ABOUT THE COMPANY

Motorola is one of the world's leading providers of electronic equipment, systems, components and services for worldwide markets. Products include two-way radios, pagers and telepoint systems, cellular telephones and systems, semiconductors, defense and aerospace electronics, automotive and industrial electronics, computers, data communications and information processing and handling equipment. Motorola was a winner of the first Malcolm Baldrige National Quality Award, in recognition of its superior company-wide management of quality processes.

CONTENTS

Financial Highlights 1

To Our Stockholders and Other Friends 2

Motorola at a Glance 6

Review of Operations 17

Financial Review 21

Financial Statements 24

Notes to Consolidated Financial Statements 27

Five Year Financial Summary 33

Elected Officers 34

Directors, CEO Quality Awards,

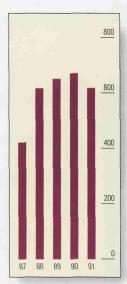
Dan Noble Fellows 36

Stockholder Reference Information 37

lions, except as noted) Motorola, Inc. and Consolidated Su		idated Subsidiaries
Years ended December 31	1991	1990
Net sales	\$11,341	\$10,885
Earnings before income taxes	613	666
% to sales	5.4%	6.1%
Net earnings	454	499
% to sales	4.0%	4.6%
Net earnings per share (in dollars)	3.44	3.80
Research and development expenditures	1,079	1,030
Fixed asset expenditures ¹	1,317	1,260
Working capital	1,424	1,404
Current ratio	1.46	1.46
Return on average invested capital (stockholders' equity plus long- and short-term debt less short-term investments) ²	7.8%	9.4%
% of total debt less short-term investments to total debt less short-term investments plus equity ²	22.5%	23.7%
Book value per common share (in dollars)	35.03	32.32
Year-end employment (in thousands)	102	105

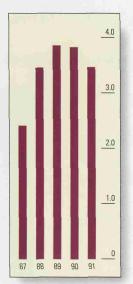


NET SALES (In billions)



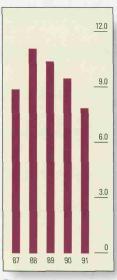
EARNINGS BEFORE INCOME TAXES

(In millions)



NET EARNINGS PER SHARE

(In dollars)



RETURN ON AVERAGE INVESTED CAPITAL

(In percentages)

¹Includes expenditures related to capitalized leases ²Includes short-term investments categorized as cash and cash equivalents

World events in 1991 made us more confident than ever that we are in the decade of wireless communication.

The emergence of market-driven economies throughout the developing world indicates that the impact of the microelectronic revolution has only begun to be felt. We think Motorola will play an important role in making it happen.

This year's report shows how the people of Motorola are building the technology platforms to serve this new global marketplace. With the decline of authoritarian systems and superpower conflicts, as many as 4 billion people could become part of emerging market economies in the next decade. Building the commercial infrastructure will be an exciting challenge for us and for our customers.

As reflected in Motorola's 1991 financial results, these events are taking place during a difficult economic period, especially in the United States and Europe. Sales growth was below our expectations, and we did not meet our goals for profitability and return on invested capital. That only serves to intensify our focus on key operational initiatives designed to serve our customers more efficiently.

We are gratified by the efforts of our people in improving quality and reducing cycle times, as we transform our businesses toward an empowered team culture. These efforts are directed at achieving our fundamental objective of Total Customer Satisfaction. We believe this is the key to superior long-term financial performance and maximum long-term value for stockholders.

REVIEW OF 1991 FINANCIAL RESULTS

Sales in 1991 increased 4% to \$11.34 billion million, or \$3.44 per share, compared with Net margin on sales was 4.0%, down from 4.6% was 7.8%, compared with 9.4% in 1990.



GEORGE FISHER
Chairman of the Board and
Chief Executive Officer

from \$10.88 billion in 1990. Earnings were \$454 \$499 million, or \$3.80 per share, a year earlier.

a year ago. Return on average invested capital

Detailed operating and financial results by our various businesses in 1991 appear on pages 17-20. The strongest growth took place in Asian markets. Overall results reflect the effects of sluggish economies in the U.S. and Europe. This impact should continue to be felt in the first half of 1992, while the potential exists for modest economic growth in the second half.

Increases in semiconductor and paging orders during the second half of 1991 are positive signs for long-term recovery. A modest improvement in capital spending should benefit communications and computer markets. The product cycles for new digital communications technologies provide opportunities for renewed growth throughout the world. Increases in the electronic content of automobiles should continue to help our businesses in this market.

Despite the unusually small rate of sales growth, Motorola continued to make progress on key measures of productivity. Sales per employee, for example, rose 5% in 1991 and have increased 71% since 1986.

We continued the trend toward becoming an increasingly global company. Non-U.S. revenues as a percentage of the total reached 48% in 1991, compared with 44% in 1990, on an international market basis. Sales exceeded \$2 billion in Europe and approached \$1 billion in Japan.

OFFICERS AND BOARD OF DIRECTORS

Donald R. Jones retired as Executive Vice President and Chief Financial Officer after completing 41 years of service with

Motorola. He was succeeded by Carl F. Koenemann,

Dr. Isamu Kuru was elected President of Younts, who was named Senior Vice President Asia and Americas.



GARY L. TOOKER
President and
Chief Operating Officer

formerly Assistant Chief Financial Officer.

Nippon Motorola Ltd. He succeeds Richard W. and Corporate Executive Director, International—

Two new members were elected to the Board of Directors during 1991. Thomas J. Murrin, Dean of Duquesne University's School of Business Administration, is a former Deputy Secretary of Commerce and President of the Energy and Advanced Technology Group of Westinghouse Electric Corp. Erich Bloch, Distinguished Fellow at the Council on Competitiveness, is former Director of the National Science Foundation.

Walter E. Massey, formerly Vice President for Research and for Argonne National Laboratory, the
University of Chicago, resigned from the Board after accepting appointment as Director of the National Science
Foundation. His technological insight has been valuable to the Board, and we appreciate his many contributions to Motorola.

THE TEAM CULTURE

Motorola was founded on basic beliefs in uncompromising integrity and respect for the individual. These traditional values create an environment that nourishes a creative, cooperative culture focused on quality and customer service.

This culture is embodied in Total Customer Satisfaction teams—employees who are empowered to solve problems, improve quality and reduce cycle times. Eight of these teams won gold medals at a worldwide competition in January 1992. They represent the following:

Chung Li, Taiwan, Paging and Telepoint Systems Group base plating manufacturing team; East Kilbride, Scot-

land, Semiconductor Products Sector product
Semiconductor Products Sector material finishing
Electronics Group inventory management team;
manufacturing team; Schaumburg, III., Corporate

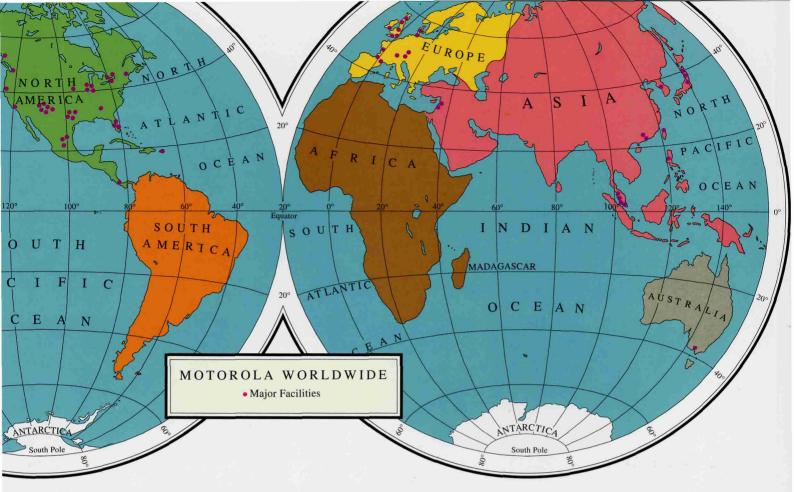


CHRISTOPHER B. GALVIN Senior Executive Vice President and Assistant Chief Operating Officer

engineering team; Manila, the Philippines, team; Northbrook, III., Automotive and Industrial Penang, Malaysia, Land Mobile Products Sector financial reporting team; Scottsdale, Ariz.,

0

NEW ZEALAND



Government Electronics Group microwave engineering team; Wood Dale, III., Land Mobile Products Sector order fulfillment and customer response team.

Another 14 teams won Silver Medals. The 22 winners were selected from more than 3,000 teams from throughout the company. They represent a powerful force that enables Motorola to compete with the finest companies in the world and succeed. We are proud of these efforts, and we look forward to the challenges of an exciting new market-driven world.

Leage Fisher

George Fisher

Chairman of the Board and

Chief Executive Officer

Gary L. Tooker

President and

Chief Operating Officer

Christopher B. Galvin

Senior Executive Vice President and

Assistant Chief Operating Officer

Christopher B. Jahri

LAND MOBILE SEMICONDUCTOR GENERAL PAGING AND MAJOR **PRODUCTS PRODUCTS** SYSTEMS TELEPOINT SECTOR BUSINESSES SECTOR SECTOR SYSTEMS GROUP Designs and produces Designs and manufac-Designs, manufactures Designs, manufactures a broad line of discrete and distributes two-way tures computer-based and distributes products semiconductors and interadios and other forms cellular radiotelephones for paging and telepoint grated circuits, including of electronic communiand systems, computers, systems microprocessors, microcations systems microcomputer boards. computers and memories and information processing and handling equipment MAJOR Computer, consumer, Agriculture, commercial, Computer, consumer, Consumer, industrial and MARKETS automotive, industrial, construction, education, automotive, industrial, telecommunications federal government/ state, local and federal federal government/ military and telecomgovernment and health military and telecommunications care, industrial, mining, munications petroleum, and transportation companies and utilities Astro™ Portable 2-Way Radio 88100 RISC MicroTAC® Lite™ Personal Advisor® Alphanumeric REPRESENTATIVE Microprocessor JSMR Mobile 2-Way Radio Cellular Telephone Display Pager **PRODUCTS** Motorola MultiPersonal™ Silverlink™ Portable CT2 Computer Handset SECTION OF THE PERSON

ORGANIZATION

Communications,
Power and Signal
Technologies Group
European Semiconductor
Group
Microprocessor and
Memory Technologies
Group
Logic and Analog
Technologies Group

Worldwide Systems Group
Worldwide Radio
Products Group
Worldwide Communications Services Group
North America Group
Communications and
Electronics Group
Customer Service Group
European Group
International Group
Sector Support Group

Cellular Infrastructure Group Pan American Cellular Subscriber Group International Cellular Subscriber Group Computer Group Paging Products Group
Americas Paging Products
Division
International Paging
Products Division
Components Division
Telepoint Systems Division

GOVERNMENT ELECTRONICS GROUP

Specializes in research, development and production of electronic systems and equipment for the U.S. Department of Defense, and other government agencies

INFORMATION SYSTEMS GROUP

Combines the capabilities of Codex Corporation and Universal Data Systems, Inc., to provide all the elements for distributed data and voice networks, from basic modems to network management systems

AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP

Designs and manufactures a variety of electronic components, modules and integrated electronic systems

CORPORATE VENTURES

Manages Motorola's entry into strategically relevant, emerging, highgrowth, high-technology business arenas

U.S. Department of Defense, NASA, government agencies, commercial users, and international customers Computer, consumer, automotive, industrial, federal government/ military and telecommunications Automotive, industrial, agriculture, and transportation

Health care, lighting, computer, commercial, and industrial

DAMA UHF Satellite Communications System



Codex 9800 Network Management System UDS V.32 Modem



Vehicle Management and Control Module Solid State Relay



Altair™ User Module Motorola Lighting Electronic Ballast



Communications Division Strategic Electronics Division Tactical Electronics Division Codex Corporation Universal Data Systems, Inc. Automotive Powertrain and Chassis Electronics Division Electronic Systems and Components Division Motorola Lighting, Inc. Wireless Enterprise Systems New Enterprises ① UALITY IS THE CORNERSTONE OF EFFECTIVE COST MANAGEMENT. OVER THE LAST FIVE YEARS,

OUR QUALITY EFFORTS HAVE RESULTED IN SAVINGS OF \$2.2 BILLION, INCLUDING MORE THAN

\$700 MILLION IN 1991, THROUGH THE REDUCTION OF DEFECTS IN THE MANUFACTURING PROCESS. →

TO ACHIEVE OUR GOALS, MOTOROLA PEOPLE MUST CONTINUALLY UPGRADE THEIR SKILLS AND

LEARN NEW WAYS OF DOING THINGS. THAT'S WHY MOTOROLA INVESTED MORE THAN \$70 MILLION

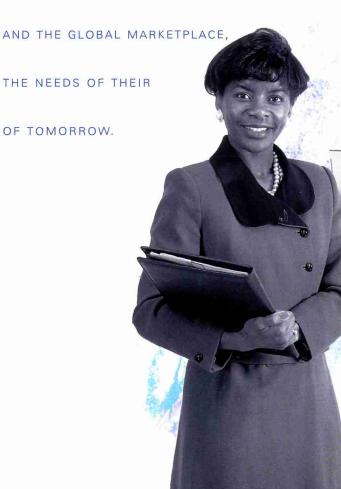
IN 1991 TO PROVIDE AT LEAST ONE WEEK OF TRAINING FOR EVERY EMPLOYEE. → BY ADDING

TO THEIR KNOWLEDGE OF TECHNOLOGY

THE PEOPLE OF MOTOROLA ANTICIPATE

CUSTOMERS AND THE POSSIBILITIES

To the people of Motorola, quality means anticipating the needs of our customers and envisioning the possibilities of tomorrow.





The people of Motorola are building the platforms for a microelectronic revolution based on semiconductor technology. We introduce an average of four new products every day. That helps us envision a computing arena in which new levels of performance will transform everything from manufacturing to medicine. → In the control arena, semiconductor technology will conserve energy and contribute to a cleaner

ENVIRONMENT. AUTOMOTIVE SYSTEMS

GUIDE DRIVERS TO THEIR DESTINATION

MOTOROLA IS BUILDING THE PLATFORMS

A revolution
based on
semiconductor
technology is
leading us to
a cleaner,
healthier, safer,
more productive world.

WILL IMPROVE PERFORMANCE AND THROUGH A DASHBOARD DISPLAY.

TODAY TO MAKE IT HAPPEN.



BADIO TECHNOLOGY PLATFORMS FROM MOTOROLA PROMISE TO TRANSFORM THE WAY THE WORLD COMMUNICATES. WE SEE NEW SERVICES OFFERING PORTABLE DATA, FACSIMILE, IMAGES AND VIDEO AS WELL AS VOICE COMMUNICATIONS. → PRIVATE AND SHARED SYSTEMS WILL CONNECT VIRTUALLY EVERY FUNCTION OF THE BUSINESS ENTERPRISE. NETWORKS OF DESKTOP COMPUTERS WILL BE CONNECTED BY RADIO AS WELL AS BY WIRES. → WE SEE PAGING SERVICES THAT WILL INCLUDE ONE-WAY DATA, GRAPHICS AND COMPRESSED VOICE.

CELLULAR TELEPHONE AND PERSONAL

AIDED BY ADVANCES IN DIGITAL

TINUE TO GROW AS A CONSUMER AS

In this
wireless world,
you could call
a person
instead of a
location, and
transmit data
and images as
well as voice.

COMMUNICATION SERVICES,

TECHNOLOGY, WILL CON-

WELL AS BUSINESS MARKET.







THE PEOPLE OF MOTOROLA ARE DESIGNING THE ELECTRONIC INFRASTRUCTURE FOR A NEW MARKET-DRIVEN WORLD. DIGITAL TECHNOLOGY IS DRAMATICALLY REDUCING THE COSTS OF COMPONENTS AND COMPUTING FROM HQNG KONG AND TOKYO TO PARIS. THIS MEANS COMPUTERS EMBEDDED IN EVERYTHING FROM CREDIT CARDS TO SPACECRAFT. PORTABLE DEVICES ARE BECOMING AFFORDABLE FOR MORE PEOPLE EVERY YEAR. CT2 AND MICROCELLULAR NETWORKS MEET THE NEEDS OF DENSELY POPULATED AREAS OF THE DEVELOPING WORLD. THE

PROPOSED IRIDIUM™ SATELLITE GLOBAL

COULD REACH EVEN THE MOST REMOTE

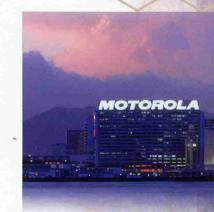
APPLY TECHNOLOGY TO IMPROVING LIFE

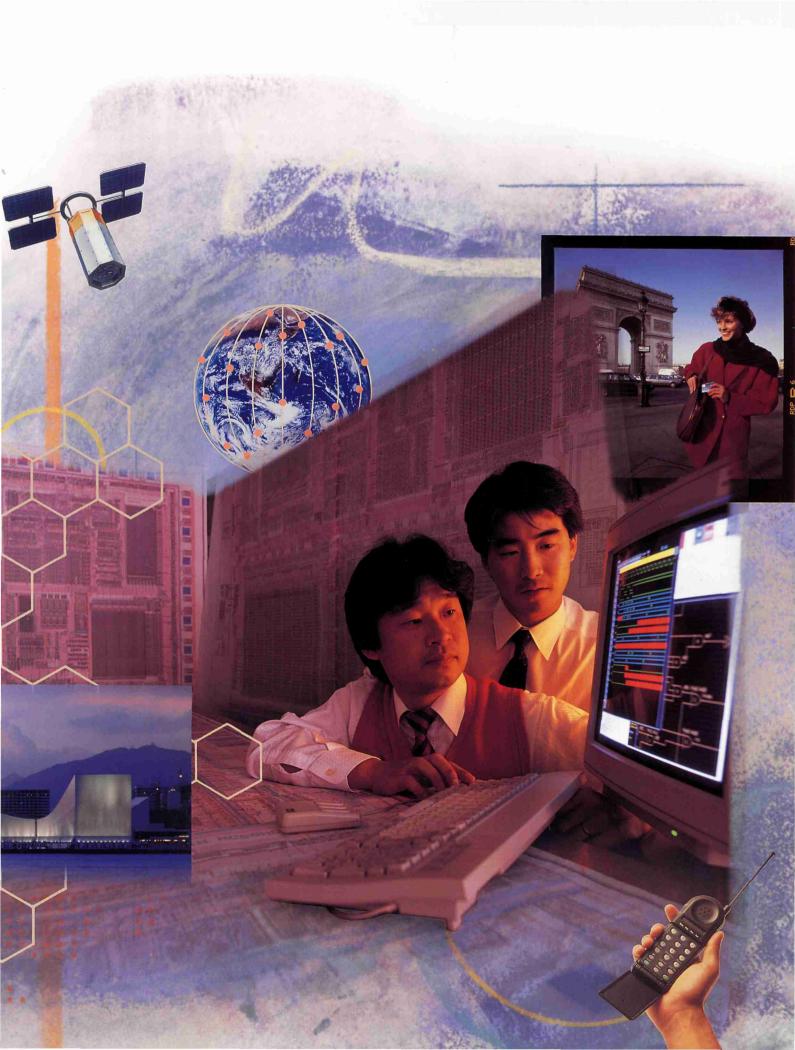
Every person
in the world
could have a
personal
portable phone
or be within
walking distance of a
telephone.

PERSONAL COMMUNICATIONS SYSTEM

REGIONS OF THE PLANET. → WE

ANYWHERE ON EARTH.





Motorola is committed to contributing to the well-being of every community and country in which we operate. This commitment ranges from education of our present and future workforce to the protection of our environment.

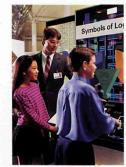
In the United States, we are involved in partnerships with educational systems in Arizona, Florida, Illinois, Massachusetts and Texas. In Arizona, for example, business and governmental leaders are working together to transform teach-

ing and learning for every student in the state.

long-term consulting to help school districts make

Motorola is also helping students discover is being used by selected high school teachers standing of electronic components and circuitry. with educators in the nearby area to redesign the Students visit the museum to see applications

Our commitment to the environment ranges earth's ozone layer to developing products that



Interactive exhibits at the Motorola Museum of Electronics give visitors hands-on experience with models of logic and mathematics used by integrated circuit designers.

In Illinois, we are providing funding, training and systemic reforms to improve student learning.

the excitement of science. Our electronics kit and students to gain practical, hands-on underThe Motorola Museum of Electronics is working science curriculum in grades six, seven and eight.

of the theory they learn in the classroom.

from eliminating chemicals that deplete the

conserve energy.

Motorola won the U.S. Environmental Protection Agency's 1991 Stratospheric Ozone Protection corporate award. It recognizes our leadership in developing and sharing technology that enables the elimination of chlorofluorocarbons (CFCs), which are used as solvents, refrigerants and fire suppressants. In 1989, we announced a stepped-up timetable to eliminate the use of CFCs by the end of 1992.

Our Kuala Lumpur facility won Malaysia's 1991 Better Environment Award. Judges cited our training programs and the attitude of our employees toward environmental issues.

We also have become a partner in Green Lights, a voluntary program sponsored by the U.S. Environmental Protection Agency. The program recognizes companies that install energy-efficient lighting products in existing and new facilities.

Our Motorola Lighting, Inc. (MLI) subsidiary is ballasts for fluorescent lamps. Retrofitting existing will result in cost savings through reduced energy



The Stratospheric Ozone Protection award for 1991.

a Green Lights Ally as a manufacturer of electronic electromagnetic ballasts with new MLI ballasts use, thereby reducing the discharge of pollutants.

Semiconductor Products Sector

Innovative technologies enabled customers around the world to excel, propelling sector sales and orders to record levels. Sales climbed 7% to \$3.7 billion, and orders increased 8%. Operating profits improved to \$356 million from \$320 million in 1990.

Orders improved in the Japanese, Asia-Pacific and North American regions. Among major markets, order growth was highest in personal computer/workstation, consumer and communications segments.

The three major product groups all posted higher orders for the year. Demand was highest for CMOS (complementary metal-oxide semiconductor) gate arrays, microprocessors, customer-specified microcontrollers, static random access memories (RAMs), analog devices and power transistors. Most of these products feature proprietary or application/customer-specific functionality.

Motorola's spectrum of product technologies and our ability to create on-chip systems solutions produced a number of new or expanded customer partnerships. They exist throughout our market segments and regions.

For example, in a technology alliance with Apple Computer and IBM, we will jointly design, manufacture and market a family of Reduced Instruction Set Computer (RISC) microprocessors called PowerPC. Based on IBM's RISC/System 6000 architecture, this family will target applications ranging from personal computers to highend servers. IBM and Motorola established a design center in Austin, Texas, to develop the PowerPC architecture. (PowerPC is a trademark of IBM.) We will also continue to develop, with other customer partners, the derivative generations of the 88000 RISC family.

New products that support our computer customers include 10 and 12 nanosecond, 256-kilobit and 1-megabit BiCMOS fast static RAMs; and the 88204 cache memory management unit within our 88000 RISC family. We previewed our next-generation RISC engine, the 88110, which features a patented Symmetric Superscaler™ implementation. Our highest performance CISC (complex instruction set computer), the 68040, achieved volume production.

In the automotive arena, we expanded our leadership as the partner-of-choice for advanced powertrain control technology. We will co-design with Ford and manufacture a RISC-based microcontroller for use in Ford's future Powertrain Electronics Controller. Mazda Motor Co. and Nippondenso, Mazda's electronic module supplier, will use a specialized version of our MC68HC16 microcontroller in future vehicles.

Bavarian Motor Works AG (BMW) chose our new 68F333, the world's first microcontroller with on-chip flash EEPROM (electrically erasable programmable read-only memory), for use in its next-generation, four-cylinder series cars. These decisions by Ford, Mazda and BMW mean that 10 of the world's largest automakers, representing about 75% of current market sales, have agreed to use Motorola microcontrollers in their next-generation powertrain control systems.

New automotive products included a SmartDiscrete[™] fuel injector driver; the MI-Bus single-wire multiplex system and higher performance microcontrollers.

Three major partnerships involving our digital media technology illustrate the convergence of communications, computing and consumer electronics. This technology enables the integration of video, voice, music, text and graphics into any application.

With IBM of Europe, we have designed a video capture chip set that brings video from various sources into the personal computer. We developed with Philips the advanced components for its Compact Disc-Interactive (CD-I) consumer entertainment/information system. And we created with British Telecom an audio/video codec (compression-decompression) system for teleconferencing.

In communications, we serve as the strategic components developer with Motorola's equipment businesses for advanced cellular, paging and two-way radio systems. Important technology partnerships also have been developed with Alcatel, AT&T, Ericsson and Northern Telecom.

We introduced a wide range of devices to support our communications customers, including a Fiber Distributed Data Interface (FDDI) chip set, and a family of linear amplifier modules for cellular base stations.

Our partnership with Echelon Corp. on its networked control technology expanded with an investment commitment, which will result in up to 19% ownership by Motorola. Echelon's LONWORKS™ technology uses a Neuron Chip™ microcontroller to sense, control and communicate with other Neuron chips in a local operating network in offices, factories, homes and vehicles, as well as end-use products such as security systems and copiers. More than 150 development systems have been sold to system and end-product manufacturers worldwide.

Our emphasis on consumer applications resulted in an alliance with Toshiba to design a next-generation MUSE decoder chip set for high-definition television systems. Chroma 4, our multistandard chroma decoder, and various companion chips have been chosen by major European and Japanese customers for upcoming televisions.

Many of the products we introduced can be used in a wide variety of applications. These include our 68EC000 family of microprocessors for embedded control functions; a low-power controller, the 68340v, for portable applications; and the world's first signal-conditioned, microprocessor-compatible absolute pressure sensor for automotive, industrial and consumer products.

We expanded our position as the world's leading provider of 8-bit microcontrollers with new versions of 68HC11 and customer-specified 68HC05 devices. A new logic line called ECLinPS Lite™ and a unique Sleep-Mode™ dual operational amplifier were introduced. Application-specific portfolio additions included the H4C series array family featuring densities of more than 300,000 gates and 256 kilobits of RAM, and the ECL300™ LogicArray.

The MOS 11 wafer fab in Austin, Texas, and CS-1 fab in Tempe, Arizona, began initial production of fast static RAMs and RF devices, respectively. A new assembly/test facility and the Tohoku Semiconductor 4-megabit dynamic RAM line both commenced operation in Sendai, Japan. Nippon Motorola Ltd. purchased a minority

interest in Think-O Electric Co., a manufacturer of bipolar and discrete semiconductors.

We won the "Semiconductor Supplier of the Year" Award from the Dataquest market research firm for the third year in a row. The 1991 award was based on ratings by semiconductor buyers worldwide for delivery, quality, price, technical support and service.

Communications Sector

Communications Sector sales rose 2% to \$3.6 billion and orders declined 2%. Operating profits were \$191 million, down from \$230 million in 1990.

In land mobile products, international orders improved in Asian markets, where major orders for trunked and secure voice systems were received. Orders in North America and Europe were lower.

Profitability was affected by continuing investments in radio data communications and a major change in North American distribution strategy. The direct sales force was reorganized and reduced, and a network of more than 1,000 dealers was developed and largely implemented. Our reorganized sales force and expanded dealer network enable us to serve a greater range of customers in more markets than ever before.

New technologies were developed to improve the efficiency of the radio frequency spectrum and provide more services to our customers. We announced the Astro™ digital technology for public safety, government and other private-market two-way radio customers. It offers improved audio quality, enhanced encryption, signaling and control, as well as integrated voice and data capabilities.

The new Motorola Integrated Radio System (MIRS) is designed to offer increased network capacity and enhanced roaming capabilities for users of shared trunked systems. The technology is planned to be available in 1993. Fleet Call, Inc. has signed conditional equipment purchase and financing agreements with Motorola to use MIRS as the backbone of its Enhanced Specialized Mobile Radio (ESMR) networks in six U.S. cities: Los Angeles, San Francisco, New York, Chicago, Dallas and Houston.

The new StartSite™ system gives customers many of the advantages of trunking with as little as one channel, and can be expanded into a multi-site system. We also introduced several two-way portable radios, including a 1.5 GHz version designed for shared systems in Japan. It is the first portable in that frequency band. The new Radius® GP300™ portable, introduced in every major world market, won the Product of the Year award at the Comdex '91 trade show in the United Kingdom.

Our CoveragePlus™ network continues to grow in the U.S. and has expanded into Canada. The system enables dispatchers to locate and communicate directly with vehicles, by voice or data messages, anywhere in the network. The U.S. Department of Defense approved the system for use by munitions carriers. A new Dispatch Terminal II supports messaging for up to 125 vehicles.

In mobile data communications, IBM, Poqet Computer Corp. and Itron, Inc. signed agreements to incorporate our new RPM405i™ radio packet modem inside their portable computing systems. Automatic Data Processing is combining the modem with a laptop computer and printer for insurance adjusters using the Ardis nationwide shared data network. Ardis is a joint venture of IBM and Motorola. Avis plans to install our mobile data terminals on its shuttle buses at airports.

In Germany, Motorola formed a joint venture with Mannesman Kienzle GmbH to provide shared trunked network service.

Motorola shipped a public safety emergency trunking system to the Philippines to help in the recovery efforts after the eruption of the Mount Pinatubo Volcano. Elsewhere in Asia, we received awards for major trunking systems in Singapore, Taiwan, China and Thailand, where the system will include fax capability.

In the U.S., we received contracts from the U.S. Customs Service and the U.S. Immigration and Naturalization Service, whose systems include our advanced Securenet™ radios with over-the-air rekeying.

As an official sponsor of the 1992 Olympic Team, Motorola will provide radio communications equipment, systems and services for use at its U.S. training centers, as well as the games in Albertville, France and Barcelona, Spain.

Motorola is also the official communications sponsor for the America's Cup operating committee. Our secure voice radios are being used by the sailing crews of the two American syndicates in the competition.

In paging and telepoint systems, orders improved due to a strong second half, as innovative products were introduced throughout the world.

We maintained our leadership in paging by adding several product lines and broadening distribution channels to reach new consumers. For example, the new Bravo[®] Express™ numeric display pager features an easy-to-read front mount display and is available in a variety of colors. Demand has been strong in Asia and the United Kingdom as well as in the U.S.

With the new Keynote™ stored voice pager, messages can be played back as often as necessary, a feature that is useful in high-noise environments. The new Bravo Plus™ numeric display pager allows multifrequency operation. The Advisor,® a new four-line alphanumeric display pager, is being shipped in Chinese and Thai language versions.

The Newsstream™ receiver was introduced for use on a service called EMBARC™ (Electronic Mail Broadcast to a Roaming Computer). It provides one-way radio delivery for portable computers. Under an agreement with *USA Today*, EMBARC users will be able to receive and display news capsules.

In Japan, we shipped our one millionth pager to Nippon Telegraph and Telephone. Several new products were introduced, including a model the size of a credit card for Japan's new common carriers.

In the emerging Telepoint business, Advanced Digital Cordless Telephony CT2/CAI (Common Air Interface) achieved acceptance worldwide as the standard for new cordless systems. The first commercial CT2/CAI system

was launched in Singapore in January, 1992. Initial response has been very positive.

We have provided equipment for the first major CT2 trial in the U.S. by American Personal Communications in Washington, D.C., and have been selected by Ameritech for a trial system in Chicago. In Canada, we participated with Northern Telecom in a major CT2 Plus demonstration.

Volume shipments of our Silverlink™ handsets and home base stations began. Early customers include Singapore, Thailand, Malaysia and Hong Kong. At the Geneva Telecom '91 show in October, we unveiled a prototype of a CT2 handset with a built-in pager.

International Network Operations continued its thrust to develop new markets for Paging and CT2 products by expanding into three new countries during 1991.

General Systems Sector

Sales in the General Systems Sector advanced 8% to \$2.8 billion, while orders rose 4%. Operating profits were \$330 million, down from \$354 million in 1990. Growth in the cellular subscriber products was offset by weakness in the cellular infrastructure business.

Motorola introduced the lightest and most advanced commercially available cellular telephone on the market. Called the MicroTAC[®] Lite[™] and MicroTAC II[™], it weighs only 7.7 ounces. It began shipping in quantity in North America during the fourth quarter.

With the introduction of the Secure Clear™ cordless telephones, Motorola entered the residential cordless phone market. They are the first such telephones to virtually eliminate the possibility of eavesdropping.

Sales of cellular subscriber equipment remained strong in international markets. Motorola is the only manufacturer to offer products in all of the world's system formats. New markets in 1991 included the Philippines, Indonesia, and St. Petersburg, Russia. We now participate in more than 60 countries.

In the United States, Motorola's Narrowband Advanced Mobile Phone Service (NAMPS) is being installed on Centel's system in Las Vegas, Nev. NAMPS triples the capacity of current AMPS cellular systems, allowing cellular operators to add new subscribers without disrupting service or quality. PacTel and U.S. West plan to begin testing in key markets.

Field testing continues for two digital technologies, Time Division Multiple Access (TDMA) and Code Division Multiple Access (CDMA). Motorola equipment placed the first live TDMA phone call. Our digital voice coder was chosen as the industry standard in the U.S. and Japan.

Motorola's Narrowband TACS system, specially designed for Japan, was placed into commercial service in the Tokyo market. Motorola MicroTAC telephones are now available throughout Japan. We were selected by Nippon Telegraph & Telephone to participate in developing Japan's digital cordless "Handyphone" program.

In Europe, we continue our strong position in analog cellular systems and the pan-European digital system (GSM),

which is being implemented throughout the European Community. Analog systems grew rapidly in Austria and Spain. Motorola was the only company to demonstrate a live GSM phone call at the Sircom Exhibition in France, and shipped the first fully functional, pre-operational base station for the United Kingdom's GSM system.

Motorola established key business relationships with Northern Telecom, Alcatel, and Siemens to market products based on open system interfaces.

In February 1992, we announced plans for a joint venture with Northern Telecom to sell and service cellular networks in the Americas and Caribbean.

Our Altair™ wireless local-area network product became commercially available in Germany. Several marketing and distribution arrangements were completed in the U.S. and Spain. Altair provides high-speed radio communications among personal computers and other equipment inside a building.

Our Computer Group expanded its lines of general purpose UNIX® platforms, real-time systems and VME modules. The new MultiPersonal™ Computing strategy combines industry-standard hardware and software products that enable business users to share and access information easily in office networks.

Products include the MultiPersonal Series 8000 family of UNIX/RISC-based systems and network servers, and MultiPersonal Networking—a comprehensive array of standards-based networking software. The strategy also includes MultiPersonal Applications, which are accessible through easy-to-use graphic interface.

Major contracts for distributed computing systems included Chrysler Corp., ADP, Honeywell, the State of Ohio, Holland America Line and Ontario Systems Corp.

The Delta Series™ 8000 multi-user RISC systems were expanded and offer a complete set of tools and enablers for technical programming as well as third-party applications packages. The new Delta Series 4000 systems, based on the M68040 microprocessor, provide embedded control solutions requiring specific attributes that are not part of a general-purpose computer system.

Government Electronics Group (GEG)

Sales decreased 8% to \$704 million and orders were down 5%. Operating profits declined to \$63 million from \$68 million.

The group is investing in new technology to better serve its traditional customers and create new businesses and markets as an offset to diminishing government procurement.

Our Satellite Communications Strategic Business Unit selected Lockheed Missiles & Space Co. as a partner to build satellites for the proposed Iridium™ personal communications system. Iridium is based on a constellation of 77 small satellites in low-Earth orbit, working together as a digital switched voice and data communications network in space. We envision a consortium to own and operate the system. Costs of Iridium are not included in GEG results.

British Aerospace, Deutsche Aerospace and Matra Marconi, N.V. also signed an agreement to participate in the planning phase of the Iridium system. Hutchison Telecommunications Ltd. signed a memorandum indicat-

ing its intention to become a member of the consortium that will fund and operate the system.

The new Secure Telecommunications Business Unit added a series of products to its SECTEL™ line of encrypted telephones for government, local law enforcement and industrial-professional markets throughout the world. The MFAX 5000 secure phone with fax and data capabilities also was introduced. A contract was received from Hughes Aircraft for a broad line of secure communications equipment, including wireline terminals and a management system for the Peace Shield program in Saudi Arabia.

Motorola technology played a prominent role in the success of Operation Desert Storm. Our military customers praised the quality and reliability of the group's products. GEG received a contract from Harris Corp. for development work on the Joint Advanced Special Operations Radio System (JASORS) for the U.S. Army. The equipment will incorporate satellite and high-frequency communications as well as encryption technologies.

Information Systems Group

Sales declined 2% to \$587 million and orders were 11% lower. The operating loss was \$13 million, compared with a loss of \$1 million in 1990.

Motorola's Codex subsidiary introduced new products aimed at building its ability to offer networking systems worldwide. As the domestic leased-line modem market and the worldwide statistical multiplexer markets declined, Codex improved its position in each market while continuing its transition to the networking systems business.

The 9800 Network Management System was opened to management of third-party products, allowing customers to control non-Codex digital networking, internetworking and transmission products from a central workstation. A new release of the 9110 Dial Management System provides open systems management of both Codex and third-party high-speed dial modems.

Codex expanded its dial modem line with the 326X family of V.32 bis standalone and nested models.

In a strategic realignment, Codex reduced its workforce by 11%, and put new information systems in place to support a worldwide networking systems business. The U.S. direct sales organization was reduced and focused on targeted accounts, while alternate distribution channels were expanded. The company also focused on growth markets such as backbone networking, internetworking, access and feeder products, and professional services.

At Universal Data Systems, price erosion in the highspeed V.32 modem market resulted in lower than expected sales, even though unit shipments increased sharply. Sales of digital products increased as more users migrated to higher speed switched and leased-line digital data services.

Universal Data Systems purchased a minority interest in XcelleNet Inc., of Atlanta, Ga., a packaged software company specializing in information delivery systems for business management applications. UDS also expanded operations in Europe with the opening of offices in Paris and London.

Automotive and Industrial Electronics Group (AIEG)

Sales rose 8% and orders increased 7%, despite a downturn in the North American automotive market and softness in other regions. Operating profits were lower compared with 1990, which included non-recurring gains.

The group expanded its business into new market segments. We began shipping a radiator fan timer control module to Honda of America, marking our first business with a U.S.-based Japanese automotive manufacturer. We also shipped our first thick film ignition product to the Latin American market.

We signed an agreement with Valeo, a French automotive supplier, for common development and production of electronic modules to be used in Valeo systems.

AIEG received production program awards for electronic engine control modules for both automotive and heavy-duty applications, as well as solid state relays for powertrain and chassis applications. We also received orders for vehicle anti-theft systems, body electronic systems, tachometers and electronic controllers. We began production on several programs, including U.S. and European engine control modules, heavy vehicle transmission controllers and several anti-lock braking system control modules.

Motorola will participate in a field test of Intelligent Vehicle Highway Systems (IVHS) technology in the northwest suburbs of Chicago. The project will test the potential of IVHS to improve traveler mobility and achieve better use of the existing transportation system. We will install and maintain our in-vehicle navigation and route guidance system in the fleet of test vehicles. We also will provide an RF data communications system.

Motorola Management's Discussion and Analysis of Financial Condition and Results of Operations includes the Financial Results section of the Letter to Stockholders on pages 2-5 and the Review of Operations on pages 17-20, in addition to the following commentary. This

commentary should be read in conjunction with the consolidated financial statements and notes, presented on pages 24-33, for a full understanding of Motorola's financial position and results of operations.

Results of Operations

Sales increased 4% to \$11.34 billion from \$10.88 billion in 1990. 1989 sales were \$9.62 billion. Semiconductor Products segment is now the largest business segment, reporting 31.1% of total sales in 1991, up from 30% in 1990. General Systems Products segment continued its growth and represented 24% of total sales in 1991, compared with 23% a year ago. International market sales, as measured by the locale of the end customer, represented 48% of total sales in 1991, compared with 44% a year ago. The growth was primarily due to stronger markets in the Japanese, Asia-Pacific and Latin American regions.

Sales in the fourth quarter were \$3.04 billion, up 4% from \$2.93 billion in the fourth quarter of 1990. Earnings were \$126 million, or 96 cents per share, compared with \$109 million, or 82 cents per share, a year ago.

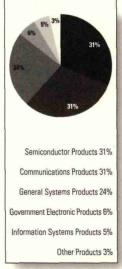
Operating profits were \$890 million. The Semiconductor Products segment showed the most profit improvement in 1991, reflecting a very strong second half in the Japanese, Asia-Pacific and North American regions. The General Systems Products segment maintained its position as one of Motorola's most profitable segments in 1991. The Company escalated its strategic investments in its proposed Iridium™ global communications system causing a significant decline in the profitability of the Other Products segment. The Company's profitability was affected in 1991 by the sluggish economy in the U.S. and Europe and by its continued investments in new technologies across the business segments.

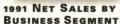
Net earnings in 1991 were \$454 million, or \$3.44 per share, compared with \$499 million, or \$3.80 per share, a year earlier. In 1989, earnings were \$498 million or \$3.83 per share. Net margin on sales was 4.0%, compared with 4.6% a year ago.

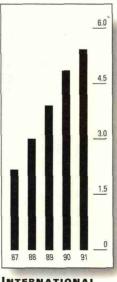
Research and Development Expenditures increased to \$1.08 billion in 1991, up from \$1.03 billion in 1990 and \$839 million in 1989. As a percent of sales, Motorola continues to invest slightly less than 10% of every sales dollar in product development and technological advances.

Income Taxes: The effective tax rate for 1991 of 26% is up from the 1990 rate of 25% and 1989 rate of 23%, principally due to continued growth in countries with higher tax rates.

Environmental Matters: Regulating agencies are proposing regulations and interpreting legislation in a manner that allows retroactive imposition of remedial requirements. The Company is engaged in a number of remedial efforts, some of which have been identified as Superfund sites under the Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, or similar state laws. Management does not believe such efforts will have a material adverse effect on the Company's consolidated financial position.





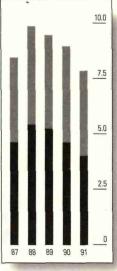


INTERNATIONAL MARKET SALES

(In billions)



1991 MARKET SALES BY REGION



PROFIT MARGINS

NET

OPERATING
(In percentages)

Liquidity and Capital Resources

Net cash provided by operations reached a record \$1.36 billion in 1991 compared with \$1.31 billion in 1990 and \$1.19 billion in 1989.

Accounts receivable levels grew at a slower pace than sales. Accounts receivable weeks outstanding remained constant at 8.0 weeks for 1991 and 1990. While the inventory levels were flat, the inventory turns, based upon a more stringent cost of goods sold definition used internally, improved to 4.3 in 1991 from 3.7 in 1990.

Motorola's net debt to net debt plus equity ratio of 22.5% for 1991 compares with 23.7% in 1990. This ratio reflects a strong balance sheet, well within the Company's financial guidelines.

During 1991, the Company's finance subsidiary entered into interest rate swap agreements under which it will pay a predetermined interest rate on commercial paper totaling \$100 million for periods ranging from 2 to 5 years.

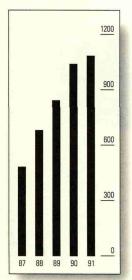
The Company issued \$200 million of 40-year debentures in August 1991. In addition, in January 1992, Motorola issued \$300 million of 15-year notes with a coupon interest

rate of 7.6%, under a \$500 million debt shelf statement made effective in December 1991. The proceeds of both of these issues were used to reduce short-term corporate indebtedness and for other general corporate purposes.

As of December 31, 1991, the Company had domestic and international credit facilities totaling \$1.88 billion, of which \$1.06 billion remained unused. Cash generated from operations and available credit facilities provide support for near-term funding requirements.

Fixed Asset Expenditures required to support current and long-term growth increased to \$1.32 billion from \$1.26 billion in 1990. The 1989 expenditures totaled \$1.12 billion. The Company's expenditure level in relation to sales continued at about 12% in 1991, generally consistent with 1990 and 1989.

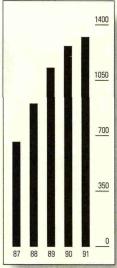
The Semiconductor Products segment continues to comprise the largest portion of fixed asset expenditures, with 49.5% of all such investments.



RESEARCH AND DEVELOPMENT EXPENDITURES

(In millions)





FIXED ASSET
EXPENDITURES
(In millions)

Motorola, Inc. and Consolidated Subsidiaries

Management is responsible for the preparation, integrity and objectivity of the consolidated financial statements and other financial information presented in this report. The accompanying consolidated financial statements were prepared in accordance with generally accepted accounting principles, applying certain estimates and judgments as required.

Motorola's internal controls are designed to provide reasonable assurance as to the integrity and reliability of the financial statements and to adequately safeguard, verify and maintain accountability of assets. Such controls are based on established written policies and procedures, are implemented by trained, skilled personnel with an appropriate segregation of duties, and are monitored through a comprehensive internal audit program. These policies and procedures prescribe that the Company and all employees are to maintain the highest ethical standards and that its business practices throughout the world are to be conducted in a manner which is above reproach.

KPMG Peat Marwick, independent auditors, are retained to audit Motorola's financial statements.

Their accompanying report is based on an audit conducted in accordance with generally accepted auditing standards, which includes the consideration of the Company's internal controls to establish a basis for reliance thereon in determining the nature, timing, and extent of audit tests to be applied.

The Board of Directors exercises its responsibility for these financial statements through its Audit Committee, which consists entirely of independent non-management Board members. The Audit Committee meets periodically with the independent auditors and with the Company's internal auditors, both privately and with management present, to review accounting, auditing, internal controls and financial reporting matters.

Leage Fisher

George Fisher
Chairman of the Board
and Chief Executive Officer

Carl F. Koenemann
Executive Vice President
and Chief Financial Officer

Carl 7 Koenemann

INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders of Motorola, Inc.:

We have audited the accompanying consolidated balance sheets of Motorola, Inc. and consolidated subsidiaries as of December 31, 1991 and 1990, and the related statements of consolidated earnings, stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 1991. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. 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 financial position of Motorola, Inc. and consolidated subsidiaries at December 31, 1991 and 1990, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 1991 in conformity with generally accepted accounting principles.

KPMG hat Marwick

KPMG Peat Marwick Chicago, Illinois

January 14, 1992

STATEMENTS OF CONSOLIDATED EARNINGS

Subsidiaries
1989
\$ 9,620
5,905
2,289
650
130
8,974
646
148
\$ 498
\$ 3.83
130.0
-

STATEMENTS OF CONSOLIDATED STOCKHOLDERS' EQUITY

(In millions, except per share amounts) Years ended December 31			mmon Stock onal Paid-in		Re	etained Earni	ngs
		1991	1990	1989	1991	1990	1989
	Balances at January 1	\$1,324	\$1,269	\$1,240	\$2,933	\$2,534	\$2,135
	Net earnings	_	_		454	499	498
	Stock option plans	19	55	29	-		-
	Dividends declared (\$.76 per share						
	in 1991,1990 and 1989)	_	_	-	(100)	(100)	(99)
	Balances at December 31	\$1,343	\$1,324	\$1,269	\$3,287	\$2,933	\$2,534

See accompanying notes to consolidated financial statements.

In millions, except pe	i stidle diffounts)	Motorola, Inc. and Consolid	
December 31		1991	1990
Assets	Current assets		
	Cash and cash equivalents	\$ 302	\$ 265
	Short-term investments, at cost (approximating market)	231	312
	Accounts receivable, less allowance for doubtful accounts		
	(1991, \$79; 1990, \$68)	1,953	1,857
	Inventories	1,242	1,245
	Future income tax benefits	417	419
	Other current assets	342	354
	Total current assets	4,487	4,452
	Property, plant and equipment, net	4,194	3,778
	Other assets	694	512
	Total assets	\$9,375	\$8,742
.iabilities	Current liabilities		
ind	Notes payable and current portion of long-term debt	\$ 852	\$ 995
Stockholders' Equity	Accounts payable	897	889
	Accrued liabilities	1,314	1,164
	Total current liabilities	3,063	3,048
	Long-term debt	954	792
	Deferred income taxes	196	203
	Other liabilities	532	442
	Stockholders' equity		
	Common stock, \$3 par value		
	Authorized shares: 300.0, 1991 and 1990		
	Outstanding shares: 132.2, 1991; 131.7, 1990	398	395
	Preferred stock, \$100 par value issuable in series		
	Authorized shares: 0.5 (none issued)	-	_
	Additional paid-in capital	945	929
	Retained earnings	3,287	2,933
	Total stockholders' equity	4,630	4,257
	Total liabilities and stockholders' equity	\$9,375	\$8,742

See accompanying notes to consolidated financial statements.

(In millions)			Motorola, Inc. and Con	The State of
Years ended De		1991	1990	1989
Operating	Net earnings	\$ 454	\$ 499	\$ 498
	Add (deduct) non-cash items			
	Depreciation	886	790	650
	Net change in deferred income taxes	(5)	(62)	(31)
	Amortization of debt discount	27	26	-
	Change in assets and liabilities, net of			
	effects of acquisitions and dispositions			
	Accounts receivable, net	(96)	(173)	(293)
	<mark>Inventories</mark>	3	(74)	(44)
	Other current assets	12	(65)	(72)
	Accounts payable and accrued liabilities	154	187	316
	Gain on dispositions of businesses	(22)	-	-
	Other assets	(145)	28	94
	Other liabilities	90	151	76
	Net cash provided by operations	1,3 <mark>5</mark> 8	1,307	1 ,194
Investing	Acquisitions and advances to affiliated companies	(52)	(117)	(53
	Dispositions of businesses	40	.2	25
	Payments for property, plant and equipment	(1 <mark>,</mark> 317)	(1,256)	(1,094
	Other changes to property, plant and equipment, net	16	38	(47
	(Increase) decrease in short-term investments	81	(110)	(57
	Net cash used for investing activities	(1,232)	(1,443)	(1,226
Financing	Increase (decrease) in notes payable and			
	current portion of long-term debt	(143)	208	(251
	Increase in long-term debt	135	7	389
	Issuance of common stock	19	55	29
	Payment of dividends to stockholders	(100)	(100)	(99
	Net cash provided by (used for) financing activities	(89)	170	68
Increase in	· 14	1		
Cash and Cash Equivalents		\$ 37	\$ 34	\$ 36

See accompanying notes to consolidated financial statements.

(In millions, except as noted)

Motorola, Inc. and Consolidated Subsidiaries

1 Summary of Significant Accounting Policies

Consolidation: The consolidated financial statements include the accounts of the Company and all majority-owned subsidiaries. All significant intercompany accounts and transactions are eliminated in consolidation.

Cash Equivalents: The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents.

Inventories: Inventories are valued at the lower of average cost (which approximates computation on a first-in, first-out basis) or market (i.e., net realizable value or replacement cost), less progress payments on long-term contracts.

Property, Plant and Equipment: Property, plant and equipment is stated at cost less accumulated depreciation. Depreciation is recorded principally using the declining-balance method, based on the estimated useful lives of the assets (buildings and building equipment, 5-50 years; machinery and equipment, 2-12 years).

Foreign Currency Translation: The Company uses the U.S. dollar as the functional currency for financial reporting. Gains and losses from translation to U.S. dollars are included in net earnings. The Company enters into foreign exchange contracts to hedge its investments in foreign subsidiaries. Gains and losses on these hedges are also included in net earnings.

The Company periodically enters into foreign exchange contracts to hedge identifiable transactions. Gains and losses from these contracts are classified in net earnings in the same category as the underlying transaction.

Reclassifications: Certain amounts in the 1990 and 1989 financial statements and related footnotes have been reclassified to conform to the 1991 presentation. These reclassifications are not significant.

2 Income Taxes

The Company provides for income taxes based on earnings reported for financial statement purposes. Income tax expense differs from income taxes currently payable because of timing differences in the recognition of certain income and expense items for tax and financial statement purposes.

Components of earnings before income taxes

	1991	1990	1989
United States	\$166	\$381	\$342
Other nations	447	285	304
Total	\$613	\$666	\$646

Components of income taxes provided on earnings

1991	1990	1989
\$ 54	\$147	\$117
104	51	29
6	31	33
164	229	179
(5)	(62)	(31)
\$159	\$167	\$148
	\$ 54 104 6 164 (5)	\$ 54 \$147 104 51 6 31 164 229 (5) (62)

Income tax payments were \$150 million in 1991, \$236 million in 1990 and \$159 million in 1989.

Income taxes are not provided on cumulative undistributed earnings of certain non-U.S. subsidiaries amounting to \$741 million and \$739 million at December 31, 1991 and 1990, respectively. It is intended that these earnings will be permanently invested in operations outside the U.S. Should these earnings be distributed, foreign tax credits would reduce the additional U.S. income tax which would be payable.

At December 31, 1991, certain non-U.S. subsidiaries had loss carryforwards for financial reporting and income tax reporting purposes of approximately \$100 million and \$80 million, respectively, with expiration dates starting in 1992. The Company also has alternative minimum tax credit carryovers of \$25 million with no expiration date.

Differences between income tax expense computed at the U.S. federal statutory tax rate of 34% and income taxes provided on earnings

	1991	1990	1989
Income tax expense at statutory rate	\$208	\$226	\$220
Taxes on non-U.S. earnings	(24)	(37)	(49)
State income taxes	5	20	21
Foreign Sales Corporation	(22)	(23)	(12)
Tax credits	(7)	(4)	(8)
Other	(1)	(15)	(24)
Income taxes	\$159	\$167	\$148

Deferred income tax expense (benefit)

	1991	1990	1989
Depreciation	\$ (7)	\$ 6	\$ 35
Deferred taxes on non-U.S. earnings	39	21	33
Employee benefits	1	(23)	(27)
Inventory valuations	(6)	(13)	(11)
Completed contract accounting	(5)	7	(10)
Alternative minimum tax credit	(25)	_	-
Other, net	(2)	(60)	(51)
Net change in deferred taxes	\$ (5)	\$(62)	\$(31)

The Internal Revenue Service has examined the federal income tax returns for Motorola, Inc. through 1985 and the returns have been settled through 1983. In connection with the audits for the years 1984 and 1985, the IRS has proposed adjustments to the Company's income and tax credits for those years which would result in substantial additional tax. The Company disagrees with most of the proposed adjustments and is contesting them. Note continued on page 28

(In millions, except as noted)

Motorola, Inc. and Consolidated Subsidiaries

In the opinion of the Company's management, the final disposition of these matters will not have a material adverse effect on the business or financial position of the Company. In June 1991, the Financial Accounting Standards Board (FASB) issued an exposure draft amending Statement of Financial Accounting Standards (SFAS) 96, "Accounting for Income Taxes." If finalized, the proposed Statement would be effective for fiscal years beginning after December 15, 1992. The Company has not yet adopted SFAS 96 and the cumulative impact of adoption is not yet determinable.

3 Debt and Credit Facilities

Long-term debt		
December 31	1991	1990
12% eurodollar notes due 1994	\$ 68	\$ 68
11½% eurodollar notes due 1997	93	93
(callable prior to stated maturity)		
85/8 ECU notes due 1992	66	69
8% sinking fund debentures due 2007		
(callable at 103.4% reducing to 100% of		
the principal amount)	62	62
5.75% industrial revenue bonds due 2014	20	20
Zero coupon notes due 2009	465	438
8.4% debentures due 2031	200	0
(redeemable at the holders' option in 2001)		
Capitalized lease obligations	17	38
Other long-term debt	42	23
	1,033	811
Less current maturities	79	19
Long-term debt	\$ 954	\$792
Short-term debt		
December 31	1991	1990
Commercial paper	\$ 703	\$733
Notes to banks	56	224
Other short-term debt	14	19
	773	976
Add current maturities	79	19
Notes payable and current		
portion of long-term debt	\$ 852	\$995

The zero coupon notes due 2009, referred to as Liquid Yield Option™ Notes (LYON™), have an aggregate face value of \$1.32 billion. The LYONs are subordinated notes, have no periodic interest payments, are convertible into 4.567 shares of Motorola common stock for each \$1,000 face value note, and were priced to yield 6% to maturity. The notes may be redeemed by the holders in specified circumstances prior to the stated maturity date.

Aggregate maturities and sinking fund requirements for long-term debt, in millions, during the next five years are as follows: 1992, \$79; 1993, \$9; 1994, \$72; 1995, \$12; 1996, \$3.

The industrial revenue bonds have an interest rate which was reset for the remaining life of the bonds on January 1, 1992, when the rate changed from 5.75% to 6.75%.

The Company has domestic and international credit facilities for short-term borrowings, generally with banks. It pays commitment fees of approximately 1/10% on its domestic credit facilities and generally no fees on its foreign credit facilities. Short-term credit facilities totaled \$1.88 billion at December 31, 1991, of which \$1.06 billion remain unused. Domestic credit facilities primarily back up the issuance of commercial paper, while foreign credit facilities generally support working capital requirements.

The Company's finance subsidiary has entered into interest rate swaps covering \$100 million of the commercial paper, fixing the interest rate for periods of 2 to 5 years.

Outstanding letters of credit aggregated approximately \$103 million at December 31, 1991.

4 Property, Plant and Equipment

December 31	1991	1990
Land	\$ 117	\$ 116
Buildings	1,993	1,771
Machinery	4,864	4,257
Equipment leased to others	415	415
	7,389	6,559
Less accumulated depreciation	3,195	2,781
Property, plant and equipment, net	\$4,194	\$3,778

5 Leases

The Company owns most of its major facilities, but does lease certain office, factory and warehouse space, land, data processing and other equipment under principally noncancellable operating leases. In addition, equipment is leased to others under noncancellable operating leases.

Rental expense, net of sublease income, was \$142 million in 1991, \$132 million in 1990 and \$125 million in 1989. Capital lease expenditures were \$30 million in 1989. Expenditures were not significant in 1991 and 1990.

At December 31, 1991, future minimum lease revenues under noncancellable leases and lease obligations, net of minimum sublease rentals, were as follows:

	Lease	Lease
	Revenues	Obligations
1992	\$49	\$114
1993	28	77
1994	13	45
1995	- 5	29
1996	2	19
Beyond	1	64

6 Employee Benefit and Incentive Plans Retirement Benefits: The Company and certain subsidiaries have profit sharing plans, principally contributory, in which all eligible employees participate. The Company makes contributions to profit sharing funds in the United States and other nations, which are generally based upon percentages of pretax earnings, as defined, from those operations.

Company contributions to all profit sharing plans totaled \$45 million, \$51 million and \$48 million in 1991, 1990 and 1989, respectively.

The Company's noncontributory pension plan covers most domestic employees after one year of service. The benefit formula is dependent upon employee earnings and years of service. The Company's policy is to fund the accrued pension cost or the amount allowable based on the full funding limitations of the Internal Revenue Service, if less.

The Company has a noncontributory supplemental retirement benefit plan for its elected officers. The plan contains provisions for funding the participants' expected retirement benefits when the participants meet the minimum age and years of service requirements.

Benefits under all pension plans are valued based upon the projected unit credit cost method. The assumptions used to develop the projected benefit obligations for the plans for 1991 and 1990 were as follows:

	1991	1990
Discount rate for obligations	8.5%	9%
Future compensation increase rate	5.5%	5.5%
Investment return assumption	9.25%	9.25%

Components of net U.S. pension expense for the regular pension plan

	1991	1990	1989
Service costs	\$ 69	\$ 63	\$ 57
Interest cost on projected obligation	43	34	26
Actual return on plan assets	(154)	(11)	(103)
Net amortization and deferral	89	(47)	51
Net pension expense	\$ 47	\$ 39	\$ 31

The net U.S. expense for the elected officers supplemental retirement benefit plan was \$17 million in 1991 and \$14 million in 1990 and 1989.

U.S. Funded Plans

December 31	19	91	1990		
	Regular	Elected Officers	Regular	Elected Officers	
Actuarial present value of:					
Vested benefit obligation	\$(426)	\$ (3 <mark>1</mark>)	\$(341)	\$ (26)	
Accumulated benefit obligation	(460)	(54)	(365)	(40)	
Projected benefit obligation for services rendered to date	(641)	(63)	(476)	(54)	
Plan assets at fair value; primarily listed stocks, bonds and cash equivalents	761	- <u>}</u> = 41	575	34	
Plan assets in excess of (less than) projected benefit obligation	120	(22)	99	(20)	
Unrecognized net (gain) loss from past experience different from assumptions	(117)	16	(88)	11	
Unrecognized prior service cost	1	30	1	32	
Unrecognized net transition (asset) liability	(80)	10	(91)	11	
Pension asset (liability) recognized in balance sheet	\$ (76)	\$ 34	\$ (79)	\$ 34	

The Company uses a three-year market-related asset value method of amortizing actuarial gains and losses.

Net transition amounts and prior service costs are being amortized over periods ranging from 10 to 15 years.

Certain non-U.S. subsidiaries have varying types of retirement plans providing benefits for substantially all of their employees. Amounts charged to earnings for all non-U.S. plans were \$33 million in 1991, \$25 million in 1990 and \$15 million in 1989.

In addition to providing pension benefits, the Company provides certain health care benefits to its retired employees. The majority of its domestic employees may become eligible for these benefits if they reach normal retirement age while working for the Company. The cost of retiree health care benefits is recognized as expense when claims are paid and totaled \$5 million in 1991 and 1990, and \$4 million in 1989. There are no significant postretirement health care benefit plans outside of the United States.

(In millions, except as noted)

In December 1990, the FASB issued SFAS 106, "Accounting for Postretirement Benefits Other than Pensions, "which requires employers to recognize expense on the accrual basis during the periods that employees render services. The FASB has deferred the required implementation until fiscal years beginning after December 15, 1992. The Company has not yet adopted SFAS 106. The Company is presently evaluating the impact of changes it may make to the postretirement benefit plan. Based upon the existing plan, management believes the net plan obligation would range from \$190 million to \$300 million. Net periodic cost of the plan would range from \$35 million to \$50 million per year. The immediate recognition of the plan liability would eliminate the "amortization of the unrecognized transition obligation" component of the cost and thus reduce the net periodic cost of the plan by \$10 million to \$15 million. Should the Company decide to fund some or all of the transition obligation, the amount of the net periodic cost of the plan could be significantly reduced.

Management Incentive: The Company may provide up to 7% of its annual consolidated pretax earnings, as defined in the Motorola Executive Incentive Plan, for the payment of cash incentive awards to key employees. During 1991, \$16 million was provided for incentive awards, as compared to \$23 million and \$24 million in 1990 and 1989, respectively.

Stock Options: Under the Company's employee stock option plans, shares of common stock have been made available for grant to key employees. The exercise price of each option granted is 100% of market value on the date of the grant.

Shares subject to option

(In thousands of shares)	1991	1990
Options outstanding at January 1	6,495	6,502
Additional options granted	1,563	1,595
Options exercised	(476)	(1,555)
Options terminated, cancelled or expired	(87)	(47)
Options outstanding at December 31	7,495	6,495
Shares reserved for future options grants	6,802	278
Total shares reserved	14,297	6,773
Total options exercisable	5,933	4,877

Options exercised during 1991 were at per share prices ranging from \$21.00 to \$59.82. Options outstanding at December 31, 1991 were at per share prices ranging from \$22.77 to \$87.25.

Other Financial Data

Income statement information

	1991	1990	1	1989
Research and development	\$1,079	\$1,030	\$	839
Maintenance and repairs	204	207		178
Foreign currency gains (losses)	16	(27)	riej.	(6)
Interest expense, net:				
Interest expense	176	180		168
Interest income	(43)	(40)		(35)
Amount capitalized	(4)	(7)		(3)
Interest expense, net	\$ 129	\$ 133	\$	130

Balance sheet information

	1991	1990
Inventories:		
Finished goods	\$ 443	\$ 405
Work in process and production materials	799	840
Inventories	1,242	1,245
Accrued liabilities:		
Compensation	233	255
Taxes other than income	116	96
Income taxes payable	56	48
Contribution to employees'		
profit sharing funds	45	51
Dividends payable	25	25
Other	839	689
Accrued liabilities	\$1,314	\$1,164

Financial data of consolidated financial subsidiary

	1991	1990	1989
Total revenue	\$ 20	\$ 15	\$ 31
Net earnings	8	5	7
Total assets	238	120	166
Total liabilities	(203)	(84)	(134)
Stockholders' investments			
and advances	\$ 35	\$ 36	\$ 32

The Company's finance subsidiary purchases customer obligations under long-term contracts from the Company at net carrying value. Its insurance subsidiary insures some of the Company's property risks.

Finance subsidiary interest income of \$20 million in 1991, \$15 million in 1990 and \$31 million in 1989 is included in net sales. Interest expense of \$8 million in 1991 and 1990, and \$20 million in 1989 is included in manufacturing and other costs of sales. In addition, long-term finance receivables of \$186 million in 1991 and \$93 million in 1990 are included in other assets.

The Company's cash payments for interest expense (net of amounts capitalized) were \$122 million in 1991, \$113 million in 1990 and \$175 million in 1989.

8 Commitments and Contingencies

The Company had \$695 million of forward foreign exchange contracts outstanding as of December 31, 1991. Management believes that these forward contracts should not subject the Company to undue risk due to foreign exchange movements because gains and losses on these contracts should offset losses and gains on the assets, liabilities and transactions being hedged.

Commitments to extend or guarantee financing and recourse obligations under receivable sale arrangements aggregated \$518 million as of December 31, 1991.

Commitments to extend or guarantee financing include commitments for customer financing and for the financing of non-consolidated affiliates. Customer financing commitments require the customer to meet certain conditions established in the financing arrangements. As of December 31, 1991, customers had not met the

conditions on half the commitments. Commitments represent the maximum amounts available under these arrangements and may not be completely utilized.

As of December 31, 1991, the Company had no significant concentrations of credit risk.

The Company records costs associated with any environmental matters when they become probable and reasonably estimable. The amount of such charges to earnings was \$18 million in 1991.

The company is a defendant in various suits and is subject to various claims which arise in the normal course of business. In the opinion of management, the ultimate disposition of these matters will not have a material adverse effect on the business or financial position of the Company.

9 Information by Industry Segment and Geographic Region

Industry segment information

		Net Sale	S			Operati	ng Profit		
Years ended December 31	1991	1990	1989	1:	991	19	990	19	189
Semiconductor Products	\$ 3,679	\$ 3,433	\$3,036	\$356	9.7%	\$320	9.3%	\$193	6.29
Communications Products	3,629	3,560	3,310	191	5.3%	230	6.5%	305	9.19
General Systems Products	2,847	2,648	1,902	330	11.6%	354	13.4%	342	17.99
Government Electronic Products	704	766	785	63	8.9%	68	8.9%	58	7.49
Information Systems Products	587	599	552	(13)	(2.2)%	(1)	(0.2)%	18	3.29
Other Products	3 <mark>9</mark> 2	355	403	(41)	(10.5)%	(6)	(1.7)%	(7)	(1.7) ^c
Adjustments and eliminations	(497)	(476)	(368)	4	_	1	-	(4)	-
Industry segment totals	\$11,341	\$10,885	\$9,620	890	7.8%	966	8.9%	905	9.4%
General corporate expenses				(148)		(167)		(129)	
Interest expense, net				(129)		(133)		(130)	
Earnings before income taxes				\$613	5.4%	\$666	6.1%	\$646	6.79

		Assets		Fixed Asset Expenditures			D	Depreciation		
Years ended December 31	1991	1990	1989	1991	1990	1989	1991	1990	1989	
Semiconductor Products	\$3,196	\$2,851	\$2,590	\$ 653	\$ 548	\$ 536	\$362	\$345	\$306	
Communication Products	2,728	2,616	2,348	245	234	216	169	159	124	
General Systems Products	1,759	1,503	1,139	236	223	182	139	101	55	
Government Electronic Products	373	381	418	26	36	36	36	35	31	
Information Systems Products	373	386	403	43	47	36	37	35	36	
Other Products	275	286	275	15	39	39	23	15	15	
Adjustments and eliminations	(52)	(20)	(44)	_		-	_	-	-	
Industry segment totals	8,652	8,003	7,129	1,218	1,127	1,045	766	690	567	
General corporate	723	739	557	99	133	79	56	50	36	
Consolidated totals	\$9,375	\$8,742	\$7,686	\$1,317	\$1,260	\$1,124	\$822	\$740	\$603	

Expenditures and depreciation do not include amounts for equipment leased to others.

(In millions, except as noted)

Motorola, Inc. and Consolidated Subsidiaries

C	L:-		·		×
Geograp	nic	area	INTO	rmation	

		Net Sales	3			Operation	ng Profit		
Years ended December 31	1991	1990	1989	19	91	19	90	1989	
United States	\$ 8,802	\$ 8,759	\$8,123	\$452	5.1%	\$697	7.8%	\$633	7.7%
Other nations	6,340	5,896	4,910	501	7.9%	308	5.2%	313	6.4%
Adjustments and eliminations	(3,801)	(3,770)	(3,413)	(63)		(39)	_	(41)	_
Geographic totals	\$11,341	\$10,885	\$9,620	890	7.8%	966	8.7%	905	9.3%
General corporate expenses				(148)		(167)		(129)	
Interest expense, net				(129)	-	(133)		(130)	
Earnings before income taxes				\$613	5.4%	\$666	6.1%	\$646	6.7%

men 1 min man man man man man man man man man ma		Assets				
December 31	1991	1990	1989			
United States	\$5,656	\$5,041	\$4,653			
Other nations	3,164	3,084	2,605			
Adjustments and eliminations	(168)	(122)	(129)			
Geographic totals	8,652	8,003	7,129			
General corporate assets	723	739	557			
Consolidated totals	\$9,375	\$8,742	\$7,686			

^{*}As measured by the locale of the revenue-producing operations

The Company operates predominantly in the electronic equipment, systems, and components industry. Operations involve the design, manufacture and sale of diversified lines of products, which include, but are not limited to: two-way radios, pagers, cellular telephones and systems; semiconductors, including integrated circuits and micro-processor units; data communication and distributive data processing equipment and systems; and electronic equipment and industrial electronics products. Manufacturing and distribution operations in any one country, other than the U.S., does not account for more than 10% of consolidated net sales or total assets.

Operating profit (revenues less operating expenses) excludes general corporate expenses, net interest and income taxes. Intersegment sales, principally semiconductor components, amounted to \$510 million for 1991, \$489 million for 1990 and \$382 million for 1989. Intersegment

and intergeographic transfers are accounted for on an arm's length pricing basis and comply with domestic and foreign tax regulations.

Identifiable assets (excluding intersegment receivables) are the Company's assets that are identified with classes of similar products or operations in each geographic area. Corporate assets are primarily administrative headquarters, cash, and marketable securities.

Sales to United States Federal Government agencies aggregated \$1.03 billion for 1991, \$1.08 billion for 1990 and \$1.07 billion for 1989. In 1991, no single customer or group under common control represented 10% or more of the Company's sales.

The equity in net assets of non-U.S. subsidiaries amounted to \$2.34 billion at December 31, 1991 and \$1.84 billion at December 31, 1990.

10 Stockholder Rights Plan

Each outstanding share of the Company's common stock carries with it one preferred share purchase right. Each right becomes exercisable for one-thousandth of a share of the Company's junior participating preferred stock, series A, at an exercise price of \$150 per one-thousandth of a share (subject to adjustment) if a person or group acquires 20% or more of the Company's common stock or announces a tender or exchange offer for 30% or more of the Company's common stock. If a person or group acquires 20% or more of the Company's common stock and in certain other circumstances, each right (except, in

some instances, those held by an acquiror) becomes exercisable for an amount of the Company's common stock (or that of an acquiror) having a market value of twice the exercise price. In some cases, the Board of Directors may exchange one exercisable right for one share (subject to adjustment) of the Company's common stock (or the equivalent) and may suspend the exercisability of the rights. The rights have no voting power, expire on November 20, 1998, and may be redeemed for \$.05 per right prior to a public announcement that 20% or more of the Company's shares have been accumulated by a person or group.

(In millions, except as	s noted)		Motor	rola, Inc. and Co	onsolidated Su	bsidiaries
Years ended Dec	ember 31	1991	1990	1989	1988	1987
Operating	Net sales	\$11,341	\$10,885	\$9,620	\$8,250	\$6,727
Results	Manufacturing and other costs of sales	7,245	6,882	5,905	5,040	4,071
	Selling, general and administrative expenses	2,468	2,414	2,289	1,957	1,665
	Depreciation expense	886	790	650	543	494
	Interest expense, net	129	133	130	98	79
	Total costs and expenses	10,728	10,219	8,974	7,638	6,309
	Earnings before income taxes	613	666	646	612	418
	Income taxes provided on earnings	159	167	148	167	110
	Net earnings	\$ 454	\$ 499	\$ 498	\$ 445	\$ 308
	Net earnings as a percent of sales	4.0%	4.6%	5.2%	5.4%	4.6%
Per Share	Net earnings	\$ 3.44	\$ 3.80	\$ 3.83	\$ 3.43	\$ 2.39
Data (In dollars)	Dividends declared	0.76	0.76	0.76	0.67	0.64
Balance	Total assets	\$ 9,375	\$ 8,742	\$7,686	\$ <mark>6</mark> ,710	\$5,517
Sheet	Working capital	1,424	1,404	1,261	758	932
	Long-term debt	954	792	755	343	344
	Total debt	1,806	1,787	1,542	1,381	917
	Total stockholders' equity	\$ 4,630	\$ 4,257	\$3,803	\$3,375	\$3,008
Other Data	Current ratio	1.46	1.46	1.48	1.29	1.52
	Return on average invested capital	7.8%	9.4%	10.3%	11.0%	8.8%
	Return on average stockholders' equity	10.2%	12.3%	13.9%	13.9%	10.7%
	Year-end employment (in thousands)	102	10 <mark>5</mark>	, 10 <mark>4</mark>	102	98
	Average shares outstanding	131.9	131.3	130.0	129.6	128.9

QUARTERLY AND OTHER FINANCIAL DATA

(In millions, except per share amounts; unaudited))	1991			*	1990		
Quarterly		1st	2nd	3rd	4th	1st	2nd	3rd	4th	
	Net sales	\$2,743	\$2,814	\$2,745	\$3,039	\$2,533	\$2,715	\$2,703	\$2,934	
	Gross profit	987	1,037	947	1,125	904	1,024	980	1,095	
	Net earnings	116	119	93	126	127	161	102	109	
	Net earnings per share	0.88	0.90	0.70	0.96	0.98	1.22	0.78	0.82	
	Dividends declared and paid	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	
	Stock prices:									
	High	64.81	70.31	68.88	65.06	69.88	88.13	88.13	66.50	
-	Low	46.81	56.69	60.88	55.00	54.50	64.13	59.13	49.88	

The number of holders of record of Motorola Common Stock on January 31, 1992 was 15,087.

As of January 1, 1992	Age	Years of Service						
Corporate			Corporate Ventures			Andre Borrel	55	24
George M.C. Fisher Chairman and Chief Executive Officer	- 51	15	Levy Katzir Senior Vice President, Motorola, and	59	35	Senior Vice President and General Manager, Communications, Power		
Gary L. Tooker President and Chief Operating Officer	52	29	President, Motorola Lighting, Inc. *Bernard R. Smedley	55	15	and Signal Technologies Group *Larry L. Gartin	48	24
Christopher B. Galvin	41	19	Senior Vice President and			Senior Vice President and		
Senior Executive Vice President and			General Manager of Wireless			Sector Director of Finance		
Assistant Chief Operating Officer			Enterprise Systems			Murray A. Goldman	54	22
Robert W. Galvin Chairman of the Executive Committee	69	51	Personnel			Senior Vice President and General Manager, Microprocessor and		
John F. Mitchell	63	38	James Donnelly	52	22	Memory Technologies Group		
Vice Chairman of the Board and			Executive Vice President and Motorola Director of Personnel			Gary M. Johnson	47	24
Officer of the Board			Joseph F. Miraglia	55	13	Senior Vice President and		
Finance			Senior Vice President and Assistant		-	General Manager, Logic and Analog Technologies Group		
*Carl F. Koenemann	53	21	Motorola Director of Personnel			Geno Ori	54	29
Executive Vice President and			Theodore Saltzberg	64	35	Senior Vice President and		
Chief Financial Officer Kenneth J. Johnson	56	20	Senior Vice President and Director of Software Programs,			Director of Customer Relations		
Corporate Vice President,	30	20	Motorola University			David L. Pulatie	49	26
Controller and Director of Audit			Carlton Braun	62	41	Senior Vice President and Sector Director of Personnel		
Garth L. Milne	49	12	Corporate Vice President and Director,			*Paul J. Shimp	52	27
Corporate Vice President and Treasurer		45	Educational Institutes and Labs		40	Senior Vice President and Director,	-	
Benny L. Smothermon Corporate Vice President and	52	15	Robert L. Hammer Corporate Vice President and Director	56	18	Sector Quality and Support Operations		
Director of International Finance			of Strategic Personnel Management			*C. D. Tam	47	23
			A. William Wiggenhorn	47	11	Senior Vice President and General Manager, Asia/Pacific		
Richard H. Weise	56	23	President, Motorola University,			Semiconductor Products Division		
Senior Vice President, General	30	25	and Corporate Vice President of			Charles E. Thompson	62	22
Counsel and Secretary			Training and Education			Senior Vice President and		
*Robert F. Falkner	51	12	Staff			Sector Director of World Marketing	40	
Corporate Vice President and			David W. Hickie	58	29	*Barry Waite Senior Vice President and	43	9
Assistant General Counsel *Joseph R. Haack	56	18	Executive Vice President and Chief Corporate Staff Officer			General Manager, European		
Corporate Vice President and	50	10	Keith J. Bane	52	18	Semiconductor Group		
Assistant General Counsel			Senior Vice President and			*Peter M. Bingham	48	13
Victor R. Kopidlansky	60	26	Motorola Director of Strategy			Corporate Vice President and		
Corporate Vice President and Assistant General Counsel			William V. Braun Senior Vice President and Motorola	56	33	General Manager, MOS Logic and Analog IC Division		
A. Peter Lawson	45	11	Director of Research and Development			R. Gary Daniels	54	25
Corporate Vice President and	10		Richard Buetow	60	33	Corporate Vice President and Assistant		
Assistant General Counsel			Senior Vice President and			General Manager, Microprocessor and		
Europe			Motorola Director of Quality	0.4	0.1	Memory Technologies Group *Weldon D. Douglas	54	31
David K. Bartram	55	31	Vincent J. Rauner Senior Vice President for Patents,	64	21	Corporate Vice President and	34	31
Senior Vice President and Executive			Trademarks and Licensing			General Manager, Federal Segment		
Director, Motorola Europe Parviz Mokhtari	50	9	James D. Burge	57	33	Jim George	49	15
Corporate Vice President and	50	3	Corporate Vice President			Corporate Vice President and General		
Director for Eastern Europe			and Motorola Director, Government Affairs/Personnel			Manager, Memory Products Division Thomas G. Gunter	44	19
International Operations			James W. Gillman	58	18	Corporate Vice President and		1,00
*Richard W. Younts	52	24	Corporate Vice President and			General Manager, High Performance		
Senior Vice President and			General Patent Counsel			Microprocessor Division *Steve P. Hanson	40	20
Corporate Executive Director,			*Veronica A. Haggart Corporate Vice President and	42	7	Corporate Vice President and General	43	20
International—Asia and Americas Richard W. Heimlich	50	9	Director of Government Relations			Manager, RF Products Division		
Corporate Vice President and	00		Les Shroyer	47	7	*Brian O. Hilton	49	24
Director, International Strategy			Corporate Vice President and			Corporate Vice President and		
Noe Kenig	68	19	Director of Management Information Systems and Telecommunications			Marketing Director, North America *Michael J. Pollak	46	23
Corporate Vice President and Director, Latin American Operations			Mauro J. Walker	56	20	Corporate Vice President and	40	20
Chi-Sun Lai	55	21	Corporate Vice President and			General Manager, RF Division		
Corporate Vice President and			Motorola Director of Manufacturing			*L.J. Reed	47	23
General Manager, Motorola China Ltd	•)		Semiconductor Products Sector			Corporate Vice President and General Manager, Gate Array		
Japan Group			James A. Norling	49	26	Operation, ASIC Division		
Arnold S. Brenner	54	32	President and General Manager,			*Fred Shlapak	48	21
Executive Vice President and			Semiconductor Products Sector, and Executive Vice President, Motorola, Inc.			Corporate Vice President and		
General Manager, Japan Group *Toshiaki Irie	58	7	Thomas D. George	51	12	Director of European Marketing		
Senior Vice President and	00	,	Senior Vice President and			Land Mobile Products Sector	-	2.0
Chairman, Nippon Motorola Limited	7425		Assistant General Manager,			Morton L. Topfer Provident and General Manager	55	20
*Isamu Kuru Corporate Vice President and	52	1	Semiconductor Products Sector			President and General Manager, Land Mobile Products Sector, and		
President, Nippon Motorola Limited						Executive Vice President, Motorola, Inc.		

Robert W. Bigony	50	25	*James P. Widick	44	25	H. Anthony Hennen	52	20
Senior Vice President and General			Corporate Vice President and Director			Corporate Vice President and General		
Manager, North America Group	40	20	of Finance, North America Group	CO	17	Manager, RF and Cellsite Development	AF	00
*Stanley A. DeCosmo Senior Vice President and General	46	23	*Dave Wooldridge Corporate Vice President and	60	17	Wolf Pavlok Corporate Vice President and	45	22
Manager, Communications and			Director of Marketing Support			General Manager, U.S. Markets		
Electronics Group			*Michael K. Worthington	46	20	Division, Cellular		
*Merle Gilmore	43	21	Corporate Vice President and	10	20	*Jack M. Scanlon	49	1
Senior Vice President and			General Manager, Asia Division			Corporate Vice President and General		
General Manager, Worldwide						Manager, Cellular Infrastructure Group		
Radio Products Group			Paging and Telepoint Systems Group			Wayne Sennett	48	7
Ronald E. Greenwell	53	29	Robert L. Growney	49	25	Corporate Vice President and		
Senior Vice President and General			Senior Vice President and	43	20	General Manager, Commercial		
Manager, International Group	00	00	General Manager, Paging and			Systems Division	45	45
Robert S. Hall Senior Vice President and General	62	30	Telepoint Systems Group			William E. Spencer	45	15
Manager, Sector Support Group			*Hector Ruiz	46	13	Corporate Vice President and General Manager, Joint		
*Kenneth R. Hessler	58	34	Senior Vice President and General			Venture Operations		
Senior Vice President and	00	•	Manager, Paging Products Group			Wes Thrash	62	6
Director, Sector Quality and			Gerald Brunning	51	27	Corporate Vice President and General		
Total Customer Satisfaction			Corporate Vice President and General			Manager, Field Service Division		
John E. Major	46	13	Manager, Components Division S. Michael Corrigan	48	13	Government Electronics Group		
Senior Vice President and General			Corporate Vice President and	40	13	David G. Wolfe	56	27
Manager, Worldwide Systems Group			Director of Personnel			Executive Vice President and	30	21
*Richard G. Day	47	25	*Walter L. Davis	51	26	General Manager, Government		
Corporate Vice President and General			Corporate Vice President and			Electronics Group		
Manager, Southeast Division *Paul Fowler	48	21	Director of Applied Research			*Gordon Comerford	55	17
Corporate Vice President and	40	21	*Jerome C. Leonard	54	30	Senior Vice President and		
General Manager, Private			Corporate Vice President and			Director of The Americas, Satellite		
Trunked Systems Division			General Manager, Americas			Communications Business Unit		
*Robert Janc	49	15	Paging Products Division *James G. Roseland	40	22	James R. Baum	61	34
Corporate Vice President and			Corporate Vice President and	48	23	Corporate Vice President and Assistant General Manager,		
Director of Research			Director of Group Finance			Government Electronics Group		
*Ferdinand C. Kuznik	50	1				Durrell W. Hillis	51	28
Corporate Vice President and General			General Systems Sector		4.0	Corporate Vice President and General		
Manager, European Group *Wayne H. Leland	48	26	Edward F. Staiano	55	18	Manager, Strategic Business Unit for		
Corporate Vice President and General	40	20	President and General Manager, General Systems Sector, and Executive			Satellite Communications		
Manager, Secure and Advanced			Vice President, Motorola, Inc.			Frank Langford	47	13
Conventional Systems Division			*John W. Battin	55	27	Corporate Vice President and		
*Harry M. Mankodi	51	23	Senior Vice President of Strategic			Director of Group Finance	F0	20
Corporate Vice President and General			Communication Planning			Ralph Love Corporate Vice President and General	59	28
Manager, Customer Service Group,			John P. Salcius	48	25	Manager, Tactical Electronics Division		
North America	10	0.5	Senior Vice President and			*David M. Neuer	50	29
Dale J. Misczynski	49	25	General Manager, International			Corporate Vice President and		
Corporate Vice President and General Manager, Worldwide			Cellular Subscriber Group	47	21	Director of International Operations		
Communications Services Group			Robert N. Weisshappel Senior Vice President and	47	21	Julie A. Sackett	48	17
Robert M. Placko	41	17	General Manager, Pan American			Corporate Vice President and		
Corporate Vice President and			Cellular Subscriber Group			Director of Personnel		
Sector Director of Personnel			Thomas A. Beaver	49	27	Information Systems Group		
*Dennis Sester	49	23	Corporate Vice President and General			John A. Lockitt	49	14
Corporate Vice President and			Manager, Motorola Computer Group			Senior Vice President, Information		
General Manager, U.S. Federal Government Division			James A. Bernhart	59	32	Systems Group, and President, Codex		40
*Richard D. Severns	46	20	Corporate Vice President and Assistant General Manager,			George R. Grumbles Corporate Vice President, Information	58	13
Corporate Vice President and	40	20	U.S. Markets Division, Cellular			Systems Group, and President, UDS		
Director of Sector Finance			Don Burns	49	19	Gerald Murray	56	13
Larry D. Shockley	53	27	Corporate Vice President and			Corporate Vice President and General	-	10
Corporate Vice President and General			General Manager, European			Manager, International Division, Codex		
Manager, International Markets Division		0.00000	Cellular Subscriber Division			Automotive and Industrial		
*Bruce M. Stone	44	21	Burnham Casterline	62	34	Electronics Group		
Corporate Vice President and General			Corporate Vice President and			Frederick T. Tucker	51	26
Manager, European Products Division James A. Wagner	46	25	Director of Quality and			Senior Vice President and General		
Corporate Vice President of	40	20	Manufacturing Technology *Larry F. Conlee	44	20	Manager, Automotive and		
Technical Operations, ARDIS			Corporate Vice President and Director,	777	20	Industrial Electronics Group		
*Francis T. Wapole	47	25	European Subscriber Operations, Cellular			John J. Pelland	48	18
Corporate Vice President,			*William D. Connor	61	22	Corporate Vice President and General		
Worldwide Business Development		32.00	Corporate Vice President and			Manager, Automotive Powertrain and Chassis Electronics Division		
*Robert L. Wasni	59	35	Director, Information Technology	22	-	Glidesia Fiedriollica Divisioni		
Corporate Vice President and			*Stephen P. Earhart	43	13	d.		
General Manager, Systems and Aftermarket Division			Corporate Vice President and Sector Director of Finance					
ALGINIAINGE DIVISION			Sector Director of Linguice					

^{*}Assumed new title or advanced in rank since previous Annual Report.

Directors of Motorola, Inc.

George Fisher Gary L. Tooker Christopher B. Galvin Robert W. Galvin John F. Mitchell

William J. Weisz

Vice Chairman of the Board; formerly Officer of the Board and CEO, Motorola, Inc.

Erich Bloch

Distinguished Fellow at the Council on Competitiveness; formerly Director of the National Science Foundation

David R. Clare

Retired; formerly President, Johnson & Johnson

Wallace C. Doud

Retired; formerly Vice President, International Business Machines Corporation

John T. Hickey

Retired; formerly Executive Vice President and Chief Financial Officer, Motorola, Inc.

Lawrence Howe

Executive Director, Civic Committee of the Commercial Club of Chicago

Anne P. Jones

Partner, Sutherland, Asbill & Brennan law firm

Donald R. Jones

Retired; formerly Executive Vice President and Chief Financial Officer, Motorola, Inc.

Stephen L. Levy

Retired; Senior Advisor and Deputy Representative for the Chief Executive Office, Motorola, Inc.

Thomas J. Murrin

Dean of Duquesne University's School of Business Administration

William G. Salatich

Retired; formerly President, Gillette North America, and Vice Chairman of the Board, Gillette Company

Gardiner L. Tucker

Retired; formerly Vice President for Science and Technology, International Paper Company

B. Kenneth West

Chairman of the Board and Chief Executive Officer, Harris Bankcorp, Inc.

Director Emeritus

Elmer H. Wavering

Formerly Vice Chairman and Chief Operating Officer, Motorola, Inc.

CEO Quality Awards

The Chief Executive Office Quality Award is Motorola's highest award for quality performance. Winners in 1991 were:

Land Mobile Products Sector

Motorola Portavoz
Puerto Rico
Energy Products Operations
Ft. Lauderdale, Fla.
Motorola Penang
Malaysia
Communications Systems Group
Schaumburg, III.

Paging and Telepoint Systems Group

Paging Division
Boynton Beach, Fla.
Ceramic Products
Albuquerque, N.M.
Primary Battery Operation,
Motorola de CentroAmerica
Guadalupe, Costa Rica

General Systems Sector

North American Subscriber Division Distribution Operations Arlington Heights, III.

Semiconductor Products Sector

Manufacturing Centers of Excellence Kuala Lumpur, Serenban, Malaysia; Seoul, Korea; Manila, Philippines; Tempe, Ariz. Manufacturing Centers of Excellence Kuala Lumpur, Malaysia; Hong Kong; Manila, Philippines; Taiwan; Korea; Tempe, Ariz. Integrated Circuit TO-220 3-Lead Assembly & Test Team Tempe, Ariz.; Aizu Wakamatsu, Japan; Toulouse, France; Kuala Lumpur, Malaysia Towa Mold Process Capability Improvement Team Seoul, Korea

1991 Dan Noble Fellows

The Dan Noble Fellow is the highest honorary award that can be made to a technologist within Motorola. It recognizes outstanding technical creativity, innovative ability and productive achievements. It is named for Dan Noble, a visionary technological pioneer, former Vice Chairman of Motorola and Chairman of its Science Advisory Board.

Fellows chosen in 1991 are:

Vedot Eyuboglu Information Systems Group, Codex, Canton, Mass.

James E. Landers, Jr.
Government Electronics Group,
Scottsdale, Ariz.

Mike Metroka General Systems Sector, Arlington Heights, III.

Stu Thro
Land Mobile Products Sector,
Schaumburg, III.

STOCKHOLDER REFERENCE INFORMATION

Transfer Agent, Registrar, Dividend Dis- bursing Agent and Dividend Reinvestment Agent	Harris Trust and Savings Bank Corporate Trust Operations Division P.O. Box 755 111 West Monroe 11th Floor Chicago, IL 60690 (312) 461-2339		
Investor Relations	Security analysts, investment professionals and shareholders should direct their business related inquiries to:	Investor Relations, Motorola, Inc. Corporate Offices 1303 E. Algonquin Road Schaumburg, IL 60196 Or call: (708) 576-4973	
Common Stock	Motorola common stock is listed on the New York, Midwest, London and Tokyo Stock Exchanges.		JASTA.
Annual Meeting of Stockholders	The annual meeting will be held on May 5, 1992. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to	stockholders on or about March 24, 1992, at which time proxies will be solicited by the Board of Directors.	
Form 10-K	After the close of each fiscal year, Motorola submits a report on Form 10-K to the Securities and Exchange Commission containing certain additional information concerning its business. A copy of this report may	be obtained without charge by addressing your request to: Secretary, Motorola, Inc. Corporate Offices 1303 E. Algonquin Road Schaumburg, IL 60196	
Auditors	KPMG Peat Marwick 303 E. Wacker Drive Chicago, IL 60601		

