

DOW CHEMICAL
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Annual Report

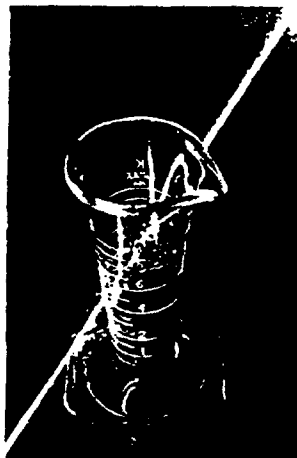
1982 Annual Report



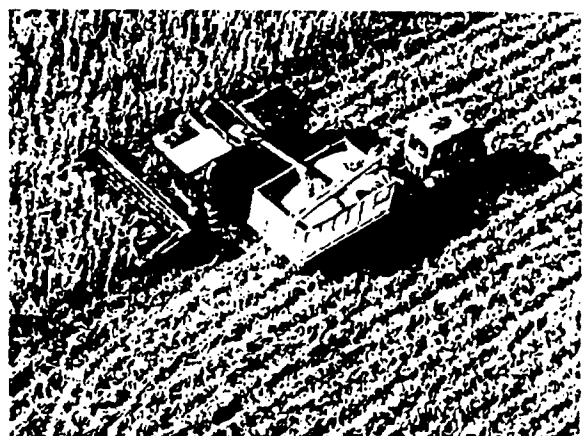
Diversification: By the late 1980s, 50% of Dow Chemical's earnings generated during a stable economy should be derived from downstream, value-added products and services.

PLAINTIFF'S EXHIBIT

DOW-1480



(see back cover)



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Cover Story

Dow Chemical has instituted bold, swift actions to expand the Company's specialty product mix without forsaking the petrochemical roots of its heritage. Novel products and services, creative combinations and composites of established applications, have been conceived in Dow research and development laboratories. Nearly 70% of the Company's research and development budget is earmarked for specialty projects. About 40% of Dow's capital dollars will be allotted to such ventures in 1983. A global product management organization and extensive personnel deployment demonstrate that Dow is committed to developing a balanced stable of premium specialty products.

The array of products displayed on the cover of this annual report illustrates the high-technology capabilities and innovative spirit of Dow Chemical. Captions on the back cover offer further details.

The Business of Dow Chemical

During 1981, The Dow Chemical Company was the sixth largest chemical company in the world in terms of sales and third in profits. Dow ranked 24th in sales and 31st in net income among the *Fortune* Magazine 500 leading industrial companies in the United States.*

Dow manufactures, packages and distributes some 1,600 products. Historically, Dow has been known for the manufacture of industrial raw materials: chlorinated hydrocarbons, brine chemicals, plastic resins and other so-called commodities. But a fast-growing part of the business is end-use products and services, including specialty chemicals and plastics, agricultural chemicals, Dowell oil well services, health care and consumer products.

Headquartered in Midland, Michigan, where it was founded in 1897, Dow and its principal subsidiaries operate 112 manufacturing locations in 29 countries.

Additionally, the Company maintains 153 sales offices around the world. More than 50% of the Com-

pany's sales are outside the United States.

Dow is considered one of the top research companies in the United States, supporting a research staff of about 7,000 persons and expenditures in 1982 of \$460 million.

Employees at Dow are among the safest workers on the job. The latest available statistics compiled by the National Safety Council show that Dow's 1981 U.S. safety record was 10 times better than the chemical industry average and 29 times better than the average for all U.S. industry.

Management is stable since the officers have been with Dow for an average of 32 years and most are major stockholders. All of the chief executives have been selected from within the Company.

Dow's principal objective is "to seek maximum long-term profit growth as the primary means to ensure the prosperity and well-being of our employees, stockholders and our customers by making products that the people of the world need, and to do so better than anyone else."

*Data for 1982 were not available at press time.



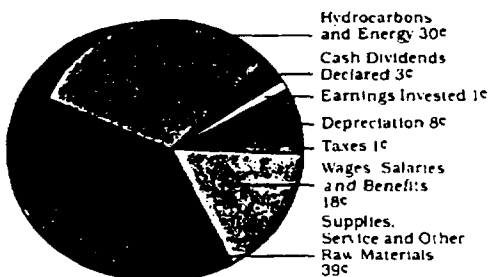
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Highlights of the Year

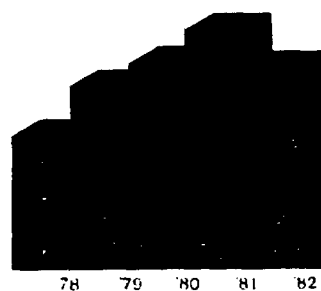
	1982	1981	% Change
	(In millions unless otherwise stated)		
Net Sales	\$10,618	\$11,873	- 11%
Operating Income	356	916	- 61%
Net Income	399*	564	- 29%
Net Income Per Share (in dollars)	2.07*	3.00	- 31%
Dividends Paid Per Share (in dollars)	1.80	1.80	0%
Average Shares Outstanding	193	188	+ 3%
Stockholders' Equity (at year-end)	5,040	4,891	+ 3%
Capital Expenditures	829	1,176	- 30%
Depreciation	870	806	+ 8%
Research and Development Expenditures	460	404	+ 14%
Wages, Salaries and Benefits	2,058	2,036	+ 1%
Employees (in thousands at year-end)	56.6	63.8	- 11%

* Includes extraordinary income

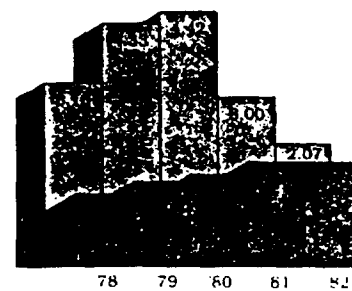
Distribution of the Income Dollar



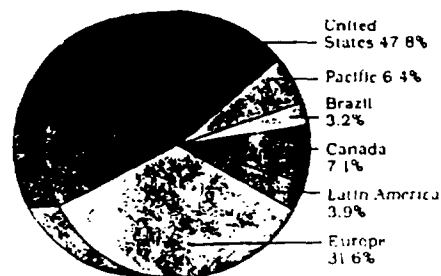
Sales
(\$ Billion)



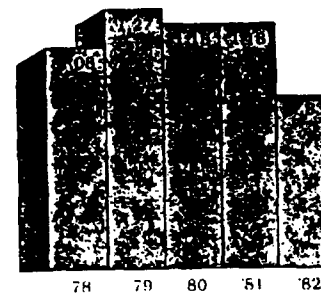
■ Earnings Per Share
■ Dividends Per Share
(Dollars)



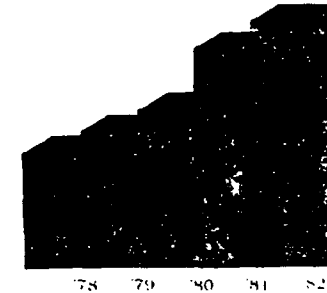
Area Sales



Capital Expenditures
(\$ Billion)



Research and Development Expenditures
(\$ Million)



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President's Letter

To Our Stockholders

1982 was a year of transition, streamlining, realignment. While sales were disappointing and earnings declined to unacceptable levels, we continued to take decisive actions to contend with the economy and position The Dow Chemical Company for future opportunities.

One year ago when I reflected on our 1981 performance with this annual report message, I outlined an agenda which would guide Dow's efforts to cope with the worst global recession since the 1930s. I would now like to review what we achieved against that program.

1. Capital spending was reduced to \$829 million in 1982, well below our target, and the lowest since 1973. But we didn't stop building. Instead, we shelved plans to add basic chemical and plastics capacity in favor of new specialty facilities and process improvement programs. Recent authorizations for new plants to produce calcium bromide, aspirin and polycarbonates demonstrate this downstream direction.

2. We reduced our debt to \$3.8 billion — down some \$700 million from a year ago and \$1.4 billion below the peak reached just 15 months earlier. Our 1982 year-end debt-equity ratio was below 43% versus 48% at the close of 1981. Despite lower profits, this leverage reduction program was achieved by a series of measures which included the programmed disposal of some Company assets around the world.

During 1982, Dow's share of the Asahi-Dow Japanese partnership was sold to Asahi Chemical for \$231 million. In addition, we assumed 100% control of three plants to manufacture Styrofoam brand insulation because that product is a critical part of our specialty business in Japan. Our U.S. oil

and gas properties were purchased by Apache Petroleum Company for proceeds worth \$402 million.

Terms of the deal also offer Dow first rights to feedstock supply. We sold our Bio-Science clinical laboratory business for \$120 million to American Hospital Supply Corporation as part of a drive to concentrate our human health efforts on the pharmaceutical business. Collectively, more than \$600 million of asset-sale cash was applied to reduce debt in 1982.

3. Our inventories were lowered by \$367 million as part of the tight control we promised on working capital. Inventory reduction was partly responsible for our 65% operating rate, since we chose to sacrifice some current profit for the future health of the business.

4. The Company's personnel count declined by about 7,200 people in 1982, largely due to attrition, divestitures, and an incentive program under which nearly 2,000 employees chose to retire. The sweeping layoffs which characterized much of industry in 1982 were avoided by Dow, and we continue to consider that the most unacceptable form of personnel reduction. Even though we were reducing our work force, we did not disband our hiring program. In 1982 and again in 1983, we will continue to recruit and hire the best technical and professional candidates to assure our anticipated growth.

5. Our expense control program resulted in savings of about \$300 million in 1982. These savings, along with all the other steps we have taken to streamline the Company, contributed to a sharp reduction in the break-even point.

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This is a significant achievement which will serve us well in the future.

In 1982, Dow withdrew from major petrochemical joint ventures in Saudi Arabia and Yugoslavia. The current oversupply situation confronting the industry rendered these projects less attractive. We also sold our South Korean plants to a Korean industrial group, while maintaining our long-standing sales company in that country. Despite these international departures, the reunited Dow is not retreating to fortress America or shying away from joint ventures. More than 50% of the Company's sales are generated in markets outside the United States, and this balance will continue. Dow Corning and Dowell Schlumberger are examples of large, healthy, profitable joint ventures which document Dow's role as a reliable business partner.

A major problem of 1982 was that the entire world experienced a recession. This factor and the strong dollar combined to reduce our U.S. exports by some 13% from 1981. It was a very difficult year in the currency markets, but excellent money management enabled us to complete the year with a profit on foreign exchange.

Other important milestones during 1982:

Safety — Dow employees' dedication to safe work practices yielded a record performance. It was the safest year in the history of our Company, and we are proud to be among the safest companies in any industry anywhere in the world.

Research and Development — The true test of a high technology company's commitment to the future is its willingness to maintain R&D expenditures during difficult

economic periods. We spent \$460 million on R&D in 1982, up 14% from 1981.

Changing of the Guard — Robert W. Lundeen was elected chairman of the board to succeed Earle B. Barnes who retired from Dow after 42 years of service. David L. Ronkr and Robert M. Kell were named executive vice presidents. Elected to the board of directors in 1982 were: William N. Lipscomb, Jr., a Nobel Prize-winning chemist from Harvard University; Frank P. Popoff, president of Dow Chemical Europe; and Donald A. Rikard, vice president and director of manufacturing and engineering. Clyde H. Boyd and Dave W. Schornstein retired from the board.

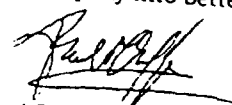
Dow's further shift to specialty products and services in 1982 accelerated a diversification strategy actually initiated in 1978. For example, major progress was made in 1982 to further the integration, consolidation, and reorganization of Dow's global pharmaceutical business. These downstream, value-added products and services are not as cyclical nor as capital intensive as our basic business and should serve to balance the Company's growth.

Our 1982 profit statement is somewhat complicated because of the large number of divestitures. While some of these transactions generated profit, others such as the Saudi Arabia and Yugoslavia withdrawals required write-offs which were taken in 1982. We tried to continue our policy of keeping the balance sheet as strong as possible.

All in all, as I survey 1982, I must tell you that it was the worst of years, yet the best of years. While it was a bad year for profits, it was an excellent year for setting a better foundation for the future. Dow people rose to new heights of performance. We implemented a six-month salary freeze and other belt-tightening measures, and yet our employees reacted by working harder, smarter, and more faithfully than ever before.

As we look ahead to the future, I truly believe we are seeing the light at the end of the tunnel in our business. The world's economy, led by the United States, should start improving in 1983. The chemical industry has endured a gut-wrenching realignment which has meant the shutdown of many chemical plants by Dow and others and the cancellation of many projects which would have increased capacity.

With the economy improving, our basic chemicals and plastics business is poised for a recovery and is ready to join our specialty products and services in leading the Company into better times.



Paul F. Orefice
President and Chief Executive Officer
Midland, Michigan
February 14, 1983



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Industrial Chemicals and Plastics

The Year in Review

Basic petrochemicals traditionally have been the bedrock of Dow's global business. In 1982, an economic recession restricted worldwide industrial demand. Despite Dow's multinational hedge, industrial chemicals and plastics sales declined. The Company's major stake in basic chemicals and the attendant cyclical markets combined to undermine Dow's profit performance.

Primary industries such as automobiles, housing, durable goods and related metal-forming applications were stymied by reluctant

consumer demand. The accompanying requirement for Dow's building-block chemicals and plastics retreated accordingly.

Dow's manufacturing facilities operated at about a 65% rate of capacity due to weak demand, oversupply and prudent inventory management. Because of reduced capacity utilization, unabsorbed fixed expenses infringed on margins.

The rationalization of surplus manufacturing capacities throughout the basic chemicals industry continued during 1982. Inefficient and obsolete plants of commodity producers were retired as the industry continued to seek healthier capacity/demand balances.

The Company optimized production by implementing a global lowest-cost supply strategy which idled some facilities and more fully utilized other plants. Dow's organizational structure encouraged this sourcing flexibility to exploit the Company's most energy- and process-efficient production facilities. While this effective supply management provided some profit improvement, Dow's basic chemical prices declined 4% reflecting a general buyer's market.

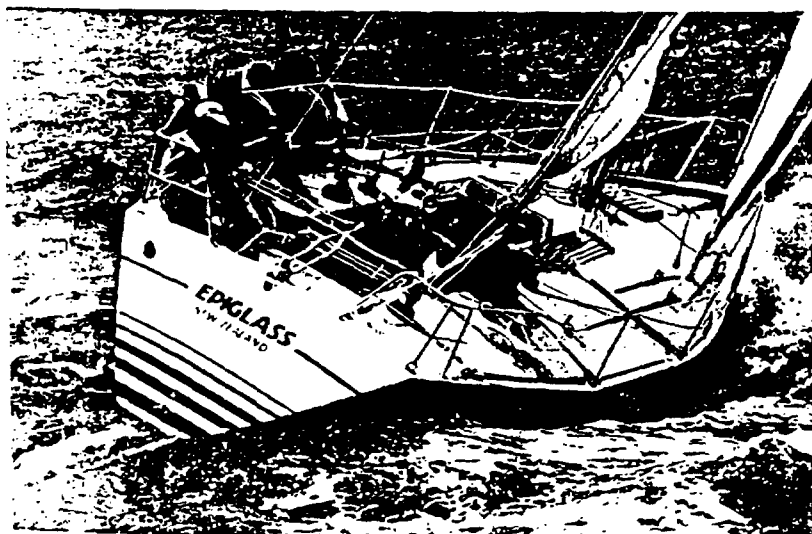
1. Constructed of Derakane vinyl ester resin from Dow because of strength, lightness and corrosion resistance, the Epiglass was selected to represent New Zealand in the 1981 Admiral's Cup Series.

2. This packaging customer's plant located in southern Germany utilizes Dowlex linear low density polyethylene from Dow's world-scale facility at Terneuzen, Netherlands.

3. Beverage bottle crates are molded from Dow polyethylene by a customer in Santiago, Chile.

4. Dow's caustic soda is enjoying increased market attention for enhanced oil recovery applications in the United States.

5. Industrial chemical storage tanks at Dow's western Canada distribution center are surrounded by protective dikes to contain total contents in the event of a chemical leak or spill.



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2.



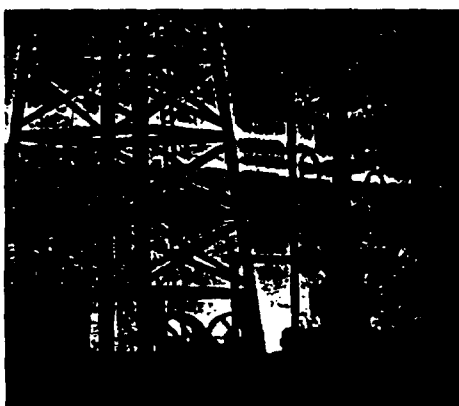
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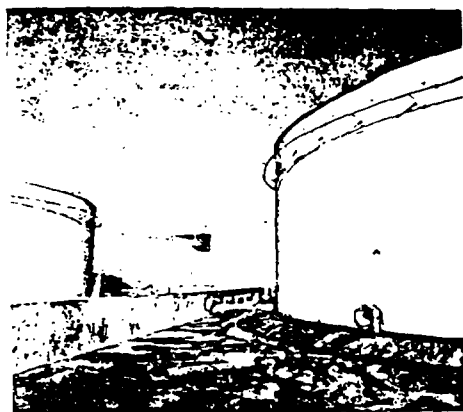
Another important option Dow exercised during 1982 involved feedstock flexibility. Many of the Company's hydrocarbon crackers are capable of accommodating naphtha or liquefied petroleum gases (LPGs). These feedstocks were alternated depending on price/supply advantages.

An excess of spot market feedstock and energy supplies generally helped to keep global raw material costs in check. Furthermore, energy conservation programs were again emphasized at all Dow manufacturing locations.

Dow's Crude Oil Processing Plant (COPP), a Gulf Coast feedstock



4.



5.

refinery mothballed in December 1981, resulted in lower cost penalties.

Industrial Chemicals

The Dow chlorine- and ethylene-based product groups were all victims of the economic circumstances which characterized the chemical industry in 1982.

Caustic soda offered a significant profit contribution despite some late-year price deterioration. Demand decline in the aluminum and paper industries, for example, was reflected in Dow's sales volume. The Company's chlorine production was down due to weak ethylene dichloride and vinyl chloride monomer markets associated with the depressed construction industry. The stronger U.S. dollar also hampered attempts to increase vinyl chloride volume in international markets.

Ethylene amines withstood price reductions and contributed to Dow's 1982 profit. Ethylene oxide and derivatives slumped substantially, due in part to a downturn in the polyester fibers market.

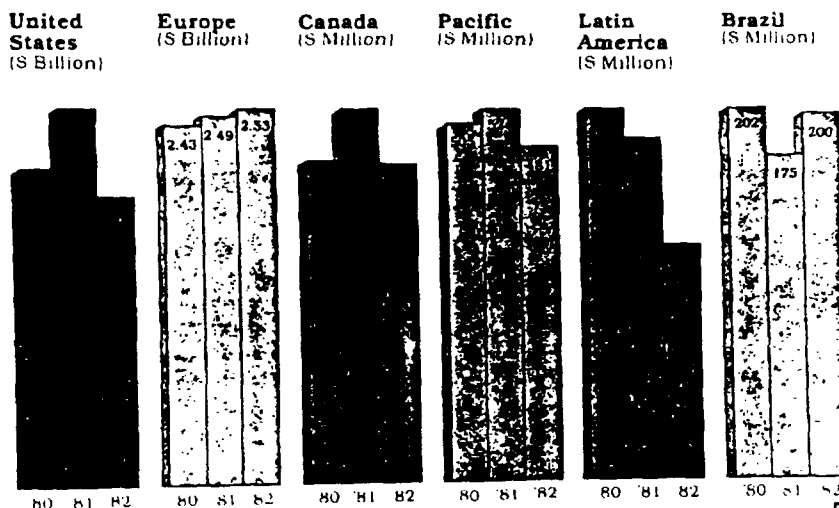
Plastics

Low density polyethylene (LDPE) maintained excellent sales volume in an environment of excess industry capacity. However, prices dipped substantially so dollar growth in the business declined. Since 1979, Dow has shelved various capital plans which cancelled about one billion pounds of polyethylene capacity because of the Company's concern about the industry oversupply situation. Premium Dowlex linear low density polyethylene products continued to make substantial market inroads worldwide for a variety of film and injection molding applications.

Operating income from Styron brand polystyrene resins increased modestly while sales remained at depressed levels.

Dow plans to maintain and expand the Company's industrial chemicals and plastics operation. Long the lifeblood of Dow, these basic businesses will provide operating resources to further advance the Company's diversification into specialty products and services.

Area Sales History of Industrial Chemicals and Plastics



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Specialty Products and Services

The Year in Review

Dow's specialties and services business accounted for 36% of the Company's sales but virtually all of the operating income in 1982 due to marginal performance in the basic chemicals business.

Pharmaceuticals

Dow's human health business in 1982 realized a 4% increase in sales to \$752 million compared to 1981.

During the past year, an important strategy shift was initiated to emphasize the rapidly-growing respiratory drug market. Yutopar®, a product for obstetrics, a therapeutic field being de-emphasized by Merrell Dow, was exchanged for the bronchodilator Bricanyl®, from Astra Pharmaceutical Products. A Bricanyl aerosol form is awaiting approval from the Food and Drug Administration (FDA). Other line extensions are expected to make Bricanyl one of Merrell Dow's leading products in the United States over the next two years.

The new drug application for Nicorette, a nicotine-containing chewing gum, is under review at the FDA. Nicorette will be the first prescription product fully approved for use as an aid to smoking cessation programs. Based on impressive new clinical data, strong medical

support, and marketing success in Canada since 1979, U.S. sales projections could exceed \$20 million.

One of the first important products to emerge from the Merrell Dow research and development program is the antihistamine terfenadine. This hay fever drug was launched in France, Germany and the United Kingdom in 1982, achieving strong market penetration and sales of over \$6 million which impressively outpaced initial projections. This drug will be launched throughout Dow's global marketing network within the next two years.

In addition to terfenadine, a unique anti-convulsant drug and a product for congestive heart failure are advancing through the research process. Each of these products is expected to exceed \$100 million in sales at maturity.

Agricultural Products

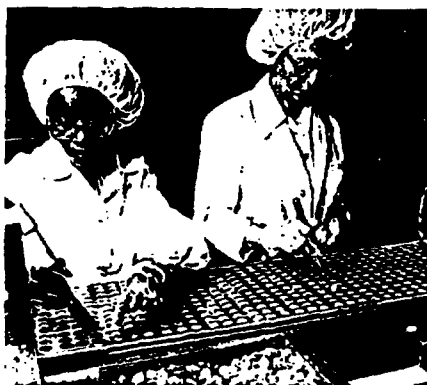
A severe economic climate confronted growers in the United States and most agrarian sectors of the developing world. Dow's global agricultural product sales trailed last year and operating income declined 24% due to a major buildup in resources to prepare for the launch of several new products.

Worldwide sales and operating income for Dursban and Lorsban

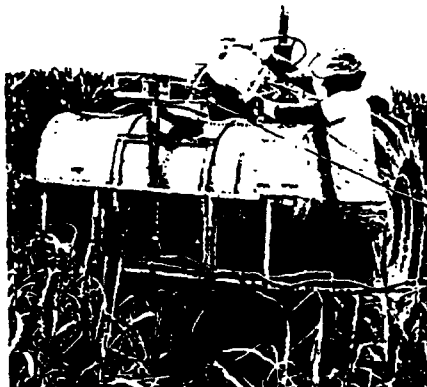
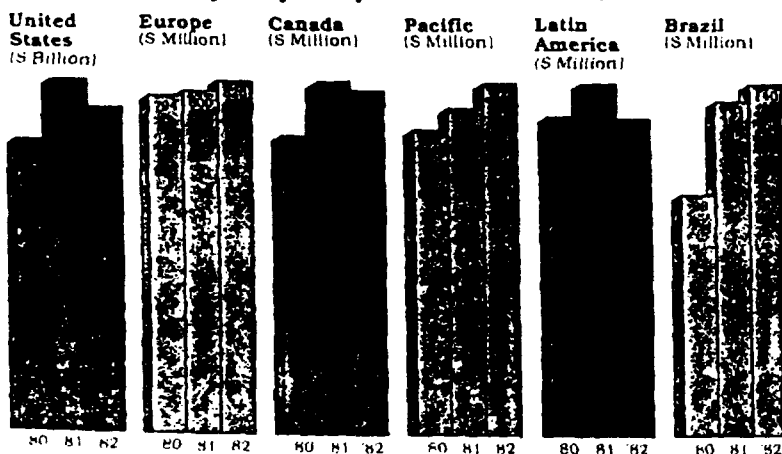
insecticides established new records. Lorsban 15G insecticide registered a significant market share increase in the declining U.S. corn market while experiencing a successful launch in the Canadian farm community. Substantial gains were also recorded in the Middle East cotton markets and several Asian rice markets.

Intense worldwide market share competition adversely affected sales and profits for 2,4-D herbicides compared to 1981 results. Global supply/demand balance is expected to improve in 1983 which should result in better profits.

The depressed U.S. farm economy resulted in disappointing sales of N-Serve nitrogen stabilizer. On a



Area Sales History of Specialty Products and Services



more positive note. Lontrel herbicide sales growth in Europe was outstanding. Pending registrations will open significant new markets for this cereal herbicide in other areas of the world. Product launches for Garlon industrial herbicide in Europe and the Pacific, combined with excellent sales momentum in the United States, should make this new product a profit contributor in 1983.

Several new herbicide candidates moved closer to commercialization. Tandem herbicide, for post-emergence corn applications, moved into the final stages of field trials in preparation for product launch. Dowco 453, a very promising grass herbicide for broadleaf crops, continues to show outstanding performance characteristics.

Consumer Products

Operating profits for consumer products in 1982 climbed 35% compared to 1981.

Ziploc food storage bags recorded a banner year with a 21% sales gain. Promising test markets for two types of Ziploc bags are being conducted to evaluate further opportunities for this product line.



3.

Plant capacity expansions were implemented in 1982 to accommodate the outstanding growth of the Ziploc bag market.

Dow Bathroom Cleaner and Dow Oven Cleaner continued to grow while the overall competitive product category remained flat.

Saran Wrap plastic film remains the leader in the household plastics wrap business despite the entry of a new competitive food wrap.

Other Products and Services

Sales of Styrofoam brand insulation to commercial roofers climbed 25% in some geographic markets.

The exceptional insulating properties of Styrofoam brand insulation have earned the product growing acceptance in Europe, the Middle East, Africa and the Pacific areas. New manufacturing capacity for Styrofoam brand insulation is slated for operation in Australia in 1984.

Latex profits advanced in 1982 due to Dow's introduction of technical improvements and innovations.



4.

Dow Water Absorbent Laminate, capable of absorbing 40-50 times its own weight in fluid, offered major volume potential in personal hygiene products.

The precipitous 39% decline of drilling rig activity during 1982 resulted in a drastic market shrinkage for the Dowell petroleum service business. Sales and profits eroded significantly.

While industrial chemicals struggled to tread water in 1982, the value-added, downstream specialty products and markets offered a reprieve from the cyclical whims of the economy. The promising growth opportunities provided by these unique specialty products provides an incentive for Dow to expand its diversification commitment.

1. Cēpastat lozenges are a familiar over-the-counter sore throat remedy produced by Merrell Dow.

2. Dow Brazil recently introduced Tufordon herbicide, a locally developed flowable mixture for effective weed control in sugarcane and coffee.

3. Dow-patented composite paper technology, using Dow latex as binder, is gaining excellent acceptance in many construction materials and paper-related applications.

4. Styrofoam brand insulation is installed on the roof of a government housing project in Hong Kong to enhance the building's energy efficiency.

5. Ziploc storage bags available in a variety of volume sizes offer a zipper closure unique in the plastic bag industry.



5.

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Management Discussion and Analysis

Financial Condition and Results of Operations

Results of Operations

Operating results for 1982 were disappointing as earnings were severely depressed by the weak economy, a strong U.S. dollar and reduced demand for industrial chemicals and high-volume plastics. The business environment continued to deteriorate throughout the year, contributing to soft prices and low operating rates. Substantial overcapacity for many industrial chemicals prompted a worldwide industry rationalization that shut down many chemical plants and cancelled other projects that would have increased capacity.

On the positive side, an effective cost reduction program, close control of personnel levels, tight management of inventories and receivables, and debt reduction improved 1982 operations and significantly strengthened the Company's balance sheet. Considerable progress was achieved toward goals of reducing debt, curtailing capital spending and disposing of selected assets. Furthermore, the Company continues to pursue the development of specialty products and services which provide more promising long-term growth opportunities, higher returns, and a less cyclical earnings pattern.

Sales

Net sales in 1982 declined to \$10.6 billion, essentially the same level as 1980, following a gain to \$11.9 billion in 1981. An oversupply of basic industrial chemicals and weak demand resulted in over-

all price erosion of 3% in 1982, nullifying the gain of 3% realized in 1981. Some price improvement was noted in the United States, Canada and Brazil in the early months of 1982, but as economic conditions worsened, those gains evaporated and prices retreated to earlier levels. Europe successfully increased prices in local currencies. Those increases, however, were more than offset by continued strengthening of the dollar which also depressed exports from the United States.

Physical volume dropped 8% in 1982 after increasing similarly in 1981. Volume in the United States fell 18% as housing, automotive, agriculture, general construction and other durable goods markets remained stagnant throughout the year. In addition, the Dowell oil well servicing division, a star performer in 1981, suffered under the adverse impact of a 39% decline in 1982 drilling rig operations in the United States. Canada and Latin America also lost volume

in 1982, while the European Area experienced a 10% increase. Pharmaceuticals, agricultural products and Styrofoam brand insulation for industrial applications were primary contributors to the volume gain in Europe.

The percentage changes in sales by industry segment and geographical area were:

	Percent Change from Prior Year	
	1982	1981
Industry Segments:		
Industrial		
Chemicals	(13)	15
Plastics and Metals ..	(14)	(5)
Specialty Products	(8)	2
Dowell	(16)	35
Bioproducts and Consumer Products ..	3	26
Geographic Areas:		
United States	(18)	20
Europe	2	2
Canada	(10)	15
Pacific	(4)	5
Latin America	(24)	(2)
Brazil	11	2

(Left to right): Robert M. Keil, executive vice president, Robert W. Lundeen, chairman of the board, Paul F. Orefice, president and chief executive officer, and David L. Rooke, executive vice president.

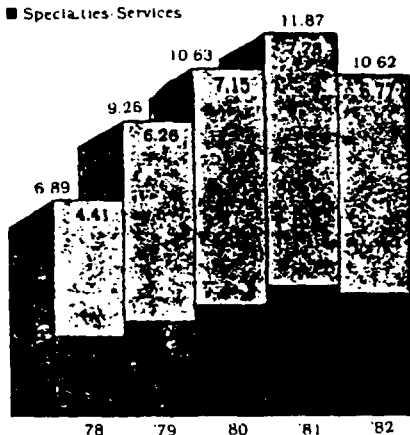


Operating Income

The combination of declining prices and heavy fixed cost penalties from reduced plant operating rates severely restricted earnings from operations in 1982. The ratio of operating income to sales dropped to 3% in 1982 from nearly 8% in 1981 and 11% in 1980. A tight inventory control program led to a \$367 million reduction in inventories in 1982, but manufacturing plants, excluding the Crude Oil Processing Plant (COPP), operated at 65% of capacity versus 72% and 75% in 1981 and 1980, respectively. The liquidation in 1982 of some quantities of lower cost last-in, first-out (LIFO) inventories produced in prior years had the effect of benefiting operating earnings by approximately \$145 million when those lower costs were compared to the current costs of production. This partially offset the fixed-cost penalties of operating at lower rates, which exceeded 1981 by approximately \$290 million. The COPP unit at Oyster Creek, Texas, which was shut down in December 1981, remained idle throughout the year and will continue in that mode until market conditions improve.

Sales by Product Group
(\$ Billion)

■ Industrial Chemicals/Plastics
■ Specialties/Services



Manufacturing costs benefited from a decline in hydrocarbon and energy costs for the first time since 1971. In addition, the Company's personnel count was reduced by about 7,200 people in 1982, largely due to attrition, divestitures and a retirement incentive program accepted by nearly 2,000 employees in the United States. An effective cost control program initiated at the beginning of the year resulted in some \$300 million in expense reduction compared to the 1981 spending level. However, R&D expenditures increased \$56 million as the Company continued its aggressive research program. The change in some major costs were:

**Percent Change
from Prior Year**
1982 1981

Feedstocks		
and energy, unit price	(3)	11
Depreciation	8	11
Maintenance		
and repair	(12)	6
Research		
and development	14	29
Salaries, wages		
and benefits	1	13

Industrial Chemicals suffered the brunt of the economic downturn in both 1982 and 1981, incurring an operating loss of \$13 million in 1982 following profits of \$307 million in 1981 and \$429 million in 1980. Margins on ethylene and chlorine derivatives dropped sharply under the combined pressure of lower prices, declining physical volume, and reduced production levels. Operating income for the Plastics and Metals group also declined rapidly from \$286 million in 1980, to \$67 million in 1981, and to \$22 million in 1982, and was affected by the same negative factors as Industrial

Chemicals. Although Specialty Chemicals performed well in a tough economic environment, operating income from Dowell oil well services declined \$169 million in 1982. Bioproducts and Consumer Products demonstrated substantial resistance to the economic slump by maintaining approximately the same margins as in 1981, a year which recorded a 34% increase over 1980.

Operating data by industry segment and geographic areas are shown in greater detail in Note 9, page 28, and in the section The Year in Review on pages 4 through 7.

Property Disposals and Project Cancellations

Gains from the sale of investments contributed \$214 million to non-operating income in 1982. Asset sales included the dissolution of Asahi-Dow Limited, a Japanese joint venture; the Company's Korean subsidiary and a related joint venture; Bio-Science Enterprises, a clinical laboratory business; and part of the Apache Petroleum Company ("Apache") depository units received from the transfer of the Company's oil and gas properties.

No income was recognized when the oil and gas properties were conveyed to Apache. The Company's obligation to guarantee production quantities from certain producing properties, an agreement to purchase specified quantities of hydrocarbon production, and a commitment to contribute \$7 million quarterly in drilling funds for 12-1/2 years, are

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Management Discussion and Analysis

more fully described in Note C, page 22. The transaction with Apache reduces the Company's financial commitment for oil and gas exploration and development in the United States from approximately \$100 million annually to \$28 million annually while providing preferred access to additional available or uncommitted gas and oil produced by Apache. Furthermore, future benefits will be derived from revenue sharing and ownership of Apache depository units. Additional details on other asset disposals are also described in Note C. Investment sales in 1981 included a \$31 million pretax gain from the sale of stock in Magma Power, and 1980 included \$74 million from the sale of Wanda Petroleum. The Company intends to continue an evaluation of its assets and expects to make additional asset sales when favorable opportunities are presented.

A provision of \$102 million was made for costs associated with cancelled projects as described in Note D, page 22.

Cash Flow*

(* Million)

* (Includes cash, debt and stockholders' capital changes)



Net Income

Interest cost declined \$26 million in 1982 following an increase of \$149 million in 1981 and \$98 million in 1980. Lower commercial paper rates, a reduction in average short-term debt outstanding, and a drop of \$466 million in long-term debt by year-end contributed to this favorable development.

The gain on exchange and translation of subsidiaries that are consolidated was \$47 million in 1982, an increase of \$40 million over 1981. Devaluation of the Brazilian cruzero, Argentine peso and Spanish peseta reduced the United States dollar equivalent of debt denominated in those foreign currencies and contributed most of the increase. On January 1, 1983, the Company adopted Financial Accounting Standard No. 52, which revises standards of financial accounting and reporting for foreign currency transactions. The impact on stockholders' equity at January 1, 1983, is described in Note A, page 22.

The 1982 income tax credit of \$29 million reflects the benefit of \$114 million for the carryback of United States investment tax credits and net operating loss which will enable the Company to claim a refund of taxes paid for prior years. A similar tax credit carryback benefited 1981 income by \$119 million. At December 31, 1982, the Company recognized \$89 million of tax credit and operating loss carryforwards as a reduction of previously recorded deferred income taxes. The deferred tax credits that were eliminated will be reinstated when the tax benefits of the carryforwards are realized for tax

purposes. A comparative tax analysis follows (in millions):

	1982	1981	1980
Current tax provision	\$139	\$ 78	\$242
Current year state taxes	3	11	13
Deferred taxes	32	218	169
Current year taxes before adjustments ..	174	295	424
Tax credit carryback to prior year ..	(114)	(119)	
Tax credit carryforward deducted from deferred taxes ..	(89)		
Net tax provision	\$(29)	\$176	\$424
Effective tax rate of current year taxes before adjustments ..	46.9%	39.7%	34.2%

The higher current year tax rate for 1982 (before carryback-carryforward adjustments) is primarily due to losses incurred in foreign subsidiaries where no applicable tax refund credits were currently available. The factors that influenced the Company's overall effective tax rate for the past three years are shown in Note F, page 23.

Liquidity and Capital Resources

Although the current economic environment severely reduced operating earnings and cash flow from operations, a combination of asset sales, cost controls, and asset management programs implemented in 1982 enabled the

Company to significantly improve its liquidity. The ratio of debt to debt-plus-equity was 42.7% by the end of 1982, compared to 47.5% at the beginning of the year and 51.3% as recently as the third quarter of 1981. Total debt was \$3.8 billion at December 31, 1982, almost \$700 million below a year ago, and the first year-to-year decline since 1962.

A combination of asset sales and reduced capital spending greatly increased cash flow in 1982. Asset sales contributed \$485 million in cash and \$150 million of debt assumption while capital spending was held to \$829 million, almost \$350 million below the level of 1981 and 1980. Depreciation of \$870 million increased 8%, or \$64 million in 1982, and continues to be a significant factor in the Company's liquidity.

Firm control over inventories and receivables contributed to a reduction of \$101 million in funds required to finance working capital. Inventories, valued on the last-in, first-out (LIFO) method were reduced by 17% in 1982. Inventories valued on the first-in, first-out (FIFO) method exceed the LIFO valuation by \$419 million. Thus, the Company's current assets are considerably more valuable than reflected on the balance sheet. Despite difficult business conditions, days of sales outstanding in accounts receivable were held to 58 days at December 31, 1982, versus 56 days in 1981 and 57 days in 1980. A reduction in short-term notes payable required to finance working capital resulted in an improvement in the ratio of current assets over current liabilities to 1.8 at the end of 1982, compared to 1.7 and 1.6 in 1981 and

1980, respectively. Short-term borrowing at December 31, 1982, was \$213 million, substantially below the \$448 million outstanding in 1981 and \$617 million in 1980.

During the course of the year, the Company used commercial paper and revolving bank credit to cover peak working capital requirements; however, no commercial paper was outstanding at year-end. Two new long-term debt issues totaling approximately \$140 million were completed in the first quarter and an additional \$51 million in industrial revenue bond financing was obtained during the year. The Company plans to continue to utilize favorable pollution control and industrial revenue financing when appropriate opportunities are identified.

Early in 1982, the Company issued four million shares of its common stock in a tax-free exchange for \$137 million principal amount of long-term debt.

The Company has unused and available credit facilities with various United States and foreign banks totaling \$1.8 billion in

support of commercial paper borrowing or long-term financing arrangements. These arrangements are supplemented by a variety of other credit facilities available for use by foreign subsidiaries. Based on projected internal cash generation, current levels of liquid assets, and the credit capacity to support additional financing, the Company expects to continue to be able to competitively finance operating cash requirements, planned capital expansion and dividend requirements.

Dividends

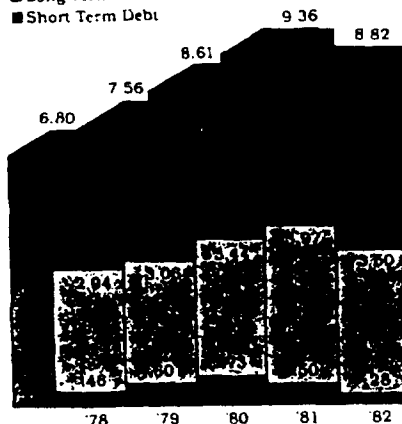
The Company paid dividends of \$1.80 a share in 1982, the same amount paid in 1981. In view of depressed earnings, the Company elected not to raise the annual dividend rate in 1982, interrupting a 22-year record of dividend increases. The Company has paid a cash dividend for 283 consecutive quarters, dating back to 1912.

Capital Expenditures

Expenditures for plant facilities in 1982 totaled \$829 million and included approximately \$147 million for the purchase of an olefin steam cracker in Spain. In addition, operating leases with an asset value of \$343 million were contracted in 1982 compared to \$320 million in 1981. Some capital projects, destined to add capacity for basic industrial chemicals and volume plastics, were cancelled during 1982 and spending was directed more toward specialty facilities. The Company expects to limit capital spending for an intermediate term to approximately the level of annual depreciation.

Capitalization
(\$ Billion)

■ Equity
■ Long Term Debt
■ Short Term Debt



Management Discussion and Analysis

QUARTERLY STATISTICS Unaudited results were as follows (in millions, except per share):

	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Year
1982					
Net sales	\$2,781	\$2,728	\$2,548	\$2,561	\$10,618
Operating income	184	148	57	(33)	356
Income before extraordinary item	97	197	35	13	342
Net income	154	197	35	13	399
Earnings per common share					
Income before extraordinary item	.50	1.02	.18	.07	1.77
Net income	.80	1.02	.18	.07	2.07
Cash dividends paid per common share	.45	.45	.45	.45	1.80
Market price range of common stock:					
High	26.38	24.63	25.75	28.88	28.88
Low	20.00	19.88	19.63	22.38	19.63
1981					
Net sales	\$2,897	\$3,067	\$2,924	\$2,985	\$11,873
Operating income	331	282	224	79	916
Net income	180	189	128	67	564
Earnings per common share	.98	1.00	.67	.35	3.00
Cash dividends paid per common share	.45	.45	.45	.45	1.80
Market price range of common stock:					
High	39.00	38.50	33.00	27.75	39.00
Low	32.13	31.63	23.63	23.38	23.38

The first quarter of 1982 includes \$57 million, or 30 cents per share, of extraordinary gain on the exchange of long-term debt for equity.

Net income for the second quarter of 1982 includes a pretax gain of \$135 million, or 62 cents per share, from the dissolution of Asahi-Dow Limited, a Japanese joint venture.

Fourth quarter 1982 earnings include a \$66 million pretax gain on the disposition of assets and a pretax charge of \$102 million for write-offs associated with Saudi Arabia, Yugoslavia and other sundry project cancellations.

The second quarter of 1981 included \$31 million pretax gain from the sale of stock in Magma Power Company.

The first three quarters of 1981 were restated to reflect the change in LIFO accounting and the change in DISC deferred tax accounting which was made in the fourth quarter, but effective for all of 1981.

SUPPLEMENTARY INFORMATION ON EFFECTS OF CHANGING PRICES Supplementary financial information, prepared in accordance with Financial Accounting Standards Board Statement No. 33, Financial Reporting and Changing Prices, shows certain income data presented in the historical cost income statement on page 17 adjusted to constant dollars and current costs expressed in dollar values generally at the average 1982 price level.

Historical Cost Adjusted for General Inflation

The supplemental data in constant dollars reflect historical costs adjusted for changes in the purchasing power of the dollar as measured by the Consumer Price Index for All Urban Consumers published by the Bureau of Labor Statistics. These amounts do not purport to represent appraised value or any other measure of current value. Depreciation was computed using the straight line method.

At December 31, 1982, there was an excess of monetary liabilities over monetary assets. As inflation erodes the purchasing power of the dollar, net debts are repayable with dollars of lesser value resulting in a gain in purchasing power of \$175 million.

Current Costs

Cost of sales was calculated by applying the last-in, first-out method to all inventories. The carrying value of \$2,174 million for inventories at December 31, 1982, was determined by using the year-end purchase prices of raw materials and supplies and the standard cost of manufacturing for finished goods and work-in-process inventories which approximates current cost.

Net plant properties were determined primarily through the use of indices related specifically to the construction cost of chemical plants. These values which totaled \$9,212 million at December 31, 1982, represent the estimated current costs of existing assets and do not consider technological improvements and efficiencies associated with normal replacement of productive capacities. Depreciation was computed using the straight line method.

Cost for assets outside the United States was determined in local currency and translated into U.S. dollars at exchange rates in effect at year-end.

Consolidated Statement of Income Adjusted for Changing Prices Year Ended December 31, 1982

	As Reported in the Financial Statements	Adjusted for General Inflation (Constant Dollars)	Adjusted for Changes in Specific Prices (Current Costs)
		(In millions)	
Net Sales	<u>\$10,618</u>	<u>\$10,618</u>	<u>\$10,618</u>
Cost of sales, excluding depreciation	8,440	8,612	8,612
Depreciation expense	870	982	916
Interest expense — net	406	406	406
Other operating expense	589	589	589
Provision for taxes on income (credit)	<u>(29)</u>	<u>(29)</u>	<u>(29)</u>
	10,276	10,560	10,494
Income before extraordinary item	<u>\$ 342</u>	<u>\$ 58</u>	<u>\$ 124</u>
Purchasing power gain on net monetary liabilities held during the year		<u>\$ 175</u>	<u>\$ 175</u>
Income including gain attributable to holding net monetary liabilities	<u>\$ 342</u>	<u>\$ 233</u>	<u>\$ 299</u>
Increase in the general price level of inventories and net plant properties over the change in specific prices			<u>\$ 530</u>

Comments on Inflation Accounting Results

Under both constant dollar and current cost methods, income from continuing operations is lower than that determined under the historical cost method. The principal reasons for the lower income are: (1) the worldwide use of double declining balance method of depreciation fell short in providing sufficient funds to replace capital assets using either constant dollar or current cost; and (2) the current cost of LIFO inventories liquidated in 1982 exceeded the historical cost amounts charged to cost of sales.

Management Discussion and Analysis

The following table is a 5-year comparison of selected supplementary financial data adjusted for effects of changing prices. Certain information pertaining to the year ended December 31, 1978, is omitted because it is impracticable to obtain.

Comparison of Selected Financial Data in Historical Dollars, Constant Dollars and Current Cost
(Dollars in millions, except per share data, all constant dollar and current cost data in average 1982 dollars)

	1982	1981	1980	1979	1978
Sales					
Historical dollars	\$10,618	\$11,873	\$10,626	\$ 9,255	\$ 6,888
Constant dollars	10,618	12,601	12,447	12,308	10,190
Income Before Extraordinary Item					
Historical dollars	\$ 342	\$ 564	\$ 805	\$ 784	\$ 575
Constant dollars	58	135	732	960	
Current costs	124	204	758	925	
Earnings Per Share Before Extraordinary Item					
Historical dollars	\$ 1.77	\$ 3.00	\$ 4.42	\$ 4.33	\$ 3.16
Constant dollars	.30	.72	4.02	5.30	
Current costs	.64	1.09	4.16	5.11	
Unrealized Gain Attributable to Holding Net Monetary Liabilities	\$ 175	\$ 417	\$ 551	\$ 578	
Earnings Per Share Including Gain Attributable to Holding Net Monetary Liabilities					
Historical dollars	\$ 1.77	\$ 3.00	\$ 4.42	\$ 4.33	\$ 3.16
Constant dollars	1.21	2.94	7.04	8.49	
Current costs	1.55	3.30	7.19	8.30	
Increase in the General Price Level of Inventories and Net Plant Properties Over the Change in Specific Prices	\$ 530	\$ 111	\$ 823	\$ 472	
Total Assets					
Historical dollars	\$11,807	\$12,496	\$11,538	\$10,252	\$ 8,789
Constant dollars	11,674	12,833	12,909	12,892	12,523
Long-Term Debt					
Historical dollars	\$ 3,502	\$ 3,968	\$ 3,438	\$ 3,055	\$ 2,937
Constant dollars	3,462	4,075	3,846	3,842	4,185
Stockholders' Equity at Year-End					
Historical dollars	\$ 5,040	\$ 4,891	\$ 4,440	\$ 3,897	\$ 3,395
Constant dollars	8,620	8,955	8,742	8,399	
Current costs	8,621	9,477	9,408	9,403	
Debt Ratio (%) at Year-End					
Historical dollars	42.7%	47.5%	48.2%	48.2%	49.7%
Constant dollars	30.1	33.8	34.7	35.2	
Current costs	30.1	32.5	33.1	32.7	
Dividends Declared Per Common Share					
Historical dollars	\$ 1.80	\$ 1.80	\$ 1.65	\$ 1.50	\$ 1.30
Constant dollars	1.80	1.90	1.91	1.97	1.91
Market Price Per Common Share at Year-End					
Historical dollars	\$ 25.88	\$ 26.25	\$ 32.13	\$ 32.13	\$ 24.88
Constant dollars	25.59	26.96	35.94	40.40	35.45
Average Consumer Price Index (CPI-U) (1967 = 100)	289.1	272.4	246.8	217.4	195.4

Responsibility for Financial Statements

The following consolidated financial statements and related notes of The Dow Chemical Company and its subsidiaries were prepared by management in accordance with generally accepted accounting principles. The Board of Directors, through its Audit Committee, assumes an oversight role with respect to the preparation of financial statements.

The Company is responsible for the integrity and objectivity of the consolidated financial statements, which are presented in a consistent manner on the accrual basis of accounting. Established accounting procedures are designed to provide accurate books, records and accounts which fairly reflect the transactions of the Company.

The training of qualified personnel and the assignment of duties are intended to provide internal controls at a cost appropriate to management's evaluation of the risks involved. Such controls are monitored by an internal audit staff, providing reasonable assurances that transactions are executed in accordance with management's authorization and that adequate accountability for the Company's assets is maintained.

Deloitte Haskins & Sells, independent public accountants, with direct access to the Board of Directors through its Audit Committee, have examined the consolidated financial statements prepared by the Company, and their report follows.

Opinion of Independent Public Accountants

TO THE STOCKHOLDERS AND BOARD OF
DIRECTORS OF THE DOW CHEMICAL COMPANY

We have examined the consolidated balance sheets of The Dow Chemical Company and its subsidiaries as of December 31, 1982 and 1981, and the related consolidated statements of income, additional paid-in capital, retained earnings, and changes in financial position for each of the three years in the period ended December 31, 1982. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, such financial statements present fairly the financial position of The Dow Chemical Company and its subsidiaries at December 31, 1982 and 1981, and the results of their operations and the changes in their financial position for each of the three years in the period ended December 31, 1982, in conformity with generally accepted accounting principles consistently applied during the period except for the change, with which we concur, in the method of stating inventories as described in Note G to the financial statements.

Deloitte Haskins & Sells

Midland, Michigan
February 14, 1983

Statement of Responsibility/Opinion of Independent Public Accountants
ST0005057

Summary of Significant Accounting Policies

CONSOLIDATION The accompanying consolidated financial statements include the assets, liabilities, revenues and expenses of all significant subsidiaries except for banks and insurance companies. Because of the nature of their operations, the accounts of these companies are not consolidated. However, their earnings are included in consolidated net income under the equity method of accounting.

NON-CONSOLIDATED EQUITY INVESTMENTS Investments in companies which are 20%-50% owned are carried on the equity basis. Marketable equity securities are carried at the lower of cost or market. Other investments are carried at cost less reserves.

TRANSLATION OF FOREIGN CURRENCIES Cash, marketable securities, receivables and liabilities are translated at current rates. Property, inventories and investments in capital stock are translated at rates prevailing when the transactions occurred. Deferred income taxes are translated in the same manner as the assets or liabilities to which they relate.

Revenues and expenses are translated at appropriate current rates for each month, except that depreciation is recorded at historical rates. Foreign currency gains and losses are reflected in income currently.

INVENTORIES Inventories are stated at cost, which is less than market value. Cost is determined on the last-in, first-out basis for product inventories and on the first-in, first-out basis for operating supplies.

PLANT PROPERTIES AND DEPRECIATION Land, buildings and equipment, including property under capital lease agreements, are carried at cost less accumulated depreciation. Depreciation is based on the estimated service lives of depreciable assets and is provided using the declining balance method.

Fully depreciated assets are retained in the property and depreciation accounts until they are removed from service. In the case of disposals, the assets and related depreciation are removed from the accounts and the net amount, less proceeds from disposal, is charged or credited to income.

GOODWILL The excess of the cost of investments in subsidiaries over carrying value of assets acquired is shown as goodwill. Goodwill arising since October 1970 is amortized over 40 years. In the opinion of management, goodwill prior to that date requires no amortization.

RETIREMENT PLANS The Company and certain subsidiaries have plans which provide retirement benefits for eligible employees. The major plan covers substantially all full-time United States employees. The policy is to accrue and fund pension cost as computed by an actuary.

TAXES ON INCOME AND INVESTMENT

CREDITS The companies compute and record income taxes currently payable based upon their determination of taxable income which may be different from pretax accounting income. These differences may arise from recording in pretax accounting income transactions which enter into the determination of taxable income in another period. The tax effect of these timing differences is recognized by adjustment currently to the provision for taxes.

Provision is made for taxes on that income of subsidiaries which is taxable in the United States as earned, and on unremitted earnings of subsidiary and associated companies to the extent that such earnings are deemed to be not permanently invested.

Laws governing the determination of United States and certain foreign income taxes provide for investment credits for acquisition of qualified facilities. Such credits are reflected as a reduction of income tax expense on the flow-through basis in the year in which they are earned.

In addition to tax credits, certain foreign countries provide incentives which are granted to encourage new investment. Generally, such grants are credited to income as earned.

EARNINGS PER COMMON SHARE The calculation of earnings per share is based on the weighted average number of shares of common stock outstanding during each year.

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Consolidated Statement of Income

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Net Sales	\$10,618	\$11,873	\$10,626
Operating Costs and Expenses			
Cost of sales	9,310	10,019	8,649
Selling and administrative	952	938	765
	<u>10,262</u>	<u>10,957</u>	<u>9,414</u>
Operating income	356	916	1,212
Other Income (Expense)			
Equity in earnings:			
Nonconsolidated subsidiaries (excluding translation)	14	13	24
Losses on translation — nonconsolidated subsidiaries	(10)	(2)	(14)
20%-50% owned companies	140	132	127
Interest income	108	102	87
Interest and amortization of debt discount and expense	(514)	(532)	(385)
Gains on exchange and translation — consolidated subsidiaries	47	7	31
Gains on sale of investments	214		74
Provision for plant closings and cancelled projects	(102)		
Sundry income — net	<u>61</u>	<u>108</u>	<u>82</u>
Income Before Provision for Taxes on Income	314	744	1,238
Provision for Taxes on Income	(29)	176	424
Minority Interests' Share in Income	<u>1</u>	<u>4</u>	<u>9</u>
Income Before Extraordinary Item	342	564	805
Extraordinary Item — Gain on Exchange of Long-Term Debt for Equity	<u>57</u>		
Net Income	<u>\$ 399</u>	<u>\$ 564</u>	<u>\$ 805</u>
Earnings Per Common Share			
Income before extraordinary item	\$ 1.77	\$ 3.00	\$ 4.42
Extraordinary item	.30		
Net Income	<u>\$ 2.07</u>	<u>\$ 3.00</u>	<u>\$ 4.42</u>

See Accounting Policies and Notes to Financial Statements

Income Statement

ST0005059

Consolidated Balance Sheet

ASSETS

	December 31	
	1982	1981
	(In millions)	
Current Assets		
Cash	\$ 22	\$ 26
Marketable securities and interest-bearing deposits (at cost, approximately market)	161	67
Accounts and notes receivable:		
Trade (less allowance for doubtful receivables — 1982, \$56; 1981, \$53)	1,507	1,671
Other	527	634
Inventories:		
Finished and work in process	1,153	1,438
Materials and supplies	593	675
Total Current Assets	3,963	4,511
Investments		
Capital stock of related companies — at cost plus equity in accumulated earnings:		
Banking and Insurance subsidiaries	198	182
Associated companies (50% owned)	724	783
20% - 49% owned companies	238	130
Other Investments (at cost)	172	156
Noncurrent receivables	194	176
Total Investments	1,526	1,427
Plant Properties	11,199	10,984
Less — Accumulated depreciation	5,238	4,810
Net Plant Properties	5,961	6,174
Goodwill	195	228
Deferred Charges and Other Assets	162	156
TOTAL	<u>\$11,807</u>	<u>\$12,496</u>

See Accounting Policies and Notes to Financial Statements

LIABILITIES

	December 31	
	1982	1981
	(In millions)	
Current Liabilities		
Notes payable	\$ 213	\$ 448
Long-term debt due within one year	63	48
Accounts payable:		
Trade	804	983
Other	251	345
United States and foreign taxes on income	119	69
Accrued and other current liabilities	791	795
Total Current Liabilities	2,241	2,688
 Long-Term Debt	 3,502	 3,968
 Deferred Taxes and Other Liabilities		
Deferred income taxes	733	840
Deferred employee benefits	64	65
Other noncurrent obligations	189	
Total Deferred Taxes and Other Liabilities	986	905
 Minority Interests in Subsidiary Companies	 38	 44
 Stockholders' Equity		
Common stock (authorized 500,000,000 shares of \$2.50 par value each; issued 1982, 204,117,415; 1981, 203,340,584)	510	509
Additional paid-in capital	516	538
Retained earnings	4,141	4,090
Total	5,167	5,137
Less — Treasury stock, at cost (1982, 9,947,509; 1981, 13,947,509 shares)	127	246
Net Stockholders' Equity	5,040	4,891
TOTAL	\$11,807	\$12,496

See Accounting Policies and Notes to Financial Statements

Consolidated Statement of Additional Paid-In Capital

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Balance at Beginning of the Year	\$538	\$516	\$480
Add (Deduct):			
Excess of selling or market price over par value of common stock issued to employees	16	31	32
Income tax benefit realized from sale of common stock to employees		1	4
Excess of cost over market value of treasury shares issued:			
In acquisition of Richardson-Merrell Inc.		(10)	
In exchange for long-term debt	(38)		
Balance at End of the Year	\$516	\$538	\$516

Consolidated Statement of Retained Earnings

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Balance at Beginning of the Year	\$4,090	\$3,868	\$3,365
Add (Deduct):			
Net income	399	564	805
Cash dividends declared (per share — 1982, \$1.80; 1981, \$1.80; 1980, \$1.65)	(348)	(342)	(302)
Balance at End of the Year	\$4,141	\$4,090	\$3,868

See Accounting Policies and Notes to Financial Statements

ST0005062

Consolidated Statement of Changes in Financial Position

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Funds Provided By			
Income before extraordinary item	\$ 342	\$ 564	\$ 805
Charges (credits) to income not requiring outlay of funds:			
Depreciation	870	806	728
Equity in net income of nonconsolidated companies,			
less dividends received	(88)	(104)	(99)
Deferred income taxes	(57)	218	169
Funds from operations	1,067	1,484	1,603
Extraordinary gain on exchange of long-term debt for equity	57		
New long-term debt	267	628	650
Increase (decrease) in short-term debt			
and current portion of long-term debt	(220)	(272)	135
Increase (decrease) in current payables and accruals	(251)	49	53
Sale of common stock to employees	18	35	40
Book value of asset disposals	560	49	103
Common stock issued:			
In acquisition of Richardson-Merrell Inc.		260	
In exchange for long-term debt	80		
Increase in other noncurrent liabilities	182		
Total Funds Provided	1,760	2,233	2,584
Funds Used For			
New plant properties	829	1,176	1,184
Cash dividends declared	348	342	302
Purchase of treasury stock		67	
Reduction in long-term debt:			
Exchange of debentures for common stock	137		
Other	596	158	267
Increase (decrease) in current accounts and notes receivable	(245)	44	106
Increase (decrease) in inventories	(367)	110	621
Increase in noncurrent receivables and sundry assets	225	113	127
Investment in related companies	147	16	61
Acquisition of businesses (less cash and securities — 1981, \$32):			
Plant properties		128	
Goodwill		128	
Other assets — net		26	
Total Funds Used	1,670	2,308	2,668
Net Increase (Decrease) in Funds	90	(75)	(84)
Cash and marketable securities, beginning of year	93	168	252
Cash and marketable securities, end of year	<u>\$ 183</u>	<u>\$ 93</u>	<u>\$ 168</u>

See Accounting Policies and Notes to Financial Statements

Consolidated Statements

ST0005063

Notes to Financial Statements

A. FOREIGN CURRENCY TRANSLATION

On January 1, 1983, the Company adopted Statement of Financial Accounting Standards No. 52 as its method of translating foreign currencies. The United States dollar is used as the functional currency throughout the world except for operations in Germany, Japan and Dow Banking Corporation. The effect of this change was to increase stockholders' equity at January 1, 1983, by approximately \$20 million.

B. EXTRAORDINARY ITEM In 1982, the Company exchanged 4,000,000 shares of its common stock in a tax-free exchange for Dow bonds having a face value of \$137 million. This exchange of long-term debt for equity resulted in an extraordinary gain of \$57 million, or \$.30 per common share.

C. ACQUISITIONS AND DIVESTITURES In March 1982, the Company and Asahi Chemical Industry Company, Ltd. reached agreement for the dissolution of their interests in Asahi-Dow Limited, a Japanese joint venture. The Asahi-Dow Styrofoam brand plastic foam business, including three manufacturing plants, was transferred to a new Dow subsidiary in Japan. The Company received approximately \$162 million in cash and short-term securities and \$69 million in other assets, resulting in a pretax gain of \$135 million.

On September 30, 1982, the Company completed the sale and exchange of its United States oil and gas properties to Apache Petroleum Company ("APC"). The transaction provided for the conveyance by Dow to APC of an undivided 90% interest in the producing oil and gas properties of Dow's oil and gas division, all nonproducing oil and gas properties of the division; and certain assets and rights used by the division in evaluating, exploring, developing, and administering its oil and gas properties, including computer software. In exchange for these assets, APC issued to Dow 9 million APC Depositary Units, assumed \$150 million of Dow liabilities, and paid Dow \$90 million in cash, a total combined value of approximately \$402 million. APC contributed the Dow assets to APD Company ("APD"), a partnership formed between APC and a Dow subsidiary. Dow contributed to APD its 10% retained interest in the producing properties and will contribute to APD \$350 million in quarterly cash contributions of \$7 million over the next 12-1/2 years for use as drilling funds. In addition, the Company has guaranteed certain

quantities of production from three fields included in the producing properties and has agreed to purchase approximately 75% of the gas produced from the conveyed producing properties. The purchase price of the production is determined in accordance with the National Gas Policy Act of 1978. Depending upon the success of the future exploration program, some portion of the drilling funds will be charged as expense to the extent that proved reserves are not discovered. That amount is not determinable at this time and such charges will be recognized in future years. No income was recognized when the properties were conveyed to APC, however, fourth quarter earnings included \$15 million of pretax income realized from the sale of 1.6 million of the APC Depositary Units.

The Company agreed in October 1982 to sell its total shareholdings in Dow Chemical Korea Limited and the joint venture Korea Pacific Chemical Corporation to the Korea Explosives Group for \$60 million. Dow agreed to provide ongoing technical support to the two companies and the Korea Explosives Group assumed certain financial obligations of Dow with respect to the two companies. The Company realized \$7 million pretax income from the transaction.

On November 1, 1982, the Company completed the sale of its Bio-Science Enterprises subsidiary, a clinical laboratory business, to American Hospital Supply Corporation for approximately \$120 million in cash. The divestiture resulted in a pretax gain of \$44 million.

As previously reported, the Company acquired the ethical pharmaceutical business of Richardson-Merrell Inc. in 1981 in exchange for approximately 7.3 million shares of Dow common stock having a value of \$260 million. The acquisition was accounted for as a purchase, and revenues and results of operations since March 10, 1981, are included in the Consolidated Statement of Income.

D. PROJECT CANCELLATIONS AND PLANT CLOSINGS

In the fourth quarter of 1982 the Company withdrew from joint ventures for the construction of petrochemical projects in Yugoslavia and Saudi Arabia. In addition, other sundry projects were cancelled, related primarily to industrial chemical production.

A pretax charge of \$102 million was recorded in the fourth quarter for estimated project cancellation costs.

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E. INTEREST COST The following is an analysis of interest and amortization of debt discount and expense:

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Interest incurred on debt	\$579	\$605	\$456
Less: Interest capitalized	65	73	71
	<u>\$514</u>	<u>\$532</u>	<u>\$385</u>

F. TAXES ON INCOME Domestic and foreign components of pretax accounting income, classified primarily by the domicile of each company, were:

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Domestic	\$211	\$526	\$ 849
Foreign	160	218	389
Income before tax	<u>\$371</u>	<u>\$744</u>	<u>\$1,238</u>

This classification of profit before tax will differ from Note G, page 28, which presents revenue and profits allocated by geographic area in accordance with area management organization.

The provision for taxes on income consisted of:

	State and			
	Federal	Local	Foreign	Total
	(In millions)			
1982				
Current	\$ (104)	\$ 3	\$ 129	\$ 28
Deferred	(38)		(19)	(57)
Total	<u>\$ (142)</u>	<u>\$ 3</u>	<u>\$ 110</u>	<u>\$ (29)</u>
1981				
Current	\$ (103)	\$ (1)	\$ 62	\$ (42)
Deferred	200		18	218
Total	<u>\$ 97</u>	<u>\$ (1)</u>	<u>\$ 80</u>	<u>\$ 176</u>
1980				
Current	\$ 125	\$ 13	\$ 117	\$ 255
Deferred	153		16	169
Total	<u>\$ 278</u>	<u>\$ 13</u>	<u>\$ 133</u>	<u>\$ 424</u>

The current tax provision was reduced by investment and other tax credits of \$121 million in 1982, \$115 million in 1981 and \$94 million in 1980. The Company had available for federal income tax purposes at December 31, 1982, United States investment and foreign tax credit carryforwards

totaling \$73 million which expire beginning in 1987. In addition, certain foreign subsidiaries had net operating loss carryforwards totaling approximately \$222 million (at December 31, 1982 exchange rates) which expire in 1983 through 1991. For financial reporting purposes, previously recorded deferred tax credits have been reduced by \$89 million for the tax benefits of carryforwards. The deferred tax credits eliminated will be reinstated as the tax benefits of the carryforwards are realized for tax purposes.

Deferred tax provisions related to the following:

	1982	1981	1980
	(In millions)		
Tax benefits of tax credit and loss carryforwards	\$ (89)		
Tax effects of foreign exchange transactions	(2)	\$ (44)	\$ (9)
Excess of depreciation and depletion claimed for tax purposes over book amounts	52	137	125
Taxable gain on sale of oil and gas properties	(40)		
Undistributed earnings of foreign subsidiaries deemed not to be permanently invested	(33)	4	13
Income of export and shipping companies operating outside the United States		8	29
Difference between LIFO method claimed for tax purposes and book amounts	24	108	(2)
Other — net	31	5	13
Total	<u>\$ (57)</u>	<u>\$ 218</u>	<u>\$ 169</u>

Current deferred taxes payable included in the Consolidated Balance Sheet caption "United States and foreign taxes on income" were \$24 million at December 31, 1982. Current deferred tax benefits totaling \$26 million are included in "Accounts and notes receivable; Other" at December 31, 1981.

Prior to 1981, the Company provided taxes on the full earnings of its domestic international sales corporation (DISC). The Company has determined that commencing with the year ended December 31, 1981, the tax deferred earnings of the DISC will be permanently invested and that under present statutes no tax on those earnings will be payable. The effect of this change in estimate was to increase net income for the year ended December 31, 1981, by \$17 million and increase earnings per common share by \$.09.

Notes

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Notes to Financial Statements

Major differences between the effective rate and the United States statutory rate were:

	Percent		
	1982	1981	1980
Statutory rate	46.0	46.0	46.0
U.S. investment and other tax credits	(31.0)	(11.8)	(6.1)
Nontaxable gain on exchange of long-term debt for equity	(7.0)		
Taxes on income of foreign operations at tax rates different from U.S. statutory rate (including DISC)	(2.9)	(7.6)	(2.4)
Untaxed equity in income of companies whose accounts are not consolidated	(5.3)	(5.9)	(2.9)
State and local income taxes (net of federal tax)	0.4	0.3	0.5
Gain on sale of subsidiaries	(8.7)		
Other	0.7	2.7	(0.8)
Effective rate	(7.8)	23.7	34.3

Unremitted earnings of subsidiary and related companies accounted for by the equity method, which are deemed to be permanently invested, amounted to approximately \$1.6 billion, \$1.5 billion and \$1.3 billion at December 31, 1982, 1981 and 1980, respectively.

G. INVENTORIES Beginning in 1974, inventories have been valued, for both tax and financial reporting purposes, under the last-in, first-out method (LIFO) using inventory pools corresponding to business segments. In 1981, the Internal Revenue Service changed its requirement that inventories be the same for both tax and financial reporting. As a result of that modification, the Company realigned its LIFO inventory pools for financial reporting purposes to correspond to product groups rather than business segments, thereby achieving, in the opinion of management, a better matching of cost and revenue. The change was made effective January 1, 1981. The effect of the change was to increase net income for the year ended December 31, 1981, by \$101 million and increase earnings per common share by \$.54. Pro forma amounts for retroactive application or the cumulative effect of this change are not determinable.

A reduction of inventories in 1982 resulted in some quantities of LIFO inventory carried at lower costs prevailing in prior years being liquidated. The effect of these liquidations was to affect pretax income favorably by approximately \$145 million for the year ended December 31, 1982.

The amount of reserve required to reduce inventories from the first-in, first-out basis to the last-in, first-out basis at December 31, 1982 and 1981, was \$419 million and \$713 million, respectively.

H. SUPPLEMENTARY INFORMATION

Accrued and Other Current Liabilities

	December 31	
	1982	1981
	(in millions)	
Accrued vacations	\$134	\$140
Employees' retirement plan	125	121
Interest payable	123	126
Sundry	409	408
Total	\$791	\$795

Net Sundry Income

	Year Ended December 31		
	1982	1981	1980
	(in millions)		
Royalty income	\$ 28	\$ 28	\$ 24
Profit on securities	1	33	18
Profit on redemption of long-term debt	8	14	14
Other — net	24	33	26
Total	\$ 61	\$108	\$ 82

Supplementary Income Statement Information

	Year Ended December 31		
	1982	1981	1980
	(in millions)		
Maintenance and repairs	\$559	\$633	\$597
Depreciation and depletion of plant properties	870	806	728
Research and development	460	404	314
Taxes, other than U.S. and foreign taxes on income:			
Property and other taxes	135	145	126
Payroll taxes	154	144	129
Provision for doubtful receivables	28	12	15

I. NOTES PAYABLE Notes payable consisted primarily of obligations due banks with a variety of interest rates and maturities. The balance at December 31, 1981, included commercial paper in the amount of \$155 million. No commercial paper was outstanding at December 31, 1982.

J. LEASED PROPERTIES Capital leases included with owned property in the balance sheet were:

	December 31	
	1982	1981
	(In millions)	
Land	\$ 1	\$ 1
Buildings	1	2
Machinery and equipment	137	144
Office furniture and equipment	7	7
Total	146	154
Less — Accumulated depreciation	104	104
Net	\$ 42	\$ 50

Minimum lease commitments at December 31, 1982, were as follows:

	Capital Leases	Operating Leases
	(In millions)	
1983	\$ 14	\$ 126
1984	12	127
1985	11	113
1986	10	114
1987	10	107
1988 and thereafter	70	803
Total minimum lease payments	127	\$1,390
Less — Estimated executory costs	1	
Net minimum lease payments	126	
Less — Amounts estimated to represent interest	48	
Present value of net minimum lease obligations	78	
Less — Current accounts payable	8	
Long-term capital lease obligations	\$ 70	

Minimum operating lease commitments have not been reduced by minimum sublease rentals of \$2 million due in the future under non-cancelable subleases.

Rental payments under operating leases charged to expense were:

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Minimum rentals	\$184	\$147	\$108
Contingent rentals	3	11	10
Less — Sublease rentals	(5)	(4)	(1)
Net	\$182	\$154	\$117

K. LONG-TERM DEBT AND AVAILABLE CREDIT FACILITIES Details of debt due after one year were as follows:

	December 31	
	1982	1981
	(In millions)	
Promissory notes:		
12.85%, final maturity 1985	\$ 150	\$ 150
8.00%, final maturity 1986	120	120
4.50%, final maturity 1990	55	60
5.00%, final maturity 1991	48	52
Debentures:		
8.78%, final maturity 1987:		
Canadian dollar		213
4.35%, final maturity 1988	20	35
6.70%, final maturity 1998	35	60
7.75%, final maturity 1999	43	59
8.85%, final maturity 1999	56	60
8.875%, final maturity 2000	71	89
8.90%, final maturity 2000	86	94
7.40%, final maturity 2002	56	71
7.625%, final maturity 2003	59	71
8.50%, final maturity 2005	212	225
8.50%, final maturity 2006	188	200
7.875%, final maturity 2007	284	300
8.625%, final maturity 2008	300	300
11.25%, final maturity 2010	400	400
Bonds:		
8.50%, final maturity 1989:		
Swiss franc		33
8.50%, final maturity 1992:		
Japanese yen	85	
9.625%, final maturity 1994	196	197
Other — Various rates and maturities:		
Foreign currency loans	111	109
Brazilian U.S. dollar loans	112	163
Other U.S. dollar loans	407	535
Pollution control/ Industrial revenue bonds	348	303
Capital lease obligations	70	79
	3,512	3,978
Less — Unamortized debt discount	10	10
Total	\$3,502	\$3,968

The amounts shown are stated net of debentures purchased to satisfy future sinking fund requirements.

The average interest rate on long-term debt was 9.9% in 1982 compared to 9.2% in 1981.

Annual installments on long-term debt and capital lease obligations for the next 5 years are as follows (in millions): 1983, \$63; 1984, \$99; 1985, \$266; 1986, \$164; 1987, \$454.

Notes

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Notes to Financial Statements

Unused and available credit facilities from various United States banks totaling \$685 million at December 31, 1982, required the retention of average cash balances aggregating approximately \$36 million. These requirements were generally satisfied by balances maintained for normal business operations.

Additional unused and available credit facilities with various United States and foreign banks totaling \$1.1 billion at December 31, 1982, required the payment of commitment fees.

Both of these groups of facilities, totaling \$1.8 billion, are available in support of commercial paper borrowing or long-term financing arrangements.

Additional unused credit facilities totaling \$475 million at December 31, 1982, are available for use by foreign subsidiaries.

L. PLANT PROPERTIES

	December 31	
	1982	1981
	(In millions)	
Land	\$ 199	\$ 191
Land and waterway improvements ..	340	341
Buildings	924	866
Machinery and equipment	8,352	7,933
Wells and brine systems	182	329
Office furniture and equipment	187	182
Oil and gas land and leaseholds	18	129
Other	299	120
Construction in progress	698	893
Total	\$11,199	\$10,984

M. RELATED COMPANY TRANSACTIONS The Company's investments in nonconsolidated subsidiaries and companies which are 20%-50% owned at December 31, 1982 and 1981, were \$1.160 million and \$1.095 million, respectively. These amounts approximate the Company's equity in the net assets of these investments. Dividends received from related companies were \$56 million in 1982, \$39 million in 1981 and \$38 million in 1980. All other transactions with and balances due to or from related companies, were not material in amount.

N. RETIREMENT PLANS The Company and its subsidiaries have several retirement plans covering substantially all of their employees, including certain employees in foreign countries. The cost of all retirement plans was \$126 million in 1982, \$121 million in 1981 and \$127 million in 1980. The Company makes annual contributions to the plans equal to the amounts accrued for pension expense, as determined by the aggregate cost method of valuation. A comparison of accumulated plan

benefits and plan assets for the Company's domestic defined benefit plan, representing more than 85 percent of accumulated pension plan benefits for the Company and its consolidated subsidiaries, was:

	January 1	
	1983	1982
	(In millions)	
Actuarial present value of accumulated plan benefits:		
Vested	\$1,044	\$ 887
Nonvested	175	188
	\$1,219	\$1,075
Net assets available for benefits	\$1,168	\$1,026

Effective January 1981, the Company changed its investment return assumption for the domestic defined benefit plan from 6.5 percent to 8.0 percent and changed its pay increase assumption from 3 percent to 6 percent. These changes were adopted to reflect assumptions which will more clearly match anticipated future experience and are reflected in the actuarial present value of accumulated plan benefits at January 1, 1982. The net effect of the changes on 1981 results of operations as compared with the year ended December 31, 1980, was to reduce pension expense by \$16 million and increase net income by \$9 million, or \$.05 per common share. Actuarial assumptions include an average retirement age of 62 and turnover based on experience.

The plan was amended in 1982 to provide a retirement incentive for certain employees who elected to retire during the period March 1, 1982, to May 1, 1982. This change resulted in an increase of \$18 million in the actuarial present value of vested accumulated plan benefits at January 1, 1983.

The Company's foreign pension plans are not required to report pursuant to ERISA and have not determined for 1982 the actuarial value of accumulated benefits or net assets available for benefits as calculated and disclosed above. However, as of January 1, 1982 and 1981, available assets in other plans exceeded vested benefits by approximately \$73 million and \$65 million, respectively.

O. STOCK OPTION AND AWARD PLANS Stock option plans and management incentive awards related to consolidated net income are described in the Company's Proxy Statement of March 1983. Options under all plans are granted at market price of the shares on the date of the grants. A summary

of transactions during the last two years for such plans is as follows:

1982		
	Deferred Stock	Dividend Units
	(In thousands)	
Granted during year ...	15	188
Outstanding		
at December 31	516	525
Available for grant		
at December 31	1,682	1,295

1981		
	Deferred Stock	Dividend Units
	(In thousands)	
Granted during year ...	70	5
Outstanding		
at December 31	556	349
Available for grant		
at December 31	1,694	1,483

Shares of common stock under option for all plans were:

1982		
	Number of Shares	Option Price Range
	(In thousands)	
Outstanding		
at December 31	3,749	\$20.125-\$36.125
Granted during year ...	1,035	\$20.125-\$24.188
Exercised during year ..	124	\$22.14-\$26.688

1981		
	Number of Shares	Option Price Range
	(In thousands)	
Outstanding		
at December 31	4,238	\$22.14-\$41.875
Granted during year ...	884	\$22.50-\$36.125
Exercised during year ..	168	\$22.14-\$37.00

	1982	1981
	(In thousands)	
Options expired or terminated during year	1,400	468
Options exercisable		
at December 31	2,732	3,372
Options available for grant		
at December 31	1,058	2,056

Aggregate amounts charged to expense for all plans were \$5 million in 1982, \$1 million in 1981 and \$10 million in 1980.

The Company made offerings of common stock to its employees, excluding directors, in 1982 and 1981 at \$19.10 per share and \$30.40 per share, respectively, payable generally through payroll deductions. Unfilled subscriptions (in thousands), cancelable at the option of the employee, were 1,604 and 698, respectively, at December 31, 1982 and 1981. Partial payments on these subscriptions aggregating \$19 million and \$14 million at December 31, 1982 and 1981, respectively, are included in current liabilities.

P. COMMITMENTS AND CONTINGENT LIABILITIES The Company and its subsidiaries are parties to a number of claims and lawsuits arising out of the normal course of business with respect to commercial matters including product liabilities, governmental regulation including environmental matters, and other actions. Certain of these actions purport to be class actions and seek damages in very large amounts. All such claims are being contested. The amounts of ultimate liability thereunder are not determinable at December 31, 1982, but in the opinion of management, resolution of these matters will not materially affect the consolidated financial position or results of operations of the Company and its subsidiaries.

As a general partner of several partnerships, the Company may be liable for any deficiencies which may arise in meeting the terms of loan obligations incurred by the partnerships. Assets of the partnerships which have been pledged as security for these loans are currently in excess of the loan obligations.

The Company has various purchase commitments for materials, supplies and items of permanent investment related to the ordinary conduct of business. Such commitments are not at prices in excess of current market. While certain of these commitments are for quantities in excess of the Company's present requirements, they are not expected to have any material adverse effect on the consolidated financial position or results of operations of the Company.

A Canadian subsidiary has entered into two 20-year agreements to purchase substantially all the output of an ethylene plant (Plant No. 1), and 40% of the output of a second ethylene plant (Plant No. 2) upon its completion. The purchase price of the output is determined on a cost-of-service basis which, in addition to covering all operating expenses, provides the owner of the plants with a specified return on capital. The owner of the plants, The Alberta Gas Ethylene Company, Ltd., has borrowed \$228 million for the construction of Plant No. 1 which has been guaranteed as to principal and interest by the Company.

Notes to Financial Statements

The Company has contracted to purchase process steam from a nuclear power plant being constructed by Consumers Power Company at Midland, Michigan. If the Company terminates the contract due to circumstances specified in the contract, Consumers may claim that the Company is obligated to pay a termination fee, which as of December 31, 1982, was estimated to be either \$373 million or \$746 million depending upon the circumstances giving rise to the termination.

A United Kingdom partnership has entered into a 15-year operating lease agreement for a semi-submersible drilling rig to be used for oil and gas drilling operations. A subsidiary of the Company is a participant in the partnership and the Company has severally guaranteed 50% of the lease payments to be made by the partnership. The present value of that guarantee amounted to \$44 million at December 31, 1982.

In addition, the Company has guaranteed loans of related companies in the amount of \$175 million.

9. GEOGRAPHIC AND INDUSTRY SEGMENTS The Company conducts its worldwide operations through separate geographic area organizations which represent major markets or combinations of related markets. The results by geographic area for the three years were (in millions):

	United States	Europe	Canada	Pacific	Latin America	Brazil	Elim. and Corp. Items	Consolidated
1982								
Sales to unaffiliated customers ..	\$5,074	\$3,358	\$ 751	\$683	\$412	\$340		\$10,618
Transfers between areas	826	105	149	1	8	41	\$(1,130)	
Operating income	335	51	9	36	14	33	(122)	356
Profit (loss) before tax	328	(57)	(22)	155	9	8	(107)	314
Identifiable assets	6,441	2,569	1,401	436	357	497	106	11,807
1981								
Sales to unaffiliated customers ..	\$6,182	\$3,292	\$ 837	\$711	\$545	\$306		\$11,873
Transfers between areas	924	241	192	1	9	44	\$(1,411)	
Operating income	680	135	110	42	56	7	(114)	916
Profit (loss) before tax	636	80	67	29	53	(22)	(99)	744
Identifiable assets	6,793	2,530	1,513	626	397	533	104	12,496
1980								
Sales to unaffiliated customers ..	\$5,133	\$3,225	\$ 731	\$680	\$557	\$300		\$10,626
Transfers between areas	909	186	113	1	6	30	\$(1,245)	
Operating income	741	341	95	74	90		(129)	1,212
Profit (loss) before tax	809	312	59	75	93	(13)	(97)	1,238
Identifiable assets	6,088	2,393	1,392	636	394	543	92	11,538

Transfers between areas are valued at cost plus a markup. There were no direct sales to foreign customers from domestic operations.

Aggregation of products into industry segments is generally made on the basis of process technology, end-use markets and channels of distribution. Principal industry segments were expanded to five in 1981 in recognition of the growing importance of the specialty products business and the petroleum production services of Dowell. Segment results for 1980 were restated to provide consistency between periods. The Industrial Chemicals segment embodies commodity chemicals and hydrocarbon intermediates. The Plastics and Metals segment includes large volume polyethylene and polystyrene products and the Company's magnesium business. The Specialty Products segment is comprised of functional chemicals and a variety of plastic coatings, films and foams. Petroleum production services and industrial equipment cleaning are in the Dowell segment. The Bioproducts and Consumer Products segment encompasses human, animal and plant health care products, in addition to household films and cleaning chemicals.

Industry segment results for the three years were (In millions):

	Industrial Chemicals	Plastics and Metals	Specialty Products	Dowell	Bioproducts and Consumer Products	Elim. and Corp. Items	Consoli- dated
1982							
Sales to unaffiliated customers ..	\$4.958	\$1.809	\$1,485	\$ 864	\$1,502		\$10,618
Intersegment transfers	1.661	99	279		18	\$(2,057)	
Operating income	(13)	22	217	36	94		356
Identifiable assets	5,519	1,448	1,157	701	1,301	1,681	11,807
Depreciation	519	97	66	122	66		870
Additions to property	496	98	61	114	60		829
1981							
Sales to unaffiliated customers ..	\$5.673	\$2,109	\$1,605	\$1,031	\$1,455		\$11,873
Intersegment transfers	1.994	163	414		8	\$(2,579)	
Operating income	307	67	238	205	99		916
Identifiable assets	5,900	1,800	936	720	1,607	1,533	12,496
Depreciation	496	117	69	57	67		806
Additions to property	676	179	112	127	82		1,176
1980							
Sales to unaffiliated customers ..	\$4,921	\$2,224	\$1,567	\$ 762	\$1,152		\$10,626
Intersegment transfers	1,666	118	272		8	\$(2,064)	
Operating income	429	286	256	167	74		1,212
Identifiable assets	5,746	1,672	903	587	1,152	1,478	11,538
Depreciation	443	117	66	45	57		728
Additions to property	745	180	95	95	69		1,184

Transfers between industry segments are generally valued at standard cost. The effect of the LIFO accounting change discussed in Note G is reflected in the segment operating income for 1981; however, the determination of the impact on individual segment results is not practicable.

R. STOCKHOLDERS' EQUITY The authorized capital stock consists of 25 million preferred shares with a par value of \$1.00 per share, none of which has been issued, and 500 million shares of common stock with a par value of \$2.50 per share.

The changes in the number of issued shares (in thousands) in the last three years were:

	1982	1981	1980
Beginning of the year	203,341	202,076	200,555
Sold to employees	776	1,265	1,519
Conversion of debentures			2
End of the year	204,117	203,341	202,076

At December 31, 1982, 1981 and 1980, shares of common stock (in thousands) outstanding were 194,170; 189,393 and 182,702, after deducting

9,947; 13,948 and 19,374 shares of treasury stock, respectively.

Shares of common stock (in thousands) were reserved for the following purposes at December 31:

	Shares		
	1982	1981	1980
Stock option and award plans	7,003	8,544	9,354
Employees' stock purchase plan	1,604	698	1,135
Conversion of debentures		12	12
Total shares reserved	8,607	9,254	10,501

Retained earnings of the parent company were approximately \$1,644 million at December 31, 1982.

Notes to Financial Statements

and there were no significant restrictions limiting the availability for dividend purposes.

Undistributed earnings of 20%-50% owned companies included in retained earnings were \$531 million and \$560 million at December 31, 1982 and 1981, respectively.

In computing earnings per share, no adjustment was made for common shares issuable under award, option and stock purchase plans because there would be no material dilutive effect.

S. COMBINED FINANCIAL STATEMENTS OF PRINCIPAL 50% OWNED COMPANIES The summarized financial statements shown below represent the combined accounts of principal companies in which Dow owns a 50 percent interest.

Combined Balance Sheet

	December 31	
	1982	1981
	(In millions)	
Current assets	\$ 823	\$1,155
Plant property — net	2,524	1,985
Other assets	50	84
Total assets	\$3,397	\$3,224
Current liabilities	\$ 580	\$ 943
Long-term debt	1,165	409
Other liabilities	110	92
Stockholders' equity	1,542	1,780
Total liabilities and stockholders' equity	\$3,397	\$3,224

Statement of Combined Income and Retained Earnings

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Sales	\$2,343	\$2,536	\$2,447
Cost of sales	1,641	1,821	1,796
Other expenses — net	421	373	322
Income before provision for taxes on income	281	342	329
Taxes on income	69	118	128
Net income	212	224	201
Retained earnings at beginning of year	1,000	835	687
Dividends declared	(91)	(59)	(53)
Retained earnings at end of year	\$1,121	\$1,000	\$ 835

Amounts presented include the assets, liabilities, revenues and expenses of Asahi-Dow Limited and Korea Pacific Chemical Corporation until the dates of sale prior to December 31, 1982.

MT Partnership, a Canadian joint venture, acquired an interest in certain oil and gas properties of Hudson Bay Oil and Gas Company Limited for approximately \$380 million in March 1982. Funds for the purchase were obtained through loans from a group of banks and collateralized by the properties acquired. The purchase agreement requires additional payments over a 5-year period related to revaluation of the properties to reflect changing energy prices, royalties and taxes.

T. CONDENSED CONSOLIDATED FINANCIAL STATEMENTS OF DOW BANKING CORPORATION AND SUBSIDIARIES

Consolidated Balance Sheet

	December 31	
	1982	1981
	(In millions)	
Cash and due from banks	\$ 473	\$ 571
Marketable securities	306	269
Bills discounted	89	120
Loans and overdrafts	788	598
Other assets	86	96
Total assets	\$1,742	\$1,654
Demand and time deposits	\$1,549	\$1,447
Other liabilities	59	54
Stockholders' equity	134	153
Total liabilities and stockholders' equity	\$1,742	\$1,654

Consolidated Statement of Income

	Year Ended December 31		
	1982	1981	1980
	(In millions)		
Operating income	\$202	\$178	\$122
Operating expenses	201	171	112
Net operating income	1	7	10
Loss on translation	13	2	15
Profit (loss) before taxes on income	(12)	5	(5)
Taxes on income	1	2	2
Net income (loss)	\$ (13)	\$ 3	\$ (7)

The Company's share of the equity in the consolidated net assets of the Dow Banking Corporation and subsidiaries at December 31, 1982 and 1981, was \$102 million and \$116 million, respectively; equity in net earnings for each of the three years ending December 31, 1982, 1981 and 1980 was \$9.6 million loss, \$2.6 million profit and \$5.5 million loss, respectively.

Geographic Results

(Unaudited)

		1982	1981	1980
		(dollars in millions)		
Sales	United States ...	\$ 5,074	\$ 6,182	\$ 5,133
	Europe	3,358	3,292	3,225
	Canada	751	837	731
	Pacific	683	711	680
	Latin America ..	412	545	557
	Brazil	340	306	300
	TOTAL	\$10,618	\$11,873	\$10,626
Operating Income	United States ...	\$ 335	\$ 680	\$ 741
	Europe	51	135	341
	Canada	9	110	95
	Pacific	36	42	74
	Latin America ..	14	56	90
	Brazil	33	7	
	Unallocated	(122)	(114)	(129)
	TOTAL	\$ 356	\$ 916	\$ 1,212
Profit (Loss) Before Tax	United States ...	\$ 328	\$ 636	\$ 809
	Europe	(57)	80	312
	Canada	(22)	67	59
	Pacific	155	29	75
	Latin America ..	9	53	93
	Brazil	8	(22)	(13)
	Unallocated	(107)	(99)	(97)
	TOTAL	\$ 314*	\$ 744	\$ 1,238
Gross Plant Properties	United States ...	\$ 6,678	\$ 6,687	\$ 6,057
	Europe	2,327	2,064	1,855
	Canada	1,346	1,312	1,158
	Pacific	197	299	273
	Latin America ..	156	138	97
	Brazil	495	484	433
	TOTAL	\$11,199	\$10,984	\$ 9,873
Capital Expenditures	United States ...	\$ 427	\$ 711	\$ 754
	Europe	274	212	235
	Canada	63	149	113
	Pacific	22	30	33
	Latin America ..	24	38	15
	Brazil	19	36	34
	TOTAL	\$ 829	\$ 1,176	\$ 1,184
Employees (thousands)	United States ...	32.8	38.6	34.8
	Europe	12.5	13.0	11.3
	Canada	4.2	4.4	4.0
	Pacific	2.9	2.1	2.0
	Latin America ..	2.2	2.5	2.5
	Brazil	2.0	3.2	2.2
	TOTAL	56.6	63.8	56.8

*Excludes extraordinary income

Product Group Sales Analysis

Principal Products and Services

Uses		1982	1981	1980
		Approximate Sales (In millions)		
Industrial Chemicals Group				
Inorganic Chemicals		\$1,405	\$1,637	\$1,648
Caustic soda	Production of paper, alumina, rayon, petroleum products and industrial chemicals			
Calcium chloride	Road deicing and dust control			
Chlorinated solvents	Metal cleaning, dry cleaning, paint removers, paints and electronics			
Chlorine	Chemical intermediate, water treatment, paper			
Ethylene dibromide	Soil fumigant and lead scavenger			
Vinyl chloride monomer	Production of polyvinylchloride			
Organic Chemicals		1,947	1,914	1,857
Acetone	Solvent, production of methyl methacrylate			
Ethylene glycol	Antifreeze, polyester fiber production			
Glycerine	Alkyd resins, tobacco products			
VORANATE isocyanates and VORANOL polyols	Flexible foam and rigid, elastomeric urethane products and foams			
Phenol	Plastic resins and adhesives			
Propylene glycols	Polyester resins, pet food humectant			
Styrene monomer	Production of polystyrene plastic			
Hydrocarbons		1,606	2,122	1,416
Ethylene/propylene	Chemical intermediate			
Naphtha	Petrochemical raw material			
Other petroleum products	Fuels, feedstocks			
Total sales		\$4,958	\$5,673	\$4,921
Plastics and Metals Group				
Plastic Materials		\$1,566	\$1,761	\$1,888
Acrylonitrile-butadiene-styrene (ABS)	Used in injection molding, blow molding and extrusion processes for fabrication of articles and in the automotive, appliance, dairy, food packaging, wire and cable, housewares, toy and construction industries			
DOWLEX linear low density polyethylene				
High density polyethylene				
Low density polyethylene				
STYRON polystyrene				
Metals		243	348	336
Magnesium sheet, plate and extrusions	Commercial and military products			
Magnesium ingot	Aluminum alloys, steel processing			
Total sales		\$1,809	\$2,109	\$2,224
Total Industrial Raw Materials		\$6,767	\$7,782	\$7,145

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Uses		1982	1981	1980
		Approximate Sales (in millions)		
Specialty Products Group				
Functional Chemicals		\$ 335	\$ 345	\$ 334
Ion exchange resins	Water purification			
METHOCEL cellulose ethers	Building materials, paint, pharmaceuticals			
SEPARAN flocculant	Mining, pulp and paper industries, enhances oil recovery			
Plastic lined piping products	Handling corrosive fluids			
Coatings		688	849	834
Epoxy resins	Coatings, adhesives, laminates			
Styrene butadiene latexes	Paper and carpeting			
Plastic Products		462	411	399
Polyethylene film	Industrial packaging, agricultural use			
TRYCITE polystyrene film	Window envelopes, functional and decorative packaging			
STYROFOAM polystyrene foam ..	Insulation, buoyancy, floral and craft uses			
SARAN film	Commercial packaging			
Total sales		\$1,485	\$1,605	\$1,567
Dowell Group				
Dowell services	Petroleum production services, equipment cleaning, mining products and services	\$ 864	\$1,031	\$ 762
Bioproducts and Consumer Products Group				
Human Health		\$ 752	\$ 723	\$ 481
CĒPACOL products	Oral hygiene			
NOVAHISTINE products	Cough and cold preparations			
RIFADIN and RIFOCIN antibiotics	Broad spectrum antibiotics used primarily for TB treatment			
LORELCO hypocholesterolemic ..	Cholesterol lowering drug			
Agricultural Chemicals		530	533	506
DURSBAN insecticide	Industrial uses			
LORSBAN insecticide	Agricultural uses			
N-SERVE nitrogen stabilizer	Fertilizer supplement			
Phenoxy herbicides	Weed and brush control			
TORDON herbicide	Weed and brush control			
Consumer Products		220	199	165
DOW Bathroom Cleaner	Household cleaner			
DOWGARD antifreeze	Automotive use			
HANDI-WRAP plastic film	Household plastic film			
SARAN WRAP plastic film	Household plastic film			
ZIPLOC bags	Food storage			
Total sales		\$1,502	\$1,455	\$1,152
Total Specialties and Services		\$3,851	\$4,091	\$3,481

11-Year Summary of Selected Financial Data

(In millions, except per share)

	1982	1981	1980
Summary of Operations			
Net sales	\$10,618	\$11,873	\$10,626
Cost of sales	9,310	10,019	8,649
Selling and administrative	952	938	765
Operating income	356	916	1,212
Investment and sundry income — net	364	258	324
Interest expense — net	(406)	(430)	(298)
Income before provision for taxes	314	744	1,238
Taxes on income	(29)	176	424
Minority interests' share in income	1	4	9
Income before extraordinary items and cumulative effect of accounting change	\$ 342(a)	\$ 564	\$ 805
Per share of common stock (in dollars) (*):			
Income before extraordinary items and cumulative effect of accounting change	\$ 1.77(a)	\$ 3.00	\$ 4.42
Cash dividends paid per share	\$ 1.80	\$ 1.80	\$ 1.60
Average common shares outstanding (thousands) (*)	193,224	187,961	182,162
Year-End Financial Position			
Total assets	\$11,807	\$12,496	\$11,538
Working capital	1,722	1,823	1,587
Property, plant and equipment — gross	11,199	10,984	9,873
Property, plant and equipment — net	5,961	6,174	5,672
Long-term debt	3,502	3,968	3,438
Total debt	3,778	4,464	4,174
Stockholders' equity	5,040	4,891	4,440
Financial Ratios			
Research and development expense as percent of sales	4.3%	3.4%	3.0%
Income before provision for taxes as percent of sales	3.0%	6.3%	11.6%
Return on average stockholders' equity	8.0%	12.1%	19.3%
Book value per common share (*)	\$ 25.96	\$ 25.83	\$ 24.30
Borrowings as a percentage of total capital invested	42.7%	47.5%	48.2%
General			
Capital expenditures	\$ 829	\$ 1,176	\$ 1,184
Depreciation	870	806	728
Research and development expenses	460	404	314
Taxes (major)	260	465	679
Wages and salaries paid	1,668	1,675	1,468
Cost of employee benefits	390	361	339
Number of employees at year-end (thousands)	56.6	63.8	56.8
Market price of common stock (*)			
High	\$ 28.88	\$ 39.00	\$ 39.25
Low	19.63	23.38	28.25
Close on December 31	25.88	26.25	32.13
Number of stockholders at year-end (thousands)	144.9	143.6	137.0

* Adjusted for stock splits.

(a) Extraordinary items, net of tax, were an addition to net income of \$57, or \$.30 per share, in 1982, \$12, or \$.06 per share, in 1974, and \$4, or \$.02 per share, in 1973.

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1979	1978	1977	1976	1975	1974	1973	1972
\$9.255	\$6.888	\$6.234	\$5.652	\$4.888	\$4.939	\$3.068	\$2.404
7,231	5,284	4,734	4,125	3,398	3,395	2,227	1,758
690	552	480	431	413	406	330	286
1,334	1,052	1,020	1,096	1,077	1,138	511	360
251	153	131	104	141	41	58	58
(272)	(237)	(220)	(161)	(108)	(90)	(93)	(93)
1,313	968	931	1,039	1,110	1,089	476	325
515	384	372	420	474	523	199	130
14	9	5	7	6	6	9	8
\$ 784	\$ 575	\$ 554	\$ 612	\$ 630	\$ 560(a)(b)	\$ 268(a)	\$ 187(b)
\$ 4.33	\$ 3.16	\$ 3.00	\$ 3.30	\$ 3.40	\$ 3.03(a)(b)	\$ 1.46(a)	\$ 1.02(b)
\$ 1.45	\$ 1.25	\$ 1.10	\$.90	\$.73	\$.55	\$.48	\$.45
181.149	182.091	184.354	185.412	185.205	185.022	184.228	182.648
\$10.252	\$8.789	\$7.752	\$6.944	\$5.942	\$5.193	\$3.993	\$3.408
1,138	1,165	874	744	766	605	549	379
8,909	8,038	7,158	6,171	5,104	4,239	3,439	3,105
5,236	4,762	4,277	3,649	2,885	2,334	1,875	1,745
3,055	2,937	2,473	1,998	1,684	1,427	1,340	1,202
3,656	3,398	3,056	2,506	2,042	1,706	1,599	1,514
3,897	3,395	3,097	2,847	2,432	1,939	1,523	1,326
2.9%	3.4%	3.3%	3.3%	3.4%	3.0%	3.8%	4.4%
14.2%	14.1%	14.9%	18.4%	22.7%	22.0%	15.5%	13.5%
21.5%	17.7%	18.6%	23.2%	28.8%	30.6%	19.1%	14.3%
\$21.51	\$18.74	\$16.95	\$15.35	\$13.12	\$10.49	\$ 8.25	\$ 7.23
48.2%	49.7%	49.3%	46.4%	45.2%	46.3%	50.5%	52.6%
\$1.268	\$1.075	\$1.163	\$1.200	\$.935	\$.890	\$.415	\$.359
634	562	493	420	364	343	275	235
269	232	203	188	167	149	118	105
748	572	550	597	636	614	314	218
1,301	1,113	976	888	791	739	612	516
297	263	224	205	171	149	102	85
55.9	53.5	53.2	53.0	53.1	53.3	49.8	48.8
\$34.88	\$30.88	\$43.50	\$57.25	\$47.75	\$34.75	\$33.94	\$26.69
24.38	22.00	25.25	38.38	26.88	24.94	23.25	19.50
32.13	24.88	26.75	43.38	45.81	27.50	28.75	25.38
141.5	136.7	125.4	112.3	98.2	94.1	88.8	84.8

(b) Accounting changes were a reduction of net income of \$42, or \$.22 per share, in 1974, and \$6, or \$.03 per share, in 1972. If the accounting change is applied retroactively, pro forma net income per share before extraordinary items would be, 1974, \$3.03; 1973, \$1.40; 1972, \$.98

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David P. Sheetz
Robert W. Dupree
ex-officio

Brian M. Klumpp
ex-officio

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Stockholder Reference Information

Annual Meeting

The 1983 Annual Meeting of Stockholders will be conducted at 2 p.m. (EDT) Friday, May 13, at the Midland Center for the Arts, Midland, Michigan. A formal notice of the meeting, with a proxy statement and proxy form, will be mailed to each stockholder separately from this report.

Form 10-K

A copy of the Company's annual report to the Securities and Exchange Commission on Form 10-K will be provided without charge to any stockholder requesting it in writing. Please contact: Corporate Secretary
The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48640.

Transfer Agents

The AmeriTrust Company
P.O. Box 6477
Cleveland, Ohio 44101
The Royal Trust Company
P.O. Box 7500, Station A
Toronto, Ontario, Canada M5W 1P9

Registrars

The AmeriTrust Company
P.O. Box 6477
Cleveland, Ohio 44101
Montreal Trust Company
15 King Street West
Toronto, Ontario, Canada M5H 1B4

Stock Exchange Listings

NYSE Symbol: DOW
New York, Midwest, Pacific,
Amsterdam, Antwerp, Basel,
Brussels, Dusseldorf, Frankfurt,
Geneva, Hamburg, Hanover,
London, Paris, Tokyo, Toronto,
Zurich.

Dividend Reinvestment Plan

An automatic dividend reinvestment plan is available to all Dow stockholders. Information can be obtained by writing to:

AmeriTrust Company
P.O. Box 6477
Cleveland, Ohio 44101

Cassette Tapes Available

Audio cassette tapes of this report and quarterly reports can be obtained for the blind by writing: Financial Communications Manager
The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48640

Corporate Headquarters

The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48640
Telephone: 517-636-1000

Stockholder Relations

The Dow Chemical Company
2030 Dow Center
Midland, Michigan 48640
Telephone: 517-636-1463

Of Interest to Stockholders

Did you know...

- 21,018 new stockholders joined the Dow Chemical family in 1982;
- Dow employees comprise 30% of our stockholders;
- 45% of our stockholders own less than 100 shares of Dow stock;
- Individuals own 25% of Dow's 194 million outstanding shares;
- The five states with the largest holdings of Dow stock are: New York: 99 million shares (51%); Michigan: 33 million shares (17%); Illinois: 10 million shares (5%); California: 9 million shares (4.5%); Texas: 7 million shares (3%);
- The number of stockholders who own Dow stock totals 144,910;
- The average daily volume for Dow stock traded in 1982 was 295,000 shares;
- The number of Dow shares held by foreign stockholder accounts totals 5 million;
- 84% of Dow's outstanding shares were voted last year at the Dow Chemical Annual Meeting;
- 21% of Dow stockholders and 3.3% of the total shares are enrolled with the Dividend Reinvestment Program.

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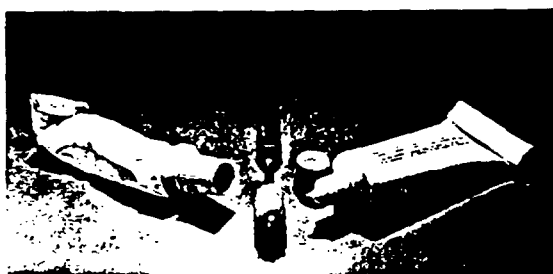


Specialty products and services emerging in the 1980s will complement Dow's global geographic presence and balance the Company's proven basic chemical technology.



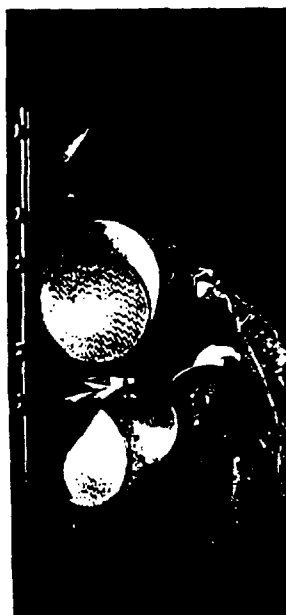
Front cover captions:

1. Dow's radium selective complexer can improve the quality of drinking water by removing high levels of naturally occurring radium ions found in many groundwater supplies.
2. Research work in Dow's sophisticated laser laboratory could lead to laser-induced chemical process reactions and other novel uses of this promising tool.
3. Dow may be the first company to support production of an industrial product from recombinant DNA technology. Rennin, a milk-clotting enzyme used in cheese production, is expected to be commercially marketed by the mid-1980s.
4. Pelamag metallurgical granules. (Dow-developed magnesium granules coated with salt), remove sulfur from molten iron to produce high-strength steel for oil pipelines and lightweight automobiles.
5. On-the-job hay fever relief for surgeons or those in other occupations which require constant alertness is available with terfenadine, the non-sedating antihistamine developed by Merrell Dow. U.S. registration approval is expected in 1984.
6. Broad-spectrum Tandem herbicide systems offer a reliable, economic concept for post-emergence weed control in the billion dollar corn herbicide market. Dow expects Tandem to be fully registered for U.S. corn applications by 1984.



Back cover captions:

1. Dowex 66 ion exchange resins help maintain low prices for canned goods and a wide variety of soft drinks by purifying corn sugar to produce high fructose corn syrup.
2. The unique properties of ethylene acrylic acid (EAA) resins have earned these specialty plastics widespread use in important adhesive coating and packaging applications.
3. The announcement of a large commercial plant to produce polycarbonate resins demonstrates Dow's commitment to these tough engineering thermoplastics with major applications for lighting fixtures and appliances.



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