

Cover chart, photographed from screen of new IBM 3279 color display station, shows effect of technical innovation in lowering the price of IBM data processing while raising product speed and capacity–resulting in greater productivity for users.

Red, orange and yellow lines show ratios by which purchase prices have declined. The yellow line, for example, shows that the per-character price of main memory in the new IBM 4341 computer is a small fraction of that for another intermediate-size computer, the IBM System/370 Model 135, introduced in 1971.

Green, turquoise and blue lines show increases in IBM computer processing speed, memory capacity and disk read/write speed.

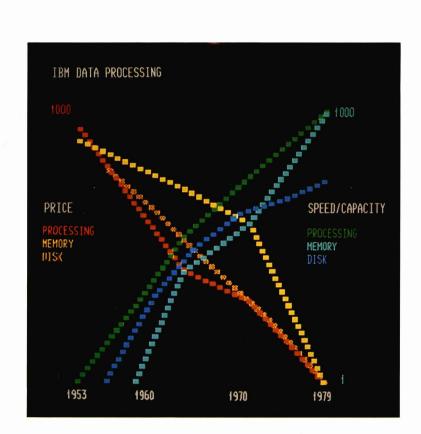
The chart is plotted on a ratio scale to show rates of change over the years. The rates shown are for some of IBM's most widely accepted medium-scale computers and disk storage units. However, the rates typify the company's overall product line.

Data for the chart may be obtained from the IBM Stockholder Relations Department, 717 Fifth Avenue, New York, N.Y. 10022.

#### Contents:

- 2 Highlights of the Year
- 3 Letter to Stockholders: Management comments on the year's financial results, business conditions affecting IBM and significant developments within the company.
- 7 Productivity of IBM customers and company operations is enhanced by innovative IBM products and techniques that reduce costs while raising efficiency.
- 19 Stockholder Information

- 20 Report of Management Report of Independent Accountants
- 21 Earnings
- 22 Financial Position
- 23 Changes in Financial Position
- 24 Stockholders' Equity
- 25 Notes to Financial Statements
- 31 Five-Year Summary of Operations
- 32 Supplemental Financial Information
- 36 IBM Organization
- 37 Progress Report on other 1979 developments involving IBM employees and business programs
- 40 Directors and Officers



Highlights of the year:		(Dollars in thousands except per share amounts) 197		
	Gross income from sales, rentals and services	\$ 22,862,77	\$ 21,076,089	
	Earnings before income taxes	\$ 5,553,25	\$ 5,797,568	
	U.S. Federal and non-U.S. income taxes	\$ 2,542,00	\$ 2,687,000	
	Net earnings	\$ 3,011,25	\$ 3,110,568	
	Per share†	\$ 5.1	6 \$ 5.32	
	Cash dividends paid	\$ 2,007,57	\$ 1,684,612	
	Per share†	\$ 3.4	\$ 2.88	
	Investment in plant, rental machines and			
	other property	\$ 5,990,98	\$ 4,045,539	
At end of year:	†Adjusted for 1979 stock split.			
	Total assets	\$ 24,529,97	\$ 20,771,374	
	Net investment in plant, rental machines and			
	other property	\$ 12,193,01	9 \$ 9,302,228	
	Long-term debt	\$ 1,589,35		
	Working capital	\$ 4,405,87		
	Number of employees	337,11	9 325,517	
	Number of stockholders	696,91	8 580,572	

# IBM's Operations:

IBM's operations, with very minor exceptions, are in the field of information-handling systems, equipment and services to solve the increasingly complex problems of business, government, science, space exploration, defense, education, medicine and many other areas of human activity. IBM's products include data processing machines and systems, information processors, office systems, electric and electronic typewriters, copiers, dictation equipment, educational and testing materials, and related supplies and services. Most products are both leased and sold through IBM's worldwide marketing organizations.



To the Stockholders:

The past year was a challenging one for IBM, particularly so because of high inflation and changing market conditions. At the same time, 1979 was a very productive year for the company. We had substantial increases in our order rates and shipments, as well as a higher year-end backlog. To meet demand, we continued a rapid expansion of our facilities.

Above all, 1979 was a year in which we made a number of investments for the future. We increased our spending for research and development, and we invested heavily in new plants, equipment and rental machines.

Worldwide net earnings for the year ended December 31, 1979, amounted to \$3,011 million, compared with \$3,111 million for the same period last year. The net earnings equaled \$5.16 per share on 583.4 million shares, the average number of shares outstanding during the period after adjustment for the four-for-one stock split effected May 10, 1979. This compared with \$5.32 per share on 584.4 million shares, the average number outstanding in 1978, adjusted for the stock split.

Consolidated gross income amounted to \$22,863 million, compared with \$21,076 million last year.

Net earnings for the quarter ended December 31, 1979, amounted to \$1,008 million, or \$1.73 per share. This compared with \$1,015 million, or \$1.74 per share, for the same period last year, after adjusting the per-share amount for the stock split. Gross income amounted to \$6,829 million, compared with \$6,438 million for the corresponding 1978 period.

Operations outside the United States for the year 1979, included in consolidated results, showed net earnings of \$1,427 million, compared with \$1,560 million in 1978. Gross income from those operations was \$12,244 million, compared with \$11,040 million last year.

For the year ended December 31, 1979, the company experienced exchange losses of \$52 million, compared with gains of \$113 million last year. Earnings for the fourth quarter include exchange losses of \$15 million, compared with gains of \$14 million in the final quarter of 1978. These gains and losses are principally unrealized and primarily result from the translation of non-U.S. assets and liabilities recorded in local currencies.

Shipments of data processing equipment were at a high level throughout 1979, with volumes significantly ahead of 1978. However, for much of the year, there was an increase in the proportion of customers choosing to lease rather than purchase such equipment. Because of this, purchase revenue showed only small increases for both the full year and the fourth quarter, compared to the corresponding 1978 periods. Net earnings for the fourth quarter and for the year 1979 showed modest decreases from the comparable periods of 1978. Among the factors contributing to these decreases were the shift toward leasing, the effects of currency fluctuations, and the growth in costs and expenses resulting from inflation and from the company's ongoing buildup of resources. Inflationary pressures were higher than anticipated in 1979 and are not expected to subside to any great degree in the near future.

Consolidated gross income from rentals and services for the year 1979 increased 8.7%. Incoming orders were well above the 1978 volumes, resulting in an increase in the year-end backlog despite the high level of shipments in 1979.

#### Product Innovation

In 1979, IBM introduced a variety of new products to help customers become more productive. The IBM 4341 and IBM 4331 processors, delivered around the world during the year, offer important price/performance advantages to users of intermediate-size computers. New models of the IBM 3033 processors give customers added flexibility in meeting large-scale processing needs.

New office system products—the IBM 6670 information distributor and the IBM 5520 administrative system—improve the speed and efficiency of word processing and electronic document distribution. The company's most advanced typewriter, the Electronic Typewriter 75, enables users to automate many routine typing tasks.

A variety of new computer terminal products, including a new color display, provide versatile, economical ways to meet the needs of many small and large users. New display, printing and data entry products permit direct computer processing in the Japanese and Chinese written languages.

#### Customer Support Innovations

IBM has also introduced marketing and service programs that improve productivity for the company and its customers.

In addition to our traditional approach of having our sales people call on customers, we are using direct mail and radio advertising to invite customers and prospects to IBM demonstration centers, where they can learn about small computers and buy products off the floor.

We are also using telephone selling for some of our products, and overseas we are testing direct sales of typewriters and supplies through IBM retail stores.

For computer customers who have programming questions or problems, we have established toll-free telephone centers that operate around the clock, seven days a week. To speed the assignment of our customer engineers who service products at customer sites, we are installing more than 100 computer dispatch systems in the U.S. and overseas.

#### Expansion to Meet Demand

To keep pace with the record demand for IBM products, we are rapidly expanding our facilities. More than 11 million sq. ft. of plant, laboratory and office space were under construction in the U.S. and abroad at the end of 1979. An additional 4 million sq. ft. were completed during the year. Our manufacturing plant and laboratory space in use worldwide has now been expanded by about 17% over the past two years.

Our capital expenditures in 1979 amounted to almost \$6 billion-about 50% higher than the \$4 billion in 1978. The 1979 total included \$4.2 billion for rental machines and \$1.8 billion for expansion of facilities.

#### Financing IBM Growth

The company's requirement for significant capital investment is expected to continue for the next several years. To help fund this growth, IBM in October, 1979, raised \$1 billion through a public offering of notes and debentures, followed in December by a \$300 million placement of notes with the Saudi Arabian Monetary Agency. Proceeds of these financings will be used for construction of manufacturing facilities and for rental equipment to meet customer demand.

In addition, the company has unused lines of credit of \$1,565 million established with a number of U.S. banks. Certain non-U.S. subsidiaries also have available unused lines of credit totaling approximately \$800 million.

#### A Promising Future

The substantial growth of IBM in 1979 – in new product introduction, increased product demand and physical expansion – is a tribute to the creativity and hard work of IBM people in the many countries where we operate. We are deeply grateful for their efforts.

We believe that the company is now well positioned for the 1980s. We have the strongest product lines in our history. We think that the demand for IBM products in all parts of the world will continue at high levels. We have the ability to finance our growth on a broad scale.

Most important are our talented and dedicated people, who give us confidence that the IBM company will take full advantage of the large potential that is opening up before us.

#### T. J. Watson, Jr., Now U.S. Ambassador

In 1979, Thomas J. Watson, Jr., resigned from the IBM Board of Directors to assume the post of United States Ambassador to the Soviet Union. It is difficult to express in full measure what Tom Watson has meant to the IBM company as its chief executive officer for 15 years and as a member of the Board for over 32 years. We shall surely miss his wise counsel. We know that IBM employees and stockholders in all parts of the world wish him every success in serving his country in a vital mission.

January 29, 1980 by order of the Board of Directors

Frank T. Cary
Chairman of the Board

When A Ggl

John R. Opel



# Raising Productivity...

Today, much of the world is struggling with rising prices, declining rates of production and unsettled economies. The problems are complex, and solutions to them are hard to come by. Clearly, however, one solution is to increase productivity—to get more done for less—and in that way to do a better job of meeting the needs of society.

Finding more productive ways to do things is what the information industry is all about. Computers and other business machines are the most effective productivity engines of our time. Year after year, technical innovation makes them faster, more reliable and easier to use. And the price keeps going down. Despite years of inflation, the cost of information processing per computation is now only a small fraction of what it was a decade ago.

For the U.S. and world economies, this is highly significant. The rising productivity of information processing translates directly into greater productivity for users:

Manufacturers can increase production yields while improving quality.

Store owners can control complex inventories and avoid both wasteful over-supply and costly out-of-stock conditions.

Hospitals can monitor energy use and trim fuel bills.

Insurance companies can serve many customers quickly and economically.

Farmers can grow and market their crops more efficiently.

In almost every area of business, government and science, a similar productive pattern may be found.

And each year, as the price of information drops still more, many new users find that they, too, can get more useful work done for less.

Pictured on the following pages are some of the productive ways that IBM customers, as well as IBM's own plants, laboratories and offices, are putting information technology to work in all parts of the world.

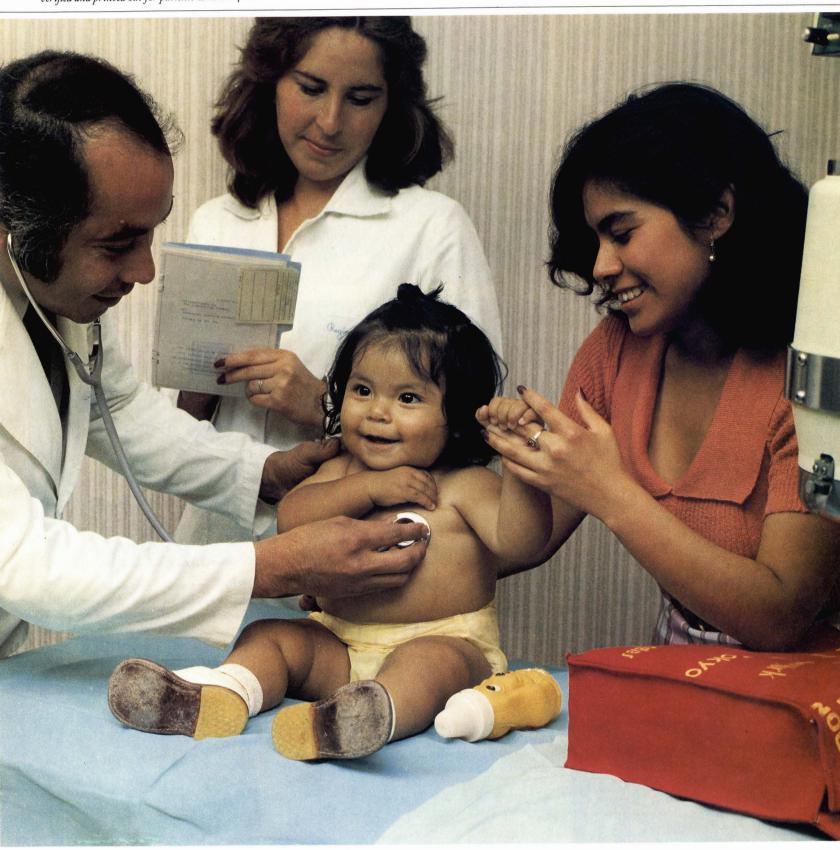
# More Productive Users...



A Southwest cotton cooperative uses an IBM computer network with 325 display terminals to make upto-the-minute market information available to 24,000 cotton farmers in Texas and Oklahoma.



For a medical laboratory with 10 branches in Mexico City, an IBM computer makes possible the processing of an average of 4,000 tests given to 1,600 patients daily, with results verified and printed out for patients within 24 hours.



# More Productive Users...

Personnel of a large California bank can load cash or traveler's checks into cartridges of the new IBM selfservice teller terminal in advance of evening and weekend use, reducing off-hours clerical and accounting costs.





A bus company in Hong Kong that transports an average of 2½ million passengers a day keeps 1,800 buses rolling with the help of an IBM computer that closely monitors an inventory of 6 million spare parts.



Two IBM office systems in the town hall of Casalpusterlengo, Italy, help serve local citizens through more efficient processing of licenses, certificates and other information required to meet many business and personal needs.



A large steel mill in Brazil uses a teleprocessing network and three IBM computers to monitor production, helping make possible an output of more than 3 million tons of steel a year in over 1,000 different grades.

# More Productive New Products...

New IBM 4331 processor, now being delivered in volume from IBM plants in the U.S., West Germany and Japan, offers improved performance and reliability through high-density packaging of memory and logic circuits.

New IBM computers and office products offer users improved productivity in many areas of their operations.

#### More Processing per Dollar

Shipments of the new intermediate-size IBM 4300 processors began in volume in 1979. Featuring the densest packaging of logic and memory circuits yet introduced by IBM, the processors provide both first-time and experienced users with significant price/performance advantages. For example, an IBM 4341 with 2 million characters of main memory has a lower purchase price and an instruction speed considerably faster than that of earlier intermediate IBM systems with smaller memory capacity.

Memory microminiaturization in the processors permits a single inch-square module to store 512,000 bits of information. Such compact circuitry makes the processors easier to service and greatly reduces power, cooling and space requirements. The IBM 4331's main memory of 1 million characters requires less electric power than a 60-watt light bulb.

#### More Storage for Less

A new disk unit permits users of the IBM 4300 processors to attach more than twice the storage capacity available on previous intermediate IBM systems, at substantially lower cost per character. A single new IBM 3370 unit can hold more than 1/2 billion characters of information- more than twice the total in the Encyclopedia Britannica's 30 volumes.

#### Big System 'Building Blocks'

New models of the large-scale IBM 3033 processor offer users a flexible approach to their processing needs. IBM 3033 Group N processors, with either 4 or 8 million characters of memory, can provide 1.3 to 1.8 times the internal performance of the IBM 3032 processor. The new processors can be expanded in a series of "building block" improvements at the user's location, creating more powerful versions of the IBM 3033.

#### Distributed Processing Enhanced

New models of the IBM 8100 information system significantly increase both available main memory and disk storage and also offer improved price/performance. The IBM 8100 is designed primarily to distribute the processing of data economically throughout an organization.



#### 'Intelligent Terminal' System

Announced in January, 1980, was the IBM 5280 distributed data system, featuring "intelligent" terminals that can process information locally as well as communicate with a central computer. Circuitry in the terminals enables them to enter, process and print information at loading docks, branch offices and many other locations.

#### Greater Office Efficiency

The new IBM 6670 information distributor, announced by the Office Products Division, combines electronic communication with highspeed laser printing for both word processing and computing applications, as well as text processing and copying. The IBM 6670 can be used in conjunction with the IBM Office System 6 family of products, IBM mag card typewriters, other

IBM 6670s or suitably programmed computers. Combinations of these products can form information networks, with documents quickly transmitted by telephone.

#### Advanced Text Processing

Introduced by the General Systems Division was the IBM 5520 administrative system, which combines advanced text processing with electronic document distribution. The system is available in four models, with a choice of two display stations, two printers, a magnetic card unit and expandable disk storage. The IBM 5520 enables office personnel to create, store, retrieve, edit and electronically distribute documents that range from single-page memos to multi-page manuals.

# More Productive New Products...

#### Easier Electronic Typing

The IBM Electronic Typewriter 75, the most advanced typewriter yet introduced by IBM, automates many repetitive and time-consuming typing tasks. Designed for the average typing station, it has many features not previously available on IBM typewriters. Microminiaturized logic and memory circuits permit storage of 26 short documents as well as 99 frequently used phrases, repetitive sentences or paragraphs.

#### New Color Terminals

A new IBM color display unit plus a new color printer can enhance a wide range of computer applications. The IBM 3279 color display station can present information in many forms-such as bar and pie charts, line graphs and diagramsin four or seven colors of excellent clarity and

brightness. The IBM 3287 color printer uses a cartridge ribbon to provide printed copies in four colors of the same information shown on the display screen.

Such color displays can simplify and emphasize information in many ways-for example, in presenting sales or financial data, pinpointing inventory shortages or clarifying many business illustrations. The new products were developed at IBM laboratories in Hursley, United Kingdom; Endicott and Kingston, N.Y.; and Raleigh, N.C.

#### Low-Cost Display

A new low-cost Teletype\*-compatible IBM display terminal can be conveniently set up in many locations by a wide range of users.

Enhanced "human factors" characteristics of the IBM 3101 include a screen that may be swiveled

or tilted to avoid glare from room lighting. Also, the keyboard is movable and may be placed at a comfortable distance and angle from the screen. The terminal operates with both small and large-scale IBM computers. The unit is programmed so that the operator can correct minor malfunctions without the aid of an IBM service representative. If more adjustment is needed, customers may return basic elements of the terminal to IBM repair centers. The terminal was developed at the IBM laboratory in Fujisawa, Japan. \*Trademark of the Teletype Corporation

#### Versatile Retail Terminals

Two new IBM store systems can be adapted by individual customers for maximum productive use. Both can be linked to IBM computers.

The IBM 5260 retail system is primarily for the



Enhanced with larger memory in 1979, the IBM System/38 enables operators at as many as 40 display terminals and printers in different parts of an enterprise to process information concurrently.

first-time data processing user or the retailer with small outlets. Introduced by the General Systems Division, the system has point-of-sale terminals that can register sales information and also handle applications such as price lookup and sales analysis. Users can "personalize" the system by answering a series of questions about their businesses via the terminal keyboard.

The IBM 3680 programmable store system, introduced by the Data Processing Division, is designed for the experienced data processing user operating a chain of many retail outlets, such as drug, variety and convenience stores. The system's terminals can be programmed to process tax computations, provide check approvals and perform other tasks.

#### Processing in Japanese and Chinese

IBM products able to process information in the Japanese and Chinese written languages now offer greater productivity for many customers.

New IBM printing, display and data entry products, plus extensive new programming, permit direct processing of the graphic symbols, or ideographs, of the Japanese and Chinese languages. The new products can be used with many IBM computers.

In Japan, previously, considerable manual work has been required to encode the ideographs into phonetic characters and, after processing, to decode into ideographs. Chinese computer users have lacked even a phonetic substitute and have been required to process language information entirely in English.

#### Dictation Flexibility

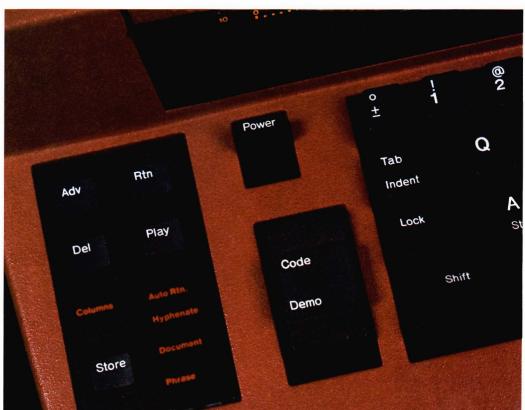
A new pocket-sized, 10-ounce dictation unit broadens the flexibility of IBM customers in meeting many dictation needs. The new IBM executive recorder employs mini-cassettes that provide 30 minutes of recording time.

#### **Economical Switching System**

Introduced for marketing in several European countries was the IBM 1750 switching system for handling both voice and data communications. The system can connect up to 760 telephone extensions. It offers an organization more than 80 different aids in handling telephone traffic, such as indicating the number of a calling extension. Developed at the IBM laboratory in LaGaude, France, the IBM 1750 is a lower-cost version of the larger IBM 3750 switching system introduced in 1973.



New IBM system for processing the Japanese and Chinese written languages includes a display with a special keyboard of 254 keys for entering and displaying thousands of complex characters.



Among many features of the new IBM Electronic Typewriter 75 are an illuminated margin scale and red message lights (lower left) that simplify machine use for the typist. The word "Columns," for example, signals the machine's readiness for automatic typing of tabular material.

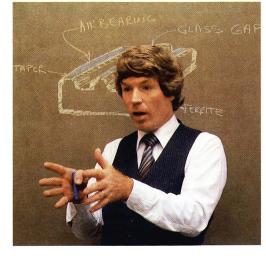
# More Productive Ideas...



Dr. Edward Eichelberger, Kingston, N.Y., developed a method of rapidly and accurately testing complex logic chips used in more than 40 IBM computer products.

Below: Dr. Joan Mitchell, Yorktown Heights, N.Y., originated and helped develop a simplified experimental data compression technique for fast facsimile trans-

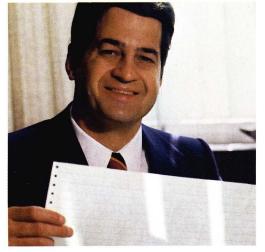
mission over telephone lines.



Above: Michael Warner, San Jose, Calif., invented a new disk recording head that raised the read/write speed available in IBM disk products to 1.2 million characters a second-almost 50% faster than before.

Right: Dr. Siegfried Wiedmann, Boeblingen, West Germany, created design concepts that have raised the performance and reliability of very dense computer

circuits used in many IBM products.



Michael Fagan, Kingston, N.Y., created IBM's Software Inspection Process, which permits early



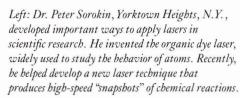
detection of errors in computer programs.



Left: Rita Mack, Manassas, Va., managed a project that applied advanced new software methods to provide more efficient, higher-quality programming for the sonar system being developed by IBM for U.S. Navy Trident submarines.

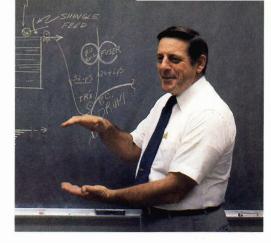






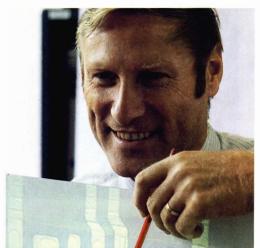
Right: Ernest Kollar, Boulder, Colo., helped develop ways to make paper feeding faster and more reliable in the IBM Series III copier and IBM 6670 information distributor, while also lowering manufacturing costs.

Left: Thomas Greaves, Menlo Park, Calif., directed development of power management programming for the IBM Series/1 computer that has produced sizable energy savings for department stores, hospitals and many other users.

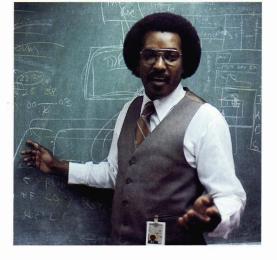




Above: The leadership of IBM Japan's Shinji Nishitani was vital to development of a computer-controlled newspaper production system for automatic handling of typography and photographs in page makeup for two large Japanese papers.

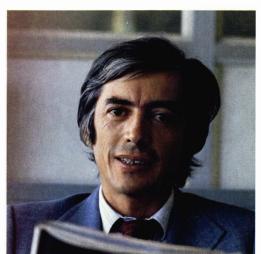






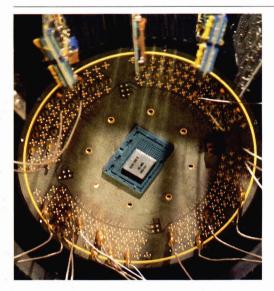
Above: Walter Cuby managed a complex effort to insure the timely delivery of advanced computer checkout programs to NASA's Space Shuttle operation in Houston. This highly reliable programming has lowered NASA's computer maintenance costs.

Left: Mary Williams, Poughkeepsie, N.Y., directed the development of a means of combining and testing IBM software products before delivery to the user-a method that has significantly reduced the time, money and personnel cost of installing IBM software.



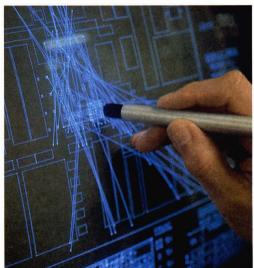
Below: Philippe Riboulet directed the development of computer programs for automatic storage and retrieval of products and parts at IBM France's new materials distribution center in Montpellier.

# More Productive Technology...

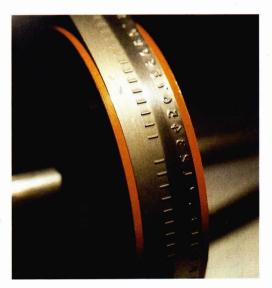


Testing of the complex functions of logic and memory circuits for future IBM computers is speeded by new IBM-designed equipment that permits quick computer analysis of the circuits.

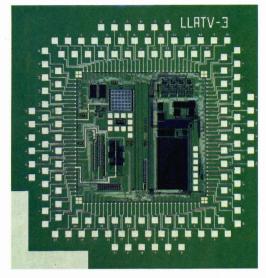
> Right: Laser technology in the new IBM 6670 information distributor permits printing up to 1,800 characters a second and provides four type styles, printed on both sides of letter-sized paper.



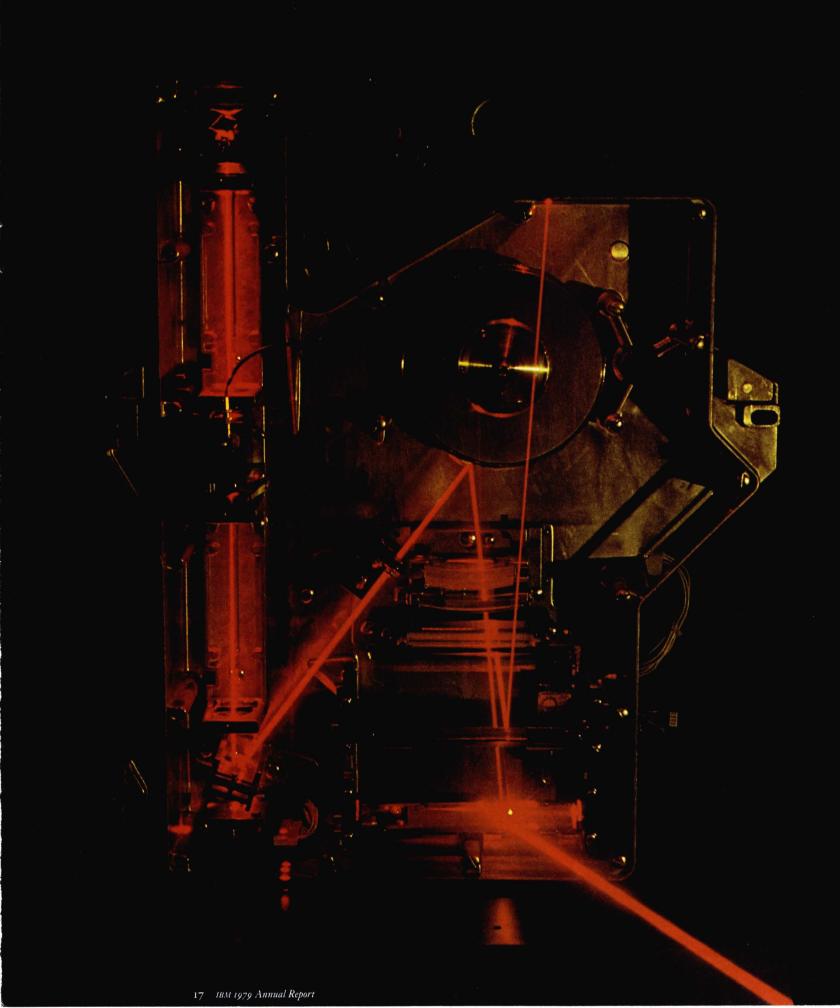
Through simulation of complex circuit functions, IBM's advanced Engineering Design System (EDS) has speeded the development of more than 100 IBM products. Over 30 large IBM computers support EDS throughout the company.



Steel printing band of enhanced IBM 3262 low-cost computer printer travels at 110 inches per second in printing 650 lines per minute. Developed at Boeblingen, West Germany, and Endicott, N.Y., the new model sells for considerably less than previous comparable IBM printers.



Experimental IBM silicon chip, 1/6-inch square, contains 4,000 logic switches in the black rectangular areaconsiderably denser than circuitry in present computers. Experiments have shown that such chips can contain 10,000 logic switches or 250,000 bits of memory.



# More Productive Marketing and Service...

IBM has many new programs that lower marketing and service costs while improving productivity for customers and IBM.

IBM Business Computer Centers in more than 70 locations in the U.S. and abroad are expanding the marketing of small computers and other products. The centers offer business and professional people a place to come for demonstrations, education and purchase of products off the floor.

IBM retail sales of typewriters and office product supplies are being tested in IBM stores in Buenos Aires and London, with supplies also being sold in Paris.

A National Marketing Center has been established by the Data Processing Division to provide customers with coast-to-coast, toll-free telephone information on selected IBM products. The center also arranges for product demonstrations and accepts product orders.

Installation support centers at 43 locations have been opened for customers of the new IBM 4341 and IBM 4331 processors.

Telephone selling of supplies for computer products is improving customer coverage and sales productivity for the Information Records Division. IBM "Telemarketing" representatives, working at terminals that display customer needs, can handle many accounts in a short period of time.

Direct-response advertising-selling by mail and telephone-is being used by the Office Products Division as a supplement to other advertising.

Computer-assisted dispatch (CAD) of IBM customer engineers is expediting service of computers and office products at customer sites. IBM is now well into nationwide installation of close to 100 CAD systems, using the IBM Series/1 computer. A display screen shows the dispatcher the IBM customer engineer best able to respond to a service call. The method is much faster and more accurate than the previous manual approach. CAD systems are also being used in IBM operations overseas.

Software support centers for use by computer customers have also been established by IBM. At the Field Engineering Division's centers, for example, IBM representatives are the first point of contact for customers who telephone for help with programming problems, information on preventive service or assistance in program installation. Toll-free calls may be made at any hour, seven days a week. Many inquiries are resolved quickly in this way, eliminating the need for an IBM representative to visit the customer site.

Programming competency centers of the General Systems Division provide a telephone information service that saves time and money for customers and IBM.



# Stockholder Information...

The Annual Report is only one of the sources of information available to IBM stockholders and the general public. Stockholders regularly receive the following:

#### Quarterly Reports

in April, July and October contain financial results and other news about the company.

The Notice of Annual Meeting and Proxy Statement, mailed to each stockholder in March, describes the items of business to be voted on at the Annual Meeting. The Proxy also provides biographies of the Board's nominees for director, their IBM shareholdings, their principal affiliations with other companies or organizations, and other information about the company.

The Report of the IBM Annual Meeting, published in June, summarizes the activities at the Annual Meeting, including the Chairman's remarks, questions and answers of general interest, and the results of voting on items of business.

The following additional information may be obtained without charge from the IBM Stockholder Relations Department, 717 Fifth Avenue, New York, N.Y. 10022:

#### The Form 10-K Annual Report

to the Securities and Exchange Commission provides further details on IBM's business, including a list of subsidiaries not contained in the Annual Report. Form 10-K will be available in April.

The Form 10-Q Quarterly Report to the Securities and Exchange Commission is available in May, August and November.

A Transcript of the Annual Meeting.

An IBM Dividend Reinvestment Plan Booklet explains how stockholders may automatically reinvest dividends toward the purchase of additional shares of IBM stock, as well as make optional additional investments for that purpose.

**IBM Equal Opportunity Programs** 

in the United States are outlined in a document describing programs for women, minorities, handicapped persons and Vietnam-era veterans, as well as reviewing IBM's affirmative action efforts in the community.

#### **IBM Business Conduct Guidelines**

is a booklet sent to IBM employees worldwide describing the ethical and business principles that the company sets for the conduct of its business. It was first issued in 1961. The revised current edition has been translated into 15 languages.

IBM U.S. Retirement Plan Information, which is given to all regular U.S. employees, includes the principal provisions of the plan, options available, a list of the trustees and a summary report on the plan's financial status.

#### IBM Operations in South Africa

are summarized in a report of the company's business in that country. This report contains a statement of personnel principles and practices to which IBM adheres in doing business in South Africa. This statement has been distributed to IBM employees there.

IBM Annual Report translations and recordings are available. The report is translated into French, German and Japanese. An audio cassette recording in English is available for the blind.

#### Service for Deaf Stockholders.

The IBM Stockholder Relations Department has a service that enables deaf stockholders who have access to a teletypewriter to communicate with the department's New York City office. Stockholders who wish to use the service should dial the IBM teletypewriter connection number (212) 223-3150 between 9 a.m. and 5 p.m., New York time, on any weekday.

#### IBM Stock Transfer

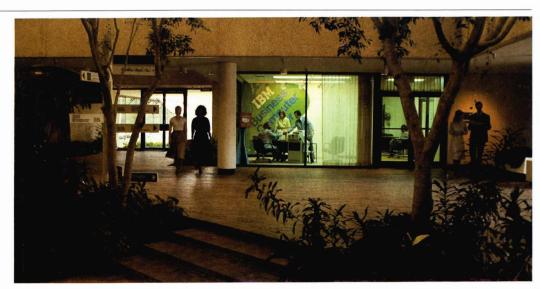
The IBM Stockholder Relations Department, located at 717 Fifth Avenue, New York, N.Y. 10022, maintains the stockholder records, transfers stock, and can answer questions regarding stockholders' accounts. Stockholders wishing to transfer stock to someone else or to change the name on a stock certificate should contact the department for transfer instructions. Stock certificates are valuable and should be safeguarded, since replacement takes time and requires payment of a surety bond premium by the stockholder. If a stock certificate is lost, stolen or destroyed, Stockholder Relations should be notified. Registered mail should be used whenever stock is mailed.

#### The 1980 Annual Meeting

of stockholders will be held in the Arie Crown Theatre at McCormick Place, Chicago, Ill., on Monday, April 28th, at 10 a.m. A notice of the meeting, proxy statement, and proxy voting card will be mailed to stockholders in late March.

Left: New "briefcase" computer enables IBM customer engineers to speed diagnostic testing of IBM computer products in the field without the need to rely on the customer's system or a remote IBM computer.

New IBM Business Computer Center in Nashville, Tenn., is one of 50 opened in the U.S. by the General Systems Division for demonstration, education and sale of small computers and other supplies.



# Report of Management

### Report of Independent Accountants

Responsibility for the integrity and objectivity of the financial information presented in this Annual Report rests with IBM management. The financial statements contained herein have been prepared in conformity with generally accepted accounting principles, applying certain estimates and judgments as required.

IBM maintains a highly developed system of internal accounting control. It consists, in part, of organizational arrangements with clearly defined lines of responsibility and delegation of authority. We believe this system provides reasonable assurance that transactions are executed in accordance with management authorization, and that they are appropriately recorded, in order to permit preparation of financial statements in conformity with generally accepted accounting principles and to adequately safeguard, verify and maintain accountability of assets. An important element of the system is a continuing and extensive internal audit program.

To assure the effective administration of internal control, we carefully select and train our employees, develop and disseminate written policies and procedures, provide appropriate communication channels, and foster an environment conducive to the effective functioning of controls. We continue to believe that it is essential for the company to conduct its business affairs in accordance with the highest ethical standards, as set forth in the IBM Business Conduct Guidelines. These guidelines, translated into numerous languages, are distributed to employees throughout the world, and reemphasized through internal programs to assure that they are understood and followed.

Price Waterhouse & Co., independent accountants, are retained to examine IBM's financial statements. Their examination is conducted in accordance with generally accepted auditing standards and forms the basis for their report as to the fair presentation, in the financial statements, of the company's financial position, operating results and changes in financial position. Their audit procedures include a review of IBM's system of internal accounting control, and a testing of the accounting procedures and records.

The Audit Committee of the Board of Directors is composed solely of outside directors, and is responsible for recommending to the Board the independent accounting firm to be retained for the coming year, subject to stockholder approval. The Audit Committee meets periodically and privately with the independent accountants, with our internal auditors, as well as with IBM management, to review accounting, auditing, internal accounting controls and financial reporting matters.

Frank T. Cary Chairman of the Board

Dean P. Phypers Sr. Vice President, Finance & Planning To the Stockholders and Board of Directors of International **Business Machines Corporation** 

In our opinion, the accompanying consolidated financial statements, appearing on pages 21 through 31, present fairly the financial position of International Business Machines Corporation and its subsidiary companies at December 31,1979 and 1978, and the results of their operations and changes in financial position for the years then ended, in conformity with generally accepted accounting principles consistently applied. Also, in our opinion, the five-year comparative consolidated summary of operations presents fairly the financial information included therein. Our examinations of these statements 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.

ice Waterlause & Co

# Consolidated Statement of Earnings for the year ended December 31:

		1979	197
<b>国际基础</b>		(Dollars in thousands exce	
ross Income from Sales, entals and Services:	Sales . Rentals and services	\$ 9,472,649 13,390,127 22,862,776	\$ 8,754,79 12,321,29 21,076,08
	Cost of sales Cost of rentals and services Selling, development and engineering, and general and administrative expenses Interest on debt Other income, principally interest Earnings before income taxes	\$ 3,266,605 5,146,353 9,205,367 140,487 17,758,812 5,103,964 449,295 5,553,259	\$ 2,838,225 4,645,800 8,151,129 55,175 15,690,32 5,385,76 411,80 5,797,56
et Earnings	Provision for U.S. Federal and non-U.S. income taxes	\$_3,011,259	
	Per share.  Average number of shares outstanding:  1979-583,373,269  1978-584,428,584	\$ 5.16	\$ 5.

The notes on pages 25 through 30 are an integral part of this statement.

			(Dollars	in thousands)	197
Assets		1	(Dollars	In thousands)	
Current Assets:	Coch	6 0			
	Cash	\$ 297,839		\$ 273,799	
	Notes and accounts receivable, less allowance:	3,4/3,304		3,756,887	
	1979, \$188,318; 1978, \$174,133	4,671,315		4,134,458	
	Inventories, at lower of average cost or market	1,841,791		1,561,382	
	Prepaid expenses	566,436		594,385	
Plant, Rental Machines			\$ 10,850,765		\$ 10,320,91
	t	22,744,188		19,175,171	
na o mer rroperty, at cos	Less: Accumulated depreciation	10,551,169		9,872,943	
			12,193,019		9,302,22
Deferred Charges and Other	er Assets		1,486,190		1,148,23
			\$ 24,529,974		\$ 20,771,37
Liabilities and Stockh	roldore' Equity				
Liabilities and Stockh	loiders Equity				
Current Liabilities:	H.C. E-Jamel and J. and H.C. in an arrangement of the control of t				
	U.S. Federal and non-U.S. income taxes.  Accounts payable and accruals	\$ 1,717,634		\$ 1,459,710	
	Loans payable	3,794,525 932,729		3,607,318 241,484	
	Dividend payable	-		501,610	
			\$ 6,444,888		\$ 5,810,12
	redits		139,349	5.5535	109,88
	demnities and Retirement Plans		1,395,144	<b>国区三元集团</b>	1,072,22
Stockholders' Equity:			1,509,350		285,53
	Capital stock, par value \$1.25 per share	3,973,911		3,942,164	
	Shares authorized, 650,000,000				
	Issued: 1979 – 583,973,258; 1978 – 583,581,958			自由生物的	
	Retained earnings	11,012,037		9,575,454	
	Less: Treasury stock, at cost	14,985,948		13,517,618	
	Shares: 1979 – 378,715; 1978 – 340,504				
			14,961,235	<b>自国到其中</b> 加	13,493,61
			\$ 24,529,974		\$ 20,771,37
he notes on pages 25 throu	igh 30 are an integral part of this statement.				
	22 IPM 1070 Annual Pepart				

		1979	197
		(Dollars in thousa	inds)
ource of Working Capital:			
	Net earnings	\$ 3,011,259	\$ 3,110,50
	Items not requiring the current use of working capital:		
	Depreciation	1,970,248	1,823,7
	Net book value of rental machines		
	and other property retired or sold	778,863	562,4
	Other	352,385	286,5
	Total from operations	6,112,755	5,783,3
	Proceeds from stock sold or issued under employee plans	416,314	341,0
	Long-term borrowings	1,449,505	74,1
		7,978,574	6,198,5
oplication of Working Capi	tal:		
opilication of working Capi	Investment in plant and other property	1,779,250	1,322,1
	Investment in rental machines		
	investment in rental machines	5,990,982	2,723,4
	Less: Depreciation of manufacturing facilities capitalized in	3,990,982	4,045,5
	rental machines	251.080	2162
	Tental machines	351,080	246,3
	In angests in defermed abanque and other assets		3,799,1
	Increase in deferred charges and other assets	337,955	131,7
	Cash dividends paid or payable	1,505,962	1,763,1
	Reduction of long-term debt.	145,681	44,3
	Treasury stock purchased for employee plan.	453,986	373,1
	Capital stock purchased and canceled	9 - 9 - 196	440,2
		8,083,486	6,551,8
ecrease in Working Capital		\$_(104,912)	\$ (353,2
hanges in Working Capital			
manges in working cupital	Cash and marketable securities	\$ (259,463)	\$(1,375,9
	Notes and accounts receivable.	536,857	1,030,1
	Inventories and prepaid expenses	252,460	594,0
	U.S. Federal and non-U.S. income taxes.	(257,924)	6,5
	Accounts payable and accruals	(187,207)	(460,4
	Loans payable	(691,245)	(69,0
	Loans payable	(091,24)/	(09,0
		501 610	(78 4
	Dividend payable	501,610	$\frac{(78,4)}{(252.2)}$
		<u>501,610</u> (104,912)	$\frac{(78,4)}{(353,2)}$
orking Capital at beginning	Dividend payable		

The notes on pages 25 through 30 are an integral part of this statement.

Consolidated Statement of Stockholders' Equity for the year ended December 31:

		Capital Stock	Retained Earnings	Treasury Stock	Total
			(Dollars in	thousands)	
1978					<b>野管</b> [新
	Balance, January 1, 1978	\$ 3,961,470	\$ 8,677,680	\$ (20,677)	\$ 12,618,473
	Net earnings Cash dividends declared (\$501,610		3,110,568		3,110,568
	payable March 10, 1979)		(1,763,102)	議事程(44	(1,763,102
	Capital stock issued under employee plans		(1,703,102)		(1,703,102
	(303,903 shares)	17,275			17,275
	Purchases (5,571,100 shares) and sales				
	(5,541,948 shares) of treasury stock under				
	employee plan–net		(55,911)	(3,331)	(59,242
	(6,916,800 shares)	(46,449)	(393,781)		(440,230
	Tax reductions applicable to stock related to	(40,449)	(393,701)		(440,230
	employee plans	9,868			9,868
	Balance, December 31, 1978	3,942,164	9,575,454	(24,008)	13,493,610
1979	N				
	Net earnings  Cash dividends declared		3,011,259 (1,505,962)		3,011,259
	Capital stock issued under employee plans		(1,505,902)		(1,505,902
	(391,300 shares)	23,366			23,366
	Purchases (6,357,500 shares) and sales			生 声 运	
	(6,319,289 shares) of treasury stock under				
	employee plan-net		(68,714)	(705)	(69,419
	Tax reductions applicable to stock related to employee plans	0 - 0 -			8,381
	Balance, December 31, 1979	\$ 3,973,911	\$ 11,012,037	\$ (24,713)	\$ 14,961,235
	Bulance, December 31, 19/9	3,9/3,911	11,012,037	<u> </u>	14,901,233
			ME SELE		
		THE REPORT			
				CHARLES !	
The notes on page	ges 25 through 30 are an integral part of this statement.				

# **International Business Machines Corporation** and Subsidiary Companies

Notes to Consolidated Financial Statements:

#### Significant Accounting Policies

Principles of Consolidation: The consolidated financial statements include the accounts of International Business Machines Corporation and its U.S. and non-U.S. subsidiary companies.

Translation of Non-U.S. Currency Amounts: Non-U.S. assets and liabilities are translated to U.S. dollars at year-end exchange rates, except that inventories and plant, rental machines and other property are translated at approximate rates prevailing when acquired. Income and expense items are translated at average rates of exchange prevailing during the year, except that inventories charged to cost of sales and depreciation are translated at historical rates. Exchange gains and losses are included in earnings currently.

Gross Income: Gross income is recognized from sales when the product is shipped or in

certain cases upon customer acceptance, from rentals in the month in which they accrue, and from services over the contractual period or as the services are performed. Rental plans include maintenance service and contain discontinuance and purchase option provisions. Rental terms are predominantly monthly or for a two-year period, with some covering periods up to five years.

Depreciation: With minor exceptions, depreciation of U.S. properties is computed using the sum of the years-digits method. Depreciation of non-U.S. properties is computed using either accelerated methods or the straight-line method.

Retirement Plans: Current service costs are accrued currently. Prior service costs resulting from improvements in the plans are amortized generally over 10 years.

Expenses: Marketing expenses and development and engineering expenses are charged against income as they are incurred.

Income Taxes: Income tax expense is based on reported earnings before income taxes. It thus includes the effects of timing differences between reported and taxable earnings that arise because certain transactions are included in taxable earnings in other years. Investment tax credits are deferred and amortized as a reduction of income tax expense over the average useful life of the applicable classes of property.

1	Non-U.S. Operations	1979	1978

Non-U.S. Operations		1979	1978
		(Dollars in	thousands)
At end of year:	Net assets employed		
	Current assets	\$ 5,826,096	\$ 5,690,104
	Current liabilities.	3,608,173	3,345,561
	Working capital	2,217,923	2,344,543
	Plant, rental machines and other property, net	5,476,825	4,424,520
	Deferred charges and other assets	839,417	737,910
		8,534,165	7,506,973
	Reserves for employees' indemnities and retirement plans	1,395,144	1,072,226
	Long-term debt	294,113	206,034
		1,689,257	1,278,260
	Net assets employed	\$ 6,844,908	\$ <u>6,228,713</u>
	Number of employees	146,800	144,593
For the year:	Gross income from sales, rentals and services	\$ 12,244,067	\$ 11,040,442
	Net earnings	\$	\$ 1,560,143
	Capital expenditures	\$_2,800,373	\$ <u>2,162,485</u>

Undistributed earnings of non-U.S. subsidiaries included in consolidated retained earnings amounted to \$5,529 million at December 31, 1979

and \$5,002 million at December 31, 1978. These earnings are indefinitely reinvested in non-U.S. operations. Accordingly, no provision has

been made for taxes that might be payable upon remittance of such earnings.

#### Research and Development

Research and development expenses amounted to \$1,360 million in 1979 and \$1,255 million in 1978.

#### Retirement Plans

**Taxes** 

The company and its U.S. subsidiaries have trusteed, non-contributory retirement plans, covering substantially all regular and part-time employees, for which accrued costs are funded. At December 31, 1979, there were 11,715 individuals receiving benefits under the plans. Most subsidiaries outside the United States have retirement plans under which funds are deposited with trustees, reserves are provided, or annuities are purchased under group contracts. The cost of all plans totaled \$971 million for the year 1979, compared with \$877 million for the year 1978. At December 31, 1979, unfunded or unaccrued prior service costs under all plans amounted to approximately \$788 million.

As of December 31, 1979, the actuarially computed value of retirement benefits vested under the terms of certain plans, which included a

significant portion of the above-mentioned prior service costs, exceeded the market value of fund assets and reserves of such plans by approximately \$190 million.

#### Notes and Accounts Receivable

At December 31, 1979, notes and accounts receivable include \$626 million of installment receivables maturing after one year, net of unearned interest. Of this amount, 60% matures in 1981 and the balance in decreasing amounts through 1984.

1979

1978

	(Dollars in	thousands)
Provision for U.S. Federal and non-U.S. income taxes  Real estate, personal property, state and local franchise  (including state income taxes of \$127 million in 1979 and	\$ 2,542,000	\$ 2,687,000
\$165 million in 1978), social security and other taxes  Total	1,315,000 \$ 3,857,000	1,185,000 \$ <u>3,872,000</u>
The portion of the provision for U.S. Federal and non-U.S. income taxes applicable to  U.S. operations was \$1,238 million in 1979 and \$1,366 million in 1978, and to non-U.S.	operations was \$1,304 mil \$1,321 million in 1978.	lion in 1979 and
Marketable Securities	December 31, 1979	December 31, 1978
U.S. Government securities	\$ 1,295,677	\$ 1,253,204
State and municipal securities	18,211	70,933
Time deposits and other bank obligations	1,667,912	2,003,937
Corporate bonds, notes and other fixed-term obligations	491,584	428,813
Total	\$ 3,473,384	\$ 3,756,887
Market value	\$ <u>3,475,444</u>	\$ <u>3,767,225</u>
Plant, Rental Machines and Other Property	December 31, 1979	December 31, 1978
Land and land improvements	\$ 568,845	\$ 496,714
Buildings	3,536,435	2,950,116
Factory, laboratory and office equipment	4,897,358	3,988,760
	9,002,638	7,435,590
Less: Accumulated depreciation	3,736,268	3,211,983
	5,266,370	4,223,607
Rental machines and parts	13,741,550	11,739,581
Less: Accumulated depreciation	6,814,901	6,660,960
	6,926,649	5,078,621
Total	\$12,193,019	\$ 9,302,228

Rental machines and parts include machines installed with IBM in the amount of \$1,509 million at December 31, 1979 and \$1,359 million at December 31, 1978. Accumulated depreciation for

these machines was \$1,180 million at December 31, 1979 and \$1,108 million at December 31, 1978.

Depreciation of plant, rental machines and other property charged to costs and expenses

amounted to \$1,970 million in 1979 and \$1,824 million in 1978.

	(Dollars in	thousands)
Short-term borrowings:  Repurchase obligations secured by marketable securities.  Other loans.	\$ 555,351 338,538	\$ — 201,762
Current portion of long-term debt	893,889 38,840 \$ 932,729	201,762 39,722 \$ 241,484

The weighted average interest rate on short-term borrowings at December 31, 1979, was 13.7%.

The average balance of such borrowings in 1979 was \$664 million at a weighted average interest

rate of 13.6%. The largest amount outstanding at any month end during 1979 was \$1,392 million.

Long-Term Debt	December 31, 1979	December 31, 1978
International Business Machines Corporation:		LERE SPECE
9½% notes due 1986	\$ 500,000	s –
93/8% debentures due 2004 (with sinking fund payments 1985 to 2003).	500,000	
10.80% notes due 1983 to 1986	300,000	_
3½% promissory notes		79,500
Subsidiaries operating in non-U.S. countries:	1,300,000	79,500
(11.3% average interest rate at December 31, 1979)	294,355	206,034
	1,594,355	285,534
Less: Unamortized discount, related principally to the		
9½% notes and 9¾% debentures	4,997	
Total	\$ <u>1,589,358</u>	\$ 285,534
Annual maturity and sinking fund requirements on		
long-term debt outstanding at December 31, 1979 are as follows: 1981 \$ 51,721		
1982 30,921		
1983 100,760		
1984 143,275		
1985 115,501		
1986 and beyond 1,152,177		
\$1,594,355	STELL SEPTEMBER	

#### Lines of Credit

At December 31, 1979, the company had unused lines of credit available with a number of U.S. banks. These lines of credit permit the company to borrow, from time to time, up to an aggregate of \$1,565 million outstanding at any time, at interest rates not to exceed the banks' prime rate. In addition, a number of non-U.S. subsidiaries had available unused lines of credit of approximately \$800 million. Interest rates on borrowings would vary from country to country depending on local market conditions. About \$160 million of such unused lines require the payment of commitment fees which generally range from ½ % to ½%.

#### Capital Stock

At the Annual Meeting on April 30, 1979, stockholders approved a four-for-one stock split, effective May 10, 1979. As a result, the number of authorized shares was increased from 162,500,000 (par value \$5.00) to 650,000,000 (par value \$1.25) and the company issued 437,835,574 additional shares of capital stock. All references in the Consolidated Financial Statements and related notes to number of shares, per share amounts, and price per share for periods prior to May 11, 1979, have been adjusted for this stock split.

#### Stock Purchase Plan

The 1976 Employees Stock Purchase Plan enables employees who are not participants in a stock option plan to purchase IBM's capital stock through payroll deductions of up to 10% of their compensation. The price an employee pays for a share of stock is 85% of the average market price on the date the employee has accumulated enough money to buy a share. During 1979, 6,319,289 treasury shares were sold to employees for \$385 million. At December 31, 1979, 15,040,115 shares, including 8,000,000 reserved unissued shares, remain available for purchase under the Plan.

#### Stock Option Plans

The stock option plans provide for granting officers and other key employees options to purchase IBM's capital stock at 100% of the market price on the day of grant. Options have a maximum duration of 10 years and may be exercised in four annual installments, commencing one year from date of grant.

The following table summarizes stock option transactions during 1979:

	Number of Shares		
	Under Option	Available for Option	
Balance at			
January 1, 1979	10,334,747	5,605,424	
Options granted	1,885,568	(1,885,568)	
Options terminated	(47,581)	8,919	
Options exercised	(337,619)	_	
Balance at			
December 31, 1979	11,835,115	3,728,775	
Exercisable at			
December 31, 1979	7,561,464		

IBM received \$19.2 million for the 337,619 shares purchased during 1979. The 11,835,115 shares under option at December 31, 1979, are at option prices ranging from \$41.60 to \$85.40 per share.

#### **Exchange Gains and Losses**

Net earnings in 1979 include exchange losses of \$52 million, resulting from fluctuations in the value of the U.S. dollar in relation to other currencies. This consists principally of unrealized losses from the translation of foreign currency assets and liabilities, and compares with exchange gains of \$113 million in the year 1978.

#### Rental Expense and Lease Commitments

Rental expense amounted to \$319 million in 1979 and \$278 million in 1978. Minimum rental commitments, in millions of dollars, under non-cancellable leases for 1980 and thereafter are as follows: 1980, \$301; 1981, \$226; 1982, \$166; 1983, \$122; 1984, \$84; and after 1984, \$366. These leases are principally for the rental of office premises. Many of the leases contain renewal options and many provide for the payment of a proportionate share of maintenance, insurance and taxes in addition to the minimum annual rentals. The above amounts exclude minor amounts of sublease income.

#### Litigation

In January, 1969, the Department of Justice filed a civil antitrust complaint against IBM under Section 2 of the Sherman Antitrust Act, charging the company with monopolizing commerce in general purpose digital computers in the United States. Trial of the case began in May, 1975, and is currently in progress.

The government continues to seek divestiture relief, requesting that IBM be reorganized into several independent and competing organizations and that IBM be enjoined from continuing its alleged monopolistic practices.

The lawsuit filed by Greyhound Computer Corporation in 1969, alleging Federal antitrust law violations, is in the pretrial discovery stage for a second trial. An earlier trial of Greyhound's claims in 1972 had resulted in a directed verdict in favor of IBM, but in 1977 the United States Court of Appeals for the Ninth Circuit granted Greyhound's petition for a new trial. Greyhound seeks damages in the amount of \$348 million, after trebling, and injunctive relief.

Six private lawsuits instituted against IBM in 1973 and 1974, alleging Federal antitrust law violations, remain in progress. The plaintiffs in these actions seek damages, trebled in accordance with the antitrust laws, and in some cases, injunctive relief.

The four cases which have been tried thus far have resulted in the dismissal of the antitrust claims against IBM. In the California Computer Products case, a District Court order directing a verdict in favor of IBM and dismissing the action was affirmed by the United States Court of Appeals for the Ninth Circuit. California Computer Products claimed damages which, after trebling, aggregate \$306 million.

In the Forro Precision case, \$36 million in damages, after trebling, were sought. After trial, the antitrust charges against IBM were dismissed, and non-antitrust damage verdicts of \$2.7 million for Forro and \$.3 million for IBM were entered. Both parties are appealing.

Memorex Corporation, on behalf of itself and two of its subsidiaries, sought \$3,150 million in damages, after trebling. In a trial of the major portion of this claim, involving Memorex Corporation and a U.S. subsidiary, after the jury was unable to reach a verdict, the District Court entered an order directing a verdict in favor of IBM and dismissing the action. Memorex is appealing the decision.

Damages sought in the action brought by Transamerica Computer Company total \$390 million after trebling. After the jury was unable to reach a verdict, the District Court decided the case in IBM's favor. Transamerica is appealing.

The two other lawsuits, in which the plaintiffs seek damages aggregating \$276 million after trebling, remain in the pretrial discovery stage.

IBM has denied the charges in all eight of these cases and is vigorously defending each action.

An investigation of IBM's business practices by the Commission of the European Economic Community, commenced in 1974, continues. No charges have been filed.

#### Quarterly Financial Data (Unaudited)

Summarized quarterly financial data (in millions of dollars except for per share amounts) for 1979 and 1978 is as follows:

1979	Gross Income	Gross Profit	Net Earnings	Per Share
First Second	\$ 5,295 5,355	\$ 3,434 3,374	\$ 667 667	\$ 1.14 1.15
Third Fourth	5,384	3,396 4,246	669	1.14
	\$ 22,863	\$ 14,450	\$ 3,011	\$ 5.16
1978				
First	\$ 4,432	\$ 2,868	\$ 589	\$ 1.00
Second	4,921	3,184	691	1.19
Third	5,285	3,443	816	1.39
Fourth	6,438	4,097	1,015	1.74
	\$ 21,076	\$ 13,592	\$ 3,111	\$ 5.32

#### Geographic Area and Industry Segment Information

Geographic Areas

For purposes of segment reporting, financial information by geographic area and industry segment for the years 1979, 1978, and 1977 is summarized below.

It should be recognized in connection with the geographic area and industry segment information, that there exist material interdependencies and overlaps among IBM's operating

units. The reported information follows IBM's administrative profit centers, and does not take into account significant intercenter dependencies and overlaps with respect to engineering, manufacturing, components, technologies and know-how, business expertise, products and customers, to the extent such activities are not reasonably quantifiable or measurable. In addition, the allocations made of indirect and common costs, and jointly used assets, involved

the extensive use of estimation techniques. Accordingly, the information is provided for purposes of achieving an understanding of IBM's operations, but may not be indicative of the financial results of, or investments in, the reported areas and segments were they independent organizations, nor useful for comparisons with operations of other companies.

1977

\$ (1,209)

\$ 18,978

(17)

(272)

1979

\$ (2,042)

\$ 22,863

\$ 3,011

\$ 24,530

(38)

(446)

		(Dollars in millions)	
United States Gross income—Customers Interarea transfers Total Net earnings Assets at December 31.	\$ 10,619 1,101 \$ 11,720 \$ 1,612 \$ 12,631	\$ 10,036	\$ 9,008 675 \$ 9,683 \$ 1,503 \$ 10,007
Europe/Middle East/Africa Gross income — Customers Interarea transfers Total Net earnings Assets at December 31.	\$ 8,837 \$ 9,368 \$ 1,082 \$ 8,987	\$ 7,778 392 \$ 8,170 \$ 1,124 \$ 7,876	\$ 6,391 284 \$ 6,675 \$ 889 \$ 6,650
Americas/Far East Gross income—Customers Interarea transfers Total Net earnings Assets at December 31.	\$ 3,407 410 \$ 3,817 \$ 355 \$ 3,358	\$ 3,262 304 \$ 3,566 \$ 460 \$ 3,145	\$ 2,734 250 \$ 2,984 \$ 344 \$ 2,593
Eliminations			

In the Europe/Middle East/Africa area, European operations accounted for approximately 95% of gross income in 1979, 1978, and 1977.

Interarea transfers, consisting principally of completed machines, sub-assemblies and parts,

are priced at cost plus an appropriate service charge, applied consistently throughout the world. The cost and service charges that relate to rental machines are capitalized and depreciated by the importing area. Interarea accounts receiv-

Gross income .....

Net earnings .....

Assets at December 31.....

able, the undepreciated portion of service charges, and the net change during the year in undepreciated service charges, have been eliminated in consolidation.

\$ 3,111

\$ 20,771

\$ (1,526)

(33)

(347)

Consolidated

1978

1077

	(Dollars in millions)			
Information-Handling Business:			4	
Data Processing				
Gross income—Customers	\$ 18,338	\$ 17,074	\$ 14,765	
Operating income	4,737	5,113	4,402	
Assets at December 31	17,373	13,598	10,995	
Depreciation expense	1,683	1,552	1,521	
Capital expenditures	5,359	3,438	2,811	
Office Products				
Gross income – Customers	3,849	3,390	2,824	
Operating income	566	381	297	
Assets at December 31	3,316	3,061	2,509	
Depreciation expense	275	260	273	
Capital expenditures	608	591	566	
Federal Systems				
Gross income – Customers	612	549	486	
Operating income	35	32	27	
Assets at December 31	329	316	286	
Depreciation expense	II	11	II	
Capital expenditures	23	16	17	
Other Business				
Gross income – Customers	64	63	58	
Operating income	6	4	8	
Assets at December 31	39	39	33	
Depreciation expense	I	I	I	
Capital expenditures	I	I	I	
Consolidated				
Gross income – Customers	\$ 22,863	\$ 21,076	\$ 18,133	
Operating income	\$ 5,344	\$ 5,530	\$ 4,734	
General corporate and interest expense	(240)	(144)	(117)	
Other income, principally interest	449	412	<u>475</u>	
Earnings before income taxes	\$ 5,553	\$ 5,798	\$_5,092	
Assets identified to segments	\$ 21,057	\$ 17,014	\$ 13,823	
Marketable securities	3,473	3,757	5,155	
Total assets at December 31	\$ 24,530	\$ 20,771	\$ 18,978	
Depreciation expense	\$ 1,970	\$ 1,824	\$ 1,806	
Capital expenditures	\$ 5,991	\$ 4,046	\$ 3,395	
Capital experiations				

IBM's operations, with very minor exceptions, are in the field of information-handling systems, equipment and services. However, for purposes of segment reporting, IBM's information-handling business has been reported as three segments.

The above segments are comprised as follows:

Data Processing — consists of informationhandling products and services such as data processing machines and systems, computer programming, systems engineering, education and related services and supplies for commercial and government customers.

Office Products — consists of informationhandling products, systems and services such as electric typewriters, magnetic media typewriters and systems, information processors, document printers, copiers, and related supplies and services for commercial and government customers. Federal Systems—consists of specialized information-handling products and services for United States space, defense and other agencies and, in some instances, other customers.

Other—consists of educational, training and testing materials and services for school, home and industrial use.

Intersegment transfers of products and services similar to those offered to unaffiliated customers are not material.

(Percentages of consolidated	gross income)
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Data Processing segment:					
Equipment			The state of the same		
Sales	26.9%	27.7%	25.4%	23.2%	17.7%
Rentals and services	38.8	40.9	44.7	48.7	54.2
	65.7	68.6	70.1	71.9	71.9
Maintenance contracts, program					
products and supplies					
Sales	2.5	2.5	2.8	2.8	3.0
Rentals and services	12.0	9.9	8.5	7.5	7.2
		12.4		10.3	10.2
	80.2	81.0	81.4	82.2	82.1
Office Products segment		<b>新 </b>			
Sales	9.1	8.5	8.0	7.6	7.7
Rentals and services		7.6	7.6	7.1	7.0
	16.8	16.1	15.6	14.7	14.7
All other segments				<b>专作</b>	
Sales	2.9	2.8	2.9	3.0	3.1
Rentals and services	I	Ι.	.1	.I	.I
	3.0	2.9	3.0	3.1	3.2
Total	100.0%	100.0%	100.0%	100.0%	100.0%

<sup>††</sup>This information should be read in conjunction with the Industry Segments notes on pages 29 and 30. In the data processing segment, equipment rentals and services includes maintenance service on

rented equipment. Maintenance contracts, program products and supplies consists of maintenance on sold equipment, program products, supplies, parts and other services.

# Five-Year Comparative Consolidated Summary of Operations:

		1979	1978	1977	1976	1975
		717	- //	housands except per		-713
For the year:	Gross income from sales, rentals and services:					
	Sales	\$ 9,472,649	\$ 8,754,794	\$ 7,090,157	\$ 5,959,475	\$ 4,545,359
	Rentals and services	13,390,127	12,321,295	11,043,027	10,344,858	9,891,182
		22,862,776	21,076,089	18,133,184	16,304,333	14,436,541
	Cost of sales	3,266,605	2,838,225	2,256,135	1,959,631	1,630,978
	Cost of rentals and services	5,146,353	4,645,800	4,042,448	3,865,813	3,717,709
	Selling, development and engineering, and					
	general and administrative expenses	9,205,367	8,151,129	7,177,080	6,409,315	5,664,897
	Interest on debt	140,487	55,175	40,350	44,950	62,607
	Other income, principally interest	449,295	411,808	475,243	494,469	360,527
	Earnings before income taxes	5,553,259	5,797,568	5,092,414	4,519,093	3,720,877
	U.S. Federal and non-U.S. income taxes	2,542,000	2,687,000	2,373,000	2,121,000	1,731,000
	Net earnings	\$ 3,011,259	\$ 3,110,568	\$ 2,719,414	\$ 2,398,093	\$ 1,989,877
	Per share †	\$5.16	\$5.32	\$4.58	\$3.99	\$3.34
	Average number of shares outstanding †	583,373,269	584,428,584	594,298,448	601,701,768	596,177,708
	Cash dividends paid	\$ 2,007,572	\$ 1,684,612	\$ 1,487,627	\$ 1,203,791	\$ 968,989
	Per share †	\$3.44	\$2.88	\$2.50	\$2.00	\$1.63
At end of year:	Number of shares outstanding †	583,594,543	583,241,454	589,883,503	602,778,192	599,378,326
	Net investment in plant, rental machines					
	and other property	\$ 12,193,019	\$ 9,302,228	\$ 7,889,326	\$ 6,962,908	\$ 6,695,043
	Long-term debt	\$ 1,589,358	\$ 285,534	\$ 255,776	\$ 275,127	\$ 295,115
	Working capital	\$ 4,405,877	\$ 4,510,789	\$ 4,864,073	\$ 5,838,125	\$ 4,751,829
	Number of stockholders	696,918	580,572	581,513	577,156	586,470
	†Adjusted for 1979 stock split.					

# Management's Discussion and Analysis of the Summary of Operations

1979 vs. 1978

Gross income from worldwide sales, rentals and services was \$22,863 million, or 8.5% above 1978. The worldwide increase in gross income reflects record shipments of products. Data processing gross income amounted to \$18,338 million, a growth of 7.4%. Although this segment accounts for the largest portion of growth, the office products segment attained a higher rate of growth, increasing by 13.5% to \$3,849 million. Total gross income from U.S. operations was \$10,619 million, an increase of 5.8% over 1978. Gross income from non-U.S. operations amounted to \$12,244 million, or an increase of 10.9%. This increase was, to some extent, attributable to the effects of currency fluctuations.

Gross income from sales increased 8.2% over 1978, with worldwide data processing sales increasing by 5.6% to \$6,720 million, and office products by 16.8% to \$2,084 million. Within data processing sales, purchases of data processing equipment amounted to \$6,162 million, a 5.5% increase over 1978. A greater proportion of U.S. customers shifted toward leasing of data processing equipment rather than purchase, resulting in a slightly lower level of purchase as compared to 1978. Non-U.S. operations, however, did exceed 1978 purchase levels and were higher than the U.S.

Gross income from worldwide rentals and services increased by 8.7% in 1979, with the data processing segment showing an 8.5% increase over 1978. Within this segment, data processing equipment rentals and services show a modest increase of 2.9%. Although record lease shipments made on a broad range of products during the year contributed to a substantial buildup of the installed rental base, worldwide price reductions implemented earlier in the year were an offsetting factor. Timing of installations was also a factor, with the bulk of the increase in the installed rental base occurring in the second half of 1979. Gross income from maintenance, program products and other services continued to show substantial year to year growth, exceeding 30%. Office products rentals and services increased by 9.9%, reflecting increased maintenance revenue, as well as growth in word processing and copier equipment installations.

Cost of sales increased over the prior year by 15.1%, compared to an increase of 8.2% in related gross income. There were a number of contribut-

ing factors. Data processing equipment sales increased only moderately, while lower-margin office products equipment sales increased at a higher rate. Within the data processing segment, margins declined principally because of changes in the mix of products sold and the effects of the substantial worldwide buildups in plant capacity and people in order to deliver higher volumes. Results for office products equipment were similar, as the newer word processing systems were shipped in greater numbers in 1979. In addition, overall worldwide costs have been impacted by inflation.

Cost of rentals and services increased by 10.8%, a rate slightly higher than the gross income increase of 8.7%. Cost of rentals and services for data processing equipment was impacted by the buildup of manufacturing resources, heavy shipments of new products and the general effects of inflation. The rapid growth of services, which yield lower margins than equipment, further reduced the overall rentals and services margin. Profit margins on office products rentals and services increased, due principally to improved support costs.

Selling, development and engineering, and general and administrative expenses, exclusive of exchange gains and losses, referred to below, increased by 10.8% over 1978. The increase is from higher costs of employee compensation and benefits, which includes those costs associated with the resource buildup needed to support the heavy current and anticipated future shipments. In addition, double-digit inflation in the U.S. and in many other countries in 1979 affected all areas of operating expenses.

In terms of the company's buildup, over 11,600 people were added worldwide in 1979. This growth followed the addition of over 15,300 people in 1978.

Foreign currency exchange losses of \$52 million, consisting principally of unrealized losses from the translation of foreign currency assets and liabilities, were included in 1979 net earnings. This compares with gains of \$113 million in 1978.

Other income, principally interest on marketable securities, increased by \$37 million in 1979, to \$449 million. Although the average portfolio of marketable securities declined by approximately \$800 million, the effect was more than offset by higher interest rates and the net change in the revaluation of securities at the lower of cost or market.

Interest on debt increased by \$85 million, to \$140 million in 1979. This is primarily a result of the \$1,000 million debt financing in October 1979, and the substantial increases in short-term borrowings.

U.S. Federal and non-U.S. income taxes in 1979 were 45.8% of earnings before such taxes, and 46.3% in 1978. The difference in effective tax rates is principally due to the reduction in the U.S. statutory tax rate from 48% to 46%.

Worldwide net earnings amounted to \$3,011 million, as compared to \$3,111 million in 1978, a decrease of 3.2%. Earnings from U.S. operations were \$1,584 million, a 2.2% increase, while non-U.S. earnings were below 1978, at \$1,427 million, an 8.5% decrease.

#### 1978 vs. 1977

Gross income from worldwide sales, rentals and services was \$21,076 million, or 16.2% higher than 1977. Total data processing gross income increased by 15.6% to \$17,074 million, and accounted for the largest part of the growth in 1978. However, total office products gross income of \$3,390 million, reflects a higher rate of growth, an increase of 20.1%. Total gross income from U.S. operations was \$10,036 million, an increase of 11.4%, while non-U.S. operations amounted to \$11,040 million, a 21.0% increase. Although the rates of increase for non-U.S. operations are greater than for U.S. operations, a large part of the difference in growth rates is attributable to the effects of currency fluctuations.

Gross income from sales increased by 23.5% in 1978. Data processing sales increased by 24.5% to \$6,366 million. Purchases of data processing equipment, which are included in this total, amounted to \$5,840 million, a 26.9% increase over 1977. Purchases of the newer large processors accounted for a significant portion of the increase. Gross income from data processing equipment purchases in non-U.S. operations slightly exceeded that of U.S. operations. Gross income from office products sales increased by 23.9% worldwide.

Gross income from rentals and services increased by 11.6% in 1978. Gross income from data processing rentals and services, which increased by 10.9% to \$10,708 million, includes equipment rentals and services, which increased by 6.2% to \$8,616 million. Gross income from other data processing rentals and services, including maintenance of purchased equipment, increased at a substantially greater rate and continues to reflect the worldwide high level of data processing equipment purchases in recent years. Gross income from office products rentals and services increased by 16.1% worldwide.

Cost of sales in 1978 increased 25.8%, compared to the increase of 23.5% in related gross income. Cost of sales of data processing equipment increased at a rate higher than the related gross

income. Among the factors contributing to this were changes in the mix of products sold, and higher costs associated with initial shipments of newer products, as well as the effects of price reductions. Cost of sales of office products increased at a slightly lower rate than the related gross income.

Cost of rentals and services increased by 14.9%, compared to the increase of 11.6% in related gross income. Cost of rentals and services of data processing equipment increased at a rate comparable to its related gross income. However, office products cost increased at a higher rate than that of gross income.

Selling, development and engineering, and general and administrative expenses increased by 13.6% in 1978, which was slightly lower than the increase in overall gross income. This reflects higher costs of employee compensation and benefits, a continued worldwide buildup of resources to meet strong customer demands, as well as inflationary pressures on all operating expenses.

Foreign currency exchange gains of \$113 million, consisting principally of unrealized gains from the translation of foreign currency assets and liabilities, were included in 1978 net earnings. This compares with gains of \$28 million in 1977.

Interest on debt increased by \$15 million as a result of borrowings related to non-U.S. operations.

Other income, principally interest on marketable securities, decreased by \$63 million in 1978. The decrease was due to a lower average portfolio of marketable securities and the effect of revaluing certain securities at the lower of cost or market, partially offset by higher interest rates.

U.S. Federal and non-U.S. income taxes were 46.3% of earnings before such taxes in 1978 and 46.6% in 1977.

Worldwide net earnings were \$3,111 million, an increase of 14.4% over 1977. Earnings from U.S. operations were \$1,551 million, a 4.0% increase. Non-U.S. earnings were \$1,560 million, a 27.1% increase. As previously mentioned, a large part of the difference in growth rates is attributable to the effects of currency fluctuations.

#### Cash Dividends

Cash dividends totaling \$2,008 million were paid to stockholders in 1979, compared with \$1,685 million in the previous year.

The regular quarterly cash dividend, payable March 10, 1980, will be at the rate of \$.86 per share. This dividend will be IBM's 260th consecutive quarterly cash dividend. Cash dividends for the last two years (adjusted for 1979 stock split) were as follows:

1979	1978	
\$ .86	\$ .72	
.86	.72	
.86	.72	
.86	.72	
\$ 3.44	\$ 2.88	
	\$ .86 .86	\$ .86 \$ .72 .86 .72 .86 .72 .86 .72

#### **IBM Stock Prices**

The high and low prices for IBM's capital stock on the New York Stock Exchange for the last two years (adjusted for 1979 stock split) were as follows:

	19	79	1978		
Quarter	High	Low	High	Low	
First	. \$ 80.13	\$ 73.63	\$ 68.25	\$ 58.81	
Second	80.50	72.13	69.06	58.69	
Third		65.75	75.85	63.75	
Fourth	69.50	61.13	77.50	64.00	

#### Capital Expenditures

During 1979, IBM's growing business, together with the company's need to replace obsolete equipment, required a worldwide investment of \$5,991 million, including \$4,212 million for rental machines.

Retirements, covering obsolete and dismantled equipment, as well as rental machines sold that previously were under lease to customers, amounted to \$2,422 million in 1979, including \$2,210 million of rental machines. These retirements were charged against amounts provided out of prior and current years' earnings, or against cost of sales.

Listed below are the major IBM facilities that were completed or under construction throughout the world during the year.

United States	Purpose	Sq. Ft.
Tucson, Arizona	Mfg. & Dev.	1,695,000
† Austin, Texas	Mfg. & Dev.	1,181,000
New York, New York	Mktg.	1,031,000
†Raleigh, North Carolina	Mfg. & Dev.	984,000
Charlotte, North Carolina	Mfg. & Dev.	750,000
†Rochester, Minnesota	Mfg. & Dev.	615,000
†Burlington, Vermont	Mfg. & Dev.	542,000
Houston, Texas	Mktg.	408,000
†Boca Raton, Florida	Mfg. & Dev.	348,000
*†Franklin Lakes, New Jersey	Adm.	295,000
St. Louis, Missouri	Mktg.	283,000
*Southfield, Michigan	Mktg.	263,000
†East Fishkill, New York	Dev.	190,000
*† Armonk, New York	Adm.	183,000
† Yorktown, New York	Adm. & Dev.	175,000
†Lexington, Kentucky	Dev.	152,000

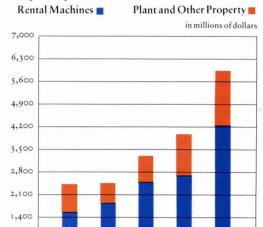
#### Non-U.S. Countries

Toronto, Canada	Adm. & Mktg.	678,000
* Helsinki, Finland	Adm. & Mktg.	399,000
† Portsmouth, England	Adm.	365,000
Marne la Vallee, France	Mktg.	356,000
†Boeblingen, West Germany	Mfg.	330,000
Buenos Aires, Argentina	Mktg.	322,000
†Greenock, Scotland	Mfg.	266,000
* London, England	Mktg.	233,000
†Vimercate, Italy	Mfg.	200,000
* Hannover, West Germany	Mfg.	185,000
*† Havant, England	Mfg.	181,000
†Essonnes, France	Mfg.	167,000
*† Montpellier, France	Mfg.	167,000
* Paris, France	Mktg.	166,000
† Yasu, Japan	Mfg.	150,000

Completed in 1979. † Additions to existing facilities.

#### Capital Expenditures:

700



#### Information on Effects of Changing Prices

In accordance with the provisions of Statement of Financial Accounting Standards (SFAS) No. 33, Financial Reporting and Changing Prices, certain financial information has been adjusted for the effects of general inflation, utilizing the Constant Dollar method and prescribed price index. The objective of SFAS No. 33 is to measure the estimated effects of inflation on business enterprises, inasmuch as it is generally recognized that financial statements prepared under the traditional historical cost basis do not adequately reflect the impact of inflation. SFAS No. 33 also calls for information on the effects of changes in specific prices, known as the Current Cost method, which is to be reported in the 1980 IBM Annual Report, including comparable 1979 information.

In terms of the Constant Dollar method as applied to IBM's operations, the restated net assets amount should not be interpreted as a measure of current value. The restated net assets and net earnings may also incorrectly imply that costs, although heavily impacted by inflation, have not benefited from the countervailing effects of productivity gains, including technological advances and improved manufacturing processes. It is well known that the industry has substantially reduced the costs of computing power, despite the effects of inflation. It should also be pointed out that the prescribed price index to be used for both U.S. and non-U.S. operations is the U.S. Consumer Price Index for all Urban Consumers (CPI-U), which may not be indicative of the rate of inflation the company has experienced in either the U.S. or its non-U.S. subsidiaries.

Accordingly, management believes that the restatement of IBM earnings prepared under the Constant Dollar method does not properly reflect the effects of inflation on the company.

In summary, it is clear that the high rates of inflation have significantly eroded the purchasing power of corporate earnings, including IBM's. It is also evident that inflation raises the effective tax rates on industry. It is generally agreed that there is a need to measure these effects. However, it should be recognized that the methods promulgated to quantify these effects are still experimental in nature, and will need refinements over time. A great deal of education and understanding will be required by preparers and users before gaining acceptance for purposes of measuring the effects of inflation on corporate financial results.

Adjusted for

As Reported in

1979 Statement of Earnings	Adjusted for Genera	Inflation (	(Constant Dollar)
19/9 Statement of Laminings	Trainstea for Genera	I IIIIIIIIIIIIIII	Constant Donat

s Adjusted for General Inflation (Constant Dollar)	Financial Statements	General Inflation
	(Dollars in millions	except per share amounts)
Gross income from sales, rentals and services	\$ 22,863	\$ 22,863
Cost of sales, rentals and services	\$ 8,413	\$ 9,083
Expenses and other income	8,897	8,991
Provision for U.S. Federal and non-U.S. income taxes	2,542	2,542
	19,852	20,616
Net earnings	\$ _3,011	\$ 2,247
Earnings per share †	\$ 5.16	\$ <u>3.85</u>
Net assets	\$ 14,961	\$ 16,624
Loss from decline in purchasing power of net monetary assets		\$ 455
†Adjusted for 1979 stock split.		

The adjusted information was prepared by converting reported inventory, plant, rental machines and other property, cost of sales, rentals and services, and depreciation expense, into dollars with purchasing power equivalent to average 1979 dollars. This was done by applying to the original cost of the applicable assets, the increase in the CPI-U for the elapsed period from acquisition to 1979. The related depreciation expenses were similarly adjusted and charged against earnings, using the company's established depreciation policies. Gross income and expenses other than depreciation, are not required to be adjusted as they are considered to have occurred

proportionately over the year, thus already reflecting average 1979 dollars.

Depreciation charged to restated costs and expenses amounted to \$2,343 million, as compared with reported depreciation of \$1,970 million.

The loss from decline in purchasing power results from holding net monetary assets during periods of inflation. Net monetary assets include cash and claims to cash, and amounts owed, which are fixed in terms of number of dollars to be received or paid.

The impact of general inflation on earnings, as presented by the above constant dollar adjustments, is not deductible for income tax purposes.

As a result, after giving effect to these adjustments, income taxes consume 53.1% of earnings as compared to 45.8% reported in the financial statements. Although as previously stated, the Constant Dollar method does not properly reflect the effects of inflation on the company, it does give an indication of the significant hidden impacts of income taxes in periods of high inflation and the adverse effects on a company's ability to retain earnings to meet the escalating cost of replacing and expanding its productive capacity. It also emphasizes the need to reconsider national tax policies in order to give recognition to the reality of inflation.

on (Constant Dollar)	1979	1978	1977	1976	1975
		(Dollars in mi	llions except per	r share amounts)	
Gross income from sales, rentals and services  Cash dividends paid per share †	\$ 22,863 \$ 3.44 \$ 64.63	\$ 23,449 \$3.20 \$ 82.92	\$ 21,720 \$ 2.99 \$ 81.75	\$ 20,789 \$ 2.55 \$ 89.02	\$ 19,470 \$2.19 \$ 75.61
The actual market price of IBM stock at December 31, for years 1975 to 1979 (adjusted for stock split) was \$56.06, \$69.81, \$68.25, \$74.53 and \$64.63, respectively. †Adjusted for 1979 stock split.					

The information was prepared by applying to the reported amounts for each item for the years 1975 to 1978, the rate of change in the average CPI-U from that year to year 1979. Thus, the

restated amounts express each prior year item in terms of the purchasing power of average 1979 dollars. For example, assuming that the CPI-U properly reflects the declining purchasing power of the dollar, the information indicates that the reported 1975 gross income of \$14,437 million, is the equivalent of \$19,470 million of purchasing power in 1979 dollars.

#### Replacement Cost Data

The company is presently compiling replacement cost data, which will be included in the 1979 Form 10-K Annual Report to the Securities and Exchange Commission. In the future, replacement cost data will no longer be furnished, as the SEC has rescinded the requirement for those companies providing current cost information under SFAS No. 33. As indicated on page 34, the company will provide such information in the 1980 IBM Annual Report.

# IBM Organization

To conduct its business throughout the world, IBM is organized into the following groups, divisions and wholly owned subsidiaries:

#### DP Marketing Group

- Data Processing Division... Has marketing responsibility within the United States and its territories for IBM's information-handling systems, equipment, computer programming, systems engineering, education and other related services to customers who require larger centralized systems as well as customers who require distributed data processing systems.
- Federal Systems Division ... Provides informationhandling and control systems to the Federal government for seaborne, spaceborne, airborne and ground-based environments. Also participates in applied research and exploratory development.
- Field Engineering Division... Provides maintenance and related services for products developed and manufactured by or for the DP Product Group and marketed by the Data Processing Division, and support for specified IBM program offerings. Also provides maintenance marketing support and central programming service for assigned products.

#### DP Product Group

- Data Systems Division... Has worldwide development responsibility for large, complex systems, with primary emphasis on highperformance products and associated programming, plus U.S. manufacturing responsibility for those systems. The division supplies computer components, including logic and selected memory technologies, used in products that it and other IBM divisions manufacture in the U.S.
- General Products Division... Has worldwide development and U.S. manufacturing responsibility for high-performance storage systems, including tape units, disk products and mass storage systems, as well as nonimpact system printers, program products, programming languages and related programming.

- System Communications Division... Has worldwide development and U.S. manufacturing responsibility for informationhandling systems and products that serve a wide range of end-users. These include distributed systems, industry systems, display terminal products, telecommunications systems and related technologies and programming.
- System Products Division... Has worldwide development responsibility for IBM's intermediaterange processors and related programming and for impact printer products and semiconductor packaging, plus U.S. manufacturing responsibility for those hardware products.

#### General Business Group

- General Systems Division ... Has worldwide product management and development responsibility, and U.S. manufacturing, marketing and service responsibility, for low-to-moderateprice information-handling systems, including systems-related programming. The division also has U.S. manufacturing responsibility for selected office products.
- Office Products Division... Has worldwide product management and development responsibility, and U.S. marketing and service responsibility, for electric and electronic typewriters, copiers, copier systems, magnetic media typewriters, information processing products, dictation equipment, direct-impression composing products and related supplies. The division also has U.S. manufacturing responsibility for electric and electronic typewriters, copiers, copier systems and most related supplies.
- General Business Group/International Division... Has marketing, service, manufacturing and overall performance responsibility for General Systems and Office Products operations in 21 countries in Europe, the Americas and the Far East.
- General Technology Division ... Has worldwide development and U.S. manufacturing responsibility for the component technology requirements of the low-to-moderate-price computers made by the General Systems Division, and products of the Office Products Division. Also supplies selected components to other IBM operating units.

Information Records Division... Has U.S. marketing responsibility for magnetic media and disk storage products, as well as U.S. manufacturing and marketing responsibility for data processing cards, ribbons and other consumable products used in information-handling machines. The division also has worldwide development and manufacturing responsibility and U.S. marketing responsibility for biomedical devices and supplies.

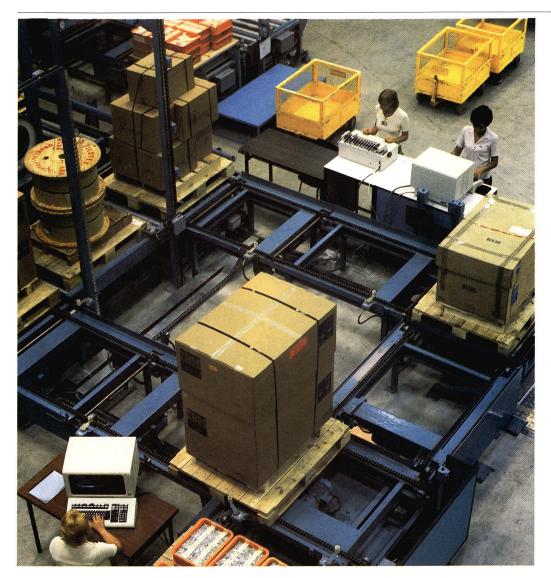
#### Other Divisions

- Real Estate and Construction Division... Manages the selection and acquisition of sites, the design and construction of buildings, and the purchase or lease of facilities for all IBM operations in the U.S. It has responsibility for assessing real estate projects outside the U.S., as well as for IBM's worldwide energy and environmental programs. It also provides facility services to selected headquarters locations.
- Research Division... Brings scientific understanding to bear on areas of company interest through basic research and the development of technologies of potential long-range importance.

#### **Subsidiaries**

- Science Research Associates, Inc.... Has worldwide development, production and marketing responsibility for a wide range of educational materials and services for elementary and secondary schools and colleges, as well as testing and training materials for industry, and educational and leisure-time products for home use by adults and children.
- IBM World Trade Americas/Far East Corporation ...With a territory extending across four continents, this subsidiary is responsible for IBM operations in 44 countries, including Australia, Brazil, Canada and Japan.
- IBM World Trade Europe/Middle East/Africa Corporation...Through its subsidiary, IBM Europe, located in Paris, it is responsible for IBM operations in 77 countries.
- IBM World Trade Corporation... Provides designated support to IBM World Trade organizational units.

# Progress Report



New computer-controlled materials distribution center at IBM France's Montpellier plant reduces costs and improves the handling and transportation of materials, as well as speeding the availability of parts to production lines for computers and data communications products.

#### Plant/Laboratory Expansion

Construction of new IBM facilities continues at a high level to meet the customer demand for IBM products. At the end of 1979, more than 11 million sq. ft. of new space were being built worldwide-of which some 8 million sq. ft. were for manufacturing and product development.

Among the facilities under construction or completed during the year were plants and laboratories in Austin, Tex.; Charlotte and Raleigh, N.C.; Tucson, Ariz.; Hannover, West Germany; and Wangaratta, Australia; materials distribution centers in Greencastle, Ind., and Montpellier, France; and a management development center in Armonk, N.Y.

Major IBM construction projects worldwide are listed on page 33.

#### Satellite System Tests

Satellite Business Systems, the partnership formed by subsidiaries of The Aetna Casualty and Surety Company, COMSAT General Corporation, and IBM, is continuing its preparations for offering commercial services in 1981.

During 1980, IBM and SBS will conduct operational field tests of the equipment to be used in SBS's tariffed offerings. The tests will provide experience in installing and operating the complex new equipment needed to provide high-speed digital communications services.

SBS is awaiting the results of a rehearing now before the full U.S. Court of Appeals in Washington, D.C., to determine if the Federal Communications Commission must hold further antitrust hearings on whether both COMSAT General Corporation and IBM may participate in SBS.

#### More Energy Gains

IBM further improved its energy efficiency in 1979 with conservation measures that amounted to a 5% saving per sq. ft. at major U.S. locations, compared with 1978. This reduction brought the company's total U.S. saving from the 1973 pre-conservation level to 45%.

In the past six years, IBM has conserved enough electricity in the U.S. to meet the needs of 380,000 homes for a year. Enough oil has been saved to serve 160,000 homes in northern states.

In IBM World Trade countries, where conservation has been practiced for many years, the energy savings per sq. ft. at major IBM locations from 1973 through 1979 came to 40%.

IBM's experience with the use of computers for energy management at its facilities shows typical savings of 10% to 15% through control of electrical, heating and cooling equipment.

# Progress Report

Now installed to conserve energy at IBM's new plant/laboratory complex in Tucson, Ariz., are 13 tanks totaling 3.9 million gallons of thermal water storage. Depending on the season, water storage is used for either air conditioning or general heating.

IBM now has more than 80 such computer systems installed in the company's worldwide operations, with more planned.

At IBM's new plant/laboratory complex in Charlotte, N.C., one of the principal boilers has the capability of burning natural gas, fuel oil, coal or any combination.

In a new IBM branch office in Tokyo, Japan, heat wheels and pipes are used to transfer building heat or cooling from the exhaust system to warm or cool the incoming outside fresh air.

#### IBM in Video Disc Field

A joint venture to develop, manufacture and market video discs and video disc players has been formed by IBM and MCA Inc. The two companies are equal owners of the newly organized Disco-Vision Associates.

By blending complementary technical and marketing skills, the new organization provides an opportunity to broaden the use of video disc technology in the home entertainment and industrial education and information fields.

The video disc technology permits high-density storage of images and sound on a plastic disc (picture, page 39). A disc player optically scans the recorded information to play out picture and sound on a television set.

#### Space and Defense Programs

In 1979, IBM delivered the flight and ground software for NASA's first Space Shuttle orbital mission, scheduled for 1980. IBM has now developed more than 3½ million computer instructions for the shuttle program.

During the year IBM also delivered the command and control system for the U.S. Navy's first Trident submarine. IBM integrated five major subsystems, consisting of 90 principal pieces of equipment and more than I million computer instructions.

Now starting full-scale tests is the U.S. Navy's new ship/helicopter system for defense against submarines and detection of surface vessels. IBM is the prime contractor for this system and is also supplying a signal processing system for both the helicopters and ships.

#### **Biomedical Systems Growth**

Enhancements of IBM biomedical systems include a new pediatric analysis program that enables doctors to use a computer to help analyze heart disorders in infants and other young children. A similar diagnostic program for adults was introduced earlier.

These programs are used with IBM's mobile electrocardiograph unit that has a built-in computer to help physicians interpret signals from the heart within minutes at a patient's bedside. Such a rapid computer analysis offers many hospitals a new method for providing around-theclock patient care.

#### **Equal Opportunity Programs**

Emphasis continued in 1979 on worldwide IBM programs that provide equal opportunities in employment, advancement and training. Of the more than 16,000 IBM employees hired in the U.S. during the year, some 36% were women and 19% were minorities. At the end of 1979, the company had 2,000 women managers and 2,200 minority managers in the U.S.

IBM employees are presently on loan as teachers at 28 predominantly minority colleges. Since 1971, the company has loaned more than 230 employees for this program.

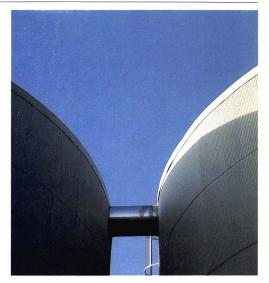
IBM support of outside programs for job training of disadvantaged and handicapped persons was expanded in 1979. More than 300 such programs are now receiving company aid in the form of loaned equipment or personnel.

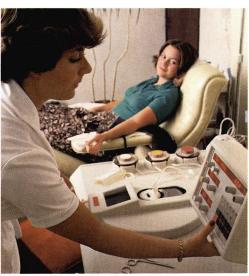
In 1979, the company expanded its countrywide purchases of products and services from minority entrepreneurs-black, Hispanic, American Indian and Asian. IBM has increased the number of its minority-owned suppliers to more than 500 companies doing more than \$40 million worth of business with IBM in 1979.

#### Audio Aid for Blind Typists

Blind typists will be better able to edit and revise documents with an IBM typing unit that "speaks" typed information (picture, page 39). The new IBM audio typing unit can be attached to any of four IBM magnetic media typewriters. It consists of an audio console, with optional headset, plus a key-pad for operator control. The unit pronounces and spells typed characters, words or lines of text. It verbalizes punctuation and typing position on the page and otherwise helps the blind typist function without the aid of a sighted person.

The audio responses are created by combining a stored set of basic speech sounds, or phonemes, in accordance with programmed pronunciation rules stored in the electronic memory. A voice synthesizer produces sounds that correspond to the typewriter keys touched by the typist.





The IBM blood cell separator, shown in the Paramus, N.J., blood center, is coming into widening use in the U.S. and overseas to separate the blood's white cells and platelets to help cancer patients fight infections and hemorrhaging. The separator is now also being used to collect "neocytes," newborn red blood cells used in treating patients who are undergoing long-term transfusion therapy.

Video disc technology in IBM's new joint venture with MCA Inc. plays out recorded picture and sound on a television receiver. The player can also locate any one of 54,000 picture frames on a disc within five seconds for projection on the screen.





 $The \ new \ corrective \ reading \ program \ introduced \ by \ SRA,$ IBM's educational publishing subsidiary, is designed to help teachers improve both the word recognition and comprehension skills of intermediate and secondary school students.

New IBM audio typing unit is designed to help blind typists become more self-sufficient and to qualify for additional employment opportunities.

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	161								
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