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On the cover:

Saturn and moons Tethys, left, Enceladus, inner left, and Mimas, right. Photo taken October 30, 1980. Range 11 million miles.

From nearly a billion miles away, Voyager I sent back stunning photographs from Saturn, evoking memorable images for 1980. Motorola-built equipment provided the only two-way communications link between the spacecraft and Earth. The X-band/S-band transponder, designed and developed by the Government Electronics Division, is the major piece of equipment in the Radio Frequency Sub-System in both Voyagers I and II.

(Photo courtesy Jet Propulsion Laboratory)

The Company

Motorola, Inc., one of the world's leading manufacturers of electronic equipment and components, is engaged in the design, manufacture and sale, principally under the Motorola brand, of a diversified line of products. These products include two-way radios and other forms of electronic communications systems; semiconductors, including integrated circuits, discrete semiconductors and microprocessor units; electronic equipment for military and aerospace use; electronic engine controls; digital appliance controls; automobile radios; citizens band radios and other automotive and industrial electronic equipment and data communications products such as high-speed modems, multiplexers and network processors. Motorola's products are manufactured for both United States and international markets.

Financial Highlights

(Amounts in thousands, except per share data)	1980	1979	1978
Sales and Other Revenues	\$3,098,763	\$2,713,795	\$2,219,744
Earnings before Special Charge and Income Taxes	287,086	269,606	220,390
% to Sales	9.3%	9.9%	9.9%
Income Taxes on Earnings before Special Charge	103,351	107,428	95,208
Special Charge	13,031	10,286	—
Income Tax Credit on Special Charge	15,377	2,404	—
Net Earnings	186,081	154,296	125,182
% to Sales	6.0%	5.7%	5.6%
Net Earnings per Share before Special Charge	5.89	5.21	4.04
Net Earnings per Share	5.96	4.96	4.04
Research and Development	200,000	167,000	133,000
Fixed Asset Expenditures	301,091	265,072	146,377
Depreciation	144,790	110,827	83,340
Working Capital	742,916	708,551	619,930
Current Ratio	2.42:1	2.35:1	2.20:1
Return on Average Invested Capital (stockholders' equity plus long- and short-term debt net of short-term investments)	13.9%	13.5%	12.3%
% of Total Debt (long-term-short-term) to Total Debt plus Equity	22.8%	23.0%	24.1%
Book Value per Common Share	36.74	32.22	28.49
Year-end Employment (approximate)	71,500	75,000	68,000

Annual Meeting of Stockholders

The annual meeting will be held on Monday, May 4, 1981. A notice of the meeting, together with a form of proxy and a proxy statement, will be mailed to stockholders on or about March 26, 1981, at which time proxies will be solicited by the Board of Directors.

Transfer Agents and Registrars

Harris Trust and Savings Bank
111 W. Monroe Street
Chicago, Ill. 60690

Citibank, N.A.
111 Wall Street
New York, N.Y. 10015

Auditors

Peat, Marwick, Mitchell & Co.
303 E. Wacker Drive
Chicago, Ill. 60601

Form 10-K

At 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 by addressing your request to the Secretary, Motorola, Inc., Corporate Offices, Motorola Center, 1303 E. Algonquin Road, Schaumburg, Ill. 60196.



Left to right: John F. Mitchell, Robert W. Galvin, William J. Weisz

To Our Stockholders and Friends

For the fifth consecutive year, sales, earnings and dividends reached record highs. The company passed the \$3 billion level in sales. The Semiconductor Group became our second operating unit to surpass the \$1 billion sales milestone.

Sales and other revenue for 1980 were \$3.1 billion, a 14 percent increase over the \$2.7 billion in 1979. Earnings for the year just completed were \$186.1 million, or \$5.96 per share. These figures compare with 1979 income of \$154.3 million, or \$4.96 per share.

The company's return on average invested capital, which is expressed as a percentage of stockholders' equity plus long- and short-term debt, net of marketable securities, was 13.9 percent, up from 13.5 percent in 1979. Progress has been made in recent years in our return on invested capital. We are giving a high priority to its continued improvement. Additional comments on our improving asset management appear in the Financial Review section of this report.

Net margin on sales was 6 percent, compared with 5.7 percent a year earlier.

These results were achieved despite the combination of inflation in many of our costs and a slowing rate of sales growth in the third and fourth quarters. In the spring of 1980, confronted with uncertainties in both the domestic and world economies, we restructured our budgets for the remainder of the year with lower sales expectations than had been previously planned. These actions significantly contributed to a lower running rate of operating costs entering 1981 than would have otherwise been the case.

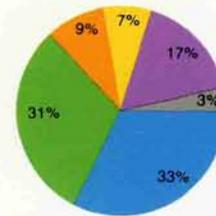
1980's results reflect a special charge against operations of \$13 million before an applicable tax credit of \$15.4 million, caused by the disposition of certain assets of the U.S. Motorola-branded aftermarket autosound business and the investment in Autovox S.p.A., an Italian corporation. The resulting after-tax credit to net earnings was \$2.3 million, or 7 cents per share. Net earnings for 1979 included a special charge of \$7.9 million, or 25 cents per share, for the disposition of the electronic timepiece component business, and certain other businesses.

For the 11th consecutive year, the company raised its quarterly dividend rate. The new per share rate, effective with the January 1981 payment, is 40 cents versus the 35 cents paid during each of the four quarters in 1980. Future dividend increases depend, of course, on operating results and capital requirements.

Divestitures and Business Mix. As mentioned above, we disposed of two operations in 1980—Autovox S.p.A., and the U.S. Motorola-branded aftermarket autosound business. This is in accordance with our stated strategy of concentrating in high technology opportunities and those businesses which fit that strategy. As a result of this strategy's application over an extended period of time, our

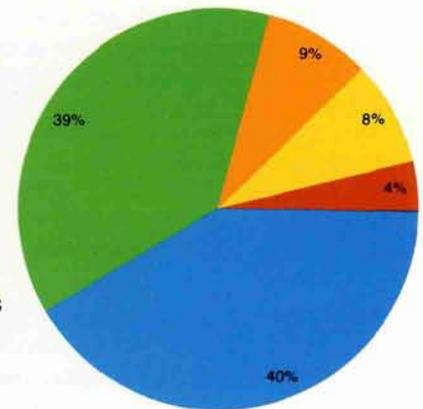
business mix has evolved dramatically, with today's emphasis on commercial and industrial products. (See illustration below.) Total sales revenue for all continuing operations has increased more than four-and-a-half times between 1970 and 1980, a compound growth rate of more than 16 percent.

1970 Total Sales \$796 million



- Communications
- Semiconductor
- Government Electronics
- Automotive & Industrial
- Data Communications
- Consumer
- Other

1980 Total Sales \$3,099 million



Operations Overview. The Communications Group's sales increased 11 percent. Operating profits also increased, but operating profit margin was down slightly from year-ago levels. New equipment orders rose 8 percent from year-end 1979. Backlog also increased from a year ago.

Indicative of the group's enterprise was its introduction of 16 new products and its penetration of new markets, both domestic and international. One significant development in 1980 was the delivery of 150 advanced design-superior quality pagers to Nippon Telegraph and Telephone (NTT) in Japan. These paging units are currently being evaluated by NTT.

The Semiconductor Group recorded a 23 percent increase in sales, which totaled \$1.2 billion, as compared with \$992 million in 1979. Operating profit margin was down from the excellent results in 1979, but operating profit was higher. The group's growth in new orders was 6 percent, with backlog increasing 10 percent, the strength emerging from both domestic and international markets. Late in the year, we reached an agreement with Toko, Inc., of Tokyo, Japan, to enter a joint venture for the production of MOS (metal-oxide semiconductor) integrated circuits for the Japanese market. Under the agreement's terms, Motorola purchased a 50 percent interest in Aizu-Toko, previously a wholly-owned subsidiary of Toko. We believe the joint venture will enable us to introduce a number of our MOS products to the joint venture's product line and will expand our participation in the Japanese marketplace.

Our Government Electronics Division reported mixed results in 1980. Sales were sharply higher, up more than 40 percent, but operating profits were down from 1979's results due primarily to problems with several contracts and the specialized production center. The division's year-end bookings and year-end backlog were down from year-ago levels.

The Automotive and Industrial Electronics Group, which is a new name that better reflects the character of the former Automotive and Display Systems Group, underwent some major changes in 1980. As previously mentioned, two of the group's operations were disposed of during the year. These disengagements resulted in the pre-tax special charge and after-tax credit. Sales for the group were down 24 percent from 1979's results, but the operating loss in 1980 was sharply reduced, due in part to the dispositions and the strength of some non-automotive business.

The Data Communications organization exhibited strong growth in 1980 as revenues rose 22 percent and new order entry climbed 27 percent above 1979's levels. Operating profit margin for data communications moderated from the previous year's level because of planned increases in strategic investments, including research and development, field-support capabilities, and plant and equipment.

Fixed Asset Expenditures. In 1980, we spent \$301 million for the acquisition of new fixed assets, up 14 percent over the previous year. As discussed elsewhere in this report, major expansions of facilities were started or completed. We also continued our emphasis on product quality and reliability, and spent heavily on facilities and equipment designed to improve our operating efficiency and productivity.

Research and Development. High technology leadership demands a continuing investment commitment in the vital area of research and development. In 1980, we spent \$200 million on R&D, exclusive of government-funded work, which compared to \$167 million in 1979. Some of the promising projects with R&D emphasis included high-capacity cellular radiotelephone systems, AM stereophonic broadcasting and receiving equipment, microprocessor-related devices, large-scale memories and gate arrays, automotive ignition and engine control devices, to mention a few.

New Director. During the year, Dr. Gardiner L. Tucker was elected to the Board of Directors. Dr. Tucker is vice president for science and technology for the International Paper Company, previously having served as assistant secretary of defense for systems analysis and as assistant secretary general of NATO for defense support.

Management. There were several senior management retirement announcements during 1980. On December 30, Walter B. Scott, vice president and corporate director of sourcing and supplier relations, retired after completing 35 years of service with the company. Homer L. Marris, senior vice president and assistant to the Chief Operating Office, will retire in April after 43 years of service. Messrs. Scott and Marris will continue to serve on the corporation's Board of Directors.

Edward J. Harty, who served the corporation for 29 years, retired during the year as vice president and controller. Named to succeed him was Kenneth J. Johnson, who

joined Motorola in 1971, was appointed vice president in 1977, and was elected to his new position in 1980.

The Board of Directors elected seven vice presidents from the Communications Group during the year. They are David K. Bartram, Arnold S. Brenner, Richard C. Buetow, R. LaVance Carson, Kenneth Hessler, Morton L. Topfer, and Theodore Saltzberg.

In the Semiconductor Group, Gary L. Tooker moved from vice president and general manager of the discrete electronic components division to the same position in the international division.

In January 1981, several key organizational changes were announced. Joseph F. (Ted) Miller, Jr., senior vice president and general manager of the Communications Group, was named to succeed Homer Marris. In line with Motorola's ongoing commitment to continue increasing its concentration on quality and product reliability throughout the corporation, Jack Germain, former vice president and assistant general manager of the Communications Group, was named to fill the new corporate post of vice president and director of quality.

Rhesa S. Farmer, a 23-year Motorolan and former vice president and general manager of the communications international division, will become vice president and general manager of the Communications Group on April 15.

Outlook. Looking ahead, we continue to be optimistic about Motorola's prospects for continued profitable growth. We have postured ourselves appropriately for the uncertain economic conditions which currently confront us. A major challenge for 1981 will be to balance profitability against increasing investment in key long-term strategic opportunities.

Yours very truly,



Robert W. Galvin,
Chairman



William J. Weisz,
Vice Chairman

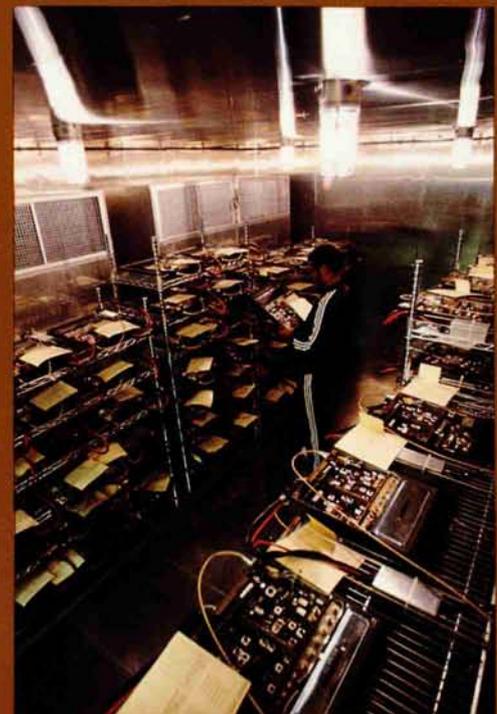


John F. Mitchell,
President

Communications Group



1 METROCOM II is a quality engineered state-of-the-art new product for transit systems. **2** With the new DIMENSION IV 800 MHz tone and voice pager, Motorola offers complete FM radio communications at 800 MHz. **3** An advanced automated system sorts random, computerized worldwide customer replacement parts orders. **4** The SYNTOR™ mobile two-way radio, Motorola's first synthesized mobile radio, undergoes a 16-hour environmental test.



The following report is presented by Joseph F. (Ted) Miller Jr., senior vice president and general manager, and Jack Germain, vice president and assistant general manager of the Communications Group.

Our group performed well in 1980 despite a difficult economic environment. Sales for the year were 11 percent higher than the previous year's total. While operating profits also increased, operating profit margin was down slightly. We are particularly pleased with the results of our increased emphasis on asset management; we showed major improvements in accounts receivable and inventory, which resulted in an improved return on net investment for the year.

Worldwide, our new equipment orders were up 8 percent for the year. Backlog at year-end was also up over the 1979 level. While there was noteworthy strength in certain domestic markets, such as energy, utility and the federal government, the group realized its strongest gains internationally, with major orders originating in Australia, Canada, Mexico, the United Kingdom, the Republic of Korea and the Republic of the Philippines.

Contributing to our success this past year was the introduction of a broad and exciting array of standard-setting products at major sales shows during the spring, when some 16 major products made their debut. Among the new products were the following: the fully synthesized Syntor™ and Syntor X™ line of mobiles in the 150 MHz, 450 MHz and 800 MHz bands with their microprocessor-based programmable control; a 20-channel trunked system using Syntor X; an 800 MHz portable—which is an industry first; and an 800 MHz Dimension IV® tone and voice pager, the only 800 MHz paging product on the market.



Ted Miller

“we are particularly pleased with the results of our increased emphasis on asset management...”

We installed a major system at the new Atlanta, Georgia, airport that uses 800 MHz portables to provide communication—even in the underground terminal areas.

Among our most significant orders in 1980 were those that opened new markets with some of the group's advanced products. For example, we received a multi-million-dollar contract from the Metropolitan Transit Authority of Houston for what is believed to be the U.S. transit market's first 800 MHz radio system, which will improve the authority's ability to contact and track buses throughout the city. Also received were a number of contracts for the newly introduced Syntor line of mobiles—from such sources as the Royal Canadian Mounted Police, the Metropolitan Toronto Fire Department, Commonwealth Edison Company, and Georgia Power Company, to name a few.



Jack Germain

“our Quality Council... institutes and monitors programs that raise employee awareness about the value of product quality...”

We also received million-dollar-plus contracts late in the year from federal, state and local government agencies for FM radio-controlled energy conservation systems, and for private telephone networks.

The group expanded its business for data communications through major orders in the trucking and mining industries, and in the utility market. Historically, the market has concentrated in governmental and public safety applications. Standard software packages have been tailored to handle communications with central dispatching units in all of these major markets.

Motorola's Dyna T'A'C® mobile and portable telephones are operating in the Baltimore/Washington area—in one of two developmental high-capacity cellular telephone tests authorized by the Federal Communications Commission. The Motorola-designed system, operated by American Radio Telephone Systems, Inc., is expected to be fully operational in 1981. The Illinois Bell Telephone Company is conducting a market trial in Chicago of a system designed by the American Telephone & Telegraph Company. Motorola is a major supplier of the mobile telephones being tested in that system.

Both systems rely on a cellular design concept in which geographic areas are divided into a honeycomb of cells, with frequencies between these cells usable by more than one party at a time. Commercial service is dependent on the regulatory decision-making process of the FCC.

“we expanded our business for data communications through major orders in the trucking and mining industries ...”



Our communications products are also a part of mobile telephone systems being implemented internationally. We continued shipping mobile telephones to the Dutch PTT (telephone company), and we have delivered an electronic switching exchange for the Austrian nationwide mobile telephone system. The Austrian system is operating now and is expected to be fully implemented in 1981.

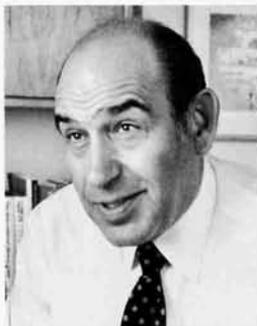
Another significant development in 1980 was the delivery from our Fort Lauderdale plant of 150 paging units to Nippon Telegraph and Telephone (NTT) in Japan. They are now being evaluated. These pagers are of advanced design—superior quality and have many unique internal features. Among these is the use of Motorola's CMOS 6805 series microprocessor, which replaces a large number of separate integrated circuits and greatly extends battery life. We believe our progress with NTT was an outstanding achievement.

During 1980 we continued to emphasize product reliability and performance. Our Quality Council, which works through—and across—all functions and divisions within the group, institutes and monitors programs that raise employee awareness about the value and importance of product quality. Typical of the programs is that which applies to quality in design. This involves the continual upgrading of reliability standards, such as Mean Time Between Failure, in the same way as more conventional radio specifications are upgraded. Our accelerated life testing, which through a series of severe laboratory stress tests simulates in a few weeks the total field life of a radio, is conducted on all new radio designs. This has improved long-term reliability by focusing on design problems before the radio ever reaches the manufacturing state.

The emphasis on reliability has not only been carried over into the manufacturing area, but into sales and service, and, in fact, into all disciplines.

The Mitrek mobile radio line, now broadened to include almost all available bands and powers, exemplified this theme as it posted an historic high for customer satisfaction in the year's final reporting period. However, the group's goal continues to be “zero defects” and 1980's Mitrek performance is merely a step toward that objective.

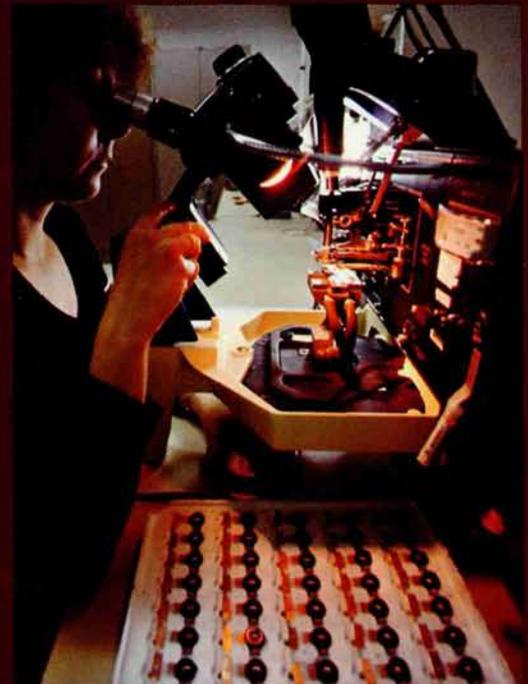
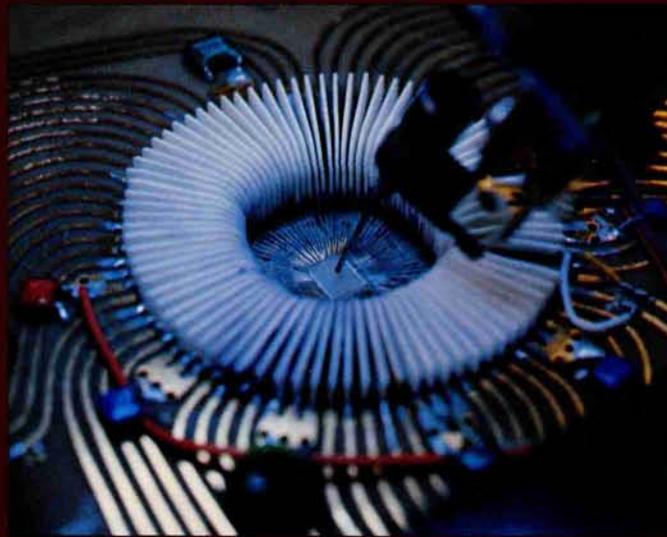
Expansion plans for the group went ahead in 1980, and we added more than 260,000 square feet of space to production facilities, engineering and sales offices in the U.S. and abroad. In addition, construction continued at the Schaumburg campus on a 350,000-square-foot facility. At year-end, the six-story structure was enclosed and is targeted for completion in 1981.



“our accelerated life testing ... simulates in a few weeks the total field life of a radio...”

Jack Germain

Semiconductor Group



1 64K RAMs undergo a post-assembly test for access time, burn-in quality, temperature and optimum quality. 2 Motorola's Macrocell Array Program offers customers a combination of standard, off-the-shelf integrated circuits, custom circuits and gate arrays. 3 Bubble memory, an economic form of mass memory, is currently in test. 4 Fiber optics technology advanced at Motorola in 1980, with the design of light sources and light-detecting devices. 5 Pressure sensors, for markets as diverse as automotive, biomedical and industrial, are currently in pilot production.

The following report is presented by John R. Welty, senior vice president and general manager, and Alfred J. Stein, vice president and assistant general manager of the Semiconductor Group.

The year turned out to be much better than we had earlier anticipated.

Our sales performance continued to be quite strong, rising 23 percent over 1979, and moving the group past the billion-dollar milestone for the first time. Operating profit margin was down from the excellent results in 1979, but operating profit was higher. New order bookings increased by 6 percent over 1979, while backlog was up 10 percent.

During the first half of the year, we achieved strong growth in most areas of our business. Second half performance moderated somewhat as the U.S. recession began to take hold and as business softened in Europe. We expect this to carry over into 1981.

There were several important factors that contributed to the group's overall performance in 1980. First, we concentrated—as we have for the past three years—on the development of state-of-the-art products, including such devices as microprocessors, large-scale memories and gate arrays, low-power Schottky devices, and fiber-optic components. Our sales in these newer areas have continued to grow throughout the year, despite the recession.

Second, we enjoyed a greater degree of stability than in previous recessionary periods because of our broadened product base, which enabled us to serve virtually every important segment of the market.

And third, we have been able to strengthen our competitive position in some markets served by more mature product lines in the discrete component field.



John Welty

“we should be able to maintain a growth rate no less than that projected for the industry...”



Al Stein

“we enjoyed a greater degree of stability than in previous recessionary periods because of our broadened product base...”

We have positioned the group so that it should be able to maintain a growth rate in sales at least as great as that projected for the industry for the next few years. We have greatly improved our manufacturing efficiency over the past several years... upgraded our silicon wafer processing capability and control... moved into larger wafer sizes... applied automation to several high-volume discrete product lines... instituted many important cost-reduction programs... which has led to improved yields, greater productivity and product quality. What all of these improvements boil down to is improved competitiveness.

Many questions have been asked about the competition in our markets and whether it has undergone change. In our view, the primary competition in the semiconductor industry continues to originate from U.S. companies. However, while the essence of the challenge we face has not changed, the dimension of it has—and today we have to strategize on a global basis. The establishment of our design center in Tokyo some time ago and our entry this past year into a joint venture with Toko, Inc.—to produce semiconductor devices for the Japanese market—are steps in that direction.

The joint venture permitted us a big timesaving in that we have gained instantaneously what might have taken three or four years to develop on our own. Specifically, we gained skilled employees, experienced management, a site, and a plant. It is our plan to supply the joint venture with whatever resources it needs to operate successfully... we'll do what is necessary to put the best products we know how to make into the Japanese marketplace.

During 1980, the Semiconductor Group introduced a steady stream of either new or improved products. In discrettes, we introduced several new product families... the industry's first thin-film hybrid-power amplifier modules for the 800 MHz communications market... a family of amplifiers for the cable TV market... a family of power transistors for the AC motor speed control market... and, new MOSFET (MOS field-effect transistor) devices for switching power applications.

We also introduced in 1980 our first pressure sensors for automotive and other microprocessor-related applications. The sensor line is one we expect to greatly expand in the future.

In bipolar integrated circuits, we placed much emphasis on the development of our new high-speed macrocell arrays, which have met with a relatively high degree of customer acceptance. These devices offer both custom circuit design and the cost advantages of large-scale production.

In the MOS field, there was continued emphasis on new product development. For example, in microprocessors, we introduced several new processors, based on our successful MC6800 8-bit machine, which provide a range of product sophistication and complexity. We introduced several new peripheral circuits for use with our 16-bit MC68000 microprocessor. In the memory area, our 16K and 64K RAM (random access memory) production was substantially increased.

Other key introductions were a 256-bit electrically erasable programmable read only memory (EEPROM) for television tuning applications, and several important new circuits for the telecommunications market.

Our microsystems unit added to the list with two significant products—a multi-user EXORmacs™, which is a hardware/software development system for design engineers, and a family of modular hardware/software “building blocks,” called VERSAmodules™, for tailoring the proven reliability of microcomputer systems into specific applications.

The year was important to us in terms of the development of innovative tools that will improve our own productivity and quality. For example, we created new computer-aided design tools that should become increasingly important to us in the years ahead. Many of our future products will require increasing customer interface and participation in the design process. It will be imperative that we provide the computer technology necessary to facilitate the input of the customer's data. We developed these computer tools in 1980, and we expect more to be forthcoming.

We redesigned many of our most popular packaging configurations to help reduce or eliminate precious metal content... an especially important step in several discrete areas where packaging materials represent a big part of the finished unit cost. And, one final item: we developed several new CMOS (complementary MOS) processing technologies that permit the building of more compact devices which reduce the power consumption level used in operation.



Al Stein

“one of the biggest challenges will be in attracting and holding the technical talent...”

There are evolutionary changes taking place in this maturing industry that make it more capital intensive than ever. Also, inflation is affecting all of our costs... from brick and mortar projects to special production equipment.

Though the semiconductor industry has become more capital intensive, an increasing demand for engineers and technicians remains with us. One of the biggest challenges facing this industry in the coming decade will be in attracting the technical talent needed to continue the development and exploitation of semiconductor technology.

Development of facilities is an ongoing matter, and in 1980, we completed an expansion that doubled the size of our MOS facility in Austin, Texas, to about a half-million square feet. Construction also was started on a large, new wafer processing facility in that city.



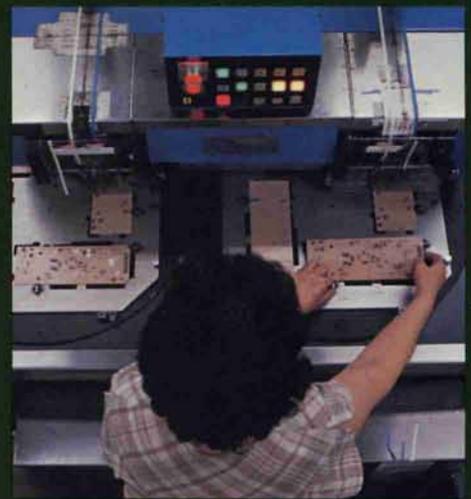
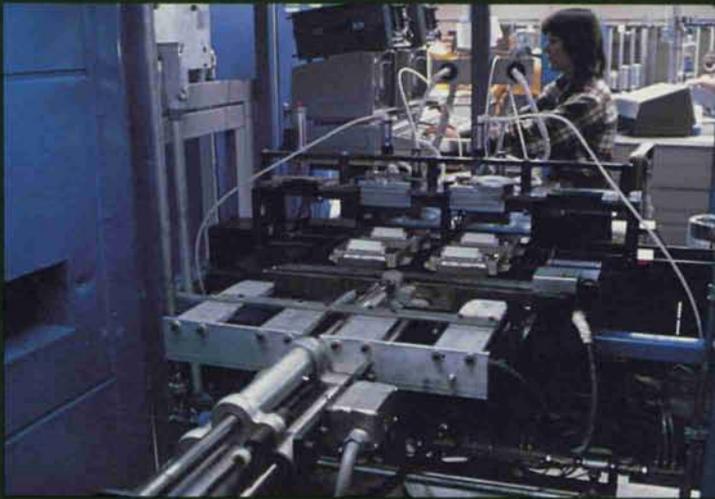
John Welty

“the year was important in terms of developing innovative tools that will improve our productivity and quality...”

In Mesa, Arizona, we completed two facilities for HMOS (high-threshold MOS) production and, in the bipolar field, completed and put into operation a large-scale integration wafer plant and established a new Bipolar Technology Center for developing advanced bipolar processes and products.

New international operations included the previously mentioned joint venture in Japan with Toko, Inc., and a second assembly plant in Malaysia. During 1980, we signed an investment agreement with the government of Sri Lanka (formerly Ceylon) for an assembly operation. We also improved our production capability from three- to four-inch MOS wafer processing at our plant in East Kilbride, Scotland.

Automotive and Industrial Electronics Group



1 Robots place electronic engine controls produced for Ford Motor Company in heating ovens, prior to a computer-controlled environmental test. 2 Computer tests are performed on the all-electronic radio built for BMW. 3 Computer-controlled automatic insertion processes place parts into panels for digital appliance controls. This is a portion of the operation that was awarded a 1980 recognition award for outstanding contributions as a key supplier by the Major Appliance Group and Air Conditioning Business Division of General Electric Company. 4 As part of hybrid technology development in the Hybrid Laboratory, resistors are laser-trimmed for the thick-film ignition module for Ford.

The following report is presented by Carl E. Lindholm, senior vice president and general manager of the Automotive and Industrial Electronics Group.



**“there were significant
upturns in product sales...that
bode well for the future...”**

Carl Lindholm

The character of our group was altered significantly in 1980—in both the products it manufactures and the markets it serves.

In the second quarter, we announced the sale of our U.S. aftermarket autosound business and the disposition of our interest in the Italian firm, Autovox S.p.A. Both moves were consistent with our stated strategy of reducing emphasis on brand-name consumer entertainment products. For example, in 1980, less than 14 percent of the group's ongoing business could be traced to the car radio market. In contrast, five years ago more than 56 percent of our business was in this market.

As a consequence of the changes, and our expanded emphasis on industrial electronic products, we renamed our organization—which previously was known as the Automotive and Display Systems Group.

Clearly, 1980 was a problem year for the automotive industry. Hardly a day passed that the media didn't have a bold headline or news bulletin that focused on the multi-million dollar losses of U.S. car manufacturers. As a result of their plight, our group was negatively impacted—sales down 24 percent against 1979 figures. However, due to the disposition of the previously noted operations, the strength of some non-automotive areas, and the implementation of a stringent cost control program, the operating loss for 1980 was sharply reduced from the previous year.

There were significant upturns in sales of certain products in 1980 that bode well for the future. Also positive was our investment in engineering, which as a percent of sales, was greater than ever before. The instruments, controls and sensors product group represented, for the most part, relatively new business that showed a healthy increase in 1980 sales. In particular, efforts to expand our capability in the digital appliance controls business proved to be effective, representing growth in a new industry for us that holds the promise of continued growth in the future.

Our domestic alternator business, mainly because of a series of steps taken during the year to expand our customer base, showed signs of a good rebound after a slow start. The alternator business in Europe, however, suffered from the economic downturn, particularly late in the year.

In new engine electronics areas, we started or continued work on a variety of new gasoline engine control products

and diesel controls. We won two important contracts—an engine control module (EEC-IV) for the Ford Motor Company that potentially represents multi-million-dollar sales annually in the 1984-1987 timeframe, and a thick-film ignition module, which is expected to generate future billings. We have new products in development for a variety of customers that represent key investments. These will be put in production over the next few years and will expand on our traditional product base.

Among the major new engine electronics products marketed in 1980 were engine control modules (EEC-III) for Ford. For the aftermarket, we introduced ignition modules that are interchangeable with modules used by General Motors and Chrysler Corp.

In the radio area, we designed and produced a new radio and amplifier for BMW of West Germany for the U.S. market and introduced a remote citizens band radio primarily for original equipment manufacture (OEM) applications.

One product concept Motorola has been identified with since the early 1970s—and on which work continued in 1980—is AM stereo. Our competitive effort to develop the best system in existence resulted in an apparent leadership position in 1980, which should enable us to market AM stereo no matter which system is finally selected by the FCC.

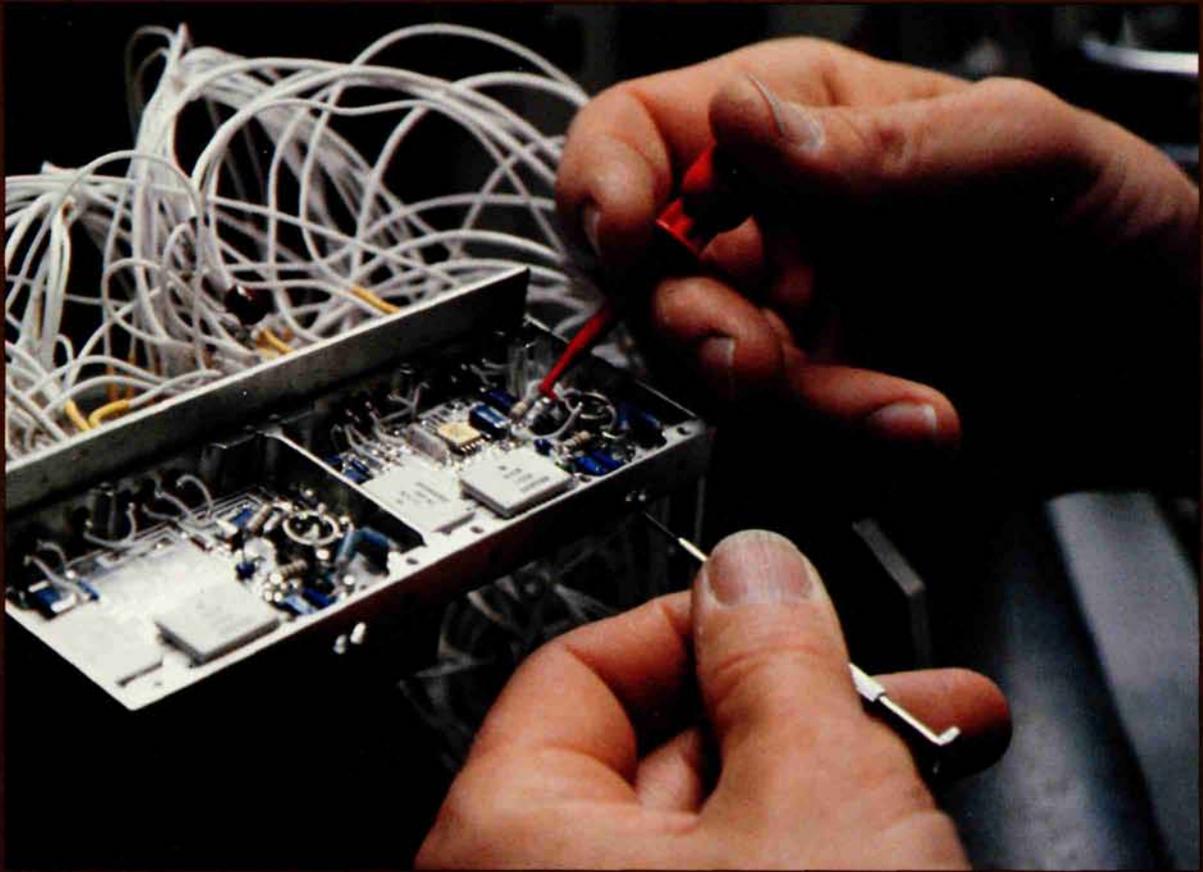
A number of display systems products were introduced in 1980 that received favorable market acceptability. These products included both low-cost and high-resolution displays for computer terminals, and a new 2/3-inch VCS closed-circuit camera.

As an OEM supplier, we must be particularly sensitive to our reputation as a designer and producer of quality products. Our objective continues... to design both a product and its manufacturing process to avoid the introduction of defects into the production system. Toward this end, we do a great deal of product stress testing to expose inherent weaknesses, then backtracking to do the necessary redesign for quality improvement. This technique has given us the kind of performance that meets or exceeds OEM quality standards, which typically are very high.

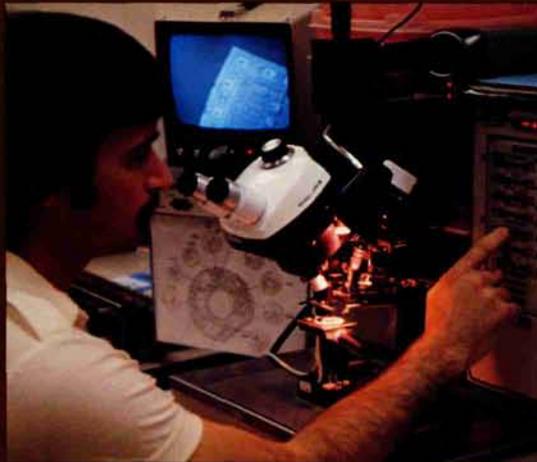
Beyond the design phase, quality improvement must be an ongoing program. To heighten our quality sensitivity, increase communication and reduce cost throughout the organization, we introduced the corporation's participative management program. We've had excellent results from this program where it has been implemented. It has helped reduce costs, improve quality and delivery capability, and, generally, has given everyone a more involved feeling in striving toward the group's goals. Bonuses, which are paid in the program, reward the good performances turned in by our employees. More important, however, are the improved communications and the pride in the group accomplishment, which is both a major goal and major result of the participative management process.

In recent years we have been diversifying—both our customer base and our product base—and feel that while the problem of changing the business mix has been difficult, much of the task is behind us and we're now in a position to make demonstrable progress.

Government Electronics Division



1 In GED's Hi-Reliability Aerospace Laboratory, NASA Standard User Transponders, developed from Voyager technology, are tested for module alignment, temperature and data. **2** A micro-processor-based machine wire bonds gold wires to hybrid circuits at the rate of two per second. **3** Antenna mounts for Side-looking Airborne Radar systems are given temperature and vibration tests and continuity measurements. **4** Actual arrays for the Phoenix Sky Harbor airport solar project are installed in modules at GED's Arizona facilities.



2



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The following report is presented by James R. Lincicome, vice president and general manager of the Government Electronics Division.

The division's results for 1980 were mixed. Sales for the year were up more than 40 percent, but operating profit was down from 1979's level because of problems on several new products in our traditional operations, and because start-up costs related to this first year of significant sales at our Specialized Production Center (SPC) resulted in this center operating at a net loss.

In addition to start-up problems, which affected all contracts at SPC, the government data package for one product scheduled for production at this center was found to be defective, and a claim was filed against the government. However, because this claim could not be settled before year-end, it was necessary to establish a reserve against the possibility of less than a total recovery under this claim.

The majority of the division's new and ongoing projects achieved their cost, schedule, and technical objectives throughout the year.



“overall, the division has achieved an excellent posture both in its traditional and in several new technological areas...”

Jim Lincicome

The division's new order bookings and backlog at year-end were down from the prior year. The large, multi-year SOTAS (Stand-Off Target Acquisition System) development program, booked in 1979, made 1980's bookings and backlog suffer by comparison.

Important strides were made in developing advanced electronic equipment, particularly for the U.S. space program. A high point in achievement was the outstanding performance of the division's equipment, the sole communications link with Earth, for the Voyager I Saturn-bound spacecraft. Photographs of Saturn were transmitted almost a billion miles and were as sharp and revealing as those of Jupiter, which were sent back a year earlier by the same spacecraft. The Motorola equipment on Voyager also served as the communications link with the spacecraft over which scientific data were transmitted from the spaceborne measuring equipment.

Another significant technical acknowledgement was the award of a contract to develop the base-band processor for the "Switchboard in the Sky," a telecommunications project of the National Aeronautics and Space Administration to be developed over the next decade. Motorola will develop the satellite-borne switches for a 30-20 GHz communications system for digital data transmission. The switching system

is vital to the satellite's objective of interconnecting signals to and from several thousand locations on Earth.

These and similar projects are typical of the division's constant endeavor to function at the leading edge of technological development. They satisfy our parallel demand for quality and reliability. In high technology programs, our division seldom produces extremely large quantities of electronic products except, perhaps, for military fuzes. On most projects for a branch of the Department of Defense or for NASA, only small quantities are usually required, and only a few products experience a second or third production run. Such products, however, are designed to apply the latest state-of-the-art in electronic componentry and techniques, and must meet the highest standards of quality and reliability. An indicator of the reliability achieved is the fact that the division's integrated circuits facility over the past ten years has produced more than a million circuits for use in spaceborne electronic assemblies, which have accumulated over one billion device hours with no known failures.

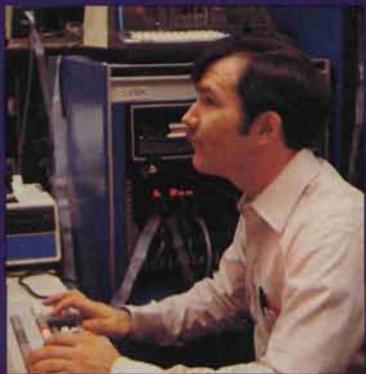
Many contract awards in 1980 were add-ons to work in progress or nearing completion. Among those listed in this category were a major contract from the U.S. Navy for additional quantities of an antenna for a target detection device for the Navy's Standard Missile; a continuation contract for the developmental phase of the Navy's Standard Missile-2 system; an award from the U.S. Air Force Avionics Laboratories for the second phase of an advanced self-protection jamming system; Navy contracts for additional AN/SSR-1 satellite receiving systems for its fleet broadcast system and for additional developmental work on satellite subscriber terminal equipment; an award from Boeing Co. for transponders used in range safety and missile tracking; an Army award for modification kits for their side-looking airborne radar system; a Navy award for an integrated target control system ground station complex to be installed at the Naval Weapons Center; and an award for two additional drone tracking stations for the Point Mugu, California, Missile Test Center.

New awards received included a major contract from Martin Marietta Corp. for range-tracking radar transponders to be used in tracking the MX missile during flight tests and training launches over the next ten years; an award from the Army for developing expendable jammer equipment; and an Army award for portable emergency transceivers to be specially modified for tactical satellite communications.

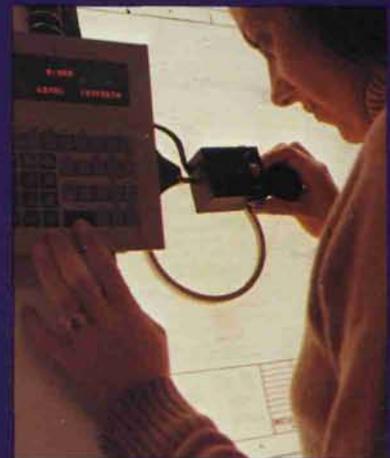
International sales continued to make an important contribution to the division's progress. Significant awards included a major contract from the Peoples Republic of China for a Mini-Ranger® electronic positioning system. An award also was received to develop a transponder for the Shuttle Pallet Satellite as part of the West German National Space Program's 1982 launch on the U.S. Shuttle vehicle.

Overall, the division has achieved an excellent posture both in its traditional and in several new technological areas. New order bookings in 1980, though down from 1979, were slightly above expectations and put us in a good position to achieve our desired growth plan for the coming year.

Data Communications



2
1 A bank of Codex MX2400 modems is inspected prior to shipment to Trustee Savings Bank Computer Services, Ltd., in the United Kingdom. 2 An R&D engineer works with the Codex Distributed Network Control System, running various tests with a data analyzer supplied by Universal Data Systems. 3 In the lab, Codex's new 6050 Distributed Communications Processor is debugged before testing in a real world environment. 4 A new computer-aided design and artwork-generating system installed at Codex streamlines the production of printed circuit boards.



4

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The following report is presented by Arthur Carr, vice president and president of Codex Corporation.

The Data Communications organization showed continued strong growth during 1980. Revenues rose 22 percent over 1979, and new order entry was 27 percent ahead of the prior year. Our operating profit margin moderated from the 1979 level because of planned increases in strategic investments, including research, development, field-support capabilities, and plant and equipment. Margins after those investments were at levels typical in our industry.

Our business mix closely paralleled that of the computer industry during 1980; that is, we experienced a shift to leasing, rather than the outright sale, of equipment. Leasing, of course, changes the timing of reported financial performance. Most notably, revenue recognition and profitability are spread over the term of a lease, thus trading off some measure of short-term results for improved long-term performance. Data Communications' lease business continued to grow through 1980. Our "equipment retention record" by our customers is excellent, and our ability to offer customers leases as well as outright sales continues as one of our key competitive strengths. Revenues from our international markets came almost solely from sales during 1980, but we expect this mix to change as we develop international leasing in the future.

Codex, which with Universal Data Systems, ESE Limited in Canada and two European subsidiaries, make up the Data Communications organization, added over 500 new accounts to its customer roster in 1980. The number of units shipped by Codex alone in all classes of products was up more than 50 percent from 1979. Our backlog at the end of 1980 was more than 60 percent over last year.



Art Carr

“ we are a full-line supplier of information transportation equipment and systems... ”

Data Communications closed several multi-million-dollar systems orders during the past year. Those orders and the expanded lease base are expected to contribute to the future development of our organization.

Data Communications introduced more than a dozen new products during the year, among the most significant being a sophisticated Distributed Network Processor, which cost-effectively provides a range of capabilities previously unavailable in the marketplace. These new products, ranging from single products to complex integrated communications systems that can span the globe, allow us to meet the needs of our customers. We are a full-line supplier of information transportation equipment and systems.

At the end of 1980, the Data Products Division of Cole Electronics in the United Kingdom was acquired and became a subsidiary operation, Codex (U.K.) Limited. This strengthened our ties to the developing U.K. datacomm market, as evidenced by a contract announced earlier in the year for a major communications network for Trustee Savings Bank Computer Services, Ltd. This network will link over a thousand terminals in bank branches across the U.K.

Our Universal Data Systems (UDS) operation introduced a new family of modems—the LP line-power series, which operates by drawing power directly from telephone lines. This compact product (it fits underneath a standard telephone) opened up new markets to us, including the home and personal computer markets. Codex also established UDS in the 9600 bps integral card modem business through a technology transfer, and UDS increased its penetration of markets for integral modems. Also in 1980, UDS dedicated a new 100,000-square-foot combined headquarters/manufacturing facility in Huntsville, Alabama.

Our Canadian operation, ESE Limited, continued its penetration of Canadian communications markets. During 1980, ESE introduced a new series of modem products which, through compatibility with American telephone equipment, has further broadened our potential customer base in the U.S.

In addition to our own research, we have access to other Motorola technology that allows us to develop and produce the most advanced products possible—an otherwise difficult challenge in an aggressive, dynamic industry such as ours. We have successfully developed our own custom large-scale-integration (LSI) chips and are currently undertaking custom designs of very-large-scale-integration (VLSI) devices in our VLSI Design Group in Phoenix, Arizona. Those new chips and the investments made in plant automation throughout Data Communications will enable us to further reduce our costs.

One of the foundations of success in our business is system reliability. Because communications networks often carry data that are critical to a company's business—financial transactions, inventory, payroll, etc.—it is essential that the network be “available”—that is, working—all of the time. Quality and reliability are both designed and built into our equipment from the start. A group level quality assurance program, for example, which is independent from our normal quality control programs, has been in operation for a number of years. The quality assurance function reports directly to the head of the Data Communications organization and has complete autonomy to ensure the quality and integrity of each product produced. The results of our quality program have been products known throughout our industry for their reliable performance—and most important, satisfied customers.

Generally, 1980 was a successful year for the Data Communications organization. Our organization grew, we added new products, our customer base increased, and our investments continued. We participate in a most significant industry, and we are well positioned for further development and growth.

Corporate Staff

The following report is presented by Stephen L. Levy, senior vice president and chief corporate staff officer.



Steve Levy

“ we further developed and refined our ‘Technology Roadmap’ for forecasting... our technological requirements...”

1980 was a busy year for our staff. As an extension of the Chief Executive Office, it is made up of a number of professionals in well-defined disciplines and areas of responsibility, each headed by a vice president. Our overall responsibility is to implement corporate policies and directives, coordinating them whenever necessary with any or all of our decentralized groups, divisions or units—and providing them with assistance and support as required.

Among the staff's activities are research and development, new facilities, new business, multinational activities, patents and licensing, government relations, public relations and advertising, and strategy and planning.

The accomplishments of each of these activities show vividly that 1980 was a very challenging year. For example, in the research and development field, we further developed and refined our “Technology Roadmap” for forecasting the short- and long-term technological requirements of most of our scientific product and/or business areas. These forecasts are based on scientific predictive tools and historical data. They are updated and reviewed at least twice a year by corporate and divisional managers, who use the information as a time and cost guide for controlling our developmental programs.

Other R&D efforts included 1) making our Dyna T*A*C radiotelephone totally compatible with the new cellular systems that are being tested in Baltimore/Washington and Chicago, and 2) the development—by the Motorola Integrated Circuits Applied Research Laboratories (MICARL)—of hundreds of integrated circuits (ICs) that advanced the state-of-the-art in VLSI (very-large-scale-integration) fabrication. Also at MICARL, we assembled a team of scientists who established our program in the magnetic bubble memory field.

In the acquisitions and multinational operations areas, there were several important achievements, including the successfully negotiated joint venture with Toko, Inc., to manufacture semiconductor products for the Japanese market (see the Semiconductor Group review), the negotiations with Sri Lanka, where we intend to establish a

semiconductor assembly facility, and in Brazil, where we continued to work to develop our presence. In an effort to improve our representation in the countries where we have operations, we have implemented the country manager concept, a relatively new program. At the end of 1980, we had appointed managers in 10 of 11 posts.

In the operational support activity, we formed seven interdivisional councils to help solve problems involving the many functions, such as purchasing, quality control and industrial engineering, that extend across divisional lines. These councils serve as a means through which the corporation can improve operational efficiencies and the exchange of information. One result of the councils' involvement, for example, was the vastly improved ratio of sales to inventory. The purchasing and materials control council assisted in reducing the inventory costs to the company. The corporation achieved the highest inventory turnover ratio in ten years.

The Corporate Quality Council, supplemented by other corporate-wide quality activities, helps the corporation to plan and implement capital and people programs to meet the highest standards of product quality. The council establishes, reviews and revises guidelines for quality in design and manufacturing.

The patent and licensing department was involved in the issuance of more than 160 U.S. patents. Significant ones related to microprocessor and memory IC devices, the dry processing of semiconductors (for lowering costs and reducing waste handling problems), high-capacity pagers, ICs for engine controls, a simple and low-cost tuning and dial display for auto radios, and Motorola's proposed system for AM stereo broadcasting.

Our Washington office worked to promote Motorola's AM stereo approach with the Federal Communications Commission. Our government relations activity also worked for the release of additional 800 MHz conventional spectrum for certain markets (the FCC did release additional 800 MHz spectrum in 1980), and helped formulate strategy for sales to the Japanese government's telecommunications market of Motorola's specially built paging units.

Steps were taken in 1980 to expand the international scope of our corporate public relations activity. Efforts were also introduced in Japan and the Far East to establish a communications program similar to that which we already have in several European countries. Domestically, we conducted a successful Technology Briefing for members of the media. It was designed to shed light on the latest communications-electronics technology, and where Motorola stands with respect to advanced research and development. Our domestic corporate advertising program continued its emphasis on Motorola as a leader in technological advance and as a manufacturer of quality high-technology electronic and communications products.

Personnel

The following report is presented by Robert N. Swift, vice president and corporate director of personnel.

Our goal in 1980 was to retain the company's large, highly skilled work force despite an economy that caused record national unemployment.

We were reasonably successful in achieving this objective. Instead of major cutbacks in our work force, we adjusted overtime, hiring, employee and work transfers, contract work, and, in a few cases, reduced work time.



“ we pushed ahead with our long-term compliance and affirmative action programs...”

Bob Swift

Motorola is a proponent of the shortened work week, supplemented by partial unemployment compensation, as an alternative to layoffs. This strategy will not be viable, however, unless unemployment compensation laws are changed to permit partial payments for reduced work time. Once this strategy becomes viable, we would be able to keep intact our highly trained work force while remaining, at the same time, responsive to the vagaries of the economy. Motorola promoted this concept in 1980 with agencies in many states and testified on the subject at a congressional hearing.

Inflation has been—and continues to be—the source of many problems. Though we are faced with spiraling wage and benefit costs, some inflationary costs cannot be passed on to customers in our highly competitive businesses.

During the year, productivity improvement was achieved through an extensive broadening of our participative approach to managing, motivating and rewarding employees. This approach, known as the Participative Management Program (PMP), involves the sharing of information and ideas on increasing output, reducing costs, and improving product quality and customer delivery among all of the people in a work unit. In return, PMP participants earn productivity sharing bonuses.

We pushed ahead with our long-term compliance and affirmative action programs in 1980. For example, the company is actively hiring handicapped people and, to ensure their career success, has implemented specialized training programs to develop their skills. To assure that Motorolans' knowledge and skills keep pace with technological advances, we stepped up the tempo of our major investments in continuing education and training. A comprehensive five-year program was developed. The founda-

tion for this program was laid in 1980 with the implementation of the first year's plan.

In 1980, we reached an accord with the U.S. Equal Employment Opportunity Commission and several private plaintiffs for the settlement of class action litigation that had been pending in the greater Chicago area. Under the settlement's terms, Motorola denied it discriminated against minorities but agreed to institute additional affirmative action programs to those already in operation, and to make monetary payments to certain blacks identified through the settlement process.

As a fast-growing company in a fast-growing and highly competitive industry, one of our major responsibilities is to recruit and train enough people to meet our needs. Each year we translate our five-year business plans into forecasts for the company's recruiting and training requirements, such as the kinds of skills and numbers of people needed under the prevailing economic and market conditions.

Our personnel activities are worldwide in scope. As a multinational corporation, we have 27 major international facilities and continually must deal with diverse government laws and regulations, languages, cultures, customs and economic conditions. We are a leader in promoting concern and respect for dignity of the individual, a policy that is reinforced in a basic corporate responsibility statement. Also in that statement we affirm that as a multinational company, we will invest anywhere in the world to properly serve our customers, so long as it is consistent with the interests of our company and the people of the countries in which we operate.

Financial Review

The following report is presented by John T. Hickey, senior vice president and chief financial officer, and Donald R. Jones, vice president and assistant chief financial officer.

Balance Sheet. 1980 saw Motorola continue to follow its strategic policy of maintaining a strong financial posture.

Total borrowings, long- and short-term, at December 31 were \$340.5 million compared with \$299.2 million as the year began. Borrowings at year-end 1980 represented 22.8 percent (23 percent for 1979) of total borrowings plus stockholders' equity. Borrowings were kept at relatively the same conservative level despite sales and other revenue increasing 14.2 percent, dividend payments increasing more than 16 percent, and 1980 fixed asset expenditures of \$301 million vs. depreciation of \$145 million. The current ratio at year-end 1980 was 2.42 vs. 2.35 and 2.20 in 1979 and 1978, respectively.

The principal reasons for debt not having risen, relative to equity, were improved turnover of receivables and inventories, and the higher (6 percent vs. 5.7 percent in 1979) after-tax margin on sales. For several years we have discussed with the stockholders our programs aimed at better receivable and inventory performance. In 1980, on a sales and other revenue increase of 14.2 percent, accounts receivable and inventories declined in the aggregate. The 1980 business dispositions contributed to this result because receivable and inventory turnover in those activities had been relatively poor. If receivables and inventory had increased in 1980 just proportionate to the increase in sales and other revenue, approximately \$150 million more would have been invested in these asset categories. At year-end, accounts receivable represented 8.1 weeks of sales vs. 8.4 and 9.2 weeks in 1979 and 1978, respectively. This is a particularly noteworthy achievement considering the extremely high interest rates which existed during much of 1980, especially at year-end, with the consequent pressure on many customers to delay payment.

In late 1980, we repatriated \$34 million of the accumulated earnings of our Puerto Rican subsidiaries. We continue to provide for repatriation of Puerto Rican earnings in our accrued tax accounts.

At year-end, \$337 million of U.S. and \$115 million of non-U.S. credit facilities (bank lines and/or revolving credit agreement) were not being used.



Jack Hickey

“In periods of significant and continuing inflation, many investors are interested in... ‘quality of earnings’...”

Funding Growth. It is Motorola's objective to “fund” its growth in sales revenues, that is, to earn and manage assets employed in the business so as to provide a reasonable dividend to the stockholders and limit additional borrowings to a modest portion of retained earnings growth. As stated above, 1980's improvement in receivable and inventory turnover, along with slightly improved after-tax margin on sales, enabled us to satisfy this objective. For the future, we seek further net margin improvement and additional gains in receivable and inventory turnover, somewhat offset by relatively greater additions to net fixed assets, in a pattern which would enable us to continue to “fund” growth, as defined above.

Quality of Earnings—Inflation. In periods of significant and continuing inflation, many investors are interested in what is called the “quality of earnings.” Concern is often voiced over the portion of earnings which is due to the holding gain from increased inventory values and/or inadequate depreciation charges related to the cost of replacing the fixed assets being depreciated. This portion of earnings would thus not be available to fund growth of the business or to pay dividends to stockholders.

As we have previously stated, we believe that Motorola's “quality of earnings” is high, and that the portion of our reported earnings caused by inventory holding gains and/or inadequate (replacement cost) depreciation is insignificant.

During 1980, we again reviewed our previous decisions to value our inventories on the FIFO (First-In, First-Out) method for determining cost of sales. Our 1980 study again indicated that, with a few insignificant areas of exception, Motorola's unit cost of inventory has not been rising. This indicates that the LIFO (Last-In, First-Out) method for Motorola would not produce significant tax savings.

Note 16 to the Financial Statements contains Motorola's compliance with Statement of Financial Accounting Standards No. 33 (SFAS-33) issued by the Financial Accounting Standards Board (FASB). SFAS-33 requires the disclosure of certain information adjusted for the effects of inflation thereby indicating the effect of changing prices on net asset values, as well as stated sales, earnings and dividends. In the “current cost” data included in this Note, the replacement cost of assets being depreciated is adjusted for the productivity improvements which should result from new machinery and equipment Motorola would acquire. This data shows that depreciation expense would either be somewhat higher or somewhat lower than that actually recorded, depending on whether an accelerated or straight-line method of depreciation were to be used. We further believe that, after adjustment for replacement cost and productivity changes, much of the reason for accelerated depreciation would no longer exist.



Don Jones

“ little or none of Motorola’s reported earnings are caused by inflationary inventory holding gains or inadequate... depreciation... ”

The inventory study and the fixed asset depreciation data cited above indicate that little or none of Motorola’s reported earnings are caused by inflationary inventory holding gains or inadequate (replacement cost) depreciation.

However, we do recognize that high and persistent inflation is a serious problem for Motorola as for other enterprises and the society in general. Because the market prices of our products do not rise apace with the inflation rate, while many of our costs—payroll, expenses and some materials—do rise at this rate or faster, we must, and we do continuously, strive for compensating productivity gains.

Another “quality of earnings” issue which is a matter of current interest to investors is the status of pension obligation funding. Note 10 to the Financial Statements indicates that Motorola provides the major share of its retirement benefits to employees via Profit Sharing Plans, the company cost of which is accrued and funded annually as percentages of pre-tax earnings. Motorola’s defined benefit pension plan for domestic employees at January 1, 1980, had net assets available to pay benefits of \$134 million, compared with the total actuarial present value of accumulated plan benefits, both vested and non-vested, of \$74 million.

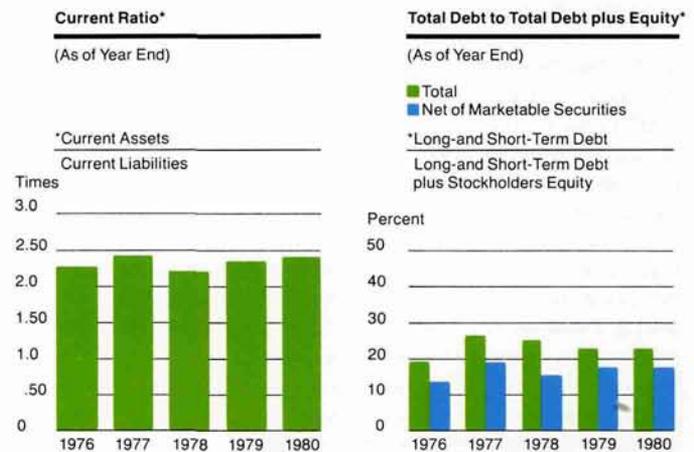
Foreign Exchange Exposure Management. Note 3 to the Financial Statements contains the foreign exchange translation data required by FASB’s Statement of Financial Standards No. 8 (SFAS-8) and data, which we believe to be more meaningful, addressing the “economic” effects of foreign currency rate changes. SFAS-8 currently requires that non-U.S. inventories be translated into U.S. dollars at the rate of exchange in effect when those inventories were acquired or produced, even though they are destined for sale at exchange rates in effect at the time of sale and/or in third country currencies. Our “economic” measurement includes an estimate of the gains/losses, from exchange rate changes occurring during the year, already realized or to be realized as those non-U.S. inventories flow through the cost of sales, and measures the entire foreign exchange gain/loss after related tax effects.

It is Motorola’s policy to neutralize foreign currency exposure on a total, or “economic,” basis insofar as practical and economically justifiable.

As Note 3 indicates, for the year 1980 Motorola realized an SFAS-8 gain of \$5 million and an (unaudited) “economic gain” estimated at \$1 million.

We continue to participate in the FASB’s current effort to revise SFAS-8 to make the indicated results more meaningful and useful.

Tax Rate Changes. The company’s apparent tax rate in 1980, as indicated in the Financial Statements, was 32.1 percent versus 40.5 percent in 1979. However, before the special charge and related tax credit for the disposition of the Autovox S.p.A. subsidiary and the aftermarket auto-sound business, the effective tax rate would be 36 percent. The difference between this rate and the 1979 effective rate of 40.5 percent is caused primarily by our having achieved relatively greater earnings or lower losses in non-U.S. countries in which we experienced lower tax rates in 1980 than in 1979 and/or in areas which we are operating under tax holiday programs. Also, in 1980, the investment tax credit related to total taxes was significantly larger than in 1979.



Consolidated Balance Sheets

Motorola, Inc., and Subsidiaries, as of December 31

Assets	(Dollars in thousands)	1980	1979
Current Assets:			
Cash		\$ 10,640	\$ 15,489
Short-term investments, at cost (approximating market)		94,155	84,141
Accounts receivable, less allowance for doubtful accounts (1980, \$32,380; 1979, \$30,148)		488,247	491,857
Inventories:			
Finished goods		156,946	156,893
Work in process and production materials		381,193	390,819
Future income tax benefits		62,712	40,169
Other current assets		73,864	54,340
Total Current Assets		1,267,757	1,233,708
Property, Plant and Equipment:			
Land		27,062	25,499
Buildings		427,754	349,714
Machinery and equipment		837,495	666,674
Accumulated depreciation		(478,691)	(388,146)
Property, Plant and Equipment, Net		813,620	653,741
Sundry assets		30,584	16,047
Total Assets		\$2,111,961	\$1,903,496
Liabilities and Stockholders' Equity			
Current Liabilities:			
Current maturities of long-term debt		\$ 4,767	\$ 3,549
Accounts payable		216,968	230,233
Accrued liabilities		254,147	240,828
Income taxes payable		48,959	50,547
Total Current Liabilities		524,841	525,157
Long-term debt		335,748	295,628
Noncurrent deferred taxes		63,331	43,049
Other noncurrent liabilities		36,082	35,786
Stockholders' Equity:			
Common stock, \$3.00 par value			
Authorized: 40,000,000 shares			
Outstanding: 1980—31,355,264 shares; 1979—31,157,719 shares		94,066	93,473
Preferred stock, \$100.00 par value issuable in series			
Authorized: 500,000 (none issued)		—	—
Additional paid-in capital		165,853	159,104
Retained earnings		892,040	751,299
Total Stockholders' Equity		1,151,959	1,003,876
Total Liabilities and Stockholders' Equity		\$2,111,961	\$1,903,496

See accompanying notes to consolidated financial statements

Statements of Consolidated Earnings and Retained Earnings

Motorola, Inc., and Subsidiaries, Years Ended December 31

(Dollars in thousands, except per share data)	1980	1979	1978
Sales and Other Revenues	\$3,098,763	\$2,713,795	\$2,219,744
Manufacturing and other costs of sales	1,845,111	1,624,966	1,339,806
Selling, general and administrative expense	772,788	672,282	548,667
Depreciation of plant and equipment	144,790	110,827	83,340
Interest expense and amortization of debenture discount and premium, net	48,988	36,114	27,541
Special charge (see Note 2)	13,031	10,286	—
Total Costs and Expenses	2,824,708	2,454,475	1,999,354
Earnings before income taxes	274,055	259,320	220,390
Income taxes	87,974	105,024	95,208
Net Earnings	186,081	154,296	125,182
Retained earnings at beginning of year	751,299	635,906	542,899
Cash dividends declared (per common share: 1980, \$1.45; 1979, \$1.25; 1978, \$1.05)	(45,340)	(38,903)	(32,175)
Retained earnings at end of year	\$ 892,040	\$ 751,299	\$ 635,906
Net Earnings Per Share			
based on average daily shares outstanding (see Note 2)	\$ 5.96	\$ 4.96	\$ 4.04
Average shares outstanding (in thousands)	31,244	31,112	31,019

Statements of Consolidated Additional Paid-in Capital

Motorola, Inc., and Subsidiaries, as of December 31

(Dollars in thousands)	1980	1979	1978
Balance at beginning of year	\$ 159,104	\$ 156,376	\$ 152,322
Share option plans	5,922	1,847	2,962
Conversion of 4½% convertible guaranteed debentures	827	881	1,092
Balance at end of year	\$ 165,853	\$ 159,104	\$ 156,376

See accompanying notes to consolidated financial statements

Statements of Consolidated Changes in Financial Position

Motorola, Inc., and Subsidiaries, Years Ended December 31

(Dollars in thousands)	1980	1979	1978
Sources of Funds			
Net earnings from operations	\$186,081	\$154,296	\$125,182
Add non-cash charges:			
Depreciation	144,790	110,827	83,340
Amortization of deferred debenture discount and premium	159	167	204
Change in deferred taxes	(2,261)	14,771	(1,577)
Funds provided from operations	328,769	280,061	207,149
Increase in accounts payable	—	46,894	48,079
Increase in accrued liabilities	18,717	43,528	56,405
Increase in notes payable and current maturities of long-term debt	1,218	—	5,245
Disposals and other changes of plant and equipment, net	20,111	19,330	12,113
Issuance of common stock	7,342	2,945	4,487
Increase in income taxes payable	—	—	20,340
Increase in long-term debt	40,120	97,537	—
Decrease in inventories	9,573	—	—
Decrease in sundry assets	—	1,554	7,599
Decrease in receivables	3,610	—	—
Other sources, net	—	5,112	—
Total Sources of Funds	429,460	496,961	361,417
Uses of Funds			
Increase in receivables	—	37,612	73,080
Increase in inventories	—	108,871	52,340
Fixed asset expenditures	301,091	265,072	146,377
Increase in equipment rented to others, at cost	23,689	15,029	10,418
Decrease in long-term debt	—	—	2,188
Investment in affiliate, 50% owned	2,914	—	—
Decrease in accounts payable	13,265	—	—
Increase in sundry assets	11,623	—	—
Decrease in notes payable and current maturities of long-term debt	—	79,414	—
Dividends	45,340	38,903	32,175
Decrease in income taxes payable	1,588	9,835	—
Other uses, net	24,785	—	3,247
Total Uses of Funds	424,295	554,736	319,825
Net Increase/(Decrease) of Funds	5,165	(57,775)	41,592
Cash and short-term investments beginning of period	99,630	157,405	115,813
End of Period	\$104,795	\$ 99,630	\$157,405

See accompanying notes to consolidated financial statements

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

We have examined the consolidated balance sheets of Motorola, Inc., and Subsidiaries as of December 31, 1980 and 1979, and the related statements of consolidated earnings and retained earnings, additional paid-in capital and changes in financial position for each of the years in the three-year period ended December 31, 1980. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the aforementioned consolidated financial statements present fairly the financial position of Motorola, Inc., and Subsidiaries at December 31, 1980 and 1979, and the results of their operations and changes in their financial position for each of the years in the three-year period ended December 31, 1980, in conformity with generally accepted accounting principles applied on a consistent basis.

Peat, Marwick, Mitchell & Co.
Chicago, Illinois
February 17, 1981

1. Accounting Policies: Following is a summary of significant accounting policies used in the preparation of these consolidated financial statements.

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

Inventories: Inventories are valued at the lower of average cost (which approximates computation on a first-in, first-out basis) or market. Market value of work in process and production materials is represented by replacement cost and for finished goods by net realizable value.

Investment Tax Credits: Investment tax credits are recorded as a reduction of income tax expense in the year in which the related assets are placed in service.

Property, Plant and Equipment: Property, plant and equipment is stated at cost. The cost and accumulated depreciation of items of property, plant and equipment sold, retired or fully depreciated are removed from the related accounts and any gain or loss on disposition is reflected in earnings. Maintenance and repairs are expensed as incurred, while major renewals or betterments are capitalized.

The cost of buildings, machinery and equipment is depreciated generally by the declining balance method, over the estimated useful lives of such assets, as follows: buildings and building equipment, 5-50 years, machinery and equipment, 2-12 years.

2. Special Charge: During the second quarter of 1980, the company disposed of certain assets of its U.S. aftermarket autosound business and of its investment in Autovox S.p.A., an Italian corporation. As a result of the foregoing and including anticipated future costs, a special charge against operations of \$13,031,000 was recorded before an applicable income tax credit of \$15,377,000. The income tax credit principally reflects certain tax benefits not previously recognized in the company's net earnings from accumulated losses of the Autovox operation. The resulting after-tax credit to net earnings amounted to \$.07 per share.

During 1979, the company decided to terminate operations in its electronic timepiece components business as well as certain other peripheral activities of the semiconductor products group. A special charge was recorded during the year of \$10,286,000 before an applicable income tax credit of \$2,404,000 for termination of these operations. The effect on earnings per share of this special charge was a reduction of \$.25.

3. Foreign Exchange: It is the company's policy to attempt to neutralize its exposure to exchange rate fluctuations, including the value of non-U.S. inventory destined for sale in foreign currencies, where it is both practical and economically justified to do so. Under Statement of Financial Accounting Standard No. 8 (SFAS-8), sales and other revenue are translated from other currencies into U.S. dollars at prevailing exchange rates while inventory must be translated at the rates in effect at the time of purchase. The inventory gains separately indicated below reflect management's best estimates of the impact of currency rate changes on manufacturing and other cost of sales. The effects of foreign currency exchange rate changes, after applicable income taxes, occurring in 1980, 1979 and 1978 were as follows:

(Dollars in thousands)	1980	1979	1978
Exchange gain (loss) included in earnings from operations before income taxes	\$3,839	\$(3,573)	\$(1,126)
Related income taxes	1,139	236	(964)
Gain (loss) included in net earnings as determined in accordance with SFAS-8	4,978	(3,337)	(2,090)
Management's estimate of the gain (loss) on non-U.S. inventories due to exchange rate changes arising only in the respective years (unaudited):			
Estimated amount realized during the year included in manufacturing and other costs of sales	(483)	2,091	5,003
Estimated amount to be realized in the subsequent year in manufacturing and other costs of sales	(3,585)	1,308	414
Total estimated gain (loss) (unaudited)	(4,068)	3,399	5,417
Result of the company's foreign currency exposure management (unaudited)	\$ 910	\$ 62	\$ 3,327

4. International Operations: The net earnings from non-U.S. subsidiaries included in earnings from operations are \$41,808,000, \$25,824,000 and \$22,232,000 for 1980, 1979 and 1978, respectively.

The company's equity in net assets of non-U.S. subsidiaries at December 31 consisted of the following:

(Dollars in thousands)	1980	1979
Current assets	\$325,408	\$ 345,046
Property, plant and equipment, net	174,207	150,964
Current liabilities	(78,843)	(117,990)
Other assets (liabilities), net	(126,434)	(109,663)
Equity in net assets of non-U.S. subsidiaries	\$294,338	\$ 268,357

The company's equity in undistributed earnings of profitable non-U.S. subsidiaries at December 31, 1980, amounted to \$181,243,000 (\$130,466,000 at December 31, 1979).

5. Long-Term Debt: Long-term debt at December 31 consisted of the following:

(Dollars in thousands)	1980	1979
Debt outside the United States:		
Commercial paper supported by revolving credit commitments from banks	\$ 9,231	\$ 7,607
Notes supported by revolving credit commitments from banks (generally at prevailing prime rates)	107,549	70,780
Notes payable (generally at prevailing prime rates) due in installments to 1991	25,581	29,957
4½% convertible guaranteed debentures due July 1, 1983	3,598	4,540
Debt in the United States:		
Commercial paper supported by revolving credit commitments from banks	46,475	66,423
Notes supported by revolving credit commitments from banks (generally at prevailing prime rates)	32,375	6,889
Other notes payable (at interest rates from 7% to 9.9%) due in installments to 2007.	5,884	—
4¾% debentures due April 1, 1986 (net of debentures held by the company for sinking fund payments, \$6,911 at December 31, 1980: \$5,242 at December 31, 1979)	10,089	13,258
8% sinking fund debentures due October 1, 2007	99,733	99,723
	340,515	299,177
Less current maturities, included in current liabilities	4,767	3,549
Long-term debt	\$335,748	\$295,628

The 4½% convertible guaranteed debentures (issued by Motorola International Development Corporation) are convertible into common stock of Motorola, Inc., at the rate of 25.2 shares for each one

thousand dollar principal amount, subject to adjustment in certain events, and are guaranteed as to the payment of principal and interest by Motorola, Inc. The debentures are redeemable at 100% of the principal amount with at least 30 days' notice. For the year ended December 31, 1980, \$942,000 in debentures (\$1,043,000 for the year ended December 31, 1979), were converted into 23,726 shares (26,279 in 1979). At December 31, 1980, there were 90,779 shares (114,505 at December 31, 1979) of Motorola, Inc., common stock reserved for issuance upon conversion of these debentures.

The 8% sinking fund debentures due October 1, 2007, are redeemable at various dates at redemption prices reducing from 106.8% to 100% of the principal amount thereof. Annual sinking fund payments are required beginning October 1, 1988, in installments of \$5 million, which are sufficient to retire 95% of the issue prior to maturity.

The foreign borrowings included above have principally been undertaken for foreign exchange exposure management considerations or as a result of favorable interest rates. Repayment of these loans is not subject to domestic or foreign exchange control limitations.

Under the terms of the revolving credit agreement, which were amended in 1979, the full amount of the agreement (\$220 million) extends through June 30, 1983, with \$31 million in equal semi-annual reductions thereafter. Any borrowings through June 30, 1982, will be at the prevailing prime commercial rate of interest, for the next two years at the prevailing prime commercial rate of interest plus ¼% and for the last two years at the prevailing prime commercial rate of interest plus ½%. Under the revolving credit agreement, Motorola has agreed to maintain a compensating balance of 3% of the credit available plus an additional 10% of outstanding borrowings. It is the intention of the company to maintain the availability of the revolving credit agreement during 1981, and therefore, certain notes and commercial paper, both domestic and foreign, which would be classified as short-term absent this agreement, are classified as long-term as follows at December 31:

(Dollars in thousands)	1980	1979
Banks and other	\$139,924	\$ 77,669
Commercial paper	55,706	74,030
Subtotal	195,630	151,699
Amount reclassified to long-term debt	(195,630)	(151,699)
Amount classified as short-term	—	—

The revolving credit agreement restricts retained earnings available for payment of cash dividends. At December 31, 1980, approximately \$587 million (\$445 million at December 31, 1979) of retained earnings were not restricted for dividend payments. The revolving credit agreement also requires the company to maintain a ratio of consolidated current assets to consolidated current liabilities of not less than 1.75:1.00 (actual was 2.42:1 at December 31, 1980) and consolidated net working capital (as defined) of not less than \$325 million (actual was \$743 million at December 31, 1980).

The aggregate maturities and sinking fund requirements for long-term debt during the next five years are as follows:

1981	1982	1983	1984	1985
\$4,767	\$5,870	\$18,566	\$65,621	\$67,768

In 1985 maturities and sinking fund requirements include \$62 million of commercial paper and foreign notes payable supported by revolving credit commitments.

6. Lines of Credit: In addition to the revolving credit agreement mentioned in Note 5, Motorola, Inc., had unused lines of credit with banks in the U.S. totaling \$117.5 million and \$73.5 million at December 31, 1980, and December 31, 1979, respectively. The banks are compensated by fees of from ¼% to ½% or by compensating balances of from 3%-10% of the commitment. Any borrowings under these commitments require additional compensating balances of from 5%-10% of the borrowings. The lines mature on varying dates in 1981 but can be withdrawn at any time at the option of the banks. The lines largely support U.S. commercial paper borrowings.

In addition to the domestic lines of credit, Motorola, Inc., has unused credit facilities available from banks outside the U.S. which total approximately \$115 million at December 31, 1980 (\$100 million at December 31, 1979). These credit facilities support short term borrowings and also can be withdrawn at the option of the banks.

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

The components of income before income tax expense are:

(Dollars in thousands)	1980	1979	1978
U.S. and U.S. Possessions	\$216,885	\$217,942	\$186,378
Other nations	57,170	41,378	34,012
Total	\$274,055	\$259,320	\$220,390

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

(Dollars in thousands)	1980	1979	1978
Taxes currently payable:			
United States	\$ 64,422	\$ 60,815	\$70,720
Other nations	16,498	19,798	18,526
State income taxes (U.S.)	9,315	9,640	7,539
Total currently payable	90,235	90,253	96,785
Total change in deferred taxes	(2,261)	14,771	(1,577)
Total income tax expense	\$ 87,974	\$105,024	\$95,208

A reconciliation of the statutory U.S. Federal corporate income tax rate with the financial statement effective income tax rate is as follows:

	1980	1979	1978
Statutory U.S. Federal corporate income tax rate	46.0%	46.0%	48.0%
Increase (decrease) in tax rate resulting from:			
Taxes on earnings in other nations and U.S. possessions	(5.9)	(4.8)	(3.2)
Investment tax credits	(6.3)	(5.5)	(4.1)
Special charges (see Note 2)	(3.4)	.9	—
State income taxes	1.9	2.0	1.8
Other	(.2)	1.9	.7
Effective tax rate	32.1%	40.5%	43.2%

Income taxes have been provided on aggregate earnings of the company's Domestic International Sales Corporations. Income taxes have been provided on that portion of the company's share of the undistributed earnings of subsidiaries that is anticipated to be repatriated in the future. Income taxes have not been provided on the company's share of other undistributed earnings of subsidiaries (\$129,354,000, \$105,078,000 and \$82,179,000 at December 31, 1980, 1979 and 1978, respectively), where it is intended these earnings will be permanently invested in operations outside the United States. Should these earnings be distributed, foreign tax credits would reduce the additional U.S. income tax which would be payable.

At December 31, 1980, certain non-U.S. subsidiaries of the company had loss carryforwards of approximately \$16.0 million.

The company's federal income tax returns have been examined and settled through 1975 with the Internal Revenue Service.

An analysis of the current year changes in deferred taxes is as follows:

(Dollars in thousands)	1980	1979	1978
Difference between depreciation recorded for income tax purposes and financial statement purposes	\$ 3,492	\$ 4,096	\$ 2,767
Income tax on profits of Domestic International Sales Corporations	6,416	5,848	2,387
Withholding tax on Puerto Rico earnings anticipated to be repatriated in the future (included in currently payable for 1978)	4,718	8,938	—
Current earnings of foreign subsidiaries anticipated to be repatriated in the future	6,033	4,179	5,035
1974 and 1975 IRS audit adjustments expected to reverse in subsequent years	(3,596)	—	—
(Increase) decrease in:			
Future warranty obligations	(101)	(799)	(1,215)
Inventory valuations	(7,423)	(2,634)	(8,088)
Future employee benefits	(4,514)	(1,639)	(1,022)
Allowance for doubtful accounts	(822)	(1,859)	(3,827)
Other nations	(3,651)	(1,269)	2,739
Other—net	(2,813)	(90)	(353)
Total change in deferred taxes	\$ (2,261)	\$14,771	\$ (1,577)

8. Contingencies: The company is one of 23 defendants named in a lawsuit commenced on September 20, 1974, by Zenith Radio Corporation ("Zenith") in the United States District Court for the Eastern District of Pennsylvania. Zenith's complaint alleged conspiracies and other violations of the United States antitrust and anti-dumping laws.

The complaint also challenges, under the U.S. antitrust laws, the purchase by subsidiaries of Matsushita Electric Industrial Co., Ltd., of Japan (collectively with such subsidiaries, "MEI") of certain of the assets and business of Motorola's former home television receiver business. Prior to the consummation of such purchase, the U.S. Department of Justice, at the request of Motorola and MEI, investigated the antitrust implications of the transaction. During such investigation, the Department of Justice took no legal action to prevent the sale.

For all such alleged violations, Zenith claims monetary damages in the aggregate of more than \$300 million (and the trebling of that amount). It seeks judgment against the defendants jointly and individually in that amount plus costs and plaintiff's attorneys' fees. It also seeks divestiture by MEI of the assets purchased from Motorola.

In the event a divestiture is ordered or litigation damages are assessed against MEI arising out of such purchase, Motorola has agreed to share to a limited extent the loss, if any, incurred by MEI. The maximum loss for which Motorola could be responsible to MEI under this agreement is \$20 million. Management believes that the company has acted properly throughout and has denied any conspiracy or other violation of law alleged by Zenith.

The company is defending four lawsuits in the United States District Court for the Northern District of Illinois, which were brought by private class action plaintiffs and the Equal Employment Opportunity Commission and which allege discrimination in various aspects of employment for blacks, females and persons of Spanish surname in the Northern District of Illinois. On September 23, 1980, the parties to those suits submitted to the United States District Court for the Northern District of Illinois a settlement agreement, which, if it receives final judicial approval, would settle all of those suits. The agreement provides that the company may pay eligible members of the plaintiff classes an amount which will not exceed \$10 million plus interest accruing from September 23, 1980, as backpay awards, as well as spend about \$5 million for private plaintiff's legal fees, expansion of certain affirmative action programs and other costs. As the number of eligible claimants cannot now readily be determined, the actual costs of the settlement cannot be reasonably determined, and accordingly, no provision for backpay settlements or plaintiff's legal fees has been made at this time. However, the company has accrued for the costs of expansion of certain affirmative action programs. The settlement agreement also provides that under certain circumstances the company or any of the other parties may withdraw from the settlement. It is not possible at this time to estimate when, if ever, the settlement agreement will receive final judicial approval, but court proceedings could take many months, or perhaps even years.

The company is a defendant in various other suits and claims which arise in the normal course of business and is obligated under repurchase and other agreements principally in connection with the financing of sales.

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. Share Option Plans: Under the company's employee share option plans, shares of common stock have been made available for grant to key employees of the company and certain subsidiaries. The exercise price of options granted may not be less than 100% of market value on the date of grant. Shares subject to option under these plans during 1980 and 1979 are as follows:

	1980	1979
Options outstanding beginning of year (shares)	1,565,043	1,295,369
Additional options granted	4,150	375,605
Options exercised	(173,819)	(46,262)
Options terminated or cancelled	(45,760)	(59,669)
Options outstanding end of year	1,349,614	1,565,043
Shares reserved for possible future options grants	530,912	489,360
Total shares reserved	1,880,526	2,054,403
Total options exercisable	879,108	843,778

Options exercised during 1980 were at per share prices of \$21.00 to \$51.88 (\$9.96 to \$38.25 in 1979). Options outstanding at December 31, 1980, were at per share prices of \$21.00 to \$68.00.

10. Employee Benefit Plans: The company may provide up to 7% of its annual consolidated pre-tax earnings, as defined in the Motorola Executive Incentive Plan, for the payment of cash incentive awards to key employees. Amounts of \$13,064,000 in 1980, \$12,171,000 in 1979, and \$8,426,000 in 1978 were provided for incentive awards for those years.

The company and certain subsidiaries have contributory profit sharing plans in which all eligible employees participate. The contributions to profit sharing funds in the United States and other nations, based upon percentages of pre-tax earnings from eligible operations, as defined, were \$42,880,000 in 1980, \$39,954,000 in 1979 and \$36,123,000 in 1978.

The company has a non-contributory pension plan covering substantially all domestic employees after one year of service. The company's policy is to fund pension costs as accrued. Expense for the plan was \$13,860,000 in 1980, \$16,579,000 in 1979 and \$14,114,000 in 1978. As of January 1, 1980, the company changed certain of its actuarial assumptions. The effect of this change was a reduction in the current year's pension cost of approximately \$4.9 million. On January 1, 1980, net plan assets available to pay benefits were \$134,006,119 while the total actuarial present value of accumulated plan benefits was \$74,394,731 (of which \$8,403,080 was non-vested). The company has assumed a 6% rate of return in the present value of those accumulated plan benefits.

In the event that the amount actually payable annually under the Pension Plan to any officer of the company elected by the Board of Directors does not amount to a specified percentage, as defined, of such elected officer's salary at retirement, it is the intention of the company (subject to certain qualifications and conditions) to make supplementary payments so that the total annual payments to such officer will aggregate a maximum of 50% of such officer's salary at retirement, or a minimum of 40% of such officer's salary at retirement, depending on such officer's seniority as of January 1, 1978, and the year in which such officer attains age 60 (or 30%, in case of payments to the surviving spouse of an elected officer's salary upon the officer's death during employment by the company or after retirement from such employment). The company is accruing currently for these supplementary payments.

Certain foreign subsidiaries have varying types of retirement plans providing benefits for substantially all of their employees. Essentially all of the cost of these plans is borne by the company. Amounts charged to earnings for these plans were \$3,611,000 in 1980, \$2,818,000 in 1979 and \$2,118,000 in 1978.

11. Information by Industry Segment and Geographic Region: Information about the company's operations in different industry segments is summarized below (dollars in thousands):

	TOTAL SALES AND OTHER REVENUES For the years ended December 31			OPERATING PROFIT For the years ended December 31			OPERATING PROFIT AS A PERCENTAGE OF TOTAL SALES AND OTHER REVENUE For the years ended December 31		
	1980	1979	1978	1980	1979	1978	1980	1979	1978
Communications products	\$1,252,822	\$1,127,221	\$ 964,930	\$156,388	\$148,514	\$110,954	12.5	13.2	11.5
Semiconductor products	1,222,423	992,439	718,055	187,350	172,012	107,346	15.3	17.4	14.9
Other products	683,646	655,204	581,874	30,216	17,344	51,059	4.4	2.6	8.8
Adjustments and eliminations	(60,128)	(61,069)	(45,115)	(1,112)	(3,246)	318	—	—	—
Industry Totals	\$3,098,763	\$2,713,795	\$2,219,744	\$372,842	\$334,624	\$269,677	12.0	12.3	12.1
General corporate expenses				(36,768)	(28,904)	(21,746)			
Interest expense				(48,988)	(36,114)	(27,541)			
Special charge				(13,031)	(10,286)	—			
Consolidated Totals				\$274,055	\$259,320	\$220,390			

	ASSETS For the years ended December 31			PROPERTY, PLANT AND EQUIPMENT For the years ended December 31 Fixed Asset Expenditures		
	1980	1979	1978	1980	1979	1978
Communications products	\$ 811,759	\$ 744,726	\$ 703,052	\$ 78,187	\$ 57,110	\$ 45,633
Semiconductor products	814,270	643,726	474,793	176,536	158,751	72,062
Other products	409,339	449,422	370,952			
Adjustments and eliminations	(8,695)	(8,044)	(5,034)			
Industry Totals	2,026,673	1,829,830	1,543,763			
General corporate assets	82,374	73,666	112,794			
Equity in net assets of 50% owned affiliate	2,914	—	—			
Consolidated Totals	\$2,111,961	\$1,903,496	\$1,656,557			

	Depreciation		
	1980	1979	1978
Communications products	\$ 35,778	\$ 31,602	\$ 25,667
Semiconductor products	71,687	50,387	33,820

Information about the company's operations in different geographic regions is summarized below:

	TOTAL SALES AND OTHER REVENUES For the years ended December 31			OPERATING PROFIT For the years ended December 31		
	1980	1979	1978	1980	1979	1978
United States	\$2,831,432	\$2,448,588	\$2,039,857	\$309,944	\$277,590	\$234,426
Non U.S. (not including U.S. exports)	1,183,444	1,060,244	815,793	78,197	69,241	49,678
Adjustments and eliminations	(916,113)	(795,037)	(635,906)	(15,299)	(12,207)	(14,427)
Geographic Totals	\$3,098,763	\$2,713,795	\$2,219,744	\$372,842	\$334,624	\$269,677
General corporate expenses				(36,768)	(28,904)	(21,746)
Interest expense				(48,988)	(36,114)	(27,541)
Special charge				(13,031)	(10,286)	—
Consolidated Totals				\$274,055	\$259,320	\$220,390

ASSETS

For the years ended December 31

	1980	1979	1978
United States	\$1,531,667	\$1,346,469	\$1,159,015
Non-U.S.	568,221	541,736	428,227
Adjustments and eliminations	(73,215)	(58,375)	(43,479)
Geographic Totals	2,026,673	1,829,830	1,543,763
General corporate assets	82,374	73,666	112,794
Equity is net assets of 50% owned affiliate	2,914	—	—
Consolidated Totals	\$2,111,961	\$1,903,496	\$1,656,557

Motorola operates predominately in one industry, electronic equipment and components. Operations involve the design, manufacture and sale of a diversified line of electronic products, which includes, but is not limited to, two-way radio and communications systems; semiconductors, including integrated circuits and micro-processor units; data communication equipment and systems; electronic components and designs for the U.S. government; automotive electronic equipment and industrial electronic products. For the three years of industry segments presented above, communications and semiconductor products represent the company's significant industry segments. Previously, automotive products was also reported as an industry segment. With the disposal of the U.S. aftermarket autosound business described in Note 2, automotive products no longer represents a significant industry segment of the company's operations and has been combined with other products in the presentation. The company operates manufacturing and distribution facilities outside the United States. No single country outside the United States accounts for more than 10% of consolidated sales and other revenues or total assets.

Operating profit was computed as total revenues less operating expenses. In computing operating profit, none of the following items have been added or deducted: general corporate expenses, interest expenses, income taxes, and a special charge for termination of certain operations in 1980 and in 1979 (see Note 2). Identifiable assets are those assets of the company that are identified to classes of similar products or operations in each geographical area, excluding internal receivables. Corporate assets are principally cash and marketable securities, the corporate administrative headquarters, and future income tax benefits. Intersegment sales were principally semiconductor components, which amounted to \$42,243,000 for 1980, \$49,271,000 for 1979 and \$31,276,000 for 1978. Intersegment and intergeographic transfers are accounted for on an arm's length pricing basis and are consistent with rules and regulations of domestic and foreign taxing authorities.

Sales to United States federal government agencies aggregated \$324 million during the year ended December 31, 1980. No other single customer (or group of customers under common control) accounted for 10% of the company's sales.

12. Lease Commitments: Although the company owns most of its major facilities, it does lease certain office, factory and warehouse space, land, data processing and other sundry equipment.

Total rental expense (including taxes, insurance and maintenance when included in rent) for all non-capital leases (including those with terms of less than one year) reduced by sublease rental income (not considered to be material) was \$39,133,000 in 1980, \$32,836,000 in 1979 and \$25,727,000 in 1978.

Minimum future obligations on all noncancelable leases, net of minimum sublease rentals, with initial terms of one year or more in effect at December 31, 1980, are as follows for the periods ending December 31:

(Dollars in thousands)

1981	\$23,603
1982	15,607
1983	8,771
1984	5,816
1985	3,944
Later	25,782

Some of the leases contain renewal options for varying periods. Certain leases include options to purchase during or at the end of the lease term.

13. Quarterly Financial Data (unaudited): Selected unaudited quarterly financial data for 1980 and 1979 are as follows:

(Dollars in thousands, except per share data)

1980	March 31	June 30	Three Months Ended	
			Sept. 27	Dec. 31
Sales and other revenues	\$753,515	\$798,943	\$743,219	\$803,086
Gross profit before depreciation (a)	\$296,922	\$320,947	\$301,249	\$334,534
Net earnings (b)	\$ 41,972	\$48,405	\$ 46,562	\$ 49,142
Net earnings per share	\$ 1.35	\$ 1.55	\$ 1.49	\$ 1.57

1979	March 31	June 30	Three Months Ended	
			Sept. 29	Dec. 31
Sales and other revenues	\$612,561	\$676,931	\$661,529	\$762,774
Gross profit before depreciation (a)	\$247,487	\$281,577	\$260,419	\$299,346
Net earnings (c)	\$ 36,135	\$ 43,408	\$ 38,494	\$ 36,259
Net earnings per share	\$ 1.16	\$ 1.40	\$ 1.24	\$ 1.16

(a) Profit after manufacturing and other costs of sales exclusive of depreciation expense.

(b) See Note 2 for description of special credit to net earnings of \$2,346,000, or \$.07 per share, recorded during the second quarter.

(c) During the year the company recorded a special charge to net earnings of \$7,882,000 (See Note 2), or \$.25 per share. \$6,641,000 of this amount, or \$.21 per share, was recorded in the fourth quarter.

14. Research and Development Expenditures: Company-funded research and development expenditures, which are charged against operations as incurred were \$200 million in 1980, \$167 million in 1979 and \$133 million in 1978.

15. Accrued Liabilities: Accrued liabilities consisted of the following at December 31:

(Dollars in thousands)	1980	1979
Taxes (other than income taxes)	\$ 31,339	\$ 36,737
Contribution to employees' profit sharing funds	42,286	40,009
Accrued compensation	69,375	67,363
Dividends payable	12,564	10,939
Other	98,583	85,780
Total accrued liabilities	\$254,147	\$240,828

16. Information on the Effects of Changing Prices (Unaudited):

Statement of Financial Accounting Standards No. 33 (SFAS-33) requires disclosure of selected information describing certain effects of changing prices on companies' financial statements. For the current year, SFAS-33 prescribes presentation of certain information as adjusted for the effects of specific price changes (current cost method) and as adjusted for the effects of general inflation (constant dollar method) as measured by the United States Consumer Price Index for All Urban Consumers (CPI-U).

Motorola, like other companies, has experienced increases in the cost of its production resources. Motorola's semiconductor business has been able to accomplish significant productivity gains in its manufacturing processes, which have reduced the cost of products sold beyond the increase in the costs of production resources. Thereby, over time, selling prices generally have decreased. Productivity gains in Motorola's other businesses have reduced the effects of increased production resource costs, resulting in price increases over time at rates less than general inflation.

In consideration of the two methods required to be used to portray the effects of changing prices, the company believes, with some reservations, the current cost method more appropriately represents the impact of inflation on the company, as it at least considers equipment related productivity. This method ignores, however, both productivity gains available from engineering and labor as well as inflationary pressures in selling, general and administrative costs. The required constant dollar method of presentation for this information contradicts the experience of the company, as it completely ignores the effects of productivity. Accordingly, management believes that the constant dollar information presented below and in the five year comparison afterwards, with the exception of the dividends declared per common share adjusted by the CPI-U, does not correctly describe the effects of changing prices on the operations of the company and is therefore misleading.

Statements of Consolidated Earnings Adjusted for Changing Prices

For the Year Ended December 31, 1980

(In millions of dollars)	Historical Cost	Constant Dollar (ave. 1980 \$'s)	Current Cost
Sales and other revenues	\$3,099	\$3,099	\$3,099
Manufacturing and other costs of sales	1,845	1,914	1,862
Selling, general and administrative expense	773	773	773
Depreciation of plant and equipment	145	158	132
Interest expense and amortization of debenture discount and premium, net	49	49	49
Special charge	13	13	13
Income taxes	88	88	88
Total Costs and Expenses	2,913	2,995	2,917
Net Earnings	\$ 186	\$ 104	\$ 182
Gain from decline in purchasing power of net amounts owed		\$ 17	\$ 17
Increase in general price level (constant dollar method) of inventories and property, plant, and equipment held during the year			\$ 193
Increase in specific prices (current cost method)*			88
Excess of constant dollar method over current cost method			\$ 105

*At December 31, 1980, the current cost of inventories was \$561 million and the current cost of property, plant and equipment, net of accumulated depreciation, was \$1,214 million.

Statements of Consolidated Earnings Adjusted for Changing Prices

For the Year Ended December 31, 1979

(In millions of dollars)	Historical Cost	Constant Dollar (ave. 1979 \$'s)	Current Cost
Sales and other revenues	\$2,714	\$2,714	\$2,714
Manufacturing and other costs of sales	1,626	1,684	1,632
Selling, general and administrative expense	672	672	672
Depreciation of plant and equipment	111	111	98
Interest expense and amortization of debenture discount and premium, net	36	36	36
Special charge	10	10	10
Income taxes	105	105	105
Total Costs and Expenses	2,560	2,618	2,553
Net Earnings	\$ 154	\$ 96	\$ 161
Gain from decline in purchasing power of net amounts owed		\$ 6	\$ 6
Increase in specific prices (current cost method) of inventories and property, plant and equipment held during the year*			\$ 199
Increase in general price level (constant dollar method)			161
Excess of current cost method over constant dollar method			\$ 38

*At December 31, 1979, the current cost of inventories was \$555 million and the current cost of property, plant and equipment, net of accumulated depreciation, was \$993 million.

The company uses accelerated methods of depreciation in its historical cost financial statements in part to conservatively value earnings as a result of the increasing prices the company will have to pay to replace these assets. The depreciation expense above for both constant dollar and current cost is based on calculations made using the straight line method with asset lives grouped to approximate those used in historical cost presentation. Also, historical cost income tax expense has not been adjusted. Had depreciation expense under the current cost method been computed using accelerated methods, the depreciation charged would have approximated \$187 million and \$144 million for 1980 and 1979, respectively.

Below is a five year summary of selected information which has been denominated in dollars of average purchasing power for the year 1980.

Five-Year Comparison of Certain Supplementary Financial Data

Adjusted for the Effects of Changing Prices

(In millions of dollars except per share data)	1976	Years Ended December 31			1980
		1977	1978	1979	
Sales and other revenue	\$ 2,226	\$ 2,520	\$ 2,804	\$ 3,081	\$ 3,099
Historical cost information <i>adjusted by the constant dollar method</i> :					
Net earnings	—	—	—	\$ 109	\$ 104
Net earnings per common share	—	—	—	\$ 3.52	\$ 3.34
Net assets at year-end	—	—	—	\$ 1,433	\$ 1,478
Historical cost information <i>adjusted by the current cost method</i> :					
Net earnings	—	—	—	\$ 183	\$ 182
Net earnings per common share	—	—	—	\$ 5.88	\$ 5.84
Net assets at year-end	—	—	—	\$ 1,449	\$ 1,505
Other information:					
Excess of constant dollar method over current cost method for inventory, and property, plant and equipment, net	—	—	—	\$ (43)	\$ 105
Gain from decline in purchasing power of net amounts owed	—	—	—	\$ 7	\$ 17
Cash dividends declared per common share	\$ 1.06	\$ 1.20	\$ 1.33	\$ 1.42	\$ 1.45
Market price per common share at year-end	\$ 79.77	\$ 48.44	\$ 48.29	\$ 54.49	\$ 68.95
Average consumer price index	170.5	181.5	195.4	217.4	246.8

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

Major Trends: Over the last three years, the company has reported an average annual growth rate in both sales of 20% and in earnings from continuing operations of 24%. With respect to the growth rate in earnings from continuing operations, Note 2 to the consolidated financial statements describes the effect on earnings of special charges recorded for termination of certain operations of the company in both 1979 and 1980. Motorola is engaged in the design, manufacture and sale of a diversified line of electronic equipment and components. The company's mix of business has continued to move further towards the industrial and commercial markets and away from consumer markets. As a result, the company's current direct participation in the consumer markets is insignificant.

Another key aspect to understanding the development of the company and its current competitive posture is the synergistic relationship between the technology of the company's semiconductor operations and the company's other products, which utilize micro-electronic components. The rapid growth of semiconductor science has provided other operations of the company with a technological base to further expand and develop their product offerings. As a result, the company is poised to maintain a leadership position in the technology and innovation of its products.

Operations: The company's principal operations are the semiconductor products and communication products segments. Note 11 to the consolidated financial statements reports the significant contribution of these segments to the overall growth in sales and operating profit of the company for the past three years.

The sales and operating profit contributions from semiconductor products has been especially noteworthy, with 1979 showing substantial growth in both sales and profits. The growth during the three year period has resulted from concentration on state of the art products (such devices as microprocessors), a broadened product base, increased participation in international markets, a strengthened competitive position in the discrete component field and improved manufacturing efficiency resulting from larger wafer sizes, automation, and improved product quality. During the last three years, despite generally declining market prices for semiconductor devices, operating profit margins have been generally maintained.

The growth in communication products sales has also contributed significantly to the overall increase in sales for the company over the past three years, with higher growth in the international market compensating for a somewhat depressed domestic economy. The trend in operating profits for this segment over the last three years has not been as favorable as that of sales growth. In 1978, this segment had some operating profit erosion principally as a result of difficulty in activating a major automated manufacturing facility, technical and manufacturing problems incurred in starting production of certain new products, cost overruns on certain systems contracts, extra and unanticipated warranty obligations, and increased receivable and inventory write-offs. In 1979, these problems were resolved and operating profits improved. In 1980, while operating profits increased, the margin was slightly down as capital and operating investment increased to improve quality and develop new products.

Overall, the company's net earnings have increased substantially over the last three years from \$4.04 per share in 1978 to \$5.96 per share in 1980. This improvement is primarily the result of increased sales and operating profits on communications and semiconductor

products, disposition of several unprofitable operations, cost control programs and a decrease in the effective tax rate for the company. As displayed in Note 7, we have experienced a declining tax rate from 43.2% in 1978 to 32.1% in 1980 (or 36% before the special charge and related tax credit resulting from the disposition of the Autovox S.p.A. subsidiary and the aftermarket autosound business). The decline is principally the result of the company achieving relatively greater earnings (or lower losses) in non-U.S. countries in which we experience lower tax rates (or tax holidays) and an increase in the investment tax credit as related to total taxes.

Liquidity and Capital Resources: At December 31, 1980, total borrowings, long- and short-term, were \$340.5 million, up from \$299.2 million a year earlier. These borrowings, at year-end, represent 22.8% of total borrowings plus stockholders' equity (down slightly from 23.0% in 1979). During the year, working capital increased to \$743 million from \$709 million a year earlier. The current ratio at year-end 1980 was 2.42 versus 2.35 at year-end 1979. The increases in the current ratio and working capital were achieved despite sales and other revenue increasing 14%, dividend payments increasing by 16% and 1980 fixed asset expenditures of \$301 million.

The above strengthening was achieved as a result of several actions and programs pursued during 1980 and previous years, including increased emphasis on asset management, particularly accounts receivable and inventories. Inventories were down 1.7% and accounts receivable were down approximately 1.0% from a year ago despite the 14% increase in sales. At year-end, accounts receivable represented 8.1 weeks of sales versus 8.4 weeks at the end of 1979. This progress was accomplished despite 1980's high interest rates and the related pressure on customers to delay payment. For 1981, the company intends to continue emphasis on asset management.

At year-end 1980, the company had approximately \$452 million of lines of credit available (U.S. and non-U.S.), which were not being used for borrowings. In 1980, the company repatriated \$34 million of earnings from subsidiaries in Puerto Rico. At year-end 1980, short term investments of more than \$76 million were available for future repatriation from those subsidiaries.

Over the past three years, the company's fixed asset expenditures have increased from \$146 million to \$301 million. As disclosed in Note 11, the semiconductor segment has received an increasing share of these expenditures, from 49% in 1978 to 59% in 1980. At year-end 1980, the company had outstanding commitments totaling \$143 million, which it expects to fund through operations and, over the near term, commercial paper and other short-term borrowings. These outstanding commitments are principally for expansion of manufacturing facilities and equipment. It is the company's policy to own, rather than lease, its manufacturing capital resources where economically justified and legally available. Accordingly, the company does not have a significant amount of those resources under lease.

*The five year selected financial data required to be presented by the Securities and Exchange Commission is included in the company's ten year financial summary and Note 16 to the consolidated financial statements.

Ten-Year Financial Summary

(Dollars in thousands, except per share data)

Operating Results from Continuing Operations (1)	1980	1979	1978
Sales and other revenues	\$3,098,763	\$2,713,795	\$2,219,744
Manufacturing and other costs of sales	1,845,111	1,624,966	1,339,806
Selling, general & administrative expense	772,788	672,282	548,667
Depreciation and amortization of plant and equipment	144,790	110,827	83,340
Interest & amortization of debenture discount, expense and premium, net	48,988	36,114	27,541
Special charge (3)	13,031	10,286	—
Total costs and other expenses	2,824,708	2,454,475	1,999,354
Earnings from continuing operations before income taxes	274,055	259,320	220,390
Income taxes	87,974	105,024	95,208
Earnings from continuing operations	186,081	154,296	125,182
Return on sales	6.0%	5.7%	5.6%
Discontinued operations—profit (loss)	—	—	—
Net earnings	\$ 186,081	\$ 154,296	\$ 125,182
Per Share Data (3)			
Earnings from continuing operations	\$ 5.96	\$ 4.96	\$ 4.04
Net earnings	5.96	4.96	4.04
Dividends declared (4)	1.45	1.25	1.05
Balance Sheet and Other Data (2)			
Total assets	\$2,111,961	\$1,903,496	\$1,656,557
Working capital	\$ 742,916	\$ 708,551	\$ 619,930
Current ratio	2.42:1	2.35:1	2.20:1
Short-term debt	\$ 4,767	\$ 3,549	\$ 82,963
Long-term debt	335,748	295,628	198,091
Stockholders' equity	1,151,959	1,003,876	885,538
Less short-term investments	94,155	84,141	121,429
Total invested capital	\$1,398,319	\$1,218,912	\$1,045,163
Return on average invested capital	13.9%	13.5%	12.3%
Return on average stockholders' equity from continuing operations	17.3%	16.3%	15.0%
Year-end employment (approximate)	71,500	75,000	68,000
Average shares outstanding (in thousands)	31,244	31,112	31,019

(1) In May 1974, Motorola sold its home television receiver business. Consequently, the 1971 through 1973 operating results have been adjusted to remove the effect of the television business.

(2) The 1971 through 1973 data have not been restated to exclude the home television receiver business.

(3) See Note 2 to the consolidated statements for a description of the special charge in 1979 and 1980 and the related effects on earnings per share.

(4) See Note 5 to the consolidated statements for discussion of dividend restrictions on retained earnings. Future dividend declarations will depend on operating results and capital requirements.

1977	1976	1975	1974	1973	1972	1971
\$1,853,514	\$1,537,533	\$1,339,025	\$1,389,429	\$1,213,795	\$ 907,020	\$ 719,186
1,139,877	940,389	859,035	886,556	759,920	609,810	472,292
426,304	354,602	319,401	289,153	242,859	168,233	156,453
72,770	57,916	52,947	44,564	33,825	28,665	25,175
22,943	16,967	20,974	27,686	16,415	10,460	7,808
—	—	—	—	—	—	—
1,661,894	1,369,874	1,252,357	1,247,959	1,053,019	817,168	661,728
191,620	167,659	86,668	141,470	160,776	89,852	57,458
84,669	75,661	41,484	64,222	72,689	41,187	29,879
106,951	91,998	45,184	77,248	88,087	48,665	27,579
5.8%	6.0%	3.4%	5.6%	7.3%	5.4%	3.8%
—	(2,470)	—	(2,184)	(3,477)	4,477	2,202
\$ 106,951	\$ 89,528	\$ 45,184	\$ 75,064	\$ 84,610	\$ 53,142	\$ 29,781
\$ 3.46	\$ 3.00	\$ 1.49	\$ 2.56	\$ 2.95	\$ 1.67	\$.97
3.46	2.92	1.49	2.49	2.83	1.83	1.05
.88	.735	.70	.60	.45	.312	.30
\$1,419,859	\$1,191,018	\$1,027,538	\$1,096,891	\$1,005,506	\$ 781,055	\$ 649,767
\$ 567,044	\$ 439,181	\$ 408,336	\$ 424,845	\$ 431,543	\$ 326,414	\$ 255,539
2.47:1	2.27:1	2.62:1	2.33:1	2.42:1	2.36:1	2.30:1
\$ 77,718	\$ 64,578	\$ 54,458	\$ 90,191	\$ 69,326	\$ 53,957	\$ 48,696
200,279	101,388	124,369	154,960	151,088	81,052	64,530
788,044	706,482	627,072	596,626	529,993	443,380	376,204
85,681	60,972	38,116	26,336	21,982	30,092	4,230
\$ 980,360	\$ 811,476	\$ 767,783	\$ 815,441	\$ 728,425	\$ 548,297	\$ 485,200
11.8%	11.8%	5.7%	9.8%	13.8%	9.3%	6.0%
14.3%	13.9%	7.4%	13.6%	18.1%	12.0%	7.7%
60,000	56,000	47,000	51,000	64,000	56,000	49,000
30,933	30,699	30,384	30,178	29,865	29,117	28,388

Stock Price and Dividend Data

The principal market for Motorola Common Stock is the New York Stock Exchange. The table (right) sets forth the high and low sales price per share for Motorola Common Stock as reported by the Consolidated Tape Association and the dividends declared and paid for the periods indicated:

1980	Stock Prices		Dividends		1979	Stock Prices		Dividends	
	High	Low	Declared	Paid		High	Low	Declared	Paid
1st Quarter	\$63.63	\$46.50	\$.350	\$.350	1st Quarter	\$42.00	\$36.00	\$.300	\$.300
2nd Quarter	51.75	42.50	.350	.350	2nd Quarter	46.38	38.25	.300	.300
3rd Quarter	69.63	48.38	.350	.350	3rd Quarter	52.50	40.00	.300	.300
4th Quarter	84.00	61.25	.400	.350	4th Quarter	55.50	42.63	.350	.300
			\$1.45	\$1.40				\$1.250	\$1.200

The number of holders of record of Motorola Common Stock on February 24, 1981, was 9,394.

Directors

ROBERT W. GALVIN
WILLIAM J. WEISZ
JOHN F. MITCHELL
JOHN J. ANTALEK
 Retired; formerly Vice President,
 TRW Inc.
JAMES W. BIRKENSTOCK
 President, Intercal, Inc.,
 Management consulting firm
JOHN T. HICKEY
M. JOSEPH LAMBERT
 Senior Vice President and Chief
 Financial Officer, Dart & Kraft, Inc.
STEPHEN L. LEVY
HOMER L. MARRS
ARTHUR C. NIELSEN, JR.
 Chairman of the Board,
 A. C. Nielsen Company,
 Market research organization
CHARLOTTE T. REID
 Business consultant; formerly a
 Commissioner, Federal
 Communications Commission, and
 a member, U.S. House of
 Representatives
WILLIAM G. SALATICH
 Part owner and Director, Advance
 Cable and Broadcast Television
 Corporation; business consultant
ELMER H. SCHULZ
 Director Emeritus,
 IIT Research Institute
WALTER B. SCOTT
 Retired; formerly Vice President,
 Motorola, Inc.
DR. GARDINER L. TUCKER
 Vice President of Science and
 Technology, International Paper
 Company
B. KENNETH WEST
 President, Harris Trust and Savings
 Bank
DIRECTOR EMERITUS
ELMER H. WAVERING
 Former Vice Chairman and Chief
 Operating Officer, Motorola, Inc.

In Memoriam

With profound sorrow and regret, and with recognition of his many contributions to Motorola's success as executive, treasurer, secretary and director over a span of 27 years, we note the death on June 11, 1980, of Edwin P. Vanderwicken, retired member of the Board of Directors.

Officers

CORPORATE

Robert W. Galvin
 William J. Weisz
 John F. Mitchell
 Homer L. Marrs
 Ralph W. Elsner
 Levy Katzir

FINANCE

John T. Hickey
 Donald R. Jones
 Kenneth J. Johnson
 William P. Meehan
 Richard H. Weise

STAFF

Stephen L. Levy
 Martin Cooper

L. Curtis Foster
 Jack Germain
 Earl R. Gomersall
 R. James Harring
 C. Travis Marshall
 Vincent J. Rauner

PERSONNEL

Robert N. Swift

AUTOMOTIVE AND INDUSTRIAL ELECTRONICS GROUP

Carl E. Lindholm

COMMUNICATIONS GROUP

Joseph F. Miller, Jr.

Rhesa S. Farmer
 David K. Bartram

John W. Battin

Arnold S. Brenner

Richard C. Buetow
 R. LaVance Carson
 Kenneth R. Hessler
 Bradford K. Kroha

Theodore Saltzberg
 Arthur P. Sundry

Morton L. Topfer
 Ira W. Walker

GOVERNMENT ELECTRONICS DIVISION

James R. Lincicome

SEMICONDUCTOR GROUP

John R. Welty

Alfred J. Stein

Andre Borrel

James R. Fiebiger

Henri A. Jarrat

James A. Norling
 Geno Ori

Charles E. Thompson

Gary L. Tooker

DATA COMMUNICATIONS

Arthur Carr

Motorola, Inc.

Chairman of the Board and Chief Executive Officer
 Vice Chairman and Chief Operating Officer
 President and Assistant Chief Operating Officer
 Senior Vice President and Assistant to the Chief Operating Office
 Vice President and Deputy to the Chief Executive Office
 Vice President and Assistant to the Chief Executive Office

Senior Vice President and Chief Financial Officer
 Vice President and Assistant Chief Financial Officer
 Vice President and Controller
 Vice President and Treasurer
 Vice President, General Counsel and Secretary

Senior Vice President and Chief Corporate Staff Officer
 Vice President and Corporate Director of
 Research and Development

Vice President and Corporate Director of Engineering
 Vice President and Director of Quality
 Vice President and Corporate Director of Operational Support
 Vice President and Corporate Director of Planning
 Vice President and Corporate Director of Government Relations
 Vice President for Patents, Trademarks and Licensing

Vice President and Corporate Director of Personnel

Senior Vice President and General Manager, Automotive and
 Industrial Electronics Group

Senior Vice President and General Manager,
 Communications Group

Vice President and General Manager, Communications Group*
 Vice President and General Manager,
 Government Markets Division

Vice President and General Manager,
 Systems and Portable Divisions

Vice President and General Manager,
 Communications International Division

Vice President and General Manager, Mobile Products Division

Vice President and General Manager, Special Markets Division

Vice President and General Manager, Commercial Markets Division

Vice President and General Manager,
 European Communications Division

Vice President and General Manager, Fixed Products Division

Vice President and General Manager,
 Communications Distribution Division

Vice President and General Manager, Portable Products Division

Vice President and General Manager,
 Communications Distribution Service Division

Vice President and General Manager,
 Government Electronics Division

Senior Vice President and General Manager,
 Semiconductor Group

Vice President and Assistant General Manager,
 Semiconductor Group

Vice President and General Manager,
 European Semiconductor Division

Vice President and General Manager,
 MOS Integrated Circuits Division

Vice President and General Manager,
 Bipolar Integrated Circuits Division

Vice President and General Manager, Power Products Division

Vice President and General Manager,
 High Frequency and Optical Products Division

Vice President and Director of
 World Marketing, Semiconductor Group

Vice President and General Manager,
 International Semiconductor Division

Vice President and President of Codex Corporation

Age Years of Service

58	40
53	33
52	28
64	43
60	32
48	25
55	33
50	30
45	9
45	11
45	12
59	17
52	26
55	7
54	31
50	9
56	29
54	10
53	11
57	29
51	14
56	29
54	23
44	20
44	22
43	21
49	22
51	26
47	22
54	26
54	25
52	24
44	10
57	25
55	30
58	23
47	5
44	13
39	4
42	4
38	15
43	18
51	11
41	19
49	3

*Assumes this position April 15, 1981

Motorola Products

Communications Group

Car telephone systems
Communications control centers
Component products
Electronic command and control systems
Health care communications systems
Microwave communications systems
Mobile and portable data communications systems
Mobile and portable FM two-way radio communications systems
Precision instruments
Radio paging systems
Signaling and remote control systems

Semiconductor Group

Bipolar and MOS integrated circuits
Bipolar VLSI macrocell arrays
Custom MOS and bipolar circuits
Electronic materials
Fiber optic devices
Field-effect transistors
Hobby components
Memory systems
Microprocessor support systems
Microprocessors
Microwave components
NMOS, CMOS and bipolar memories
Optoelectronics
Power and small signal transistors
Pressure sensors
Rectifiers
RF modules
RF power and small signal transistors
Semiconductor chips
Solar energy components and systems
Thyristors
Triggers
Varactors
Zener and tuning diodes

Automotive and Industrial Electronics Group

Alternator charging systems
AM, AM/FM car radios
Automotive sensors (pressure and position)
Automotive speaker systems
Automotive stereo 8-track tape and cassette players
Citizens band radios and antennas
Closed circuit TV systems
CRT display modules
Digital appliance controls
Electronic engine controls
Engine management systems
Information display systems
Regulators
Solid-state ignition systems
Tachometers, speedometers, odometers, hourmeters

Government Electronics Division

Advanced seeker systems
Antenna and microwave systems
Data security products
Drone command and control systems
Electronic countermeasures systems
Electronic positioning and tracking systems
Energy systems, including solar photovoltaics
Fixed and satellite communications systems
Fuze systems
Intelligent display terminals and systems
Military radios
Missile and aircraft instrumentations
Missile guidance systems
Satellite survey and positioning systems
Satellite terminals
Secure communications
Space communications systems
Surveillance radar systems
Tracking and command transponder systems
Video processing systems and products

Data Communications

Data security equipment
Intelligent terminals
Modems
Multiplexers
Network control equipment
Nodal processors

Other businesses

Plasma processing systems

Motorola Worldwide

Major facilities in:

Australia
Melbourne
Canada
Rexdale, Ontario
Willowdale, Ontario
Costa Rica
San Jose
Denmark
Frederikssund
France
Angers
Toulouse
Hong Kong
Kowloon
Israel
Tel-Aviv
Japan
Shikawa
Tokyo
Korea
Seoul
Malaysia
Kuala Lumpur
Penang
Seremban
Mexico
Guadalajara
Mexico City
Philippines
Manila
Puerto Rico
Vega Alta
Vega Baja
South Africa
Johannesburg
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United States

Alabama
Huntsville
Arizona
Mesa
Phoenix
Scottsdale
Tempe
Florida
Fort Lauderdale
Illinois
Franklin Park
Schaumburg
Iowa
Mount Pleasant
Massachusetts
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Missouri
Joplin
New Mexico
Albuquerque
New York
Arcade
Texas
Austin
Fort Worth
Seguin
West Germany
Munich
Tanusstein



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