

Union Carbide Corporation

Annual Report



UNION CARBIDE C

TABLE OF CONTENTS

FINANCIAL HIGHLIGHTS/AT A GLANCE

- 1 Summary comparison of 1999 and 1998 results

CHAIRMAN'S LETTER

- 2 Bill Joyce on performance in 1999, strategic objectives and long-term outlook

PRINCIPAL PRODUCTS & SERVICES

- 4 Description of the Specialties & Intermediates and Basic Chemicals & Polymers segments

CHEMICAL GLOSSARY

- 6 Chemicals and polymers used in Carbide's businesses

MANAGEMENT'S DISCUSSION AND ANALYSIS

- 7 Results of Operations
- 16 Liquidity, Capital Resources and Other Financial Data
- 17 Debt Ratios

SELECTED FINANCIAL DATA

- 18 Summary financial history of the past 11 years

FINANCIAL STATEMENTS

- 20 Consolidated Balance Sheet
- 21 Consolidated Statement of Income
- 22 Consolidated Statement of Stockholders' Equity
- 24 Consolidated Statement of Cash Flows
- 25 Notes to Financial Statements
- 44 Management's Statement of Responsibility for Financial Statements
- 44 Independent Auditors' Report

QUARTERLY DATA

- 45 Summary comparison of quarterly 1999 and 1998 results

CORPORATE INFORMATION

- 46 Important dates, names, addresses, telephone numbers and other information

DIRECTORS & CORPORATE OFFICERS

- 47 List of directors, corporate officers and other senior management

UNION CARBIDE AROUND THE WORLD

- 48 List of worldwide locations

DEFINITION OF TERMS

- 48 Definition of non-chemical terms

Cautionary statement: All statements in this annual report that do not reflect historical information are forward-looking statements, within the meaning of the Private Securities Litigation Reform Act of 1995 (as amended). Forward-looking statements include statements concerning the pending merger with The Dow Chemical Company (and, with regard to the merger, the Dow Merger); plans; objectives; strategies; anticipated future events or performance; sales; cost, expense and earnings expectations; the Year 2000 issue; interest rate and currency risk management; the chemical markets in 2000 and beyond; development, production and acceptance of new products and process technologies; ongoing and planned capacity additions and expansions; joint ventures; Management's Discussion and Analysis; and any other statements that do not reflect historical information. Such forward-looking statements are subject to risks and uncertainties. Important factors that could cause actual results to differ materially from those discussed in such forward-looking statements include the supply/demand balance for the corporation's products; customer inventory levels; competitive pricing pressures; raw material availability and costs; changes in industry production capacities and operating rates; currency exchange rates; interest rates; global economic conditions; competitive technology positions; failure by the corporation to achieve technology objectives, achieve cost reduction targets or complete projects on schedule and on budget; inability to obtain new customers or retain existing ones; and, with respect to the Dow Merger, failure to obtain necessary regulatory and other governmental approvals and failure to satisfy conditions of the merger agreement.

Dollar amounts in millions (except per share figures)	1999	1998	% Change
For the Year			
Net sales	\$5,870	\$5,659	4
Operating profit	555	803	(31)
Income before cumulative effect of change in accounting principle	311	403	(23)
Per common share - basic	2.33	2.98	(22)
Per common share - diluted	2.27	2.91	(22)
Net income - common stockholders	291	403	(28)
Per common share - basic	2.18	2.98	(27)
Per common share - diluted	2.13	2.91	(27)
Cash dividends on common stock	120	122	(2)
Per common share	0.90	0.90	—
Capital expenditures	764	782	(2)
At Year-End			
Total assets	\$7,957	\$7,291	9
Total debt	2,651	2,222	19
Stockholders' equity	2,617	2,449	7
Per common share	19.51	18.46	6
Common shares outstanding (thousands)	134,144	132,686	1
Common stockholders of record	42,386	45,775	(7)
Employees	11,569	11,627	—

AT A GLANCE

Union Carbide Corporation is a worldwide chemicals and polymers company. The company possesses many of the industry's most advanced process and catalyst technologies and some of the most cost-efficient, large-scale production facilities in the world. In addition to its consolidated operations, the corporation participates in partnerships and corporate joint ventures whose combined net sales totaled approximately \$4.1 billion in 1999.

Union Carbide operates two business segments:

Specialties & Intermediates, which accounted for 71 percent of customer revenues, produces a broad range of products, including specialty polyolefins used in wire and cable insulation; surfactants for industrial cleaners; catalysts for the manufacture of polymers; acrolein and derivatives; water-soluble polymers; cellulose-, glucose- and lanolin-based materials for personal care products; specialty coatings; acrylic and vinyl acrylic latex used in paints and adhesives; solvents; vinyl acetate and acrylic monomers, and ethylene oxide derivatives. This segment also licenses olefins-based technologies and offers other specialized technology licensing and services.

Basic Chemicals & Polymers converts various hydrocarbon feedstocks, principally liquefied petroleum gases and naphtha, into the basic building-block chemicals ethylene and propylene (also known as olefins), which are in turn converted to polyethylene (the world's most widely used plastic), polypropylene (one of the world's fastest-growing plastics), and ethylene oxide and ethylene glycol (used to make polyester fiber, film and resin, and automotive antifreeze). This segment provides ethylene, propylene, ethylene oxide and ethylene glycol to the Specialties & Intermediates segment.

Union Carbide's leading end markets as a percentage of sales are:

Paints, coatings and adhesives	22
Packaging and consumer plastics	20
Wire and cable	11
Textile	7
Household and personal care	7
Automotive, including antifreeze	5
Agriculture and food	4
Oil and gas	2
Industrial cleaners	2

The most significant day in Union Carbide's recent history was August 4, 1999, when plans to merge with The Dow Chemical Company were announced.

I have said that in a consolidating chemical industry, the combination of Dow and Union Carbide sets the gold standard. With leading technologies and outstanding facilities, the new Dow will offer superb long-term prospects for profitable growth and enhanced shareholder value. Both employee and independent Carbide shareholders overwhelmingly approved the merger.

Looking to Carbide's businesses in the decade ahead, we anticipate higher sales volumes and improved earnings from our joint ventures and partnerships, plus prospects for higher earnings and better returns at both the top and bottom of the next industry cycle. The new Dow should be positioned to reach those heights and higher in spite of new, and more difficult, global economic forces.

Consumer demands for equal or higher quality products at lower prices have led to a rapidly consolidating industry in which fewer companies of greater size and resources serve the global needs of customers. The growing importance of technology, global reach and world-class production capabilities are creating some strong corporate combinations, such as Exxon-Mobil, Total-Petrofina and BP-Amoco.

Recognizing that change was afoot within the industry, we could not ignore the opportunity to combine organizations with Dow; the proposed merger was too beneficial to employees, shareholders and our customers. Since the announcement, I have been asked what will Union Carbide contribute to the new Dow. I believe Carbide's contribution will be driven by three initiatives instituted earlier in the 1990's that will contribute to achieving some of Dow's stated objectives for the merger.

First, we applied extensive capital to repair or upgrade the physical infrastructure of our production facilities, as well as to transform our Information Technology systems through the most comprehensive SAP R/3 implementation attempted in a process industry. The infrastructure improvements, which were nearly complete in 1999, improved operating reliability and helped reduce costs by making us a low-cost producer of power and steam.

Second, but concurrently, we changed the basic cost structure of the company. Proof of our success is the fact that our unit fixed cost decreased to 10.2 cents per pound in 1999 from 15.5 cents per pound in 1991. Throughout all of our businesses, Carbiders concentrated on increasing volume while cutting costs by eliminating work that did not add value.

Finally, we began laying the foundation for long-term growth by adding nearly 6 billion pounds of capacity since

WILLIAM H. JOYCE
Chairman, President and
Chief Executive Officer



1994, helping our earnings per share to more than double from the bottom of the last trough.

Prospects of additional sales and earnings from added capacity coupled with more efficiently run operations strengthened by infrastructure improvements and the SAP implementation clearly made a combination with Carbide attractive to Dow. While we made significant progress by bringing much of this new capacity to market during the past year, the added capacity and modernized infrastructure will make substantial long-term contributions to the new Dow's financial results beyond the current trough in the industry cycle.

Carbide shareholders have already benefited from the planned merger. Our total shareholder return of 59.8 percent during 1999 put us at the top of our industry, well ahead of both the Standard & Poor's 500 and Chemicals indexes. Since the spin-off of the industrial gases business in mid-1992, we have delivered 600 percent total shareholder return, and more than 1,000 percent total shareholder return since the end of November 1991, just before the spin-off was announced.

One of the key messages to employees since the merger announcement has been the need to give highest priority to working safely while meeting our business goals and preparing to deliver the strongest possible organization to the new company. I am happy to report that Carbiders worldwide are living up to that request, as they have achieved or exceeded most of the corporate safety goals for the year while producing quality products and providing excellent service to our customers.

Customer sales volume in 1999 was the highest ever for our current businesses, reaching 16.8 billion pounds by year-end, a gain of 13.9 percent over 1998. Infrastructure improvements strengthened production reliability as capacity utilization increased by 9.4 percent. Additionally, worldwide sales rose 3.7 percent, to \$5.9 billion. Before the cumulative effect of a change in accounting principle, income available to stockholders fell to \$311 million, and income per diluted share decreased to \$2.27.

Clearly, the current cyclical trough, coupled with a major downturn in Asia that put the industry in a situation of over-supply, depressed the earnings of companies like Carbide. Our financial performance improved as the year progressed and the Asian economic crisis lessened, providing Carbide with a significant opportunity for increased sales in the region.

Fueling future growth in the Asian market is the OPTIMAL joint venture with Petroliam Nasional Berhad (PETRONAS), the national oil company of Malaysia. Construction of the new complex remains on schedule, with completion expected around the end of 2001. With its technology and feedstock advantages, OPTIMAL will be Southeast Asia's most competitively advantaged producer of a broad range of chemicals.

A source of concern this year has been reduced earnings in Specialties & Intermediates (S&I), the larger of Carbide's two business segments. Although delivering more than twice the earnings the segment generated at the start of the decade, S&I earnings were down in 1999 from higher levels achieved during the prior four years. S&I continued to be hurt by the impact of the Asian economic situation and by rapidly rising raw material costs that could not be passed along quickly enough through higher selling prices. These factors, including continued depressed business activity at our UOP joint venture, more than offset the favorable impact of a nearly 10.4 percent increase in customer volume compared with 1998. Income from our licensing businesses, while down from 1998, remained strong, and further benefited from litigation gains that occurred in both years.

The Basic Chemicals & Polymers (BC&P) segment realized increased prices through most of the year. Average unit variable margins declined, however, as selling price increases were insufficient to offset steeply rising feedstock costs.

After correcting defects in warranted equipment that had hampered its performance, EQUATE improved production and earnings as the year progressed. With the ethylene, polyethylene and ethylene glycol units each demonstrating greater-than-nameplate capacity, the site's higher production volumes and sales are beginning to produce anticipated long-term returns.

Projects for ethylene and polyethylene in Alberta remain on target. Our 1.4 billion-pound-capacity UNIPOL Process polyethylene plant at Prentiss, Alberta, is scheduled for completion in the fall of 2000. With its large size, leading-edge process technology and access to low-cost ethylene from the 2.8 billion-pound-capacity facility we are building nearby with Nova Chemicals Corporation, the Prentiss plant should be a highly competitive supplier in its target markets.

Powernet, our information technology initiative, replaced more than 700 software applications housed in legacy computer systems that were over 20 years old. The outcome was improved efficiency and reduced costs through the integration of planning, order entry, procurement, production, distribution and financial systems, in addition to addressing Year 2000 problems existing in the systems it replaced. By year-end 1999, Powernet was operational at all remaining North American locations not converted in 1998 and helped to establish a higher on-time customer delivery percentage than before the November 1998 changeover.

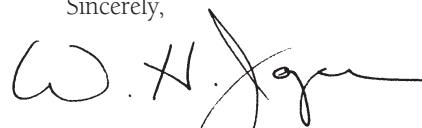
Health, safety and environmental performance was very good. There were no fatalities in 1999, and for the eighth consecutive year we experienced no major process safety incidents. The number of accidental releases was reduced by about 38 percent from 1998, and the amount of material lost was reduced by more than 80 percent. Worker safety also improved, as the recordable work-caused injury and illness rates decreased 19 percent and 14 percent, respectively.

For more information about our 1999 environmental and safety performance, either write to Carbide's Public Affairs Department for our RESPONSIBLE CARE Progress Report or access the report on the Internet (at www.unioncarbide.com).

With the merger approaching, I am more inclined to look to the future than dwell on the past. Just as Carbide made Leo Baekeland's Bakelite Company, acquired in 1939, a noted part of Carbide's heritage, I am confident that the new Dow will honor and build on Union Carbide's exceptional history of technological achievements.

In conclusion, I want to thank our shareholders, our customers and, especially, Carbide employees for their support and continuing commitment to our success.

Sincerely,



William H. Joyce
February 23, 2000

Specialties & Intermediates

Union Carbide's *Specialty Polymers and Products* group manufactures and markets numerous specialty products. Many of its technologies are targeted for sharply defined market segments.

- ▶ *Water Soluble Polymers* produces polymers used in a wide range of applications for their unique properties in aqueous systems. Key product lines include *CELLOSIZ* hydroxyethyl cellulose, *POLYOX* water soluble resins, and a variety of cellulose, glucose and lanolin-based materials supplied to the personal care industry by Amerchol Corporation, a Union Carbide subsidiary. Other key markets for Water Soluble Polymers include paints, pharmaceuticals, oil fields, paper and industrial adhesives and binders.
- ▶ *Performance Polymers* produces coatings and plastic materials, including *UCAR* solution vinyl resins, used in coatings for beverage and food cans, bottle caps and closures; maintenance coatings on bridges, storage tanks and ocean-going vessels; printing inks for vinyl shower curtains, wall-paper and furniture; and magnetic recording tape; *TONE* caprolactone-based materials, used in fabric coatings, orthopedic cast and splint materials, automotive primers and topcoats, plus biodegradable bags for compostable materials; cycloaliphatic epoxides for electric utility equipment such as insulators and transformers; *CYRACURE* products for ultraviolet-cured coatings and inks; *FLEXOL* plasticizers, made from soybean and linseed oils, used to keep plastic products soft and pliable; and *polyvinyl acetate resins*, used in such widely diverse applications as chewing-gum, molded automotive body parts, bathroom fixtures, business-machine housings, coatings and adhesives.
- ▶ *Specialty Industrial Products* produces *acrolein* and *derivatives*, important in a range of products from biocides to animal feed supplements; *ethylidene norbornene (ENB)*, used in the production of ethylene propylene rubber roofing and automotive parts; and *specialty ketones*, used as solvents and intermediates in herbicide, drug and vitamin manufacture.

UCAR Emulsion Systems makes products used in interior and exterior house paints, adhesives and sealants. They include *UCAR POLYPHOBE* rheology modifiers, used to thicken coatings, and *UCAR latex products*, used as binders and to improve exterior paint durability, scrub and stain resistance and adhesion.

Specialty Polyolefins manufactures a variety of *performance polyolefin products* marketed worldwide. Chief among

these are *polyolefin-based compounds* for high-performance insulation, semiconductives and jacketing systems for power distribution, telecommunications and flame-retardant wire and cable. Other Specialty Polyolefins products are used in adhesives, laminating film and flexible tubing.

UNIPOL Systems develops and licenses *UNIPOL Process technology* – the industry's most versatile method of manufacturing polyethylene and polypropylene – for producers worldwide. The business also develops new process technology for the manufacture of other *olefins-based polymers*, such as *ELASTOFLO* ethylene propylene rubber, which the business produces and markets to rubber products manufacturers, and sells catalysts to UNIPOL Process licensees worldwide. Licensing of the *UNIPOL PE* and *PP processes*, as well as development of new polyethylene technologies, is handled through Univation Technologies, LLC, a joint venture of Union Carbide and ExxonMobil Chemical Company.

Industrial Performance Chemicals manufactures and sells a broad range of *ethylene oxide derivatives* and *formulated glycol products* for specialty applications. *Ethylene oxide derivatives* include *CARBOWAX* polyethylene glycols, nontoxic, biodegradable, water-soluble products with a wide range of applications in the pharmaceutical, personal care, household, textile processing, wood preservation, ceramic and industrial markets; *ethanolamines*, for detergents, personal care products such as bath soap, agricultural products and natural gas conditioning and refining; *ethylenamines*, for fuel, lubricant and motor-oil additives, adhesives, corrosion inhibitors, cleaning materials and many other industrial uses; *TRITON* and *TERGITOL* specialty and commodity surfactants, for use in institutional, industrial and household cleaning products; formulations for personal care products; and in industrial processes for textiles, paper, paints and coatings and many other products; *UCON fluids and lubricants*, for use in brake fluids and fire-resistant hydraulic fluids used in heavy-duty machinery and off-highway equipment and in automotive air-conditioning systems with non-ozone-depleting coolants; *alkyl alkanolamines* for water-treating chemicals, surfactants, fabric softeners, pharmaceuticals and natural-gas and boiler-water conditioning; and *gas-treating chemicals*, including *SELEXOL* and *UCARSOL solvents*, used to lower corrosion rates and increase efficiency in removing carbon dioxide and sulfur deriva-

tives from natural and refinery gases. *Formulated glycol* products include *UCAR aircraft and runway deicing and anti-icing fluids*, which remove or prevent formation of ice, snow and frost on aircraft and runway surfaces; *UCARTHERM heat-transfer fluids*, which help to distribute heating and cooling effects and inhibit corrosion in heating, ventilation and refrigeration systems; and *NORKOOL industrial products*, used as coolants, corrosion inhibitors and cleaners in gas compressor stations, generators and large engines.

Solvents, Intermediates & Monomers supplies one of the chemical industry's broadest product lines to the paints and coatings market and also serves the cosmetics and personal care, adhesives, household and institutional products, pharmaceuticals and agricultural markets. Products include *oxo aldehydes, acids and alcohols*, used as chemical intermediates and industrial solvents and in herbicides, plasticizers, paint dryers, jet-turbine lubricants, lube oil additives, perfumes and food and feed preservatives; *esters*, which serve as solvents in industrial coatings and printing inks and in the manufacturing processes for pharmaceuticals and polymers; *CARBITOL* and *CELLOSOLVE solvents*, used in high-technology coatings applications, such as primers and industrial finishes for the automotive, packaging and furniture markets, as jet-fuel additives and as grease cutters for household and industrial cleaners and in *UCON and EMKADIXOL brake fluids*; *ketones*, including *methyl isobutyl ketone*, used as solvents for vinyl resins, industrial lacquers and pharmaceuticals and as intermediates for dyes and rubber chemicals; *monomers*, such as *vinyl acetate* and *acrylic esters*, widely used in the production of latex paints, paper coatings, adhesives, textile binders and floor and shoe polishes; *alcohols*, such as *ethanol* and *isopropanol*, which act as solvents and intermediates in materials used to produce coatings, inks, herbicides, petroleum additives and synthetic lubricants and also widely used as solvents for personal care products, such as perfumes, deodorants and hair sprays, and in the preparation of mouthwashes, detergents, disinfectants and polishes; and the *UNICARB System*, a pollution-reducing technology that can cut costs and reduce volatile organic compounds (VOCs) in spray-applied coatings by up to 80 percent.

Basic Chemicals & Polymers

Union Carbide's *Hydrocarbons* group manufactures about three quarters of the company's ethylene requirements and almost one third of its propylene requirements. *Ethylene* and *propylene* are the key raw materials for many of Union Carbide's businesses.

Union Carbide, the leading producer of *ethylene oxide* and *ethylene glycol*, is supplied by the *Ethylene Oxide/Glycol* group. *Ethylene oxide* is a chemical intermediate primarily used in the manufacture of *ethylene glycol, polyethylene glycol, glycol ethers, ethanalamines, surfactants* and other performance chemicals and polymers; *di- and triethylene glycol*, used in a variety of applications, including boat construction, shoe manufacturing, natural gas-drying and other moisture-removing applications and plasticizers for safety glasses; and *tetraethylene glycol*, used predominantly in the production of plasticizers for automotive windows. *Ethylene glycol* is used extensively in the production of polyester fiber, resin and film, automotive antifreeze and engine coolants, and aircraft anti-icing and deicing fluids.

Union Carbide is a leading manufacturer of *polyethylene*, the world's most widely used plastic. *UNIPOL Polymers* produces and markets *linear low-, medium- and high-density polyethylenes*, used in high-volume applications such as housewares, milk and water bottles, grocery sacks, trash bags, packaging, water and gas pipe, and *FLEXOMER very low-density polyethylene resins*, used as an impact modifier in other polymers and to produce flexible hose and tubing, frozen-food bags and stretch wrap.

Carbide's *Polypropylene Resins* business manufactures and sells *polypropylene*, one of the world's largest-volume, fastest-growing plastics. End-use applications include carpeting and upholstery; apparel; packaging films; food containers, such as dairy-products cups; housewares and appliances; heavy-duty tapes and ropes, and automobile interior panels and trim.

For a summary of business and geographic segment data, see Note 6 to the consolidated financial statements and Management's Discussion and Analysis, beginning on page 7.

For a summary of the corporation's Joint ventures, see Note 9 to the consolidated financial statements and those sections of Management's Discussion and Analysis beginning on page 10.

Alcohols – Chemicals, such as butanol, ethanol and isopropanol, that serve as solvents and intermediates for the manufacture of personal care products, pharmaceuticals, paints and coatings, herbicides, petroleum additives and synthetic lubricants.

Biocides – Chemicals used to control or inhibit the growth of bacteria, algae, fungi and mold.

Chemical Intermediates – Chemicals formed or introduced as an intermediate step between the starting material and the final product in chemical processing. Examples are:

- ▶ **Acrolein**, used to make biocides, animal feed supplements and coatings resins.
 - ▶ **Ethanolamines**, reaction products of ethylene oxide and ammonia, used in detergents and other cleaning materials, personal care and agricultural products and for removal of sulfur and other impurities from natural gases.
 - ▶ **Ethyleneamines**, made from ethylene oxide or ethylene dichloride, used in many industrial products, including fuel, lubricant and motor oil additives, adhesives, wet-strength paper resins and paints.
-

Esters – Chemicals made by reacting alcohols and acids, used as solvents in paints and coatings, ink and pharmaceuticals.

Ethylene Glycol – Chemical made from ethylene oxide and water, used to make polyester resins, film and fiber, automotive antifreeze and engine coolants and aircraft deicing/anti-icing fluids.

Ethylene Oxide – Chemical made from ethylene and oxygen. It combines with other chemicals to produce a wide range of products, such as ethylene glycol, water-soluble polymers for personal care products and surfactants for detergents and cleaning products.

Glutaraldehyde – Acrolein derivative predominantly used as a biocide for industrial water treatment and in oil field applications, animal housing sanitizers, surgical instrument sterilants and paper manufacturing.

Glycol Ethers – Solvents used in higher-technology coating applications, such as finishes for the automotive market, and in noncoating applications, such as hard-surface cleaners, military jet fuels and brake fluids.

Ketones – Chemicals, such as acetone, used as solvents for resins, lacquers and pharmaceuticals, and as intermediates for resins, dyes and rubber chemicals.

Monomers – Chemicals that can be converted into polymers. For example, ethylene is a monomer that is made into polyethylene.

Olefins – Generic name for unsaturated hydrocarbons made from components of petroleum or natural gas. Examples are:

- ▶ **Ethylene** and **Propylene**, chemicals derived from natural gases or petroleum components, and the starting materials from which most of Union Carbide's chemicals and polymers are made.
-

Oxo Alcohols, Aldehydes and Acids – Chemicals Carbide manufactures via its LP OXO Process, such as butanol and propionic acid, which are used as chemical intermediates and industrial solvents.

Polymers – Chains or networks of linked monomers. Plastics are polymers. Examples are:

- ▶ **Polyethylene**, the world's most widely used plastic, made by the reaction of ethylene and, optionally, other olefins. It is used in hundreds of consumer and industrial products, including grocery and trash bags, waste containers, housewares, bottles, drums, food packaging and wire and cable insulation and jacketing. Union Carbide produces most of its polyethylene via UNIPOL Process technology, developed by the corporation in the early 1970's, which is licensed to polyethylene makers around the world.
 - ▶ **Polypropylene**, a high-volume plastic made from the reaction of propylene and, optionally, other olefins. The broad range of applications includes lawn furniture, carpet fiber and backing, food containers, toys, appliance housings and binding materials. Much of Union Carbide's production is via the UNIPOL PP Process, also licensed around the world.
-

Solvents – Chemicals used to dissolve or absorb other chemicals. For example, ketones, esters, alcohols and glycol ethers are effective solvents commonly used in paints and coatings.

Surfactants – Chemicals that increase the cleaning and wetting properties of household and industrial cleaners and detergents. They are also used in textile and paper processing, paints, agricultural products and cosmetics, shampoos and other personal care products. Carbide makes most of its surfactants from ethylene oxide and alcohols.

Results of Operations

Millions of dollars (except per share figures), for the year ended December 31,	1999	1998	1997
Net sales	\$5,870	\$5,659	\$6,502
Operating profit ^(a)	555	803	1,045
Interest expense	133	114	79
Income before provision for income taxes	422	689	966
Income before cumulative effect of change in accounting principle	311	403	676
Net income	291	403	659
Net income - common stockholders	291	403	652
Per share - basic			
Income before cumulative effect of change in accounting principle	\$ 2.33	\$ 2.98	\$ 5.02
Net income - common stockholders	2.18	2.98	4.89
Per share - diluted			
Income before cumulative effect of change in accounting principle	2.27	2.91	4.53
Net income - common stockholders	2.13	2.91	4.41

(a) See Note 6 to the financial statements for a discussion of the special items included in operating profit.

Union Carbide operates in two business segments. Specialties & Intermediates (S&I) converts basic and intermediate chemicals into a diverse portfolio of chemicals and polymers serving industrial customers in many markets. This segment also provides technology services, including licensing, to the oil and petrochemicals industries. Basic Chemicals & Polymers (BC&P) converts hydrocarbon feedstocks, principally liquefied petroleum gas and naphtha, into ethylene or propylene used to manufacture polyethylene, polypropylene, ethylene oxide and ethylene glycol for sale to third-party customers, as well as ethylene, propylene, ethylene oxide and ethylene glycol for consumption by the S&I segment. In comparison with those of S&I, the revenues and operating profit of BC&P tend to be more cyclical and very sensitive to a number of external variables, including overall economic demand, hydrocarbon feedstock costs, industry capacity increases and plant operating rates.

In addition to its business segments, the corporation's Other segment includes its noncore operations and financial transactions other than derivatives designated as hedges, which are included in the same segment as the item being hedged.

Summary

1999 Compared with 1998

On a consolidated basis, net sales improved by 3.7 percent, the result of an increase in customer volume of 13.9 percent offset by a decrease in average customer selling prices of 9.1 percent. Although average customer selling prices in the BC&P segment fell 6.1 percent from the prior year, they showed steady quarterly improvement from a two-year low in the first quarter

of 1999. Competitive pricing pressures in solvents, intermediates, monomers, industrial performance chemicals and wire and cable products caused average customer selling prices for the S&I segment to decline in the first half of 1999 with some improvement in the remainder of the year. Volume increases in both segments reflected an increase in current year demand and improved operating reliability coupled with the absence of extended plant shutdowns and distribution disruptions in the U.S. Gulf Coast region, both of which occurred in 1998. Increases in raw material costs throughout 1999 were only partially absorbed in the form of increases in average selling prices. Unit variable margin (sales less variable manufacturing and distribution costs divided by customer volume) decreased by 13.6 percent. Fixed costs increased \$27 million, or 1.6 percent, as a result of increased costs associated with Year 2000 compliance efforts and environmental remediation as well as the increased level of shipments, partially offset by a reduction in plant turnaround costs. Fixed cost per pound of products sold (fixed manufacturing and distribution costs, plus research and development and selling, administrative and other expenses, divided by customer volume) declined to a decade low of 10.2 cents, from 11.5 cents in 1998.

The decline of \$22 million in partnership income from 1998 primarily was the result of a decline in earnings of UOP LLC (UOP), which was partially offset by lower losses of Aspell Polymeres SNC (Aspell). During the latter part of 1998 and continuing throughout most of 1999, UOP was affected by a reduction in oil and petrochemical projects within some of the oil markets in Asia, Russia and the Middle East. Additionally, in the third quarter of 1998, the corporation recognized \$53 million of before-tax (\$38 million after-tax) losses associated with Aspell.

Over the past several years, the fair value of the corporation's pension plan assets has grown at a faster rate than the projected pension benefit obligation primarily as the result of high market returns on the corporation's pension plan assets. As a result, operating income in 1999 includes \$9 million of pension income, compared with pension expense of \$13 million and \$14 million in 1998 and 1997, respectively.

Other income (expense), net in 1999 includes two favorable litigation settlements related to the licensing business totaling \$50 million before-tax (\$38 million after-tax), compared with gains of \$189 million before-tax (\$115 million after-tax) associated with favorable litigation settlements related to the licensing business in 1998.

The corporation's corporate investments carried at equity showed marked improvement as earnings increased from a loss of \$66 million in 1998 to income of \$2 million in 1999. The increase is primarily related to EQUATE Petrochemical Company K.S.C.'s (EQUATE) results in the second half of the year and increased earnings of Polimeri Europa.

1998 Compared with 1997

The corporation's 1998 earnings reflected a difficult environment for the chemical industry coupled with a continuing decline of the Asian economy. On a consolidated basis, net sales declined 13.0 percent as the result of a 10.1 percent decline in average selling prices and a 3.1 percent decline in customer volume. Average customer selling prices dropped 22.3 percent in the BC&P segment, reflecting a deteriorating supply/demand balance in polyethylene, polypropylene and ethylene oxide/glycol. Average selling prices in S&I dropped 5.2 percent, due in part to weakness in Asian markets. Volumes declined in both segments as a result of extended plant shutdowns associated with planned multiyear olefins unit turnarounds and expansion, distribution disruptions in the U.S. Gulf Coast region early in 1998 and declining Asian demand. Fixed cost per pound of products sold increased from 10.8 cents in 1997 to 11.5 cents in 1998, primarily the result of

lower volumes and higher fixed costs related to the extended plant shutdowns and the implementation of the corporation's information technology infrastructure system during 1998.

Partnership income declined \$100 million due to the recognition of \$53 million of before-tax losses in the third quarter associated with Aspell; a decline in UOP earnings, related to reduced oil and petrochemical projects within some of the oil markets in Asia, Russia and the Middle East and reduced Petromont and Company, Limited Partnership (Petromont) earnings due to declining polyethylene prices. Operating profit benefited from a \$189 million before-tax net gain from two favorable litigation settlements related to the licensing business. Net income was reduced by a \$69 million decline in earnings of the corporation's corporate investments carried at equity caused by a decline in basic chemical prices in Asia and Europe, as well as startup difficulties experienced by EQUATE.

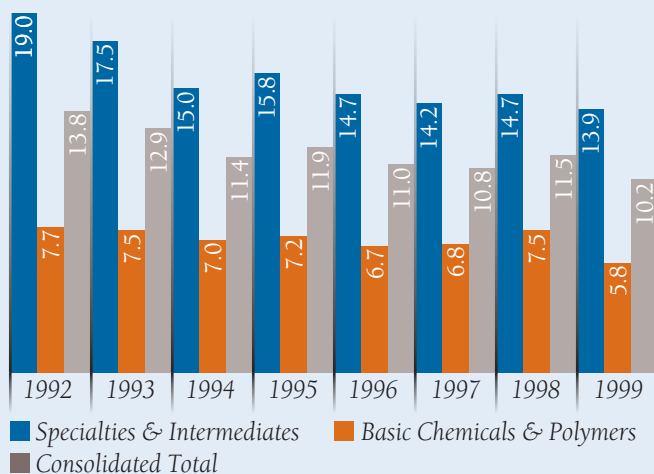
Interest Expense

Interest expense increased from \$79 million in 1997 to \$114 million in 1998 and \$133 million in 1999 as average debt outstanding throughout these periods increased. Additionally, in 1998, compared with 1997, there was a reduction in capitalized interest associated with the corporation's capital program.

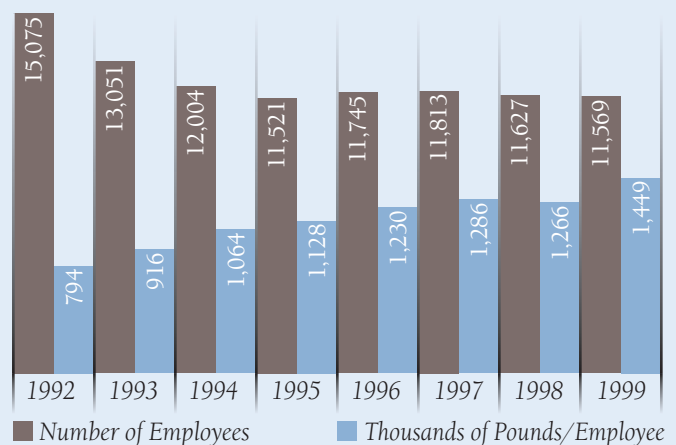
Provision for Income Taxes

The effective tax rate was 25.6 percent in 1999 compared with 31.5 percent and 28.9 percent in 1998 and 1997, respectively. The corporation's effective tax rate increased in 1998 as a result of higher tax rates associated with the corporation's two favorable litigation settlements related to the licensing business. Excluding these settlements, the effective tax rate would have been 28.6 percent. Generally, the corporation's effective tax rate is less than the statutory Federal income tax rate because of research and experimentation and foreign sales corporation tax credits, both of which were higher in 1999.

Fixed Cost per Pound—cents/pound



Employee Productivity



Corporate Matters

Interest Rate and Currency Risk Management

The corporation selectively uses financial instruments to manage its exposure to market risk related to changes in foreign currency exchange rates and interest rates. The corporation does not hold derivative financial instruments for trading purposes. See Notes 1 and 10 to the consolidated financial statements for more information about these instruments.

At Dec. 31, 1999, the corporation held open foreign currency forward contracts and purchased options with net notional amounts of \$253 million and an unrecognized net loss of less than \$1 million (net notional amount of \$419 million and an unrecognized net loss of \$1 million at Dec. 31, 1998).

The corporation used sensitivity analysis to evaluate the potential effect of movements in foreign currency exchange rates and interest rates on the consolidated financial statements. Based on this analysis, a hypothetical 10 percent weakening in the U.S. dollar across all currencies would have resulted in a \$0.5 million net gain at Dec. 31, 1999 (\$7 million net loss at Dec. 31, 1998). Alternatively, a hypothetical 10 percent strengthening in the U.S. dollar across all currencies would have resulted in a \$5 million net gain at Dec. 31, 1999 (\$10 million net loss at Dec. 31, 1998). These gains and losses would generally be offset by fluctuations in underlying currency transactions. The corporation held long-term debt of \$1,869 million, of which \$125 million was variable-rate debt, at Dec. 31, 1999 (total long-term debt of \$1,814 million and variable-rate debt of \$125 million at Dec. 31, 1998). At Dec. 31, 1999 and 1998, a hypothetical 10 percent increase or decrease in market interest rates would not have materially affected interest expense or cash flows related to variable-rate debt. A 10 percent increase in market interest rates would have decreased the net fair market value of fixed-rate debt instruments by \$102 million at Dec. 31, 1999 (\$96 million at Dec. 31, 1998), and a 10 percent decrease in market interest rates would have increased the net fair market value of fixed-rate debt instruments by \$120 million at Dec. 31, 1999 (\$108 million at Dec. 31, 1998).

Foreign Operations

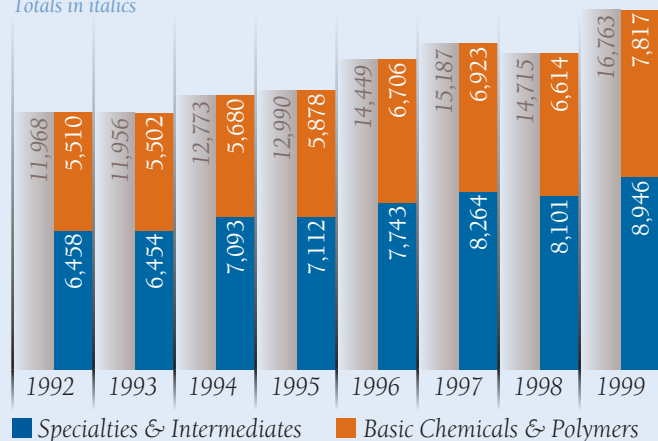
A portion of the financial results of each of the corporation's segments is derived from activities conducted outside the U.S. and denominated in currencies other than the U.S. dollar. Because the financial results of the corporation are reported in U.S. dollars, they are affected by changes in the value of the various foreign currencies in relation to the U.S. dollar. Exchange rate risks are lessened, however, by the diversity of the corporation's foreign operations and the fact that international activities are not concentrated in any single non-U.S. currency. In addition, the effects of a strengthening U.S. dollar could cause pricing pressures on worldwide chemical markets that could result in declines in the corporation's sales volumes. The corporation is subject to other risks customarily associated with doing business in foreign countries, including local labor and economic conditions, unfavorable changes in foreign tax laws and possible controls on repatriation of earnings and capital. Future losses associated with such risks, if any, cannot be predicted.

Outlook – Corporate

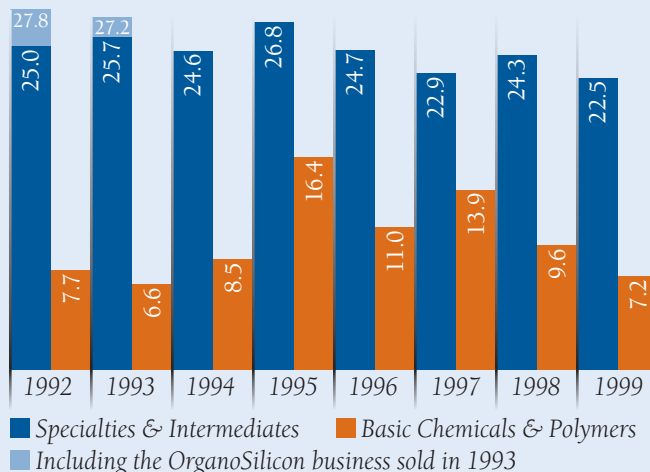
On Aug. 3, 1999, the corporation and The Dow Chemical Company (Dow) entered into an Agreement and Plan of Merger providing for the merger of a subsidiary of Dow with and into the corporation. As a result of the merger, the corporation will become a wholly-owned subsidiary of Dow and the corporation's shareholders will receive 0.537 of a share of Dow common stock for each share of UCC common stock they own as of the date of the merger. On Dec. 1, 1999, UCC shareholders approved the merger agreement. The merger is subject to certain conditions including review by antitrust regulatory authorities in the United States, Europe and Canada. The transaction is intended to qualify as a tax-free reorganization for United States Federal income tax purposes and is expected to be accounted for under the pooling-of-interests method of accounting.

Volume—millions of pounds

Totals in italics



Unit Variable Margin—cents/pound



Specialties & Intermediates

<i>Millions of dollars, except as indicated</i>	1999	1998	1997
Segment revenues	\$4,182	\$4,139	\$4,453
Cost of sales, exclusive of depreciation and amortization	3,100	3,007	3,358
Gross margin	1,082	1,132	1,095
Depreciation and amortization	262	247	214
Partnership income	6	27	116
Operating profit	\$ 607	\$ 833	\$ 667
Income (loss) from corporate investments carried at equity	\$ (1)	\$ 1	\$ 6
Customer volume (millions of pounds)	8,946	8,101	8,264
Unit variable margin (cents/pound)	22.5	24.3	22.9
Fixed cost per pound of products sold (cents/pound)	13.9	14.7	14.2
Capital expenditures	\$ 291	\$ 438	\$ 458
Investments, advances and acquisitions	64	42	50
Segment assets	\$4,603	\$4,403	\$4,146

Specialties & Intermediates Operations

1999 Compared with 1998

In 1999, S&I segment revenues increased 1.0 percent, reflecting a 10.4 percent increase in customer volumes offset by an 8.6 percent decline in average customer selling prices. Due to competitive pricing pressures, average customer selling prices declined in the first half of 1999 with some recovery in the latter part of the year; however, in no quarter of 1999 did the average customer selling price exceed any quarter of 1998. Although most of S&I's products were affected, solvents, intermediates, monomers, industrial performance chemicals and wire and cable products experienced the most dramatic declines. Increased capacity associated with new manufacturing units started up in 1998 and 1999, coupled with generally strong demand, particularly in solvents, intermediates and monomers, enabled the segment to substantially increase shipments over prior year levels.

The decline in S&I's unit variable margin was principally the result of the year's overall decline in average selling prices coupled with an increase in raw material and energy costs throughout the year. The segment benefited from decreases in fixed cost per pound of products sold. These declines reflected the combined effect of increased volumes in 1999 coupled with the absence of costs associated with the 1998 extended plant shutdowns. Increased depreciation and amortization represented a full year's worth of depreciation for capital projects completed throughout 1998.

Included in S&I's 1999 operating profit were two favorable litigation settlements related to the licensing business totaling \$50 million, which occurred in the second and third quarters. Segment operating profit in 1998 included \$189 million in gains during the second half of 1998 from favorable litigation settlements related to the licensing business.

1998 Compared with 1997

During 1998, S&I segment revenues declined 7.1 percent on a 5.2 percent decline in average selling prices and a 2.0 percent decline in volume. Average selling prices declined for almost all of S&I's products as a result of worldwide competitive pricing pressure, particularly on sales in Asian markets which weakened throughout 1998. Volume decreased most significantly in the solvents, intermediates and monomers product lines, due largely to reduced Asian demand. This decline was somewhat offset by increased domestic shipments of industrial performance chemicals and UCAR Emulsion Systems products.

S&I's unit variable margin increased principally due to declines in raw material costs. However, fixed cost per pound of products sold in 1998 increased over 1997 reflecting the combined effect of reduced volumes and increased fixed costs associated with extended plant shutdowns and costs associated with the corporation's information technology project occurring in 1998. Increased depreciation and amortization in 1998 compared with 1997 are principally the result of depreciation associated with capital projects completed throughout 1998.

Specialties & Intermediates Joint Ventures

The most significant joint ventures included in the S&I segment are:

UOP LLC (UOP) – a Domestic joint venture, accounted for as a partnership, with Honeywell International, Inc. for the worldwide supply of process technology, catalysts, molecular sieves and adsorbents to the petrochemical and gas-processing industries. In addition to its domestic operations, UOP has facilities in Germany, Italy and the United Kingdom.

Specialties & Intermediates Joint Ventures

Millions of dollars	1999	Combined		UCC's Proportionate Share ^(a)		
		1998	1997	1999	1998	1997
Net sales	\$2,000	\$2,060	\$2,246	\$ 990	\$1,032	\$1,109
Cost of sales	1,334	1,345	1,395	657	663	567
Depreciation	104	119	90	47	54	51
Income from operations	92	231	340	53	122	175
Interest expense	40	43	42	19	16	15
Provision for income taxes	61	48	76	30	24	38
Net Income (Loss)	\$ (7)	\$ 141	\$ 224	\$ 5	\$ 81^(b)	\$ 122
UCC share of dividends & distributions				\$ 64	\$ 105	\$ 107
Total assets	\$2,086	\$1,981	\$1,837	\$ 923	\$ 881	\$ 820
Total third-party debt	786	616	588	330	268	249
Net Assets	\$ 606	\$ 474	\$ 451	\$ 314	\$ 298	\$ 277

(a) Includes U.S. Generally Accepted Accounting Principles adjustments made by the corporation, such as goodwill and related amortization, and adjustments needed to conform the accounting policies of the joint ventures to those of UCC.

(b) Excluding the \$53 million loss associated with Aspell in the third quarter.

Nippon Unicar Company Limited (NUC) – a Japanese corporate joint venture with Tonen Chemical Corporation to produce polyethylene and specialty polyethylene compounds and specialty silicone products.

Aspell Polymeres SNC (Aspell) – a French partnership with Elf Atochem S.A., a subsidiary of Elf Aquitaine, to produce polyethylene and specialty polyethylene compounds.

World Ethanol Company (World Ethanol) – a Domestic partnership with Archer Daniels Midland Company, to supply ethanol worldwide.

Univation Technologies, LLC (Univation) – a Domestic joint venture, accounted for as a partnership, with ExxonMobil Chemical Company, a division of Exxon Mobil Corporation, for the licensing of polyethylene technology and research, development and commercialization activities on process technology and single site and other advanced catalysts for the production of polyethylene. The venture is also the sales agent for licensing of Union Carbide's UNIPOL technology.

Asian Acetyls Co., Ltd. (ASACCO) – a South Korean corporate joint venture with BP Chemicals and Samsung Fine Chemicals Company to produce vinyl acetate monomer used in the production of emulsion resins by customers in the coatings and adhesives industries.

OPTIMAL Chemicals (Malaysia) Sdn Bhd (OPTIMAL-S&I) – a Malaysian corporate joint venture with Petroliaam Nasional Berhad (PETRONAS) that is building a facility for the production of ethylene and propylene derivatives within a world-scale, integrated chemical complex in Kerteh, Terengganu, Malaysia. This corporate joint venture, along with two joint ventures in the corporation's BC&P segment, form the OPTIMAL Group.

1999 Compared with 1998

The corporation's share of S&I's partnership income decreased \$21 million from 1998. The majority of this decline relates to reduced earnings from UOP partly offset by lower losses associated with Aspell. During the latter part of 1998 and continuing throughout most of 1999, UOP was affected by a reduction in oil and petrochemical projects within some of the oil markets in Asia, Russia and the Middle East. Additionally, earnings from World Ethanol declined due to an oversupply of ethanol in the domestic marketplace and increases in distribution costs.

1998 Compared with 1997

The corporation's share of S&I partnership income decreased \$89 million from 1997. The decrease was primarily related to the recognition of \$53 million of losses associated with Aspell in the third quarter of 1998. Additionally, 1998 income included declining earnings from UOP, primarily related to unfavorable market conditions in Asia, Russia and the Middle East, and a full twelve months of operating costs, principally related to research and development, associated with Univation, compared with only eight months in 1997. Income from the corporation's S&I corporate investments carried at equity decreased \$5 million, mostly due to reduced earnings at NUC.

Outlook – Specialties & Intermediates

The corporation anticipates that unit variable margins will continue to suffer into the first quarter of 2000 as anticipated increases in average selling prices will most likely continue to lag raw material cost increases. Volumes are anticipated to remain strong, especially in the solvents, intermediates and monomers products. It is anticipated that the segment will benefit from improvements in partnership income over fourth-quarter 1999 levels and from lower fixed cost per pound of products sold.

Basic Chemicals & Polymers

Millions of dollars, except as indicated	1999	1998	1997
Segment revenues	\$1,976	\$1,802	\$2,420
Cost of sales, exclusive of depreciation and amortization	1,765	1,550	1,816
Gross margin	211	252	604
Depreciation and amortization	146	142	126
Partnership income	5	6	17
Operating profit (loss)	\$ (21)	\$ 20	\$ 386
Income (loss) from corporate investments carried at equity	\$ 3	\$ (67)	\$ (3)
Customer volume (millions of pounds)	7,817	6,614	6,923
Unit variable margin (cents/pound)	7.2	9.6	13.9
Fixed cost per pound of products sold (cents/pound)	5.8	7.5	6.8
Capital expenditures	\$ 473	\$ 344	\$ 297
Investments, advances and acquisitions	85	69	18
Segment assets	\$3,137	\$2,686	\$2,540

Basic Chemicals & Polymers Operations

1999 Compared with 1998

Segment revenues increased 9.7 percent on a 6.1 percent decline in average customer selling prices and an 18.2 percent increase in customer volume. Average customer selling prices, which declined steadily throughout 1998, reached a low in the first quarter of 1999 and showed improvement throughout the remainder of the year. Customer volume improvements reflected an increase in current year demand and improved operating reliability coupled with the absence of volume losses due to extended plant shutdowns and distribution disruptions, both of which occurred in 1998.

Declines in BC&P's unit variable margin occurred as the modest increases in average customer selling prices during 1999 failed to offset increases in raw material costs. Declining fixed cost per pound of products sold was due to both higher capacity utilization and lower fixed costs. Reductions in fixed costs, a majority of which were in fixed manufacturing and distribution costs, reflected the absence of the costs related to plant turn-arounds that occurred in 1998.

1998 Compared with 1997

During 1998, the BC&P segment was negatively affected by overall deterioration of the supply/demand balance for basic chemicals. Average customer selling prices declined 22.3 percent. Prices for ethylene glycol, polyethylene and polypropylene declined throughout 1998 to levels below those of the prior cyclical trough in 1993. Customer volume declined 4.5 percent, in part due to distribution disruptions in the first half of the year and extended

ethylene plant shutdowns for multiyear maintenance, at the corporation's Taft, La., and Texas City, Tex., facilities, and an expansion, at Taft, La., all in the second half of the year.

Unit variable margin declined as average selling prices fell at a faster rate than the cost of raw materials. The increase in this segment's fixed cost per pound of products sold reflected the combined effect of reduced customer volumes and higher costs associated with the extended plant shutdowns and the implementation of the corporation's information technology infrastructure system in 1998. The increase in depreciation and amortization in 1998 compared with 1997 is the result of depreciation associated with capital projects completed throughout 1998.

Basic Chemicals & Polymers Joint Ventures

The most significant joint ventures included in the BC&P segment are:

Alberta & Orient Glycol Company Limited (A&OG) – a Canadian corporate joint venture with Mitsui & Co., Ltd., Japan, and Far Eastern Textile Ltd., Taiwan, to produce ethylene glycol.

EQUATE Petrochemical Company K.S.C. (EQUATE) – a corporate joint venture in Kuwait with Petrochemical Industries Company and Boubyan Petrochemical Company to manufacture ethylene, polyethylene and ethylene glycol.

Petromont and Company, Limited Partnership (Petromont) – a Canadian partnership with Ethylec Inc. to produce olefins and polyethylene resins.

Polimeri Europa S.r.l. (Polimeri Europa) – an Italian corporate joint venture with EniChem S.p.A. to produce olefins and polyethylene resins. This joint venture also has facilities in France and Germany.

Basic Chemicals & Polymers Joint Ventures

Millions of dollars	1999	Combined		UCC'S Proportionate Share ^(a)		
		1998	1997	1999	1998	1997
Net sales	\$2,135	\$1,996	\$2,078	\$1,047	\$ 984	\$1,038
Cost of sales	1,649	1,597	1,661	815	790	855
Depreciation	244	253	102	93	113	46
Income from operations	155	50	219	100	36	68
Interest expense	157	206	70	78	86	35
Provision for income taxes	26	27	49	13	12	18
Net Income (Loss)	\$ (27)	\$ (182)	\$ 100	\$ 8	\$ (61)	\$ 14
UCC share of dividends & distributions				\$ 11	\$ 18	\$ 19
Total assets	\$3,548	\$3,724	\$3,980	\$1,508	\$1,725	\$1,797
Total third-party debt	1,241	1,474	1,595	581	691	744
Net Assets	\$1,232	\$ 639	\$ 985	\$ 442	\$ 326	\$ 413

(a) Includes U.S. Generally Accepted Accounting Principles adjustments made by the corporation, such as goodwill and related amortization, and adjustments needed to conform the accounting policies of the joint ventures to those of UCC.

OPTIMAL Olefins (Malaysia) Sdn Bhd and OPTIMAL Glycols (Malaysia) Sdn Bhd (OPTIMAL-BC&P) – Malaysian corporate joint ventures (part of the OPTIMAL Group) with PETRONAS that are building an ethane/propane cracker and an ethylene oxide/glycol facility, within a world-scale, integrated chemical complex in Kerteh, Terengganu, Malaysia.

1999 Compared with 1998

The corporation's income (loss) from BC&P's corporate investments carried at equity increased from a loss of \$67 million in 1998 to income of \$3 million in 1999. The increase is primarily related to EQUATE's results in the second half of the year when the venture benefited from strong manufacturing operations, rising basic chemical prices, advantaged raw material supply arrangements and a recapitalization of debt. Additionally, increased earnings from Polimeri Europa, related to improvements in average selling prices and volumes, partly offset charges for preliminary operating expenses of OPTIMAL-BC&P.

1998 Compared with 1997

BC&P's partnership income in 1998 declined \$11 million from 1997 due to the decline in earnings of Petromont, the result of declining worldwide average chemical selling prices. Increased losses of this segment's corporate investments carried at equity in 1998 were mainly attributable to declining worldwide average basic chemical selling prices, particularly in Asia and Europe. Additionally, EQUATE experienced startup difficulties in 1998, its first full year of operations, including an interruption in the supply of electric power from a government-owned power station. Depreciation within the joint ventures more than doubled in 1998 due to the startup of the EQUATE facility.

Joint Venture Commitments

EQUATE commenced operations in the fourth quarter of 1997. The corporation recognized preoperating losses of \$43 million in 1997 for development of this world-scale petrochemical complex. The corporation severally guaranteed 45 percent (approximately \$603 million at Dec. 31, 1999) of EQUATE's debt and working capital financing needs. Certain completion and financial tests supporting the corporation's guarantee were achieved and on Feb. 4, 2000, a substantial portion of this guarantee was released. Subsequent to this date, the corporation's continuing several debt guarantee has been reduced to an amount of up to \$184 million. The corporation has also severally guaranteed certain sales volume targets until EQUATE's sales capabilities are proved. In addition, the corporation has pledged its shares in EQUATE as security for EQUATE's debt. The corporation has political risk insurance coverage for its equity investment and most of its remaining several guarantee of EQUATE's debt.

Outlook – Basic Chemicals & Polymers

Although recent volatility in raw material prices makes first quarter forecasting difficult, it is anticipated that BC&P will be negatively impacted by falling average customer selling prices and increasing raw material costs. BC&P joint ventures should experience similar selling price and raw material pressure resulting in an earnings decline in the first quarter of 2000.

Other

Millions of dollars, for the year ended December 31,	1999	1998	1997
Operating profit (loss)	\$(31)	\$(50)	\$(8)

The Other segment includes profit and loss from noncore activities and certain financial transactions. Operating loss for 1999 included environmental expenses of \$27 million related to a discontinued business. Included in 1998's operating loss were the net effects of gains and losses from the resolution of certain legal obligations related to discontinued businesses, the write-down of a long-term available-for-sale security and a reclassification, to a discontinued business, of an environmental accrual.

Costs Relating to Protection of the Environment

Worldwide costs relating to environmental protection continue to be significant, due primarily to stringent laws and regulations and to the corporation's commitment to industry initiatives such as RESPONSIBLE CARE, as well as to its own internal standards. In 1999, worldwide expenses related to environmental protection for compliance with Federal, state and local laws regulating solid and hazardous wastes and discharge of materials to air and water, as well as for waste site remedial activities, totaled \$118 million. Expenses in 1998 and 1997 were \$91 million and \$100 million, respectively. In addition, worldwide capital expenditures relating to environmental protection, including those for new capacity and cost reduction and replacement, in 1999 totaled \$35 million, compared with \$57 million and \$68 million in 1998 and 1997, respectively.

The corporation, like other companies in the U.S., periodically receives notices from the U.S. Environmental Protection Agency and from state environmental agencies, as well as claims from other companies, alleging that the corporation is a potentially responsible party (PRP) under the Comprehensive Environmental Response, Compensation and Liability Act and equivalent state laws (hereafter referred to collectively as Superfund) for past and future cleanup costs at hazardous waste sites at which the corporation is alleged to have disposed of, or arranged for treatment or disposal of, hazardous sub-stances. The corporation is also undertaking environmental investigation and remediation projects at hazardous waste sites located on property currently and formerly owned by the corporation pursuant to Superfund, as well as to the Resource Conservation and Recovery Act and equivalent state laws.

There are approximately 111 hazardous waste sites at which management believes it is probable or reasonably possi-

ble that the corporation will incur liability for investigation and/or remediation costs. The corporation has established accruals for those hazardous waste sites where it is probable that a loss has been incurred and the amount of the loss can reasonably be estimated. The reliability and precision of the loss estimates are affected by numerous factors, such as the stage of site evaluation, the allocation of responsibility among PRPs and the assertion of additional claims. The corporation adjusts its accruals as new remediation requirements are defined, as information becomes available permitting reasonable estimates to be made, and to reflect new and changing facts.

At Dec. 31, 1999, the corporation's accruals for environmental remediation totaled \$208 million (\$220 million in 1998). Approximately 45 percent of the accrual (53 percent in 1998) pertains to estimated future expenditures for site investigation and cleanup, and approximately 55 percent (47 percent in 1998) pertains to estimated future expenditures for closure and postclosure activities. See Note 17 to the financial statements for a discussion of the environmental sites for which the corporation has remediation responsibility. In addition, the corporation had environmental loss contingencies of \$108 million at Dec. 31, 1999.

Estimates of future costs of environmental protection are necessarily imprecise, due to numerous uncertainties. These include the impact of new laws and regulations, the availability and application of new and diverse technologies, the identification of new hazardous waste sites at which the corporation may be a PRP and, in the case of Superfund sites, the ultimate allocation of costs among PRPs and the final determination of the remedial requirements. While estimating such future costs is inherently imprecise, taking into consideration the corporation's experience to date regarding environmental matters of a similar nature and facts currently known, the corporation estimates that worldwide expenses related to environmental protection, expressed in 1999 dollars, should average about \$105 million annually over the next five years. Worldwide capital expenditures for environmental protection, also expressed in 1999 dollars, are expected to average about \$30 million annually over the same period. Management anticipates that future annual costs for environmental protection after 2004 will continue at levels comparable to the five-year average estimates. Subject to the inherent imprecision and uncertainties in estimating and predicting future costs of environmental protection, it is management's opinion that any future annual costs for environmental protection in excess of the five-year average estimates stated here, plus those costs anticipated to continue thereafter, would not have a material adverse effect on the corporation's consolidated financial position.

Litigation

The corporation and its consolidated subsidiaries are involved in a number of legal proceedings and claims with both private and governmental parties. These cover a wide range of matters, including, but not limited to: product liability; trade regulation; governmental regulatory proceedings; health, safety and environmental matters; employment; patents; contracts; and taxes. In some of these legal proceedings and claims, the cost of remedies that may be sought or damages claimed is substantial. While it is impossible at this time to determine with certainty the ultimate outcome of any such legal proceedings and claims, management believes that adequate provisions have been made for probable losses with respect thereto and that such ultimate outcome, after provisions therefor, will not have a material adverse effect on the consolidated financial position of the corporation, but could have a material effect on consolidated results of operations in a given quarter or year. Should any losses be sustained in connection with any of such legal proceedings and claims in excess of provisions therefor, they will be charged to income when determinable.

Accounting Changes

1997 through 1999

Effective Jan. 1, 1999, the corporation adopted the provisions of the American Institute of Certified Public Accountants' Statement of Position (SOP) 98-5, "Reporting on the Costs of Start-Up Activities." This SOP requires the expensing of certain costs, such as preoperating expenses and organizational costs associated with an entity's startup activities. In accordance with this SOP's provisions, on Jan. 1, 1999, the corporation recognized a charge of \$27 million (\$20 million after-tax) as a cumulative effect of change in accounting principle, the majority of which represented formation costs associated with the corporation's joint ventures.

Also effective Jan. 1, 1999, the corporation prospectively adopted the provisions of SOP 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use." The effect of this adoption was not material to the corporation's financial position or results of operations in the period of adoption.

In 1998, the corporation adopted Statement of Financial Accounting Standards (Statement) No. 130, "Reporting Comprehensive Income," Statement No. 131, "Disclosures about Segments of an Enterprise and Related Information," and Statement No. 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits."

In 1997, the corporation adopted Emerging Issues Task Force consensus on Issue 97-13, "Accounting for Costs Incurred in Connection with a Consulting Contract or an

Internal Project That Combines Business Process Reengineering and Information Technology Transformation." Effective Oct. 1, 1997, the corporation adopted the provisions of Issue 97-13 as a cumulative effect of change in accounting principle, reversing \$28 million (\$17 million after-tax) of costs previously capitalized from 1995 through the third quarter of 1997.

Subsequent to 1999

In 1998, the Financial Accounting Standards Board issued Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities." It requires that an entity recognize all derivative instruments as either assets or liabilities in the statement of financial position and measure those instruments at fair value. This Statement, as amended by Statement No. 137, "Accounting for Derivative Instruments and Hedging Activities - Deferral of the Effective Date of FASB Statement No. 133," is effective for all fiscal quarters of fiscal years beginning after June 15, 2000. The corporation is evaluating the effect Statement No. 133 will have on its financial position and results of operations in the period of adoption.

In 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin (SAB) 101, "Revenue Recognition in Financial Statements," which summarizes the staff's views regarding the application of generally accepted accounting principles to selected revenue recognition issues. The corporation is evaluating whether SAB 101 will cause any change in its revenue recognition policies and procedures.

Year 2000 Readiness Disclosure

The corporation implemented a comprehensive program to address its hardware and software systems that might have been affected by the Year 2000 transition and to assess the readiness of its customers and suppliers. This remediation program was completed during 1999.

The Jan. 1, 2000 crossover was uneventful for the corporation. No system-related interruptions to operations, public infrastructure, customers or suppliers were experienced related to the date change. All major business, manufacturing, logistics and financial systems were unaffected. Mission-critical applications, infrastructure and services were maintained with a few minor events experienced only in non-critical systems. No outages occurred as a result of these experiences. No RESPONSIBLE CARE, health, safety or environmental events occurred as a result of the Year 2000 transition. Critical customers and suppliers appear to have been unaffected by the date transition. No unusual changes in business volume or responsiveness have been experienced.

Normal business management practices will be used to monitor and verify critical suppliers and customers during the Feb. 29, 2000 transition, which is expected to be uneventful.

Through Dec. 31, 1999, costs for Year 2000 project work were \$49 million, with internal personnel costs contributing an additional \$30 million. Less than \$1 million of these costs remain to be expended. All costs were funded through operations of the corporation. Approximately 75 percent of the external costs related to repairing or upgrading current systems and 25 percent to replacement of existing hardware and software. These estimates do not include costs associated with the replacement of most of the corporation's North American computer systems with SAP, the environmental reporting project, international information technology infrastructure or Year 2000 costs that the corporation's joint ventures incurred, all of which are being or have been implemented independently of the corporation's Year 2000 project. The corporation's share of the internal and external costs incurred by its joint ventures was \$9 million through Dec. 31, 1999.

Liquidity, Capital Resources and Other Financial Data

Cash Flow From Operations

Cash flow from operations decreased by \$369 million to \$559 million in 1999, as compared to \$928 million in 1998. The 1999 decline was principally the result of an increase in working capital requirements and declines in income before cumulative effect of change in accounting principle and equity in earnings/losses of joint ventures.

Cash Flow Used for Investing

Cash flow used for investing includes capital expenditures, investments, advances and acquisitions, and purchases of, and proceeds from the sale of, securities and assets. Capital expenditures were \$764 million in 1999, compared with \$782 million in 1998 and \$755 million in 1997. Major capital projects funded during 1999 included continued work at a new olefins facility being built jointly with Nova Chemicals Corporation, and a polyolefins project, both in Alberta, Canada. Major capital projects funded during 1998 and 1997 included work on an olefins expansion, a new butanol unit, a new CARBOWAX polyethylene glycol and TERGITOL surfactants facility and an ethanolamines unit, all at Taft, La.; the new olefins facility and polyolefins project; as well as the upgrade of information technology infrastructure.

Over the past three years, 67 percent of capital expenditures was directed to new capacity, 29 percent to cost reduction and replacement and 4 percent to environmental, safety and health facilities. Of these expenditures, 45 percent were in the U.S. and Puerto Rico.

At Dec. 31, 1999, the cost of completing authorized construction projects was estimated to be \$633 million, of which \$299 million is covered by firm commitments. Future construction expenditures are anticipated to be sourced through operating cash flows and borrowings.

In April 1998, the corporation and PETRONAS agreed to form the OPTIMAL Group, which will build and operate a 600,000 metric-tons-per-year ethylene plant, a 385,000 metric-tons-per-year ethylene oxide/glycol plant and a multiple specialties and intermediates derivatives facility in Kerteh, Terengganu, Malaysia. The joint ventures' primary marketing focus will be in Southeast Asia. The corporation anticipates funding its approximate \$500 million share of the cost of the complex through its 2001 planned startup date with internally generated funds and external debt. At Dec. 31, 1999, the corporation had invested approximately \$134 million, and was firmly committed to an additional \$68 million.

Cash Flow From Financing

Cash flow from/used for financing includes stockholder and minority interest dividends and funds used to buy back common stock, offset in part by net proceeds from short- and long-term debt and sales of common stock pursuant to the corporation's dividend reinvestment plan, its employee savings and investment programs and its long-term incentive plans.

Cash flow from financing in 1999 totaled \$324 million, compared with cash flow used for financing of \$8 million in 1998 and \$132 million in 1997. Cash flow from financing in 1999 includes net proceeds of \$250 million from the April issuance of 6.70% Public Notes due in April 2009 and net increases in debt, excluding this issuance, of \$183 million partially offset by cash dividends paid of \$120 million. Borrowings in 1998 included net proceeds of \$248 million from the issuance of 6.25% Notes due in June 2003 and \$110 million net proceeds of Floating Rate Public Notes, due in April 2000. The Floating Rate Public Notes bear interest at a rate which is reset quarterly at the three-month London Interbank Offered Rate (LIBOR) plus 0.65 percent. Dividends paid in 1998 totaled \$122 million.

Included in cash flow used for financing in 1997 were net proceeds of \$250 million from the issuance of preferred stock by the corporation's real estate investment trust (REIT) subsidiary. The corporation paid \$240 million in cash to redeem the preferred stock shares in the fourth quarter of 1997. Cash dividends paid to preferred shareholders of the REIT during 1997 totaled \$25 million.

In Sept. 1997, the board of directors declared an increase in the quarterly common stock dividend to \$0.225 per share. In Oct. 1997, the trustee of the Employee Stock Ownership Plan (ESOP) exercised its right to convert all shares of the corporation's preferred stock held by the ESOP into the corporation's common stock. This noncash conversion increased the corporation's common stock outstanding at that time by 15.4 million shares.

On Aug. 3, 1999, the board of directors rescinded the corporation's authorization to repurchase up to 60 million shares of the corporation's common stock. Since inception of its repurchase authorization in 1993 through Aug. 3, 1999, the corporation repurchased 56.4 million shares for \$2.033 billion, at an average effective price of \$36.01 per share. In addition to the above repurchases, in 1999 and 1998 stock was reacquired from employees to satisfy tax withholding requirements on restricted shares issued under employee benefit plans.

At Dec. 31, 1999, there were no outstanding borrowings under the existing major bank credit agreement aggregating \$1 billion.

Debt Ratios

Total debt outstanding at year-end for each of the past three years was:

Millions of dollars	1999	1998	1997
Domestic	\$2,568	\$2,019	\$1,719
International	83	203	168
Total	\$2,651	\$2,222	\$1,887

Year-end ratios of total debt to total capital were:

	1999	1998	1997
Debt ratio	49.9%	47.2%	44.2%

Total debt consists of short-term debt, long-term debt and the current portion of long-term debt. Total capital consists of total debt plus minority stockholders' equity in consolidated subsidiaries and stockholders' equity.

UNION CARBIDE C

SELECTED FINANCIAL DATA

Union Carbide Corporation and Subsidiaries

page
18

Dollar amounts in millions (except per share figures)	1999	1998	1997	1996
From the Income Statement				
Net Sales	\$5,870	\$5,659	\$6,502	\$6,106
Cost of sales, exclusive of depreciation and amortization	4,609	4,294	4,806	4,568
Research and development	154	143	157	159
Selling, administrative and other expenses	257	304	324	321
Depreciation and amortization	408	389	340	312
Partnership income (loss)	11	33 ^(b)	133	144
Other income (expense) – net	102 ^(a)	241 ^(c)	37	31
Income before interest expense and provision for income taxes	555	803	1,045	921
Interest expense	133	114	79	76
Income (loss) before provision for income taxes – continuing operations	422	689	966	845
Provision (credit) for income taxes	108	217	279	236
Income (loss) from corporate investments carried at equity	2	(66)	3	(16)
Income (loss) from continuing operations	311	403	676	593
Cumulative effect of change in accounting principle	(20)	–	(17)	–
Net income (loss) – common stockholders	291	403	652	583
Per common share:				
Basic – Income (loss) from continuing operations	\$ 2.33	\$ 2.98	\$ 5.02	\$ 4.43
– Net income (loss)	2.18	2.98	4.89	4.43
Diluted – Income (loss) from continuing operations	2.27	2.91	4.53	3.90
– Net income (loss)	2.13	2.91	4.41	3.90
From the Balance Sheet				
Net current assets of continuing operations	\$ 361	\$ 436	\$ 362	\$ 595
Total assets	7,957	7,291	6,964	6,546
Long-term debt	1,869	1,796	1,458	1,487
Other long-term obligations	603	602	738	811
Total capital ^(d)	5,310	4,707	4,268	3,742
Stockholders' equity	2,617	2,449	2,348	2,114
Stockholders' equity per common share	19.51	18.46	17.15	16.72
Other Data				
Cash dividends on common stock	\$ 120	\$ 122	\$ 100	\$ 99
Cash dividends per common share	0.90	0.90	0.7875	0.75
Special distribution per common share	–	–	–	–
Market price per common share – high ^(e)	67.75	55.75	56.81	49.88
Market price per common share – low ^(e)	37.13	36.75	40.50	36.38
Common shares outstanding (thousands)	134,144	132,686	136,944	126,440
Capital expenditures	764	782	755	721
Employees – continuing operations	11,569	11,627	11,813	11,745
Selected Financial Ratios				
Total debt/total capital	49.9%	47.2%	44.2%	42.7%
Return on capital ^(g)	8.4%	11.2%	19.6%	18.6%
Return on equity ^(f)	11.9%	17.2%	30.8%	28.5%
Income from continuing operations/average stockholders' equity	12.3%	16.8%	30.3%	28.5%
Cash dividends on common stock/income from continuing operations	38.6%	30.3%	14.8%	16.7%

(a) Other income (expense) – net in 1999 includes \$50 million in favorable litigation settlements related to the licensing business.

(b) Includes \$53 million in losses associated with Aspell Polymeres SNC, the corporation's joint venture in France.

(c) Other income (expense) – net in 1998 includes \$189 million in favorable litigation settlements related to the licensing business.

(d) Selling, administrative and other expenses in 1995 include a charge of \$68 million for postemployment benefits.

(e) Prices are based on New York Stock Exchange Composite Transactions.

(f) Return on equity is computed by dividing Net income (loss) – common stockholders by beginning-of-year stockholders' equity.

CORPORATION 1999

	1995	1994	1993	1992	1991	1990	1989
	\$5,888	\$4,865	\$4,640	\$4,872	\$4,877	\$5,238	\$5,613
	4,100	3,673	3,589	3,764	3,787	3,876	3,909
	144	136	139	155	157	157	143
	387 ^(d)	290	340	383	408	466	442
	306	274	276	293	287	278	261
	152	98	67	60	(22)	70	82
	245	(39)	(66)	(13)	(135)	103	108
	1,348	551	297	324	81	634	1,048
	89	80	70	146	228	269	268
	1,259	471	227	178	(147)	365	780
	380	137	78	45	(50)	130	257
	47	55	16	(14)	(21)	(42)	27
	925	389	165	119	(116)	188	530
	—	—	(97)	(361)	—	—	—
	915	379	58	(187)	(28)	308	573
	\$ 6.65	\$ 2.51	\$ 1.03	\$ 0.79	\$ (1.07)	\$ 1.34	\$ 3.79
	6.65	2.51	0.37	(1.48)	(0.22)	2.19	4.10
	5.85	2.27	0.97	0.76	(1.07)	1.32	3.63
	5.85	2.27	0.41	(1.24)	(0.22)	2.16	3.92
	\$ 858	\$ 329	\$ 233	\$ 66	\$ 209	\$ 7	\$ 22
	6,256	5,028	4,689	4,941	6,826	7,389	7,355
	1,285	899	931	1,113	1,160	2,058	2,060
	834	537	378	277	428	357	572
	3,392	2,479	2,395	2,710	4,694	5,338	5,319
	2,045	1,509	1,428	1,238	2,239	2,373	2,383
	15.14	10.45	9.49	9.32	17.55	18.88	16.83
	\$ 103	\$ 113	\$ 110	\$ 114	\$ 126	\$ 138	\$ 140
	0.75	0.75	0.75	0.875	1.00	1.00	1.00
	—	—	—	15.875	—	—	—
	42.75	35.88	23.13	17.13 ^(h)	22.63	24.88	33.25
	25.50	21.50	16.00	10.88 ^(h)	15.13	14.13	22.75
	135,108	144,412	150,548	132,865	127,607	125,674	141,578
	542	409	395	359	400	381	483
	11,521	12,004	13,051	15,075	16,705	17,722	18,032
	39.0%	38.2%	40.3%	54.3 %	52.0 %	54.0%	49.9%
	39.2%	18.0%	7.7%	6.9 %	—	8.4%	21.2%
	60.6%	26.5%	4.7%	(8.4)%	(1.2)%	12.9%	31.2%
	52.1%	26.5%	12.4%	6.8 %	—	7.9%	25.1%
	11.1%	29.0%	66.7%	95.8 %	—	73.4%	26.4%

(g) Return on capital is computed by dividing income by beginning-of-year capital. Income consists of income from continuing operations, less preferred dividends, plus after-tax interest cost (net of interest income received from Praxair), plus income attributable to minority interests. Capital consists of total debt plus minority stockholders' equity in consolidated subsidiaries and stockholders' equity, adjusted for the corporation's Praxair-related assets and the cumulative effect of changes in accounting principles. Total debt consists of short-term debt, long-term debt and the current portion of long-term debt.

(h) In 1992 the corporation spun off Praxair, Inc. The high and low presented in the table for 1992 represent the value of the common stock after the spin-off. The high and low for 1992 before the spin-off were \$29.63 and \$20.13, respectively.

UNION CARBIDE CORPORATION

CONSOLIDATED BALANCE SHEET

Union Carbide Corporation and Subsidiaries

page
20

Millions of dollars, at December 31,	1999	1998
Assets		
Cash and cash equivalents	\$ 41	\$ 49
Notes and accounts receivable	1,132	933
Inventories	680	667
Other current assets	297	257
Total Current Assets	2,150	1,906
Property, plant and equipment	9,057	8,409
Less: Accumulated depreciation	4,536	4,228
Net Fixed Assets	4,521	4,181
Companies carried at equity	756	624
Other investments and advances	75	141
Total Investments and Advances	831	765
Other assets	455	439
Total Assets	\$7,957	\$7,291
Liabilities and Stockholders' Equity		
Accounts payable	\$ 329	\$ 264
Short-term debt and current portion of long-term debt	782	426
Accrued income and other taxes	—	110
Other accrued liabilities	678	670
Total Current Liabilities	1,789	1,470
Long-term debt	1,869	1,796
Postretirement benefit obligation	438	450
Other long-term obligations	603	602
Deferred credits	599	488
Minority stockholders' equity in consolidated subsidiaries	42	36
Stockholders' equity		
Common stock		
Authorized - 500,000,000 shares		
Issued - 157,571,933 shares (155,052,017 shares in 1998)	158	155
Additional paid-in capital	165	79
Other equity adjustments	(1)	(2)
Accumulated other comprehensive loss	(160)	(104)
Retained earnings	3,530	3,357
Unearned employee compensation – ESOP	(56)	(67)
Treasury stock, at cost – 23,428,229 shares (22,366,017 shares in 1998)	(1,019)	(969)
Total Stockholders' Equity	2,617	2,449
Total Liabilities and Stockholders' Equity	\$7,957	\$7,291

The Notes to Financial Statements on pages 25 through 43 should be read in conjunction with this statement.

CONSOLIDATED STATEMENT OF INCOME

Union Carbide Corporation and Subsidiaries

page
21

Millions of dollars (except per share figures), for the year ended December 31,	1999	1998	1997
Net Sales	\$5,870	\$5,659	\$6,502
Cost of sales, exclusive of depreciation and amortization	4,609	4,294	4,806
Research and development	154	143	157
Selling, administrative and other expenses	257	304	324
Depreciation and amortization	408	389	340
Partnership income	11	33	133
Other income – net	102	241	37
Income Before Interest Expense and Provision for Income Taxes	555	803	1,045
Interest expense	133	114	79
Income Before Provision for Income Taxes	422	689	966
Provision for income taxes	108	217	279
Income of Consolidated Companies and Partnerships	314	472	687
Minority interest	5	3	14
Income (loss) from corporate investments carried at equity	2	(66)	3
Income Before Cumulative Effect of Change in Accounting Principle	311	403	676
Cumulative effect of change in accounting principle	(20)	–	(17)
Net Income	291	403	659
Preferred stock dividends, net of income taxes	–	–	7
Net Income – Common Stockholders	\$ 291	\$ 403	\$ 652
Earnings Per Share			
Basic –			
Income Before Cumulative Effect of Change in Accounting Principle	\$ 2.33	\$ 2.98	\$ 5.02
Cumulative effect of change in accounting principle	(0.15)	–	(0.13)
Net Income – Common Stockholders	\$ 2.18	\$ 2.98	\$ 4.89
Diluted –			
Income Before Cumulative Effect of Change in Accounting Principle	\$ 2.27	\$ 2.91	\$ 4.53
Cumulative effect of change in accounting principle	(0.14)	–	(0.12)
Net Income – Common Stockholders	\$ 2.13	\$ 2.91	\$ 4.41
Cash Dividends Declared Per Common Share	\$ 0.90	\$ 0.90	\$ 0.7875

The Notes to Financial Statements on pages 25 through 43 should be read in conjunction with this statement.

UNION CARBIDE C

CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY

Union Carbide Corporation and Subsidiaries

page
22

Millions of dollars (shares in thousands)	Shares		Common Stock	Additional Paid-in Capital
	Common	Treasury		
Balance at December 31, 1996	154,610	28,169	\$ 155	\$ 370
Put options, net				26
Net Issued:				
For the Dividend Reinvestment and Stock Purchase Plan		(189)		2
For employee savings and incentive plans		(1,979)		(66)
Common stock repurchase program		7,071		
Effect of conversion of preferred shares held by ESOP		(15,406)		(285)
Comprehensive income				
Net income				
Other comprehensive income (loss), net of income taxes				
Unrealized gains on securities, net of reclassification adjustments				
Foreign currency translation adjustments				
Other comprehensive loss				
Comprehensive income				
Preferred stock dividends, net of income taxes				
Cash dividends on common stock				
Shares allocated to ESOP participants				
Restricted stock – Long-Term Incentive Program				
Balance at December 31, 1997	154,610	17,666	\$ 155	\$ 47
Net Issued:				
For the Dividend Reinvestment and Stock Purchase Plan	58	(161)		4
For employee savings and incentive plans	384	(1,213)		28
Common stock repurchase program		6,074		
Comprehensive income				
Net income				
Other comprehensive income (loss), net of income taxes				
Unrealized gains on securities, net of reclassification adjustments				
Foreign currency translation adjustments				
Other comprehensive loss				
Comprehensive income				
Cash dividends on common stock				
Tax on unallocated ESOP shares				
Shares allocated to ESOP participants				
Restricted stock – Long-Term Incentive Program				
Balance at December 31, 1998	155,052	22,366	\$ 155	\$ 79
Net Issued:				
For the Dividend Reinvestment and Stock Purchase Plan	174			8
For employee savings and incentive plans	2,346	44	3	78
Common stock repurchase program		1,018		
Comprehensive income				
Net income				
Other comprehensive income (loss), net of income taxes				
Unrealized gains on securities, net of reclassification adjustments				
Foreign currency translation adjustments				
Other comprehensive loss				
Comprehensive income				
Cash dividends on common stock				
Tax on unallocated ESOP shares				
Shares allocated to ESOP participants				
Restricted stock – Long-Term Incentive Program				
Balance at December 31, 1999	157,572	23,428	\$ 158	\$ 165

The Notes to Financial Statements on pages 25 through 43 should be read in conjunction with this statement.

CORPORATION 1999

Other Equity Adjustments	Comprehensive Income	Accumulated Other Comprehensive Loss	Retained Earnings	Unearned Employee Compensation – ESOP	Treasury Stock	Total Stockholders' Equity
\$ (8)		\$ (25)	\$ 2,629	\$ –	\$(1,007)	\$ 2,114
						26
					7	9
					66	–
					(340)	(340)
			(107)	(81)	530	57
	\$ 659		659			
	5					
	(81)					
	(76)	(76)				
	\$ 583					583
			(7)			(7)
			(100)			(100)
				1		1
5						5
\$ (3)		\$(101)	\$ 3,074	\$ (80)	\$ (744)	\$ 2,348
					6	10
					42	70
					(273)	(273)
	\$ 403		403			
	5					
	(8)					
	(3)	(3)				
	\$ 400					400
			(122)			(122)
			2			2
				13		13
1						1
\$ (2)		\$(104)	\$ 3,357	\$ (67)	\$ (969)	\$ 2,449
						8
					(3)	78
					(47)	(47)
	\$291		291			
	1					
	(57)					
	(56)	(56)				
	\$235					235
			(120)			(120)
			2			2
				11		11
1						1
\$ (1)		\$(160)	\$3,530	\$ (56)	\$(1,019)	\$2,617

UNION CARBIDE C

CONSOLIDATED STATEMENT OF CASH FLOWS

Union Carbide Corporation and Subsidiaries

page
24

Increase (decrease) in cash and cash equivalents			
Millions of dollars, for the year ended December 31,	1999	1998	1997
Operations			
Income before cumulative effect of change in accounting principle	\$ 311	\$ 403	\$ 676
Noncash charges (credits) to net income			
Depreciation and amortization	408	389	340
Deferred income taxes	106	118	86
Equity in earnings/losses of joint ventures, net of dividends received	62	156	(10)
Other	58	6	12
Increase in working capital ^(a)	(297)	(86)	(144)
Long-term assets and liabilities	(89)	(58)	(53)
Cash Flow From Operations	559	928	907
Investing			
Capital expenditures	(764)	(782)	(755)
Investments, advances and acquisitions, excluding cash acquired	(149)	(111)	(68)
Proceeds from available-for-sale securities	42	39	37
Purchase of available-for-sale securities	(50)	(47)	(38)
Sale of fixed and other assets	30	11	13
Cash Flow Used for Investing	(891)	(890)	(811)
Financing			
Change in short-term debt (3 months or less)	397	(23)	271
Proceeds from short-term debt	2	22	51
Repayment of short-term debt	(20)	(14)	—
Proceeds from long-term debt	285	358	14
Repayment of long-term debt	(231)	(4)	(30)
Issuance of common stock	51	41	44
Purchase of common stock	(51)	(276)	(337)
Proceeds from subsidiary preferred stock	—	—	250
Purchase of subsidiary preferred stock	—	—	(240)
Payment of dividends	(120)	(122)	(134)
Other	11	10	(21)
Cash Flow From (Used for) Financing	324	(8)	(132)
Effect of exchange rate changes on cash and cash equivalents	—	(1)	(1)
Change in cash and cash equivalents	(8)	29	(37)
Cash and cash equivalents, beginning-of-year	49	20	57
Cash and cash equivalents, end-of-year	\$ 41	\$ 49	\$ 20
Cash paid for interest and income taxes:			
Interest (net of amount capitalized)	\$ 153	\$ 117	\$ 77
Income taxes	40	43	121
^(a) Net change in certain components of working capital (excluding noncash transactions):			
(Increase) decrease in current assets			
Notes and accounts receivable	\$ (188)	\$ 77	\$ 53
Inventories	(14)	(63)	(63)
Other current assets	(19)	(3)	—
Decrease in payables and accruals	(76)	(97)	(134)
Increase in working capital	\$ (297)	\$ (86)	\$ (144)

The Notes to Financial Statements on pages 25 through 43 should be read in conjunction with this statement.

Index		Page
1	Summary of Significant Accounting Policies	25
2	Supplementary Balance Sheet Detail	27
3	Supplementary Income Statement Detail	28
4	Other Comprehensive Income (Loss)	28
5	Earnings Per Share	29
6	Business and Geographic Segment Information	30
7	Income Taxes	32
8	Leases	33
9	Joint Ventures	34
10	Financial Instruments	35
11	Long-Term Debt	36
12	Minority Interest	37
13	Stockholders' Equity	37
14	Employee Stock Ownership Plan	37
15	Incentive Plans	38
16	Retirement Programs	40
17	Commitments and Contingencies	42
18	The Dow Merger	43

NOTE 1 Summary of Significant Accounting Policies

Nature of Operations – Union Carbide Corporation is engaged in two segments of the chemicals and plastics industry, Specialties & Intermediates and Basic Chemicals & Polymers. See Note 6.

Principles of Consolidation – The consolidated financial statements include the accounts of all significant subsidiaries. All significant intercompany transactions have been eliminated in consolidation. Investments in 20 percent- to 50 percent-owned partnerships and corporate investments (joint ventures) are reported under the equity method of accounting. Other investments are generally carried at cost.

The consolidated financial statements have been prepared in conformity with generally accepted accounting principles, which require the corporation to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Accounting Changes – 1997 through 1999 – Effective Jan. 1, 1999, the corporation adopted the provisions of the American Institute of Certified Public Accountants' Statement of Position (SOP) 98-5, "Reporting on the Costs of Start-Up Activities." This SOP requires the expensing of certain costs, such as preoperating expenses and organizational costs associated with an entity's startup activities. In accordance with this SOP's provisions, on Jan. 1, 1999, the corporation recognized a charge of \$27 million (\$20 million after-tax)

as a cumulative effect of change in accounting principle, the majority of which represented formation costs associated with the corporation's joint ventures.

Also effective Jan. 1, 1999, the corporation prospectively adopted the provisions of SOP 98-1, "Accounting for the Costs of Computer Software Developed or Obtained for Internal Use." The effect of this adoption was not material to the corporation's financial position or results of operations in the period of adoption.

In 1998, the corporation adopted Statement of Financial Accounting Standards (Statement) No. 130, "Reporting Comprehensive Income," Statement No. 131, "Disclosures about Segments of an Enterprise and Related Information," and Statement No. 132, "Employers' Disclosures about Pensions and Other Postretirement Benefits."

In 1997, the corporation adopted Emerging Issues Task Force consensus on Issue 97-13, "Accounting for Costs Incurred in Connection with a Consulting Contract or an Internal Project That Combines Business Process Reengineering and Information Technology Transformation." Effective Oct. 1, 1997, the corporation adopted the provisions of Issue 97-13 as a cumulative effect of change in accounting principle, reversing \$28 million (\$17 million after-tax) of costs previously capitalized from 1995 through the third quarter of 1997.

Accounting Changes – Subsequent to 1999 – In 1998, the Financial Accounting Standards Board issued Statement No. 133, "Accounting for Derivative Instruments and Hedging Activities." It requires that an entity recognize all derivative instruments as either assets or liabilities in the statement of financial position and measure those instruments at fair value. This Statement, as amended by Statement No. 137, "Accounting for Derivative Instruments and Hedging Activities - Deferral of the Effective Date of FASB Statement No. 133," is effective for all fiscal quarters of fiscal years beginning after June 15, 2000. The corporation is evaluating the effect Statement No. 133 will have on its financial position and results of operations in the period of adoption.

In 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin (SAB) 101, "Revenue Recognition in Financial Statements," which summarizes the staff's views regarding the application of generally accepted accounting principles to selected revenue recognition issues. The corporation is evaluating whether SAB 101 will cause any change in its revenue recognition policies and procedures.

Foreign Currency Translation – Unrealized gains and losses resulting from translating foreign subsidiaries' assets and liabilities into U.S. dollars generally are recognized as part of *Other comprehensive income (loss)*, as described in Note 4, and are included in *Accumulated other comprehensive loss* on the Consolidated Balance Sheet until such time as the subsidiary is sold or substantially or completely liquidated. Translation

gains and losses relating to those operations located in Latin American countries where hyperinflation exists and to international operations using the U.S. dollar as their functional currency are included in the Consolidated Statement of Income. As required by Statement No. 52, Brazil was no longer considered a hyperinflationary economy, effective Jan. 1, 1998.

Financial Instruments – Financial instruments are used to hedge financial risk caused by fluctuating interest and currency rates. The amounts to be paid or received on interest rate risk instruments that hedge debt, accrue and are recognized over the lives of the instruments. Gains and losses on foreign currency risk instruments used to hedge firm commitments are deferred and recognized as part of the related foreign currency transactions. Gains on foreign currency purchased options used to hedge the identified cash flows of anticipated transactions are deferred and matched against the cash flows of the foreign currency transactions as they occur.

Foreign currency instruments that are designated to offset fluctuations in the dollar value of foreign currency accounts receivable and payable and from earnings fluctuations in anticipated foreign currency cash flows are marked to market and the results recognized immediately in *Other income-net*.

Cash Equivalents – The corporation considers as cash equivalents all highly liquid investments that are readily convertible to known amounts of cash and are so near their maturity that they present insignificant risk of changes in value because of changes in interest rates.

Inventories – Inventories are stated at cost or market, whichever is lower. These amounts do not include depreciation and amortization, the impact of which is not significant to the financial statements.

Approximately 68 percent of inventory amounts before application of the LIFO method at Dec. 31, 1999 (65 percent at Dec. 31, 1998) have been valued on the LIFO basis; the “average cost” method is used for the balance. It is estimated that if inventories had been valued at current costs, they would have been approximately \$293 million and \$224 million higher than reported at Dec. 31, 1999 and 1998, respectively.

Fixed Assets – Fixed assets are carried at cost. Expenditures for replacements are capitalized, and the replaced items are retired. Gains and losses from the sale of property are included in income. Depreciation is calculated on a straight-line basis. The corporation and its subsidiaries generally use accelerated depreciation methods for tax purposes where appropriate.

Patents, Trademarks and Goodwill – Amounts paid for purchased patents, trademarks and newly acquired businesses in excess of the fair value of the net assets of such businesses have been charged to patents, trademarks and goodwill. The portion of such amounts determined to be attributable to

patents is amortized over their remaining lives, while trademarks and goodwill are amortized over the estimated period of benefit, generally 5 to 20 years.

Revenue Recognition – Sales of products and services, and related costs and allowances, are recognized when title transfers to the purchaser, generally upon shipment, as services are rendered, or in relation to licensee production levels.

Research and Development – Research and development costs are charged to expense as incurred. Depreciation expense applicable to research and development facilities and equipment is included in *Depreciation and amortization* in the Consolidated Statement of Income (\$10 million in 1999, \$11 million in 1998 and \$12 million in 1997).

Income Taxes – Provisions have been made for deferred income taxes based on differences between financial statement and tax bases of assets and liabilities using currently enacted tax rates and regulations.

Environmental Costs – Environmental expenditures are expensed or capitalized as appropriate, depending on their future economic benefit. Expenditures relating to an existing condition caused by past operations and having no future economic benefits are expensed. Environmental expenditures include site investigation, physical remediation, operation and maintenance, and legal and administrative costs. Environmental accruals are established for sites where it is probable that a loss has been incurred and the amount of the loss can reasonably be estimated. Where the estimate is a range and no amount within the range is a better estimate than any other amount, the corporation accrues the minimum amount in the range and includes the balance of the range in its reported contingencies.

Retirement Programs – The cost of pension benefits under the U.S. Retirement Program is determined by an independent actuarial firm using the projected unit credit actuarial cost method, with an unrecognized net asset at Jan. 1, 1986, amortized over 15 years. Contributions to this program are made in accordance with the regulations of the Employee Retirement Income Security Act of 1974. The cost of postretirement benefits is recognized on the accrual basis over the period in which employees become eligible for benefits.

Incentive Plans – The corporation measures compensation expense for certain employee stock purchases and the stock option portion of the Long-Term Incentive Plan using the intrinsic-value-based method of accounting prescribed by Accounting Principles Board Opinion 25, and makes pro forma disclosures of net income and earnings per share as if the fair-value-based method of accounting defined in Statement No. 123 had been applied. Compensation expense is recognized for other stock-based incentives issued under the Long-Term Incentive Plan and other programs.

NOTE **2** Supplementary Balance Sheet Detail

Millions of dollars, at December 31,	1999	1998
Notes and accounts receivable		
Trade	\$ 951	\$ 783
Other	200	172
	1,151	955
Less: Allowance for doubtful accounts	19	22
	\$1,132	\$ 933
Inventories		
Raw materials and supplies	\$ 152	\$ 187
Work in process	45	41
Finished goods	483	439
	\$ 680	\$ 667
Other current assets		
Prepaid expenses	\$ 65	\$ 65
Net current deferred income tax assets	137	125
Other	95	67
	\$ 297	\$ 257
Property, plant and equipment		
Land and improvements	\$ 361	\$ 345
Buildings	433	437
Machinery and equipment	7,441	7,080
Construction in progress and other	822	547
	\$9,057	\$8,409
Other assets		
Deferred charges	\$ 250	\$ 228
Insurance recovery receivables	109	104
Long-term receivables	25	27
Patents, trademarks and goodwill	71	80
	\$ 455	\$ 439
Other accrued liabilities		
Accrued accounts payable	\$ 333	\$ 314
Payrolls	62	56
Environmental remediation costs	53	60
Postretirement benefit obligation	41	38
Other	189	202
	\$ 678	\$ 670
Other long-term obligations		
Environmental remediation costs	\$ 155	\$ 160
Product liability costs	110	107
Impairment of unused office space	94	115
Postemployment benefits	57	63
Other	187	157
	\$ 603	\$ 602
Accumulated other comprehensive loss		
Foreign currency translation adjustments ^(a)	\$ (168)	\$ (111)
Unrealized gains on available-for-sale securities, net of tax ^(b)	8	7
	\$ (160)	\$ (104)

(a) The corporation does not record deferred income tax on foreign currency translation adjustments.

(b) Net of \$4 million of deferred income tax at Dec. 31, 1999 and 1998.

NOTE 3 Supplementary Income Statement Detail

Millions of dollars, for the year ended December 31,	1999	1998	1997
Selling, administrative and other expenses			
Selling	\$ 94	\$ 99	\$124
Administrative	90	107	126
Other expenses	73	98	74
	\$257	\$304	\$324
Other income (expense) – net			
Settlements of licensing business litigation	\$ 50	\$189	\$ –
Investment and interest income	36	26	27
Foreign currency adjustments	(3)	(20)	(8)
Other	19	46	18
	\$102	\$241	\$ 37
Interest expense			
Interest incurred ^(a)	\$176	\$157	\$130
Less: Interest capitalized and other adjustments	43	43	51
	\$133	\$114	\$ 79

(a) Includes \$12 million in 1999, 1998 and 1997, representing the interest component of certain leases

NOTE 4 Other Comprehensive Income (Loss)

Comprehensive income is defined as any change in the corporation's equity from transactions and other events originating from non-owner sources. For the corporation, those changes are comprised of reported net income, changes in the unrealized appreciation or depreciation of

the corporation's available-for-sale securities and changes in unrealized foreign currency translation adjustments. The following summary presents the components of comprehensive income, other than net income:

Millions of dollars	Pre-tax	Income Tax Effect	After-tax
Balance at December 31, 1996	\$ (26)	\$ (1)	\$ (25)
Foreign currency translation adjustments	(81)	–	(81)
Unrealized gains (losses) on securities:			
Unrealized holding gains (losses) arising during period	8	3	5
Reclassification adjustment for (gains) losses realized in net income	–	–	–
Unrealized gains on securities	8	3	5
Balance at December 31, 1997	\$ (99)	\$ 2	\$ (101)
Foreign currency translation adjustments	(8)	–	(8)
Unrealized gains (losses) on securities:			
Unrealized holding gains (losses) arising during period	–	–	–
Reclassification adjustment for (gains) losses realized in net income	7	2	5
Unrealized gains on securities	7	2	5
Balance at December 31, 1998	\$ (100)	\$ 4	\$ (104)
Foreign currency translation adjustments	(57)	–	(57)
Unrealized gains (losses) on securities:			
Unrealized holding gains (losses) arising during period	11	4	7
Reclassification adjustment for (gains) losses realized in net income	(10)	(4)	(6)
Unrealized gains on securities	1	–	1
Balance at December 31, 1999	\$ (156)	\$ 4	\$ (160)

NOTE 5 Earnings Per Share

Basic and diluted earnings per share (EPS) are calculated as follows:

<i>Millions of dollars (except share and per share amounts), for the year ended December 31,</i>	1999	1998	1997
Basic –			
Income before cumulative effect of change in accounting principle	\$ 311	\$ 403	\$ 676
Less: Dividends on ESOP shares, pre-tax	–	–	(9)
Appreciation on ESOP shares redeemed for cash	–	–	(23)
Income before cumulative effect of change in accounting principle, adjusted for basic calculation	311	403	644
Cumulative effect of change in accounting principle	(20)	–	(17)
Net income—common stockholders, adjusted for basic calculation	\$ 291	\$ 403	\$ 627
Weighted average shares outstanding for basic calculation	133,342,112	135,028,100	128,185,093
Earnings per share –			
Income before cumulative effect of change in accounting principle	\$2.33	\$2.98	\$5.02
Cumulative effect of change in accounting principle	(0.15)	–	(0.13)
Net income—common stockholders	\$2.18	\$2.98	\$4.89
Diluted –			
Income before cumulative effect of change in accounting principle, adjusted for basic calculation	\$ 311	\$ 403	\$ 644
Plus: Dividends on ESOP shares, pre-tax	–	–	9
Less: Additional ESOP contribution resulting from assumed conversion of ESOP shares	–	–	(1)
Income before cumulative effect of change in accounting principle, adjusted for diluted calculation	311	403	652
Cumulative effect of change in accounting principle	(20)	–	(17)
Net income—common stockholders, adjusted for diluted calculation	\$ 291	\$ 403	\$ 635
Weighted average shares outstanding for basic calculation	133,342,112	135,028,100	128,185,093
Add: Effect of stock options	3,316,207	3,381,795	4,034,969
Shares issuable upon conversion of the corporation's convertible ESOP shares	–	–	11,739,036
Weighted average shares outstanding, adjusted for diluted calculation	136,658,319	138,409,895	143,959,098
Earnings per share –			
Income before cumulative effect of change in accounting principle	\$2.27	\$ 2.91	\$4.53
Cumulative effect of change in accounting principle	(0.14)	–	(0.12)
Net income—common stockholders	\$2.13	\$ 2.91	\$4.41

NOTE 6 Business and Geographic Segment Information

The corporation has two operating segments, Specialties & Intermediates (S&I) and Basic Chemicals & Polymers (BC&P). The S&I segment includes the corporation's specialty chemicals and polymers product lines, licensing, and solvents and chemical intermediates. The BC&P segment includes the corporation's ethylene and propylene manufacturing operations as well as the production of first-level ethylene and propylene derivatives—polyethylene, polypropylene, ethylene oxide and ethylene glycol. Each operating segment is a strategic business unit that offers products and services with different functionalities. They are managed separately because of the significant differences that exist in their products and services and in the methods required to produce, market and distribute them. In addition to its operating segments, the corporation's Other segment includes its non-core operations and financial transactions other than derivatives designated as hedges, which are included in the same segment as the item being hedged.

The accounting policies of the segments are the same as those described in the summary of significant accounting policies. Sales of the BC&P segment include intersegment sales, principally ethylene oxide, which are made at the estimated market value of the products transferred. Administrative costs were allocated between the segments via a formula based on sales in 1999 and 1998, and a formula based on capital, overhead and sales in 1997; no significant difference in allocations between the segments resulted from the change in formula. Other costs and shared assets are principally allocated on the basis of pounds produced, gross fixed asset values or headcount, as appropriate. The corporation evaluates performance based on *Income before interest expense and provision for income taxes* (operating profit).

Sales are attributed to countries based on customer ship-to addresses. Long-lived assets are principally composed of *Net Fixed Assets, Companies carried at equity*, and certain *Other assets*. Investments of the corporation are assigned to the country in which the investee has its principal offices. Net sales and long-lived assets by country and geographic area were as follows:

<i>Millions of dollars, for the year ended December 31,</i>	1999	1998	1997
<i>Net Sales</i>			
United States, including Puerto Rico	\$3,509	\$3,355	\$3,784
Canada	283	211	247
Europe & Middle East	834	802	924
Latin America	382	408	431
Far East & Other	862	883	1,116
Total International Operations	\$2,361	\$2,304	\$2,718
	\$5,870	\$5,659	\$6,502

<i>Millions of dollars, at December 31,</i>	1999	1998	1997
<i>Long-lived assets</i>			
United States, including Puerto Rico	\$4,229	\$4,290	\$4,021
Canada	704	284	201
Europe & Middle East	406	401	456
Latin America	79	91	111
Far East & Other	267	127	122
Total International Operations	\$1,456	\$ 903	\$ 890
Total Long-lived assets	5,685	5,193	4,911
<i>Current and other assets</i>	\$2,272	\$2,098	\$2,053
Total Assets	\$7,957	\$7,291	\$6,964

Millions of dollars	S&I	BC&P	Other	Totals
1999				
Net sales	\$4,182	\$1,688	\$ —	\$5,870
Intersegment revenues	—	288	—	288
Segment revenues	4,182	1,976	—	6,158
Depreciation and amortization	262	146	—	408
Partnership income	6	5	—	11
Operating profit (loss)	607	(21)	(31)	555
Interest expense	—	—	133	133
Income (loss) from corporate investments carried at equity	(1)	3	—	2
Segment assets	4,603	3,137	217	7,957
Companies carried at equity	314	442	—	756
Expenditures for segment assets	355	558	—	913
1998				
Net sales	\$4,139	\$1,520	\$ —	\$5,659
Intersegment revenues	—	282	—	282
Segment revenues	4,139	1,802	—	5,941
Depreciation and amortization	247	142	—	389
Partnership income	27	6	—	33
Operating profit (loss)	833	20	(50)	803
Interest expense	—	—	114	114
Income (loss) from corporate investments carried at equity	1	(67)	—	(66)
Segment assets	4,403	2,686	202	7,291
Companies carried at equity	298	326	—	624
Expenditures for segment assets	480	413	—	893
1997				
Net sales	\$4,453	\$2,049	\$ —	\$6,502
Intersegment revenues	—	371	—	371
Segment revenues	4,453	2,420	—	6,873
Depreciation and amortization	214	126	—	340
Partnership income	116	17	—	133
Operating profit (loss)	667	386	(8)	1,045
Interest expense	—	—	79	79
Income (loss) from corporate investments carried at equity	6	(3)	—	3
Segment assets	4,146	2,540	278	6,964
Companies carried at equity	277	413	—	690
Expenditures for segment assets	508	315	—	823

The operating profit of the S&I segment for 1999 includes a nonrecurring net gain of \$50 million related to the favorable settlement of licensing business litigation in the second and third quarters of 1999.

The operating profit of the S&I segment for 1998 includes a nonrecurring net gain of \$189 million related to favorable settlements of licensing business litigation in the third and fourth quarters of 1998 and a \$53 million reduction in earnings related to losses associated with Aspell Polymeres SNC in the third quarter of 1998.

The operating profit of the S&I segment for 1997 includes a \$12 million charge for the write-off of certain equipment associated with the corporation's ethylene propylene rubber project.

NOTE 7 Income Taxes

The following is a summary of the U.S. and non-U.S. components of *Income Before Provision for Income Taxes*:

Millions of dollars, for the year ended December 31,	1999	1998	1997
U.S.	\$329	\$646	\$897
Non-U.S.	93	43	69
	\$422	\$689	\$966

The following is an analysis of income tax expense:

Millions of dollars, for the year ended December 31,	1999		1998		1997	
	Current	Deferred	Current	Deferred	Current	Deferred
U.S. Federal income taxes	\$(31)	\$99	\$100	\$ 86	\$154	\$80
U.S. business and research and experimentation tax credits	—	(23)	(27)	—	(14)	—
U.S. state and local taxes based on income	(5)	26	6	31	1	4
Non-U.S. income taxes	38	4	20	1	52	2
	2	106	99	118	193	86
Provision for income taxes	\$108		\$217		\$279	

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows:

Millions of dollars, at December 31,	1999		1998	
	Deferred Assets	Deferred Liabilities	Deferred Assets	Deferred Liabilities
Depreciation and amortization	\$ —	\$ 733	\$ —	\$ 617
Postretirement and postemployment benefits	209	—	218	—
Environmental and litigation costs	86	—	90	—
Sale/leaseback and related deferrals	81	—	94	—
Other	247	219	207	214
Gross deferred tax assets and liabilities	623	952	609	831
Net deferred tax liability		\$ 329		\$ 222

Net noncurrent deferred tax liabilities of \$466 million (\$347 million in 1998) are included in *Deferred credits* on the Consolidated Balance Sheet. Net current deferred income tax assets of \$137 million (\$125 million in 1998) are included in *Other current assets*. In 1999 and 1998, there were no benefits from non-U.S. net operating loss carryforwards.

Undistributed earnings of affiliates intended to be reinvested indefinitely amounted to approximately \$511 million at Dec. 31, 1999 (\$488 million at Dec. 31, 1998). Determination of deferred taxes related to these earnings is not practicable.

An analysis of the difference between *Provision for income taxes* and the amount computed by applying the statutory Federal income tax rate to *Income Before Provision for Income Taxes* is as follows:

<i>For the year ended December 31,</i>	Percentage of Pre-Tax Income		
	1999	1998	1997
Tax at statutory Federal rate	35.0%	35.0%	35.0%
Taxes related to operations outside the U.S.	(2.6)	0.7	(0.7)
U.S. state and local taxes based on income	3.3	3.4	0.3
Foreign sales corporation	(3.8)	(1.5)	(2.9)
Business credits	(5.4)	(3.9)	(1.5)
Other, net	(0.9)	(2.2)	(1.3)
Consolidated effective income tax rate	25.6%	31.5%	28.9%

NOTE 8 Leases

Leases that meet the criteria for capitalization have been classified and accounted for as capital leases. For operating leases, primarily involving facilities and distribution equipment, the future minimum rental payments under leases with remaining noncancelable terms in excess of one year are:

<i>Millions of dollars, for the year ended December 31,</i>	
2000	\$ 77
2001	76
2002	81
2003	74
2004	68
Subsequent to 2004	98
Total minimum payments	474
Future sublease rentals	70
Net minimum rental commitments	\$404

The present value of the net minimum rental payments amounts to \$309 million, of which \$157 million pertains to the corporation's headquarters lease. Total lease and rental payments (net of sublease rental income of \$10 million in 1999, \$9 million in 1998 and \$21 million in 1997) were \$66 million for 1999, \$64 million for 1998 and \$62 million for 1997.

NOTE 9 Joint Ventures

The following are financial summaries of 33 percent- to 50 percent-owned joint ventures included in *Companies carried at equity*. The corporation's most significant joint ventures classified as partnerships include UOP LLC; Petromont and Company, Limited Partnership; Aspell Polymeres SNC; World Ethanol Company, and Univation Technologies, LLC.

Millions of dollars	Partnerships		
	1999	1998	1997
Net sales ^(a)	\$1,815	\$1,905	\$2,076
Cost of sales	1,179	1,210	1,242
Depreciation	100	116	83
Partnership income	14	154	249
UCC share of partnership income	\$ 11	\$ 33^(b)	\$ 133
Current assets	\$ 867	\$ 799	\$ 746
Noncurrent assets	893	937	886
Total assets	1,760	1,736	1,632
Current liabilities	488	430	451
Noncurrent liabilities	721	828	711
Total liabilities	1,209	1,258	1,162
Net assets	551	478	470
UCC equity	\$ 278	\$ 286	\$ 278

(a) Includes \$154 million net sales to the corporation in 1999 (\$140 million in 1998 and \$208 million in 1997).

(b) Includes \$53 million of losses associated with Aspell Polymeres SNC.

The corporation's joint ventures classified as corporate investments include Polimeri Europa S.r.l.; EQUATE Petrochemical Company K.S.C.; Nippon Unicar Company Limited; Alberta & Orient Glycol Company Limited; Asian Acetyls Co., Ltd.; the OPTIMAL Group (consisting of OPTIMAL Chemicals (Malaysia) Sdn Bhd, OPTIMAL Olefins (Malaysia) Sdn Bhd and OPTIMAL Glycols (Malaysia) Sdn Bhd), and several smaller entities.

Millions of dollars	Corporate Investments		
	1999	1998	1997
Net sales ^(a)	\$2,320	\$2,151	\$2,248
Cost of sales	1,804	1,732	1,814
Depreciation	248	256	109
Net income (loss)	(48)	(195)	75
UCC share of net income (loss)	\$ 2	\$ (66)	\$ 3
Current assets	\$1,318	\$1,037	\$ 933
Noncurrent assets	2,556	2,932	3,252
Total assets	3,874	3,969	4,185
Current liabilities	855	963	872
Noncurrent liabilities	1,732	2,371	2,347
Total liabilities	2,587	3,334	3,219
Net assets	1,287	635	966
UCC equity^(b)	\$ 478	\$ 338	\$ 412

(a) Includes \$152 million net sales to the corporation in 1999 (\$157 million in 1998 and \$156 million in 1997).

(b) At Dec. 31, 1999, the corporation's investment in EQUATE Petrochemical Company K.S.C. was \$143 million less than its proportionate share of the company's underlying equity. Such amount is being amortized into income over the next eight years.

Dividends and distributions received from joint ventures and partnerships aggregated \$75 million in 1999 (\$123 million in 1998 and \$126 million in 1997).

NOTE 10 Financial Instruments

Fair values of financial instruments are estimated by using a method that indicates the amount at which the instrument could be exchanged in a current transaction between willing parties, other than in a forced or liquidation sale. The fair values of the financial instruments included on the Consolidated Balance Sheet were estimated as follows:

Cash, Short-Term Receivables and Accounts Payable – At Dec. 31, 1999 and 1998, the carrying amounts approximate fair values because of the short maturity of these instruments.

Outstanding foreign currency forward contracts and options used as a means of offsetting fluctuations in the dollar value of other foreign currency accounts receivable and payable and earnings fluctuations from anticipated foreign currency cash flows totaled \$186 million at Dec. 31, 1999 (\$220 million at Dec. 31, 1998). There were unrealized losses of \$1 million and \$13 million on these contracts at Dec. 31, 1999 and 1998, respectively, which were generally offset by changes in the U.S. dollar value equivalents of underlying foreign currency transactions.

In addition to the above, at Dec. 31, 1999, the corporation held foreign currency options in the amount of \$67 million (\$199 million at Dec. 31, 1998) (U.S. dollar equivalent) to hedge a commitment to lend money to fund construction of operating facilities at specific future dates by one of its foreign subsidiaries. Such commitment is supported by commitments to third parties. The premiums on the options and any gains or losses are being capitalized as part of the intercompany loan and amortized to income as an adjustment to the effective interest yield of such loan over its repayment term. At Dec. 31, 1999, a \$3 million gain (\$3 million loss at Dec. 31, 1998) had been capitalized.

Investments – The corporation’s investments in joint ventures and companies carried under the cost method generally involve entities for which it is not practicable to determine fair values.

Long-Term Receivables – The fair values of long-term receivables are calculated using current interest rates and consideration of underlying collateral where appropriate. The fair values approximate the carrying values of \$25 million and \$27 million included in *Other assets* on the Consolidated Balance Sheet at Dec. 31, 1999 and 1998, respectively.

Debt – The corporation uses various types of financial instruments, including interest rate swaps and forward rate agreements, to manage exposure to financial market risk caused by interest rate fluctuations. The corporation held no such instruments at Dec. 31, 1999. An interest rate swap held at Dec. 31, 1998 had a nominal carrying amount and fair value.

Carrying Amounts and Fair Values – The carrying amounts and fair values of the corporation’s *Other investments and advances*, long-term receivables and debt financial instruments at Dec. 31, 1999 and 1998, are summarized in the table below. Fair values are based on quoted market values, where available, or discounted cash flows (principally long-term debt).

Millions of dollars, at December 31,	1999		1998	
	Carrying Amount	Fair Value	Carrying Amount	Fair Value
Assets (Liabilities)				
Investments and receivables	\$100	\$100	\$168	\$168
Short- and long-term debt	(2,651)	(2,592)	(2,222)	(2,266)

NOTE **11** Long-Term Debt

Millions of dollars, at December 31,	1999	1998
6.25% Notes due 2003	\$ 250	\$ 250
6.70% Notes due 2009	250	—
6.75% Notes due 2003	125	125
6.79% Debentures due 2025 ^(a)	250	250
7.00% Notes due 1999	—	175
7.50% Debentures due 2025	150	150
7.75% Debentures due 2096 ^(b)	200	200
7.875% Debentures due 2023	175	175
8.75% Debentures due 2022 ^(c)	117	117
Floating Rate Public Notes due 2000	110	110
Pollution control and other facility obligations	238	239
Other debt – various maturities and interest rates	4	23
	1,869	1,814
Less: Payments to be made within 1 year	—	18
	\$1,869	\$1,796

(a) Holders may request redemption of these debentures from the corporation on June 1, 2005.

(b) The maturity may be shortened under certain circumstances to preserve the deductibility of interest payments for Federal income tax purposes.

(c) Redeemable at the option of the corporation on or after Aug. 1, 2002.

The corporation has a credit agreement with a group of banks permitting the corporation to borrow up to \$1 billion at any time through Jan. 2002 with the option, subject to certain conditions, to increase the available credit by \$250 million and to extend the maturity date of the agreement to maintain a five year term. The credit agreement permits the corporation to borrow funds under several different programs, including the euro-dollar, Certificate of Deposit (CD), Base Rate or Money Market London Interbank Offered Rate (LIBOR) programs. Maturity dates for these programs range from 30 days to twelve months. The interest rate for each of these programs is contingent on the euro-dollar, CD rate, Federal funds rate or LIBOR and is determined based on a calculation included in the agreement. The corporation must pay an annual facility fee based on the rating of the corporation's long-term debt securities by either Moody's Investors Service Inc. or Standard & Poor's Ratings Services, as indicated in the agreement. As of Dec. 31, 1999, there were no outstanding amounts against this agreement. The corporation intends to refinance the Floating Rate Public Notes maturing in April 2000 by borrowing either under this credit agreement or under a prospective borrowing. Accordingly, such amount has been classified as long-term debt.

In 1998, the corporation issued \$110 million of Floating Rate Public Notes due in April 2000. The Floating Rate Public Notes bear interest at a rate which is reset quarterly at the three-month LIBOR plus 0.65 percent. At Dec. 31, 1999, the interest rate on these notes was 6.87 percent.

The corporation has an effective shelf registration statement available covering \$500 million of public debt securities at Dec. 31, 1999.

The corporation's credit agreement and the indentures under which notes and debentures are issued contain covenants normal for these types of instruments. These covenants place certain limits on the corporation's ability to sell assets, engage in sale-leaseback transactions, incur debt or create liens on assets. Furthermore, one covenant limits the corporation's ability to merge with another entity; however, this covenant would not be applicable to the way in which the corporation's merger with The Dow Chemical Company is structured. In addition, the credit agreement requires the corporation to meet leverage and interest coverage tests.

Pollution control and other facility obligations represent state, commonwealth and local governmental bond financing of pollution control and other facilities and are treated for accounting and tax purposes as debt of the corporation. These tax-exempt obligations mature at various dates from 2000 through 2023 and had an average annual effective interest rate of 7.1 percent in 1999 (7.2 percent in 1998).

The weighted average and effective interest rates on the corporation's fixed-rate debt, excluding pollution control and other facility obligations, were 7.3 percent in 1999 (7.5 percent in 1998). The corporation's weighted average interest rate on short-term borrowings outstanding as of Dec. 31, 1999 was 6.0 percent (6.0 percent at Dec. 31, 1998).

Payments due on long-term debt in the four years following 2000 are: 2001, \$10 million; 2002, \$13 million; 2003, \$380 million and 2004, \$23 million.

NOTE 12 Minority Interest

In Jan. 1997, a newly formed real estate investment trust subsidiary issued \$250 million of preferred stock bearing a current dividend yield of 14 percent for 10 years and 1 percent thereafter. In Oct. 1997, the preferred shares were redeemed for \$240 million.

NOTE 13 Stockholders' Equity

Each outstanding share of common stock has identical rights in voting on corporate matters, dividends when declared, liquidation and other corporate matters.

On Aug. 31, 1999, Rights entitling each holder of common stock to purchase a share of common stock from the corporation, under certain circumstances, expired unused.

On Aug. 3, 1999, the board of directors rescinded the corporation's authorization to repurchase shares under the common stock repurchase authorization, subsequent to that date. Since inception of its share repurchase authorization in 1993 through Aug. 3, 1999, the corporation repurchased 56.4 million shares (1.0 million shares during 1999) out of a total authorization of 60 million shares, at an average effective price of \$36.01 per share.

During the course of the corporation's repurchase authorization, and in conjunction with it, put options were sold in a series of private placements entitling the holders to sell 12.9 million shares of common stock to UCC at specified prices upon exercise of the options. By Dec. 31, 1997, options representing 9.8 million common shares expired unexercised, while options representing 3.1 million shares were exercised for \$129 million, or an average price of \$40.94 per share. Premiums received during the course of the program were recorded as *Additional paid-in capital*, reducing the average price of repurchased shares from \$36.26 to \$36.01 per share.

NOTE 14 Employee Stock Ownership Plan

The Union Carbide Corporation Employee Stock Ownership Plan (ESOP) is an integral part of the Savings and Investment Program (the Program) for employees. Substantially all full-time employees in the U.S. are eligible to participate in the ESOP through the allocation of shares of the corporation's common stock (ESOP shares) equivalent to the corporation's matching contribution of 75 percent of eligible employee contributions to the Program. In addition, eligible employees can receive the equivalent of up to twenty days pay in ESOP shares through the corporation's ESOP profit sharing plan. Participants' accounts are also allocated ESOP shares with a market value equal to the amount of dividends paid on their allocated shares.

Under this plan, the corporation sold shares of a new series of convertible preferred stock to the ESOP for a \$325 million note. The receivable from the ESOP is reflected as *Unearned employee compensation – ESOP*, a reduction of stockholders' equity. Dividends on shares held by the ESOP are paid to the ESOP and, together with company contributions, are used, in part, by the ESOP to make debt service payments on the loan. Shares are released for allocation to participants based on the ratio of the current year's debt service to the sum of the principal and interest payments over the life of the loan.

Each share of the corporation's preferred stock held by the ESOP was convertible into and had the same voting rights as one share of the corporation's common stock. The annual preferred dividend was \$0.794 per share. In Oct. 1997, the trustee of the ESOP exercised its right to convert all outstanding ESOP preferred stock into ESOP shares. As a result of the conversion, the corporation's common stock outstanding at that date was increased by 15.4 million shares.

Expense associated with the ESOP is recognized as incurred using the cost method and was \$5 million in 1999 (\$7 million in 1998 and 1997). At Dec. 31, 1999, 13.6 million common shares held by the ESOP were outstanding, 7.3 million of which were allocated to employees' accounts. During 1999, 1.2 million ESOP shares were allocated to employees' accounts.

NOTE 15 Incentive Plans

The 1997 Union Carbide Long-Term Incentive Plan for key employees provides for granting incentive and non-qualified stock options; exercise payment rights; grants of stock, including restricted stock, and performance awards. Holders of options may be granted the right to receive payments of amounts equal to the regular cash dividends paid to holders of the corporation's common stock during the period an option is outstanding. The number of shares granted or subject to options cannot exceed six million under the Plan. Option prices are equal to the closing price of the corporation's common stock on the date of the grant, as listed on the New York Stock Exchange Composite Transactions. Options generally become exercisable two years after such date. Options may not have a duration of more than ten years. The option price may be settled in cash, common shares of the corporation currently

owned by a participant, withholding stock shares from the exercise or a combination of these alternatives. Restricted stock award shares are entitled to vote and dividends are credited to the holder's account, but these shares are generally non-transferable for varying periods after the grant date. Once the vesting conditions are met, the shares become fully transferable. Performance awards may be paid in common stock, cash or other forms of property. No dividend-equivalent payment rights or performance awards were granted in 1999, 1998 or 1997.

Prior plans still have options outstanding, whose terms are generally similar to nonqualified stock options under the 1997 Plan.

Changes in outstanding fixed price options were as follows:

	1999		1998		1997	
<i>Shares in thousands</i>	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at January 1	12,792	\$28.36	12,533	\$25.48	12,782	\$21.45
Granted	1,749	60.44	1,514	43.88	1,508	46.31
Exercised	(1,829)	16.80	(1,141)	15.60	(1,717)	13.45
Canceled or expired	(41)	45.33	(114)	46.21	(40)	38.47
<i>Outstanding at December 31</i>	12,671	\$34.40	12,792	\$28.36	12,533	\$25.48
Options exercisable at December 31	9,422		9,874		9,889	

Options were exercised during 1999 at prices ranging from \$6.70 to \$46.31 per share (\$6.70 to \$40.38 per share during 1998 and \$6.70 to \$45.63 per share during 1997).

The following table summarizes information about fixed price option shares outstanding at Dec. 31, 1999:

Shares in thousands	Shares Outstanding	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price
Range of Exercise Prices			
\$ 6.70 to \$ 9.54	1,456	1.6 years	\$ 8.49
\$16.75 to \$21.63	3,134	3.5 years	19.29
\$28.63 to \$43.88	3,958 ^(a)	6.7 years	37.41
\$45.63 to \$60.44	4,123 ^(b)	8.5 years	52.13
	12,671		

(a) At Dec. 31, 1999, 2.458 million options were exercisable at an average price of \$33.47.

(b) At Dec. 31, 1999, 2.374 million options were exercisable at an average price of \$46.02.

Had compensation cost related to the fixed price options been recorded at fair value on the dates of grant in accordance with Statement No. 123, the effect on the corporation's net income and EPS amounts would have been as follows:

Millions of dollars (except per share figures), for the year ended December 31,	1999	1998	1997
Net income – common stockholders			
As reported	\$291	\$ 403	\$ 652
Pro forma	\$274	\$ 388	\$ 639
Basic EPS			
As reported	\$2.18	\$2.98	\$4.89
Pro forma	\$2.06	\$2.87	\$4.79
Diluted EPS			
As reported	\$2.13	\$2.91	\$4.41
Pro forma	\$2.01	\$2.80	\$4.32

The Black-Scholes Option Pricing Model was used to estimate the fair values of options granted during 1999, 1998 and 1997. The assumptions used for these grants included a six-year average expected life for 1999 (seven-year average for 1998 and six-year average for 1997), and zero-coupon U.S. government risk free interest rates of 6.14%, 4.41%, and 5.92%; current dividend yields of 1.49%, 2.22%, and 1.73%, and volatility of 30.00%, 29.47%, and 28.77% for the years ended Dec. 31, 1999, 1998 and 1997, respectively. The weighted average fair values of options granted during the years 1999, 1998 and 1997 were \$21.57, \$15.15 and \$15.54, respectively.

In 1997, the board of directors approved the 1997 Union Carbide Corporation EPS Incentive Plan for a limited number of senior managers. The plan requires these senior managers to put an amount equivalent to a portion of one year's annual base pay at risk, up to 100 percent, should diluted earnings per share not equal or exceed \$4.00 in the year 2000. The amount at risk is being deducted from compensation over three years. The amounts at risk have been converted to units equivalent to common stock using a \$47.75 share price, the closing price of the corporation's common stock on the date the plan was approved by the board of directors. Participants are being credited with dividend-equivalents in the form of additional units. The plan is designed to grant awards if the corporation achieves \$4.00 or more diluted earnings per share performance during 1999 and 2000. Participants could be awarded up to four times the number of units at risk for each of the years 1999 and 2000, depending on the extent to which the goals of the plan are exceeded. Awards, if any, under the plan will be in cash and paid in 2002, 2003 and 2004. Alternatively under the plan, awards may be granted and the payment schedule accelerated at the discretion of the Compensation & Management Development Committee of the board of directors should a change in control or certain actions or events occur which significantly affect the corporation's ability to reach the earnings per share performance goals during the performance period. Failure to meet the requirements of the plan will result in forfeiture of the amounts at risk. No award was earned for the 1999 year.

16 Retirement Programs

The noncontributory defined benefit retirement program of Union Carbide Corporation (U.S. Retirement Program) covers substantially all U.S. employees and certain employees in other countries. Pension benefits are based primarily on years of service and compensation levels prior to retirement. Pension coverage for employees of the corporation's non-U.S. consolidated subsidiaries is provided through separate plans, to the extent deemed appropriate. Obligations under such plans are principally provided for by depositing funds with trustees.

The corporation provides health care and life insurance benefits (Other Benefits) for eligible retired employees and their eligible dependents. These benefits are provided through various insurance companies and health care providers. The health care plans are contributory with participants' contributions adjusted annually; the life insurance plans are non-contributory. The corporation's significant retirement programs are its U.S. and Canadian plans. The funded status, actuarial assumptions, health care cost trends and components of net periodic benefit costs of these plans combined is as follows:

Millions of dollars, for the year ended December 31,	Pension Benefits		Other Benefits	
	1999	1998	1999	1998
Change in plan assets				
Fair value of plan assets, beginning-of-year	\$4,311	\$3,769	\$ 14	\$ 17
Actual gain on plan assets	308	736	2	6
Foreign currency exchange rate changes	10	(12)	—	—
Employer contribution	—	—	1	—
Benefits paid	(189)	(182)	(9)	(9)
Fair value of plan assets, end-of-year	\$4,440	\$4,311	\$ 8	\$ 14
Change in benefit obligation				
Benefit obligation, beginning-of-year	\$3,472	\$3,278	\$ 443	\$ 503
Service cost	65	60	13	14
Interest cost	204	205	26	30
Amendments/curtailments	(1)	—	—	(93)
Plan participants' contributions	—	—	23	22
Foreign currency exchange rate changes	6	(7)	—	(1)
Actuarial loss (gain)	(384)	129	(16)	27
Benefits paid ^(a)	(201)	(193)	(58)	(59)
Benefit obligation, end-of-year	\$3,161	\$3,472	\$ 431	\$ 443
Funded status	\$1,279	\$ 839	\$(423)	\$(429)

(a) Includes nonfunded plan benefits paid directly by the corporation.

The funded status is composed of the following elements:

Millions of dollars, at December 31,	Pension Benefits		Other Benefits	
	1999	1998	1999	1998
Unrecognized net actuarial gain (loss)	\$1,244	\$ 818	\$ (20)	\$ (34)
Unrecognized transition asset	17	29	—	—
Unrecognized prior service (cost) credit	(10)	(14)	70	93
Prepaid benefit cost	38	30	6	—
Accrued benefit cost	(10)	(24)	(479)	(488)
Funded status	\$1,279	\$ 839	\$(423)	\$(429)

The Other Benefits benefit obligation is net of \$91 million at Dec. 31, 1999 (\$99 million at Dec. 31, 1998), which is reimbursed to the corporation in part by previously owned businesses under ongoing benefit-sharing agreements.

Benefit obligations are valued using the 1994 Uninsured Pensioner Mortality Table. The actuarial assumptions used were as follows:

At December 31,	Pension Benefits		Other Benefits	
	1999	1998	1999	1998
Discount rate for determining benefit obligation	7.25%	6.00%	7.25%	6.00%
Expected long-term rate of return on plan assets	9.50%	8.00%	8.00%	8.00%
Rate of increase in compensation levels	5.00%	3.25%	—	—

Health care costs are projected to increase as follows:

	Pre-Medicare	Medicare Supplement Plan	Medicare Alternative Plan
Immediate	7.25%	7.55%	14.75%
Ultimate	5.75%	5.75%	5.75%
Year ultimate trend is reached	2004	2004	2014

Millions of dollars, for the year ended December 31,	Pension Benefits			Other Benefits		
	1999	1998	1997	1999	1998	1997
Components of net periodic benefit costs						
Service cost	\$ 65	\$ 60	\$ 51	\$ 13	\$ 14	\$ 14
Interest cost	204	205	206	26	30	33
Expected return on plan assets	(269)	(242)	(233)	(1)	(1)	(2)
Amortization of transition obligation	(12)	(12)	(12)	—	—	—
Amortization of prior service costs (credits)	3	3	3	(24)	(29)	(21)
Recognized net actuarial gains	—	(1)	(1)	—	—	—
Net periodic benefit (credits) costs	\$ (9)	\$ 13	\$ 14	\$ 14	\$ 14	\$ 24

The accounting for the health care plans anticipates future cost-sharing changes to the written plan that are consistent with the company's expressed intent to control these costs. On July 1, 1998, the corporation adopted certain amendments which become effective between Jan. 1, 1999 and Jan. 1, 2001. These amendments encourage retirees to transfer their health care coverage into lower costing plans and usually to choose generic drugs. Effective Jan. 1, 1999, certain retirees pay a greater percentage of premium contributions. In addition, the plan provides that the corporation's per individual subsidy for pre-Medicare and Medicare medical coverage is capped at two times its subsidy to the company-sponsored plans in 2000.

The corporation funded postretirement benefits for certain retirees who retired prior to Dec. 31, 1988. The funds are invested primarily in common stocks.

At Dec. 31, 1999, the effect on the accumulated postretirement benefit obligation of a one-percentage-point change in assumed health care cost trend rates would be as follows:

Millions of dollars	1999		1998	
	1 Percentage Point Increase	1 Percentage Point Decrease	1 Percentage Point Increase	1 Percentage Point Decrease
Effect on total of service and interest cost components	\$ 2	\$ (2)	\$ 3	\$ (3)
Effect on postretirement benefit obligation	\$ 18	\$ (20)	\$ 28	\$(30)

Deferred Compensation Plan

The corporation provides an unfunded, nonqualified deferred compensation plan to certain key employees, offering them an election to defer a portion of their gross pay. The corporation's obligation to employees is adjusted to reflect changes in the market values of employees' investment choices. With limited exceptions, participants' deferred account balances are scheduled for payment at or after full retirement.

NOTE 17 Commitments and Contingencies

Purchase Agreements – The corporation has three major agreements for the purchase of ethylene-related products and two other purchase agreements in the U.S. and Canada. Total purchases under these agreements were \$229 million, \$196 million and \$245 million in 1999, 1998 and 1997, respectively. The net present value of the fixed and determinable portion of obligations under these purchase commitments at Dec. 31, 1999 (at current exchange rates, where applicable) is presented in the following table:

<i>Millions of dollars, for the year ended December 31,</i>	
2000	\$ 41
2001	29
2002	25
2003	22
2004	17
2005 through 2014	69
Total	\$203

Environmental – The corporation is subject to loss contingencies resulting from environmental laws and regulations, which include obligations to remove or remediate the effects on the environment of the disposal or release of certain wastes and substances at various sites. The corporation has established accruals in current dollars for those hazardous waste sites where it is probable that a loss has been incurred and the amount of the loss can reasonably be estimated. The reliability and precision of the loss estimates are affected by numerous factors, such as different stages of site evaluation, the allocation of responsibility among potentially responsible parties and the assertion of additional claims. The corporation adjusts its accruals as new remediation requirements are defined, as information becomes available permitting reasonable estimates to be made and to reflect new and changing facts.

At Dec. 31, 1999, the corporation had established environmental remediation accruals in the amount of \$208 million (\$220 million in 1998). These accruals have two components, estimated future expenditures for site investigation and cleanup and estimated future expenditures for closure and postclosure activities. In addition, the corporation had environmental loss contingencies of \$108 million at Dec. 31, 1999.

The corporation has sole responsibility for the remediation of approximately 40 percent of its environmental sites for which accruals have been established. These sites are well advanced in the investigation and cleanup stage. The corporation's environmental accruals at Dec. 31, 1999 included \$165 million for these sites (\$169 million at Dec. 31, 1998), of which \$51 million (\$65 million at Dec. 31, 1998) was for estimated future expenditures for site investigation and cleanup and \$114 million (\$104 million at Dec. 31, 1998) was for estimated future expenditures for closure and postclosure activities. In addition, \$65 million of the corporation's environmental loss contingencies at Dec. 31, 1999 related to these sites. The three sites with the largest total potential cost to the corporation are non-operating sites. Of the above accruals, these sites accounted for \$60 million (\$50 million at Dec. 31, 1998), of which \$21 million (\$23 million at Dec. 31, 1998) was for estimated future expenditures for site investigation and cleanup and \$39 million (\$27 million at Dec. 31, 1998) was for estimated future expenditures for closure and postclosure activities. In addition, \$43 million of the above environmental loss contingencies related to these sites.

The corporation does not have sole responsibility at the remainder of its environmental sites for which accruals have been established. All of these sites are in the investigation and cleanup stage. The corporation's environmental accruals at Dec. 31, 1999 included \$43 million for estimated future expenditures for site investigation and cleanup at these sites (\$51 million at Dec. 31, 1998). In addition, \$43 million of the corporation's environmental loss contingencies related to these sites. The largest three of these sites are nonoperating sites. Of the above accruals, these sites accounted for \$15 million (\$19 million at Dec. 31, 1998) for estimated future expenditures for site investigation and cleanup. In addition, \$17 million of the above environmental loss contingencies related to these sites.

Worldwide expenses related to environmental protection for compliance with Federal, state and local laws regulating solid and hazardous wastes and discharge of materials to air and water, as well as for waste site remedial activities, totaled \$118 million in 1999, \$91 million in 1998 and \$100 million in 1997.

Other – The corporation severally guaranteed 45 percent (approximately \$603 million at Dec. 31, 1999) of EQUATE Petrochemical Company's debt and working capital financing needs. Certain completion and financial tests supporting the corporation's guarantee were achieved and on Feb. 4, 2000, a substantial portion of this guarantee was released. Subsequent to this date, the corporation's continuing several debt guarantee has been reduced to an amount of up to \$184 million. The corporation has also severally guaranteed certain sales volume targets until EQUATE's sales capabilities are proved. In addition, the corporation has pledged its shares in EQUATE as security for EQUATE's debt. The corporation has political risk insurance coverage for its equity investment and most of its remaining several guarantee of EQUATE's debt.

The corporation and its consolidated subsidiaries had additional contingent obligations at Dec. 31, 1999, totaling \$118 million, of which \$34 million related to guarantees of debt.

Litigation – The corporation and its consolidated subsidiaries are involved in a number of legal proceedings and claims with both private and governmental parties. These cover a wide range of matters, including, but not limited to: product liability; trade regulation; governmental regulatory proceedings; health, safety and environmental matters; employment; patents; contracts; and taxes. In some of these legal proceedings and claims, the cost of remedies that may be sought or damages claimed is substantial.

The corporation has recorded nonenvironmental litigation accruals of \$129 million and related insurance recovery receivables of \$109 million. At Dec. 31, 1999, the corporation had net nonenvironmental litigation loss contingencies of \$52 million.

While it is impossible at this time to determine with certainty the ultimate outcome of any legal proceedings and claims referred to in this note, management believes that adequate provisions have been made for probable losses with respect thereto and that such ultimate outcome, after provisions therefor, will not have a material adverse effect on the consolidated financial position of the corporation, but could have a material effect on consolidated results of operations in a given quarter or year. Should any losses be sustained in connection with any of such legal proceedings and claims in excess of provisions therefor, they will be charged to income when determinable.

NOTE 18 The Dow Merger

On Aug. 3, 1999, the corporation and The Dow Chemical Company (Dow) entered into an Agreement and Plan of Merger providing for the merger of a subsidiary of Dow with and into the corporation. As a result of the merger, the corporation will become a wholly-owned subsidiary of Dow and the corporation's shareholders will receive 0.537 of a share of Dow common stock for each share of UCC common stock they own as of the date of the merger. On Dec. 1, 1999, UCC shareholders approved the merger agreement. The merger is subject to certain conditions including review by antitrust regulatory authorities in the United States, Europe and Canada.

Management's Statement of Responsibility for Financial Statements

Union Carbide Corporation's financial statements are prepared by management, which is responsible for their fairness, integrity and objectivity. The accompanying financial statements have been prepared in conformity with generally accepted accounting principles and, accordingly, include amounts that are estimates and judgments. All historical financial information in this annual report is consistent with the accompanying financial statements.

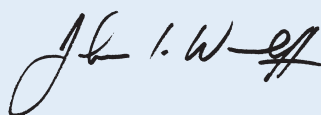
The corporation maintains accounting systems, including internal accounting controls monitored by a staff of internal auditors, that are designed to provide reasonable assurance of the reliability of financial records and the protection of assets. The concept of reasonable assurance is based on recognition that the cost of a system must not exceed the related benefits. The effectiveness of those systems depends primarily upon the careful selection of financial and other managers, clear delegation of authority and assignment of accountability, inculcation of high business ethics and conflict-of-interest standards, policies and procedures for coordinating the management of corporate resources and the leadership and commitment of top management.

The corporation's financial statements are audited by KPMG LLP, independent certified public accountants, in accordance with generally accepted auditing standards. These standards provide for the auditors to consider the corporation's internal control structure to the extent they deem necessary in order to issue their opinion on the financial statements.

The Audit Committee of the board of directors, which consists solely of nonemployee directors, is responsible for overseeing the functioning of the accounting system and related controls and the preparation of annual financial statements. The Audit Committee recommends to the board of directors the selection of the independent auditors, which is submitted to the stockholders for ratification. The Audit Committee periodically meets with the independent auditors, management and internal auditors to review and evaluate their accounting, auditing and financial reporting activities and responsibilities. The independent and internal auditors have full and free access to the Audit Committee and meet with the committee, with and without management present.



William H. Joyce
Chairman, President and
Chief Executive Officer
Danbury, Conn.
Jan. 26, 2000



John K. Wulff
Vice-President, Chief Financial
Officer and Controller

Independent Auditors' Report



To the Stockholders and Board of Directors of Union Carbide Corporation:

We have audited the accompanying consolidated balance sheet of Union Carbide Corporation and subsidiaries as of Dec. 31, 1999 and 1998, and the related consolidated statements of income, stockholders' equity, and cash flows for each of the years in the three-year period ended Dec. 31, 1999. These consolidated financial statements are the responsibility of the company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Union Carbide Corporation and subsidiaries at Dec. 31, 1999 and 1998, and the results of their operations and their cash flows for each of the years in the three-year period ended Dec. 31, 1999, in conformity with generally accepted accounting principles.



KPMG LLP
Stamford, Conn.
Jan. 26, 2000

QUARTERLY DATA

Union Carbide Corporation and Subsidiaries

page
45

Millions of dollars	1Q	2Q	3Q	4Q	Year
1999					
Net sales	\$1,402	\$1,418	\$1,498	\$1,552	\$5,870
Cost of sales	1,032	1,105	1,232	1,240	4,609
Gross profit	370	313	266	312	1,261
Depreciation and amortization	104	95	103	106	408
Operating profit	179	145 ^(a)	123 ^(a)	108	555
Income before cumulative effect of change in accounting principle	77	63	77	94	311
Cumulative effect of change in accounting principle	(20)	—	—	—	(20)
Net income	57	63	77	94	291
1998					
Net sales	\$1,561	\$1,459	\$1,350	\$1,289	\$5,659
Cost of sales	1,161	1,087	1,036	1,010	4,294
Gross profit	400	372	314	279	1,365
Depreciation and amortization	95	98	95	101	389
Operating profit	232	203	190 ^{(b)(c)}	178 ^(b)	803
Net income	142	118	76	67	403

(a) Includes \$12 million in the second quarter and \$38 million in the third quarter of favorable litigation settlements related to the licensing business.

(b) Includes \$118 million in the third quarter and \$71 million in the fourth quarter of favorable litigation settlements related to the licensing business.

(c) Includes \$53 million in losses associated with Aspell Polymeres SNC, the corporation's joint venture in France.

Dollars per common share	1Q	2Q	3Q	4Q	Year
1999					
Basic —					
Income before cumulative effect of change in accounting principle	\$ 0.57	\$ 0.47	\$ 0.58	\$ 0.70	\$ 2.33
Cumulative effect of change in accounting principle	(0.14)	—	—	—	(0.15)
Net income — common stockholders	0.43	0.47	0.58	0.70	2.18
Diluted —					
Income before cumulative effect of change in accounting principle	0.56	0.46	0.57	0.68	2.27
Cumulative effect of change in accounting principle	(0.14)	—	—	—	(0.14)
Net income — common stockholders	0.42	0.46	0.57	0.68	2.13
Cash dividends declared	0.225	0.225	0.225	0.225	0.90
Market price — high ^(a)	47.7500	56.8750	65.8750	67.7500	67.7500
Market price — low ^(a)	37.1250	45.3125	44.3750	52.7500	37.1250
1998					
Basic —					
Net income — common stockholders	\$ 1.03	\$ 0.87	\$ 0.56	\$ 0.50	\$ 2.98
Diluted —					
Net income — common stockholders	1.01	0.85	0.55	0.49	2.91
Cash dividends declared	0.2250	0.2250	0.2250	0.2250	0.90
Market price — high ^(a)	50.3125	55.7500	55.6250	46.2500	55.7500
Market price — low ^(a)	40.1250	45.3125	36.7500	37.4375	36.7500

(a) Prices are based on New York Stock Exchange Composite Transactions.

2000 Annual Meeting

The 2000 annual meeting of stockholders will be held on Wednesday, April 26, at the John C. Creasy Health Education Center, 24 Hospital Ave., Danbury, CT 06810, beginning at 10 a.m.

A notice of the annual meeting, a proxy statement and a proxy voting card will be mailed to each stockholder in March, together with a copy of this annual report.

General Offices

The general offices of Union Carbide Corporation are located at 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 203-794-2000).

Stock Exchanges

Union Carbide stock is traded primarily on the New York Stock Exchange (ticker symbol: UK). The stock is also listed on the Chicago and Pacific stock exchanges in the U.S.

Stock Records and Transfer

The corporation acts as its own stock transfer agent through its Shareholder Services Department, which maintains stockholder records, transfers stock and answers questions regarding stockholders' accounts, including dividend reinvestment accounts. Stockholders wishing to transfer stock or to change the name on a stock certificate should contact Shareholder Services for assistance. The registrar is ChaseMellon Shareholder Services.

Dividend Reinvestment

Stockholders of record may purchase shares directly through Union Carbide's Dividend Reinvestment and Stock Purchase Plan. Under the plan, shares may be purchased from Union Carbide free of commissions and service charges. Requests for a prospectus that explains the plan in detail should be directed to the Shareholder Services Department (Telephone: 800-934-3350).

Form 10-K

A Form 10-K report for the year ended Dec. 31, 1999, will be available in April 2000. A copy without exhibits may be obtained without charge by writing to Union Carbide Corporation, Bruce D. Fitzgerald, secretary, 39 Old Ridgebury Road, Danbury, CT 06817-0001.

Charitable Contributions Booklet

Union Carbide annually publishes a booklet that lists organizations receiving charitable, educational, cultural or similar grants of \$250 or more from the corporation. The booklet is available on written request to the secretary.

RESPONSIBLE CARE Progress Report

This report covers health, safety and environmental progress at Union Carbide. Information includes performance data for U.S. and other worldwide locations, RESPONSIBLE CARE goals, and progress Carbide made in 1999. To obtain a copy, write to Union Carbide Corporation, Public Affairs Department, Section L4-505, 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 800-552-5272).

Inquiries

- Inquiries from the public about Union Carbide and its products and services should be directed to the Corporate Information Center, Union Carbide Corporation, Section N-0, 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 203-794-5300).
- Inquiries about stockholder accounts and dividend reinvestment should be directed to Union Carbide Corporation, William H. Smith, manager, Shareholder Services Department, Section G1-328, 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 203-794-3350).
- Investors, financial analysts and portfolio managers should direct questions about Union Carbide to Union Carbide Corporation, D. Nicholas Thold, director of investor relations, Investor Relations Department, Section E4-286, 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 203-794-6440).
- Financial journalists should direct questions to Union Carbide Corporation, Sean Clancy, director, corporate communications, Public Affairs Department, Section L4-501, 39 Old Ridgebury Road, Danbury, CT 06817-0001 (Telephone: 203-794-6976).
- Information about Union Carbide also may be found on the Internet at www.unioncarbide.com. Union Carbide's site provides information in six categories: general, financial, business, investment recovery, RESPONSIBLE CARE and recruitment.

Directors

C. Fred Fetterolf

Retired director, president and chief operating officer of Aluminum Company of America. A UCC director since 1987, he chairs the Health, Safety & Environmental Affairs (HS&EA) Committee and serves on the Audit, Compensation & Management Development, Executive and Nominating Committees.

Rainer E. Gut

Chairman of Credit Suisse Group, Credit Suisse First Boston and Credit Suisse, all of Switzerland. A UCC board member since 1994, he chairs the Finance and Pension Committee and is a member of the Compensation & Management Development and Nominating Committees.

Vernon E. Jordan, Jr.

Senior managing director of Lazard Freres & Co. He is chairman of the Nominating Committee and a member of the Executive, Finance & Pension and Public Policy Committees. He has been a board member since 1987.

William H. Joyce

Chairman, president and chief executive officer of Union Carbide Corporation. A director since 1992, he is chairman of the Executive Committee.

Robert D. Kennedy

Retired chairman and chief executive officer of Union Carbide Corporation. He serves on the Audit, Executive, Nominating and Public Policy Committees and has been a director since 1985.

Ronald L. Kuehn, Jr.

Director and chairman of El Paso Energy Corporation. A UCC board member since 1984, he chairs the Compensation & Management Development Committee and serves on the Executive, Finance & Pension and HS&EA Committees.

Rozanne L. Ridgway

Former assistant secretary of state for Europe and Canada. A director since 1990, she chairs the Public Policy Committee and is a member of the Audit, HS&EA and Nominating Committees.

James M. Ringler

Vice-Chairman of Illinois Tool Works Inc. He has been a director since 1996 and is chairman of the Audit Committee and a member of the Compensation & Management Development, Finance & Pension and HS&EA Committees.

Paul J. Wilhelm

President of the U.S. Steel Group of USX Corporation and a director of that corporation. Elected a director in 1998, he serves on the Audit, Finance & Pension, HS&EA and Public Policy Committees.

Corporate Officers

William H. Joyce

Chairman of the Board, President and Chief Executive Officer

Joseph S. Byck

Vice-President, Strategic Planning, Investor Relations and Public Affairs

Bruce D. Fitzgerald

Vice-President, General Counsel and Secretary

James F. Flynn

Vice-President, General Manager, Solvents, Intermediates and Monomers

Malcolm A. Kessinger

Vice-President, Human Resources

Lee P. McMaster

Vice-President, General Manager, Specialty Polymers and Products

Joseph C. Soviero

Vice-President, Corporate Ventures

Roger B. Staub

Vice-President

John K. Wulff

Vice-President, Chief Financial Officer and Controller

Other Senior Management

David L. Brucker

Vice-President, Engineering and Operations

Graham S. Cattell

Vice-President, Engineering

Ron J. Cottle

Vice-President, Health, Safety and Environment

John R. Dearborn

Vice-President, General Manager, UNIPOL Systems

R. Duane Dickson

Vice-President, General Manager, Industrial Performance Chemicals

Linda A. Koffenberger

Vice-President, General Manager, UCAR Emulsion Systems (UES)

Kevin P. Lynch

Vice-President, General Manager, UNIPOL Polymers

Scott C. Mason

Vice-President, Supply Chain Logistics

Philip F. McGovern

Vice-President, Tax

Gregory N. Nelson

Vice-President, Purchasing

Daniel C. Scheid

Vice-President, General Manager, Ethylene Oxide/Glycol and Information Technology Services

Lee C. Stewart

Vice-President and Treasurer

Vince F. Villani

Vice-President, General Manager, Olefins

Donald R. Wood

Vice-President, General Manager, Polypropylene Resins and Elastomers

John P. Yimoyines

Vice-President, General Manager, Specialty Polyolefins

Union Carbide around the World*

United States & Puerto Rico

California	New Jersey
Colorado	New York
Connecticut	North Carolina
District of Columbia	South Carolina
Georgia	Texas
Illinois	Vermont
Louisiana	West Virginia
	Puerto Rico

Canada

Alberta	Quebec
Ontario	

Europe

Austria	Spain
Belgium	Sweden
France	Switzerland
Germany	Turkey
Italy	United Kingdom
Russia	

Latin America

Argentina	Ecuador
Brazil	Guatemala
Chile	Mexico
Colombia	Peru
Costa Rica	Venezuela

Far East & Other

Australia	Philippines
China	Singapore
Egypt	South Africa
Hong Kong	South Korea
Indonesia	Sri Lanka
Japan	Taiwan
Jordan	Thailand
Malaysia	United Arab Emirates
Morocco	

*Excluding Joint venture locations

Definition of Terms

Unless the context otherwise requires, the terms below refer to the following:

Union Carbide Corporation, Union Carbide, Carbide, the corporation, we, our, the company, UCC Union Carbide Corporation, the parent company, and its consolidated subsidiaries

Domestic	United States and Puerto Rico
Domestic operations	Operations of Union Carbide in this area, including exports
International operations	Operations of Union Carbide in areas of the world other than the United States and Puerto Rico
Joint ventures	Partnerships and corporate investments of Union Carbide Corporation accounted for under the equity method of accounting

The use of these terms is for convenience of reference only. The consolidated subsidiaries are separate legal entities that are managed by, and accountable to, their respective boards of directors.

CARBITOL, CARBOWAX, CELLOSIZ, CELLOSOLVE, CYRACURE, ELASTOFLO, FLEXOL, FLEXOMER, NEULON, NORKOOL, LP OXO, POLYOX, POLYPHOBE, SELEXOL, TERGITOL, TONE, TRITON, TUFLIN, UCAR, UCARSOL, UCARTHERM, UCON, UCURE, UNICARB, UNIPOL, and UNION CARBIDE are trademarks of Union Carbide.

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