

SECURITIES AND EXCHANGE COMMISSION
 WASHINGTON, D.C. 20549
 FORM 10-K

(MARK ONE)

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

FOR THE FISCAL YEAR ENDED OCTOBER 30, 1999

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 (I.R.S. Employer
 incorporation or organization) 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)

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 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 NO

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

The aggregate market value of the voting stock held by non-affiliates of the registrant was approximately \$16,009,763,070 based on the closing price of the Common Stock on the New York Stock Exchange Composite Tape reporting system on December 31, 1999.

As of December 31, 1999, there were 175,504,662 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 30, 1999 | I and II |
| Portions of the Registrant's Proxy Statement for the Annual Meeting of Stockholders to be held March 14, 2000 | III |

PART I

ITEM 1. BUSINESS

COMPANY OVERVIEW

Analog Devices, Inc. (Analog, ADI or the Company) is a world leader in the design, manufacture and marketing of high-performance analog, mixed-signal and digital signal processing (DSP) integrated circuits (ICs) used in signal processing applications.

As of the end of fiscal 1999, approximately 40% of Analog's revenues came from the communications market, making it the Company's largest and fastest growing served market. Communications applications include wireless handsets and base stations, as well as products used for high-speed access to the Internet, including ICs used in ADSL and cable modems and central office networking equipment.

Analog serves the PC market with products that monitor and manage power usage, process signals used in flat panel displays and LCD projectors and enable PCs to provide CD-quality audio. Analog also serves the high-end consumer market with products used in digital cameras and camcorders, DVD players and surround sound audio systems. Analog provides a broad array of products to the industrial market, including products for automatic test equipment and for the digital speed control of AC motors.

Analog's products are sold worldwide through a direct sales force, third-party industrial distributors and independent sales representatives. The Company has direct sales offices in 18 countries, including the United States. Approximately 46% of fiscal 1999 revenue came from customers in North America, while most of the balance came from customers in Western Europe and the Far East.

The Company is headquartered near Boston, in Norwood, Massachusetts, and has manufacturing facilities in Massachusetts, California, North Carolina, Ireland, the Philippines and Taiwan. Founded in 1965, Analog Devices employs approximately 7,400 people worldwide. The Company's stock is listed on the New York Stock Exchange under the symbol ADI and is included in the Standard & Poor's 500 Index.

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 functions such as analog display, audio output or control. These manipulations and transformations are known collectively as "real-world signal processing."

Significant advances in semiconductor technology in recent years have led to substantial increases in the performance and functionality of ICs used in signal processing applications. These advances include the ability to sense, receive, condition, convert and transmit signals from analog phenomena, such as voice and video images, and process these signals in both the analog and digital domain. 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 convergence of computing and communications requires applications that incorporate these functions and the Company's products are used as components in equipment and systems to achieve higher performance and more efficient signal processing.

PRINCIPAL PRODUCTS

The Company is engaged in the design, manufacture and marketing of a broad line of high-performance ICs that incorporate analog, mixed-signal and digital signal processing technologies that address a wide range of real-world signal processing applications. The Company has a generic list of approximately 2,000 products, with the highest revenue product accounting for approximately 2% of the Company's revenue for fiscal 1999. Many of the Company's products are proprietary, while equivalents to other products are available from a limited number of other suppliers. The Company also designs, manufactures and markets a range of assembled products.

MARKETS AND APPLICATIONS

The following describes some of the characteristics of, and products supplied to, each of the Company's major markets:

COMMUNICATIONS--The rapid development of broadband and wireless communications infrastructure around the world combined with the development of the Internet has created a rapidly growing market for the Company's products. Communications technology involves the acquisition of analog signals that are converted from analog to digital and digital to analog form as they are processed and transmitted. ADI's expertise in combining analog and digital functionality on a single chip has enabled the Company to develop products that fulfill the technological challenges of this complex and rapidly expanding market space. The need for ever higher speed and reduced power consumption, coupled with more reliable, more bandwidth-efficient communications, is creating increasing demand for the Company's products which are used in systems that include digital, analog and mixed-signal processing capability. The products are used in the full spectrum of signal processing for audio, data, image or video communication. In broadband and wireless communication applications, the Company's products are incorporated into data and digital subscriber line (DSL) modems, cellular telephones, base station equipment and remote access servers.

COMPUTERS AND COMPUTER PERIPHERALS--Increased interface between users and the PC through monitors, printers, scanners and audio devices and the increasing need for power and thermal management capability in PCs have provided many opportunities in the computer market. The Company's ability to integrate analog, DSP and mixed-signal functionality on ICs has enabled ADI to supply many high performance critical components required by PC manufacturers. The computer industry requires smaller, lighter personal computers, creating increased demand for high performance ICs to monitor power usage thereby allowing manufacturers to use smaller batteries and extend battery life between charges. 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 audio input and output capability for business and entertainment applications.

CONSUMER ELECTRONICS--The acquisition and display of signals combined with the requirement for digital processing of these signals have allowed the Company to combine analog and digital design capability to provide solutions that conform to the rigorous cost, size and reliability constraints of the consumer electronic market. 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. The addition of monitoring and motor control devices on many consumer products has also created new opportunities for the Company.

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 and mixed-signal ICs are 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.

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

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.

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 high-end computer joysticks.

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 incurred \$257 million during fiscal 1999 for the design, development and improvement of new and existing products and processes, compared to \$219 million and \$196 million during fiscal 1998 and fiscal 1997, 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 30, 1999, the Company owned approximately 550 U.S. patents and had 150 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.

IC TECHNOLOGY

Analog Technology

Analog IC technology has been the foundation of the Company's business for more than 25 years, and the Company believes it is one of the world's largest suppliers of analog ICs. 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 IC 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 IC 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.

General Purpose DSP Technology

The Company's products that include DSP technology 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.

Mixed-Signal Technology

ADI's product range also includes multi-function mixed-signal devices which incorporate combinations of analog and digital technology. The growing need to allow user interface with computers and consumer products as well as the development of communications systems has created new opportunities for these mixed-signal devices. Examples of these devices include chipsets for communication applications (GSM cellular phones, remote access servers, data and fax modems), audio input/output devices and power and thermal management devices for computer applications and motor control devices.

Micromachined Technology

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. In addition to incorporating an electro-mechanical structure, these devices also have analog circuitry for conditioning signals obtained from the micromachined sensing element.

ADI's micromachined products are accelerometers used in a wide variety of applications. The majority of current revenue from ADI's micromachined products is derived from accelerometers used by automotive manufacturers in airbag applications. Emerging applications include GPS automobile navigation systems, earthquake detectors and high-end computer joysticks.

General Purpose and Custom Products

Across the entire range of ICs designed and manufactured by the Company there are general purpose products and custom products designed for specific applications for specific customers. In many of the new emerging markets in communications, computer and consumer products there is a tendency to work with selected large customers to design application-specific solutions which can combine elements of analog, digital, mixed-signal and micromachined functionality.

ASSEMBLED PRODUCT TECHNOLOGY

The Company's assembled products technology includes multi-chip modules (MCMs), hybrids and printed circuit board modules. An 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. Sales of these products have declined to approximately 3% of the Company's total sales.

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 46% of fiscal 1999 revenue was derived from customers in North America. As of December 1, 1999, 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 22% of the Company's fiscal 1999 revenue was derived from sales to customers in Europe; 14% to customers in Japan; and 18% to customers in other international markets. As of December 1, 1999, 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 4 in the Notes to the Company's Consolidated Financial Statements incorporated herein by reference to the 1999 Annual Report to Shareholders and filed herewith as part of Exhibit 13.2.

Approximately 42% of ADI's fiscal 1999 revenue was derived from sales made through distributors. These distributors typically maintain an inventory of Analog products. Some of them 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 and the Company started to sell products on the Internet in the fourth quarter of fiscal 1999. 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 1999, Analog's 20 largest customers accounted for approximately 30% of the Company's net sales. The largest single customer represented approximately 4% 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 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 has agreements with 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 participates in a joint venture agreement (WaferTech, LLC) with TSMC, Altera, Integrated Silicon Solutions and several individual investors that built an eight-inch wafer fabrication facility in Camas, Washington. Originally the Company had an 18% equity ownership in WaferTech. In

January 1999, the Company concluded an agreement to sell to other WaferTech partners 78% of its equity ownership in WaferTech for cash equal to its carrying value at October 31, 1998.

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 in 1997 and 1998. Major wafer fabrication expansions were completed in Wilmington and Cambridge, Massachusetts; Sunnyvale, California and Limerick, Ireland. Also, in fiscal 1998 the Company completed construction of an additional assembly and test facility in Cavite, Philippines. Capital expenditures were reduced to a total of \$78 million in fiscal 1999 in response to the industry downturn in the latter half of fiscal 1998 and the early part of fiscal 1999.

BACKLOG

Backlog at the end of fiscal 1999 was approximately \$446 million, up from approximately \$174 million at the end of fiscal 1998. The increase in the backlog is a result of the rapid increase in demand for the Company's products from the year earlier period. This is the result of an upturn in the semiconductor industry during fiscal 1999 combined with increased demand for the Company's products in the rapidly growing communications, computer and consumer products markets. In periods of increased demand there is a tendency towards longer lead times which has the effect of increasing backlog and, in some instances, the Company may not have manufacturing capacity sufficient to fulfill all orders. As is customary in the semiconductor industry, the Company includes customers' forecast orders in backlog and often allows such orders to be canceled or deliveries delayed by customers 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 7% of its fiscal 1999 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 analog, mixed-signal and DSP products include Burr-Brown Corp., Cirrus Logic Inc., Harris Corp., Linear Technology Corp., Lucent Technologies Inc., Maxim Integrated Products, Inc., Motorola Semiconductor Products, National Semiconductor Corp., Sierra Semiconductor Corp., Siliconix Inc. and Texas Instruments, Inc. Sales of the Company's micromachined products currently comprise acceleration sensors, and its main competitors are Bosch, Motorola and Denso, which use a multichip solution whereas ADI uses a single chip solution that 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 30, 1999, the Company employed approximately 7,400 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 | 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 and 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 | Engineering and administrative offices | 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 1999 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 1999 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 30, 1999.

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..... | 65 | 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..... | 54 | 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..... | 55 | 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..... | 53 | 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..... | 45 | 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..... | 45 | 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. |

| <u>EXECUTIVE OFFICER</u> | <u>AGE</u> | <u>POSITION</u> | <u>BUSINESS EXPERIENCE</u> |
|--------------------------|------------|--|---|
| William A. Martin..... | 40 | 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..... | 49 | 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..... | 49 | 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..... | 52 | 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. |
| Franklin Weigold..... | 60 | Vice President and General Manager, Micromachined Products Division | Vice President and General Manager, Micromachined Products Division since November 1999; 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.

| PERIOD | FISCAL 1999 | | FISCAL 1998 | |
|----------------|-------------|---------|-------------|---------|
| | HIGH | LOW | HIGH | LOW |
| First Quarter | \$32.25 | \$19.31 | \$33.56 | \$23.75 |
| Second Quarter | \$38.38 | \$24.38 | \$39.63 | \$27.13 |
| Third Quarter | \$51.00 | \$35.06 | \$39.00 | \$21.44 |
| Fourth Quarter | \$60.44 | \$41.63 | \$24.38 | \$12.00 |

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 30, 1999 this amount was equal to \$378,723,500. 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, 1999 was 4,655. 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) | 1999 | 1998 | 1997 | 1996 | 1995 |
|---|-------------|-------------|-------------|-------------|-----------|
| Statement of Operations data: | | | | | |
| Net sales..... | \$1,450,379 | \$1,230,571 | \$1,243,494 | \$1,193,786 | \$941,546 |
| 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..... | 196,819 | 82,408 | 178,219 | 171,901 | 119,270 |
| Net income per share: | | | | | |
| Basic..... | 1.16 | 0.51 | 1.13 | 1.12 | 0.79 |
| Diluted..... | 1.10 | 0.50 | 1.04 | 1.03 | 0.75 |
| 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..... | \$2,218,354 | \$1,861,730 | \$1,763,853 | \$1,508,272 | \$993,349 |
| Long-term debt and non-current obligations under capital leases..... | 16,214 | 340,758 | 348,852 | 353,666 | 80,000 |

* Data was not available in sufficient detail to provide pro forma information for this year.

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 7 of the 1999 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 7 of the 1999 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 1999 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 14, 2000 (the "2000 Proxy Statement") under the caption "Election of Directors," and is incorporated herein by reference.

ITEM 11. EXECUTIVE COMPENSATION

The response to this item is contained in the Company's 2000 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 2000 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 2000 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 1999 Annual Report to Shareholders and are incorporated herein by reference pursuant to Item 8:

- Consolidated Statements of Income for the years ended October 30, 1999, October 31, 1998 and November 1, 1997
- Consolidated Balance Sheets as of October 30, 1999 and October 31, 1998
- Consolidated Statements of Stockholders' Equity for the years ended October 30, 1999, October 31, 1998 and November 1, 1997
- Consolidated Statements of Cash Flows for the years ended October 30, 1999, October 31, 1998 and November 1, 1997

(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 quarterly report on Form 10-Q (Commission File No. 1-7819) for the quarterly period January 30, 1999 as filed with the Commission on March 15, 1999 and incorporated herein by reference. |
| 3.2 | By-laws of Analog Devices, Inc., as amended, filed as an exhibit to the Company's annual report on Form 10-K (Commission File No. 1-7819) for the fiscal year ended November 1, 1997, as filed with the Commission on January 28, 1998 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 | 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 ----- |
|-------------------------|---|
| 4.4 | Rights Agreement, dated as of March 18, 1998 between Analog Devices Inc. and BankBoston, N.A., as Rights Agent, filed as an exhibit and incorporated herein by reference to Analog Devices Inc.'s Registration Statement on Form 8-K (File No. 001-07819) filed on March 19, 1998, as amended by Amendment No. 1 filed as an exhibit to the Registrant's Form 8-K/A (File No. 001-07819) filed on November 11, 1999 and incorporated herein by reference. |
| *+ 10.1 | Bonus Plan of Analog Devices, Inc. |
| * 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 Registrant'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 Registrant'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. |
| + 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. |
| 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. |

| EXHIBIT NO. ----- | DESCRIPTION ----- |
|-------------------------|---|
| 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. |
| 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 | 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. |
| + 10.16 | Amendment No. 1 dated as of May 18, 1993 to the Company's Credit Agreement dated March 12, 1993. |
| 10.17 | 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. |
| 10.18 | 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. |
| * 10.19 | 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. |
| *+ 10.20 | Employee Change in Control Severance Policy of Analog Devices, Inc., as amended. |
| *+ 10.21 | Senior Management Change in Control Severance Policy of Analog Devices, Inc., as amended. |
| * 10.22 | 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. |
| * 10.23 | 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. |
| ** 10.24 | 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. |
| ** 10.25 | 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 ----- |
|-------------------------|--|
| 10.26 | 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. |
| 10.27 | 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. |
| ** 10.28 | 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. |
| ***+ 10.29 | Deposit Agreement dated October 1, 1999 between Chartered Semiconductor Manufacturing Pte. Ltd. and Analog Devices, Inc. |
| 10.30 | 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. |
| ** 10.31 | 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. |
| ** 10.32 | 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. |
| * 10.33 | 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. |
| 10.34 | 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 7 of the 1999 Annual Report to Shareholders, for the fiscal year ended October 30, 1999. |
| + 13.2 | Financial Statements and Notes thereto, Report of Ernst & Young LLP, Independent Auditors and Supplementary Financial Information, corresponding to pages 8 through 33 of the 1999 Annual Report to Shareholders, for the fiscal year ended October 30, 1999. |
| + 21 | Subsidiaries of the Company. |
| + 23 | Consent of Ernst & Young LLP. |

| EXHIBIT NO. ----- | DESCRIPTION ----- |
|-------------------------|--------------------------|
| + 27 | Financial Data Schedule. |

- -----

- * 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.
 - *** Confidential Materials omitted and filed separately with the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934.
 - + 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 30, 1999.

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

Jerald G. Fishman
President
Chief Executive Officer
and Director
(Principal Executive Officer)

By: /s/ Joseph E. McDonough

Joseph E. McDonough
Vice President-Finance
and Chief Financial Officer
(Principal Financial and
Accounting Officer)

Date: January 28, 2000

Date: January 28, 2000

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 ----- Ray Stata | Chairman of the Board | January 28, 2000 ----- |
| /s/ Jerald G. Fishman ----- Jerald G. Fishman | President, Chief Executive Officer and Director | January 28, 2000 ----- |
| /s/ John L. Doyle ----- John L. Doyle | Director | January 28, 2000 ----- |
| /s/ Charles O. Holliday ----- Charles O. Holliday | Director | January 28, 2000 ----- |
| /s/ Joel Moses ----- Joel Moses | Director | January 28, 2000 ----- |
| /s/ F. Grant Saviers ----- F. Grant Saviers | Director | January 28, 2000 ----- |
| /s/ Lester C. Thurow ----- Lester C. Thurow | Director | January 28, 2000 ----- |

ANALOG DEVICES, INC.

SCHEDULE II - VALUATION AND QUALIFYING ACCOUNTS

YEARS ENDED OCTOBER 30, 1999, OCTOBER 31, 1998 AND NOVEMBER 1, 1997
(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 1, 1997 | \$14,785 ===== | \$25,456 ===== | \$ 234 ===== | \$40,007 ===== |
| Year ended October 31, 1998 | \$40,007 ===== | \$ 3,023 ===== | \$10,698* ===== | \$32,332 ===== |
| Year ended October 30, 1999 | \$32,332 ===== | \$ 313 ===== | \$18,407 ===== | \$14,238 ===== |

* Amount reflects reclassification of certain reserves from accounts receivable to accrued liabilities made in connection with the Company's accounting change (see Notes 2(m) and 5 to the consolidated financial statements).

FY99 BONUS PLAN

Analog Devices

U.S.-based Employees

SALES GROWTH

OPBT

ROA

Analog Devices is committed to sharing its success with the people who make it possible - our employees. The aim of the Bonus Plan is to encourage participation by all of us in achieving company goals and to share the rewards of our success.

Jerry Fishman
President & CEO

THE FY99 BONUS PLAN

Our business strategy has always been for ADI to be a growth company with strong profitability. Given our focus on two of the highest growth segments of the semiconductor industry - analog integrated circuits and digital signal processing - we believe that further improvement in sales growth and profitability are both achievable and necessary.

While improvement in sales growth and operating profit before taxes (OPBT) continue to be important goals for the company, we have also identified improving return on assets (ROA) as an important success factor for strong financial performance.

Therefore, the FY99 Bonus Plan emphasizes not only continued improvements in sales growth and OPBT, but also improvements in ROA, which can be defined as the return the company earns on its investments in plant, property and equipment, inventory and accounts receivable. By improving ROA, we will be able to minimize the investments we need to make to execute our high growth, high profitability business strategy.

Sales growth, OPBT and ROA are weighted equally in the FY99 Bonus Plan. The Plan is designed to generate a 1.0 payout when the average of all three performance factors equals 17%, a level of performance that we believe is achievable during the second half of FY99. A 1.0 payout would result in approximately 10% of the company's profits being paid to employees in bonus payments.

The FY99 Bonus Plan is consistent with ADI's long-term business model, which is defined as 25% sales growth, 25% OPBT and 25% ROA.

WE CAN MAKE A DIFFERENCE

All ADI employees can contribute to achieving these key goals by working to control expenses, minimize waste, increase customer satisfaction, develop new products on time and improve process efficiency.

CALCULATING BONUS PAYMENTS

The bonus payout factor is determined by averaging sales growth since the same bonus period in the previous year, and OPBT and ROA during the bonus period. Each fiscal year, the first bonus period consists of the first and second quarters, while the second bonus period consists of the third and fourth quarters.

For example, if sales growth for the second half of the year totaled 20%, OPBT were 16% and ROA were 15%, the average of the three factors would be 17%, resulting in a payout factor of 1.0.

BONUS PAYOUT CURVE

[chart]

Your accumulated eligible earnings for the bonus period are multiplied by your bonus target, which presents a percentage of your eligible earnings. The percentage of earnings used in the bonus calculation varies by job grade.

The product of that calculation is then multiplied by the bonus factor to determine the gross bonus payment amount.

| GRADE LEVEL | BONUS TARGET | POTENTIAL RANGE |
|----------------|-----------------|--------------------|
| Non-exempt | 4% | 0-12% |
| E02-E06 | 4% | 0-12% |
| E07-E08 | 6% | 0-18% |
| E09-E10 | 10% | 0-30% |
| E11-E14 | 15% | 0-45% |
| E15-EI6 | 20% | 0-60% |

EXAMPLE:

Accumulated eligible earnings for the bonus period = \$15,000

Bonus target for your job grade = 4%

Payout factor for the bonus period = 1.0

Gross bonus (before tax) payment:

\$15,000 x 4% x 1.0 = \$600.00

Earnings included in the bonus calculation:

- o Base Pay
- o Shift differential
- o Sick pay
- o Vacation pay
- o Holiday pay
- o Bereavement pay
- o Jury duty pay
- o Alternative work schedule pay

Excluded from the bonus calculation:

- o Overtime pay
- o Bonus payments from a previous bonus period
- o Other payments that are taxable but not considered regular earnings

WHEN BONUS PAYMENTS ARE MADE

When ADI's financial performance warrants, bonus payments will be made on a semi-annual basis in June and December.

No bonus payments will be earned when the average of sales growth, OPBT and ROA equals 10% or below, since this level of performance is not acceptable for ADI. Bonus payments will begin when the average of all three performance factors is above 10%.

The maximum payout for the FY99 Bonus Plan is 3.0 times target, or when the average of sales growth, OPBT and ROA equals 31%.

WHO'S ELIGIBLE?

Most ADI employees are eligible to participate in the Bonus Plan. New employees are immediately eligible to participate in the Plan with no waiting period.

The following situations may EXCLUDE an employee from participating in the Plan:

- o Employee is already covered under a field sales, field application engineering or other incentive program.
 - o Employee terminates employment at ADI prior to the last day of the bonus period.
 - o Employee receives a 'Needs Improvement' or 'Marginal' performance rating during the bonus period.
 - o Employee receives a final written warning during the bonus period.
 - o Co-op and temporary employees are not eligible for participation in the Plan.
-

OTHER INFORMATION ABOUT THE BONUS PLAN

WHEN BONUS CHECKS ARE ISSUED

Bonus checks are issued approximately six weeks after the end of the bonus period.

HOW CHANGES IN YOUR EMPLOYMENT STATUS AFFECT BONUS PAYMENTS

o IF YOUR JOB GRADE AND BONUS TARGET CHANGE DURING THE BONUS PERIOD:
Your bonus payments will be based on the job grade that was effective at the end of the bonus period.

o IF YOU CHANGE WORK SHIFTS DURING THE BONUS PERIOD:
Because shift differential paid during the bonus period is included as part of your earnings for the bonus calculation, your bonus payment will already take into consideration any shift differential earnings that you may have for the period.

o IF YOU TRANSFER BUSINESS UNITS:
If you transfer between business units, your earnings records transfer with you, so your bonus payment is based on the total accumulated paid earnings for the bonus period.

o IF YOU CHANGE STATUS BETWEEN FULL-TIME AND PART-TIME WORKING HOURS:
Since your bonus payment is based on your accumulated paid earnings for the bonus period, your bonus calculation will take into account any change in status, such as part-time to full-time or full-time to part-time working hours.

o IF YOU ARE ON LEAVE OF ABSENCE OR DISABILITY FOR PART OF THE BONUS PERIOD:
The bonus is paid based on your earnings while actively at work during the period (not on short-term disability, long-term disability or other leave of absence). Therefore, any pay received during your leave of absence will be excluded from your accumulated paid earnings for bonus calculation purposes.

THE BONUS PLAN DESIGN

THE BONUS PLAN IS DESIGNED TO REWARD ALL ELIGIBLE EMPLOYEES FOR CONTRIBUTING TO COMPANY-WIDE BUSINESS GOALS DURING EACH FISCAL YEAR. THE BONUS PLAN DESIGN, OR PORTIONS OF THE DESIGN, MAY CHANGE FROM YEAR TO YEAR AS THE COMPANY'S FOCUS MOVES TO DIFFERENT COMPANY-WIDE PERFORMANCE GOALS THAT ARE DETERMINED TO BE CRITICAL DURING THAT FISCAL YEAR. THE BONUS PLAN IS EFFECTIVE ONLY DURING FY99 AND WILL BE RECONSIDERED IN FY00.

BELOW CERTAIN LEVELS, ADI'S RESULTS MAY NOT BE COMPETITIVE AND MAY NOT MEET KEY BUSINESS PERFORMANCE MEASURES. AT THESE LOW LEVELS OF BUSINESS PERFORMANCE, NO BONUS WOULD BE PAID.

The Bonus Plan brochure provides a summary of the FY99 Bonus Plan. If you need further information, please ask your supervisor or Human Resources consultant. Analog Devices reserves the right to modify the Bonus Plan from time to time at the sole discretion of management. All changes to the Bonus Plan are subject to the approval of ADI's Board of Directors.

GUARANTY

THIS GUARANTY (this "Guaranty"), dated as of May 1, 1994, is from ANALOG DEVICES, INC., a Massachusetts corporation (the "Guarantor"), to and for the benefit of METROPOLITAN LIFE INSURANCE COMPANY (the "Purchaser"), its successors and assigns and any and all other Beneficiaries (as such term is defined in Section 9 hereof).

RECITALS

A. The Purchaser has agreed to purchase \$10,500,000.00 in aggregate original principal amount of the 8.87% Senior Secured Notes due May 1, 2007 (the "Notes"), of Francis J. Perry, Jr. and William J. Walker, not in their individual capacities, but solely as trustees of Everett Street Trust, a Massachusetts nominee trust established under Declaration of Trust, dated May 9, 1980 (the "Debtor"), to be issued pursuant to the terms of a Note Purchase Agreement (the "Note Agreement"), dated May 18, 1994, between the Debtor and the Purchaser.

B. The Guarantor is the lessee (in its capacity as such, the Guarantor is hereinafter sometimes referred to as the "Lessee") under an Amended and Restated Lease Agreement, dated as of May 1, 1992 (as the same may be further amended or supplemented from time to time, the "Lease"), each with the Debtor, as lessor. The Debtor will use the proceeds from the sale of the Notes to refinance certain indebtedness with respect to and to make certain improvements to the Premises (as defined in the Lease) for the benefit of the Lessee.

C. It is a condition to the purchase by the Purchaser of the Notes under the Note Agreement that the Guarantor execute and deliver this Guaranty.

NOW, THEREFORE, the Guarantor hereby agrees as follows:

1. GUARANTY OF PAYMENT AND PERFORMANCE OF OBLIGATIONS.

(a) The Guarantor unconditionally guarantees to each of the Beneficiaries the full and punctual payment of the Obligations (as defined in subsection (b) below). This Guaranty is an absolute, unconditional and continuing guaranty of the full and punctual payment by the Debtor of each of the Obligations, and not of collectibility only, and is in no way conditioned upon any requirement that any Beneficiary first attempts to collect payment from the Debtor or any other guarantor or surety or resorts to any security or other means of obtaining payment of all or any of the Obligations or upon any other contingency. Upon any Event of Default (as defined in the Mortgage) by the Debtor in the full and punctual payment of any of the Obligations, the liabilities and obligations of the Guarantor hereunder shall, at the option of any Beneficiary, become forthwith due and payable without demand or notice of any nature, all such demands and notices being expressly waived by the Guarantor.

(b) As used herein, the term "Obligations" means all indebtedness, obligations and liabilities of any kind of the Debtor to any or all of the Beneficiaries or otherwise arising under or in connection with the Notes, the Note Agreement or any other Obligation Agreement (as defined

below), howsoever incurred, arising or evidenced, whether now or hereafter existing, due or to become due or of payment, and including without limitation the Debtor's obligation to pay (i) all principal of, interest on and premium, if any, including any Make-Whole Payments (as defined in the Mortgage), with respect to the Notes when and as the same shall become due and payable (whether at maturity or by declaration or otherwise) and (ii) all costs and expenses (including court costs, reasonable attorneys' fees and other legal expenses) incurred by any Beneficiary in exercising and enforcing any of its rights, powers and remedies under the Notes, the Note Agreement or any other Obligation Agreement, including without limitation its rights and remedies following an Event of Default (as defined in the Mortgage) by Debtor. The term "Obligation Agreement" means the Notes, the Note Agreement, the Mortgage (as defined in the Note Agreement), the Lease Assignment (as defined in the Note Agreement) and any other agreement, document or instrument referred to in any thereof.

2. GUARANTY CONTINUING AND LIABILITY UNLIMITED.

(a) This is a continuing guaranty and shall be binding upon the Guarantor regardless of (a) how long before or after the date hereof any part of the Obligations was or is incurred by the Debtor and (b) the amount of the Obligations at any time outstanding (whether more or less than the original principal amount of the Notes). This Guaranty may be enforced by any or all of the Beneficiaries from time to time and as often as occasion for such enforcement may arise.

(b) If after receipt of any payment of, or the proceeds of any collateral for, all or any part of the Obligations, the Beneficiaries are compelled to surrender or voluntarily surrender such payment or proceeds to any person because such payment or application of proceeds is or may be avoided, invalidated, recaptured, or set aside as a preference, fraudulent conveyance, impermissible setoff or for any other reason, whether or not such surrender is the result of (i) any judgment, decree or order of any court or administrative body having jurisdiction over the Beneficiaries, or (ii) any settlement or compromise by the Beneficiaries of any claim as to any of the foregoing with any person (including the Debtor), then the Obligations or part thereof affected shall be reinstated and continue and this Guaranty shall be reinstated and continue, in full force as to such Obligations or part thereof as if such payment or proceeds had not been received, notwithstanding any previous cancellation of any instrument evidencing any such Obligation or any previous instrument delivered to evidence the satisfaction thereof. The provisions of this Section 2(b) shall survive the termination of this Guaranty and any satisfaction and discharge of the Debtor by virtue of any payment, court order or any federal or state law.

3. UNCONDITIONAL NATURE OF GUARANTOR'S OBLIGATIONS AND LIABILITIES.

The obligations and liabilities of the Guarantor hereunder shall be absolute and unconditional, shall not be subject to any counterclaim, set-off, deduction or defense based upon any claim the Guarantor may have against the Debtor, any other guarantor, or any other person or entity, and shall remain in full force and effect until all of the Obligations have been fully satisfied, without regard to any event, circumstance or condition (whether or not the Guarantor shall have knowledge or notice thereof) which but for the provisions of this Section might constitute a legal or equitable defense or discharge of a guarantor or surety or which might in any way limit recourse against the Guarantor, including without limitation: (a) any amendment or modification or supplement to the terms of the Note Agreement, the Lease, the Notes or any other Obligation Agreement; PROVIDED, HOWEVER that the Guarantor shall not be liable under this Guaranty for any increase in the Obligations

which results solely from an amendment, modification or supplement to the Notes or the Note Agreement to which the Guarantor has not consented; (b) any waiver, consent or indulgence by any Beneficiary, or any exercise or non-exercise by any Beneficiary of any right, power or remedy, under or in respect of this Guaranty, the Note Agreement, the Notes, the Lease or any other Obligation Agreement (whether or not the Guarantor or the Debtor has or have notice or knowledge of any such action or inaction); (c) the invalidity or unenforceability, in whole or in part, of the Note Agreement, the Lease, the Notes or any other Obligation Agreement, or the termination, cancellation or frustration of any thereof, or any limitation or cessation of the Debtor's liability under any thereof, including without limitation any invalidity, unenforceability or impaired liability resulting from the Debtor's lack of capacity, power and/or authority to enter into the Note Agreement, the Notes, the Lease or any other Obligation Agreement and/or to incur any or all of the Obligations, or from the execution and delivery of any Obligation Agreement by any person acting for the Debtor without or in excess of authority; (d) any actual, purported or attempted sale, assignment or other transfer by any or all of the Beneficiaries or by the Debtor of any Obligation Agreement or of any of its rights, interests or obligations thereunder; (e) any defect in the Debtor's title to the Premises or any item(s) of the Mortgaged Property (as defined in the Note Agreement) or in the design, quality, condition, durability, operation, merchantability or fitness for any particular use or purpose of any thereof, or the failure of any such item to meet the requirements or specifications of any law, regulation, judgment, administrative order or decision or of any agreement between the Debtor and any other party; (f) any actual, purported or attempted sale, assignment, leasing, transfer, encumbrance, redelivery or other temporary or permanent disposition of the Premises or any item(s) of the Mortgaged Property, or any damage to or destruction, seizure, condemnation, theft, repossession or any other partial or total loss or loss of use of any thereof; (g) the Debtor's failure to obtain, protect, preserve or enforce any rights in the Premises or any item(s) of the Mortgaged Property against any party, or the invalidity or unenforceability of any such rights; (h) the taking or holding by any or all of the Beneficiaries of a security interest, lien or other encumbrance in or on any other property as security for any or all of the Obligations or any exchange, release, non-perfection, loss or alteration of, or any other dealing with, any such security; (i) the addition of any party as a guarantor or surety of all or any part of the Obligations or any limitation of the liability of any additional guarantor or surety of all or any part of the Obligations under any other agreement; (j) any merger or consolidation of the Debtor into or with any other entity, or any sale, lease, transfer or other disposition of any or all of Debtor's assets or any sale, transfer or other disposition of any or all of the beneficial interests in the Debtor to any other person or entity; and (k) any change in the financial condition of the Debtor or the Debtor's entry into an assignment for the benefit of creditors, an arrangement or any other agreement or procedure for the restructuring of its liabilities, or the Debtor's insolvency, bankruptcy, reorganization, dissolution, liquidation or any similar action by or occurrence with respect to the Debtor.

4. GUARANTOR'S WAIVER.

The Guarantor unconditionally waives, to the fullest extent permitted by law: (a) notice of any of the matters referred to in Section 3 hereof; (b) any right to the enforcement, assertion or exercise by any or all of the Beneficiaries of any of its or their respective rights, powers or remedies under, against or with respect to (i) the Note Agreement, the Lease, the Notes or any other Obligation Agreement, (ii) any other guarantor or surety, or (iii) any security for all or any part of the Obligations, including, without limitation, the Mortgaged Property; (c) any requirement of diligence and any

defense based on a claim of laches; (d) all defenses which may now or hereafter exist by virtue of any statute of limitations, or of any stay, valuation, exemption, moratorium or similar law; (e) any requirement that the Guarantor be joined as a party in any action or proceeding against the Debtor to enforce any of the provisions of the Note Agreement, the Lease, the Notes or any other Obligation Agreement; (f) any requirement that any Beneficiary mitigate or attempt to mitigate damages resulting from a default by the Guarantor hereunder or from a default by the Debtor under the Lease or any of the Obligation Agreements; (g) acceptance of this Guaranty by any Beneficiary; and (h) all presentments, protests, notices of dishonor, demands for performance and any and all other demands upon and notices to the Debtor, and any and all other formalities of any kind, the omission of or delay in performance of which might but for the provisions of this Section constitute legal or equitable grounds for relieving or discharging the Guarantor in whole or in part from its irrevocable, absolute and continuing obligations hereunder, it being the intention of the Guarantor that its obligations hereunder shall not be discharged except by payment and performance and then only to the extent thereof; PROVIDED, HOWEVER, that the Beneficiaries agree that if, at any time, such Beneficiaries have the right to assert an identical claim against the Guarantor both under this Guaranty and under the Put Agreement (as defined in the Note Agreement), then, so long as the Put Agreement is in full force and effect and the Guarantor is not in default in any of its obligations thereunder, the Beneficiaries shall first assert such claim against the Guarantor under the Put Agreement; PROVIDED FURTHER, HOWEVER, that the Beneficiaries may immediately assert such claim under this Guaranty without the necessity of asserting such claim under the Put Agreement if the Guarantor at any time fails to make payment of all or any portion of such claim as and when due under the Put Agreement or otherwise is in default of its obligations thereunder.

5. REPRESENTATIONS AND WARRANTIES.

The Guarantor represents and warrants that:

(a) ORGANIZATION AND POWER. The Guarantor (i) is a corporation duly organized and validly existing under the laws of the Commonwealth of Massachusetts; and (ii) has all requisite corporate power and authority and all necessary licenses and permits under the laws of the Commonwealth of Massachusetts to enter into this Guaranty, the Lease, Put Agreement and Lease Assignment (herein, collectively, the "Guarantor Documents"), to perform and observe the terms and conditions of such instruments and to own its properties and conduct its business as currently conducted. The Guarantor is qualified to do business as a foreign corporation in all jurisdictions where its ownership of property or the nature of its business requires such qualification. Each of the Guarantor's Subsidiaries (i) is a corporation duly organized and validly existing under the laws of such Subsidiary's state of incorporation, (ii) has all requisite corporate power and authority to own its properties and conduct its business as currently conducted and (iii) is qualified to do business as a foreign corporation in all jurisdictions where its ownership of property or the nature of its business requires such qualification. The Guarantor Documents have been duly authorized, executed and delivered by the Guarantor and constitute the legal, valid and binding obligations of the Guarantor enforceable against the Guarantor in accordance with their respective terms, except that certain rights and remedies as set forth in such Guarantor Documents may be limited by bankruptcy, reorganization and other laws of general application relating to or affecting the enforcement of creditors' or lessors' rights.

(b) LITIGATION; TAXES. There are no actions, suits or proceedings pending or, to its knowledge, threatened against or affecting the Guarantor at

law or in equity before any court or administrative officer or agency an adverse determination in which could, individually or in the aggregate, have a material adverse effect on the business, property, assets or financial condition of the Guarantor. The Guarantor is not in default (i) in the payment of any taxes levied or assessed against it or its assets or (ii) under or in violation of any statute, rule, order, decree, writ, injunction or regulation of any governmental body (including any court).

(c) COMPLIANCE WITH OTHER INSTRUMENTS. The Guarantor is not a party to any contract or agreement or subject to any restriction or to any order, rule, regulation, writ, injunction or decree of any court or governmental authority or to any statute which materially and adversely affects its business, property, assets or financial condition. Neither the execution, delivery or performance by the Guarantor of this Guaranty or the other Guarantor Documents nor its compliance herewith or therewith (A) conflicts or will conflict with or results or will result in a breach of or constitutes or will constitute a default under (i) any law in effect as of the date of delivery of this Guaranty, (ii) the articles of incorporation or by-laws of the Guarantor, (iii) any agreement or instrument to which the Guarantor is a party or by which it is bound, or (iv) any order, writ, injunction or decree of any court or other governmental authority, or (B) results or will result in the creation or imposition of any lien, charge or encumbrance upon the Guarantor's property pursuant to such agreement or instrument.

(d) GOVERNMENTAL AUTHORIZATION; CONSENTS. No authorization, consent or approval of or filing with any governmental authority is required for the execution, delivery and performance of this Guaranty or any other Guarantor Document. If, on the Closing Date (as defined in the Note Agreement), any such authorization, consent, approval or filing shall be required, the same shall have been obtained or made on or prior to the Closing Date and true and complete copies of each thereof shall have been provided to the Purchaser. The execution, delivery and performance by the Guarantor of this Guaranty or any other Guarantor Document do not require any stockholder approval or the consent or approval of any of the Guarantor's creditors (except as have already been obtained in writing).

(e) EVENT OF DEFAULT. No event has occurred and is continuing with respect to the Guarantor which would constitute a Default or an Event of Default.

(f) OBLIGATIONS TO OTHERS. The Guarantor has no unsatisfied obligations in excess of \$25,000 in the aggregate to any Person arising out of or incurred in connection with the acquisition, construction, leasing or remodeling by the Guarantor of its interests in the Premises.

(g) MARGIN STOCK. The Guarantor does not own or have any present intention of acquiring any "margin stock" as defined in Regulation G (12 C.F.R., Chapter II, Part 207) of the Board of Governors of the Federal Reserve System. None of the proceeds of the Notes will be used, directly or indirectly, for the purpose, whether immediate, incidental or ultimate, of purchasing or carrying any such margin stock or for the purpose of maintaining, reducing or retiring any indebtedness which was originally incurred to purchase or carry any such stock that is currently a margin stock or for any other purpose which might constitute this transaction a "purpose credit" within the meaning of said Regulation G. Neither the Guarantor nor any agent acting on its behalf has taken or will take any action which might cause the transactions contemplated herein to violate such Regulation G, Regulation T (12 C.F.R., Chapter II, Part 220) or Regulation X (12 C.F.R., Chapter II, Part 224) or any other regulation of the

Board of Governors of the Federal Reserve System or to violate the Securities Exchange Act of 1934, in each case as now in effect or as the same may hereafter be in effect.

(h) ERISA. The Guarantor is in compliance in all material respects with all material applicable provisions of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"), and the regulations and published interpretations thereunder. No "reportable event", as such term is defined in Section 4043 of ERISA, has occurred with respect to any employee pension benefit plan (as defined in ERISA), and the Guarantor has not incurred, nor does it reasonably expect to incur, any liability to the Pension Benefit Guaranty Corporation under Section 4062 of ERISA or to any multiemployer plan (as defined in ERISA) under Section 4201 of ERISA. The Guarantor has not incurred any accumulated funding deficiency within the meaning of Section 302 of ERISA nor is it subject to any lien arising under Section 307 of ERISA or Section 401(a)(29) or 412(n) of the Internal Revenue Code of 1986, as amended.

(i) SOLVENCY. The Guarantor's assets are not less than its liabilities, both determined in accordance with generally accepted accounting principles, and the Guarantor is solvent. The transactions contemplated by this Guaranty and the other Guarantor Documents are being consummated by the Guarantor in furtherance of the Guarantor's ordinary business purposes and in furtherance of its corporate purposes within the meaning of M.G.L. c156B, #9, with no contemplation of insolvency and with no intent to hinder, delay or defraud any of its present or future creditors. Neither before nor as a result of the transactions contemplated by this Guaranty will the Guarantor be or be rendered insolvent or have an unreasonably small capital for the conduct of its business and the payment of its anticipated obligations. The Guarantor's assets and cash flow enable it to meet its present obligations in the ordinary course of business as they become due, and the Guarantor does not believe that it will incur debts beyond its ability to pay.

(j) TITLE TO THE PREMISES. The Premises are free and clear of any liens or encumbrances which result from claims against the Guarantor.

(k) FULL DISCLOSURE. Neither (i) the financial statements for the Guarantor's fiscal years ending in 1993, 1992, 1991, 1990 and 1989 nor (ii) the Form 10-Q of the Guarantor for the fiscal quarter ended January 31, 1994 nor (iii) the Form 10-K of the Guarantor for the fiscal year ended October 30, 1993 nor (iv) any Guarantor Document nor (v) any written statement furnished by the Guarantor to the Purchaser in connection with the offering and sale of the Notes, contains any untrue statement of a material fact or omits a material fact necessary to make the statements contained therein not misleading. There is no fact applicable to the Guarantor which the Guarantor has not disclosed to the Purchaser in writing which materially affects adversely nor so far as the Guarantor can now reasonably foresee will materially affect adversely the properties, business, prospects, profits or condition (financial or otherwise) of the Guarantor. The Guarantor represents to the Purchaser that all of the financial statements and reports specified above have been prepared in accordance with generally accepted accounting principles, consistently applied.

(l) NO MATERIAL ADVERSE CHANGE. There has been no material adverse change in the business, properties, prospects or condition, financial or otherwise, of the Guarantor since October 30, 1993.

(m) OFFERING OF THE NOTES. The Guarantor has not, directly or through an agent, offered the Notes or any part thereof or any similar security for sale to, solicited offers to buy any thereof from or otherwise approached or negotiated with anyone other than the Purchaser. Neither the Guarantor nor any agent on its behalf will sell or offer any part of the Notes or any part

thereof or any similar security for sale to, solicit any offers to buy any thereof from or otherwise approach or negotiate in respect thereof with any other Person or Persons so as thereby to require registration of the Notes under Section 5 of the Securities Act of 1933, as amended.

6. CERTAIN COVENANTS AND AGREEMENTS.

In addition to its covenants and agreements set forth elsewhere in this Guaranty, the Guarantor hereby further covenants and agrees, for so long as any Obligation is outstanding and unpaid, as follows:

(a) PAYMENT OF OBLIGATIONS. The Guarantor will pay and discharge, and will cause each Subsidiary to pay and discharge, at or before maturity, all their respective material obligations and liabilities, including, without limitation, tax liabilities, except where the same may be contested in good faith by appropriate proceedings, and will maintain and will cause each Subsidiary to maintain, in accordance with generally accepted accounting principles, appropriate reserves for the accrual of any of the same.

(b) MAINTENANCE OF PROPERTY; INSURANCE. (i) The Guarantor will keep, and will cause each Subsidiary to keep, all property useful and necessary in its business in good working order and condition, ordinary wear and tear and fully insured casualty excepted.

(ii) The Guarantor will maintain, and will cause each Subsidiary to maintain, insurance with financially sound and reputable insurance companies or associations in such amounts and covering such risks as are usually carried by companies engaged in the same or a similar business and similarly situated, which insurance may provide for reasonable deductibility from coverage thereof.

(c) CONDUCT OF BUSINESS AND MAINTENANCE OF EXISTENCE. The Guarantor will continue, and will cause each Subsidiary to continue, to engage in business of the same general type as now conducted by the Guarantor and its Subsidiaries, and will preserve, renew and keep in full force and effect, and will cause each Subsidiary to preserve, renew and keep in full force and effect their respective corporate existence and their respective rights, privileges and franchises necessary or desirable in the normal conduct of business; PROVIDED that nothing in this Section 6(c) shall prohibit (i) the merger of a Subsidiary into the Guarantor or the merger or consolidation of a Subsidiary with or into another Person if the corporation surviving such consolidation or merger is a Subsidiary and if, in each case, after giving effect thereto, no Default or Event of Default shall have occurred and be continuing or (ii) the termination of the corporate existence of any Subsidiary if the Guarantor in good faith determines that such termination is in the best interest of the Guarantor and is not materially disadvantageous to the Beneficiaries.

(d) COMPLIANCE WITH LAWS. The Guarantor will comply, and cause each Subsidiary to comply, in all material respects with all applicable laws, ordinances, rules, regulations, and requirements of governmental authorities except where the necessity of compliance therewith is contested in good faith by appropriate proceedings.

(e) INSPECTION OF PROPERTY, BOOKS AND RECORDS. The Guarantor will keep, and will cause each Subsidiary to keep, proper books of record and account in which full, true and correct entries shall be made of all dealings and transactions in relation to its business and activities; and will permit, and will cause each Subsidiary to permit, representatives of any Beneficiary,

at such Beneficiary's expense, to visit and inspect any of their respective properties, to examine and make abstracts from any of their respective books and records and to discuss their respective affairs, finances and accounts with their respective officers, employees and independent public accountants, all at such reasonable times and as often as may reasonably be desired.

(f) TRANSACTIONS WITH AFFILIATES. Neither the Guarantor nor any Subsidiary will enter into any transaction, including, without limitation, the purchase or sale of any property or the rendering of any service, with any Affiliate except for transactions entered into in the ordinary course of, and pursuant to the reasonable requirements of, the Guarantor's or such Subsidiary's business and upon fair and reasonable terms no less favorable to the Guarantor or such Subsidiary than would be obtained in a comparable arm's-length transaction with a person not an Affiliate.

(g) LEVERAGE RATIO. The Guarantor shall maintain at all times a ratio of Total Liabilities to Consolidated Tangible Net Worth of not greater than 1 to 1.

(h) MINIMUM CONSOLIDATED TANGIBLE NET WORTH. The Guarantor will at no time permit Consolidated Tangible Net Worth to be less than the sum of (A) \$312,000,000 PLUS (B) 50% of consolidated net income for the period from October 30, 1993, through the end of the Guarantor's then most recent fiscal quarter (treated for this purpose as a single accounting period); PROVIDED, HOWEVER, that in the event that the Guarantor incurs a net loss in one of more of its fiscal quarters ending after October 30, 1993, then the results of such quarter or quarters shall be excluded in calculating consolidated net income for the purposes of clause (B) above.

(i) RESTRICTED PAYMENTS. Neither the Guarantor nor any Subsidiary will declare or make any Restricted Payment if either (A) a Default or Event of Default exists or (B) after giving effect thereto, the aggregate of all Restricted Payments declared or made subsequent to October 30, 1993, would exceed an amount equal to (x) \$48,000,000 PLUS (y) 50% of consolidated net income for the period from October 30, 1993, through the end of the Guarantor's then most recent fiscal quarter (treated for this purpose as a single accounting period). Nothing in this subparagraph (i) shall prohibit the payment of any dividend or distribution within 45 days after declaration thereof, if such declaration was not prohibited by this subparagraph (i).

(j) INVESTMENTS. The Guarantor will not make, or permit any of its Subsidiaries to make, any loan or advance to any Person or purchase or otherwise acquire, or permit any such Subsidiary to purchase or otherwise acquire any capital stock, assets, obligations or other securities of, make any capital contribution to, or otherwise invest in, or acquire any interest in, any Person (all such transactions being herein called "Investments"), except:

(i) Investments in Liquid Assets;

(ii) Investments in the Guarantor or any of its Consolidated Subsidiaries;

(iii) Investments in accounts, contract rights and general intangibles (as defined in the Uniform Commercial Code as in effect in the Commonwealth of Massachusetts from time to time) or notes or other instruments receivable, arising from the sale, lease or other furnishing of goods or services by the Guarantor or any Consolidated Subsidiary in the ordinary course of business;

(iv) Investments in equity interests (including stocks and convertible debt securities) of corporations which do not become Consolidated Subsidiaries made with the proceeds of the issuance of stock by the Guarantor;

(v) Acquisitions permitted by Section 6(q);

(vi) Investments (including stocks, equity interests and convertible debt securities) of corporations that do not become Consolidated Subsidiaries made with the proceeds of the sale or other disposition of any capitalized investment permitted by clause (iv), providing that the Guarantor gives the Beneficiaries notice of such Investment under this clause; and

(vii) additional Investments not exceeding in the aggregate at any one time outstanding \$20,000,000.

(k) NEGATIVE PLEDGE. Neither the Guarantor nor any Subsidiary will create, assume or suffer to exist any Lien on any asset now owned or hereafter acquired by it, except:

(i) Liens securing Indebtedness specified on Exhibit A hereto;

(ii) Liens for taxes or assessments or other government charges or levies if not yet due and payable or, if due and payable, they are being contested in good faith by appropriate proceedings and for which appropriate reserves are maintained;

(iii) Liens imposed by law, such as mechanic's, materialmen's, landlord's, warehousemen's and carrier's Liens, and other similar Liens, securing obligations incurred in the ordinary course of business which are not past due for more than 30 days, or which are being contested in good faith by appropriate proceedings and for which appropriate reserves have been established;

(iv) Liens under workmen's compensation, unemployment insurance, social security or similar legislation;

(v) Liens, deposits or pledges to secure the performance of bids, tenders, contracts (other than contracts for the payments of money), leases (as may be permitted under this Guaranty), public or statutory obligations, surety, stay, appeal, indemnity, performance or other similar bonds, or other similar obligations arising in the ordinary course of business;

(vi) easements, rights-of-way, restrictions and other similar encumbrances which, in the aggregate do not materially interfere with the occupation, use and enjoyment by the Guarantor or any Subsidiary of the property or assets encumbered thereby in the normal course of business or materially impair the value of the property subject thereto;

(vii) Liens securing obligations of a Subsidiary to the Guarantor or to another Subsidiary;

(viii) Judgment and other similar Liens arising in connection with court proceedings; PROVIDED that the execution or other enforcement of such Liens is effectively stayed and the claims secured thereby are being actively contested in good faith and by appropriate proceedings;

(ix) Liens on any assets of any corporation at the time such corporation becomes a Subsidiary;

(x) Liens on any assets at the time of acquisition of such assets by the Guarantor or a Subsidiary;

(xi) Liens on any assets of a corporation existing at the time such corporation is merged into or consolidated with the Guarantor or a Subsidiary or at the time of a purchase, lease or other acquisition of the assets of a corporation or firm as an entirety or substantially as an entirety by the Guarantor or a Subsidiary;

(xii) Liens granted in connection with the Guarantor's or any Subsidiary's refinancing of Indebtedness secured by a Lien on any of their respective assets on the date of the closing for the sale of the Notes; PROVIDED, HOWEVER, that in no event shall the principal amount of Indebtedness secured by such Lien exceed 100% of the Indebtedness originally secured by the Lien to be released in connection with such refinancing; and

(xiii) Liens not otherwise permitted by the foregoing clauses (i) - (xii) of this Section securing Indebtedness in an aggregate principal amount and Swap Obligations with an aggregate mark to market value (net of mark of market thresholds, if any) at any one time outstanding not to exceed 30% of Consolidated Tangible Net Worth.

(1) CONSOLIDATIONS, MERGERS AND SALES OF ASSETS. (A) The Guarantor will not merge or consolidate with or sell, assign, lease or otherwise dispose of (whether in one transaction or in a series of transactions) all or substantially all of its assets (whether now owned or hereafter acquired), to any Person unless: (i) the corporation which results from such merger, sale or consolidation or to which such disposition is made is either (A) the Guarantor or (B) a corporation organized under the laws of the United States or any state thereof or the District of Columbia; (ii) the surviving corporation (if not the Guarantor) or the corporation to which such disposition is made expressly assumes the Guarantor's obligations hereunder and under the Lease, the Lease Amendment, the Put Agreement and the Lease Assignment pursuant to documentation satisfactory in form and substance to the Beneficiaries; (iii) no Default or Event of Default exists or will result from such merger, sale or consolidation; (iv) no default by the Debtor exists in respect of payment of any amount due under the Notes, whether in respect of principal, interest or premium, if any; and (v) such merger, sale or consolidation will not have a material adverse effect on the financial condition of the Guarantor or such surviving or transferee corporation, as the case may be.

(B) No Subsidiary shall merge or consolidate with or sell, assign, lease or otherwise dispose of (whether in one transaction or in a series of transactions) all or any part of its assets (whether now owned or hereafter acquired) to any Person or acquire all or substantially all of the assets or the business of any Person nor shall the Guarantor permit any of its Subsidiaries to do so, except that: (i) any Subsidiary may merge into or transfer assets to the Guarantor; (ii) any Subsidiary may merge into or transfer assets to any other Subsidiary; and (iii) any Subsidiary may consummate an Acquisition as permitted under Section 6(q).

(m) SALES AND LEASEBACKS. The Guarantor and its Subsidiaries will not sell or transfer any of their respective assets and become, directly or indirectly, liable as the lessee under a lease of such assets if, as a result of such a sale and leaseback transaction, the combined fair market value (as

determined in good faith by the Guarantor) of all assets of the Guarantor and its Subsidiaries subject to a sale and leaseback transaction entered into from and after the date of the sale of the Notes to any date of determination would exceed 30% of Consolidated Tangible Assets.

(n) SUBSIDIARY INDEBTEDNESS. The Guarantor will not permit a Subsidiary to incur any Indebtedness except:

(i) Indebtedness listed on Exhibit B hereto;

(ii) Indebtedness incurred pursuant to the refinancing of Indebtedness permitted pursuant to clause (i) above;

(iii) Guaranties of Indebtedness of the Guarantor;

(iv) Indebtedness to any other Subsidiary or to the Guarantor;
and

(v) Indebtedness not permitted by any of the preceding clauses (i) - (iv); PROVIDED, HOWEVER, that the aggregate amount of Indebtedness outstanding at any time pursuant to this clause (v) shall not exceed 20% of Consolidated Tangible Net Worth; and PROVIDED FURTHER that no Indebtedness incurred as permitted by clause (iv) above may be sold, transferred or otherwise assigned at any time to any Person that is not a Subsidiary or is not the Guarantor.

(o) FINANCIAL STATEMENTS. The Guarantor will deliver to each Beneficiary:

(i) Copies of all public financial statements, including any special or interim statements of the Guarantor, and any information sent to shareholders; PROVIDED, HOWEVER, that if such statements do not include the following information required by this clause (o), the Guarantor will deliver to said Beneficiaries the following:

(A) Within 120 days after the end of each fiscal year of the Guarantor, a consolidated balance sheet of the Guarantor and its Consolidated Subsidiaries as at the end of such year and consolidated statements of income, retained earnings and changes in financial position of the Guarantor and its Consolidated Subsidiaries for such year, setting forth in each case, in comparative form, the corresponding figures for the preceding fiscal year in reasonable detail and scope, certified by independent certified public accountants of nationally recognized standing selected by the Guarantor; and within 60 days after the end of the first three fiscal quarters of the Guarantor, consolidated balance sheets of the Guarantor and its Consolidated Subsidiaries as at the end of such quarter and consolidated statements of income, retained earnings and changes in financial position of the Guarantor and its Consolidated Subsidiaries for such quarter, setting forth in each case, in comparative form, the corresponding figures for the similar quarter of the preceding year, in reasonable detail and scope, and certified by the treasurer or chief financial officer of the Guarantor;

(B) With reasonable promptness such additional information (including copies of public reports filed by the Guarantor) regarding the business affairs and financial condition of the Guarantor as any Beneficiary may reasonably request; and

(C) Upon the occurrence of any Default or Event of Default hereunder or under and as defined in the Lease, the Guarantor promptly shall give written notice thereof to each Beneficiary.

All financial statements specified in clause (A) above shall be accompanied by the certificate of the treasurer or chief financial officer of the Guarantor stating that (A) no Default or Event of Default hereunder or under and as defined in the Lease has occurred and is continuing, (B) if any such Default or Event of Default has occurred, specifying the nature and the period of existence thereof and what action the Guarantor has taken or is taking with respect thereto, (C) the Guarantor has fulfilled all its obligations hereunder and under the Lease and (D) such financial statements present fairly and completely the financial condition of the Guarantor and its Consolidated Subsidiaries. As soon as available and in any event within 120 days after the end of each fiscal year of the Guarantor, the certification of the independent certified public accountants referred to in clause (A) above shall be accompanied by a letter from said accountants stating whether as a result of their examination anything has come to their attention to cause them to believe that a Default or Event of Default hereunder or under and as defined in the Lease has occurred, and, if so, specifying the nature and period of existence thereof.

(p) PAYMENT OF CERTAIN EXPENSES. Whether or not the transactions contemplated by this Guaranty or the Note Agreement shall be consummated, the Guarantor will:

(i) Pay all reasonable fees and expenses incurred by the Purchaser and the Debtor in connection with the transactions described in the Note Agreement and all reasonable fees and expenses incurred by the Purchaser or any other Beneficiary in connection with any modification, supplement or amendment of this Guaranty, the Lease, the Put Agreement or any of the Obligation Agreements or Guarantor Documents or any waiver or consent under or in respect of this Guaranty, the Notes, the Lease, the Put Agreement or any of the Obligation Agreements or Guarantor Documents, whether or not such modification, supplement, amendment, waiver or consent is obtained or becomes effective, including in each such instance, without limitation, printing, word processing and reproduction expenses, reasonable legal fees (including reasonable legal fees and expenses of each Beneficiary's counsel), fees and expenses of any appraisers and environmental engineers and consultants and all recording, registration and filing fees, taxes and expenses. The Guarantor agrees to pay all expenses incurred by any Beneficiary (including reasonable counsel fees and the fees, expenses and disbursements of an investment bank or other firm acting as such Beneficiary's financial advisor) following the occurrence and during the continuance of any Default or Event of Default or any workout restructuring or similar negotiations or any bankruptcy proceeding involving the Guarantor, the Debtor or any holder of a beneficial interest in the Debtor and to pay all costs of collection and enforcement, including reasonable attorneys' fees and disbursements, with respect to this Guaranty, the Notes, the Lease, the Put Agreement or any other Obligation Agreement or Guarantor Document;

(ii) Pay and save each Beneficiary harmless from and against any and all liability and loss with respect to or resulting from the nonpayment or delayed payment of any and all stamp and other similar taxes (other than transfer taxes), fees and excises, if any, including any interest and penalties, which may be, or be determined to be, payable in connection with the transactions contemplated by the Note Agreement and this Guaranty, or in connection with any modification, supplement or amendment of this Guaranty, the Notes, the Lease, the Put Agreement or any of the Obligation Agreements or Guarantor Documents or any waiver or consent under or in respect of any thereof; and

(iii) Hold each Beneficiary harmless from and against any and all finders' or brokerage fees and commissions which may be payable in connection with the transactions contemplated hereby and by the Note Agreement or in connection with any modification, supplement or amendment of this Guaranty, the Notes, the Lease, the Put Agreement or any of the Obligation Agreements or Guarantor Documents or any waiver or consent under or in respect of any thereof.

Notwithstanding anything to the contrary contained in this Guaranty, the Guarantor's obligations under this Section 6(p) shall survive payment of the Obligations.

(q) ACQUISITIONS. The Guarantor shall not, and shall not permit any of its Subsidiaries to, consummate any Acquisition, or sell, lease, assign or otherwise dispose of (whether in one transaction or in a series of related transactions) all or any substantial part of its assets, whether now owned or hereafter acquired, or be a party to any merger or consolidation, except that:

(i) the Guarantor and its Subsidiaries may sell inventory or used or surplus equipment in the ordinary course of business; and

(ii) the Guarantor and any of its Subsidiaries may consummate any Acquisition (including any Acquisition by way of merger); PROVIDED that: (i) with respect to any such Acquisition, the Guarantor shall provide to the Beneficiaries twenty (20) days or more prior written notice thereof; (ii) with respect to all such Acquisitions the aggregate value, on a current market value basis (determined at the time of each such Acquisition), of the consideration therefor paid and to be paid by the Guarantor and Subsidiaries shall not exceed 33 1/3% of Consolidated Tangible Net Worth as of the end of the immediately preceding fiscal quarter; (iii) after giving effect to such Acquisition, the Guarantor shall be in compliance with all of the terms and conditions hereof; (iv) the Guarantor or such Subsidiary consummating such Acquisition shall not, after giving effect to such Acquisition, be in violation of Section 6(c); (v) no such Acquisition shall have a material adverse effect on the financial condition of the Guarantor and the Subsidiaries taken as a whole; and (vi) in respect of each such Acquisition, the Guarantor or such Subsidiary shall be the surviving or continuing entity.

For the purposes of this Guaranty, the following definitions shall apply:

"Acquisition" means any transaction or series of related transactions, consummated after the date of this Guaranty, by which the Guarantor or any of its Subsidiaries (i) acquires any going business or all or substantially all of the assets of any firm, corporation or division thereof, whether through purchase of assets, merger or otherwise, or (ii) directly or indirectly acquires (in one transaction or as the most recent transaction in a series of transactions) at least a majority (in number of votes) of the securities of a

corporation which have ordinary voting power for the election of directors (other than securities having such power only by reason of the happening of a contingency).

"Affiliate" means (i) any Person that directly, or indirectly through one or more intermediaries, controls the Guarantor (a "Controlling Person") or (ii) any Person (other than the Guarantor or a Subsidiary of the Guarantor) which is controlled by or is under common control with a Controlling Person. As used herein, the term "control" means possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"Consolidated Subsidiary" means any Subsidiary whose accounts are or are required to be consolidated with the accounts of the Guarantor.

"Consolidated Tangible Assets" means the gross book value of all assets of the Guarantor and its Consolidated Subsidiaries, determined on a consolidated basis, minus the following items (without duplication of deductions) appearing on the balance sheet of the Guarantor and its Consolidated Subsidiaries:

- (a) reserves for depreciation, depletion and amortization and other reserves against assets, reserves for investments, receivables and income taxes and other liability reserves;
- (b) all deferred charges (less amortization), unamortized debt discount and expense and corporate organizational expenses;
- (c) the book amount of all assets (including, without limitation, goodwill, patents, trademarks and copyrights) which would be treated as intangibles under generally accepted accounting principles;
- (d) the amount by which aggregate inventories appearing on the asset side of such balance sheet exceed the lower of cost or market value (at the date of such balance sheet) thereof;
- (e) any write-up in the book amount of any asset or investment subsequent to April 30, 1994, resulting from a reevaluation or reappraisal thereof from the amount entered in accordance with generally accepted accounting principles by the Guarantor or its Subsidiary on its books with respect to its acquisition of the asset or investment; and
- (f) the book amount of the minority interest in any Subsidiary.

"Consolidated Tangible Net Worth" means the Tangible Net Worth of the Guarantor and its Consolidated Subsidiaries on a consolidated basis.

"Default" means any condition or event which with the giving of notice or lapse of time or both would, unless cured or waived, become an Event of Default.

"Environmental Laws" has the meaning specified in Section 7 of this Guaranty.

"Event of Default" has the meaning specified in Section 8 of this Guaranty.

"Guaranty" by any Person means any agreement, undertaking or arrangement, by which such Person assumes, guarantees, endorses or otherwise is or becomes, directly or contingently responsible or liable (including, but not limited to, an agreement to purchase any obligation, stock, assets, goods or services or to supply or advance any funds, assets, goods or services, or an agreement to maintain or cause such Person to maintain a minimum working capital or net worth or otherwise to assure the creditors of any Person against loss) for the obligations of any Person.

"Indebtedness" means, with respect to any Person (without duplication), (a) indebtedness for borrowed money which, in accordance with generally accepted accounting principles, would be classified on a balance sheet as liabilities of such Person, (b) indebtedness for borrowed money secured by any mortgage, pledge or other Lien on any property of such Person, (c) Guarantees and (d) letters of credit to support Indebtedness of others.

"Lien" means, with respect to any asset, any lien (statutory or otherwise), security interest, mortgage, deed of trust, priority, pledge, charge, conditional sale, title retention agreement, financing lease or other encumbrance or similar right of others or any agreement to give any of the foregoing.

"Liquid Assets" means at any time (i) cash; (ii) current accounts with banks; (iii) bankers' acceptances, certificates of deposit, and time deposits evidenced by instruments or documents other than certificates of deposit, in each case only if due within 1 year, not past due, and issued by United States commercial banks having assets of \$500,000,000 or more; (iv) direct debt obligations of, or obligations guaranteed by, the United States or of agencies of the United States, due within 1 year and not past due; and (v) direct debt obligations of any issuer, due within 1 year and not past due, rated A or MIG- 2 or higher by Moody's Investors Services, Inc.

"Person" means an individual, a corporation, a partnership, an association, a trust or any other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

"Restricted Payment" means any dividend or other distribution on any shares of the Guarantor's capital stock (except dividends payable solely in shares of its capital stock).

"Subsidiary" means, as to any Person, any corporation or other entity of which at least a majority of the securities or other ownership interests having ordinary voting power for the election of directors or other persons performing similar functions are at the time owned directly or indirectly by such Person.

"Swap Obligations" means obligations of the Guarantor and its Subsidiaries in respect of rate swap transactions, basis swaps, forward rate transactions, commodity swaps, commodity options, interest rate options, foreign exchange transactions, cap transactions, floor transactions, collar transactions, currency swap transactions, cross-currency rate swap transactions, currency options or any other similar transactions (including any options with respect to any such transactions) or combinations of such transactions.

"Tangible Net Worth" means the excess of total assets over total liabilities, excluding, however, from the determination of total assets (i) goodwill; (ii) patents, copyrights and trademarks; (iii) trade names; (iv) licenses; (v) organizational expenses; and (vi) treasury stock.

"Total Liabilities" means at any time all Indebtedness, obligations and liabilities of the Guarantor and its Consolidated Subsidiaries, on a consolidated basis, which should be classified as liabilities of such corporations on a consolidated balance sheet, and in any event shall include (without duplication):

(1) all Indebtedness, obligations and liabilities guaranteed by any Guaranty, and all Indebtedness, obligations and liabilities secured by any mortgage, lien, assignment, pledge, security interest, charge or encumbrance upon or in property owned by the respective corporation, even though the respective corporation has not assumed or become liable for the payment of the same, to the extent that such Indebtedness, obligations and liabilities actually outstanding exceed \$4,000,000;

(2) the aggregate amount of reserves established on the books of the Guarantor and its Consolidated Subsidiaries in respect of contingent liabilities and other contingencies, including contingent obligations to make payments under contracts; and

(3) contingent liabilities in excess of 20% of Consolidated Tangible Net Worth.

For the purposes of this Section 6, all definitions and calculations made or to be made in connection therewith shall be governed by generally accepted accounting principles, consistently applied, as in effect from time to time.

7. ENVIRONMENTAL MATTERS.

(a) REPRESENTATIONS, WARRANTIES AND COVENANTS. The Guarantor represents, covenants and warrants to the Beneficiaries that:

- (i) at all times during the term of the Lease, the Premises and the Lessee shall comply in all respects with all applicable Environmental Laws; the Lessee has obtained all permits, licenses, and any other authorizations to conduct operations at the Premises that are required under all applicable Environmental Laws; the Lessee is in compliance with all terms and conditions of all permits, licenses, and any other authorizations required under all applicable Environmental Laws relating to the Premises;
- (ii) as of the commencement of the term of the Lease, no notices, complaints or orders of violation or non-compliance of any nature whatsoever had been issued to the Lessee or, to the best of the Lessee's knowledge, to any person regarding the Premises, and no federal, state or local environmental investigation or legal action by a private party is pending or overtly threatened, in each case with regard to the Premises or any use thereof or any alleged violation of, or strict liability arising under, Environmental Laws with regard to the Premises; no liens have been placed upon the Premises in connection with any actual or alleged liability under any Environmental Laws;
- (iii) the Premises (a) have not been used by the Lessee or by any other person to generate, manufacture, refine, produce or process any Hazardous Substance or to store, handle, transfer or transport any Hazardous Substance other than normal and lawful uses of such Hazardous Substances, taking

into account the Lessee's use of the Premises, in lawful quantities and in compliance with Environmental Laws, and (b) will not be used by the Lessee or any other Person at any time during the term of the Lease to generate, manufacture, refine, produce or process any Hazardous Substance or to store, handle, transfer or transport any Hazardous Substance, other than normal and lawful uses of such Hazardous Substances, taking into account the Lessee's intended use of the Premises, in lawful quantities and in compliance with Environmental Laws where such uses will have no material adverse effect upon the Premises;

- (iv) no surface impoundments are constructed, operated or maintained in or on the Premises in violation of applicable Environmental Laws and no underground storage tanks are constructed, operated or maintained in or on the Premises; there is no asbestos nor asbestos-containing material located in, on, at or under the Premises nor is there any polychlorinated biphenyl containing equipment, including transformers located in, on, at or under the Premises; and
- (v) the Premises are and at all times during the term of the Lease will be maintained (a) free of Hazardous Substances to which Persons working on or visiting the Premises could be exposed, the removal or remediation of which is required or the maintenance of which is prohibited or penalized by any applicable legal requirements of any local, state or federal agency, authority or governmental unit having jurisdiction or which would have a material adverse effect upon the Premises and (b) free of asbestos and asbestos-containing material and free of polychlorinated biphenyl containing equipment, including transformers.

(b) COMPLIANCE WITH ENVIRONMENTAL LAWS. The Guarantor and the Lessee shall (i) fully comply with all Environmental Laws relating to the Premises, (ii) prohibit the use of the Premises for the generation, manufacture, refinement, production or processing of any Hazardous Substances or for the storage, handling, transfer or transportation of any Hazardous Substances (other than normal and lawful uses of such products in lawful quantities in compliance with Environmental Laws where such uses will have no material adverse effect upon the Premises), (iii) refrain from installing or permitting the installation on the Premises of any underground storage tanks or asbestos-containing materials or, except in accordance with applicable Environmental Laws, surface impoundments and (iv) cause any alterations of, or construction on, the Premises to be done in accordance with applicable Environmental Laws, and in connection with any such alterations or construction, remove and dispose of, in compliance with applicable Environmental Laws, any Hazardous Substances present upon the Premises not in compliance with Environmental Laws.

(c) NOTICES. Promptly upon obtaining knowledge thereof, the Guarantor shall give to the Beneficiaries notice of the occurrence of any of the following events: (i) the failure of the Premises or the Lessee or the Guarantor to comply with any Environmental Law in any manner whatsoever; (ii) the issuance to the Lessee of any notice, complaint or order of violation or non-compliance of any nature whatsoever with regard to the Premises or the use thereof with respect to Environmental Laws; or (iii) any notice of a pending or threatened investigation to determine whether the Lessee's operations on the Premises are in violation of any Environmental Law.

If any Beneficiary at any time receives notice that an adverse change in the environmental condition of the Premises has occurred or that an adverse environmental condition with respect to the Premises has been discovered, such Beneficiary may give notice thereof to the Guarantor, and if the Guarantor has not (i) diligently commenced to cure such condition, to the extent necessary to meet legal requirements or comply fully with applicable Environmental Laws or to prevent a material diminution in the fair market value of the Premises, within 30 days after receipt of such notice (or such shorter period as may be required by law or in the event of an emergency) and (ii) thereafter diligently prosecuted to completion such cure, then the Beneficiaries may cause to be performed an environmental audit or risk assessment of the Premises and the then uses thereof, and may take such actions as they may deem necessary to cure such condition. Such environmental audit or assessment shall be performed by an environmental consultant satisfactory to the Beneficiaries and shall include a review of the uses of the Premises and compliance of the same with all Environmental Laws. All costs and expenses incurred by the Beneficiaries in connection with such environmental audit or assessment and any remediation required shall be paid by the Guarantor upon demand.

(d) INDEMNIFICATION. The Guarantor agrees to indemnify, defend and hold harmless each Beneficiary (herein, the "Indemnified Parties") from and against any and all losses, liabilities, damages, judgments, penalties, claims, charges, costs and expenses (including, without limitation, fees and disbursements of counsel and consultants for such Indemnified Party), which may be suffered or incurred by, or asserted against such Indemnified Party to the extent directly or indirectly arising out of, or related to, the Premises, or any Indemnified Party's interest therein pursuant to the Mortgage or the Lease Assignment, or the enforcement or exercise of any right or remedy of such Indemnified Party thereunder, or the presence, use, storage, transportation, disposal, release, threatened release, discharge, emission or generation of any Hazardous Substances at the Premises, or the violation by the Lessee or the Guarantor of any Environmental Law or the breach by the Guarantor of any representation or covenant contained in this Section 7.

The warranties and obligations of the Guarantor and the rights and remedies of each Indemnified Party under this Section 7 are in addition to and not in limitation of any other warranties, obligations, rights and remedies provided in the Lease or otherwise at law or in equity.

In the event of the termination of the Lease as therein provided or the Lessee's abandonment of the Premises, the obligations and liabilities of the Guarantor with respect to each Indemnified Party, actual or contingent, under this Section 7 shall survive such termination or abandonment.

For the purposes of this Section 7, the following definitions shall apply:

"Environmental Laws" means and includes but shall not be limited to the Resource Conservation and Recovery Act (42 U.S.C. #6901 ET SEQ.) ("RCRA"), as amended by the Hazardous and Solid Waste Amendments of 1984, the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. #9601 et seq.) ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act of 1986 (Pub. Law 99-499, 100 Stat. 1613) ("SARA"), the Hazardous Materials Transportation Act (49 U.S.C. #1801 ET SEQ.) ("HMTA"), the Toxic Substances Control Act (15 U.S.C. #2601 ET SEQ.), Clean Air Act (42 U.S.C. #9402 ET SEQ.), the Clean Water Act (33 U.S.C. #1251 ET SEQ.), the Federal Insecticide, Fungicide and Rodenticide Act (7 U.S.C. #136 ET SEQ.), the Occupational Safety and Health Act (29 U.S.C. #651 ET SEQ.) ("OSHA") and all applicable federal, state and local environmental laws, including obligations

under the common law, ordinances, rules, regulations, private agreements (such as covenants, conditions and restrictions) and publications, as any of the foregoing may have been or may be from time to time amended, supplemented or supplanted, and any other federal, state or local laws, including obligations under the common law, ordinances, rules, regulations, private agreements (such as covenants, conditions and restrictions) and publications, now or hereafter existing relating to regulation or control of Hazardous Substances or environmental health and safety.

"Hazardous Substances" means (i) those substances included within the definitions of or identified as "hazardous substances", "hazardous materials", or "toxic substances" in or pursuant to, without limitation, CERCLA, SARA, RCRA, OSHA and HMTA and in the regulations promulgated pursuant to said laws, all as amended; (ii) those substances listed in the United States Department of Transportation Table (40 CFR 172.101 and amendments thereto) or by the Environmental Protection Agency (or any successor agency) as hazardous substances (40 CFR Part 302 and amendments thereto); (iii) any material, waste or substance which is or contains (A) petroleum, including crude oil or any fraction thereof, natural gas, or synthetic gas usable for fuel or any mixture thereof, (B) asbestos, (C) polychlorinated biphenyls, (D) designated as "hazardous substance" pursuant to Section 311 of the Clean Water Act, 33 U.S.C. #1251 ET SEQ., (33 U.S.C. #1321) or listed pursuant to Section 307 of the Clean Water Act (33 U.S.C. #1317); (E) flammable explosives; (F) radioactive materials; and (iv) such other substances, materials and wastes which are or become regulated as hazardous, toxic or "special wastes" under applicable local, state or federal law, or by the United States government, or which are classified as hazardous, toxic or as "special wastes" under federal, state or local laws or regulations.

8. EVENTS OF DEFAULT. An "Event of Default" shall exist if any of the following occurs and is continuing:

(a) if default shall be made in any payment due hereunder by the Guarantor;

(b) if the Guarantor shall fail to make any payment when due, whether in respect of principal or interest, on Indebtedness of the Guarantor aggregating in excess of \$5,000,000;

(c) if the Guarantor shall default in the observance or performance of any other covenant, condition or agreement contained in any instrument(s) evidencing any Indebtedness of the Guarantor aggregating in excess of \$5,000,000, or under any agreement(s) securing or relating to such Indebtedness, the effect of which is to cause the holder(s) thereof (or a trustee therefor) to cause such Indebtedness, or a portion thereof, to become due prior to its stated maturity or prior to its regularly scheduled date or dates of payment;

(d) if any representation or warranty of the Guarantor set forth in (i) any certificate delivered in connection with the issuance of the Notes, (ii) the Lease in its capacity as Lessee, (iii) this Guaranty, (iv) the Put Agreement (as defined in the Note Agreement), (v) the Lease Assignment (as defined in the Note Agreement), or (vi) any certificate, notice, demand, or request delivered to any Beneficiary pursuant to this Guaranty shall be misleading or inaccurate in any material respect, as of the time when the same shall have been made;

(e) if default shall be made in the due observance or performance of any covenant, agreement or condition set forth in Section 6 or Section 7 of this Guaranty, or if any material term of this Guaranty shall cease to be in

full force or effect or if such material term shall be disavowed by the Guarantor;

(f) if default shall be made in the due observance or performance of any other covenant, condition, or agreement of the Guarantor contained herein or in the Lease in its capacity as Lessee and the Guarantor shall not, within 30 days after written notice to the Guarantor specifying such default, have commenced diligently to correct the default or at any time thereafter shall not diligently pursue such correction to completion;

(g) if a receiver, trustee, or liquidator (or other similar official) of the Guarantor or of any property of the Guarantor shall be appointed in any proceeding or by any federal or state officer or agency and shall not be discharged within 90 days after such appointment or if the Guarantor shall consent to such appointment or if a custodian for purposes of any federal bankruptcy statute of substantially all of the Guarantor's property is appointed or otherwise takes possession thereof or if the Guarantor shall be adjudicated a bankrupt or be declared insolvent under any federal or state bankruptcy laws, or if an order for relief shall be entered in any bankruptcy proceeding;

(h) if the Guarantor shall file a petition commencing a voluntary case under any federal bankruptcy or similar law or in bankruptcy or for reorganization or for any arrangement pursuant to any state bankruptcy or similar law or shall make an assignment for the benefit of its creditors or shall admit in writing its inability, or shall fail, to pay its debts generally as they become due or shall consent to the appointment of a receiver of any property of the Guarantor, or if a petition or an answer proposing the reorganization of the Guarantor pursuant to the Federal Bankruptcy Code or any similar law, federal or state, shall be filed in, and approved by, any court;

(i) if an involuntary case against the Guarantor, as debtor, is commenced by a petition for reorganization or liquidation under any federal bankruptcy or similar law, federal or state, and if such petition shall not be discharged or denied within 90 days after the date on which such petition was filed; or

(j) if any final judgment or judgments for the payment of money in excess of \$5,000,000 in the aggregate shall be rendered against the Guarantor, and the Guarantor shall not discharge the same or cause the same to be discharged by the later of (A) 30 days from the entry thereof and (B) the date payment is required pursuant to the judgment, if later than 30 days after such date of entry, or shall not appeal therefrom or from the order, decree or process upon which or pursuant to which said judgment was granted, based or entered, and secure a stay of execution pending such appeal.

9. SUCCESSORS AND ASSIGNS.

This Guaranty shall be binding upon the Guarantor and its respective successors and assigns (including without limitation any and all successors and transferees which may assume the Guarantor's obligations as provided in Section 6(1) hereof), and shall inure to the benefit of and be enforceable by the Purchaser, its successors and assigns, and each successive holder of any of the Notes (herein, collectively, called the "Beneficiaries").

10. SUBORDINATION OF OBLIGATIONS TO GUARANTOR.

Any and all indebtedness and other obligations of the Debtor to the Guarantor (including without limitation any such obligations resulting from any rights of subrogation on the part of the Guarantor as a result of any

payment by the Guarantor hereunder) shall during the term of this Guaranty be subordinated to the Obligations and to any other indebtedness of the Debtor to any or all of the Beneficiaries.

11. GOVERNING LAW AND CONSENT TO JURISDICTION.

This Guaranty shall be governed by the laws of the Commonwealth of Massachusetts. The Guarantor hereby irrevocably and unconditionally submits, for itself and its property, to the non-exclusive jurisdiction of any New York state court or federal court of the United States of America sitting in New York, and any appellate court from any thereof, in any action or proceeding arising out of or relating to this Guaranty or for recognition and enforcement of any judgment, and irrevocably and unconditionally consents to all claims in respect of any such action or proceeding being heard and determined in such New York state court or, to the extent permitted by law, in such Federal court. A final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any manner provided by law. Nothing in this Guaranty shall affect any right that any party may otherwise have to bring any action or proceeding relating to this Guaranty against the Guarantor or its properties in the courts of any jurisdiction.

The Guarantor hereby irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so, any objection which it may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or relating to this Guaranty in any New York state or Federal court. The Guarantor hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

The Guarantor irrevocably consents to service of process in the manner provided for notices in Section 13. Nothing in this Guaranty will affect the right of any party to serve process in any other manner permitted by law.

12. SEVERABILITY.

Wherever possible, each provision of this Guaranty shall be construed in such manner as to be valid and enforceable against the Guarantor under applicable law, but if any provision hereof shall be deemed invalid or unenforceable to any extent against the Guarantor in any jurisdiction, such provision shall be ineffective only to the extent of such invalidity or unenforceability without invalidating or rendering unenforceable the remainder of such provision or any of the other provisions hereof, and any such invalidity or unenforceability against the Guarantor in one jurisdiction shall not render such provision ineffective in any other jurisdiction.

13. NOTICES.

All notices, requests, demands and other communications provided for herein shall be in writing, and shall be sent by (i) reputable overnight delivery service, and the giving of such communication shall be complete on the immediately succeeding business day after the same is deposited with such delivery service or (ii) legible confirmed fax with original to follow the next day by overnight delivery service as specified in clause (i), and the giving of such communication shall be complete when such fax is received. Notices shall be addressed (a) to the Guarantor at One Technology Way, Norwood, Massachusetts 02026-9106, fax number (617) 461-3491, Attention: Chief Financial Officer, (b) to the Purchaser at its address and fax number set forth in the Note Agreement, and (c) to any other Beneficiary, at the address and fax number of such Beneficiary provided by such Beneficiary in writing to

the Purchaser and the Guarantor or to such other address or fax number as the Guarantor, the Purchaser or any other Beneficiary shall theretofore have transmitted to the other parties in writing by any of the means specified in this Section. Each of the Guarantor, the Purchaser and the Beneficiaries agree that it will send a courtesy copy of any notice delivered by such party hereunder to the Debtor at 1416 Providence Highway, Norwood, Massachusetts 02062; PROVIDED, HOWEVER, that the failure to send such a copy to the Debtor shall not render ineffective any notice otherwise delivered by any such party in accordance with the terms of this Section 13.

14. HEADINGS; COUNTERPARTS.

Section headings appearing in this Guaranty are for convenience of reference only and shall not define, limit, amplify or otherwise modify any provision hereof. This Guaranty may be executed in two or more counterparts, each of which when executed shall be deemed to be an original but all of which together shall constitute one and the same agreement.

15. AMENDMENTS.

No provision of this Guaranty may be amended, modified, waived, discharged or terminated except by a writing signed by each of the Beneficiaries and the Guarantor expressly referring to the provisions of this Guaranty to which such writing relates. No course of dealing with respect to any of the rights, powers and remedies of any or all of the Beneficiaries hereunder, and no delay or omission on the part of any or all of the Beneficiaries in exercising any such right, power or remedy, shall operate as a waiver thereof or otherwise be prejudicial thereto.

IN WITNESS WHEREOF, the Guarantor has caused this Guaranty to be executed under seal on its behalf by an officer thereunto duly authorized as of the date first above written.

ANALOG DEVICES, INC.

By: /s/ William A. Martin

Name: William A. Martin
Title: Treasurer

EXHIBIT A

EXISTING SECURED INDEBTEDNESS

| | Amounts Outstanding as of 4/30/94 ----- |
|------------------------------|---|
| Capital Lease Obligations | \$ 467,000.00 |

EXHIBIT B

EXISTING SUBSIDIARY INDEBTEDNESS

| Country | Bank | Facility | Amounts Outstanding as of 4/30/94 |
|---------|-----------------|-----------|--------------------------------------|
| ----- | ----- | ----- | ----- |
| France | Bank of America | Overdraft | \$ 970,522.00 |
| Belgium | Credit Lyonnais | Overdraft | \$2,137,833.00 |
| | | | ----- |
| | | | \$3,108,355.00 |

ANALOG DEVICES, INC.
One Technology Way
P. O. Box 9106
Norwood, Massachusetts 02062-9106

May 18, 1994

Metropolitan Life Insurance Company
One Madison Avenue
New York, New York 10010

Attention: Treasurer

Re: 8.87% Senior Secured Notes Due May 1, 2007

Gentlemen:

Capitalized terms used herein but not otherwise defined shall have the meanings specified in the Note Agreement, as hereinafter defined.

In connection with the \$10,500,000 loan (the "Loan") made by Metropolitan Life Insurance Company (together its with successors and assigns, "Metropolitan") to Francis J. Perry, Jr. and William J. Walker, not in their individual capacities but solely as Trustees of Everett Street Trust under Declaration of Trust, dated May 9, 1980 (the "Borrower"), pursuant to and as described in the Note Purchase Agreement, dated May 18, 1994, between Metropolitan and the Borrower (the "Note Agreement") and the Notes evidencing the Loan executed by the Borrower to Metropolitan or its registered assigns (the "Notes"), Analog Devices, Inc. (the "Company") agrees with Metropolitan as follows:

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ARTICLE I

OBLIGATION TO PURCHASE

1.1 PURCHASE. (a) Upon the occurrence and during the continuance of (i) an "Event of Default", as defined in the Mortgage, Security Agreement and Fixture Filing, dated as of May 1, 1994 (the "Mortgage"), from the Borrower, as mortgagor, to Metropolitan, as mortgagee, or (ii) an "Event of Default", as defined in the Guaranty, dated as of May 1, 1994 (the "Guaranty"), from the Company to Metropolitan or (b) at such time when all principal payable under the Notes has become or has been declared due and payable, whether upon the stated maturity of the Notes of May 1, 2007 or otherwise, or (c) at any time if the Lease (as defined in the Notes) is terminated by either the Borrower or the Company prior to May 1, 2007, or (d) at any time if the Fixed Rent (as defined in the Lease) payable under the Lease is reduced or suspended so that the Debt Service Portion of Fixed Rent (as defined in the Lease) is not sufficient to pay in full the Installment Payments (as defined in the Notes) then due under the Notes or (e) upon the determination by Metropolitan of the existence of a Material Environmental Condition (as hereinafter defined) with respect to the Property, the Company will, upon written demand by Metropolitan, and at the time, in the manner and otherwise as hereinafter set forth, purchase and pay for the Notes. The purchase shall be made within 15 days after such demand is made, for an amount (the "Purchase Price") payable in immediately available funds equal to the aggregate outstanding principal amount of the Notes, together with all accrued and unpaid interest thereon and all other costs, fees and charges due and payable under or with respect to the Guaranty and the Mortgage, including, without limitation, the Make-Whole Payment (as defined in the Mortgage), if any. Notwithstanding the foregoing, Metropolitan and the Company agree that the Purchase Price payable hereunder (x) upon the termination of the Lease

pursuant to Section 7.1 of the Lease solely on account of a casualty in the final 3 years of the term of the Lease or (y) upon the termination of the Lease pursuant to Section 7.2 of the Lease solely on account of a taking of the Property at any time or (z) upon a purchase contemplated by subparagraph (e) above, shall not include the Make-Whole Payment. Upon any purchase, Metropolitan shall, without representation or warranty, express or implied, other than as to the ownership by Metropolitan of the Notes free and clear of any encumbrances created by or through Metropolitan, and without recourse on the part of Metropolitan, endorse and deliver the Notes and assign the Note Agreement and any related documents to the Company.

As a condition of Metropolitan's making the Loan, Metropolitan has required the Company to complete an Environmental Due Diligence Questionnaire (the "Questionnaire") with respect to the Property. The Company agrees that if upon completion and delivery to Metropolitan of the Questionnaire, together with any supplements thereto as may be required by Metropolitan, Metropolitan in good faith determines that further environmental testing, monitoring, investigation or other review of the Property is warranted, then the Company shall, at its sole cost and expense, engage a firm of independent qualified environmental engineers acceptable to Metropolitan (the "Independent Engineers") to conduct such testing, monitoring, investigation and review, including, without limitation, preparation of a "Phase I" environmental site assessment (the "Phase I ESA"). If, based upon review of the Phase I ESA or such other tests, reports, evaluations or reviews as are prepared by the Independent Engineers, Metropolitan determines in good faith that additional testing of the Property is warranted, the Company agrees to provide for such additional testing, at its sole cost and expense, by a firm of Independent Engineers.

Upon the conclusion of all environmental testing, investigation and review with respect to the Property which Metropolitan has required as

permitted above, Metropolitan shall inform the Company in writing of whether Metropolitan believes that a "Material Environmental Condition" exists with respect to the Property. A "Material Environmental Condition" shall exist if Metropolitan in good faith determines, based on its review of the Questionnaire, any supplement thereto, any Phase I ESA and/or any other report prepared in connection with the Property, that an environmental condition exists with respect to the Property that could materially adversely affect Metropolitan's investment in the Notes or the Property as collateral therefor or could materially adversely affect the Company's business, prospects or financial condition.

Upon receipt of written notice from Metropolitan that a Material Environmental Condition exists, the Company will purchase and pay for the Notes in accordance with the terms of this Agreement.

1.2 TAXES, AUTHORIZATIONS, ETC. The Company will pay any stamp, with respect to the purchase of the Notes pursuant to this Agreement other than any gross receipts or net income or similar tax of Mortgagee payable with respect to such purchase. If any such tax is paid by Metropolitan, the Company will, upon demand of Metropolitan and whether or not such tax will be correctly or legally asserted, promptly pay to Metropolitan all such amounts incurred by Metropolitan for such payment, together with any interest, penalties and expenses in connection therewith. The Company hereby indemnifies and holds harmless Metropolitan for such payment, together with all such interest, penalties and expenses incurred in connection therewith, in the event of the failure of the Company to pay such stamp or other tax as hereinabove set forth. The provisions of this Section 1.2 shall survive the purchase of the Notes contemplated herein.

The Company will obtain any authorization or approval or other action by, and will give any notice to or make any filing with, any governmental authority or regulatory body required in connection with the transfer of the Notes and related documents to the Company upon any purchase pursuant to this Agreement. Nothing in this paragraph shall obligate the Company to obtain any such authorization or approval or other action by, or give any such notice to or make any such filing if any such authorization, approval, action, notice, or filing is required solely by or with respect to Metropolitan.

1.3 OBLIGATION ABSOLUTE. The Company acknowledges and agrees that the obligations of the Company as set forth in this Agreement are material inducements to Metropolitan in purchasing the Notes from the Borrower. The Company hereby agrees that its obligations under this Agreement are absolute and unconditional, independent of the ability of the Borrower to perform any of its obligations to Metropolitan or to the Company or the performance by any person or entity of his or its respective obligations, and without regard to any law, regulation or order now or hereafter in effect in any jurisdiction affecting the Notes or any of the terms of the Note Agreement, the Notes, the Mortgage, the Lease, the Guaranty or any other document related thereto or the rights of Metropolitan with respect thereto, and irrespective of the following:

(a) Any lack of genuineness, legality, validity, enforceability or value of the Note Agreement or Notes or any other agreement or instrument relating thereto or any collateral therefor;

(b) Any change in the time, manner or place of payment of any obligations under the Notes, or any term of the Note Agreement, the Mortgage or the Notes or any amendment or waiver of or any consent to departure from

the terms of the Note Agreement, the Mortgage or the Notes or any other related documents;

(c) Any exchange, release or non-perfection of any collateral including, without limitation, the Mortgaged Property (as defined in the Mortgage);

(d) Any failure to pay any taxes which may be payable with respect to the issuance or transfer of any Note and related documents; or any failure to obtain any authorization or approval from, or other action by, or to notify or file with, any governmental authority or regulatory body required in connection with the issuance or transfer of any Note and related documents;

(e) Any impossibility or impracticality of performance, FORCE MAJEURE, OR any act of any government, or any other circumstance which might constitute a defense available to, or a discharge of, the Borrower in respect of the obligations under the Note Agreement, the Mortgage or the Notes or any party obligated thereunder or any circumstance, event or happening whatsoever, whether foreseen or unforeseen and whether similar or dissimilar to anything referred to in this Section 1.3(e), which in any manner would constitute a legal, equitable or other excuse for non-performance by the Borrower or the Company;

(f) The validity of the organization of the Borrower or the Company or any other entity, the termination of existence of the Borrower, the Company or any person or entity or the receipt or non-receipt of any approvals, directions or consents or other authorizations to act on behalf of the Company or the Borrower;

(g) Any defense, claim, setoff, recoupment, abatement or other right, existing or future, which the Company may have against the Borrower or any other person or entity;

(h) The inaccuracy of any representation, warranty or statement made by or on behalf of any person or entity in connection with the issuance of the Notes (other than those representations, warranties and statements contained in Sections 7.1 and 7.2 of the Note Agreement);

(i) The bankruptcy, insolvency, reorganization, liquidation, dissolution, winding up, arrangement, composition, readjustment of debt or similar event with respect to the Borrower or the Company or any other person or entity.

This Agreement shall continue to be effective or be reinstated, as the case may be, if at any time any payment under or with respect to any Note is rescinded or must otherwise be returned by Metropolitan upon the insolvency, bankruptcy or reorganization of the Borrower or otherwise, all as though such payment had not been made. The obligations of the Company under this Agreement shall not be subject to reduction, termination or other impairment by reason of any setoff, recoupment, counterclaim or defense or for any other reason.

1.4 WAIVER. The Company hereby waives promptness, diligence and notice of acceptance with respect to the Note Agreement, the Mortgage and the Notes, and any requirement that Metropolitan protect, secure, perfect or insure any security interest in or lien on any property including, without limitation, the Mortgaged Property, which may become subject thereto or exhaust any right or take any action against the Borrower, or any other person or entity or any collateral including, without limitation, the Mortgaged Property and the Guaranty.

1.5 SUBROGATION. Until all sums owing hereunder have been paid in full to Metropolitan, any rights of subrogation or other rights or remedies which the Company might have against the Borrower as a result of any payments made hereunder or otherwise in connection with its undertaking under this Agreement shall be subordinate to the rights of Metropolitan under the Notes, Note Agreement, the Mortgage and other related documents and the Company shall not exercise any such rights and remedies without the consent of Metropolitan.

ARTICLE II

REMEDIES

2.1 FAILURE TO PURCHASE. If the Company shall fail to pay the Purchase Price for the Notes within the time period and in the manner set forth above, the Company (i) agrees that it will be unconditionally liable to Metropolitan for liquidated damages (for the loss of a bargain and not as a penalty) for the amount of such Purchase Price as well as for all costs and expenses, if any, incurred by Metropolitan in enforcing this Agreement, and (ii) irrevocably waives to the full extent permitted by applicable law any right or defense the Company may have to cause Metropolitan to prove the cause or amount of such damages or to mitigate the same.

2.2 ADDITIONAL REMEDIES. The Company agrees that Metropolitan may bring hereunder and prosecute against the Company a separate action or actions whether or not the Company brings an action against the Borrower and whether or not the Borrower is joined in any such action or actions. Metropolitan shall have, in its sole discretion and without limitation of any other remedies of Metropolitan with respect to this Agreement and the performance obligations called for hereby, a right of specific performance of the obligations of the Company under this Agreement, including but not limited

to the obligation to purchase the Notes for the Purchase Price, and the right to commence suit for compensatory, consequential and liquidated damages.

2.3 INDEMNIFICATION. The Company agrees to indemnify and defend Metropolitan against and hold Metropolitan harmless from all liabilities, damages, costs and expenses (including, without limitation, reasonable attorneys' fees), sustained or incurred (a) as a result of the failure of the Company to comply with its obligations hereunder or (b) in connection with Metropolitan's purchase of the Notes from the Borrower or enforcement of any of its rights with respect thereto.

ARTICLE III

Miscellaneous

Section 3.1 GENERAL PROVISIONS. This Agreement cannot be changed, discharged or terminated orally, but only by an instrument in writing signed by the party against which enforcement of the same is sought; PROVIDED, HOWEVER, that the terms of Section 1.1 of this Agreement may not be amended in any manner which would materially and adversely affect the Borrower's interests and rights with respect to the Property without the consent of the Borrower, which consent shall not be unreasonably withheld or delayed. All the terms of this Agreement shall be binding upon, inure to the benefit of and be enforceable by the respective successors and assigns of the parties hereto, and, in particular, shall inure to the benefit of and be enforceable by any registered owner or holder of any of the Notes. The headings to the various sections of this Agreement have been inserted for the convenience of reference only and shall not limit or otherwise affect any of the terms hereof. This Agreement may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one and the same

instrument. This Agreement shall be construed and enforced in accordance with, and governed by, the laws of the Commonwealth of Massachusetts.

Section 3.2 CONSENT TO JURISDICTION. The Company hereby irrevocably and unconditionally submits, for itself and its property, to the non-exclusive jurisdiction of any New York state court or federal court of the United States of America sitting in New York, and any appellate court from any thereof, in any action or proceeding arising out of or relating to this Agreement, or for recognition and enforcement of any judgment, and irrevocably and unconditionally consents to all claims in respect of any such action or proceeding being heard and determined in such New York state court or, to the extent permitted by law, in such Federal court. A final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any manner provided by law. Nothing in this Agreement shall affect any right that any party may otherwise have to bring any action or proceeding relating to this Agreement against the Company or its properties in the courts of any jurisdiction.

The Company hereby irrevocably and unconditionally waives, to the fullest extent it may legally and effectively do so, any objection which it may now or hereafter have to the laying of venue of any suit, action or proceeding arising out of or relating to this Agreement in any New York state or Federal court. The Company hereby irrevocably waives, to the fullest extent permitted by law, the defense of an inconvenient forum to the maintenance of such action or proceeding in any such court.

The Company irrevocably consents to service of process in the manner provided for notices in Section 13 of the Guaranty. Nothing in this Agreement will affect the right of any party to serve process in any other manner permitted by law.

If you are in agreement with the foregoing, please sign the enclosed counterparts and return one to the Company whereupon this Agreement shall become a binding contract under seal between you and the Company.

Very truly yours,

ANALOG DEVICES, INC.

By: /s/ William A. Martin

Name: William A. Martin
Title: Treasurer

The foregoing Agreement is hereby agreed to as of the date first above written.

METROPOLITAN LIFE INSURANCE COMPANY

By: /s/ Francis M. Donnantuono

Name: Francis M. Donnantuono
Title:

By: /s/ Richard G. Clarke

Name: Richard G. Clarke
Title:

\$80,000,000

CREDIT AGREEMENT

dated as of

March 12, 1993

among

Analog Devices, Inc.

The Banks Listed Herein

and

Morgan Guaranty Trust Company of New York,

as Agent

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*The Table of Contents is not a part of this Agreement.

AGREEMENT dated as of March 12, 1993 among ANALOG DEVICES, INC., the BANKS listed on the signature pages hereof and MORGAN GUARANTY TRUST COMPANY OF NEW YORK, as Agent.

The parties hereto agree as follows:

ARTICLE I

DEFINITIONS

SECTION 1.01. Definitions. The following terms, as used herein, have the following meanings:

"Absolute Rate Auction" means a solicitation of Money Market Quotes setting forth Money Market Absolute Rates pursuant to Section 2.03.

"Acquisition" means any transaction, or any series of related transactions, consummated after the date of this Agreement, by which the Company or any of its Subsidiaries (i) acquires any going business or all or substantially all of the assets of any firm, corporation or division thereof, whether through purchase of assets, merger or otherwise, or (ii) directly or indirectly acquires (in one transaction or as the most recent transaction in a series of transactions) at least a majority (in number of votes) of the securities of a corporation which have ordinary voting power for the election of directors (other than securities having such power only by reason of the happening of a contingency).

"Adjusted CD Rate" has the meaning set forth in Section 2.07(b).

"Adjusted London Interbank Offered Rate" has the meaning set forth in Section 2.07(c).

"Administrative Questionnaire" means, with respect to each Bank, an administrative questionnaire in the form prepared by the Agent and submitted to the Agent (with a copy to the Company) duly completed by such Bank.

"Affiliate" means (i) any Person that directly, or indirectly through one or more intermediaries, controls the Company (a "Controlling Person") or (ii) any Person (other than the Company or a Subsidiary of the Company) which is controlled by or is under common control with a Controlling Person. As used herein, the term "control" means possession, directly or indirectly, of the power to direct or cause the direction of the management or policies of a Person, whether through the ownership of voting securities, by contract or otherwise.

"Agent" means Morgan Guaranty Trust Company of New York in its capacity as agent for the Banks hereunder, and its successors in such capacity.

"Applicable Lending Office" means, with respect to any Bank, (i) in the case of its Domestic Loans, its Domestic Lending Office, (ii) in the case of its Euro-Dollar Loans, its

Euro-Dollar Lending Office and (iii) in the case of its Money Market Loans, its Money Market Lending Office.

"Assessment Rate" has the meaning set forth in Section 2.07(b).

"Assignee" has the meaning set forth in Section 11.06(c).

"Bank" means each bank listed on the signature pages hereof, each Assignee which becomes a Bank pursuant to Section 11.06(c), and their respective successors.

"Base Rate" means, for any day, a rate per annum equal to the higher of (i) the Prime Rate for such day and (ii) the sum of 1/2 of 1% plus the Federal Funds Rate for such day.

"Base Rate Loan" means a Committed Loan to be made by a Bank as a Base Rate Loan in accordance with the applicable Notice of Committed Borrowing or pursuant to Article VIII.

"Benefit Arrangement" means at any time an employee benefit plan within the meaning of Section 3(3) of ERISA which is not a Plan or a Multiemployer Plan and which is maintained or otherwise contributed to by any member of the ERISA Group.

"Borrower" means the Company or any Eligible Subsidiary, as the context may require, and their respective successors, and "Borrowers" means all of the foregoing.

"Borrowing" has the meaning set forth in Section 1.03.

"Capital Lease" means any lease which has been or should be capitalized on the books of the lessee.

"CD Base Rate" has the meaning set forth in Section 2.07(b).

"CD Loan" means a Committed Loan to be made by a Bank as a CD Loan in accordance with the applicable Notice of Committed Borrowing.

"CD Margin" has the meaning set forth in Section 2.07(b).

"Commitment" means, with respect to each Bank, the amount set forth opposite the name of such Bank on the signature pages hereof, as such amount may be reduced from time to time pursuant to Section 2.09.

"Commitment Fee Rate" means, for any date, 1/16 of 1% per annum.

"Committed Loan" means a loan to be made by a Bank pursuant to Section 2.01.

"Company" means Analog Devices, Inc., a Massachusetts corporation, and its successors.

"Company's 1992 Form 10-K" means the Company's annual report on Form 10-K for 1992, as filed with the Securities and Exchange Commission pursuant to the Securities Exchange Act of 1934.

"Consolidated Current Assets" means all current assets of the Company and its Consolidated Subsidiaries on a consolidated basis.

"Consolidated Current Liabilities" means all current liabilities of the Company and its Consolidated Subsidiaries on a consolidated basis, including without limitation (a) all obligations payable on demand or within one year after the date on which the determination is made, and (b) installment and sinking fund payments required to be made within one year after the date on which the determination is made, but excluding all such liabilities or obligations (i) which are renewable or extendable at the option of the Company to a date more than one year from the date of determination or (ii) which can be refinanced using the available portion of the Commitments under this Agreement.

"Consolidated Subsidiary" means any Subsidiary whose accounts are or are required to be consolidated with the accounts of the Company.

"Consolidated Tangible Net Worth" means the Tangible Net Worth of the Company and its Consolidated Subsidiaries on a consolidated basis.

"Default" means any condition or event which constitutes an Event of Default or which with the giving of notice or lapse of time or both would, unless cured or waived, become an Event of Default.

"Domestic Business Day" means any day except a Saturday, Sunday or other day on which commercial banks in New York City are authorized by law to close.

"Domestic Lending Office" means, as to each Bank, its office located at its address set forth in its Administrative Questionnaire (or identified in its Administrative Questionnaire as its Domestic Lending Office) or such other office as such Bank may hereafter designate as its Domestic Lending Office by notice to the Company and the Agent; provided that any Bank may so designate separate Domestic Lending Offices for its Base Rate Loans, on the one hand, and its CD Loans, on the other hand, in which case all references herein to the Domestic Lending Office of such Bank shall be deemed to refer to either or both of such offices, as the context may require.

"Domestic Loans" means CD Loans or Base Rate Loans or both.

"Domestic Reserve Percentage" has the meaning set forth in Section 2.07(b).

"Effective Date" means the date this Agreement becomes effective in accordance with Section 3.01.

"Election to Participate" means an Election to Participate substantially in the form of Exhibit G hereto.

"Election to Terminate" means an Election to Terminate substantially in the form of Exhibit H hereto.

"Eligible Subsidiary" means any Wholly-Owned Consolidated Subsidiary of the Company as to which an Election to Participate shall have been delivered to the Agent and as to which an Election to Terminate shall not have been delivered to the Agent. Each such Election to Participate and Election to Terminate shall be duly executed on behalf of such Wholly-Owned Consolidated Subsidiary and the Company in such number of copies as the Agent may request. The delivery of an Election to Terminate shall not affect any obligation of an Eligible Subsidiary theretofore incurred. The Agent shall promptly give notice to the Banks of the receipt of any Election to Participate or Election to Terminate.

"Environmental Laws" means any and all federal, state, local and foreign statutes, laws regulations, ordinances, rules, judgments, orders, decrees, permits, concessions, grants, franchises, licenses, agreements or other governmental restrictions relating to the environment or to emissions, discharges or releases of pollutants, contaminants, petroleum or petroleum products, chemicals or industrial, toxic or hazardous substances or wastes into the environment including, without limitation, ambient air, surface water, ground water, or land, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of pollutants, contaminants, petroleum or petroleum products, chemicals or industrial, toxic or hazardous substances or wastes or the clean-up or other remediation thereof.

"ERISA" means the Employee Retirement Income Security Act of 1974, as amended, or any successor statute.

"ERISA Group" means the Company and all members of a controlled group of corporations and all trades or businesses (whether or not incorporated) under common control which, together with the Company, are treated as a single employer under Section 414 of the Internal Revenue Code.

"Euro-Dollar Business Day" means any Domestic Business Day on which commercial banks are open for international business (including dealings in dollar deposits) in London.

"Euro-Dollar Lending Office" means, as to each Bank, its office, branch or affiliate located at its address set forth in its Administrative Questionnaire (or identified in its Administrative Questionnaire as its Euro-Dollar Lending Office) or such other office, branch or affiliate of such Bank as it may hereafter designate as its Euro-Dollar Lending Office by notice to the Company and the Agent.

"Euro-Dollar Loan" means a Committed Loan to be made by a Bank as a Euro-Dollar Loan in accordance with the applicable Notice of Committed Borrowing.

"Euro-Dollar Margin" has the meaning set forth in Section 2.07(c).

"Euro-Dollar Reserve Percentage" has the meaning set forth in Section 2.07(c).

"Event of Default" has the meaning set forth in Section 6.01.

"Facility Fee Rate" means (i) 3/16 of 1% per annum for any date on which Level I Status exists, (ii) 1/4 of 1% per annum for any date on which Level II Status exists, (iii) 5/16 of 1% per annum for any date on which Level III Status or Level IV Status exists and (iv) 7/16 of 1% per annum for any date on which Level V Status exists.

"Federal Funds Rate" means, for any day, the rate per annum (rounded upward, if necessary, to the nearest 1/100th of 1%) equal to the weighted average of the rates on overnight Federal funds transactions with members of the Federal Reserve System arranged by Federal funds brokers on such day, as published by the Federal Reserve Bank of New York on the Domestic Business Day next succeeding such day, provided that (i) if such day is not a Domestic Business Day, the Federal Funds Rate for such day shall be such rate on such transactions on the next preceding Domestic Business Day as so published on the next succeeding Domestic Business Day, and (ii) if no such rate is so published on such next succeeding Domestic Business Day, the Federal Funds Rate for such day shall be the average rate quoted to Morgan Guaranty Trust Company of New York on such day on such transactions as determined by the Agent.

"Fixed Rate Loans" means CD Loans or Euro-Dollar Loans or Money Market Loans (excluding Money Market LIBOR Loans bearing interest at the Prime Rate pursuant to Section 8.01(a)) or any combination of the foregoing.

"Guaranty" by any Person means any agreement, undertaking or arrangement, by which such Person assumes, guarantees, endorses or otherwise is or becomes, directly or contingently responsible or liable (including, but not limited to, an agreement to purchase any obligation, stock, assets, goods or services or to supply or advance any funds, assets, goods or services, or an agreement to maintain or cause such Person to maintain a minimum working capital or net worth or otherwise to assure the creditors of any Person against loss) for the obligations of any Person.

"Interest Period" means: (1) with respect to each Euro-Dollar Borrowing, the period commencing on the date of such Borrowing and ending one, two, three or six months thereafter, as the Borrower may elect in the applicable Notice of Borrowing; provided that:

(a) any Interest Period which would otherwise end on a day which is not a Euro-Dollar Business Day shall be extended to the next succeeding Euro-Dollar Business Day unless such Euro-Dollar Business Day falls in another calendar month, in which case such Interest Period shall end on the next preceding Euro-Dollar Business Day;

(b) any Interest Period which begins on the last Euro-Dollar Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall, subject to clause (c) below, end on the last Euro-Dollar Business Day of a calendar month; and

(c) any Interest Period which would otherwise end after the Termination Date shall end on the Termination Date.

(2) with respect to each CD Borrowing, the period commencing on the date of such Borrowing and ending 30, 60, 90 or 180 days thereafter, as the Borrower may elect in the applicable Notice of Borrowing; provided that:

(a) any Interest Period which would otherwise end on a day which is not a Euro-Dollar Business Day shall be extended to the next succeeding Euro-Dollar Business Day; and

(b) any Interest Period which would otherwise end after the Termination Date shall end on the Termination Date.

(3) with respect to each Base Rate Borrowing, the period commencing on the date of such Borrowing and ending 30 days thereafter; provided that:

(a) any Interest Period which would otherwise end on a day which is not a Euro-Dollar Business Day shall be extended to the next succeeding Euro-Dollar Business Day; and

(b) any Interest Period which would otherwise end after the Termination Date shall end on the Termination Date.

(4) with respect to each Money Market LIBOR Borrowing, the period commencing on the date of such Borrowing and ending such whole number of months thereafter as the Borrower may elect in accordance with Section 2.03; provided that:

(a) any Interest Period which would otherwise end on a day which is not a Euro-Dollar Business Day shall be extended to the next succeeding Euro-Dollar Business Day unless such Euro-Dollar Business Day falls in another calendar month, in which case such Interest Period shall end on the next preceding Euro-Dollar Business Day;

(b) any Interest Period which begins on the last Euro-Dollar Business Day of a calendar month (or on a day for which there is no numerically corresponding day in the calendar month at the end of such Interest Period) shall, subject to clause (c) below, end on the last Euro-Dollar Business Day of a calendar month; and

(c) any Interest Period which would otherwise end after the Termination Date shall end on the Termination Date.

(5) with respect to each Money Market Absolute Rate Borrowing, the period commencing on the date of such Borrowing and ending such number of days thereafter (but not less than 15 days) as the Borrower may elect in accordance with Section 2.03; provided that:

(a) any Interest Period which would otherwise end on a day which is not a Euro-Dollar Business Day shall be extended to the next succeeding Euro-Dollar Business Day; and

(b) any Interest Period which would otherwise end after the Termination Date shall end on the Termination Date.

"Internal Revenue Code" means the Internal Revenue Code of 1986, as amended, or any successor statute.

"Investment" has the meaning set forth in Section 5.12.

"Level I Status" exists at any date if, at such date, the Company's senior unsecured long-term debt securities are rated either A- or higher by S&P or A3 or higher by Moody's.

"Level II Status" exists at any date if, at such date, (i) the Company's senior unsecured long-term debt securities are rated either BBB- or higher by S&P or Baa2 or higher by Moody's and (ii) Level I Status does not exist.

"Level III Status" exists at any date if, at such date, (i) the Company's senior unsecured long-term debt securities are rated either BBB or higher by S&P or Baa3 or higher by Moody's and (ii) neither Level I Status nor Level II Status exists.

"Level IV Status" exists at any date if, at such date, (i) the Company's senior unsecured long-term debt securities are rated either BB+ or higher by S&P or Ba1 or higher by Moody's and (ii) none of Level I Status, Level II Status or Level III Status exists.

"Level V Status" exists at any date if, at such date, none of Level I Status, Level II Status, Level III or Level IV Status exists.

"LIBOR Auction" means a solicitation of Money Market Quotes setting forth Money Market Margins based on the London Interbank Offered Rate pursuant to Section 2.03.

"Lien" means, with respect to any asset, any lien (statutory or otherwise), security interest, mortgage, deed of trust, priority, pledge, charge, conditional sale, title retention agreement, financing lease or other encumbrance or similar right of others or any agreement to give any of the foregoing.

"Liquid Assets" means at any time (i) cash; (ii) current accounts with banks; (iii) bankers' acceptances, certificates of deposit, and time deposits evidenced by instruments or documents other than certificates of deposit, in each case only if due within 1 year, not past due, and issued by United States commercial banks having assets of \$500,000,000 or more; (iv) direct debt obligations of, or obligations guaranteed by, the United States or of agencies of the United States, due within 1 year and not past due; and (v) direct debt obligations of any issuer, due within 1 year and not past due, rated A or MIG-2 or higher by Moody's.

"Loan" means a Domestic Loan or a Euro-Dollar Loan or a Money Market Loan and "Loans" means Domestic Loans or Euro-Dollar Loans or Money Market Loans or any combination of the foregoing.

"London Interbank Offered Rate" has the meaning set forth in Section 2.07(c).

"Material Debt" means indebtedness (other than the Notes) of the Company and/or one or more of its Subsidiaries, arising in one or more related or unrelated transactions, in an aggregate principal amount exceeding \$1,000,000.

"Material Plan" means at any time a Plan or Plans having aggregate Unfunded Liabilities in excess of \$500,000.

"Moody's" means Moody's Investors Service, Inc.

"Money Market Absolute Rate" has the meaning set forth in Section 2.03(d).

"Money Market Absolute Rate Loan" means a loan to be made by a Bank pursuant to an Absolute Rate Auction.

"Money Market Lending Office" means, as to each Bank, its Domestic Lending Office or such other office, branch or affiliate of such Bank as it may hereafter designate as its Money Market Lending Office by notice to the Company and the Agent; provided that any Bank may from time to time by notice to the Company and the Agent designate separate Money Market Lending Offices for its Money Market LIBOR Loans, on the one hand, and its Money Market Absolute Rate Loans, on the other hand, in which case all references herein to the Money Market Lending Office of such Bank shall be deemed to refer to either or both of such offices, as the context may require.

"Money Market LIBOR Loan" means a loan to be made by a Bank pursuant to a LIBOR Auction (including such a loan bearing interest at the Prime Rate pursuant to Section 8.01(a)).

"Money Market Loan" means a Money Market LIBOR Loan or a Money Market Absolute Rate Loan.

"Money Market Margin" has the meaning set forth in Section 2.03 (d) .

"Money Market Quote" means an offer by a Bank to make a Money Market Loan in accordance with Section 2.03.

"Multiemployer Plan" means at any time an employee pension benefit plan within the meaning of Section 4001(a)(3) of ERISA to which any member of the ERISA Group is then making or accruing an obligation to make contributions or has within the preceding five plan years made contributions, including for these purposes any Person which ceased to be a member of the ERISA Group during such five year period.

"Notes" means promissory notes of a Borrower, substantially in the form of Exhibit A hereto, evidencing the obligation of such Borrower to repay the Loans made by it, and "Note" means any one of such promissory notes issued hereunder.

"Notice of Borrowing" means a Notice of Committed Borrowing (as defined in Section 2.02) or a Notice of Money Market Borrowing (as defined in Section 2.03(f)).

"Parent" means, with respect to any Bank, any Person controlling such Bank.

"Participant" has the meaning set forth in Section 11.06(b).

"PBGC" means the Pension Benefit Guaranty Corporation or any entity succeeding to any or all of its functions under ERISA.

"Person" means an individual, a corporation, a partnership, an association, a trust or any other entity or organization, including a government or political subdivision or an agency or instrumentality thereof.

"Plan" means at any time an employee pension benefit plan (other than a Multiemployer Plan) which is covered by Title IV of ERISA or subject to the minimum funding standards under Section 412 of the Internal Revenue Code and either (i) is maintained, or contributed to, by any member of the ERISA Group for employees of any member of the ERISA Group or (ii) has at any time within the preceding five years been maintained, or contributed to, by any Person which was at such time a member of the ERISA Group for employees of any Person which was at such time a member of the ERISA Group.

"Prime Rate" means the rate of interest publicly announced by Morgan Guaranty Trust Company of New York in New York City from time to time as its Prime Rate.

"Refunding Borrowing" means a Committed Borrowing which, after application of the proceeds thereof, results in no net increase in the outstanding principal amount of Committed Loans made by any Bank to any Borrower.

"Regulation U" means Regulation U of the Board of Governors of the Federal Reserve System, as in effect from time to time.

"Required Banks" means at any time Banks having at least 66 2/3% of the aggregate amount of the Commitments or, if the Commitments shall have been terminated, holding Notes evidencing at least 66 2/3% of the aggregate unpaid principal amount of the Loans.

"Restricted Payment" means any dividend or other distribution on any shares of the Company's capital stock (except dividends payable solely in shares of its capital stock).

"Revolving Credit Period" means the period from and including the Effective Date to but excluding the Termination Date.

"S&P" means Standard and Poor's Corporation.

"Subsidiary" means, as to any Person, any corporation or other entity of which at least a majority of the securities or other ownership interests having ordinary voting power for the election of directors or other persons performing similar functions are at the time owned directly or indirectly by such Person, provided that for the purpose of Articles IV and V (except when the term "Consolidated Subsidiary" is used) of this Agreement the term "Subsidiary" shall not include any corporation that is the subject of any Acquisition if the Company elects or designates less than a majority of the members of the board of directors of such corporation, and if such Subsidiary's assets are less than 15% of Consolidated Tangible Net Worth.

"Tangible Net Worth" means the excess of total assets over total liabilities, excluding, however, from the determination of total assets (i) goodwill; (ii) patents, copyrights and trademarks; (iii) trade names; (iv) licenses; (v) organizational expenses; and (vi) treasury stock.

"Termination Date" means March 15, 1996, or, if such day is not a Euro-Dollar Business Day, the next succeeding Euro-Dollar Business Day unless such Euro-Dollar Business Day falls in another calendar month, in which case the Termination Date shall be the next preceding Euro-Dollar Business Day.

"Total Liabilities" means at any time all indebtedness, obligations and liabilities of the Company and its Consolidated Subsidiaries, on a consolidated basis, which should be classified as liabilities of such corporations on a consolidated balance sheet, and in any event shall include (without duplication):

(1) all indebtedness, obligations and liabilities guaranteed by any Guaranty, and all indebtedness, obligations and liabilities secured by any mortgage, lien, assignment, pledge, security interest, charge or encumbrance upon or in property owned by the respective corporation, even though the respective corporation has not assumed or become liable for the payment of the same, to the extent that such indebtedness, indebtedness actually outstanding with respect to obligations and liabilities exceed \$4,000,000;

(2) the aggregate amount of reserves established on the books of the Company and its Consolidated Subsidiaries in respect of contingent liabilities and other contingencies, including contingent obligations to make payments under contracts; and

(3) contingent liabilities in excess of 20% of Consolidated Tangible Net Worth.

"Unfunded Liabilities" means, with respect to any Plan at any time, the amount (if any) by which (i) the present value of all benefits under such Plan exceeds (ii) the fair market value of all Plan assets allocable to such benefits (excluding any accrued but unpaid contributions), all determined as of the then most recent valuation date for such Plan, but only to the extent that such excess represents a potential liability of a member of the ERISA Group to the PBGC or any other Person under Title IV of ERISA.

"Usage Fee Rate" means (i) 0% per annum, for any date on which Level I Status, Level II Status, Level III or Level V Status exists and (ii) 1/8 of 1% per annum, for any date on which Level IV Status exists.

"Wholly-Owned Consolidated Subsidiary" means any Consolidated Subsidiary all of the shares of capital stock or other ownership interests of which (except directors, qualifying shares) are at the time directly or indirectly owned by the Company.

SECTION 1.02. Accounting Terms and Determinations. Unless otherwise specified herein, all accounting terms used herein shall be interpreted, all accounting determinations hereunder shall be made, and all financial statements required to be delivered hereunder shall be prepared in accordance with generally accepted accounting principles as in effect from time to time, applied on a basis consistent (except for changes concurred in by the Company's independent public accountants) with the most recent audited consolidated financial statements of the Company and its Consolidated Subsidiaries delivered to the Banks.

SECTION 1.03. Types of Borrowings. The term "Borrowing" denotes the aggregation of Loans of one or more Banks to be made to a single Borrower pursuant to Article II on a single date and for a single Interest Period. Borrowings are classified for purposes of this Agreement either by reference to the pricing of Loans comprising such Borrowing (e.g., a "Euro-Dollar Borrowing" is a Borrowing comprised of Euro-Dollar Loans) or by reference to the provisions of Article II under which participation therein is determined (i.e., a "Committed Borrowing" is a Borrowing under Section 2.01 in which all Banks participate in proportion to their Commitments, while a "Money Market Borrowing" is a Borrowing under Section 2.03 in which the Bank participants are determined on the basis of their bids in accordance therewith).

ARTICLE II

THE CREDITS

SECTION 2.01. Commitments to Lend. During the Revolving Credit Period each Bank severally agrees, on the terms and conditions set forth in this Agreement, to make loans to the Company or any Eligible Subsidiary pursuant to this Section from time to time in amounts such that the aggregate principal amount of Committed Loans by such Bank at any one time outstanding to all Borrowers shall not exceed the amount of its Commitment. Each Borrowing under this subsection (a) shall be in an aggregate principal amount of \$5,000,000 or any larger multiple of \$1,000,000 (except that any such Borrowing may be in the aggregate amount available in accordance with Section 3.02(b)) and shall be made from the several Banks ratably in proportion to their respective Commitments. Within the foregoing limits, a Borrower may borrow under this Section 2.01, repay, or to the extent permitted by Section 2.11, prepay Loans and reborrow at any time during the Revolving Credit Period under this Section 2.01.

SECTION 2.02. Notice of Committed Borrowings. The Borrower shall give the Agent notice (a "Notice of Committed Borrowing") not later than Noon (New York City time) on (x) the date of each Base Rate Borrowing, (y) the second Domestic Business Day before each CD Borrowing and (z) the third Euro-Dollar Business Day before each Euro-Dollar Borrowing, specifying:

- (i) the date of such Borrowing, which shall be a Domestic Business Day in the case of a Domestic Borrowing or a Euro-Dollar Business Day in the case of a Euro-Dollar Borrowing,
- (ii) the aggregate amount of such Borrowing,
- (iii) whether the Loans comprising such Borrowing are to be CD Loans, Base Rate Loans or Euro-Dollar Loans, and
- (iv) in the case of a Fixed Rate Borrowing, the duration of the Interest Period applicable thereto, subject to the provisions of the definition of Interest Period.

SECTION 2.03. Money Market Borrowings.

(a) The Money Market Option. In addition to Committed Borrowings pursuant to Section 2.01, unless Level V Status exists any Borrower may, as set forth in this Section, request the Banks during the Revolving Credit Period to make offers to make Money Market Loans to the Borrower. Unless Level V Status exists, the Banks may, but shall have no obligation to, make such offers and the Borrower may, but shall have no obligation to, accept any such offers in the manner set forth in this Section.

(b) Money Market Quote Request. When a Borrower wishes to request offers to make Money Market Loans under this Section, it shall transmit to the Agent by telex or facsimile transmission a Money Market Quote Request substantially in the form of Exhibit B hereto so as to be received no later than Noon (New York City time) on (y) the fifth Euro-Dollar Business Day prior to the date of Borrowing proposed therein, in the case of a LIBOR Auction or (y) the Domestic Business Day next preceding the date of Borrowing proposed therein, in the case of an Absolute Rate Auction (or, in either case, such other time or date as the Company and the Agent shall have mutually agreed and shall have notified to the Banks not later than the date of the Money Market Quote Request for the first LIBOR Auction or Absolute Rate Auction for which such change is to be effective) specifying:

(i) the proposed date of Borrowing, which shall be a Euro-Dollar Business Day in the case of a LIBOR Auction or a Domestic Business Day in the case of an Absolute Rate Auction,

(ii) the aggregate amount of such Borrowing, which shall be \$5,000,000 or a larger multiple of \$1,000,000,

(iii) the duration of the Interest Period applicable thereto, subject to the provisions of the definition of Interest Period, and

(iv) whether the Money Market Quotes requested are to set forth a Money Market Margin or a Money Market Absolute Rate.

The Borrower may request offers to make Money Market Loans for more than one Interest Period in a single Money Market Quote Request. No Money Market Quote Request shall be given within five Euro-Dollar Business Days (or such other number of days as the Company and the Agent may agree) of any other Money Market Quote Request.

(c) Invitation for Money Market Quotes. Promptly upon receipt of a Money Market Quote Request, the Agent shall send to the Banks by telex or facsimile transmission an Invitation for Money Market Quotes substantially in the form of Exhibit C hereto, which shall constitute an invitation by the Borrower to each Bank to submit Money Market Quotes offering to make the Money Market Loans to which such Money Market Quote Request relates in accordance with this Section.

(d) Submission and Contents of Money Market Quotes. (i) Each Bank may submit a Money Market Quote containing an offer or offers to make Money Market

Loans in response to any Invitation for Money Market Quotes. Each Money Market Quote must comply with the requirements of this subsection (d) and must be submitted to the Agent by telex or facsimile transmission at its offices specified in or pursuant to Section 11.01 not later than (x) 2:00 P.M. (New York City time) on the fourth Euro-Dollar Business Day prior to the proposed date of Borrowing, in the case of a LIBOR Auction or (y) 9:00 A.M. (New York City time) on the proposed date of Borrowing, in the case of an Absolute Rate Auction (or, in either case, such other time or date as the Company and the Agent shall have mutually agreed and shall have notified to the Banks not later than the date of the Money Market Quote Request for the first LIBOR Auction or Absolute Rate Auction for which such change is to be effective); provided that Money Market Quotes submitted by the Agent (or any affiliate of the Agent) in the capacity of a Bank may be submitted, and may only be submitted, if the Agent or such affiliate notifies the Borrower of the terms of the offer or offers contained therein not later than (x) one hour prior to the deadline for the other Banks, in the case of a LIBOR Auction or (y) 15 minutes prior to the deadline for the other Banks, in the case of an Absolute Rate Auction. Subject to Articles III and VI, any Money Market Quote so made shall be irrevocable except with the written consent of the Agent given on the instructions of the Borrower.

(ii) Each Money Market Quote shall be in substantially the form of Exhibit D hereto and shall in any case specify:

(A) the proposed date of Borrowing,

(B) the principal amount of the Money Market Loan for which each such offer is being made, which principal amount (w) may be greater than or less than the Commitment of the quoting Bank, (x) must be \$5,000,000 or a larger multiple of \$1,000,000, (y) may not exceed the principal amount of Money Market Loans for which offers were requested, and (z) may be subject to an aggregate limitation as to the principal amount of Money Market Loans for which offers being made by such quoting Bank may be accepted,

(C) in the case of a LIBOR Auction, the margin above or below the applicable London Interbank Offered Rate (the "Money Market Margin") offered for each such Money Market Loan, expressed as a percent-age (specified to the nearest 1/10,000th of 1%) to be added to or subtracted from such base rate,

(D) in the case of an Absolute Rate Auction, the rate of interest per annum (specified to the nearest 1/10,000th of 1%) (the "Money Market Absolute Rate") offered for each such Money Market Loan, and

(E) the identity of the quoting Bank.

A Money Market Quote may set forth up to five separate offers by the quoting Bank with respect to each Interest Period specified in the related Invitation for Money Market Quotes.

(iii) Any Money Market Quote shall be disregarded if it:

(A) is not substantially in conformity with Exhibit D hereto or does not specify all of the information required by subsection (d) (ii);

(B) contains qualifying, conditional or similar language;

(C) proposes terms other than or in addition to those set forth in the applicable Invitation for Money Market Quotes; or

(D) arrives after the time set forth in subsection (d) (i).

(e) Notice to Borrower. The Agent shall promptly notify the Borrower of the terms (x) of any Money Market Quote submitted by a Bank that is in accordance with subsection (d) and (y) of any Money Market Quote that amends, modifies or is otherwise inconsistent with a previous Money Market Quote submitted by such Bank with respect to the same Money Market Quote Request. Any such subsequent Money Market Quote shall be disregarded by the Agent unless such subsequent Money Market Quote is submitted solely to correct a manifest error in such former Money Market Quote. The Agent's notice to the Borrower shall specify (A) the aggregate principal amount of Money Market Loans for which offers have been received for each Interest Period specified in the related Money Market Quote Request, (B) the respective principal amounts and Money Market Margins or Money Market Absolute Rates, as the case may be, so offered and (C) if applicable, limitations on the aggregate principal amount of Money Market Loans for which offers in any single Money Market Quote may be accepted.

(f) Acceptance and Notice by Borrower. Not later than 10:00 A.M. (New York City time) on (x) the third Euro-Dollar Business Day prior to the proposed date of Borrowing, in the case of a LIBOR Auction or (y) the proposed date of Borrowing, in the case of an Absolute Rate Auction (or, in either case, such other time or date as the Company and the Agent shall have mutually agreed and shall have notified to the Banks not later than the date of the Money Market Quote Request for the first LIBOR Auction or Absolute Rate Auction for which such change is to be effective), the Borrower shall notify the Agent of its acceptance or non-acceptance of the offers so notified to it pursuant to subsection (e). In the case of acceptance, such notice (a "Notice of Money Market Borrowing") shall specify the aggregate principal amount of offers for each Interest Period that are accepted. The Borrower may accept any Money Market Quote in whole or in part; provided that:

(i) the aggregate principal amount of each Money Market Borrowing may not exceed the applicable amount set forth in the related Money Market Quote Request,

(ii) the principal amount of each Money Market Borrowing must be \$5,000,000 or a larger multiple of \$1,000,000,

(iii) acceptance of offers may only be made on the basis of ascending Money Market Margins or Money Market Absolute Rates, as the case may be, and

(iv) the Borrower may not accept any offer that is described in subsection (d) (iii) or that otherwise fails to comply with the requirements of this Agreement.

(g) Allocation by Agent. If offers are made by two or more Banks with the same Money Market Margins or Money Market Absolute Rates, as the case may be, for a greater aggregate principal amount than the amount in respect of which such offers are accepted for the related Interest Period, the principal amount of Money Market Loans in respect of which such offers are accepted shall be allocated by the Agent among such Banks as nearly as possible (in multiples of \$1,000,000, as the Agent may deem appropriate) in proportion to the aggregate principal amounts of such offers. Determinations by the Agent of the amounts of Money Market Loans shall be conclusive in the absence of manifest error.

SECTION 2.04. Notice to Banks; Funding of Loans.

(a) Upon receipt of a Notice of Borrowing, the Agent shall promptly notify each Bank of the contents thereof and of such Bank's share (if any) of such Borrowing and such Notice of Borrowing shall not thereafter be revocable by the Borrower.

(b) Not later than 1:00 P.M. (New York City time) on the date of each Borrowing, each Bank participating therein shall (except as provided in subsection (c) of this Section) make available its share of such Borrowing, in Federal or other funds immediately available in New York City, to the Agent at its address specified in or pursuant to Section 11.01. Unless the Agent determines that any applicable condition specified in Article III has not been satisfied, the Agent will make the funds so received from the Banks available to the Borrower at the Agent's aforesaid address or at such other location as may be agreed upon in writing between the Borrower and the Agent.

(c) If any Bank makes a new Loan hereunder to a Borrower on a day on which such Borrower is to repay all or any part of an outstanding Loan from such Bank, such Bank shall apply the proceeds of its new Loan to make such repayment and only an amount equal to the difference (if any) between the amount being borrowed by such Borrower and the amount being repaid shall be made available by such Bank to the Agent as provided in subsection (b) of this Section, or remitted by such Borrower to the Agent as provided in Section 2.12, as the case may be.

(d) Unless the Agent shall have received notice from a Bank prior to the date of any Borrowing that such Bank will not make available to the Agent such Bank's share of such Borrowing, the Agent may assume that such Bank has made such share available to the Agent on the date of such Borrowing in accordance with subsections (b) and (c) of this Section 2.04 and the Agent may, in reliance upon such assumption, make available to the Borrower on such date a corresponding amount. If and to the extent that such Bank shall not have so made such share available to the Agent, such Bank and the Borrower severally agree to repay to the Agent forthwith on demand such corresponding amount together with interest thereon, for each day from the date such amount is made available to the Borrower until the date such amount is repaid to the Agent, at (i) in the case of the Borrower, a rate per annum equal to the higher of the Federal Funds Rate and the interest

rate applicable thereto pursuant to Section 2.07 and (ii) in the case of such Bank, the Federal Funds Rate; provided that upon any Bank's failure to make such share available to the Agent, the Agent may make a demand upon the Borrower for payment of all amounts due under this subsection with respect to such failure only if (A) the Agent has first made such a demand upon such Bank and (B) such Bank has failed to immediately pay the amounts so demanded. If such Bank shall repay to the Agent such corresponding amount, such amount so repaid shall constitute such Bank's Loan included in such Borrowing for purposes of this Agreement.

SECTION 2.05. Notes. (a) The Loans of each Bank to each Borrower shall be evidenced by a single Note of such Borrower payable to the order of such Bank for the account of its Applicable Lending office in an amount equal to the aggregate unpaid principal amount of such Bank's Loans to such Borrower.

(b) Each Bank may, by notice to a Borrower and the Agent, request that its Loans of a particular type to such Borrower be evidenced by a separate Note of such Borrower in an amount equal to the aggregate unpaid principal amount of such Loans. Each such Note shall be in substantially the form of Exhibit A hereto with appropriate modifications to reflect the fact that it evidences solely Loans of the relevant type. Each reference in this Agreement to a "Note" or the "Notes" of such Bank shall be deemed to refer to and include any or all of such Notes, as the context may require.

(c) Upon receipt of each Bank's Note pursuant to Section 3.01(b) or 3.03(a), the Agent shall mail such Note to such Bank. Each Bank shall record the date, amount, type and maturity of each Loan made by it to each Borrower and the date and amount of each payment of principal made with respect thereto, and prior to any transfer of its Note of any Borrower shall endorse on the schedule forming a part thereof appropriate notations to evidence the foregoing information with respect to each such Loan to such Borrower then outstanding; provided that the failure of any Bank to make any such recordation or endorsement shall not affect the obligations of any Borrower hereunder or under the Notes. Each Bank is hereby irrevocably authorized by each Borrower so to endorse its Notes and to attach to and make a part of any Note a continuation of any such schedule as and when required.

SECTION 2.06. Maturity of Loans. Each Loan included in any Borrowing shall mature, and the principal amount thereof shall be due and payable, on the last day of the Interest Period applicable to such Borrowing.

SECTION 2.07. Interest Rates. (a) Each Base Rate Loan shall bear interest on the outstanding principal amount thereof, for each day from the date such Loan is made until it becomes due, at a rate per annum equal to the Base Rate for such day. Such interest shall be payable for each Interest Period on the last day thereof. Any overdue principal of or interest on any Base Rate Loan shall bear interest, payable on demand, for each day until paid at a rate per annum equal to the sum of 2% plus the rate otherwise applicable to Base Rate Loans for such day.

(b) Each CD Loan shall bear interest on the outstanding principal amount thereof, for the Interest Period applicable thereto, at a rate per annum equal to the sum of the CD Margin plus the applicable Adjusted CD Rate; provided that if any CD Loan or any portion thereof shall, as a result of clause (2) (b) (i) of the definition of Interest Period, have an Interest Period of less than 30 days, such portion shall bear interest during such Interest Period at the rate applicable to Base Rate Loans during such period. Such interest shall be payable for each Interest Period on the last day thereof and, if such Interest Period is longer than 90 days, at intervals of 90 days after the first day thereof. Any overdue principal of or interest on any CD Loan shall bear interest, payable on demand, for each day until paid at a rate per annum equal to the sum of 2% plus the higher of (i) the sum of the CD Margin plus the Adjusted CD Rate applicable to such Loan and (ii) the rate applicable to Base Rate Loans for such day.

"CD Margin" means (i) 9/16 of 1% per annum for any date on which Level I Status exists, (ii) 5/8 of 1% per annum for any date on which Level II Status exists, (iii) 11/16 of 1% per annum for any date on which Level III Status exists, (iv) 3/4 of 1% per annum for any date on which Level IV Status exists and (v) 1-3/16% per annum for any date on which Level V Status exists.

The "Adjusted CD Rate" applicable to any Interest Period means a rate per annum determined pursuant to the following formula:

$$ACDR = \frac{[CDBR]}{[1.00 - DRP]} + AR$$

ACDR = Adjusted CD Rate
 CDBR = CD Base Rate
 DRP = Domestic Reserve Percentage
 AR = Assessment Rate

* The amount in brackets being rounded upward, if necessary, to the next higher 1/100 of 1%

The "CD Base Rate" applicable to any Interest Period is the rate of interest determined by the Agent to be the average (rounded upward, if necessary, to the next higher 1/100 of 1%) of the prevailing rates per annum, bid at 10:00 A.M. (New York City time) (or as soon thereafter as practicable) on the first day of such Interest Period by two or more New York certificate of deposit dealers of recognized standing for the purchase at face value from Morgan Guaranty Trust Company of New York of its certificates of deposit in an amount comparable to the principal amount of the CD Loan of Morgan Guaranty Trust Company of New York to which such Interest Period applies and having a maturity comparable to such Interest Period.

"Domestic Reserve Percentage" means for any day that percentage (expressed as a decimal) which is in effect on such day, as prescribed by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirement (including

without limitation any basic, supplemental or emergency reserves) for a member bank of the Federal Reserve System in New York City with deposits exceeding five billion dollars in respect of new non-personal time deposits in dollars in New York City having a maturity comparable to the related Interest Period and in an amount of \$100,000 or more. The Adjusted CD Rate shall be adjusted automatically on and as of the effective date of any change in the Domestic Reserve Percentage.

"Assessment Rate" means for any day the annual assessment rate in effect on such day which is payable by a member of the Bank Insurance Fund classified as adequately capitalized and within supervisory subgroup "A" (or a comparable successor assessment risk classification) within the meaning of 12 C.F.R. Section 327.3(d) (or any successor provision) to the Federal Deposit Insurance Corporation (or any successor) for such Corporation's (or such successor's) insuring time deposits at offices of such institution in the United States. The Adjusted CD Rate shall be adjusted automatically on and as of the effective date of any change in the Assessment Rate.

(c) Each Euro-Dollar Loan shall bear interest on the outstanding principal amount thereof, for the Interest Period applicable thereto, at a rate per annum equal to the sum of the Euro-Dollar Margin plus the applicable Adjusted London Interbank Offered Rate. Such interest shall be payable for each Interest Period on the last day thereof and, if such Interest Period is longer than three months, at intervals of three months after the first day thereof.

"Euro-Dollar Margin" means (i) 7/16 of 1% per annum for any date on which Level I Status exists, (ii) 1/2 of 1% per annum for any date on which Level II Status exists, (iii) 9/16 of 1% per annum for any date on which Level III Status exists, (iv) 5/8 of 1% per annum for any date on which Level IV Status exists and (v) 1-1/16% per annum for any date on which Level V Status exists.

The "Adjusted London Interbank Offered Rate" applicable to any Interest Period means a rate per annum equal to the quotient obtained (rounded upward, if necessary, to the next higher 1/100 of 1%) by dividing (i) the applicable London Interbank Offered Rate by (ii) 1.00 minus the Euro-Dollar Reserve Percentage.

The "London Interbank Offered Rate" applicable to any Interest Period means the average (rounded upward, if necessary, to the next higher 1/16 of 1%) of the respective rates per annum at which deposits in dollars are offered to Morgan Guaranty Trust Company of New York in the London interbank market at approximately 11:00 A.M. (London time) two Euro-Dollar Business Days before the first day of such Interest Period in an amount approximately equal to the principal amount of the Euro-Dollar Loan of Morgan Guaranty Trust Company of New York to which such Interest Period is to apply and for a period of time comparable to such Interest Period.

"Euro-Dollar Reserve Percentage" means for any day that percentage (expressed as a decimal) which is in effect on such day, as prescribed by the Board of Governors of the Federal Reserve System (or any successor) for determining the maximum reserve requirement for a member bank of the Federal Reserve System in New York City with deposits exceeding

five billion dollars in respect of "Eurocurrency liabilities" (or in respect of any other category of liabilities which includes deposits by reference to which the interest rate on Euro-Dollar Loans is determined or any category of extensions of credit or other assets which includes loans by a non-United States office of any Bank to United States residents). The Adjusted London Interbank Offered Rate shall be adjusted automatically on and as of the effective date of any change in the Euro-Dollar Reserve Percentage.

(d) Any overdue principal of or interest on any Euro-Dollar Loan shall bear interest, payable on demand, for each day from and including the date payment thereof was due to but excluding the date of actual payment, at a rate per annum, equal to the sum of 2% plus the higher of (i) the sum of the Euro-Dollar Margin plus the Adjusted London Interbank Offered Rate applicable to such Loan and (ii) the Euro-Dollar Margin plus the quotient obtained (rounded upward, if necessary, to the next higher 1/100 of 1%) by dividing (x) the average (rounded upward, if necessary, to the next higher 1/16 of 1%) of the respective rates per annum at which one day (or, if such amount due remains unpaid more than three Euro-Dollar Business Days, then for such other period of time not longer than six months as the Agent may select) deposits in dollars in an amount approximately equal to such overdue payment due to Morgan Guaranty Trust Company of New York are offered to Morgan Guaranty Trust Company of New York in the London interbank market for the applicable period determined as provided above by (y) 1.00 minus the Euro-Dollar Reserve Percentage (or, if the circumstances described in clause (a) or (b) of Section 8.01 shall exist, at a rate per annum equal to the sum of 2% plus the rate applicable to Base Rate Loans for such day).

(e) Subject to Section 8.01(a), each Money Market LIBOR Loan shall bear interest on the outstanding principal amount thereof, for the Interest Period applicable thereto, at a rate per annum equal to the sum of the London Interbank Offered Rate for such Interest Period (determined in accordance with Section 2.07(c) as if the related Money Market LIBOR Borrowing were a Committed Euro-Dollar Borrowing) plus (or minus) the Money Market Margin quoted by the Bank making such Loan in accordance with Section 2.03. Each Money Market Absolute Rate Loan shall bear interest on the outstanding principal amount thereof, for the Interest Period applicable thereto, at a rate per annum equal to the Money Market Absolute Rate quoted by the Bank making such Loan in accordance with Section 2.03. Such interest shall be payable for each Interest Period on the last day thereof and, if such Interest Period is longer than three months, at intervals of three months after the first day thereof. Any overdue principal of or interest on any Money Market Loan shall bear interest, payable on demand, for each day until paid at a rate per annum equal to the sum of 2% plus the Prime Rate for such day.

(f) The Agent shall determine each interest rate applicable to the Loans hereunder. The Agent shall give prompt notice to the Borrower and the participating Banks by telex or cable of each rate of interest so determined, and its determination thereof shall be conclusive in the absence of manifest error.

SECTION 2.08. Fees.

(a) Commitment Fee. During the Revolving Credit Period, the Company shall pay to the Agent for the account of the Banks ratably in proportion to their Commitments a commitment fee at the Commitment Fee Rate on the daily amount by which the aggregate amount of the Commitments exceeds the aggregate outstanding principal amount of the Loans. Such commitment fee shall accrue from and including the date hereof to but excluding the Termination Date.

(b) Facility Fee. The Company shall pay to the Agent for the account of the Banks ratably a facility fee at the Facility Fee Rate. Such facility fee shall accrue (i) from and including the date hereof to but excluding the Termination Date, on the daily aggregate amount of the Commitments (whether used or unused) and (ii) from and including the Termination Date to but excluding the date the Loans shall be repaid in their entirety, on the daily aggregate outstanding principal amount of the Loans.

(c) Administrative and Auction Fees. The Company shall pay to the Agent for its own account administrative and auction fees in the amounts previously agreed between them.

(d) Payments. Accrued fees under subsections (a) and (b) of this Section shall be payable quarterly on each March 15, June 15, September 15 and December 15, and upon the date of termination of the Commitments in their entirety (and, if later, the date the Loans shall be repaid in their entirety).

(e) Usage Fee. If the daily average aggregate outstanding amount of Committed Loans during any calendar quarter is greater than 25% of the daily average aggregate amount of Commitments (whether drawn or undrawn) during such quarter, then the Company shall pay to the Agent for the account of the Banks ratably in proportion to their daily average outstanding amount of Committed Loans during such calendar quarter a usage fee at the Usage Fee Rate on such daily average aggregate outstanding amount of Committed Loans. Such usage fee shall be payable in arrears on the fifteenth day after the last day of the relevant calendar quarter.

SECTION 2.09. Optional Termination or Reduction of Commitments. During the Revolving Credit Period, the Company may, upon at least three Domestic Business Days', notice to the Agent, (i) terminate the Commitments at any time, if no Loans are outstanding at such time or (ii) ratably reduce from time to time by an aggregate amount of at least \$10,000,000, the aggregate amount of the Commitments in excess of the aggregate outstanding principal amount of the Loans.

SECTION 2.10. Mandatory Termination of Commitments. The Commitments shall terminate on the Termination Date, and any Loans then outstanding (together with accrued interest thereon) shall be due and payable on such date.

SECTION 2.11. Optional Prepayments.

(a) The Borrower may, upon at least one Domestic Business Day's notice to the Agent, prepay any Base Rate Borrowing (or any Money Market Borrowing bearing interest at the Prime Rate pursuant to Section 8.01(a)) in whole at any time, or from time to time in part in amounts aggregating at least \$5,000,000, by paying the principal amount to be prepaid together with accrued interest thereon to the date of prepayment. Each such optional prepayment shall be applied to prepay ratably the Loans of the several Banks included in such Borrowing.

(b) Except as provided in Section 8.02, no Borrower may prepay all or any portion of the principal amount of any Fixed Rate Loan prior to the maturity thereof.

(c) Upon receipt of a notice of prepayment pursuant to this Section, the Agent shall promptly notify each Bank of the contents thereof and of such Bank's ratable share (if any) of such prepayment and such notice shall not thereafter be revocable by the Borrower.

SECTION 2.12. General Provisions as to Payments.

(a) The Borrowers shall make each payment of principal of, and interest on, the Loans and of fees hereunder, not later than 2:00 P.M. (New York City time) on the date when due, in Federal or other funds immediately available in New York City, to the Agent at its address referred to in Section 11.01. The Agent will promptly distribute to each Bank its ratable share of each such payment received by the Agent for the account of the Banks. Whenever any payment of principal of, or interest on, the Domestic Loans or of fees shall be due on a day which is not a Domestic Business Day, the date for payment thereof shall be extended to the next succeeding Domestic Business Day. Whenever any payment of principal of, or interest on, the Euro-Dollar Loans shall be due on a day which is not a Euro-Dollar Business Day, the date for payment thereof shall be extended to the next succeeding Euro-Dollar Business Day unless such Euro-Dollar Business Day falls in another calendar month, in which case the date for payment thereof shall be the next preceding Euro-Dollar Business Day. Whenever any payment of principal of, or interest on, the Money Market Loans shall be due on a day which is not a Euro-Dollar Business Day, the date for payment thereof shall be extended to the next succeeding Euro-Dollar Business Day. If the date for any payment of principal is extended by operation of law or otherwise, interest thereon shall be payable for such extended time.

(b) Unless the Agent shall have received notice from a Borrower prior to the date on which any payment is due from such Borrower to the Banks hereunder that such Borrower will not make such payment in full, the Agent may assume that such Borrower has made such payment in full to the Agent on such date and the Agent may, in reliance upon such assumption, cause to be distributed to each Bank on such due date an amount equal to the amount then due such Bank. If and to the extent that such Borrower shall not have so made such payment, each Bank shall repay to the Agent forthwith on demand such amount distributed to such Bank together with interest thereon, for each day from

the date such amount is distributed to such Bank until the date such Bank repays such amount to the Agent, at the Federal Funds Rate.

SECTION 2.13. Funding Losses. If a Borrower makes any payment of principal with respect to any Fixed Rate Loan (pursuant to Article VI or VIII or otherwise) on any day other than the last day of the Interest Period applicable thereto, or the end of an applicable period fixed pursuant to Section 2.07(d), or if a Borrower fails to borrow any Fixed Rate Loans after notice has been given to any Bank in accordance with Section 2.04(a), the Company shall reimburse each Bank within 15 days after demand for any resulting loss or expense incurred by it (or by an existing or prospective Participant in the related Loan), including (without limitation) any loss incurred in obtaining, liquidating or employing deposits from third parties, but excluding loss of margin for the period after any such payment or failure to borrow, provided that such Bank shall have delivered to the Company a certificate as to the amount of such loss or expense, which certificate shall be conclusive in the absence of manifest error.

SECTION 2.14. Computation of Interest and Fees. Interest based on the Prime Rate hereunder shall be computed on the basis of a year of 365 days (or 366 days in a leap year) and paid for the actual number of days elapsed (including the first day but excluding the last day). All other interest and fees shall be computed on the basis of a year of 360 days and paid for the actual number of days elapsed (including the first day but excluding the last day).

SECTION 2.15. Withholding Tax Exemption. At least five Domestic Business Days prior to the first date on which interest or fees are payable hereunder for the account of any Bank, each Bank that is not incorporated under the laws of the United States of America or a state thereof agrees that it will deliver to each of the Company and the Agent two duly completed copies of United States Internal Revenue Service Form 1001 or 4224, certifying in either case that such Bank is entitled to receive payments from the Company under this Agreement and the Notes without deduction or withholding of any United States federal income taxes. Each Bank which so delivers a Form 1001 or 4224 further undertakes to deliver to each of the Company and the Agent two additional copies of such form (or a successor form) on or before the date that such form expires or becomes obsolete or after the occurrence of any event requiring a change in the most recent form so delivered by it, and such amendments thereto or extensions or renewals thereof as may be reasonably requested by the Company or the Agent, in each case certifying that such Bank is entitled to receive payments from the Company under this Agreement and the Notes without deduction or withholding of any United States federal income taxes, unless an event (including without limitation any change in treaty, law or regulation) has occurred prior to the date on which any such delivery would otherwise be required which renders all such forms inapplicable or which would prevent such Bank from duly completing and delivering any such form with respect to it and such Bank advises the Company and the Agent that it is not capable of receiving such payments without any deduction or withholding of United States federal income tax.

SECTION 2.16. Judgment Currency. If for the purpose of obtaining judgment in any court it is necessary to convert a sum due from any Borrower hereunder or under any of the Notes in United States dollars ("dollars") into another currency, the parties hereto agree, to the fullest extent that they may effectively do so, that the rate of exchange used shall be that at which in accordance with normal banking procedures the Agent could purchase dollars with such other

currency at the Agent's New York office on the Domestic Business Day preceding that on which final judgment is given. The obligations of each Borrower in respect of any sum due to any Bank or the Agent hereunder or under any Note shall, notwithstanding any judgment in a currency other than dollars, be discharged only to the extent that on the Domestic Business Day following receipt by such Bank or the Agent (as the case may be) of any sum adjudged to be so due in such other currency such Bank or the Agent (as the case may be) may in accordance with normal banking procedures purchase dollars with such other currency; if the amount of dollars so purchased is less than the sum originally due to such Bank or the Agent, as the case may be, in dollars, each Borrower agrees, to the fullest extent that it may effectively do so, as a separate obligation and notwithstanding any such judgment, to indemnify such Bank or the Agent, as the case may be, against such loss, and if the amount of dollars so purchased exceeds (a) the sum originally due to any Bank or the Agent, as the case may be, and (b) any amounts shared with other Banks as a result of allocations of such excess as a disproportionate payment to such Bank under Section 11.04, such Bank or the Agent, as the case may be, agrees to remit such excess to the appropriate Borrower.

SECTION 2.17. Foreign Withholding Taxes and Other Costs.

(a) All payments by an Eligible Subsidiary of principal of and interest on its Notes and of all other amounts payable under this Agreement are payable without deduction for or on account of any present or future taxes, duties or other charges levied or imposed by the government of any jurisdiction outside the United States of America or by any political sub-division or taxing authority thereof or therein through withholding or deduction with respect to any such payments. If any such taxes, duties or other charges are so levied or imposed, such Eligible Subsidiary will pay additional interest or will make additional payments in such amounts so that every net payment of principal of and interest on its Notes and of all other amounts payable by it under this Agreement, after withholding or deduction for or on account of any such present or future taxes, duties or other charges, will not be less than the amount provided for herein. Such Eligible Subsidiary shall furnish promptly to the Agent official receipts evidencing such withholding or deduction.

(b) If the cost to any Bank of making or maintaining any Loan to an Eligible Subsidiary is increased, or the amount of any sum received or receivable by any Bank (or its Applicable Lending Office) is reduced by an amount deemed by such Bank to be material, by reason of the fact that such Eligible Subsidiary is incorporated in, or conducts business in, a jurisdiction outside the United States of America, the Company shall indemnify such Bank for such increased cost or reduction within 15 days after demand by such Bank (with a copy to the Agent). A certificate of such Bank claiming compensation under this subsection (b) and setting forth the additional amount or amounts to be paid to it hereunder shall be conclusive in the absence of manifest error.

(c) Each Bank will promptly notify the Company and the Agent of any event of which it has knowledge that will entitle such Bank to additional interest or payments pursuant to subsection (b) and will designate a different Applicable Lending Office, if, in the judgment of such Bank, such designation will avoid the need for, or reduce the amount of, such compensation and will not be otherwise disadvantageous to such Bank.

ARTICLE III

CONDITIONS

SECTION 3.01. Effectiveness. This Agreement shall become effective on the date that each of the following conditions shall have been satisfied (or waived in accordance with Section 11.05):

(a) receipt by the Agent of counterparts hereof signed by each of the Company, the Banks and the Agent (or, in the case of any party as to which an executed counterpart shall not have been received, receipt by the Agent in form satisfactory to it of telegraphic, telex or other written confirmation from such party of execution of a counterpart hereof by such party);

(b) receipt by the Agent for the account of each Bank of a duly executed Note of the Company dated on or before the Effective Date complying with the provisions of Section 2.05;

(c) receipt by the Agent of an opinion of William A. Wise, Jr., Assistant General Counsel of the Company, substantially in the form of Exhibit E hereto and covering such additional matters relating to the transactions contemplated hereby as the Required Banks may reasonably request;

(d) receipt by the Agent of an opinion of Davis Polk & Wardwell, special counsel for the Agent, substantially in the form of Exhibit F hereto and covering such additional matters relating to the transactions contemplated hereby as the Required Banks may reasonably request;

(e) receipt by the Agent of all fees payable under Section 2.08(c);

(f) receipt by the Agent of evidence satisfactory to it that the commitments of the banks under the \$80,000,000 Credit Agreement dated as of December 19, 1990, as amended, among the Company and the banks and agent listed therein shall have been terminated and all amounts due and payable under such agreement shall have been paid; and

(g) receipt by the Agent of all documents it may reasonably request relating to the existence of the Company, the corporate authority for and the validity of this Agreement and the Notes, and any other matters relevant hereto, all in form and substance satisfactory to the Agent;

provided that this Agreement shall not become effective or be binding on any party hereto unless all of the foregoing conditions are satisfied not later than March 26, 1993. The Agent shall promptly notify the Company and the Banks of the Effective Date, and such notice shall be conclusive and binding on all parties hereto.

SECTION 3.02. Borrowings. The obligation of any Bank to make a Loan on the occasion of any Borrowing is subject to the satisfaction of the following conditions:

(a) receipt by the Agent of a Notice of Borrowing as required by Section 2.02 or 2.03, as the case may be;

(b) the fact that, immediately before and after such Borrowing, the aggregate outstanding principal amount of the Loans will not exceed the aggregate amount of the Commitments;

(c) the fact that, immediately before and after such Borrowing, no Default shall have occurred and be continuing; and

(d) the fact that the representations and warranties of the Borrower contained in this Agreement (except, in the case of a Refunding Borrowing, the representations and warranties set forth in Sections 4.04(c) and 4.05 as to any matter which has theretofore been disclosed in writing by the Company to the Banks) shall be true on and as of the date of such Borrowing.

Each Borrowing hereunder shall be deemed to be a representation and warranty by the Borrower on the date of such Borrowing as to the facts specified in clauses (b), (c) and (d) of this Section.

SECTION 3.03. First Borrowing by Each Eligible Subsidiary. The obligation of each Bank to make a Loan on the occasion of the first Borrowing by each Eligible Subsidiary is subject to the satisfaction of the following further conditions:

(a) receipt by the Agent for the account of each Bank of a duly executed Note of such Eligible Subsidiary, dated on or before the date of such Borrowing complying with the provisions of Section 2.05;

(b) receipt by the Agent of an opinion of counsel for such Eligible Subsidiary acceptable to the Agent, substantially in the form of Exhibit I hereto and covering such additional matters relating to the transactions contemplated hereby as the Required Banks may reasonably request; and

(c) receipt by the Agent of all documents which it may reasonably request relating to the existence of such Eligible Subsidiary, the corporate authority for and the validity of the Election to Participate of such Eligible Subsidiary, this Agreement and the Notes of such Eligible Subsidiary, and any other matters relevant thereto, all in form and substance satisfactory to the Agent.

The opinion referred to in clause (b) above shall be dated no more than five Euro-Dollar Business Days before the date of the first Borrowing by such Eligible Subsidiary hereunder.

ARTICLE IV

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company represents and warrants that:

SECTION 4.01. Corporate Existence and Power. The Company is a corporation duly incorporated, validly existing and in good standing under the laws of the Commonwealth of Massachusetts, and has all corporate powers and all material governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted.

SECTION 4.02. Corporate and Governmental Authorization; No Contravention. The execution, delivery and performance by the Company of this Agreement and its Notes are within the Company's corporate powers, have been duly authorized by all necessary corporate action, require no action by or in respect of, or filing with, any governmental body, agency or official and do not contravene, or constitute a default under, any provision of applicable law or regulation or of the articles of organization or by-laws of the Company or of any agreement, judgment, injunction, order, decree or other instrument binding upon the Company or result in the creation or imposition of any Lien on any asset of the Company or any of its Subsidiaries.

SECTION 4.03. Binding Effect. This Agreement constitutes a valid and binding agreement of the Company and its Notes, when executed and delivered in accordance with this Agreement, will constitute valid and binding obligations of the Company.

SECTION 4.04. Financial Information.

(a) The consolidated and consolidating balance sheet of the Company and its Consolidated Subsidiaries as of October 31, 1992 and the related consolidated and consolidating statements of income, cash flow and stockholders' equity for the fiscal year then ended, in the case of the consolidated statements reported on by Ernst & Young and set forth in the Company's 1992 Form 10-K, copies of which has been delivered to each of the Banks, fairly present, in conformity with generally accepted accounting principles, the financial position of the Company and its Consolidated Subsidiaries as of such date and their results of operations and cash flows for such fiscal year.

(b) The unaudited consolidated and consolidating balance sheet of the Company and its Consolidated Subsidiaries as of January 30, 1993 and the related unaudited consolidated statements of income, cash flow and stockholders' equity for the three months then ended, copies of which have been delivered to each of the Banks, fairly present, in conformity with generally accepted accounting principles applied on a basis consistent with the financial statements referred to in subsection (a) of this Section, the financial position of the Company and its Consolidated Subsidiaries as of such date and their results of operations and cash flows for such three month period (subject to normal year-end adjustments).

(c) Since January 30, 1993 there has been no material adverse change in the business, financial position, results of operations or prospects of the Company and its Consolidated Subsidiaries, considered as a whole.

SECTION 4.05. Litigation. There is no action, suit or proceeding pending against, or to the knowledge of the Company threatened against or affecting, the Company or any of its Subsidiaries before any court or arbitrator or any governmental body, agency or

official in which there is a reasonable possibility of an adverse decision which could materially adversely affect the business, consolidated financial position or consolidated results of operations of the Company and its Consolidated Subsidiaries or which in any manner draws into question the validity of this Agreement or the Notes.

SECTION 4.06. Compliance with ERISA. Each member of the ERISA Group has fulfilled its obligations under the minimum funding standards of ERISA and the Internal Revenue Code with respect to each Plan and is in compliance in all material respects with the presently applicable provisions of ERISA and the Internal Revenue Code with respect to each Plan. No member of the ERISA Group has (i) sought a waiver of the minimum funding standard under Section 412 of the Internal Revenue Code in respect of any Plan, (ii) failed to make any contribution or payment to any Plan or Multiemployer Plan or in respect of any Benefit Arrangement, or made any amendment to any Plan or Benefit Arrangement, which has resulted or could result in the imposition of a Lien or the posting of a bond or other security under ERISA or the Internal Revenue Code or (iii) incurred any liability under Title IV of ERISA other than a liability to the PBGC for premiums under Section 4007 of ERISA.

SECTION 4.07. Environmental Matters. In the ordinary course of its business, the Company conducts an ongoing review of the effect of Environmental Laws on the business, operations and properties of the Company and its Subsidiaries, in the course of which it identifies and evaluates associated liabilities and costs (including, without limitation, any capital or operating expenditures required for clean-up or closure of properties presently or previously owned, any capital or operating expenditures required to achieve or maintain compliance with environmental protection standards imposed by law or as a condition of any license, permit or contract, any related constraints on operating activities, including any periodic or permanent shutdown of any facility or reduction in the level of or change in the nature of operations conducted thereat and any actual or potential liabilities to third parties, including employees, and any related costs and expenses). On the basis of this review, the Company has reasonably concluded that Environmental Laws are unlikely to have a material adverse effect on the business, financial condition, results of operations or prospects of the Company and its Consolidated Subsidiaries, considered as a whole.

SECTION 4.08. Taxes. United States Federal income tax returns of the Company and its Subsidiaries have been examined and closed through the fiscal year ended November 3, 1990. The Company and its Subsidiaries have filed all United States Federal income tax returns and all other material tax returns which are required to be filed by them and have paid all taxes due pursuant to such returns or pursuant to any assessment received by the Company or any Subsidiary. The charges, accruals and reserves on the books of the Company and its Subsidiaries in respect of taxes or other governmental charges are, in the opinion of the Company, adequate.

SECTION 4.09. Subsidiaries. Each of the Company's corporate Subsidiaries is a corporation duly incorporated, validly existing and in good standing under the laws of its jurisdiction of incorporation, and has all corporate powers and all material governmental licenses, authorizations, consents and approvals required to carry on its business as now conducted.

SECTION 4.10. Ownership and Liens. Each of the Company and its Consolidated Subsidiaries has title to, or valid leasehold interests in, all of its properties and assets, real and personal, including the properties and assets, and leasehold interests reflected in the financial statements referred to in Section 4.04 (other than any properties or assets disposed of in the ordinary course of business), and none of the properties and assets owned by the Company or any of its Subsidiaries and none of its leasehold interests is subject to any Lien, except as disclosed in such financial statements or as may be permitted hereunder.

SECTION 4.11. Subsidiaries and Ownership of Stock. Schedule I is a complete and accurate list of the Subsidiaries of the Company, showing the jurisdiction of incorporation or organization of each Subsidiary and showing the percentage of the Company's ownership of the outstanding stock or other interest of each such Subsidiary. All of the outstanding capital stock or other interest of each such Subsidiary owned by the Company has been validly issued, is fully paid and nonassessable and is owned by the Company free and clear of all Liens.

SECTION 4.12. Credit Arrangements. Schedule II is a complete and correct list of all credit agreements, indentures, purchase agreements, Guaranties, Capital Leases and other investments, agreements and arrangements presently in effect providing for or relating to extensions of credit (including agreements and arrangements for the issuance of letters of credit or for acceptance financing) in respect of which the Company or any of its Subsidiaries is in any manner directly or contingently obligated; and the maximum principal or face amounts of the credit in question, outstanding as of January 30, 1993 and which can be outstanding, are correctly stated, and all Liens of any nature given or agreed to be given as security therefor are correctly described or indicated, in such Schedule; provided that for the purposes of such Schedule, credit agreements, indentures and purchase agreements which individually have values less than \$2,000,000 and which in the aggregate do not have values exceeding \$4,000,000 may be listed in summary fashion and Guaranties and Capital Leases having an aggregate market value of less than \$6,000,000 and \$14,000,000, respectively, may be listed in summary fashion.

SECTION 4.13. Not an Investment Company. The Company is not an "investment company" within the meaning of the Investment Company Act of 1940, as amended.

SECTION 4.14. Full Disclosure. All information heretofore furnished by the Company to the Agent or any Bank for purposes of or in connection with this Agreement or any transaction contemplated hereby is, and all such information hereafter furnished by the Company to the Agent or any Bank will be, true and accurate in all material respects on the date as of which such information is stated or certified. The Company has disclosed to the Banks in writing any and all facts which materially and adversely affect or may affect (to the extent the Company can now reasonably foresee), the business, operations or financial condition of the Company and its Consolidated Subsidiaries, taken as a whole, or the ability of the Company to perform its obligations under this Agreement.

ARTICLE V

COVENANTS

The Company agrees that, so long as any Bank has any Commitment hereunder or any amount payable under any Note remains unpaid:

SECTION 5.01. Information. The Company will deliver to each of the Banks:

(a) as soon as available and in any event within 120 days after the end of each fiscal year of the Company, a consolidated and consolidating balance sheet of the Company and its Consolidated Subsidiaries as of the end of such fiscal year and the related consolidated and consolidating statements of income, cash flow and stockholders' equity for such fiscal year, setting forth in each case in comparative form the figures for the previous fiscal year, in the case of the consolidated statements, all reported on in a manner acceptable to the Securities and Exchange Commission by Ernst & Young or other independent public accountants of nationally recognized standing;

(b) as soon as available and in any event within 60 days after the end of each of the first three quarters of each fiscal year of the Company, a consolidated and consolidating balance sheet of the Company and its Consolidated Subsidiaries as of the end of such quarter and the related consolidated statements of income and cash flow for such quarter and for the portion of the Company's fiscal year ended at the end of such quarter, setting forth in each case in comparative form the figures for the corresponding quarter and the corresponding portion of the Company's previous fiscal year, all certified (subject to normal year-end adjustments) as to fairness of presentation, generally accepted accounting principles and consistency by the chief financial officer or the treasurer of the Company;

(c) simultaneously with the delivery of each set of financial statements referred to in clauses (a) and (b) above, a certificate of the chief financial officer or the treasurer of the Company (i) setting forth in reasonable detail the calculations required to establish whether the Company was in compliance with the requirements of Sections 5.08 to 5.13, inclusive, and 5.15 on the date of such financial statements and (ii) stating whether any Default exists on the date of such certificate and, if any Default then exists, setting forth the details thereof and the action which the Company is taking or proposes to take with respect thereto;

(d) simultaneously with the delivery of each set of financial statements referred to in clause (a) above, a statement of the firm of independent public accountants which reported on such statements (i) whether anything has come to their attention to cause them to believe that any Default existed on the date of such statements and (ii) confirming the calculations set forth in the officer's certificate delivered simultaneously therewith pursuant to clause (c) above;

(e) within ten days after any officer of the Company obtains knowledge of any Default, if such Default is then continuing, a certificate of the chief financial officer

or the treasurer of the Company setting forth the details thereof and the action which the Company is taking or proposes to take with respect thereto;

(f) promptly upon the mailing thereof to the shareholders of the Company generally, copies of all financial statements, reports and proxy statements so mailed;

(g) promptly upon the filing thereof, copies of all registration statements (other than the exhibits thereto and any registration statements on Form S-8 or its equivalent) and reports on Forms 10-K, IO-Q and 8-K (or their equivalents) which the Company shall have filed with the Securities and Exchange Commission;

(h) if and when any member of the ERISA Group (i) gives or is required to give notice to the PBGC of any "reportable event" (as defined in Section 4043 of ERISA) with respect to any Plan which might constitute grounds for a termination of such Plan under Title IV of ERISA, or knows that the plan administrator of any Plan has given or is required to give notice of any such reportable event, a copy of the notice of such reportable event given or required to be given to the PBGC; (ii) receives notice of complete or partial withdrawal liability under Title IV of ERISA or notice that any Multiemployer Plan is in reorganization, is insolvent or has been terminated, a copy of such notice; (iii) receives notice from the PBGC under Title IV of ERISA of an intent to terminate, impose liability (other than for premiums under Section 4007 of ERISA) in respect of, or appoint a trustee to administer any Plan, a copy of such notice (iv) applies for a waiver of the minimum funding standard under Section 412 of the Internal Revenue Code, a copy of such application; (v) gives notice of intent to terminate any Plan under Section 4041(c) of ERISA, a copy of such notice and other information filed with the PBGC; (vi) gives notice of withdrawal from any Plan pursuant to Section 4063 of ERISA, a copy of such notice; or (vii) fails to make any payment or contribution to any Plan or Multiemployer Plan or in respect of any Benefit Arrangement or makes any amendment to any Plan or Benefit Arrangement which has resulted or could result in the imposition of a Lien or the posting of a bond or other security, a certificate of the chief financial officer or the treasurer of the Company setting forth details as to such occurrence and action, if any, which the Company or applicable member of the ERISA Group is required or proposes to take;

(i) promptly after the commencement thereof, notice of all actions, suits, and proceedings before any court or governmental department, commission, board, bureau, agency or instrumentality, domestic or foreign, affecting the Company or any of its Subsidiaries which, if determined adversely to the Company or such Subsidiary, could have a material adverse effect on the financial condition, properties, or operations of the Company and its Subsidiaries, taken as a whole;

(j) promptly after the furnishing thereof, copies of any, statement or report furnished to any other party pursuant to the terms of any indenture, loan or credit or similar agreement and not otherwise required to be furnished to the Banks pursuant to any other clause of this Section;

(k) promptly after such time as the Company becomes aware of any actual or proposed change in the rating of the Company's senior unsecured long-term debt securities, notice of such actual or proposed change; and

(l) from time to time such additional information regarding the financial position or business of the Company and its Subsidiaries as the Agent, at the request of any Bank, may reasonably request.

SECTION 5.02. Payment of Obligations. The Company will pay and discharge, and will cause each Subsidiary to pay and discharge, at or before maturity, all their respective material obligations and liabilities, including, without limitation, tax liabilities, except where the same may be contested in good faith by appropriate proceedings, and will maintain, and will cause each Subsidiary to maintain, in accordance with generally accepted accounting principles, appropriate reserves for the accrual of any of the same.

SECTION 5.03. Maintenance of Property; Insurance. (a) The Company will keep, and will cause each Subsidiary to keep, all property useful and necessary in its business in good working order and condition, ordinary wear and tear and fully insured casualty excepted.

(b) The Company will maintain, and will cause each Subsidiary to maintain, insurance with financially sound and reputable insurance companies or associations in such amounts and covering such risks as are usually carried by companies engaged in the same or a similar business and similarly situated, which insurance may provide for reasonable deductibility from coverage thereof.

SECTION 5.04. Conduct of Business and Maintenance of Existence. The Company will continue, and will cause each Subsidiary to continue, to engage in business of the same general type as now conducted by the Company and its Subsidiaries, and will preserve, renew and keep in full force and effect and will cause each Subsidiary to preserve, renew and keep in full force and effect their respective corporate existence and their respective rights, privileges and franchises necessary or desirable in the normal conduct of business; provided that nothing in this Section 5.04 shall prohibit (i) the merger of a Subsidiary into the Company or the merger or consolidation of a Subsidiary with or into another Person if the corporation surviving such consolidation or merger is a Subsidiary and if, in each case, after giving effect thereto, no Default shall have occurred and be continuing or (ii) the termination of the corporate existence of any Subsidiary if the Company in good faith determines that such termination is in the best interest of the Company and is not materially disadvantageous to the Banks.

SECTION 5.05. Compliance with Laws. The Company will comply, and cause each Subsidiary, to comply, in all material respects with all applicable laws, ordinances, rules, regulations, and requirements of governmental authorities (including, without limitation, Environmental Laws and ERISA and the rules and regulations thereunder) except where the necessity of compliance therewith is contested in good faith by appropriate proceedings.

SECTION 5.06. Inspection of Property, Books and Records. The Company will keep, and will cause each Subsidiary to keep, proper books of record and account in which full, true and correct entries shall be made of all dealings and transactions in relation to its business

and activities; and will permit, and will cause each Subsidiary to permit, representatives of any Bank at such Bank's expense to visit and inspect any of their respective properties, to examine and make abstracts from any of their respective books and records and to discuss their respective affairs, finances and accounts with their respective officers, employees and independent public accountants, all at such reasonable times and as often as may reasonably be desired.

SECTION 5.07. Transactions With Affiliates. The Company will not, and will not permit any Subsidiary to, directly or indirectly, pay any funds to or for the account of, make any investment (whether by acquisition of stock or indebtedness, by loan, advance, transfer of property, guarantee or other agreement to pay, purchase or service, directly or indirectly, any indebtedness, or otherwise) in, lease, sell, transfer or otherwise dispose of any assets, tangible or intangible, to, or participate in, or effect any transaction in connection with any joint enterprise or other joint arrangement with, any Affiliate; provided, however, that the foregoing provisions of this Section shall not prohibit (a) the Company from declaring or paying any lawful dividend so long as, after giving effect thereto, no Default shall have occurred and be continuing, (b) the Company or any Subsidiary from making sales to or purchases from any Affiliate and, in connection there with, extending credit or making payments, or from making payments for services rendered by any Affiliate, if such sales or purchases are made or such services are rendered in the ordinary course of business and on terms and conditions at least as favorable to the Company or such Subsidiary as the terms and conditions which would apply in a similar transaction with a Person not an Affiliate, (c) the Company or any Subsidiary from making payments of principal, interest and premium on any indebtedness of the Company or such Subsidiary held by an Affiliate if the terms of such indebtedness are substantially as favorable to the Company or such Subsidiary as the terms which could have been obtained at the time of the creation of such indebtedness from a lender which was not an Affiliate and (d) the Company or any Subsidiary from participating in, or effecting any transaction in connection with, any joint enterprise or other joint arrangement with any Affiliate if the Company or such Subsidiary participates in the ordinary course of its business and on a basis no less advantageous than the basis on which such Affiliate participates.

SECTION 5.08. Current Ratio. The Company shall maintain at all times a ratio of Consolidated Current Assets to Consolidated Current Liabilities of not less than 1.75 to 1.

SECTION 5.09. Leverage Ratio. The Company shall maintain at all times a ratio of Total Liabilities to Consolidated Tangible Net Worth of not greater than 1 to 1.

SECTION 5.10. Minimum Consolidated Tangible Net Worth. The Company will at no time permit Consolidated Tangible Net Worth to be less than the sum of (i) \$288,981,000 plus (ii) 50% of consolidated net income of the Company and its Consolidated Subsidiaries for the period from January 31, 1993 through the end of the Company's then most recent fiscal quarter (treated for this purpose as a single accounting period) plus (iii) 50% of the net proceeds received by the Company from the issuance and sale subsequent to January 30, 1993 of shares of any class of the capital stock of the Company; provided, however, that in the event the Company incurs a net loss in one or more of its fiscal quarters ending after January 30, 1993, the results of such quarter or quarters shall be excluded in calculating consolidated net income of the Company and its Consolidated Subsidiaries pursuant to clause (ii) above.

SECTION 5.11. Restricted Payments. Neither the Company nor any Subsidiary will declare or make any Restricted Payment unless, after giving effect thereto, the aggregate of all Restricted Payments declared or made subsequent to January 30, 1993 does not exceed the sum of \$29,734,000 plus 50% of the consolidated net income of the Company and its Consolidated Subsidiaries for the period from January 31, 1993 through the end of the Company's then most recent fiscal quarter (treated for this purpose as a single accounting period). Nothing in this Section shall prohibit the payment of any dividend or distribution within 45 days after the declaration thereof if such declaration was not prohibited by this Section.

SECTION 5.12. Investments. The Company will not make, or permit any of its Subsidiaries to make, any loan or advance to any Person or purchase or otherwise acquire, or permit any such Subsidiary to purchase or otherwise acquire, any capital stock, assets, obligations or other securities of, make any capital contribution to, or otherwise invest in, or acquire any interest in, any Person (all such transactions being herein called "Investments"), except:

(a) Investments in Liquid Assets;

(b) Investments in the Company or any or its Consolidated Subsidiaries;

(c) Investments in accounts, contract rights and general intangibles (as defined in the Uniform Commercial Code) or notes or other instruments receivable, arising from the sale, lease or other furnishings of goods or services by the Company or any Subsidiary in the ordinary course of its business;

(d) Investments in equity interests (including stocks and convertible debt securities) of corporations which do not become Consolidated Subsidiaries made with the proceeds of the issuance of stock by the Company;

(e) Acquisitions permitted by Section 5.15;

(f) Investments (including stocks, equity interests and convertible debt securities) of corporations that do not become Consolidated Subsidiaries made with the proceeds of the sale or other disposition of any capitalized Investment permitted by clause (d), providing the Company gives the Banks notice of such Investment under this clause; and

(g) additional Investments not exceeding in the aggregate at any one time outstanding \$20,000,000.

SECTION 5.13. Negative Pledge. Neither the Company nor any Subsidiary will create, assume or suffer to exist any Lien on any asset now owned or hereafter acquired by it, except:

(a) Liens in favor of the Banks securing the Loans hereunder;

(b) Liens for taxes or assessments or other government charges or levies if not yet due and payable or if due and payable if they are being contested in good faith by appropriate proceedings and for which appropriate reserves are maintained;

(c) Liens imposed by law, such as mechanic's, materialmen's, landlord's, warehousemen's and carrier's Liens, and other similar Liens, securing obligations incurred in the ordinary course of business which are not past due for more than 30 days, or which are being contested in good faith by appropriate proceedings and for which appropriate reserves have been established;

(d) Liens under workmen's compensation, unemployment insurance, social security or similar legislation;

(e) Liens, deposits or pledges to secure the performance of bids, tenders, contracts (other than contracts for the payment of money), leases (permitted under the terms of this Agreement), public or statutory obligations, surety, stay, appeal, indemnity, performance or other similar bonds, or other similar obligations arising in the ordinary course of business;

(f) judgment and other similar Liens arising in connection with court proceedings; provided that the execution or other enforcement of such Liens is effectively stayed and the claims secured thereby are being actively contested in good faith and by appropriate proceedings;

(g) easements, rights-of-way, restrictions and other similar encumbrances which, in the aggregate, do not materially interfere with the occupation, use and enjoyment by the Company or any such Subsidiary of the property assets encumbered thereby in the normal course of its business or materially impair the value of the property subject thereto;

(h) Liens securing obligations of such a Subsidiary to the Company or another such Subsidiary;

(i) Liens set forth in Schedule III; and

(j) Liens not otherwise permitted by the foregoing clauses of this Section securing indebtedness in an aggregate principal amount at any one time outstanding not to exceed 30% of Consolidated Tangible Net Worth.

SECTION 5.14. Consolidations, Mergers and Sales of Assets. The Company will not merge or consolidate with or sell, assign, lease or otherwise dispose of (whether in one transaction or in a series of transactions) all or any substantial part of its assets (whether now owned or hereafter acquired), to any Person, or acquire all or substantially all of the assets or the business of any Person, or permit any of its Subsidiaries to do so, except that: (a) any such Subsidiary may merge into or transfer assets to the Company; (b) any Subsidiary may merge into or consolidate with or transfer assets to any other Subsidiary; and (c) the Company may effect any Acquisition permitted by Section 5.15.

SECTION 5.15. Acquisitions. The Company shall not, and shall not permit any of the Subsidiaries to, consummate any Acquisition, or sell, lease, assign or otherwise dispose of (whether in one transaction or in a series of related transactions) all or Any substantial part of its assets, whether now owned or hereafter acquired, or be a party to any merger or consolidation, except that:

(a) the Company and its Subsidiaries may sell inventory or used or surplus equipment in the ordinary course of business; and

(b) the Company and any of the Subsidiaries may consummate any Acquisition (including any Acquisition by way of merger); provided that: (i) with respect to any such Acquisition the Company shall provide to the Banks twenty (20) days or more prior written notice thereof; (ii) with respect to all such Acquisitions the aggregate value, on a current market value basis (determined at the time of each such Acquisition), of the consideration therefor paid and to be paid by the Company and Subsidiaries shall not exceed 33 1/3% of Consolidated Tangible Net worth as of the end of the immediately preceding fiscal quarter; (iii) after giving effect to such Acquisition, the Company shall be in compliance with all of the terms and conditions hereof; (iv) the Company or such Subsidiary consummating such Acquisition shall not, after giving effect to such Acquisition, be in violation of Section 5.04; (v) no such Acquisition shall have a material adverse effect on the financial condition of the Company and the Subsidiaries taken as a whole; and (vi) in respect of each such Acquisition, the Company or such Subsidiary shall be the surviving or continuing entity.

SECTION 5.16. Use of Proceeds. The proceeds of the Loans made under this Agreement will be used by the Borrowers for general corporate purposes. None of such proceeds will be used, directly or indirectly, for the purpose, whether immediate, incidental or ultimate, of buying or carrying any "margin stock" within the meaning of Regulation U.

ARTICLE VI

DEFAULTS

SECTION 6.01. Events of Default. If one or more of the following events ("Events of Default") shall have occurred and be continuing:

(a) any principal of any Loan shall not be paid when due, or any interest, any fees or any other amount payable hereunder shall not be paid within three days of the due date thereof;

(b) the Company shall fail to observe or perform any covenant contained in Sections 5.07 to 5.16, inclusive;

(c) any Borrower shall fail to observe or perform any covenant or agreement contained in this Agreement (other than those covered by clause (a) or (b) above) for 10 days after written notice thereof has been given to the Company by the Agent at the request of any Bank;

(d) any representation, warranty, certification or statement made by any Borrower in this Agreement or in any certificate, financial statement or other document delivered pursuant to this Agreement shall prove to have been incorrect in any material respect when made (or deemed made);

(e) the Company or any Subsidiary shall fail to make payment in respect of any Material Debt when due or within any applicable grace period;

(f) any event or condition shall occur which results in the acceleration of the maturity of any Material Debt or enables (or, with the giving of notice or lapse of time or both, would enable) the holder of such Debt or any Person acting on such holder's behalf to accelerate the maturity thereof;

(g) the Company or any Subsidiary shall commence a voluntary case or other proceeding seeking liquidation, reorganization or other relief with respect to itself or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, or shall consent to any such relief or to the appointment of or taking possession by any such official in an involuntary case or other proceeding commenced against it, or shall make a general assignment for the benefit of creditors, or shall fail generally to pay its debts as they become due, or shall take any corporate action to authorize any of the foregoing;

(h) an involuntary case or other proceeding shall be commenced against the Company or any Subsidiary seeking liquidation, reorganization or other relief with respect to it or its debts under any bankruptcy, insolvency or other similar law now or hereafter in effect or seeking the appointment of a trustee, receiver, liquidator, custodian or other similar official of it or any substantial part of its property, and such involuntary case or other proceeding shall remain undismitted and unstayed for a period of 60 days; or an order for relief shall be entered against the Company or any Subsidiary under the federal bankruptcy laws as now or hereafter in effect;

(i) any member of the ERISA Group shall fail to pay when due an amount or amounts aggregating in excess of \$500,000 which it shall have become liable to pay under Title IV of ERISA; or notice of intent to terminate a Material Plan shall be filed under Title IV of ERISA by any member of the ERISA Group, any plan administrator or any combination of the foregoing; or the PBGC shall institute proceedings under Title IV of ERISA to terminate, to impose liability (other than for premiums under Section 4007 of ERISA) in respect of, or to cause a trustee to be appointed to administer any Material Plan; or a condition shall exist by reason of which the PBGC would be entitled to obtain a decree adjudicating that any Material Plan must be terminated; or there shall occur a complete or partial withdrawal from, or a default, within the meaning of Section 4219(c)(5) of ERISA, with respect to, one or more Multiemployer Plans which could cause one or more members of the ERISA Group to incur a current payment obligation in excess of \$500,000;

(j) one or more judgments or orders for the payment of money in excess of \$750,000 in the aggregate shall be rendered against the Company or any Subsidiary and such judgment or order shall continue unsatisfied and unstayed for a period of 30 days; or

(k) any person or group of persons (within the meaning of Section 13 or 14 of the Securities Exchange Act of 1934, as amended) shall have acquired beneficial ownership (within the meaning of Rule 13d-3 promulgated by the Securities and Exchange Commission under said Act) of 50% or more of the outstanding shares of common stock of the Company; or, during any period of 12 consecutive calendar months, individuals who were directors of the Company on the first day of such period shall cease to constitute a majority of the board of directors of the Company (other than as a result of the death of one or more such individuals);

then, and in every such event, the Agent shall (i) if requested by Banks having more than 50% in aggregate amount of the Commitments, by notice to the Company terminate the Commitments and they shall thereupon terminate, and (ii) if requested by Banks holding Notes evidencing more than 50% in aggregate principal amount of the Loans, by notice to the Company declare the Notes (together with accrued interest thereon) to be, and the Notes shall thereupon become, immediately due and payable without presentment, demand, protest or other notice of any kind, all of which are hereby waived by each Borrower; provided that in the case of any of the Events of Default specified in clause (g) or (h) above with respect to any Borrower, without any notice to any Borrower or any other act by the Agent or the Banks, the Commitments shall thereupon terminate and the Notes (together with accrued interest thereon) shall become immediately due and payable without presentment, demand, protest or other notice of any kind, all of which are hereby waived by each Borrower.

SECTION 6.02. Notice of Default. The Agent shall give notice to the Company under Section 6.01(c) promptly upon being requested to do so by any Bank and shall thereupon notify all the Banks thereof.

ARTICLE VII

THE AGENT

SECTION 7.01. Appointment and Authorization. Each Bank irrevocably appoints and authorizes the Agent to take such action as agent on its behalf and to exercise such powers under this Agreement and the Notes as are delegated to the Agent by the terms hereof or thereof, together with all such powers as are reasonably incidental thereto.

SECTION 7.02. Agent and Affiliates. Morgan Guaranty Trust Company of New York shall have the same rights and powers under this Agreement as any other Bank and may exercise or refrain from exercising the same as though it were not the Agent, and Morgan Guaranty Trust Company of New York and its affiliates may accept deposits from, lend money to, and generally engage in any kind of business with any Borrower or any Subsidiary or affiliate of any Borrower as if it were not the Agent hereunder.

SECTION 7.03. Action by Agent. The obligations of the Agent hereunder are only those expressly set forth herein. Without limiting the generality of the foregoing, the Agent shall not be required to take any action with respect to any Default, except as expressly provided in Article VI.

SECTION 7.04. Consultation with Experts. The Agent may consult with legal counsel (who may be counsel for any Borrower), independent public accountants and other experts selected by it and shall not be liable for any action taken or omitted to be taken by it in good faith in accordance with the advice of such counsel, accountants or experts.

SECTION 7.05. Liability of Agent. Neither the Agent nor any of its directors, officers, agents, or employees shall be liable for any action taken or not taken by it in connection herewith (i) with the consent or at the request of the Required Banks or (ii) in the absence of its own gross negligence or willful misconduct. Neither the Agent nor any of its directors officers, agents or employees shall be responsible for or have any duty to ascertain, inquire into or verify (i) any statement, warranty or representation made in connection with this Agreement or any borrowing hereunder; (ii) the performance or observance of any of the covenants or agreements of any Borrower; (iii) the satisfaction of any condition specified in Article III, except receipt of items required to be delivered to the Agent; or (iv) the validity, effectiveness or genuineness of this Agreement, the Notes or any other instrument or writing furnished in connection herewith. The Agent shall not incur any liability by acting in reliance upon any notice, consent, certificate, statement, or other writing (which may be a bank wire, telex or similar writing) believed by it to be genuine or to be signed by the proper party or parties.

SECTION 7.06. Indemnification. Each Bank shall, ratably in accordance with its Commitment, indemnify the Agent (to the extent not reimbursed by the Borrowers) against any cost, expense (including counsel fees and disbursements), claim, demand, action, loss or liability (except such as result from the Agent's gross negligence or willful misconduct) that the Agent may suffer or incur in connection with this Agreement or any action taken or omitted by the Agent hereunder.

SECTION 7.07. Credit Decision. Each Bank acknowledges that it has, independently and without reliance upon the Agent or any other Bank, and based on such documents and information as it has deemed appropriate, made its own credit analysis and decision to enter into this Agreement. Each Bank also acknowledges that it will, independently and without reliance upon the Agent or any other Bank, and based on such documents and information as it shall deem appropriate at the time, continue to make its own credit decisions in taking or not taking any action under this Agreement.

SECTION 7.08. Successor Agent. The Agent may resign at any time by giving written notice thereof to the Banks and the Company. Upon any such resignation, the Required Banks shall have the right, with the consent of the Company, to appoint a successor Agent. If no successor Agent shall have been so appointed by the Required Banks and consented to by the Company, and shall have accepted such appointment, within 30 days after the retiring Agent gives notice of resignation, then the retiring Agent may, on behalf of the Banks, appoint a successor Agent, which shall be a commercial bank organized or licensed under the laws of the United States of America or of any State thereof and having a combined capital and surplus of at

least \$50,000,000. Upon the acceptance of its appointment as Agent hereunder by a successor Agent, such successor Agent shall thereupon succeed to and become vested with all the rights and duties of the retiring Agent, and the retiring Agent shall be discharged from its duties and obligations hereunder. After any retiring Agent's resignation hereunder as Agent, the provisions of this Article shall inure to its benefit as to any actions taken or omitted to be taken by it while it was Agent.

SECTION 7.09. Agent's Fee. The Borrower shall pay to the Agent for its own account fees in the amounts and at the times previously agreed upon between the Borrower and the Agent.

ARTICLE VIII

CHANGE IN CIRCUMSTANCES

SECTION 8.01. Basis for Determining Interest Rate Inadequate or Unfair. If on or prior to the first day of any Interest Period for any Fixed Rate Borrowing:

(a) the Agent is advised by Morgan Guaranty Trust Company of New York that deposits in dollars (in the applicable amounts) are not being offered to Morgan Guaranty Trust Company of New York in the relevant market for such Interest Period, or

(b) in the case of a Committed Borrowing, Banks having more than 50% of the aggregate amount of the Commitments advise the Agent that the Adjusted CD Rate or the Adjusted London Interbank Offered Rate, as the case may be, as determined by the Agent will not adequately and fairly reflect the cost to such Banks of funding their CD Loans or Euro-Dollar Loans, as the case may be, for such Interest Period,

the Agent shall forthwith give notice thereof to the Company and the Banks, whereupon until the Agent notifies the Company that the circumstances giving rise to such suspension no longer exist, the obligations of the Banks to make CD Loans or Euro-Dollar Loans, as the case may be, shall be suspended. Unless the Borrower notifies the Agent at least two Domestic Business Days before the date of any Fixed Rate Borrowing for which a Notice of Borrowing has previously been given that it elects not to borrow on such date, (i) if such Fixed Rate Borrowing is a Committed Borrowing, such Borrowing shall instead be made as a Base Rate Borrowing and (ii) if such Fixed Rate Borrowing is a Money Market LIBOR Borrowing, the Money Market LIBOR Loans comprising such Borrowing shall bear interest for each day from and including the first day to but excluding the last day of the Interest Period applicable thereto at the Prime Rate for such day.

SECTION 8.02. Illegality. If, on or after the date of this Agreement, the adoption of any applicable law, rule or regulation, or any change therein, or any change in the interpretation or administration thereof by any governmental authority, central bank or comparable agency charged with the interpretation or administration thereof, or compliance by any Bank (or its Euro-Dollar Lending Office) with any request or directive (whether or not having the force of law) of any such authority, central bank or comparable agency shall make it unlawful or impossible for any Bank (or its Euro-Dollar Lending Office) to make, maintain or

fund its Euro-Dollar Loans to any Borrower and such Bank shall so notify the Agent, the Agent shall forthwith give notice thereof to the other Banks and the Company, whereupon until such Bank notifies the Company and the Agent that the circumstances giving rise to such suspension no longer exist, the obligation of such Bank to make Euro-Dollar Loans to such Borrower shall be suspended. Before giving any notice to the Agent pursuant to this Section, such Bank shall designate a different Euro-Dollar Lending Office if such designation will avoid the need for giving such notice and will not, in the judgment of such Bank, be otherwise disadvantageous to such Bank. If such Bank shall determine that it may not lawfully continue to maintain and fund any of its outstanding Euro-Dollar Loans to such Borrower to maturity and shall so specify in such notice, such Borrower shall immediately prepay in full the then outstanding principal amount of each such Euro-Dollar Loan, together with accrued interest thereon. Concurrently with prepaying each such Euro-Dollar Loan, such Borrower shall borrow a Base Rate Loan in an equal principal amount from such Bank (on which interest and principal shall be payable contemporaneously with the related Euro-Dollar Loans of the other Banks), and such Bank shall make such a Base Rate Loan.

SECTION 8.03. Increased Cost and Reduced Return. (a) If on or after (x) the date hereof, in the case of any Committed Loan or any obligation to make Committed Loans or (y) the date of the related Money Market Quote, in the case of any Money Market Loan, the adoption of any applicable law, rule or regulation, or any change therein, or any change in the interpretation or administration thereof by any governmental authority, central bank or comparable agency charged with the interpretation or administration thereof, or compliance by any Bank (or its Applicable Lending Office) with any request or directive (whether or not having the force of law) of any such authority, central bank or comparable agency:

(i) shall subject any Bank (or its Applicable Lending Office) to any tax, duty or other charge with respect to its Fixed Rate Loans, its Note or its obligation to make Fixed Rate Loans, or shall change the basis of taxation of payments to any Bank (or its Applicable Lending Office) of the principal of or interest on its Fixed Rate Loans or any other amounts due under this Agreement in respect of its Fixed Rate Loans or its obligation to make Fixed Rate Loans (except for changes in the rate of tax on the overall net income of such Bank or its Applicable Lending Office imposed by the jurisdiction in which such Bank's principal executive office or Applicable Lending Office is located); or

(ii) shall impose, modify or deem applicable any reserve, special deposit or similar requirement (including, without limitation, any such requirement imposed by the Board of Governors of the Federal Reserve System, but excluding (A) with respect to any CD Loan any such requirement included in an applicable Domestic Reserve Percentage and (B) with respect to any Euro-Dollar Loan any such requirement included in an applicable Euro-Dollar Reserve Percentage) against assets of, deposits with or for the account of, or credit extended by, any Bank (or its Applicable Lending Office) or shall impose on any Bank (or its Applicable Lending Office) or on the United States market for certificates of deposit or the London interbank market any other condition affecting its Fixed Rate Loans, its Note or its obligation to make Fixed Rate Loans;

and the result of any of the foregoing is to increase the cost to such Bank (or its Applicable Lending Office) of making or maintaining any Fixed Rate Loan, or to reduce the amount of any

sum received or receivable by such Bank (or its Applicable Lending Office) under this Agreement or under its Note with respect thereto, by an amount deemed by such Bank to be material, then, within 15 days after demand by such Bank (with a copy to the Agent), the Company shall pay to such Bank such additional amount or amounts as will compensate such Bank for such increased cost or reduction.

(b) If any Bank shall have determined that, after the date hereof, the adoption of any applicable law, rule or regulation regarding capital adequacy, or any change therein, or any change in the interpretation or administration thereof by any governmental authority, central bank or comparable agency charged with the interpretation or administration thereof, or any request or directive regarding capital adequacy (whether or not having the force of law) of any such authority, central bank or comparable agency, has or would have the effect of reducing the rate of return on capital of such Bank (or its Parent) as a consequence of such Bank's obligations hereunder to a level below that which such Bank (or its Parent) could have achieved but for such adoption, change, request or directive (taking into consideration its policies with respect to capital adequacy) by an amount deemed by such Bank to be material, then from time to time, within 15 days after demand by such Bank (with a copy to the Agent), the Company shall pay to such Bank such additional amount or amounts as will compensate such Bank (or its Parent) for such reduction.

(c) Each Bank will promptly notify the Company and the Agent of any event of which it has knowledge, occurring after the date hereof, which will entitle such Bank to compensation pursuant to this Section and will designate a different Applicable Lending Office if such designation will avoid the need for, or reduce the amount of, such compensation and will not, in the judgment of such Bank, be otherwise disadvantageous to such Bank. A certificate of any Bank claiming compensation under this Section and setting forth the additional amount or amounts to be paid to it hereunder shall be conclusive in the absence of manifest error. In determining such amount, such Bank may use any reasonable averaging and attribution methods.

SECTION 8.04. Base Rate Loans Substituted for Affected Fixed Rate Loans. If (i) the obligation of any Bank to make Euro-Dollar Loans to any Borrower has been suspended pursuant to Section 8.02 or (ii) any Bank has demanded compensation under Section 8.03(a) and the Borrower shall, by at least five Euro-Dollar Business Days' prior notice to such Bank through the Agent, have elected that the provisions of this Section shall apply to such Bank, then, unless and until such Bank notifies the Company that the circumstances giving rise to such suspension or demand for compensation no longer apply:

(a) all Loans to such Borrower which would otherwise be made by such Bank as CD Loans or Euro-Dollar Loans, as the case may be, shall be made instead as Base Rate Loans (on which interest and principal shall be payable contemporaneously with the related Fixed Rate Loans of the other Banks), and

(b) after each of its CD Loans or Euro Loans, as the case may be, to such Borrower has been repaid, all payments of principal which would otherwise be applied to repay such Fixed Rate Loans shall be applied to repay its Base Rate Loans instead.

SECTION 8.05. HLT Classification. If, after the date hereof, the Agent determines that, or the Agent is advised by any Bank that such Bank has received notice from any governmental authority, central bank or comparable agency having jurisdiction over such Bank that, Loans hereunder are classified as a "highly leveraged transaction" (an "HLT Classification"), the Agent shall promptly give notice of such HLT Classification to the Company and the other Banks. The Agent, the Banks and the Company shall commence negotiations in good faith to agree on the extent to which fees, interest rates and/or margins hereunder should be increased so as to reflect such HLT Classification. If the Company and Banks having more than 50% in aggregate amount of the Commitments agree on the amount of such increase or increases, this Agreement may be amended to give effect to such increase or increases as provided in Section 11.05. If the Company and Banks having more than 50% in aggregate amount of the Commitments fail to so agree within 45 days after notice is given by the Agent as provided above, then the Agent shall, if requested by Banks having 50% or more in aggregate amount of the Commitments, by notice to the Company terminate the Commitments and they shall thereupon terminate and the Borrowers shall repay each outstanding Loan at the end of the Interest Period applicable thereto. The Banks acknowledge that an HLT Classification is not a Default or an Event of Default hereunder.

ARTICLE IX

REPRESENTATIONS AND WARRANTIES OF ELIGIBLE SUBSIDIARIES

Each Eligible Subsidiary shall be deemed by the execution and delivery of its Election to Participate to have represented and warranted as of the date thereof that:

SECTION 9.01. Corporate Existence and Power. It is a corporation duly incorporated, validly existing and in good standing under the laws of its jurisdiction of incorporation and a Wholly-Owned Consolidated Subsidiary of the Company.

SECTION 9.02. Corporate and Governmental Authorization; Contravention. The execution and delivery by it of its Election to Participate and its Notes, and the performance by it of this Agreement and its Notes, are within its corporate powers, have been duly authorized by all necessary corporate action, require no action by or in respect of, or filing with, any governmental body, agency or official and do not contravene, or constitute a default under, any provision of applicable law or regulation or of its certificate or incorporation or by-laws or of any agreement, judgment, injunction, order, decree or other instrument binding upon the Company or such Eligible Subsidiary result in the creation or imposition of any Lien on any asset of the Company or any of its Subsidiaries.

SECTION 9.03. Binding Effect. This Agreement constitutes a valid and binding agreement of such Eligible Subsidiary and its Notes, when executed and delivered in accordance with this Agreement, will constitute valid and binding obligations of such Eligible Subsidiary.

SECTION 9.04. Taxes. Except as disclosed in such Election to Participate, there is no income, stamp or other tax of any country, or any taxing authority thereof or therein, imposed by or in the nature of withholding or otherwise, which is imposed on any payment to be

made by such Eligible Subsidiary pursuant hereto or on its Notes, or is imposed on or by virtue of the execution, delivery or enforcement of its Election to Participate or of its Notes.

ARTICLE X

GUARANTY

SECTION 10.01. The Guaranty. The Company hereby unconditionally guarantees the full and punctual payment (whether at stated maturity, upon acceleration or otherwise) of the principal of and interest on each Note issued by any Eligible Subsidiary pursuant to this Agreement, and the full and punctual payment of all other amounts payable by any Eligible Subsidiary under this Agreement. Upon failure by any Eligible Subsidiary to pay punctually any such amount, the Company shall forthwith on demand pay the amount not so paid at the place and in the manner specified in this Agreement.

SECTION 10.02. Guaranty Unconditional. The obligation of the Company hereunder shall be unconditional and absolute and, without limiting the generality of the foregoing, shall not be released, discharged or otherwise affected by:

(i) any extension, renewal, settlement, com-promise, waiver or release in respect of any obligation of any Eligible Subsidiary under this Agreement or any Note, by operation of law or otherwise;

(ii) any modification or amendment of or supplement to this Agreement or any Note;

(iii) any release, non-perfection or invalidity of any direct or indirect security for any obligation of any Eligible Subsidiary under this Agreement or any Note;

(iv) any change in the corporate existence, structure or ownership of any Eligible Subsidiary, or any insolvency, bankruptcy, reorganization or other similar proceeding affecting any Eligible Subsidiary or its assets or any resulting release or discharge of any obligation of any Eligible Subsidiary contained in this Agreement or any Note;

(v) the existence of any claim, set-off or other rights which the Company may have at any time against any Eligible Subsidiary, the Agent, any Bank or any other Person, whether in connection herewith or any unrelated transactions, provided that nothing herein shall prevent the assertion of any such claim by separate suit or compulsory counterclaim;

(vi) any invalidity or unenforceability relating to or against any Eligible Subsidiary for any reason of this Agreement or any Note, or any provision of applicable law or regulation purporting to prohibit the payment by any Eligible Subsidiary of the principal of or interest on any Note or any other amount payable by it under this Agreement; or

(vii) any other act or omission to act or delay of any kind by any Eligible Subsidiary, the Agent, any Bank or any other Person or any other circumstance whatsoever which might, but for the provisions of this paragraph, constitute a legal or equitable discharge of the Company's obligations hereunder.

SECTION 10.03. Discharge Only Upon Payment In Full; Reinstatement In Certain Circumstances. The Company's obligations hereunder shall remain in full force and effect until the Commitments shall have terminated and the principal of and interest on the Notes and all other amounts payable by the Company and each Eligible Subsidiary under this Agreement shall have been paid in full. If at any time any payment of the principal of or interest on any Note or any other amount payable by any Eligible Subsidiary under this Agreement is rescinded or must be otherwise restored or returned upon the insolvency, bankruptcy or reorganization of any Eligible Subsidiary or otherwise, the Company's obligations hereunder with respect to such payment shall be reinstated at such time as though such payment had been due but not made at such time.

SECTION 10.04. Waiver by the Company. The Company irrevocably waives acceptance hereof, presentment, demand, protest and any notice not provided for herein, as well as any requirement that at any time any action be taken by any Person against any Eligible Subsidiary or any other Person.

SECTION 10.05. Subrogation. The Company irrevocably waives any and all rights to which it may be entitled, by operation of law or otherwise, upon making any payment hereunder to be subrogated to the rights of the payee against an Eligible Subsidiary with respect to such payment or otherwise to be reimbursed, indemnified or exonerated by an Eligible Subsidiary in respect thereof.

SECTION 10.06. Stay of Acceleration. In the event that acceleration of the time for payment of any amount payable by any Eligible Subsidiary under this Agreement or its Notes is stayed upon insolvency, bankruptcy or reorganization of such Eligible Subsidiary, all such amounts otherwise subject to acceleration under the terms of this Agreement shall nonetheless be payable by the Company hereunder forthwith on demand by the Agent made at the request of the Required Banks.

ARTICLE XI

MISCELLANEOUS

SECTION 11.01. Notices. All notices, requests and other communications to any party hereunder shall be in writing (including bank wire, telex, facsimile transmission or similar writing) and shall be given to such party: (x) in the case of any Borrower or the Agent, at its address or telex number set forth on the signature pages hereof (or, in the case of an Eligibility Subsidiary, its Election to Participate), (y) in the case of any Bank, at its address or telex number set forth in its Administrative Questionnaire or (z) in the case of any party, such other address or telex number as such party may hereafter specify for the purpose by notice to the Agent and the Company. Each such notice, request or other communication shall be effective (i) if given by telex, when such telex is transmitted to the telex number specified in this Section and the

appropriate answerback is received, (ii) if given by mail, 72 hours after such communication is deposited in the mails with first class postage prepaid, addressed as aforesaid or (iii) if given by any other means, when delivered at the address specified in this Section; provided that notices to the Agent under Article II or Article VIII shall not be effective until received.

SECTION 11.02. No Waivers. No failure or delay by the Agent or any Bank in exercising any right, power or privilege hereunder or under any Note shall operate as a waiver thereof nor shall any single or partial exercise thereof preclude any other or further exercise thereof or the exercise of any other right, power or privilege. The rights and remedies herein provided shall be cumulative and not exclusive of any rights or remedies provided by law.

SECTION 11.03. Expenses; Documentary Taxes; Indemnification.

(a) The Company shall pay (i) all out-of-pocket expenses of the Agent, including fees and disbursements of special counsel for the Agent, in connection with the preparation of any waiver or consent hereunder or any amendment hereof or any Default or alleged Default hereunder and (ii) if an Event of Default occurs, all out-of-pocket expenses incurred by the Agent and each Bank, including fees and disbursements of counsel, and all allocated costs of in-house counsel, in connection with such Event of Default and collection, bankruptcy, insolvency and other enforcement proceedings resulting therefrom. The Company shall indemnify each Bank against any transfer taxes, documentary taxes, assessments or charges made by any governmental authority by reason of the execution and delivery of this Agreement, any Election to Participate or Election to Terminate or any Note.

(b) The Company agrees to indemnify each Bank and hold each Bank harmless from and against any and all liabilities, losses, damages, costs and expenses of any kind, including, without limitation, the reasonable fees and disbursements of counsel, which may be incurred by any Bank (or by the Agent in connection with its actions as Agent hereunder) in connection with any investigative, administrative or judicial proceeding (whether or not such Bank shall be designated a party thereto) relating to or arising out of this Agreement or any actual or proposed use of proceeds of Loans hereunder; provided that no Bank shall have the right to be indemnified hereunder for its own gross negligence or willful misconduct as determined by a court of competent jurisdiction.

SECTION 11.04. Sharing of Set-Offs. Each Bank agrees that if it shall, by exercising any right of set-off or counterclaim or otherwise, receive payment of a proportion of the aggregate amount of principal and interest due with respect to any Note held by it which is greater than the proportion received by any other Bank in respect of the aggregate amount of principal and interest due with respect to any Note held by such other Bank, the Bank receiving such proportionately greater payment shall purchase such participations in the Notes held by the other Banks, and such other adjustments shall be made, as may be required so that all such payments of principal and interest with respect to the Notes held by the Banks shall be shared by the Banks pro rata; provided that nothing in this Section shall impair the right of any Bank to exercise any right of set-off or counterclaim it may have and to apply the amount subject to such exercise to the payment of indebtedness of a Borrower other than its indebtedness hereunder. Each Borrower agrees, to the fullest extent it may effectively do so under applicable law, that any holder of a participation in a Note, whether or not acquired pursuant to the foregoing

arrangements, may exercise rights of set-off or counterclaim and other rights with respect to such participation as fully as if such holder of a participation were a direct creditor of such Borrower in the amount of such participation.

SECTION 11.05. Amendments and Waivers. Any provision of this Agreement or the Notes may be amended or waived if, but only if, such amendment or waiver is in writing and is signed by the Company and the Required Banks (and, if the rights or duties of the Agent are affected thereby, by the Agent); provided that no such amendment or waiver shall, unless signed by all the Banks, (i) increase or decrease the Commitment of any Bank (except for a ratable decrease in the Commitments of all Banks) or subject any Bank to any additional obligation, (ii) reduce the principal of or rate of interest on any Loan or any fees hereunder, except as provided below, (iii) postpone the date fixed for any payment of principal of or interest on any Loan or any fees hereunder or for any reduction or termination of any Commitment or (iv) change the percentage of the Commitments or of the aggregate unpaid principal amount of the Notes, or the number of Banks, which shall be required for the Banks or any of them to take any action under this Section or any other provision of this Agreement; provided, further, that this Agreement may be amended to give effect to any increased fees, interest rates and/or margins agreed upon pursuant to Section 8.05 or to reduce or rescind any such increases previously agreed upon pursuant to Section 8.05, if such amendment is in writing and is signed by the Company and Banks having more than 50% in aggregate amount of the Commitments; and provided further that no such amendment, waiver or modification shall, unless signed by an Eligible Subsidiary, (w) subject such Eligible Subsidiary to any additional obligation, (x) increase the principal of or rate of interest on any outstanding Loan of such Eligible Subsidiary, (y) accelerate the stated maturity of any outstanding Loan of such Eligible Subsidiary or (z) change this proviso.

SECTION 11.06. Successors and Assigns. (a) The provisions of this Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, except that no Borrower may assign or otherwise transfer any of its rights under this Agreement without the prior written consent of all Banks.

(b) Any Bank may at any time grant to one or more banks or other institutions (each a "Participant") participating interests in its Commitment or any or all of its Loans. In the event of any such grant by a Bank of a participating interest to a Participant, whether or not upon notice to the Borrowers and the Agent, such Bank shall remain responsible for the performance of its obligations hereunder, and the Borrowers and the Agent shall continue to deal solely and directly with such Bank in connection with such Bank's rights and obligations under this Agreement. Any agreement pursuant to which any Bank may grant such a participating interest shall provide that such Bank shall retain the sole right and responsibility to enforce the obligations of the Borrowers hereunder including, without limitation, the right to approve any amendment, modification or waiver of any provision of this Agreement; provided that such participation agreement may provide that such Bank will not agree to any modification, amendment or waiver of this Agreement described in clause (i), (ii) or (iii) of Section 11.05 without the consent of the Participant. The Borrowers agree that each Participant shall, to the extent provided in its participation agreement, be entitled to the benefits of Article VIII with respect to its participating interest. An assignment or other transfer which is not permitted by

subsection (c) or (d) below shall be given effect for purposes of this Agreement only to the extent of a participating interest granted in accordance with this subsection (b).

(c) Any Bank may at any time assign to one or more other institutions (each an "Assignee") all, or a proportionate part of all, of its rights and obligations under this Agreement and the Notes, and such Assignee shall assume such rights and obligations, pursuant to an Assignment and Assumption Agreement in substantially the form of Exhibit J hereto executed by such Assignee and such transferor Bank, with (and subject to) the subscribed consent of the Company and the Agent; provided that (i) the amount of Loans or Commitments assigned equals or exceeds \$10,000,000, (ii) if an Assignee is an affiliate of such transferor Bank, no such consent shall be required and (iii) such assignment may, but need not, include rights of the transferor Bank in respect of outstanding Money Market Loans. Upon execution and delivery of such instrument and payment by such Assignee to such transferor Bank of an amount equal to the purchase price agreed between such transferor Bank and such Assignee, such Assignee shall be a Bank party to this Agreement and shall have all the rights and obligations of a Bank with a Commitment as set forth in such instrument of assumption, and the transferor Bank shall be released from its obligations hereunder to a corresponding extent, and no further consent or action by any party shall be required. Upon the consummation of any assignment pursuant to this subsection (c), the transferor Bank, the Agent and the Borrowers shall make appropriate arrangements so that, if required, new Notes are issued to the Assignee. In connection with any such assignment, the transferor Bank shall pay to the Agent an administrative fee for processing such assignment in the amount of \$2,000. If the Assignee is not incorporated under the laws of the United States of America or a state thereof it shall, prior to the first date on which interest or fees are payable hereunder for its account, deliver to the Company and the Agent certification as to exemption from deduction or withholding of any United States federal income taxes in accordance with Section 2.15.

(d) Any Bank may at any time assign all or any portion of its rights under this Agreement and its Notes to a Federal Reserve Bank. No such assignment shall release the transferor Bank from its obligations hereunder.

(e) No Assignee, Participant or other transferee of any Bank's rights shall be entitled to receive any greater payment under Section 8.03 than such Bank would have been entitled to receive with respect to the rights transferred, unless such transfer is made with the Company's prior written consent or by reason of the provisions of Section 8.02 or 8.03 requiring such Bank to designate a different Applicable Lending Office under certain circumstances or at a time when the circumstances giving rise to such greater payment did not exist.

SECTION 11.07. Collateral. Each of the Banks represents to the Agent and each of the other Banks that it in good faith is not relying upon any "margin stock" (as defined in Regulation U) as collateral in the extension or maintenance of the credit provided for in this Agreement.

SECTION 11.08. Governing Law; Submission to Jurisdiction. This Agreement and each Note shall be governed by and construed in accordance with the laws of the State of New York. Each Borrower hereby submits to the nonexclusive jurisdiction of the United States District Court for the Southern District of New York and of any New York State court sitting in New York City for purposes of all legal proceedings arising out of or relating to this Agreement or the transactions contemplated hereby. Each Borrower irrevocably waives, to the fullest extent permitted by law, any objection which it may now or hereafter have to the laying of the venue of any such proceeding brought in such a court and any claim that any such proceeding brought in such a court has been brought in an inconvenient forum.

SECTION 11.09. Counterparts; Integration. This Agreement may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement constitutes the entire agreement and understanding among the parties hereto and supersedes any and all prior agreements and understandings, oral or written, relating to the subject matter hereof.

WAIVER OF JURY TRIAL. EACH OF THE BORROWERS, THE AGENT AND THE BANKS HEREBY IRREVOCABLY WAIVES ANY AND ALL RIGHT TO TRIAL BY JURY IN ANY LEGAL PROCEEDING ARISING OUT OF OR RELATING TO THIS AGREEMENT OR THE TRANSACTIONS CONTEMPLATED HEREBY.

IN WITNESS WHEREOF, the parties hereto have this Agreement to be duly executed by their respective authorized officers as of the day and year first above written:

ANALOG DEVICES, INC.

By _____
Title: V.P. Finance & CFO
One Technology Way
P.O. Box 9106
Norwood, Massachusetts 02062-9106
Attention: Vice President - Finance
and Chief Financial Officer
Telex number: 924491

COMMITMENTS
\$20,000,000

MORGAN GUARANTY TRUST COMPANY
OF NEW YORK

By _____
Title: VICE PRESIDENT

\$20,000,000

BANK OF AMERICA NATIONAL TRUST
AND SAVINGS ASSOCIATION

By _____
Title:

\$20,000,000

CONTINENTAL BANK N.A.

By _____
Title:

\$20,000,000

THE FIRST NATIONAL BANK OF
BOSTON

By _____
Title:

Total Commitments

\$80,000,000
=====

COMMITMENTS
\$20,000,000

MORGAN GUARANTY TRUST COMPANY
OF NEW YORK

By _____
Title:

\$20,000,000

BANK OF AMERICA NATIONAL TRUST
AND SAVINGS ASSOCIATION

By _____
Title: Vice President

\$20,000,000

CONTINENTAL BANK N.A.

By _____
Title:

\$20,000,000

THE FIRST NATIONAL BANK OF
BOSTON

By _____
Title:

Total Commitments

\$80,000,000
=====

COMMITMENTS
\$20,000,000

MORGAN GUARANTY TRUST COMPANY
OF NEW YORK

By _____
Title:

\$20,000,000

BANK OF AMERICA NATIONAL TRUST
AND SAVINGS ASSOCIATION

By _____
Title:

\$20,000,000

CONTINENTAL BANK N.A.

By _____
Title: Vice President

\$20,000,000

THE FIRST NATIONAL BANK OF
BOSTON

By _____
Title:

Total Commitments

\$80,000,000
=====

COMMITMENTS
\$20,000,000

MORGAN GUARANTY TRUST COMPANY
OF NEW YORK

By _____
Title:

\$20,000,000

BANK OF AMERICA NATIONAL TRUST
AND SAVINGS ASSOCIATION

By _____
Title:

\$20,000,000

CONTINENTAL BANK N.A.

By _____
Title:

\$20,000,000

THE FIRST NATIONAL BANK OF BOSTON

By _____
Title:

Total Commitments

\$80,000,000
=====

MORGAN GUARANTY TRUST COMPANY
OF NEW YORK, as Agent

By

Title: VICE PRESIDENT
60 Wall Street
New York, New York 10260
Attention: Adam Silver
Telex number: 177615

AMENDMENT NO. 1 TO CREDIT AGREEMENT

AMENDMENT dated as of May 18, 1993 among ANALOG DEVICES, INC. and the undersigned BANKS.

W I T N E S S E T H:

WHEREAS, Analog Devices, Inc., the Banks listed therein and Morgan Guaranty Trust Company of New York, as Agent, are parties to a Credit Agreement dated as of March 12, 1993 (the "Agreement"); and

WHEREAS, the parties hereto desire to amend the negative pledge covenant, and make a related change, as more fully set forth below;

NOW, THEREFORE, the parties hereto agree as follows:

SECTION 1. Definitions; References. Unless otherwise specifically defined herein, each term used herein which is defined in the Agreement has the meaning assigned to such term in the Agreement.

SECTION 2. Amendment of Section 1.01. Section 1.01 of the Agreement is amended to insert the following definition after the definition of "Subsidiary":

"Swap Obligations" means obligations of the Company and its Subsidiaries in respect of rate swap transactions, basis swaps, forward rate transactions, commodity swaps, commodity options, interest rate options, foreign exchange transactions, cap transactions, floor transactions, collar transactions, currency swap transactions, cross-currency rate swap transactions, currency options or any other similar transactions (including any options with respect to any such transactions) or combinations of such transactions.

SECTION 3. Amendment of Section 5.13. Clause (j) of Section 5.13 of the Agreement is amended and restated to read in its entirety as follows:

(j) Liens not otherwise permitted by the foregoing clauses of this Section securing indebtedness and Swap Obligations in an aggregate principal and mark to market value (net of mark to market thresholds, if any) amount at any one time outstanding not to exceed 30% of Consolidated Tangible Net Worth.

SECTION 4. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the State of New York.

SECTION 5. Counterparts; Effectiveness. This Amendment may be signed in any number of counterparts, each of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Amendment shall become effective as of the date hereof when the Agent shall receive duly executed counterparts hereof signed by the Borrower and the Required Banks (or, in the case of any party as to which an executed counterpart shall not have been received, the Agent shall receive telex, telecopy or other written confirmation from such party of execution of a counterpart hereof by such party).

IN WITNESS WHEREOF, the parties hereto have caused this Amendment to be duly executed by their respective authorized officers as of the day and year first above written.

ANALOG DEVICES, INC.

By: /s/ William A. Martin
Title: Treasurer

MORGAN GUARANTY TRUST
COMPANY OF NEW YORK

By: /s/ Stephen J. Kenneally
Title: Vice President

BANK OF AMERICA NATIONAL
TRUST AND SAVINGS ASSOCIATION

By: /s/ Michael A. Drevno
Title: Vice President

CONTINENTAL BANK N.A.

By: /s/ David Noda
Title: Vice President

THE FIRST NATIONAL BANK OF BOSTON

By: /s/ George A. Hibbard
Title: Vice President

ANALOG DEVICES, INC.

Employee Change in Control Severance Policy

(Effective December 13, 1988)

(As Amended on June 13, 1989 and December 9, 1993)

1. Purpose

The purpose of this Employee Change in Control Severance Policy is to diminish the distraction of covered employees (as defined below) in the event of a threatened or pending Change in Control (as defined below) and to provide financial assistance to any covered employee whose employment with Analog Devices, Inc. or any of its subsidiaries is terminated by the Company, other than for the reasons set forth below, following such a Change in Control. For purposes of this Policy, a covered employee shall be any employee of the Company (other than any exempt employee with a labor grade of 15 or above) who is not covered under any severance pay agreement (other than a stock option or restricted stock agreement) that provides special cash benefits following such a Change in Control. Unless the context otherwise requires, the "Company" means Analog Devices, Inc. and its subsidiaries (other than portfolio companies of AD Enterprises).

2. Eligibility for Severance Benefits

A covered employee shall qualify for severance benefits under this Policy if the employee is terminated from employment by the Company following a Change in Control (as defined below) other than for Cause or Disability (as such terms are defined below).

For purposes of this Policy, termination by the Company of employment for Cause shall mean termination (a) upon the willful and continuing failure by the employee to substantially perform his or her duties with the Company, provided that a written demand for substantial performance has been delivered to the employee by the Company specifically identifying the manner in which the Company believes that such employee has not substantially performed his or her duties and such employee shall not have cured such failure within 30 days after such demand or (b) by reason of the employee's willful engagement in conduct which is demonstrably and materially injurious to the Company. For purposes of this Policy, no act or failure to act on the part of an employee shall be deemed "willful" unless done or admitted to be done by the employee not in good faith and without reasonable belief that his or her action or omission was in the best interest of the Company.

For purposes of this Policy, Disability shall mean that as a result of incapacity due to physical or mental illness, the employee shall have been absent from the full-time performance of his or her duties with the Company for six consecutive months and, within 30 days after written notice of termination is given to the employee, the employee shall not have returned to the full-time performance of his or her duties.

3. Change in Control

For purposes of this Policy, a Change in Control shall occur or be deemed to have occurred only if any of the following events occur: (i) any "person," as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), (other than the Company, any trustee or other fiduciary holding securities under an employee benefit plan of the Company, or any corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportion as their ownership of stock of the Company) is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 50% or more of the combined voting power of the Company's then outstanding securities; (ii) individuals who, as of the effective date hereof, constitute the Board of Directors of the Company (as of the date hereof, the "Incumbent Board") cease for any reason to constitute at least a majority of the Board, provided that any person becoming a director subsequent to the date hereof whose election, or nomination for election by the Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board (other than an election or nomination of an individual whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of the directors of the Company, as such terms are used in Rule 14a-11 of Regulation 14A under the Exchange Act) shall be, for purposes of this Policy, considered as though such person were a member of the Incumbent Board; (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation, other than (A) a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 80% of the combined voting power of the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation or (B) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no "person" (as hereinabove defined) acquires more than 30% of the combined voting power of the Company's then outstanding securities; or (iv) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets."

4. Computation of Severance Benefit

If a covered employee's employment by the Company shall be terminated by the Company other than for Cause or Disability during the 18-month period following a Change in Control, then such employee shall be entitled to receive, promptly upon the termination of his or her employment, a lump-sum severance payment equal to the base salary otherwise payable to such employee for the following number of weeks' employment with the Company:

| Period of Employment Prior to Termination | Hourly Non-Exempt | Exempt (L.G. E01-14) |
|--|----------------------|-------------------------|
| 0 to 89 days | 2 weeks | 4 weeks |
| 90 days to less than 1 year | 4 weeks | 8 weeks |

| Period of Employment Prior to Termination | Hourly Non-Exempt | Exempt (L.G. E01-14) |
|--|---|---|
| 1 year to less than 3 years | 6 weeks | 12 weeks |
| 3 years to less than 5 years | 8 weeks | 16 weeks |
| 5 years to less than 10 years | 2 weeks for each full year of employment | 24 weeks |
| 10 years or more | 20 weeks, plus 4 weeks for each full year of employment over 10 years | 32 weeks, plus 4 weeks for each full year of employment over 10 years |

Notwithstanding the figures in the second column of the foregoing table, the severance benefit for covered employees with labor grades of 12, 13 or 14 shall be a minimum of 26 weeks of base salary.

Notwithstanding the foregoing, in no event shall any lump sum payment to any covered employee hereunder exceed two times such covered employee's annual compensation for the last full year immediately preceding the termination of employment with the Company following a Change in Control.

Subject to the provisions of Section 5(b), this Policy establishes in each covered employee, following a Change in Control, a contractual right to the benefits to which he or she is entitled under this Policy, and such right shall be enforceable by each covered employee against the Company following a Change in Control.

5. Amendment and Terminations

(a) This Policy shall be effective until December 31, 1994 and shall continue in effect thereafter unless the Board of Directors of the Company shall vote to terminate or modify this Policy, provided, however, that if a Change in Control shall have occurred prior to December 31, 1994 (or such later date that this Policy is in effect because no action has been taken by the Board of Directors to terminate this Policy), this Policy shall remain in effect for a period of not less than 18 months after the date of such Change in Control and all obligations of the Company arising under this Policy as a result of any termination during such 18-month period shall survive until such obligations are fully performed.

(b) Notwithstanding the foregoing, this Policy and the benefits described herein may be amended or terminated by the Board of Directors of the Company at any time; provided, however, that following a Change in Control this Policy may not be terminated or amended in any manner materially adverse to then covered employees without the written consent of a majority of the covered employees actively employed by the Company and covered by this Policy both immediately prior to the Change in Control and at the date of such amendment.

6. No Mitigation

An employee shall not be required to mitigate the amount of any payment provided for in this Policy by seeking other employment or otherwise and shall not be required to offset against such payment any payments he or she may receive from future employment.

7. No Fiduciary or Employment Relationship

Nothing contained in this Policy and no action taken pursuant to the provisions of this Policy shall create or be construed to create a trust of any kind or fiduciary relationship or contract for employment between the Company and any employee, and nothing in this Policy shall affect the right of the Company to terminate the employment of any employee for any reason whatsoever.

8. Notice

For the purpose of this Policy, notices and all other communications provided for in the Policy shall be in writing and shall be deemed to have been duly given when delivered in person or mailed by United States registered mail, return receipt requested, postage prepaid.

9. Withholding

Any payment provided for hereunder shall be paid net of any applicable withholding required under foreign, federal, state or local law.

10. Governing Law

All questions pertaining to the construction, regulation, and validity and effect of the provisions of this Policy shall be determined in accordance with the laws of the Commonwealth of Massachusetts without regard for the conflict of law principles thereof.

11. Conflict with Surplus (Reduction in Work Force) Policy

Any payments made to a covered employee under this Policy shall be in lieu of, and not in addition to, any payments to such employee under the Company's Surplus (Reduction in Work Force) Policy.

ANALOG DEVICES, INC.

Senior Management Change in Control Severance Policy

(Effective December 13, 1988)

(As Amended on June 13, 1989 and December 9, 1993)

1. Purpose

The purpose of this Senior Management Change in Control Severance Policy is to diminish the distraction of covered employees (as defined below) in the event of a threatened or pending Change in Control (as defined below) and to provide financial assistance to any covered employee whose employment with Analog Devices, Inc. or any of its subsidiaries is terminated under certain circumstances following such a Change in Control. For purposes of this Policy, a covered employee shall be any employee of the Company with a labor grade of 15 or above (as of the time of termination) who is not covered under any severance pay agreement (other than a stock option or restricted stock agreement) that provides special cash benefits following such a Change in Control. Unless the context otherwise requires, the "Company" means Analog Devices, Inc. and its subsidiaries (other than portfolio companies of AD Enterprises).

2. Eligibility for Severance Benefits

(a) A covered employee shall qualify for severance benefits under this Policy if following a Change in Control (as defined below) the employee is terminated from employment by the Company other than for Cause or Disability (as such terms are defined below) or by the employee for Good Reason (as defined below).

(b) For purposes of this Policy, termination by the Company of employment for Cause shall mean termination (a) upon the willful and continuing failure by the employee to substantially perform his or her duties with the Company, provided that a written demand for substantial performance has been delivered to the employee by the Company specifically identifying the manner in which the Company believes that such employee has not substantially performed his or her duties and such employee shall not have cured such failure within 30 days after such demand or (b) by reason of the employee's willful engagement in conduct which is demonstrably and materially injurious to the Company. For purposes of this Policy, no act or failure to act on the part of an employee shall be deemed "willful" unless done or admitted to be done by the employee not in good faith and without reasonable belief that his or her action or omission was in the best interest of the Company.

(c) For purposes of this Policy, Disability shall mean that as a result of incapacity due to physical or mental illness, the employee shall have been absent from the full-time performance of his or her duties with the Company for six consecutive months and, within 30 days after written notice of termination is given to the employee, the employee shall not have returned to the full-time performance of his or her duties.

(d) For purposes of this Policy, Good Reason shall mean, without the employee's written consent, the occurrence after a Change in Control of the Company of any of the following circumstances:

(A) any significant diminution in the employee's position, duties, responsibilities, power, title or office as in effect immediately prior to a Change in Control;

(B) any reduction in the employee's annual base salary as in effect on January 1, 1989 or as the same may be increased from time to time;

(C) the failure of the Company to continue in effect any material compensation or benefit plan in which the employee participates immediately prior to the Change in Control, unless an equitable arrangement (embodied in an ongoing substitute or alternative plan) has been made with respect to such plan, or the failure by the Company to continue his or her participation therein (or in such substitute or alternative plan) on a basis not materially less favorable, both in terms of the amount of benefits provided and the level of his or her participation relative to other participants, as existed at the time of the Change in Control;

(D) the failure by the Company to continue to provide the employee with benefits substantially similar to those enjoyed by him or her under any of the Company's life insurance, medical, health and accident, or disability plans in which he or she was participating at the time of the Change in Control, the taking of any action by the Company which would directly or indirectly materially reduce any of such benefits, or the failure by the Company to provide him or her with the number of paid vacation days to which he or she is entitled on the basis of years of service with the Company in accordance with the Company's normal vacation policy in effect at the time of the Change in Control;
or

(E) any requirement by the Company or of any person in control of the Company that the location at which the employee performs his or her principal duties for the Company be changed to a new location outside a radius of 50 miles from his or her principal residence at the time of the Change in Control.

3. Change in Control

For purposes of this Policy, a Change in Control shall occur or be deemed to have occurred only if any of the following events occur: (i) any "person," as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), (other than the Company, any trustee or other fiduciary holding securities under an employee benefit plan of the Company, or any corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportion as their ownership of stock of the Company) is or becomes the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of securities of the Company representing 50% or more of the combined voting power of the Company's then outstanding securities; (ii) individuals who, as of the effective date hereof, constitute the Board of Directors of the Company (as of the date hereof, the "Incumbent Board") cease for any reason to constitute at least a majority of the Board, provided that any person becoming a director subsequent to the date hereof whose election, or nomination for election by the Company's stockholders, was approved by a vote of at

least a majority of the directors then comprising the Incumbent Board (other than an election or nomination of an individual whose initial assumption of office is in connection with an actual or threatened election contest relating to the election of the directors of the Company, as such terms are used in Rule 14a-11 of Regulation 14A under the Exchange Act) shall be, for purposes of this Agreement, considered as though such person were a member of the Incumbent Board; (iii) the stockholders of the Company approve a merger or consolidation of the Company with any other corporation, other than (A) a merger or consolidation which would result in the voting securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity) more than 80% of the combined voting power of the voting securities of the Company or such surviving entity outstanding immediately after such merger or consolidation or (B) a merger or consolidation effected to implement a recapitalization of the Company (or similar transaction) in which no "person" (as hereinabove defined) acquires more than 30% of the combined voting power of the Company's then outstanding securities; or (iv) the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of all or substantially all of the Company's assets."

4. Computation of Severance Benefit

If a covered employee's employment by the Company shall be terminated by the Company other than for Cause or Disability during the 18-month period following a Change in Control or a covered employee terminates employment with the Company for Good Reason during the 18-month period following a Change in Control, then such employee shall be entitled to receive, promptly upon the termination of his or her employment, a lump-sum severance payment equal to the base salary otherwise payable to such employee for the following number of weeks' employment with the Company, plus an amount equal to the aggregate cash bonuses paid or awarded by the Company to such employee in respect of the four fiscal quarters preceding such termination of employment:

| Period of Employment Prior to Termination | Number of Weeks of Base Salary |
|--|--|
| Less than 10 years | 52 weeks |
| 10 years or more | 62 weeks, plus 4 weeks for each full year of employment over 10 years, up to a maximum of 104 weeks in the aggregate |

Subject to the provisions of Section 6(b), this Policy establishes in each covered employee, following a Change in Control, a contractual right to the benefits to which he or she is entitled under this Policy, and such rights shall be enforceable by each covered employee against the Company following a Change in Control.

5. Certain Reduction of Payments by the Company

(a) Anything in this Policy to the contrary notwithstanding, in the event it shall be determined that any payment or distribution by the Company to or for the benefit of the

employee (whether paid or payable or distributed or distributable pursuant to the terms of this Policy or otherwise) (a "Payment") would be nondeductible by the Company for federal income tax purposes because of Section 280G of the Internal Revenue Code of 1986, as amended (the "Code"), then the aggregate present value of amounts payable or distributable to or for the benefit of such employee pursuant to this Policy (such payments or distributions pursuant to this Policy are hereinafter referred to as "Policy Payments") shall be reduced to the Reduced Amount. The "Reduced Amount" shall be an amount expressed in present value which maximizes the aggregate present value of Policy Payments without causing any Payment to be nondeductible by the Company because of Section 280G of the Code. For purposes of this Section 5, present value shall be determined in accordance with Section 280G(d)(4) of the Code.

(b) All determinations required to be made under this Section 5 shall be made by the Company's independent public accountants (the "Accounting Firm") which shall provide detailed supporting calculations both to the Company and the employee. Any such determination by the Accounting Firm shall be binding upon the Company and the employee.

(c) As a result of the uncertainty in the application of Section 280G of the Code at the time of the initial determination by the Accounting Firm hereunder it is possible that Policy Payments will have been made by the Company which should not have been made ("Overpayment") or that additional Policy Payments which will not have been made by the Company could have been made ("Underpayment"), in each case, consistent with the calculations required to be made hereunder. In the event that the Accounting Firm, based upon the assertion of a deficiency by the Internal Revenue Service against the employee which the Accounting Firm believes has a high probability of success determines that an Overpayment has been made, any such Overpayment paid or distributed by the Company to or for the benefit of the employee shall be treated for all purposes as a loan ab initio to the employee which the employee shall repay to the Company together with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code; provided, however, that no such loan shall be deemed to have been made and no amount shall be payable by the employee to the Company if and to the extent such deemed loan and payment would not either reduce the amount on which the employee is subject to tax under Section 1 and Section 4999 of the Code or generate a refund of such taxes. In the event that the Accounting Firm, based upon controlling precedent or other substantial authority, determines that an Underpayment has occurred, any such Underpayment shall be promptly paid by the Company to or for the benefit of the employee together with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code.

6. Amendment and Termination

(a) This Policy shall be effective until December 31, 1994 and shall continue in effect thereafter unless the Board of Directors of the Company shall vote to terminate or modify this Policy, provided, however, that if a Change in Control shall have occurred prior to December 31, 1994 (or such later date that this Policy is in effect because no action has been taken by the Board of Directors to terminate this Policy), this Policy shall remain in effect for a period of not less than 18 months after the date of such Change of Control and all obligations of the Company arising under this Policy as a result of any termination during such 18-month period shall survive until such obligations are fully performed.

(b) Notwithstanding the foregoing, this Policy and the benefits described herein may be amended or terminated by the Board of Directors of the Company at any time; provided, however, that following a Change in Control this Policy may not be terminated or amended in any manner materially adverse to then covered employees without the written consent of a majority of the covered employees actively employed by the Company and covered by this Policy both immediately prior to the Change in Control and at the date of such amendment.

7. No Mitigation

An employee shall not be required to mitigate the amount of any payment provided for in this Policy by seeking other employment or otherwise and shall not be required to offset against such payment any payments he or she may receive from further employment.

8. No Fiduciary or Employment Relationship

Nothing contained in this Policy and no action taken pursuant to the provisions of this Policy shall create or be construed to create a trust of any kind or fiduciary relationship or contract for employment between the Company and any employee, and nothing in this Policy shall affect the right of the Company to terminate the employment of any employee for any reason whatsoever.

9. Notice

For the purpose of this Policy, notices and all other communications provided for in the Policy shall be in writing and shall be deemed to have been duly given when delivered in person or mailed by United States registered mail, return receipt requested, postage prepaid.

10. Withholding

Any payment provided for hereunder shall be paid net of any applicable withholding required under foreign, federal, state or local law.

11. Governing Law

All questions pertaining to the construction, regulation, and validity and effect of the provisions of this Policy shall be determined in accordance with the laws of the Commonwealth of Massachusetts without regard for the conflict of law principles thereof.

12. Conflict with Surplus (Reduction in Work Force) Policy

Any payments made to a covered employee under this Policy shall be in lieu of, and not in addition to, any payments to such employee under the Company's Surplus (Reduction in Work Force) Policy.

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

DATED THIS 1ST DAY OF OCTOBER 1999

BETWEEN

CHARTERED SEMICONDUCTOR MANUFACTURING LTD

AND

ANALOG DEVICES INC.

ASSURED SUPPLY AND DEMAND AGREEMENT

ASSURED SUPPLY AND DEMAND AGREEMENT

THIS AGREEMENT is made the 1st day of October 1999 by and between :-

- (1) CHARTERED SEMICONDUCTOR MANUFACTURING LTD, a company incorporated in Singapore and having its place of business at 60 Woodlands Industrial Park D, Street 2, Singapore 738406 ("CSM"); and
- (2) ANALOG DEVICES, INC. a company incorporated in Delaware and having its place of business at One Technology Way, Norwood, MA 02062, USA ("ADI").

WHEREAS

- (A) CSM and ADBV, an affiliate of ADI, had entered into a Deposit Agreement dated 30 January 1996 (the "Deposit Agreement") for the purpose of ADBV depositing certain funds with CSM and for CSM to make available to ADBV certain wafer manufacturing capacity. ADBV subsequently assigned its rights and obligations under the Deposit Agreement to ADI.
- (B) To strengthen the relationship between CSM and ADI and to meet the changing business needs of both Parties, CSM and ADI have decided to enter into this Assured Supply and Demand Agreement to supersede the Deposit Agreement to effect new terms and conditions under which the said deposit may be credited back to ADI.

NOW THEREFORE, in consideration of the foregoing and the mutual covenants contained herein, the Parties agree as follows:-

1. DEPOSIT AGREEMENT SUPERSEDED

With effect from July 1, 1999 ("the Effective Date"), all terms and conditions of the Deposit Agreement shall be superseded by the terms and conditions of this Agreement, and shall cease to have any force or effect.

2. THE DEPOSIT

2.1 The Parties acknowledge that ADI has deposited with CSM the sum of US\$20,000,000 (the "Deposit") for the purposes of securing wafer manufacturing capacity at CSM's facilities.

2.2 With effect from the Effective Date, the Parties agree that CSM will refund the Deposit to ADI on the terms and conditions set out as follows. Partial refunds shall occur on a per wafer basis as outlined in Table B of ANNEX A and on a per product basis as outlined in TABLE A of Annex A. Product based refunds shall occur upon successful completion of Tapeout, Lot Acceptance or Qualification, as defined below and as indicated in TABLE A of Annex A. Wafer refunds per Table B of Annex A shall include wafers purchased by ADI, its affiliates and others of ADI products. If CSM is unable to accept an order for

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

- 2.3 wafers within the CSM commitment described in this Agreement, ADI shall be entitled to that same refund amount per wafer for any orders not accepted by CSM. Refunds shall be calculated at the end of each calendar quarter and shall be credited or paid to ADI within 30 days after the close of the quarter.
- 2.4 "Tapeout" shall be deemed to have occurred when ADI provides to CSM a full GDS database of a given product and CSM has communicated in writing to ADI that there has been no design rule violation or has agreed to accept the design and layout "as is." Acceptance of a purchase order by CSM from ADI for more than [**] wafers of a product shall constitute written "as is" design acceptance, unless mutually agreed in writing.
- 2.5 "Lot Acceptance" by ADI shall be defined as the successful fabrication of 4 production lots including 1 prototype or skew lot and 3 qualification lots, which pass all relevant CSM WAT criteria.
- 2.6 "Qualification" by ADI shall be defined as the attainment of competitive yield and the successful completion of standard Reliability screens as used by ADI in the qualification of similar products, according to ADI specification ADI-0012.
- 2.7 If ADI successfully qualifies products as described in Table A of Annex A in accordance with the mutually agreed qualification plan in ANNEX C, ADI will be entitled to portions of the Deposit in accordance with Annex A. Any part of the Deposit that is not refunded or due to be refunded to ADI pursuant to Annex A on or before 30 June 2004, will not be refunded thereafter. However, i) if ADI shall Tapeout one or more products, proven to meet similar Lot Acceptance and Qualification criteria at another vendor, on each of three or more of the technologies listed in Table A of Annex A and CSM does not attain Lot Acceptance and Qualification by 1 January 2002, on two or more of the technologies listed in Table A of Annex A, or ii) CSM shall fail to make industry-compatible versions of three or more of the technologies listed in Table A of Annex A available to ADI for production use by 1 January 2002, then any remaining deposit on 29 June 2004 shall be then refunded to ADI. For this purpose, an industry compatible process is one which can accept and qualify the same layout as accepted and qualified at a competitor wafer fab, after only minor revisions which do not affect die size.
- 2.8 ADI may introduce its design customers and/or licensees to use CSM's manufacturing facilities. If CSM agrees to provide manufacturing services to any such third party, wafers manufactured based on an ADI design pursuant to such an arrangement shall entitle ADI to the same wafer credits indicated in Table B of Annex A. Wafers manufactured for ADI under other agreements between CSM and ADI or its subsidiaries shall entitle ADI to the same wafer credits indicated in Table B.

- 2.8 All wafers shall be manufactured and supplied in accordance with CSM's procedures and relevant ADI and CSM specifications, including the existing ADI/CSM procurement spec, as to the current revision or as amended by mutual agreement. Copies of CSM's procedures shall be available upon written request by ADI.
- 2.9 ADI acknowledges that some of the process technologies referred to in Annex A may be run in either or both of CSM's joint venture fabs operated by Silicon Manufacturing Partners Pte Ltd ("SMP") and Chartered Silicon Partners Pte Ltd ("CSP"). In the event that CSM needs to supply ADI with any wafers out of SMP and/or CSP, ADI agrees to allow CSM to assign the relevant portions of this Agreement to SMP or CSP, as the case may be, or to enter into a separate agreement with SMP or CSP on similar terms as the terms of this Agreement. All 8" wafers purchased by ADI, its subsidiaries and assignees from CSM and its affiliates, regardless of the actual process, fabrication source, or fabrication site, shall be eligible for credit under the terms of this Agreement.
3. ADI'S LOADING COMMITMENT
- 3.1 ADI agrees to place with CSM purchase orders of such quantity of 8-inch wafers as forecasted for delivery during each calendar quarter of the term of this Agreement.
- 3.2 While there are no liquidated damages associated with forecasts, both Parties recognize the difficulty in CSM factories accommodating sharp forecast changes or changes from forecast. Also, both Parties recognize that a certain level of capacity must be committed by CSM to ADI to accommodate ADI's revenue needs and to enable ADI to earn back the deposit as set forth in Annex A. For these reasons, the Parties have agreed on certain forecast guidelines below.
- 3.3 Forecast Timing. Forecasts refer to wafer purchase projections beyond the normal lead-time published by CSM and agreed by ADI. Nominally, the order lead-time is otherwise assumed to be 3 months for the purpose of such forecasts. Forecasts shall refer to wafer delivery quantities and dates and shall be non-binding. CSM shall acknowledge each forecast in writing within 10 business days, either (i) accepting such forecast, even though aspects may exceed the forecast quantity or variation guidelines noted in Section 3.8, or (ii) identifying those aspects which exceed guidelines and CSM's ability to sustain as their Base Loading Commitment. Any forecast accepted by CSM in writing within 10 business days shall become the new Base Loading Commitment.
- 3.4 All wafer commitments within the agreed lead-time are made via ADI Purchase Orders as acknowledged and accepted by CSM. Purchase Orders accepted by CSM are considered binding agreements for CSM to deliver and ADI to accept the stated quantity and type of wafers, in accordance with all relevant CSM procedures and all agreed ADI and CSM specifications, including the existing ADI/CSM procurement spec, as to the current revision or as amended by mutual agreement. Purchase Orders are time sensitive documents and must be acknowledged and accepted in writing by CSM within 10 business days or they are considered null and void. Wafer orders which are not delivered within the agreed delivery lead-time, plus a grace period of no more than 30 days, upon placement and acceptance of the Purchase Order, are subject to cancellation by ADI on 2

business days notice. There is no penalty for cancellation due to late delivery as described in this section. To the extent that the terms of Purchase Orders and other documents are inconsistent with the terms of this Agreement, this Agreement shall take precedence, unless CSM and ADI specifically agree to amended terms in a separate agreement. The terms of a quotation and purchase order shall not constitute such amendment.

- 3.5 Quarterly Forecast. ADI's monthly wafer delivery requirements forecast for those products to be manufactured over the next 18 months will be provided quarterly on an agreed timetable (the "Quarterly Forecast"). The first such forecast is set out in ANNEX B (the "Original Forecast"). The first 3 months of each Quarterly Forecast shall be backed by Purchase Orders for those 3 months as described above. Subject to Section 3.8 hereof, the Original Forecast shall be updated by ADI at the end of every calendar quarter. Future Quarterly Forecasts shall cover the period from 10 to 18 months from the forecast date, indicating total wafer demand by process. The period from 4 to 9 months shall be covered by the monthly forecast as outlined below.
- 3.6 Monthly Forecast. On a monthly basis, ADI shall provide CSM with a 6-month rolling forecast, by product and process, of its monthly volume requirements for wafers covering the period from 4 to 9 months from the forecast date. ADI will update the 6-month forecast on or before the 26th of each month (the "Monthly Forecast"). ADI shall indicate on the forecast those products for which ADI requests CSM to obtain circuit probe capacity and commit to execute circuit probing within the order lead time.
- 3.7 Base Loading Commitment. For the purposes of establishing CSM's capacity commitment to ADI, the concept of Base Loading Commitment is introduced and is defined as the first Monthly Forecast, (as defined in Section 3.6) of each quarter as accepted by CSM in writing plus the corresponding Quarterly Forecast (as defined in section 3.5) of the same date as submitted by ADI as adjusted for flexibility in accordance with Section 3.8.

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

3.8 Loading Commitment Flexibility.

3.8.1 ADI's loadings per month shall not vary from one third of the relevant quarter's Base Loading Commitment by more than [**].

3.8.2 On a quarterly basis, ADI may modify the Base Loading Commitment as follows:

| Period (Forecast Quarter = Quarter 0; current month = month 0 e.g. Mar 2000) | Pre-approved Modification (Percentage of the same month forecast made in the previous Base Loading Commitment) |
|---|--|
| Quarter 1 (e.g. Apr - Jun 2000) | +/- 0% as covered by Accepted Purchase Orders |
| Quarter 2 (e.g. Jul - Sep 2000) | The lesser of + / - [**] wafers |
| Quarter 3 (e.g. Oct - Dec 2000) | The lesser of + / - [**] wafers |
| Quarter 4 (e.g. Jan - Mar 2001) | The lesser of + / - [**] wafers |
| Quarter 5 (e.g. Apr - Jun 2001) | The lesser of + / - [**] wafers |
| Quarter 6 (e.g. Jul - Sep 2001) | The lesser of + / - [**] wafers |

3.8.3 Notwithstanding the foregoing, should any ADI forecast exceed the pre-approved modification for any calendar quarter, CSM shall have the right to accept or reject that revised forecast. CSM shall have 14 business days to either accept or reject the modified forecast in writing. If CSM accepts the modified forecast, then it shall become the new Base Loading Commitment.

A table to demonstrate how the above flexibility model operates with respect to the Original Forecast is set out in ANNEX B.

4. CSM'S SUPPLY COMMITMENT

4.1 In consideration of the retention of the Deposit, CSM hereby agrees to supply wafers as per the Base Loading Commitment. Unless otherwise agreed to by CSM in writing, CSM shall not be contractually obligated to provide more than [**] wafers under this Agreement in a given month through December 31, 2000. Thereafter, and unless otherwise agreed to by CSM in writing, CSM shall not be contractually obligated to provide more than [**] wafers per month or [**] wafers per month per [**] outstanding Deposit balance, whichever is greater.

4.2 CSM's Supply Commitment set out in Section 4.1 above shall be limited to the mix of technologies set out in the Original Forecast in Annex B or in subsequent forecasts as accepted by CSM and shall continue for so long as any portion of the Deposit remains outstanding, unless the Agreement is terminated under Section 6.

- 4.3 CSM's Supply Commitment under this Agreement shall be considered separate from and in addition to CSM's Supply Commitment under other agreements between the Parties.
5. EFFECTIVE DATE
- 5.1 The effective date of this Agreement shall be July 1st, 1999.
6. TERMINATION DATE
- 6.1 Unless terminated earlier by the Agreement of the parties or on the complete refund of the Deposit, this Agreement shall terminate automatically on June 30, 2004. Any remaining amount of the Deposit unrefunded as of June 30, 2004 and not pending reimbursement via mechanisms in Annex A shall be retained by CSM with no recourse for recovery by ADI, as provided in Section 2.6.
7. PRICING AND PAYMENT TERMS
- 7.1 The purchase price of wafers charged to ADI shall be in accordance with the terms of the relevant CSM price quotation agreed to by the Parties from time to time for the relevant lots of wafers purchased. CSM commits to provide wafers at market competitive prices.
- 7.2 Unless otherwise set out in the applicable Agreed Price Quotation, payment for wafers ordered shall be made by ADI in United States dollars within 45 days from the date of the applicable invoices issued by CSM. ADI shall make payment by telegraphic transfer to an account nominated by CSM. Any late payment for Wafers shall be subject to interest charges of 1.5% per month.
- 7.3 All invoices issued by CSM shall identify the wafers and the relevant ADI Purchase Order number, Product part number, Purchase Order line and release number, description of items, and quantity of items shipped. Unless otherwise agreed by ADI and CSM in writing, invoices may be dated no earlier than the relevant date of delivery.
- 7.4 In the event of any dispute over the amount invoiced, ADI shall first make payment of the undisputed portion in accordance with Section 7.2 pending resolution of the dispute between the Parties.
- 7.5 ADI shall pay, in addition to the prices of wafers stipulated herein, the amount of any freight, insurance, handling and other duties levied on the shipment of wafers to ADI. ADI shall also pay for all sales, use, excise or other similar taxes levied on the purchase of wafers by ADI hereunder.
- 7.6 CSM may, in its discretion upon written notice to ADI, change the terms of payment to cash, cash-on-delivery or letter of credit or place ADI on credit hold in the event that ADI is late in its payments under this Agreement.

8. PROCEDURE FOR RETURN OF WAFERS

- 8.1 The return of wafers shall be in accordance with the current CSM specification QX-038. The time limit for the return of wafers due to low sort yield is 60 days from the delivery date of such wafers, and the time limit for the return of Wafers due to reliability failures is 1 year from the delivery date of such wafers.
- 8.2 CSM shall have no liability and shall not be obliged to accept the return of wafers after the relevant period of 60 days or 1 year, as the case may be. In addition, CSM shall be under no liability for defects in the wafers caused by static discharge, abnormal working conditions, fair wear and tear, accident, willful damage, abuse, misuse, neglect, improper installation, repair or alteration by persons other than CSM, improper testing and/or improper storage and/or improper handling or use contrary to any instructions issued by CSM which are in keeping with generally accepted industry practices. Further, CSM shall be under no liability for any parts or materials it has not manufactured.
- 8.3 CSM shall have the discretion to decide whether or not to conduct failure analysis on the wafers returned by ADI, and if such failure analysis is conducted, CSM will, at ADI's request, provide ADI with copies of the results of such analysis. If it is mutually agreed that the defects are due to causes other than the causes specified in Section 8.2, then ADI may at its option elect for either a full credit for the purchase price paid for such wafers, or CSM's replacement of the defective wafers returned to CSM. If ADI elects for the replacement of defective wafers, the manufacture of such wafers shall have high priority on CSM's production schedule, at no further cost to ADI.
- 8.4 THE FOREGOING STATES CSMS ENTIRE LIABILITY, WHETHER IN CONTRACT OR IN TORT FOR DEFECTS IN WAFERS. THE EXPRESS TERMS OF THIS AGREEMENT ARE IN LIEU OF ALL WARRANTIES, CONDITIONS, TERMS, UNDERTAKINGS, AND OBLIGATIONS IMPLIED BY STATUTE, COMMON LAW, CUSTOM, TRADE USAGE, COURSE OF DEALING OR OTHERWISE, ALL OF WHICH ARE HEREBY EXPRESSLY EXCLUDED TO THE FULLEST EXTENT PERMITTED BY LAW AND CSM SPECIFICALLY DISCLAIMS ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.
9. PRODUCTION HALTS
- 9.1 ADI may at any time request CSM to halt the manufacture of wafers still in-process and CSM shall effect production stoppage, within 2 business days at a point in the process that is consistent with subsequent successful completion. The manufacture of Wafers shall remain on hold pending written directions from ADI. If such hold extends beyond 90 days, CSM will deem the hold to be a cancellation of the order and ADI will be invoiced in accordance with Section 9.2.

- 9.2 If ADI places an order on hold beyond 90 days or decides to cancel an order for reasons other than late delivery, ADI shall pay to CSM a Cancellation Fee based on the formula below:

$$CF = [(CS \text{ DIVIDED BY } TS) \times (P - R)] + R + T$$

where

'CF' means the cancellation fee payable by Customer.

'CS' means the number of completed manufacturing steps as at the date of cancellation.

'TS' means the total number of manufacturing steps required to produce the Wafers had there not been any cancellation.

'P' refers to the purchase price of the Wafer as set out in the applicable Agreed Price Quotation.

'R' refers to the raw wafer cost incurred by CSM.

'T' refers to any applicable sales, use, excise or other similar taxes levied on or otherwise payable in connection with the Cancellation Fee.

- 9.3 CSM shall, if commercially feasible, re-start the manufacture of wafers within a reasonable time after receipt of ADI's written request, subject to ADI's agreement to bear all expenses incurred by CSM in production stoppage and re-start. CSM will make no commitments of yield, reliability and conformance with the Acceptance Criteria in respect of wafers stopped in-process (a) more than one time regardless of the number of days of stoppage, or (b) if the stoppage lasts for more than 90 days.

10. DELIVERY

- 10.1 CSM shall use its commercially reasonable efforts to deliver the exact quantity of wafers stipulated in the relevant ADI Purchase Order. However if for each Purchase Order the aggregate quantity of wafers delivered by CSM is either within plus or minus 5% of the quantity ordered or within plus or minus 1 wafer, whichever is greater, such quantity shall constitute compliance with ADI Purchase Order.
- 10.2 Unless otherwise agreed by the Parties, Wafers shall be delivered Ex-Works (CSM's factory in Singapore) (INCOTERMS 1990). CSM shall use its commercially reasonable efforts to deliver within the scheduled delivery date. However if for each purchase order, wafers are delivered within plus or minus 7 days of the scheduled delivery date, such delivery shall constitute compliance with ADI Purchase Order. CSM shall promptly give ADI written notice of any prospective failure to deliver within the scheduled deliver date.

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

- 10.3 All quantities of wafers shall be delivered in CSM standard containers with proper labels identifying the specific product and lot number and shall be accompanied by a packing list specifying the relevant purchase order number, wafer lot number, Wafer quantity and number of good un-inked die (if wafers have been sorted) and agreed upon processing documentation.
- 10.4 If ADI fails to take delivery of any quantity of wafers or fails to give adequate delivery instructions (otherwise than by reason of any cause beyond ADI's reasonable control or by reason of CSM's fault), then without prejudice to any other right or remedy available to CSM, CSM may at its option, store such wafers until actual delivery and charge ADI for reasonable costs (including insurance) of storage.
11. FORCE MAJEURE
- 11.1 Each Party's obligations under this Agreement shall be suspended upon the occurrence of a force majeure event such as act of God, flood, earthquake, fire, explosion, act of government, war, civil commotion, insurrection, embargo, riots, lockouts, labour disputes affecting such Party, for such period as such force majeure event may subsist. Upon the occurrence of a force majeure event, the affected Party shall notify the other Party in writing of the same and shall by subsequent written notice after the cessation of such force majeure event inform the other Party of the date on which that Party's obligation under this Agreement shall be reinstated.
- 11.2 Notwithstanding anything in this Section 11, upon the occurrence of a force majeure event affecting either Party, if such force majeure event continues for a period exceeding 6 consecutive months without a prospect of a cure of such event, the other Party shall have the option, in its sole discretion, to terminate this Agreement. Such termination shall take effect immediately upon the written notice to that effect from the other Party to the Party affected by the force majeure event.
- 11.3 If a force majeure event prevents CSM from supplying wafers to ADI, the termination date set forth in Section 6 shall be automatically extended by the duration of the force majeure event.
12. USE RESTRICTION AND LIMITATION OF LIABILITY
- 12.1 ADI accepts all responsibility for any use or action taken by ADI with respect to wafers manufactured by CSM, once CSM has satisfactorily delivered the said wafers to ADI or ADI's agent(s) in Singapore in accordance with the terms of this Agreement.
- 12.2 ADI hereby agrees that the wafers are [**] for use as [**] in (a) any [**] devices or systems; or (b) any [**] devices or systems [**] (including but not limited to [**]). CSM

- 13.2 The Parties shall take all reasonable steps to minimize the risk of disclosure of Confidential Information, by ensuring that only they themselves and such of their employees and directors whose duties will require them to possess any of such information shall have access thereto, and will be instructed to treat the same as confidential.
- 13.3 The obligation contained in this Section 13 shall endure, even after the termination of this Agreement, for a period of 5 years from the date of receipt of the Confidential Information except and until such Confidential Information enters the public domain as set out above.
14. NOTICES
- 14.1 All notices, demands or other communications required or permitted to be given or made under or in connection with this Agreement shall be in writing and shall be sufficiently given or made (a) if delivered by hand or commercial courier or (b) sent by pre-paid registered post or (c) sent by legible facsimile transmission (provided that the receipt of such facsimile transmission is confirmed and a copy thereof is sent immediately thereafter by pre-paid registered post or commercial courier) addressed to the intended recipient at its address or facsimile number set out below. A Party may from time to time notify the others of its change of address or facsimile number in accordance with this Section 14.

CSM

60 Woodlands Industrial Park D
Street 2
Singapore 738406
Facsimile no: (65) 362 2909
Attention: The Legal Department

ADI

One Technology Way
Norwood, MA 02062-9106, USA
Facsimile no: 1-781-461-3491
Attention: Corporate Counsel

With a copy to:
804 Woburn Street
Wilmington, MA 01887-3462, USA
Facsimile no: 1-781-937-2008
Attention: External Foundry Director

14.2 DEEMED DELIVERY

Any such notice, demand or communication shall be deemed to have been duly served (a) if delivered by hand or commercial courier, or sent by pre-paid registered post, at the time of delivery; or (b) if made by successfully transmitted facsimile transmission, at the time of dispatch (provided that the receipt of such facsimile transmission is confirmed and that immediately after such dispatch, a copy thereof is sent by pre-paid registered post or commercial courier).

15. WAIVER AND REMEDIES

15.1 No delay or neglect on the part of either Party in enforcing against the other Party any term or condition of this Agreement or in exercising any right or remedy under this Agreement shall either be or be deemed to be a waiver or in any way prejudice any right or remedy of that Party under this Agreement.

15.2 No remedy conferred by any of the provisions of this Agreement is intended to be exclusive of any other remedy which is otherwise available at law, in equity, by statute or otherwise and each and every other remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law, in equity, by statute or otherwise. The election of any one or more of such remedies by either of the Parties shall not constitute a waiver by such Party of the right to pursue any other available remedy.

16. SEVERANCE

16.1 If any provision or part of this Agreement is rendered void, illegal or unenforceable in any respect under any enactment or rule of law, the validity, legality and enforceability of the remaining provisions shall not in any way be affected or impaired thereby.

17. NO ASSIGNMENT OR SUB-CONTRACTING

17.1 Unless otherwise agreed in writing by the Parties, this Agreement may not be assigned or sub-contracted by either Party to any third party without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

18. GOVERNING LAW

18.1 This Agreement shall be governed by and construed in accordance with the substantive laws of the Singapore.

18.2 The Parties hereby specifically exclude the application of the United Nations Convention on Contracts for the International Sale of Goods to this Agreement.

18.3 Except as otherwise expressly provided hereunder, any dispute or controversy arising in connection with this Agreement which cannot be settled by mutual or amicable agreement shall be finally settled through binding arbitration in London, England pursuant to the Rules of Arbitration of the International Chamber of Commerce by 1 arbitrator appointed in accordance with the said Rules. Any such arbitration shall be conducted in the English language.

19. ENTIRE AGREEMENT

19.1 This Agreement constitutes the entire agreement between the parties with respect to the subject matter hereof and supersedes and replaces all prior or contemporaneous understandings, agreements, dealings, and negotiations, oral or written, regarding the subject matter hereof including, without limitation, the Deposit Agreement. No modification, alteration or amendment of the Agreement shall be effective unless in writing and signed by both Parties. This Agreement shall supersede the 1995 Manufacturing Agreement, dated 17 March 1995, only to the extent of any inconsistent provision set forth herein.

IN WITNESS WHEREOF the Parties have hereunto entered into this Agreement as of the date first above written.

/s/ Joseph E. McDonough

Name: Joseph E. McDonough
Title: Vice President Finance & CFO
for and on behalf of
ANALOG DEVICES, INC.

/s/ Robert Baxter

Name: Robert Baxter
Title: Senior Vice-President, Business Operations
for and on behalf of
CHARTERED SEMICONDUCTOR MANUFACTURING LTD

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

ANNEX A

(Ref Sections 2.2, 2.6, 2.7, 2.9, 3.2 and 6.1)

The Refund of the Deposit to ADI shall be in accordance with the following terms:

TABLE A: NON-WAFER CREDITS

| EVENTS ENTITLING ADI TO REFUND: NON-WAFER CREDITS | AMOUNT (US\$) | REFUNDABLE |
|--|------------------|----------------------------------|
| 1. [**] | [**] | |
| 2. [**] | [**] | |
| 3. [**] | [**] | |
| 4. [**] | [**] | |
| 5. [**] | [**] | |
| 6. [**] | [**] | |
| 7. [**] | [**] | |
| 8. [**] | [**] | |
| 9. [**] | [**] | |
| 10. [**] | [**] | |
| 11. [**] | [**] | |
| MAXIMUM TOTAL OF ALL NON-WAFER CREDITS | [**] | AMOUNT PAID OUT IN WAFER CREDITS |

TABLE B: WAFER CREDITS

| EVENTS ENTITLING ADI TO REFUND: WAFER CREDITS | AMOUNT (US\$) | REFUNDABLE |
|--|------------------|--------------------------------------|
| [**] | [**] | |
| MAXIMUM TOTAL OF ALL WAFER CREDITS | [**] | AMOUNT PAID OUT IN NON-WAFER CREDITS |

Confidential Materials omitted and filed separately with the Securities and Exchange Commission. Asterisks denote omissions.

NOTES:

1. The maximum amount of monetary credits to be refunded by Chartered pursuant to the situations in Tables A and B above shall not exceed US[**].
2. Notwithstanding product names or descriptions above, ADI shall have sole discretion 1) as to which products are actually used for qualification, provided they use the CSM process as described, and 2) as to which products are subsequently run in volume generating wafer credits.

Confidential Materials omitted and filed separately with the Securities
and Exchange Commission. Asterisks denote omissions.

ANNEX B
(Ref Sections 3.5, 3.8 & 4.2)

{Original Forecast & Flexibility Model - ADI to provide forecast}

Table A - Monthly Forecast

ADI WORLDWIDE MANUFACTURING
CSM AUG WAFER FORECAST

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| PRODUCT | VENDOR PART # | (P)ROBED (U)NPROBED | 09/99A ORDR | 10/99A ORDR | 11/99A ORDR | 12/99F PLAN | 12/99F MAX | 01/00F PLAN | 01/00F MAX | 02/00F PLAN |
|----------|--|------------------------|----------------|----------------|----------------|----------------|---------------|----------------|---------------|----------------|
| FOUNDRY: | Chartered Semiconductor Manufacturing Pte Ltd | | | | | | | | | |

ADI WORLDWIDE MANUFACTURING
CSM AUG WAFER FORECAST

PRINTED ON: 9121199 6:02:53 PM

| PRODUCT | VENDOR PART # | (P)ROBED (U)NPROBED | 02/00F MAX | 03/00F PLAN | 03/00F MAX | 04/00F PLAN | 04/00F MAX | 05/00F PLAN | 05/00F MAX |
|----------|--|------------------------|---------------|----------------|---------------|----------------|---------------|----------------|---------------|
| FOUNDRY: | Chartered Semiconductor Manufacturing Pte Ltd | | | | | | | | |

[**]

CSM/ADI CONFIDENTIAL

18

MANAGEMENT ANALYSIS

COMPANY OVERVIEW

Analog Devices, Inc. (Analog, ADI or the Company) is a world leader in the design, manufacture and marketing of high-performance analog, mixed-signal and digital signal processing (DSP) integrated circuits (ICs) used in signal processing applications.

As of the end of fiscal 1999, approximately 40% of Analog's revenues came from the communications market, making it the Company's largest and fastest-growing served market. Communications applications include wireless handsets and base stations, as well as products used for high-speed access to the Internet, including ICs used in ADSL and cable modems and central office networking equipment.

Analog serves the PC market with products that monitor and manage power usage, process signals used in flat panel displays and LCD projectors and enable PCs to provide CD-quality audio. Analog also serves the high-end consumer market with products used in digital cameras and camcorders, DVD players and surround sound audio systems. Analog provides a broad array of products to the industrial market, including products for automatic test equipment and for the digital speed control of AC motors.

Analog's products are sold worldwide through a direct sales force, third-party industrial distributors and independent sales representatives. The Company has direct sales offices in 18 countries, including the United States. Approximately 46% of fiscal 1999 revenue came from customers in North America, while most of the balance came from customers in Western Europe and the Far East.

The Company is headquartered near Boston, in Norwood, Massachusetts, and has manufacturing facilities in Massachusetts, California, North Carolina, Ireland, the Philippines and Taiwan. Founded in 1965, Analog Devices employs approximately 7,400 people worldwide. The Company's stock is listed on the New York Stock Exchange under the symbol ADI and is included in the Standard & Poor's 500 Index.

RESULTS OF OPERATIONS

Sales were \$1,450 million in fiscal 1999, \$1,231 million in fiscal 1998 and \$1,243 million in fiscal 1997. The significant growth in the use of analog, digital and mixed-signal ICs to address the signal processing needs of the growing broadband and wireless communications, computer and computer peripherals markets was the main reason for the sales increase in fiscal 1999. In addition, a recovery in the semiconductor industry generally, partially offset by a decline in Automatic Test Equipment (ATE) sales, contributed to the sales increase in fiscal 1999. Sales declined slightly during fiscal 1998 from the levels achieved in fiscal 1997, primarily due to a decline in sales of Global System for Mobile Communications (GSM) cellular phone chipsets and a decline in disk drive product sales as a result of the disposal of the disk drive IC business in fiscal 1998. These declines were partially offset by an increase in analog IC sales. Sales of assembled products continued to decline in fiscal 1999 and accounted for 3% of the Company's net sales in fiscal 1999, down from 4% in the prior fiscal year. Assembled products include multichip modules, hybrids and printed circuit board modules.

Demand for the Company's communications, computer and consumer products resulted in sales increases in all geographic regions during fiscal 1999. Sales to North American customers increased 8% over fiscal 1998. Sales in Europe in the first half of fiscal 1999 had declined from prior year levels but as the fiscal year progressed, demand increased resulting in a relatively flat level of sales year over year. Sales in Japan increased 23% as demand increased for the Company's products as the Japanese economy continued its recovery. Sales in other Southeast Asian countries in fiscal 1999 doubled from the levels achieved in fiscal 1998. The increased demand was attributed to the increased use of the Company's products in the communications and computer products market, both of which experienced significant growth during the year.

Sales to North American customers increased 9% during fiscal 1998 over the levels achieved in the prior year, due to increased sales of analog IC products. In Europe, sales declined in fiscal 1998 from the levels achieved in fiscal

1997, primarily due to a decline in GSM sales. Sales in Japan during fiscal 1998 remained flat to the levels achieved in fiscal 1997. Sales in other Southeast Asian countries declined during fiscal 1998 primarily because of a decline in the sales of disk drive IC products, which was partially offset by increases in the sale of analog IC products.

Gross margin increased to 49.3% of sales in fiscal 1999, from 47.8% in fiscal 1998. This increase was primarily attributable to higher sales and tight control of internal manufacturing spending. The decline in gross margin from 49.9% in fiscal 1997 to 47.8% in fiscal 1998 was principally due to a reduction in demand in fiscal 1998, which caused the Company to reduce production rates, particularly in the second half of the year.

Research and development (R&D) expense was \$257 million in fiscal 1999, compared to \$219 million in fiscal 1998. As a percentage of sales, R&D spending remained flat at approximately 17.8%. The Company expects to continue the development of innovative technologies and processes for new products targeted for broadband and wireless communications applications, imaging, audio and high-performance power and thermal management products for computer and consumer product applications. The Company believes that a continued commitment to research and development is essential in order to maintain product leadership with its existing products and to provide innovative new product offerings, and therefore expects to continue to make significant R&D investments in the future. In fiscal 1998, R&D expenses increased approximately 12% to \$219 million, or 17.8% of sales, up from 15.8% of sales in fiscal 1997.

During the second quarter of fiscal 1999, the Company acquired two DSP tools companies, White Mountain DSP, Inc. of Nashua, New Hampshire and Edinburgh Portable Compilers Limited, of Edinburgh, Scotland. The total cost of these acquisitions was approximately \$23 million with additional cash consideration of up to a maximum of \$10 million payable if the acquired companies achieve certain revenue and operational objectives. In connection with these acquisitions, the Company recorded a charge of \$5.1 million for the write-off of in-process research and development.

Selling, marketing, general and administrative (SMG&A) expenses were \$210 million in fiscal 1999, an increase of \$3 million from the \$207 million recorded in the prior fiscal year. As a percentage of sales, SMG&A decreased from 16.9% for fiscal 1998 to 14.5% for fiscal 1999 due to continued control over spending despite sales increases. In fiscal 1998, SMG&A expenses increased \$15 million from the \$192 million recorded in fiscal 1997. This increase was primarily attributable to an \$8 million charge related to collection difficulties experienced by the Company. As a result, SMG&A expenses as a percentage of sales increased from 15.4% in fiscal 1997 to 16.9% in fiscal 1998.

Including the impact of the write-off of in-process research and development, the Company's operating income was 16.7% of sales for fiscal 1999. The Company's operating income for fiscal 1998, including the impact of a \$17 million restructuring charge and a \$13 million net gain on the sale of its disk drive IC business in fiscal 1998, was 12.8% of sales. The Company's operating income was 18.8% of sales for fiscal 1997.

The Company's equity interest in WaferTech, LLC, a joint venture with Taiwan Semiconductor Manufacturing Company and other investors, resulted in a loss of \$1.1 million in fiscal 1999, compared to a loss of \$9.8 million in fiscal 1998. This change was the result of the Company's completion of the sale in fiscal 1999 of approximately 78% of its equity ownership in WaferTech. As a result of this sale, the Company's equity ownership in WaferTech was reduced from 18% to 4%. The Company sold 78% of its investment to other WaferTech partners in exchange for \$105 million in cash, which was equal to 78% of the carrying value of the equity ownership at October 31, 1998. This investment is now recorded under the cost method.

The Company's effective income tax rate increased to 23.6% for fiscal 1999 from 20.6% in fiscal 1998 due to a shift in the mix of worldwide profits. Additionally, in fiscal 1998 the Company utilized \$5.6 million of capital loss carryforwards for tax purposes, which reduced the Company's valuation allowance from \$5.6 million at November 1, 1997 to \$0 at October 31, 1998. The effective tax rate for fiscal 1997 was 24.4%.

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). Prior to the change the Company had historically deferred revenue on most shipments made to domestic distributors until the products were resold by the distributors to end users, but 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 all distributors worldwide is deferred until the products are resold to the end users. The Company believes that deferral of revenue and related gross margin on shipments to distributors 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.

For fiscal 1999, net income increased 65% before the fiscal 1998 change in accounting principle, and 139% after the change in accounting principle, to \$197 million, and diluted earnings per share was \$1.10. For fiscal 1998, net income before the cumulative effect of the change in accounting principle was \$119 million, and diluted earnings per share was \$0.71. Net income after the cumulative effect of the change in accounting principle was \$82 million for fiscal 1998, and diluted earnings per share was \$0.50. Net income was \$178 million for 1997, and the diluted earnings per share was \$1.04.

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." This statement provides a comprehensive and consistent standard for the recognition and measurement of derivatives and hedging activities. In July 1999, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 137, which defers the effective date of FAS 133 for one year. Accordingly, the Company will adopt FAS 133 during fiscal 2001 as required. The Company is currently evaluating the impact of FAS 133 on the results of operations and financial position.

In March 1998, Statement of Position 98-1, (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 believes that, based upon current circumstances, the effect of adopting the standard will not have a significant impact on the results of operations or financial position.

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin 101, (SAB 101), "Revenue Recognition in Financial Statements." SAB 101 summarizes the application of generally accepted accounting principles to revenue recognition in financial statements. The Company does not expect SAB 101 to have a material effect on the results of operations or financial position.

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

LIQUIDITY AND CAPITAL RESOURCES

At October 30, 1999, the Company had \$762 million of cash, cash equivalents and short-term investments compared to \$305 million at October 31, 1998. The increase in cash, cash equivalents and short-term investments was primarily due to operating cash inflows of \$427 million (29% of fiscal 1999 sales), \$105 million received in January 1999, related to the sale of the Company's investment in WaferTech and lower capital spending. The Company's operating activities generated net cash of \$225 million, or 18% of sales in fiscal 1998. Investing activities used \$358 million in fiscal 1999 and \$187 million in fiscal 1998, while financing activities generated \$22 million in fiscal 1999 and used \$62 million in fiscal 1998. The Company's primary source of funds in fiscal 1999 and fiscal 1998 was net cash generated by operations.

Accounts receivable of \$267 million at the end of fiscal 1999 increased \$60 million or 29% from \$207 million at the end of fiscal 1998. This increase resulted principally from a \$133 million increase in sales from the fourth quarter of fiscal 1998 to the fourth quarter of fiscal 1999. Days sales outstanding improved from 63 at the end of the fourth quarter of fiscal 1998 to 56 at the end of the fourth quarter of fiscal 1999. As a percentage of annualized fourth quarter sales, accounts receivable was 15.5% at the end of fiscal 1999, down from 17.4% at the end of fiscal 1998.

Inventories declined \$26 million, or 10%, from the prior year to \$249 million at the end of fiscal 1999. Inventories as a percentage of annualized fourth quarter sales decreased to 14% for the year ended October 30, 1999 from 23% for the year ended October 31, 1998. Inventory levels had increased at the end of fiscal 1998 as demand levels had declined in the second half of fiscal 1998. As demand increased through fiscal 1999, inventory levels declined.

Net additions to property, plant and equipment of \$78 million for fiscal 1999 were funded with a combination of cash on hand and cash generated from operations. Capital spending in fiscal 1999 was down substantially from the \$167 million spent in fiscal 1998. The decrease in capital expenditures was attributable to the Company's efforts to constrain all spending, including capital expenditures, until sales growth resumed. The Company currently plans to make capital

expenditures of between \$200 million and \$250 million in fiscal 2000. Depreciation expense is expected to increase to \$150 million in fiscal 2000.

During the second quarter of fiscal 1999, the Company acquired two DSP tools companies, White Mountain DSP, Inc. of Nashua, New Hampshire and Edinburgh Portable Compilers Limited, of Edinburgh, Scotland. The total cost of these acquisitions was approximately \$21 million in cash and \$2 million in common stock of the Company, with additional cash consideration of up to a maximum of \$10 million payable if the acquired companies achieve certain revenue and operational objectives. These acquisitions were accounted for as purchases, and the excess of the purchase price over the fair value of assets acquired was allocated to existing technology, workforce in place, tradenames and goodwill, which are being amortized over periods ranging from six to ten years. In connection with these acquisitions, the Company recorded a charge of \$5.1 million for the write-off of in-process research and development. In the fourth quarter of 1999, the Company invested an additional \$4 million in WaferTech.

In fiscal 1999, financing activities generated cash of \$22 million. The issuance of common stock under stock purchase and stock option plans generated cash of \$34 million, and proceeds from variable rate borrowings generated cash of \$2 million. These increases were offset by \$14 million of cash used for the repayment of capital lease obligations.

As of March 11, 1999, the Company had converted \$229,967,000 of the \$230 million principal amount of its 3-1/2% Convertible Subordinated Notes (Notes) due 2000 into an aggregate of 10,983,163 shares of the Company's common stock, and the remaining Notes were redeemed by a cash payment of \$33,000. As a result of this conversion, the Company's debt-to-equity ratio was reduced to 7% as compared to 31% in the prior year.

At October 30, 1999, the Company's principal sources of liquidity were \$762 million of cash and cash equivalents and short-term investments. In addition, the Company has various lines of credit both in the U.S. and overseas, including a \$60 million credit facility in the U.S. that expires in fiscal 2000. These lines of credit were substantially unused at October 30, 1999.

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 for fiscal 1999 and fiscal 1998. 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 in fiscal 1999 and fiscal 1998 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 the consolidated pre-tax income, respectively.

As more fully described in Note 2 (h) 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 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 30, 1999 and October 31, 1998. 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 30, 1999 and October 31, 1998, 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 against 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 that 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 that are difficult to predict. (See "Factors That May Affect Future Results" below.) Therefore, actual outcomes and results may differ materially from what is expressed or forecast 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 THAT 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. In addition, the semiconductor market has historically been cyclical and subject to significant economic downturns at various times. The Company's business is subject to rapid technological changes and there can be no assurance, depending on the mix of future business, that products stocked in inventory will not be rendered obsolete before they are shipped by the Company. 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 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 Company's 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 cyclical nature of the industry has resulted in sustained or short-term periods when demand for the Company's products has increased or decreased rapidly. The semiconductor industry and the Company have experienced a period of rapid increases in demand during fiscal 1999. The Company has increased its manufacturing capacity over the past three years through both expansion of its production facilities and increased access to third-party foundries. However, the Company cannot be sure 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. 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. If revenue levels are not sufficient 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, noncompliance with "take or pay" covenants in certain of its supply agreements could adversely impact operating results. The Company 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 addition, the Company and many companies in the semiconductor industry, rely on internal manufacturing capacity located in California and Taiwan as well as wafer fabrication foundries in Taiwan and other subcontractors in geologically unstable locations around the world. Such reliance involves risks associated with the impact of earthquakes on the Company and the semiconductor industry including temporary loss of capacity, availability and cost of key raw materials and equipment, and availability of key services including transport.

In fiscal 1999, 54% 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 a supply agreement that includes "take or pay" covenants with a supplier located in Southeast Asia (SEA) and as part of this arrangement, the Company has \$20 million on deposit as well as a \$27 million investment in the common stock of the supplier. In addition to being exposed to the ongoing economic cycles in the semiconductor 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 many developing economies around the world. 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 six years the Company 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 was that the Company had year 2000 compliant hardware and software running on many of its major platforms. The Company established a task force to evaluate the remaining systems and equipment and upgrade or replace systems that were not year 2000 compliant. The cost of this effort, which commenced at the beginning of fiscal 1998 and continued through fiscal 1999, was approximately \$10 million.

The Company's computer systems and equipment successfully transitioned to the year 2000. However, there may be latent problems that surface at key dates or events in the future. The Company has not experienced, and does not anticipate, any significant problems related to the transition to the year 2000. Furthermore, the Company does not anticipate any significant expenditure in the future related to year 2000 compliance.

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF INCOME

Years ended October 30, 1999, October 31, 1998 and November 1, 1997
(thousands except per share amounts)

| | | 1999 | 1998 | 1997 |
|-----------|--|--------------|--------------|--------------|
| | | ---- | ---- | ---- |
| REVENUE | Net sales..... | \$ 1,450,379 | \$ 1,230,571 | \$ 1,243,494 |
| COSTS AND | Cost of sales..... | 735,643 | 642,085 | 622,531 |
| EXPENSES | | ----- | ----- | ----- |
| | Gross margin..... | 714,736 | 588,486 | 620,963 |
| | Operating expenses: | | | |
| | Research and development..... | 257,039 | 219,354 | 196,148 |
| | Write-off of purchased in-process research and development..... | 5,140 | - | - |
| | Selling, marketing, general and administrative..... | 209,639 | 207,487 | 191,613 |
| | Restructuring charge..... | - | 17,000 | - |
| | Gain on sale of business..... | - | (13,100) | - |
| | | ----- | ----- | ----- |
| | Operating income..... | 471,818 | 430,741 | 387,761 |
| | Operating income..... | 242,918 | 157,745 | 233,202 |
| | Equity in loss (income) of WaferTech..... | 1,149 | 9,780 | (214) |
| | Nonoperating (income) expenses: | | | |
| | Interest expense..... | 8,071 | 11,229 | 12,507 |
| | Interest income..... | (26,726) | (16,838) | (16,178) |
| | Other..... | 2,884 | 3,115 | 1,208 |
| | | ----- | ----- | ----- |
| | | (15,771) | (2,494) | (2,463) |
| | | ----- | ----- | ----- |
| EARNINGS | Income before income taxes..... | 257,540 | 150,459 | 235,879 |
| | Provision for income taxes: | | | |
| | Payable currently..... | 44,139 | 43,343 | 63,794 |
| | Deferred | 16,582 | (12,372) | (6,134) |
| | | ----- | ----- | ----- |
| | | 60,721 | 30,971 | 57,660 |
| | | ----- | ----- | ----- |
| | Net income before cumulative effect of change in accounting principle..... | 196,819 | 119,488 | 178,219 |
| | | ----- | ----- | ----- |
| | 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..... | \$ 196,819 | \$ 82,408 | \$ 178,219 |
| | | ===== | ===== | ===== |
| | Shares used to compute earnings per share - Basic..... | 168,241 | 161,574 | 159,594 |
| | | ===== | ===== | ===== |
| | Shares used to compute earnings per share - Diluted.... | 181,452 | 177,875 | 177,309 |
| | | ===== | ===== | ===== |
| | Earnings per share before cumulative effect of change in accounting principle | | | |
| | Earnings per share - Basic..... | \$1.16 | \$0.74 | \$1.13 |
| | | ===== | ===== | ===== |
| | Earnings per share - Diluted..... | \$1.10 | \$0.71 | \$1.04 |
| | | ===== | ===== | ===== |
| | Earnings per share after cumulative effect of change in accounting principle | | | |
| | Earnings per share - Basic..... | \$1.16 | \$0.51 | \$1.13 |
| | | ===== | ===== | ===== |
| | Earnings per share - Diluted..... | \$1.10 | \$0.50 | \$1.04 |
| | | ===== | ===== | ===== |

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED BALANCE SHEETS

October 30, 1999 and October 31, 1998
(thousands except share amounts)

| ASSETS | | 1999 | 1998 |
|---|---|--------------------|--------------------|
| CURRENT ASSETS | Cash and cash equivalents..... | \$ 355,891 | \$ 263,331 |
| | Short-term investments..... | 406,553 | 41,575 |
| | Accounts receivable less allowances of \$14,238 (\$32,332 in 1998)..... | 267,127 | 207,361 |
| | Inventories..... | 248,936 | 275,076 |
| | Deferred tax assets..... | 89,780 | 98,148 |
| | Prepaid expenses and other current assets..... | 10,823 | 18,038 |
| | Total current assets..... | <u>1,379,110</u> | <u>903,529</u> |
| PROPERTY, PLANT AND EQUIPMENT, AT COST | Land and buildings..... | 166,130 | 158,792 |
| | Machinery and equipment..... | 1,088,939 | 1,034,619 |
| | Office equipment..... | 74,530 | 70,576 |
| | Leasehold improvements..... | 108,530 | 103,482 |
| | Less accumulated depreciation and amortization..... | <u>1,438,129</u> | <u>1,367,469</u> |
| | Net property, plant and equipment..... | <u>642,806</u> | <u>703,431</u> |
| OTHER ASSETS | Investments..... | 119,301 | 187,224 |
| | Intangible assets, net..... | 30,563 | 15,815 |
| | Other assets..... | 46,574 | 51,731 |
| | Total other assets..... | <u>196,438</u> | <u>254,770</u> |
| | | <u>\$2,218,354</u> | <u>\$1,861,730</u> |
| | | ===== | ===== |
| LIABILITIES AND STOCKHOLDERS' EQUITY | | | |
| CURRENT LIABILITIES | Short-term borrowings and current portion of long-term debt..... | \$ 82,344 | \$ 193 |
| | Obligations under capital leases..... | 14,717 | 14,266 |
| | Accounts payable..... | 103,368 | 59,115 |
| | Deferred income on shipments to distributors..... | 100,788 | 113,784 |
| | Income taxes payable..... | 66,761 | 53,595 |
| | Accrued liabilities..... | 111,285 | 79,906 |
| | Total current liabilities..... | <u>479,263</u> | <u>320,859</u> |
| NONCURRENT LIABILITIES | Long-term debt..... | - | 309,985 |
| | Noncurrent obligations under capital leases..... | 16,214 | 30,773 |
| | Deferred income taxes..... | 40,002 | 31,789 |
| | Other noncurrent liabilities..... | 66,844 | 39,935 |
| | Total noncurrent liabilities..... | <u>123,060</u> | <u>412,482</u> |
| | Commitments and Contingencies | | |
| STOCKHOLDERS' EQUITY | Preferred stock, \$1.00 par value, 471,934 shares authorized, none outstanding..... | - | - |
| | Common stock, \$0.16 2/3 par value, 600,000,000 shares authorized, 178,049,189 shares issued (164,092,719 in 1998)..... | 29,675 | 27,349 |
| | Capital in excess of par value, net of deferred compensation of \$6,211 (\$9,291 in 1998)..... | 523,106 | 248,970 |
| | Retained earnings..... | 1,110,811 | 913,992 |
| | Accumulated other comprehensive income..... | 12,209 | 6,025 |
| | Less 3,161,774 shares in treasury, at cost (3,782,763 in 1998)..... | <u>1,675,801</u> | <u>1,196,336</u> |
| | Total stockholders' equity..... | <u>1,616,031</u> | <u>1,128,389</u> |
| | | <u>\$2,218,354</u> | <u>\$1,861,730</u> |
| | | ===== | ===== |

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

| Years ended October 30, 1999, October 31, 1998 and November 1, 1997 (thousands) | | COMMON STOCK SHARES | STOCK AMOUNT | CAPITAL IN EXCESS OF PAR VALUE | RETAINED EARNINGS | ACCUMULATED OTHER COMPREHENSIVE INCOME* | TREASURY SHARES | STOCK AMOUNT |
|---|---|------------------------|-----------------|--------------------------------------|----------------------|--|--------------------|-----------------|
| | | ----- | ----- | ----- | ----- | ----- | ----- | ----- |
| | Balance, November 2, 1996 | 158,745 | \$26,458 | \$176,357 | \$ 653,365 | \$ 6,655 | - | \$ - |
| ACTIVITY | Net income - 1997 | | | | 178,219 | | | |
| IN FISCAL | Issuance of stock under | | | | | | | |
| 1997 | 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 | | | | |
| | Translation adjustment | | | | | 69 | | |
| | Balance, November 1, 1997 | 161,941 | 26,991 | 223,885 | 831,584 | 6,724 | (35) | (1,054) |
| ACTIVITY | Net income - 1998 | | | | 82,408 | | | |
| IN FISCAL | Issuance of stock under | | | | | | | |
| 1998 | 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) |
| | Translation adjustment | | | | | (699) | | |
| | Balance, October 31, 1998 | 164,093 | 27,349 | 248,970 | 913,992 | 6,025 | (3,783) | (67,947) |
| ACTIVITY | Net income - 1999 | | | | 196,819 | | | |
| IN FISCAL | Issuance of stock under | | | | | | | |
| 1999 | stock plans and other, net of repurchases | 2,974 | 496 | 28,159 | | | 621 | 8,177 |
| | Conversion of 3-1/2% Subordinated notes | 10,982 | 1,830 | 228,074 | | | | |
| | Compensation recognized under Restricted Stock Plan | | | 2,799 | | | | |
| | Tax benefit on exercise of non- qualified stock options and disqualifying dispositions under stock plans | | | 15,104 | | | | |
| | Securities valuation adjustment | | | | | 6,629 | | |
| | Translation adjustment | | | | | (445) | | |
| | Balance, October 30, 1999 | 178,049 | \$29,675 | \$523,106 | \$1,110,811 | \$ 12,209 | (3,162) | \$ (59,770) |

* Comprehensive income, i.e., net income plus other comprehensive income, totaled \$203 million in 1999, \$82 million in 1998 and \$178 million in 1997.

See accompanying notes.

ANALOG DEVICES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

Years ended October 30, 1999, October 31, 1998 and November 1, 1997
(thousands)

| | 1999 | 1998 | 1997 |
|---|------------|------------|------------|
| OPERATIONS | | | |
| Cash flows from operations: | | | |
| Net income | \$ 196,819 | \$ 82,408 | \$ 178,219 |
| 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..... | 142,598 | 127,560 | 103,554 |
| Noncash portion of restructuring costs..... | - | 10,000 | - |
| Gain on sale of business..... | - | (13,100) | - |
| Write-off of purchased in-process research and development..... | 5,140 | - | - |
| Equity in loss of WaferTech, net of dividends..... | 1,149 | 10,907 | 211 |
| Deferred income taxes..... | 16,582 | (12,372) | (6,134) |
| Change in operating assets and liabilities: | | | |
| (Increase) decrease in accounts receivable..... | (59,019) | 51,061 | (25,129) |
| Decrease (increase) in inventories..... | 28,424 | (48,883) | (7,739) |
| Decrease (increase) in prepaid expenses and other current assets..... | 7,331 | 240 | (3,605) |
| Increase in investments - trading..... | (28,098) | (7,319) | (8,965) |
| Increase (decrease) in accounts payable, deferred income and accrued liabilities..... | 57,096 | (31,840) | 4,828 |
| Increase in income taxes payable..... | 27,774 | 14,476 | 32,916 |
| Increase in other liabilities..... | 31,525 | 4,467 | 17,584 |
| Total adjustments..... | 230,502 | 142,277 | 107,521 |
| Net cash provided by operations..... | 427,321 | 224,685 | 285,740 |
| INVESTMENTS | | | |
| Cash flows from investments: | | | |
| Additions to property, plant and equipment, net..... | (77,500) | (166,911) | (179,374) |
| Purchase of short-term investments available-for-sale.. | (628,823) | (143,449) | (153,269) |
| Maturities of short-term investments available-for-sale | 263,845 | 152,880 | 192,073 |
| Change in long-term investments..... | 101,501 | (56,110) | (51,599) |
| Payments for acquisitions, net of cash acquired..... | (20,499) | - | - |
| Proceeds from sale of business..... | - | 27,000 | - |
| Decrease (increase) in other assets..... | 3,435 | (370) | (33,650) |
| Net cash used for investments..... | (358,041) | (186,960) | (225,819) |
| FINANCING ACTIVITIES | | | |
| Cash flows from financing activities: | | | |
| Repurchase of common stock..... | - | (84,192) | - |
| Proceeds from employee stock plans..... | 34,154 | 27,638 | 19,283 |
| Payments on capital lease obligations..... | (14,109) | (11,640) | (11,164) |
| Proceeds from equipment financing..... | - | 6,094 | 7,123 |
| Net increase (decrease) in variable rate borrowings.... | 1,776 | 60 | (109) |
| Net cash provided by (used for) financing activities..... | 21,821 | (62,040) | 15,133 |
| Effect of exchange rate changes on cash..... | 1,459 | (1,955) | 4,438 |
| Net increase (decrease) in cash and cash equivalents..... | 92,560 | (26,270) | 79,492 |
| Cash and cash equivalents at beginning of year..... | 263,331 | 289,601 | 210,109 |
| Cash and cash equivalents at end of year..... | \$ 355,891 | \$ 263,331 | \$ 289,601 |
| SUPPLEMENTAL INFORMATION | | | |
| Cash paid during the year for: | | | |
| Income taxes..... | \$ 19,582 | \$ 23,582 | \$ 27,621 |
| Interest..... | \$ 10,808 | \$ 15,535 | \$ 16,158 |

See accompanying notes.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

YEARS ENDED OCTOBER 30, 1999, OCTOBER 31, 1998 AND NOVEMBER 1, 1997
(ALL TABULAR AMOUNTS IN THOUSANDS EXCEPT PER SHARE AMOUNTS)

1. DESCRIPTION OF BUSINESS

Analog Devices, Inc. (Analog, ADI or the Company) is a world leader in the design, manufacture and marketing of high-performance analog, mixed-signal and digital signal processing (DSP) integrated circuits (ICs) used in signal processing applications.

As of the end of fiscal 1999, approximately 40% of Analog's revenues came from the communications market, making it the Company's largest and fastest-growing served market. Communications applications include wireless handsets and base stations, as well as products used for high-speed access to the Internet, including ICs used in ADSL and cable modems and central office networking equipment.

Analog serves the PC market with products that monitor and manage power usage, process signals used in flat panel displays and LCD projectors and enable PCs to provide CD-quality audio. Analog also serves the high-end consumer market with products used in digital cameras and camcorders, DVD players and surround sound audio systems. Analog provides a broad array of products to the industrial market, including products for automatic test equipment and for the digital speed control of AC motors.

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 1999, 1998 and 1997 were each 52-week years.

Certain amounts reported in previous years have been reclassified to conform to the 1999 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, bank time deposits, institutional money market funds and bankers' acceptances. Long-term investments consist of mutual funds and bank money market funds that are acquired to generate returns that offset changes in certain liabilities related to deferred compensation arrangements, as well as equity securities.

The Company classifies its investments in readily marketable 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. The Company's other readily marketable investments are classified as either 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, as well as interest, dividends and capital gains distributions on all securities, are included in earnings.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Cash equivalents and short-term investments classified as available-for-sale were \$707 million and \$241 million at October 30, 1999 and October 31, 1998, respectively and those classified as held-to-maturity were \$28 million and \$42 million at October 30, 1999 and October 31, 1998, respectively. All of these securities have contractual maturities of twelve 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 realized or unrealized gains or losses were recorded during each of these years.

Long-term investments classified as trading were \$59 million and \$30 million at October 30, 1999 and October 31, 1998, respectively and were based on published market quotes on October 29, 1999 and October 30, 1998. Gross realized and unrealized gains and losses from trading securities were not material in fiscal 1999, fiscal 1998 and fiscal 1997. There was approximately \$27 million and \$0 at October 30, 1999 and October 31, 1998, respectively, of long-term investments classified as available-for-sale. Gross unrealized gains were not material in fiscal 1999 and fiscal 1998. There were no long-term investments classified as held-to-maturity at October 30, 1999 and October 31, 1998.

c. ADDITIONAL CASH FLOW STATEMENT INFORMATION

The Company's non-cash financing activities consisted solely of the conversion of its 3-1/2% Convertible Subordinated Notes into common stock as described in Note 9.

d. INVENTORIES

Inventories are valued at the lower of cost (first-in, first-out method) or market. Inventories at October 30, 1999 and October 31, 1998 were as follows:

| | 1999 ---- | 1998 ---- |
|-------------------|--------------|--------------|
| Raw materials | \$ 13,735 | \$ 25,624 |
| Work in process | 150,427 | 142,139 |
| Finished goods | 84,774 | 107,313 |
| | ----- | ----- |
| Total inventories | \$ 248,936 | \$ 275,076 |
| | ===== | ===== |

e. 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 \$138,530,000, \$124,735,000 and \$101,432,000 in fiscal 1999, 1998 and 1997, respectively. Property, plant and equipment included \$75,034,000 and \$75,006,000 of capitalized leases in 1999 and 1998, net of \$35,588,000 and \$23,679,000 respectively, of accumulated depreciation.

f. 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.

g. 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 1999, 1998 and 1997.

h. 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 \$178 million and \$140 million at October 30, 1999 and October 31, 1998, 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 that 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 \$39 million and

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

\$26 million, at October 30, 1999 and October 31, 1998, respectively. Deferred gains or losses attributable to foreign currency option contracts were not material at October 30, 1999 and October 31, 1998.

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 million at October 30, 1999 and October 31, 1998. The currency swap agreement outstanding at October 30, 1999 has a remaining maturity of 4 months and is expected to remain in effect until expiration.

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 eight 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 30, 1999 and October 31, 1998.

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.

i. 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.

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| | OCTOBER 30, 1999 | | OCTOBER 31, 1998 | |
|---|--------------------|---------------|--------------------|---------------|
| | CARRYING AMOUNT | FAIR VALUE | CARRYING AMOUNT | FAIR VALUE |
| Assets: | | | | |
| Cash and cash equivalents | \$ 355,891 | \$ 355,891 | \$ 263,331 | \$ 263,331 |
| Short-term investments | 406,553 | 406,553 | 41,575 | 41,575 |
| Long-term investments | 85,999 | 85,999 | 30,488 | 30,488 |
| Liabilities: | | | | |
| Short-term borrowings | (2,344) | (2,344) | (193) | (193) |
| Long-term debt, including current portion | (80,000) | (79,978) | (309,985) | (328,290) |
| Foreign Currency Instruments and Interest Rate Agreements: | | | | |
| Interest rate swap and cap agreements | 13 | (36) | 14 | 1,201 |
| Forward foreign currency exchange contracts | (4,260) | (7,658) | (3,045) | (1,575) |
| Foreign currency option contracts | 340 | 220 | 479 | 211 |
| Currency swap agreements | 375 | 325 | 1,325 | 1,324 |

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

Cash, cash equivalents and short-term 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.

Long-term investments-The fair value of long-term investments is based on quoted market values.

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, degrees of risk and remaining maturities.

Interest rate swap and cap agreements-The fair value of interest rate swap and cap agreements is 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.

j. 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.

k. CONCENTRATIONS OF CREDIT RISK

Financial instruments that 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 that may not be collected.

l. 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.

m. REVENUE RECOGNITION

Revenue from product sales to end users is recognized upon shipment. As further explained in Note 5, 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 that 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.

n. COMPREHENSIVE INCOME

In the first quarter of fiscal 1999 the Company adopted Statement of Financial Accounting Standards No. 130, (FAS 130), "Reporting Comprehensive Income". FAS 130 establishes new rules for the reporting and display of comprehensive income and its components. Components of comprehensive income include net income and certain transactions that have generally been reported in the consolidated statement of shareholders' equity. Other comprehensive income is comprised of net income, currency translation adjustments and available-for-sale securities valuation adjustments.

o. 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.

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p. 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.

q. EARNINGS PER SHARE OF COMMON STOCK

Basic earnings per share is computed based only on the weighted average number of common shares outstanding during the period. Diluted earnings per share is computed using the weighted average number of common shares outstanding during the period, plus the dilutive effect of future issues of common stock relating to stock option programs and convertible debt financing. In calculating diluted earnings per share, the dilutive effect of stock options is computed using the average market price for the period. The following table sets forth the computation of basic and diluted earnings per share:

| | 1999 | 1998 | 1997 |
|---|------------|------------|------------|
| | ----- | ----- | ----- |
| Basic: | | | |
| Income before cumulative effect of change in accounting principle | \$ 196,819 | \$ 119,488 | \$ 178,219 |
| Cumulative effect of change in accounting principle | - | (37,080) | - |
| | ----- | ----- | ----- |
| Net income | 196,819 | 82,408 | 178,219 |
| | ===== | ===== | ===== |
| Weighted shares outstanding | 168,241 | 161,574 | 159,594 |
| | ===== | ===== | ===== |
| Earnings per share: | | | |
| Income before cumulative effect of change in accounting principle | \$1.16 | \$0.74 | \$1.13 |
| Cumulative effect of change in accounting principle | - | (0.23) | - |
| | ----- | ----- | ----- |
| Net income | \$1.16 | \$0.51 | \$1.13 |
| | ===== | ===== | ===== |
| Diluted: | | | |
| Income before cumulative effect of change in accounting principle | \$ 196,819 | \$ 119,488 | \$ 178,219 |
| Interest related to convertible subordinated notes, net of tax | 1,906 | 5,686 | 5,700 |
| | ----- | ----- | ----- |
| Income before cumulative effect of change in accounting principle including the effect of dilutive securities | 198,725 | 125,174 | 183,919 |
| | ----- | ----- | ----- |
| Cumulative effect of change in accounting principle | - | (37,080) | - |
| | ----- | ----- | ----- |
| Net income | \$ 198,725 | \$ 88,094 | \$ 183,919 |
| | ===== | ===== | ===== |
| Weighted shares outstanding | 168,241 | 161,574 | 159,594 |
| Assumed exercise of common stock equivalents | 9,411 | 5,317 | 6,730 |
| Assumed conversion of subordinated notes | 3,800 | 10,984 | 10,985 |
| | ----- | ----- | ----- |
| Weighted average common and common equivalent shares | 181,452 | 177,875 | 177,309 |
| | ===== | ===== | ===== |
| Earnings per share: | | | |
| Income before cumulative effect of change in accounting principle | \$1.10 | \$0.71 | \$1.04 |
| Cumulative effect of change in accounting principle | - | (0.21) | - |
| | ----- | ----- | ----- |
| Net income | \$1.10 | \$0.50 | \$1.04 |
| | ===== | ===== | ===== |

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

r. NEW ACCOUNTING STANDARDS

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 required adoption in periods beginning after June 15, 1999. FAS 133 was subsequently amended by Statement of Financial Accounting Standards No. 137, "Accounting for Derivative Instruments and Hedging Activities - Deferral of the Effective Date of FASB Statement No. 133" and will now be effective for fiscal years beginning after June 15, 2000, with earlier adoption permitted. The Company will adopt FAS 133 on a cumulative basis during fiscal 2001, as required. The Company is currently evaluating the effect of adopting FAS 133 and has not determined the impact of FAS 133 on its financial statements. In March 1998, Statement of Position 98-1, (SOP 98-1), "Accounting for the Cost of Computer Software Developed for or Obtained for Internal Use" was issued. The Company will adopt SOP 98-1 in fiscal 2000. The Company does not expect SOP 98-1 to have a material impact on the results of operations or financial position. In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin 101, (SAB 101), "Revenue Recognition in Financial Statements." SAB 101 summarizes the application of generally accepted accounting principles to revenue recognition in financial statements. The Company will adopt SAB 101 in the second quarter of fiscal 2000 and does not expect SAB 101 to have a material effect on its financial position or results of operations.

3. ACQUISITIONS AND DISPOSITIONS

During the second quarter of fiscal 1999, the Company acquired two DSP tools companies, White Mountain DSP, Inc. (WM) of Nashua, New Hampshire, and Edinburgh Portable Compilers Limited (EPC), of Edinburgh, Scotland. The total cost of these acquisitions was approximately \$21 million in cash and \$2 million in common stock of the Company, with additional cash consideration of up to a maximum of \$10 million (to be accounted for as additional goodwill) payable if the acquired companies achieve certain revenue and operational objectives. These acquisitions were accounted for as purchases, and the excess of the purchase price over the fair value of the assets acquired was allocated to existing technology, workforce in place, trade names and goodwill, which are being amortized on the straight-line basis over periods ranging from six to ten years. In connection with these acquisitions, the Company recorded a charge of \$5.1 million representing the write-off of in-process research and development.

Pro forma results of operations for WM and EPC have not been provided herein as they were not material to the Company on either an individual or an aggregate basis. The results of operations of each acquisition are included in the Company's consolidated statement of income from the date of each acquisition.

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 provided for payments to the Company aggregating \$13 million, of which \$3 million was earned in fiscal 1999 and \$10 million was earned in fiscal 1998, for assisting Adaptec in research and development efforts.

4. INDUSTRY AND GEOGRAPHIC SEGMENT INFORMATION

The Company adopted Statement of Financial Accounting Standards No. 131, (FAS 131), "Disclosures about Segments of an Enterprise and Related Information" in fiscal 1999. The Company operates in two segments: the design, manufacture and marketing of a broad range of integrated circuits, which comprises approximately 97% of the Company's revenue, and the design, manufacture and marketing of a range of assembled products, which accounts for the remaining 3% of the Company's revenue. Effectively, the Company operates in one reportable segment.

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GEOGRAPHIC INFORMATION

The Company operates in three major geographic areas. The following geographic area data include trade sales based upon point of sale and long lived assets based upon physical location. 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 include export sales of \$262.4 million in fiscal 1999, \$128.2 million in fiscal 1998 and \$147.6 million in fiscal 1997.

GEOGRAPHIC SEGMENT INFORMATION

| | | 1999 | 1998 | 1997 |
|----------------------|--------------------------------------|--------------|--------------|--------------|
| | | ----- | ----- | ----- |
| SALES | North America, including export..... | \$ 929,971 | \$ 748,283 | \$ 711,252 |
| | Europe..... | 313,598 | 312,523 | 359,333 |
| | Asia..... | 206,810 | 169,765 | 172,909 |
| | | ----- | ----- | ----- |
| | Total sales..... | \$ 1,450,379 | \$ 1,230,571 | \$ 1,243,494 |
| | | ===== | ===== | ===== |
| LONG-LIVED ASSETS | North America..... | \$ 417,854 | \$ 448,384 | \$ 405,511 |
| | Europe..... | 178,361 | 187,921 | 195,685 |
| | Asia..... | 77,154 | 82,941 | 75,207 |
| | | ----- | ----- | ----- |
| | Total long-lived assets..... | \$ 673,369 | \$ 719,246 | \$ 676,403 |
| | | ===== | ===== | ===== |

5. 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 is deferred until the products are resold to the end users. The Company believes that deferral of revenue and related gross margin on shipments to distributors 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 1998 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 prior years' results is as follows:

| | 1998 | 1997 |
|---|--------------|--------------|
| | ---- | ---- |
| As reported: | | |
| Net sales | \$ 1,230,571 | \$ 1,243,494 |
| Net income | 82,408 | 178,219 |
| Basic earnings per share | \$ 0.51 | \$ 1.13 |
| Diluted earnings per share | \$ 0.50 | \$ 1.04 |
| Pro forma amounts with the change in accounting principle related to revenue recognition applied retroactively: (unaudited) | | |
| Net sales | \$ 1,230,571 | \$ 1,214,602 |
| Net income | 119,488 | 167,515 |
| Basic earnings per share | \$ 0.74 | \$ 1.06 |
| Diluted earnings per share | \$ 0.71 | \$ 0.98 |

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NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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. In addition, the Company performed a review of its business strategy and concluded that the key to success in the DSP market was to focus on opportunities in the general-purpose DSP market that could 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 30, 1999 and October 31, 1998 were as follows:

| | 1999 ---- | 1998 ---- |
|----------------|--------------|--------------|
| WaferTech, LLC | \$ 32,852 | \$ 135,002 |
| CSM | 27,413 | 20,784 |
| Other | 59,036 | 31,438 |
| | ----- | ----- |
| | \$ 119,301 | \$ 187,224 |
| | ===== | ===== |

In January 1999, the Company concluded an agreement to sell to other WaferTech partners 78% of its 18% equity ownership in WaferTech for cash equal to the carrying value of the 78% equity ownership at October 31, 1998. During fiscal 1999, the Company invested an additional \$4 million in WaferTech. The Company no longer exercises significant influence over WaferTech's operating and financial policies and, accordingly, accounts for its remaining 4% investment under the cost method. 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."

The Company has an equity investment in Chartered Semiconductor Manufacturing Pte., Ltd., (CSM), in Singapore of approximately \$27 million which represents a less than 5% ownership interest. During fiscal 1999, CSM's stock became publicly traded. As a result, the Company changed the classification of its equity investment to available-for-sale. Previously, the investment was accounted for under the cost method.

Other investments consist primarily of long-term investments in mutual funds and bank money market funds, which are related to the Company's deferred compensation plan and are largely offset by a corresponding noncurrent liability to the plan participants. These investments are classified as trading.

Investments are stated at fair value, which is based on market quotes, interest rates or management estimates, as appropriate. Adjustments to fair value of investments classified as available-for-sale are recorded as an increase or decrease in stockholders' equity. Adjustments to fair value of and income pertaining to other investments are recorded in operating expense.

8. ACCRUED LIABILITIES

Accrued liabilities at October 30, 1999 and October 31, 1998 consisted of the following:

| | 1999 ---- | 1998 ---- |
|--------------------------------------|--------------|--------------|
| Accrued compensation and benefits | \$ 65,997 | \$ 36,582 |
| Other | 45,288 | 43,324 |
| | ----- | ----- |
| Total accrued liabilities | \$ 111,285 | \$ 79,906 |
| | ===== | ===== |

ANALOG DEVICES, INC.
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9. DEBT AND CREDIT FACILITIES

Long-term debt at October 30, 1999 and October 31, 1998 consisted of the following:

| | 1999 | 1998 |
|---|----------|------------|
| | ----- | ----- |
| 3 1/2% Convertible Subordinated Notes due December 1, 2000 | \$ - | \$ 229,985 |
| 6 5/8% Notes due March 1, 2000 | 80,000 | 80,000 |
| | ----- | ----- |
| Long-term debt | 80,000 | 309,985 |
| Less: Current portion long-term debt | (80,000) | - |
| | ----- | ----- |
| Total | \$ - | \$ 309,985 |
| | ===== | ===== |

As of March 11, 1999, the Company had converted \$229,967,000 of the \$230 million principal amount of its 3 1/2% Convertible Subordinated Notes (Notes) due 2000 into an aggregate of 10,983,163 shares of the Company's common stock, and the remaining Notes were redeemed by a cash payment of \$33,000. This conversion did not have an impact on diluted earnings per share.

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 30, 1999, the net effective interest rate on \$40 million of the Notes was 7.3% after giving effect to the interest rate swap agreement.

The Company has a revolving credit agreement with several banks that commits them to lend up to \$60 million. The Company did not borrow against this agreement at any time during fiscal 1999 or fiscal 1998. There was \$2.3 million and \$0.2 million of foreign currency borrowings outstanding at October 30, 1999 and October 31, 1998, respectively, 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 that 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 approximately \$17 million in fiscal 1999, \$16 million in fiscal 1998 and \$13 million in fiscal 1997.

The following is a schedule of future minimum lease payments under capital leases and rental payments required under long-term operating leases at October 30, 1999:

| FISCAL YEARS | OPERATING LEASES | CAPITAL LEASES |
|---|---------------------|-------------------|
| | ----- | ----- |
| 2000 | \$ 11,649 | \$ 15,807 |
| 2001 | 8,402 | 8,903 |
| 2002 | 5,920 | 4,804 |
| 2003 | 3,027 | 3,607 |
| 2004 | 2,501 | 57 |
| Later Years | 13,994 | - |
| | ----- | ----- |
| Total | \$ 45,493 | 33,178 |
| | ===== | |
| Less amount representing interest | | (2,247) |
| | | ----- |
| Present value of minimum lease payments | | \$ 30,931 |
| | | ===== |

11. COMMITMENTS AND CONTINGENCIES

LITIGATION

The Company was 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. Subsequent to fiscal 1999, the Company entered into a settlement agreement with Lemelson that was not material.

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 rescheduled 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.

On January 18, 2000, the Company became aware that Silicon Laboratories, Inc. had named ADI as a defendant in a lawsuit filed in the United States District Court for the Western District of Texas, which alleges misappropriation of trade secrets and patent infringement by Analog. As of January 21, 2000, the Company had not yet been served by the plaintiff and therefore has not had the opportunity to review the plaintiff's complaint. Accordingly, the Company is not in a position to assess the validity of the allegations or the effect of the lawsuit on the Company.

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 of these matters are resolved.

WAFER SUPPLY AGREEMENTS

The Company maintains a deposit of \$20 million with Chartered Semiconductor Manufacturing Pte., Ltd., (CSM). 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 2004. 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. The outstanding balance of the deposit is refunded in proportion to the Company's purchases of wafers from CSM and, at this time, the Company expects to have the entire deposit refunded.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 that 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 non-employee director is granted annually a non-statutory option to purchase 10,500 shares of common stock at an exercise price equal to the fair market value on the date of grant. Up to 1999, each newly elected non-employee director received a grant of an option to purchase 10,500 shares of Common Stock upon his or her election to the Board (the "Initial Grant"). The 1994 Director Plan was amended in 1999 whereby the number of shares of Common Stock underlying the Initial Grant was increased from 10,500 to 30,000. 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 that 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:

| STOCK OPTION ACTIVITY ----- | SHARES AVAILABLE FOR GRANT ----- | OPTIONS OUTSTANDING | |
|---|---|---------------------|--|
| | | NUMBER ----- | WEIGHTED AVERAGE PRICE PER SHARE ----- |
| 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 |
| | ----- | ----- | ----- |
| Options granted | (660) | 660 | \$ 34.52 |
| Options exercised | - | (3,027) | \$ 8.51 |
| Options canceled | 651 | (651) | \$ 15.29 |
| | ----- | ----- | ----- |
| Balance, October 30, 1999 | 8,844 | 22,691 | \$ 13.93 |
| | ===== | ===== | ===== |

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 vest 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 30, 1999:

| RANGE OF EXERCISE PRICE | OUTSTANDING OPTIONS | | | OPTIONS EXERCISABLE | |
|-------------------------------|--------------------------------------|--|--|--------------------------------------|--|
| | NUMBER OUTSTANDING AT 10/30/99 | WEIGHTED AVERAGE REMAINING CONTRACTUAL LIFE (YEARS) | WEIGHTED AVERAGE EXERCISE PRICE | NUMBER EXERCISABLE AT 10/30/99 | WEIGHTED AVERAGE EXERCISE PRICE |
| \$ 1.96 - \$ 5.62 | 950 | 2.1 | \$ 2.81 | 950 | \$ 2.81 |
| \$ 5.62 - \$ 11.24 | 3,515 | 4.8 | \$ 9.11 | 2,414 | \$ 8.59 |
| \$ 11.24 - \$ 22.48 | 17,191 | 7.9 | \$ 14.48 | 711 | \$ 16.26 |
| \$ 22.48 - \$ 39.33 | 842 | 8.3 | \$ 26.41 | 76 | \$ 25.95 |
| \$ 39.33 - \$ 56.19 | 193 | 9.9 | \$ 51.45 | 0 | \$ 0 |
| \$ 1.96 - \$ 56.19 | 22,691 | 7.2 | \$ 13.93 | 4,151 | \$ 8.90 |

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 656,400 shares in 1999 (602,500 and 579,200 in 1998 and 1997, respectively) for \$12.9 million (\$11.8 million and \$10.2 million in 1998 and 1997, respectively). At October 30, 1999, approximately 2,201,000 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 that 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. There were no additional shares awarded under the restricted stock plans in fiscal 1999. Shares awarded under the Company's restricted stock plans, net of cancellations, for fiscal 1998 and fiscal 1997 were 217,500 and 168,000, respectively. The fair market value of the shares at the date of award was \$6,293,000 and \$4,002,000 in fiscal 1998 and 1997, respectively and was accounted for as deferred compensation and is being amortized over the restricted period. During 1999, 1998 and 1997, \$2,799,000, \$2,918,000 and \$2,309,000, respectively, of such compensation was charged to expense. At October 30, 1999, there were 597,500 shares of common stock available for issuance under the 1991 Restricted Stock Plan.

As of October 30, 1999, a total of 34,332,881 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 at an average purchase price of \$19.13 per share. The Company did not purchase any shares in fiscal 1999. 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

STOCK-BASED COMPENSATION

As permitted under Statement of Financial Accounting Standards No. 123 (FAS 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 that 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 | | |
|---------------------------------|---------|-------|-------|-------|-------|-------|
| | 1999 | 1998 | 1997 | 1999 | 1998 | 1997 |
| Expected life (years) | 6.1 | 6.1 | 6.2 | 1.0 | 1.0 | 1.0 |
| Expected stock price volatility | 52.9% | 49.5% | 47.7% | 64.1% | 57.6% | 56.0% |
| Risk-free interest rate | 5.3% | 5.3% | 6.2% | 5.1% | 5.4% | 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 | | |
|--------------------|-----------------------------------|---------|----------|
| | 1999 | 1998 | 1997 |
| Stock option plans | \$ 19.54 | \$ 9.82 | \$ 12.68 |
| ESPP | \$ 8.79 | \$ 8.33 | \$ 9.53 |

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:

| | 1999 | 1998 | 1997 |
|--------------------------------------|-----------|----------|-----------|
| Pro forma net income | \$162,872 | \$56,719 | \$170,173 |
| Pro forma diluted earnings per share | \$ 0.90 | \$ 0.32 | \$ 0.97 |

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 fiscal 2000.

PREFERRED STOCK

The Company has 471,934 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) that 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 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 rights to acquire) beneficial ownership of 15% or more of 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 Common Stock (or in certain circumstances, cash property or other securities of the Company) that 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 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 of 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 that 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, plus 50% of the contributions between 2% and 4%. 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 was approximately \$21 million in fiscal years 1999 and 1998 and \$19 million in fiscal 1997, which primarily consisted of costs related to the U.S. defined contribution plan. Also included in total expense is pension expense related to foreign defined benefit plans of approximately \$3 million for each of the fiscal years 1999, 1998 and 1997.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NON-U.S. PLAN DISCLOSURES

The Company's funding policy for its foreign defined benefit pension plans is consistent with the local requirements of each country. The plans' assets consist primarily of U.S. and foreign equity securities, bonds, property and cash.

Net annual periodic pension cost of non-U.S. plans is presented in the following table:

| | 1999 ---- | 1998 ---- | 1997 ---- |
|---|-------------------|-------------------|-------------------|
| Service cost of benefits earned during the year | \$ 4,079 | \$ 3,208 | \$ 3,117 |
| Interest cost on projected benefit obligation | 3,273 | 3,246 | 3,295 |
| Expected return on plan assets | (6,052) | (12,623) | (8,109) |
| Amortization of prior service cost | 1,846 | 9,440 | 4,889 |
| | ----- | ----- | ----- |
| Net periodic pension cost | \$ 3,146 ===== | \$ 3,271 ===== | \$ 3,192 ===== |

Obligation and asset data of the plans at fiscal year end is presented in the following table:

| | 1999 ---- | 1998 ---- |
|---|--------------------|--------------------|
| Benefit Obligation: | | |
| Beginning balance | \$ 56,485 | \$ 52,648 |
| Service cost | 4,079 | 3,208 |
| Interest cost | 3,273 | 3,246 |
| Plan participants' contributions | 1,267 | 1,230 |
| Benefits paid | (1,540) | (2,634) |
| Actuarial (gain)/loss | (7,939) | 5,982 |
| Exchange rate adjustment | (711) | (7,195) |
| | ----- | ----- |
| Ending balance | \$ 54,914 ===== | \$ 56,485 ===== |
| Plan Assets at Fair Value: | | |
| Beginning balance | \$ 58,784 | \$ 50,951 |
| Actual return on plan assets | 6,052 | 12,623 |
| Company contributions | 2,646 | 2,277 |
| Plan participants' contributions | 1,267 | 1,230 |
| Benefits paid | (1,540) | (2,634) |
| Exchange rate adjustment | (1,052) | (5,663) |
| | ----- | ----- |
| Ending balance | \$ 66,157 ===== | \$ 58,784 ===== |
| Reconciliation of Funded Status: | | |
| Fund status - Plan assets in excess of benefit obligation | \$ (11,243) | \$ (2,299) |
| Unrecognized net gain | 15,148 | 6,543 |
| Unrecognized prior service cost | (1,077) | (308) |
| | ----- | ----- |
| Net amount recognized | \$ 2,828 ===== | \$ 3,936 ===== |
| Amounts recognized in the balance sheet consist of: | | |
| Prepaid benefit cost | \$ (4,201) | \$ (2,678) |
| Accrued benefit cost | 7,029 | 6,614 |
| | ----- | ----- |
| Total | \$ 2,828 ===== | \$ 3,936 ===== |

Accrued benefit cost at October 30, 1999 and October 31, 1998 includes projected benefit obligations of \$14.8 million and \$12.7 million and accumulated benefit obligations of \$8.7 million and \$7.5 million, versus plan assets of \$6.4 million and \$4.7 million for four plans whose obligations exceeded their assets.

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

The range of assumptions used for the non-U.S. defined benefit plans reflects the different economic environments within the various countries. The projected benefit obligation was determined using the following assumptions:

| | 1999 ---- | 1998 ---- |
|---|--------------|--------------|
| Discount rate | 4% - 12% | 4% - 12% |
| Rate of increase in compensation levels | 4% - 10% | 3% - 10% |
| Expected long-term returns on assets | 5% - 12% | 4% - 13% |

14. INCOME TAXES

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

| | 1999 ---- | LIABILITY METHOD ----- 1998 ---- | 1997 ---- |
|---|--------------------|---|--------------------|
| U.S. federal statutory tax rate | 35.0% | 35.0% | 35.0% |
| Income tax provision reconciliation: | | | |
| Tax at statutory rate | \$ 90,139 | \$ 52,660 | \$ 82,578 |
| Irish income subject to lower tax rate | (25,557) | (10,960) | (19,880) |
| Change in valuation allowance | - | (5,559) | (1,835) |
| State income taxes, net of federal benefit | 260 | 502 | 964 |
| Research and development tax credits | (2,700) | (4,400) | (5,000) |
| Foreign Sales Corporation | (4,923) | (1,745) | (3,161) |
| Amortization of goodwill | 1,189 | 545 | 528 |
| Net foreign tax in excess of U.S. federal statutory tax rate | (156) | 125 | 2,765 |
| Other, net | 2,469 | (197) | 701 |
| Total income tax provision | \$ 60,721 ===== | \$ 30,971 ===== | \$ 57,660 ===== |

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

| | 1999 ---- | 1998 ---- | 1997 ---- |
|----------------|---------------------|---------------------|---------------------|
| Pretax income: | | | |
| Domestic | \$ 114,333 | \$ 34,290 | \$ 84,599 |
| Foreign | 143,207 | 116,169 | 151,280 |
| | \$ 257,540 ===== | \$ 150,459 ===== | \$ 235,879 ===== |

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

| | 1999 ---- | 1998 ---- | 1997 ---- |
|--------------------------|--------------------|----------------------|---------------------|
| Current: | | | |
| Federal | \$ 19,949 | \$ 24,588 | \$ 35,500 |
| Foreign | 23,790 | 17,983 | 26,811 |
| State | 400 | 772 | 1,483 |
| Total current | \$ 44,139 ===== | \$ 43,343 ===== | \$ 63,794 ===== |
| Deferred (prepaid): | | | |
| Federal | \$ 16,262 | \$ (7,792) | \$ (3,364) |
| Foreign | 320 | (4,580) | (2,770) |
| Total deferred (prepaid) | \$ 16,582 ===== | \$ (12,372) ===== | \$ (6,134) ===== |

ANALOG DEVICES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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 \$588,048,000 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 30, 1999 and October 31, 1998, and \$5.6 million at November 1, 1997.

The significant components of the Company's deferred tax assets and liabilities for the fiscal years ended October 30, 1999 and October 31, 1998 are as follows:

| | 1999 ---- | 1998 ---- |
|--|--------------|--------------|
| Deferred tax assets: | | |
| Inventory reserves | \$ 32,816 | \$ 36,176 |
| Deferred income on shipments to distributors | 34,750 | 39,210 |
| Reserves for compensation and benefits | 12,769 | 11,968 |
| Restricted stock | 2,364 | 2,466 |
| Intercompany profits in foreign inventories | 5,181 | 5,066 |
| Reserve for bad debts | 2,821 | 5,694 |
| Foreign tax credits | 292 | (492) |
| Other | 3,253 | 4,340 |
| | ----- | ----- |
| Total gross deferred tax assets | 94,246 | 104,428 |
| | ----- | ----- |
| Deferred tax liabilities: | | |
| Depreciation | (44,468) | (38,069) |
| | ----- | ----- |
| Total gross deferred tax liabilities | (44,468) | (38,069) |
| | ----- | ----- |
| Net deferred tax assets | \$ 49,778 | \$ 66,359 |
| | ===== | ===== |

The Board of Directors and Stockholders
Analog Devices, Inc.

We have audited the accompanying consolidated balance sheets of Analog Devices, Inc. as of October 30, 1999 and October 31, 1998, and the related consolidated statements of income, stockholders' equity and cash flows for each of the three years in the period ended October 30, 1999. 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 auditing standards generally accepted in the United States. 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 30, 1999 and October 31, 1998, and the consolidated results of its operations and its cash flows for each of the three years in the period ended October 30, 1999, in conformity with accounting principles generally accepted in the United States.

As discussed in Notes 2(m) and 5 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
November 30, 1999

ANALOG DEVICES, INC.
SUPPLEMENTARY FINANCIAL INFORMATION (UNAUDITED)

Quarterly financial information for fiscal 1999 and fiscal 1998 (thousands of dollars except as noted):

| | 4Q99 | 3Q99 | 2Q99 | 1Q99 | 4Q98* | 3Q98* | 2Q98* | 1Q98* |
|---|---------|---------|---------|---------|---------|---------|----------|----------|
| | ---- | ---- | ---- | ---- | ----- | ----- | ----- | ----- |
| Net sales | 431,036 | 378,776 | 340,067 | 300,500 | 297,650 | 295,700 | 319,430 | 317,791 |
| Cost of sales | 205,922 | 190,481 | 176,435 | 162,805 | 164,945 | 161,815 | 160,993 | 154,332 |
| Gross margin | 225,114 | 188,295 | 163,632 | 137,695 | 132,705 | 133,885 | 158,437 | 163,459 |
| % of sales | 52% | 50% | 48% | 46% | 45% | 45% | 50% | 51% |
| Operating expenses: | | | | | | | | |
| Research and development | 75,414 | 67,142 | 61,899 | 52,584 | 53,101 | 55,088 | 56,190 | 54,975 |
| Write-off of purchased in-process research and development | - | - | 5,140 | - | - | - | - | - |
| Selling, marketing, general and administrative | 59,702 | 54,589 | 49,167 | 46,181 | 46,625 | 48,202 | 57,014 | 55,646 |
| Restructuring charge | - | - | - | - | - | 17,000 | - | - |
| Gain on sale of business | - | - | - | - | - | - | (13,100) | - |
| Total operating expenses | 135,116 | 121,731 | 116,206 | 98,765 | 99,726 | 120,290 | 100,104 | 110,621 |
| % of sales | 31% | 32% | 34% | 33% | 34% | 41% | 31% | 35% |
| Operating income | 89,998 | 66,564 | 47,426 | 38,930 | 32,979 | 13,595 | 58,333 | 52,838 |
| % of sales | 21% | 18% | 14% | 13% | 11% | 5% | 18% | 17% |
| Equity in loss of WaferTech | - | - | - | 1,149 | 2,715 | 3,560 | 1,915 | 1,590 |
| Nonoperating expenses (income): | | | | | | | | |
| Interest expense | 1,354 | 1,044 | 1,985 | 3,688 | 3,031 | 2,666 | 3,103 | 2,429 |
| Interest income | (9,428) | (6,881) | (6,117) | (4,300) | (4,543) | (3,996) | (4,318) | (3,981) |
| Other | 441 | 557 | 854 | 1,032 | 798 | 536 | 996 | 785 |
| Total nonoperating (income) expense | (7,633) | (5,280) | (3,278) | 420 | (714) | (794) | (219) | (767) |
| Income before income taxes | 97,631 | 71,844 | 50,704 | 37,361 | 30,978 | 10,829 | 56,637 | 52,015 |
| % of sales | 23% | 19% | 15% | 12% | 10% | 4% | 18% | 16% |
| Provision for income taxes | 24,413 | 17,243 | 11,598 | 7,467 | 4,642 | 1,721 | 12,852 | 11,756 |
| Net income before cumulative effect of change in accounting principle | 73,218 | 54,601 | 39,106 | 29,894 | 26,336 | 9,108 | 43,785 | 40,259 |
| % of sales | 17% | 14% | 12% | 10% | 9% | 3% | 14% | 13% |
| Per share - basic | .42 | .32 | .23 | .19 | .16 | .05 | .27 | .26 |
| Per share - diluted | .40 | .30 | .22 | .18 | .16 | .06 | .25 | .24 |
| Cumulative effect of change in accounting principle | - | - | - | - | - | - | - | (37,080) |
| Net income after cumulative effect of change in accounting principle | 73,218 | 54,601 | 39,106 | 29,894 | 26,336 | 9,108 | 43,785 | 3,179 |
| % of sales | 17% | 14% | 12% | 10% | 9% | 3% | 14% | 1% |
| Per share - basic | .42 | .32 | .23 | .19 | .16 | .05 | .27 | .03 |
| Per share - diluted | .40 | .30 | .22 | .18 | .16 | .06 | .25 | .03 |
| Shares used to compute earnings per share (in thousands) | | | | | | | | |
| Basic | 173,670 | 172,710 | 167,012 | 159,572 | 160,698 | 162,451 | 162,124 | 161,023 |
| Diluted | 184,774 | 183,480 | 180,698 | 176,857 | 175,382 | 178,546 | 179,427 | 178,146 |

* Fiscal 1998 results are after cumulative effect of accounting change - see Note 5 of the consolidated financial statements.

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 30, 1999 ----- |
|---|------------------------------------|--|
| 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. | The Philippines | 100% |
| Analog Devices International Financial Services Company | Ireland | 100% |
| Analog Devices Foreign Sales Corporation | Barbados | 100% |
| Analog Development (Israel) 1996 Ltd. | Israel | 100% |
| Analog Devices (China) Co. Ltd. | China | 100% |
| Analog Devices Canada, Ltd. | Canada | 100% |
| Edinburgh Portable Compilers Limited | Scotland | 100% |
| Analog/NCT Supply Ltd. | Delaware | 50% |
| Analog Devices Realty Holdings, Inc. | The Philippines | 40% |
| Analog Supplies Company | Japan | 15% |
| Analyzed Investments, Ltd. | Ireland | 7.4% |

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 November 30, 1999, included in the 1999 Annual Report to Shareholders of Analog Devices, Inc.

Our audits 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 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 (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, 333-69359, 333-79551 and 333-87055 and Form S-3 Nos. 333-08505, 333-08509, 333-17651 and 333-87053) of Analog Devices, Inc. and in the related Prospectuses of our report dated November 30, 1999, with respect to the consolidated financial statements and schedule of Analog Devices, Inc. included or incorporated by reference in this Annual Report (Form 10-K) for the year ended October 30, 1999.

/s/ Ernst & Young LLP

Boston, Massachusetts
January 25, 2000

5
1,000
U.S. DOLLARS

YEAR
OCT-30-1999
NOV-01-1998
OCT-30-1999
1
355,891
406,553
281,365
14,238
248,936
1,379,110
1,438,129
795,323
2,218,354
479,263
0
0
29,675
1,586,356
2,218,354
1,450,379
1,450,379
735,643
735,643
471,818
0
8,071
257,540
60,721
196,819
0
0
0
196,819
1.16
1.10