1998 Annual Report

The Lubrizol Corporation

LUBRIZOL

To Our Shareholders:

We knew 1998 would not be an easy year. Market forces, competitive pressures and economic uncertainty in Asia and Latin America presented a new set of challenges to Lubrizol that we were...

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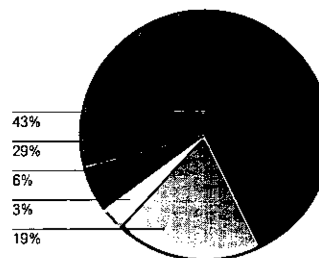
The Lubrizol Corporation is a leading full-service supplier of performance chemicals to diverse markets worldwide. These specialty chemical products are created through application of advanced chemical and mechanical technologies to enhance the performance, quality and value of the products in which they are used.

Founded in 1928, the company operates manufacturing and blending facilities, laboratories and offices staffed by 4,300 employees around the world.

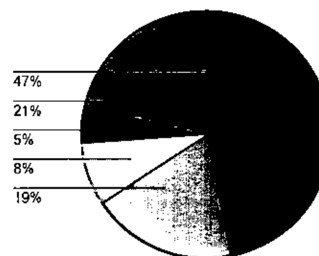
In 1998, Lubrizol continued to pursue three corporate initiatives to grow the business, improve its structure and build the franchise. These strategies strengthened Lubrizol's position as a global leader in the development, manufacturing and distribution of performance chemistry. They also enhanced the company's ability to produce products that meet the needs of transportation and industrial customers worldwide, and to supply consistent, high-quality products anywhere in the world.

Lubrizol is a recognized leader in specialty additive systems for lubricating oils used in gasoline and diesel engines, automatic transmissions, gear drives, marine engines and tractors. The company also supplies specialty products for industrial fluids, fuel additives, process chemicals and coating additives. In addition, Lubrizol markets equipment and performance chemicals for other specialized markets.

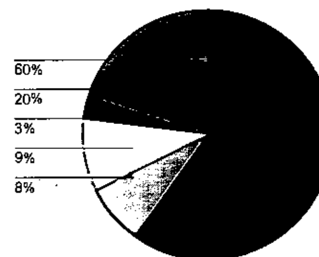
NORTH AMERICA
$655.8 Million in Revenues



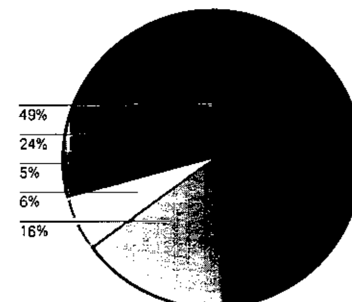
EUROPE
$509.7 Million in Revenues



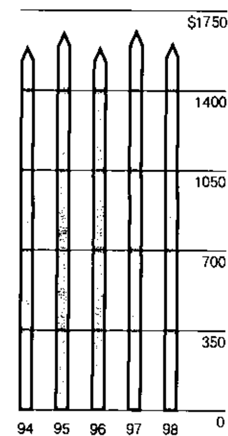
ASIA-PACIFIC, LATIN AMERICA, MIDDLE EAST
$452.4 Million in Revenues



WORLDWIDE
$1,617.9 Million in Revenues

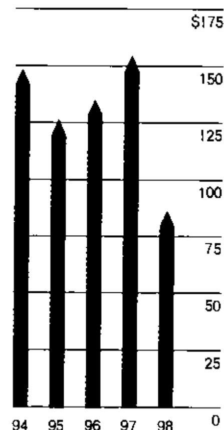


ENGINE OIL ADDITIVES
DRIVELINE OIL ADDITIVES
FUEL PRODUCTS
ADDITIVE COMPONENTS
CHEMICALS FOR INDUSTRY



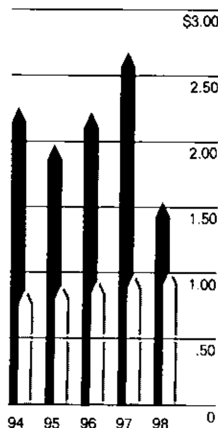
Financial Highlights

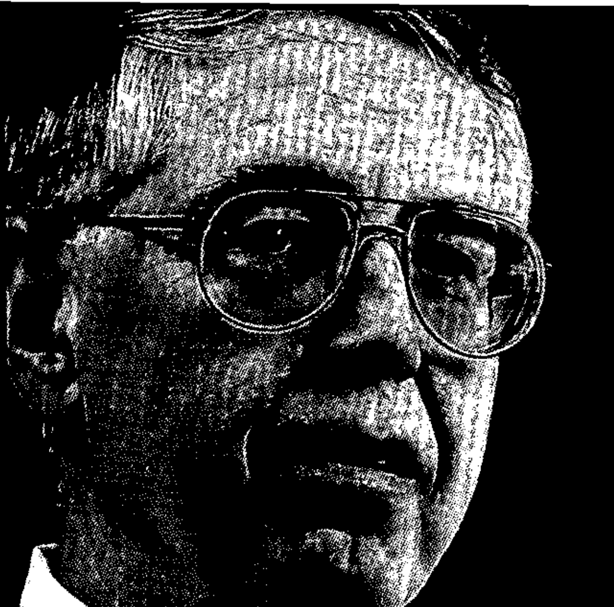
(In Millions Except Per Share and Employee Data)	1998	1997	Increase (Decrease)
OPERATIONS:			
Revenues	**$1,617.9**	$1,673.8	(3%)
Net income	**71.2**	154.9	(54%)
Net income before special charges and litigation gain	**86.5**	154.9	(44%)
Net income per share	**1.27**	2.68	(53%)
Net income per share before special charges and litigation gain	**1.55**	2.68	(42%)
Dividends per share	**1.04**	1.01	3%
Cash provided from operating activities	**155.2**	234.4	(34%)
Return on shareholders' equity before special charges and litigation gain	**11%**	19%	
FINANCIAL POSITION:			
Total assets	**$1,643.2**	$1,462.3	12%
Shareholders' equity	**769.1**	815.4	(6%)
Debt as a percent of capitalization	**36%**	21%	
OTHER:			
Capital expenditures	**$ 93.4**	$ 100.7	(7%)
Shares outstanding at December 31	**54.5**	57.0	(4%)
Number of employees	**4,324**	4,291	1%



COMMON SHARE PRICE HISTORY

	1998		1997	
	High	Low	High	Low
1st quarter	**$40 3/16**	**$33 1/4**	$36	$30 1/2
2nd quarter	**38 3/4**	**30 1/4**	42 1/8	30 3/8
3rd quarter	**32 3/8**	**22 3/8**	44 7/8	41 15/16
4th quarter	**29 9/16**	**23 1/2**	46 15/16	34 7/8





W. G. Bares

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prepared to meet head-on.

But overcoming challenges sometimes takes longer than planned, and economic conditions in our industry proved to be even weaker than we had expected.

Following a record year in 1997, Lubrizol's financial performance in 1998 was very disappointing. Although worldwide additive shipments were equal to those in 1997, consolidated revenues declined by 3 percent to $1.62 billion.

Consolidated net income in 1998 was $71.2 million, or $1.27 per share, which included an after-tax gain of $10.5 million, or $.19 per share, from the settlement of litigation, and after-tax special charges of $25.8 million, or $.47 per share. Excluding these special items, net income per share in 1998 was $1.55, a decline of 42 percent from 1997.

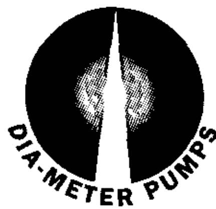
"Our focus is on better managing our investments in assets and resources..."

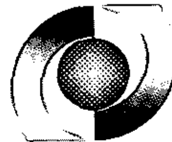
Soft demand for lubricant additives and excess industry capacity caused aggressive competition among additive producers. The result was lower product prices, which were only partially offset by lower manufacturing costs. Profit margins were squeezed, and Lubrizol's gross profit declined by $64.4 million in 1998. Selling, administration and technology expenses increased by $12.8 million in 1998, largely due to acquisitions which were completed during the year. Lower other income, higher interest expense and a higher tax rate further contributed to the lower earnings per share in 1998, even though the number of shares outstanding was reduced by 2.4 million shares.

In response, the company announced in November a series of steps to reduce costs and improve its worldwide operating structure over the next two years. These steps, which will occur in two phases, include reorganization of the company's commercial structure, changes in work processes using the company's new globally integrated management information system, the shutdown of production units, consolidation of facilities and an 11 percent reduction in worldwide staffing. A special charge of $23.3 million was taken in the fourth quarter to cover the costs associated with the first phase of this program. Annual savings related to this first phase are estimated to be $26 million beginning in 1999.

The market growth rates for lubricants and additives have slowed, and this is being aggravated by the poor economic environment in Asia-Pacific and Latin America. Our focus is on better managing our investments in assets and resources to ensure continuing acceptable financial returns and concentrating on those business areas with the best growth opportunities.

Although our results fell short of expectations, last year was not without its successes, and we made progress in several important areas. Foremost was our initiative to redefine our vision of the company to include performance chemicals for both transportation and industry. As the growth rate for additives used in engine oils declines, Lubrizol has been broadening its base to embrace new business areas outside the company's traditional markets. While these areas are new, they remain firmly grounded upon Lubrizol's competencies in problem solving, formulation and global supply. They include additives for hydraulic fluids and metalworking fluids; additives for coatings,





Engine Control Systems Ltd.

A LUBRIZOL COMPANY

A LUBRIZOL COMPANY

inks and surface modifiers; and compressor lubricants and process chemicals. In addition, the company has been building a performance system capability that combines equipment-related businesses with chemicals for transportation or industry to provide an integrated solution to lubrication or environmental problems. Today, the company markets various multiflow and turbine-driven injection systems; on-board truck lubrication systems; precision fluid measurement and control equipment; and engine emission control systems.

Through acquisitions and growth, the chemicals for industry and performance systems businesses amounted to approximately $260 million of revenues in 1998. We believe continued growth should take these revenues to over $400 million in 2002, and we are evaluating other acquisitions that could add as much as $200 million in revenues in the same period.

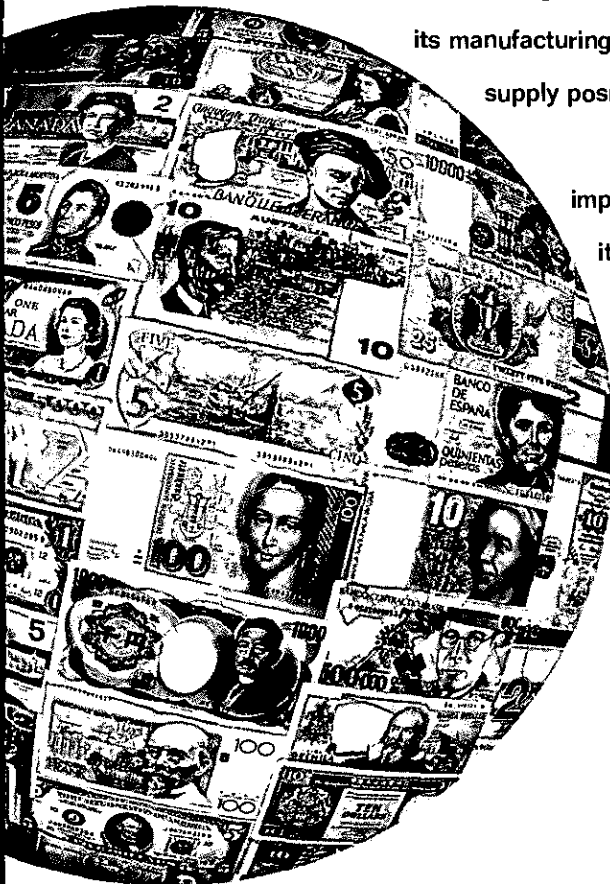
Building block acquisitions continued to be an important part of Lubrizol's strategy in 1998. During the last several years, the company has completed 12 acquisitions, adding approximately $215 million in annualized revenue. In 1998, we acquired seven companies with total annualized revenues of $162 million. The three largest were Adibis, Carroll Scientific and Becker Chemie. Adibis is the lubricant and fuel additives business formerly owned by BP Chemicals and brings to Lubrizol complementary patented technology, unique lubricant additive components and a larger market position in fuel additives, which is an area the company has targeted for growth. Carroll Scientific specializes in the development and supply of varnish and waxed-based performance additives to the inks market. Becker Chemie is a leading supplier of specialty additives to the metalworking fluid and industrial lubricant markets in Germany and throughout the European Union.

"Although our results fell short of expectations, last year was not without successes."

The slowdown in economic growth in Asia-Pacific certainly contributed to our weak financial results in 1998. Yet, it is impossible to ignore the significant potential for future growth in lubricant additives coming from that region — particularly in China and India. For example, even though economic difficulties have reduced the near-term outlook in China, the expected annual growth rate of lubricant additives for the next several years is still estimated to be seven percent. Lubrizol intends to become the leading additive supplier to the growing China market. The company has established a joint venture with SINOPEC Lanzhou Petroleum Processing and Chemical Complex. With its plants in Tianjin and Lanzhou, supported by our network of facilities worldwide, the joint venture will be able to provide consistent products to our customers throughout China. Negotiations are also under way with our partner to establish additional additive manufacturing capability and a technology agreement.

"In 1998, we acquired seven companies with total annualized revenues of $162 million."

Lubrizol India Limited, Lubrizol's joint venture with the government of India, offers a wide range of additives uniquely suited to the special requirements of that country. Now that the Indian market has become more open, the company plans to build its capabilities to remain competitive in the region. Lubrizol is negotiating with the government to achieve management control of the Indian joint venture. This will enable us to integrate its manufacturing capability into Lubrizol's regional operations and to use our local supply position to sustain our significant share of the Indian market.



In 1998, we also made substantial progress on our initiative to improve the structure of the company. Lubrizol successfully implemented its new globally integrated management information system in the United States last April and will implement the system in Europe by mid-1999. This is changing various work processes, introducing efficiencies and enabling the company to carry out its announced cost reduction initiatives. At the same time, we continued to focus on increasing manufacturing efficiencies by simplifying our product line and reducing manufacturing costs.

Excluding acquisitions, manufacturing expenses declined by $6.7 million in 1998. Part of the company's cost reduction plan is focused on lowering costs and improving efficiency in production and distribution activities. We will continue to reduce the number of intermediate components, which will enable us to reduce the number of our production units by an additional 20 percent over the next two years. This will occur through the shutdown of certain production units and facilities worldwide, as well as the rapid consolidation of the recently acquired Adibis additives business.

Accompanying the cost reductions in manufacturing, we announced the implementation of a new commercial structure for our chemicals for transportation business and a portion of our chemicals for industry business. We will also consolidate certain sales offices and testing functions. These steps are the inevitable result of changes taking place within the additives business.

Our customers continue to consolidate into larger entities with increased purchasing power. They are representative of new industry dynamics, which offer both opportunities and risks. As market leader in the lubricant additives business, Lubrizol will have the opportunity to serve this new class of customer with potential for even further growth. Lubrizol must adjust to the new reality and become increasingly more efficient and cost-effective. Providing customers more for less has become a requirement for success. This has led us to focus on implementing cost reduction plans and limiting new capital employed in chemicals for transportation. At the same time, we are continuing our investment in building our chemicals for industry business for the future. We also recognize that this has become a very dynamic period for specialty chemical businesses in general, and we are continuing to search for other strategic acquisition opportunities to further broaden the base of our business.

We are optimistic about the transformation taking place at Lubrizol. We view 1999 as a year of

"Providing customers more for less has become a requirement for success."

transition because Lubrizol must move in a new direction. Our traditional chemicals for transportation business has changed and requires a new approach with different perspectives. A new commercial structure is now in place for this business, and we are exploring new ways to increase our competitive advantage. In the marketplace, we are introducing an advanced new product for heavy-duty diesel engine oil applications and believe it to be the best available technology; and our new combined Lubrizol/Adibis fuel additives business is opening opportunities for significant growth using new technology.

"Achieving improved results and increasing shareholder value is a priority."

Our chemicals for industry business requires focus and nurturing in order to gain the necessary mass to be world class. We continue to make progress in growing both our coatings and metalworking additives businesses. Our recent acquisitions are being quickly integrated, and these business areas are growing rapidly. And, in the emerging area of performance systems, we expect to introduce several new product platforms in conjunction with key equipment manufacturers this year. Lubrizol's knowledge of fluids and equipment is leading to entirely new business opportunities. Lubrizol must look at itself differently and create a new vision of what is needed for success beyond 2000.

Achieving improved results and increasing shareholder value is a priority. We are committed to improving results and intend to be flexible and creative in considering a broad range of strategic alternatives to accomplish this goal.

Lubrizol is focused on providing sustainable and profitable growth from performance chemicals for both transportation and industry, and we are confident that the steps we are taking will enable us to become more globally competitive. Entering the 21st century, Lubrizol will be a leaner but more customer-responsive and efficient organization, which will form the basis for greater opportunity for growth and profitability.

W. G. Bares
Chairman, President and
Chief Executive Officer

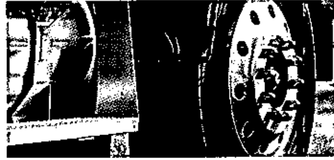
March 17, 1999

Chemicals for Transportation

PASSENGER CAR MOTOR OILS

Additive packages to improve fuel economy and control deposits, sludge, varnish, rust, corrosion, wear, viscosity, oxidation and cold temperature flow in oils meeting industry and original equipment manufacturers specifications worldwide.

HEAVY-DUTY ENGINE OILS

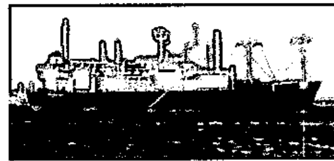


Performance chemistry to control piston deposits, lacquer, soot, oxidation, sludge, wear and oil consumption in oils meeting industry and original equipment manufacturers specifications worldwide.

TWO-STROKE ENGINE OILS

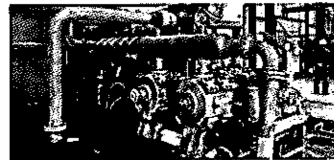
Technology to protect against piston and cylinder scuffing, ring stick, exhaust port blocking, preignition and rust in oils meeting worldwide industry and original equipment manufacturers' specifications.

MARINE DIESEL ENGINE OILS



Additives for cylinder, crosshead and trunk piston oils that neutralize acids and control scuffing, deposits, wear, lacquer, ring sticking, sludge, oxidation and rust in meeting the requirements of major engine builders.

STATIONARY GAS ENGINE OILS



Performance chemistry to prevent deposits, wear, valve recession, ring sticking, plug fouling, catalyst masking, port blocking, oxidation, nitration and rust in oils meeting the requirements of major engine builders worldwide.

AUTOMATIC TRANSMISSION FLUIDS

Technology to maintain shift quality and prevent wear, deposits, oxidation, viscosity loss and foam in automatic transmission fluids meeting specifications issued by major automotive manufacturers around the world.

AUTOMOTIVE & INDUSTRIAL GEAR OILS

Chemistry for manual transmissions, rear axles and industrial gearboxes to prevent wear, pitting, spalling, scoring, tooth breakage, deposits, oxidation, rust, copper corrosion, foam and water retention.

TRACTOR FLUIDS

Additives to control wear, deposits, oxidation, friction, brake squawk, foaming, rust and corrosion in farm tractor transmissions, final drives, wet brakes, clutches and hydraulic systems.

OFF-HIGHWAY EQUIPMENT

Additive chemistry for the engine oils, gear lubricants, hydraulic fluids and diesel fuels meeting the specifications of heavy-duty equipment builders worldwide.

FUEL PRODUCTS

Additive packages for fuels to control deposits, wear, lubricity, emissions, rust and foam in gasoline and diesel engines. Also, additives to ensure storage stability and cold weather flow of gasoline and diesel fuels.

ANTIWEAR HYDRAULIC FLUIDS

Additive packages to prevent wear, rust, oxidation, corrosion and viscosity loss in functional fluids meeting the requirements of hydraulic pump, valve and cylinder manufacturers.

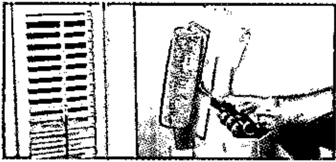
METALWORKING FLUIDS

Chemistry to control acidity, foam, mist, metal staining, friction, tool breakage, odor and oxidation in fluids used in metalworking machinery.

GREASES

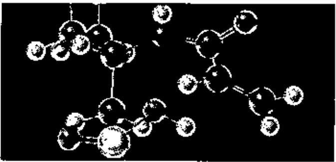
Thickeners, rust inhibitors, extreme pressure agents and antioxidants used in greases to meet the specifications of industry organizations and original equipment manufacturers around the world.

PAINTS, COATINGS & INKS



Additive technology for industrial coatings, paints and inks to improve physical properties, such as sag resistance, scratch and abrasion resistance, color development and adhesion.

FIBER DYE, WATER TREATMENT CHEMICALS, PERSONAL CARE PRODUCTS



Sulfonic acid acrylic monomers that impart hydrophilicity, stability and lubricity to a wide variety of products, including acrylic fiber, premium water treatment chemicals, personal care products and conductive gels for medical applications.

EMISSION CONTROL

Catalyst and filter systems for bus engines to help buses meet clean air standards in retrofit and rebuild applications. Also, exhaust aftertreatment systems for mining, materials handling, construction and highway equipment.

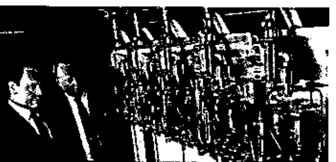
REFINERY AND OIL FIELD PRODUCTS

Specialty chemicals to improve combustion and flow, prevent deposits and fouling, regenerate catalysts, inhibit corrosion and scale and enhance oil field operations.

COMPRESSOR LUBRICANTS

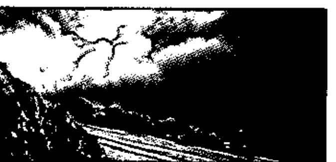
Synthetic based compressor lubricants for use with non-CFC refrigerants in air conditioning systems and air compressor applications.

PRECISION METERING



Blending and additive injection metering equipment for bulk fluid loading, mining, water and sewage treatment, chemical manufacturing and oil refining applications.

MINING EXPLOSIVES



Specialty surfactant technology that provides superior stability in water-in-oil invert emulsions used in a variety of applications worldwide. Compatible with vegetable, synthetic and mineral oils.

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

The Lubrizol Corporation is a full-service supplier of performance chemicals to diverse markets worldwide. The company develops, produces and sells specialty additive packages used in transportation and industrial finished lubricants. The company's products are created through the application of advanced chemical and mechanical technologies to enhance the performance, quality and value of the customer products in which they are used. The company groups its product lines into two operating segments: chemicals for transportation and chemicals for industry. Chemicals for transportation comprised approximately 85% of the company's consolidated revenues and segment pretax operating profit in 1998. This discussion and analysis of the company's financial condition and results of operations is focused upon the company as a whole, rather than the individual segments, since the company believes this provides the most appropriate understanding of its business. Note 13 to the financial statements contains a further description of the nature of the company's operations, the product lines within each of the operating segments and related financial disclosures.

Over the past three years, the company has made progress on its strategies to grow its revenues, improve its cost structure and expand into new market areas. During this period, market share has been increased, costs have been lowered, acquisitions to broaden business areas have been completed and, during the fourth quarter of 1998, the company took steps to increase the selling prices of its products. However, these actions have not been sufficient to meet the company's financial objectives given the present conditions within the lubricant additives industry.

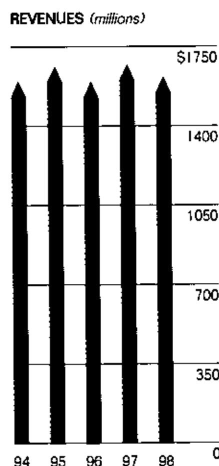
The global market growth rate for lubricant additives is a significant factor affecting the company's performance. In recent years, as the North American and European markets matured, the global growth rate for lubricant additives began to slow. Asia-Pacific and Latin America were two of the fastest growing markets for lubricant additives. In 1997, before the Asia-Pacific and Latin American economies began to weaken, the company estimated the global growth rate as approximately 1% per year. In 1998, the poor economic environments of Asia-Pacific and Latin America caused the global market growth rate to contract. However, even when these economies strengthen, industry market forces, such as improved engine design and longer drain intervals, suggest that global lubricant additives growth rates in excess of 1% are not likely to return. The effects from these conditions have been declining shipment volumes, industry overcapacity, a very competitive pricing environment, reduced financial returns on the capital invested and increased consolidation among both customers and additive producers.

One example of this consolidation among customers and additive producers is the publicly announced pending merger between Exxon Corporation and Mobil Corporation. Each of these companies is an important customer of the company, and Exxon, through a joint venture, is a competitor in the lubricant additive industry. The company currently is not able to predict whether consolidation among customers or additive producers, including the proposed transaction between Exxon and Mobil, would have any material positive or negative effect on the company.

The company has been implementing various short- and long-term initiatives relating to its cost structure, such as further consolidation of component production and continuing simplification of its product lines, to further enhance its competitiveness and market leadership position. Also, in response to market and industry conditions, the company initiated in November 1998 a series of steps to be implemented over the next two years that will reduce its costs and improve its worldwide operating structure. These steps, which will occur in two phases, include reorganization of the company's commercial structure, changes in work processes using the company's new globally integrated management information system, the shutdown of production units and consolidation of facilities and offices. These actions are discussed below under the caption entitled "Special Charges and Adibis Assimilation."

Acquisitions continue to be an important part of the company's strategy to strengthen its business position and expand into new markets. In 1998, the company made seven acquisitions for an aggregate of approximately $158 million in cash and common shares. The largest acquisition was Adibis, formerly the lubricant and fuel additives group of British Petroleum Group P.L.C., which had annualized 1998 revenues of approximately $100 million and is within the company's chemicals for transportation segment. The other six acquisitions were "building block" acquisitions within the company's chemicals for industry segment and had annualized 1998 revenues of approximately $62 million. Further information regarding these acquisitions is contained in Note 12 to the financial statements.

1998 RESULTS OF OPERATIONS



In 1998, the continuing weak business environment of the lubricant additives industry and poor economic conditions in Asia-Pacific and Latin America negatively impacted the financial results for the year, particularly during the second half of the year. Despite acquisitions contributing 5% to consolidated revenues during 1998, annual revenues declined 3% as compared with 1997. Lower average selling prices combined with relatively level material costs have compressed profit margins. In addition, higher interest expense and a higher effective tax rate each contributed to 1998 earnings being significantly lower than 1997 earnings.

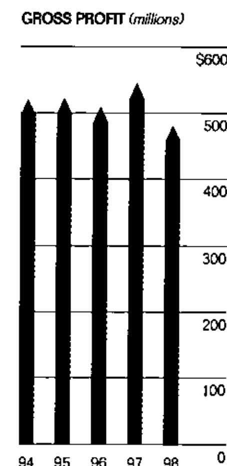
Consolidated revenues for 1998 of $1.62 billion decreased $55.9 million, or 3%, as compared with the record 1997 annual revenues of $1.67 billion. The primary factors causing the decline in revenues from the prior year were lower average selling prices and lower pre-acquisition volume, which more than offset the year-over-year incremental revenues from acquisitions. Excluding acquisitions, sales volume declined by 4% for 1998 and by 10% for the second half of 1998 as compared with the comparable 1997 periods. The 1998 average selling price declined 5% as compared with 1997, of which 75% was due to lower product pricing and changing product mix and 25% was due to currency. The year-over-year increase in revenues from acquisitions was $81.2 million, of which $38.0 million pertained to chemicals for transportation and $43.2 million pertained to chemicals for industry.

The slowing of lubricant additive demand in virtually all geographic areas during 1998 and the current economic conditions in Asia-Pacific caused difficult comparisons against 1997, a year in which the company achieved record revenues and sales volume. Although sales volume in 1998 was flat with 1997, excluding acquisitions, sales volume declined 4%. On this same basis, sales volume to customers in North America during 1998 was level with 1997, but declined 7% to international customers. For the 1998 second half compared with the same period of 1997, sales volume (excluding acquisitions) decreased 3% to customers in North America and decreased 15% to international customers.

The continuing economic difficulties in the Asia-Pacific region had an accelerating, unfavorable effect on the company's 1998 results. Products shipped to customers in Asia-Pacific are manufactured primarily in production facilities in the United States and comprised approximately 16% and 19% of the company's revenues in 1998 and 1997, respectively. Sales volume to customers in Asia-Pacific during the first half of 1998 declined by only 1% as compared with the first half of 1997, but declined by 21% in the 1998 second half as compared with the 1997 second half. Lower sales volume into Asia-Pacific was the primary reason that overall sales volume declined in 1998. Asia-Pacific revenues declined by $53 million, or 17% for the year 1998 and by $40 million, or 24% for the second half of 1998 as compared with the respective 1997 periods. Some forward buying during the second half of 1997 by customers in Asia-Pacific in a reaction to worsening economic conditions exacerbated the comparison with the current year.

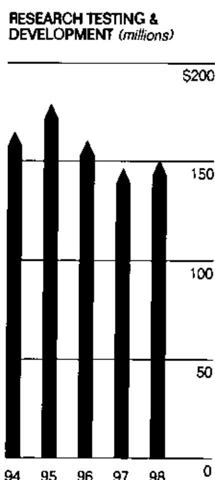
Cost of sales for the full year 1998, including acquisitions, increased only 1% over 1997 as sales volume, average material unit costs and manufacturing costs, remained relatively constant between the comparable periods. Average material unit costs declined less than 1% from 1997. The company's manufacturing costs do not fluctuate significantly with changes in production volume. The effects of the company's ongoing manufacturing rationalization program and other cost management initiatives, for the second consecutive year, helped keep manufacturing costs level as compared with the prior year, despite a $12.2 million increase from acquisitions.

Gross profit (net sales less cost of sales) decreased $64.4 million, or 12%, in 1998 compared with 1997. Excluding acquisitions, gross profit declined $82.3 million, or 15%, in 1998 compared with 1997. Gross profit decreased $30.2 million, or 11%, ($35.3 million, or 13%, excluding acquisitions) in the first half of 1998 and decreased $34.2 million, or 13%, ($47.0 million, or 18%, excluding acquisitions) in the second half of 1998 compared with the same 1997 periods. The decrease in gross profit for each of the respective periods was primarily due to the decline in selling prices and, in the second half of 1998, also due to the lower sales volume. The $17.9 million increase in gross profit contributed from acquisitions made over the past year was partially offset by unfavorable currency effects of $7.4 million for 1998.



The gross profit percentage (gross profit divided by net sales) was 29.8% for 1998 as compared with 32.7% for 1997. This decrease in gross profit percentage was attributable to the lower average selling price as well as the unfavorable effect on per unit manufacturing costs resulting from lower production levels, particularly in the fourth quarter of 1998. In addition, the gross profit percentage of 27.6% in the fourth quarter of 1998 reflected a $4.3 million inventory write-down primarily due to a change in a customer product specification.

Selling and administrative expenses increased by $8.5 million, or 5%, in 1998 compared with 1997. Excluding acquisitions, selling and administrative expenses were $1.5 million, or 1%, lower compared with 1997. Selling and administrative expenses in 1998 reflect increased spending of $11.3 million related to the implementation of the new, enterprise-wide, management information system, but this was more than offset by lower variable pay expense, lower litigation expense and other cost reductions.



Research, testing and development expenses (technology expenses) increased $4.3 million, or 3%, in 1998 compared with 1997. Excluding acquisitions, technology expenses declined $1.9 million, or 1%, from 1997. Product standards change periodically to meet new emissions, efficiency, durability and other performance factors as engine and transmission designs are improved by the equipment manufacturers. These changes influence the timing and amount of the technology expense. Approximately 80% of the company's technology cost is incurred in company-owned facilities and 20% is incurred at third-party testing facilities. Testing expenses incurred at third-party testing facilities increased $5.5 million in 1998

over 1997 primarily due to a new performance specification for heavy-duty engine oils. The company's technology expense in 1998, as well as in 1997, included costs related to new performance specifications for heavy-duty engine oils, which were introduced into the market in late 1998, and new performance specifications for passenger car engine oils expected to become effective during 2000.

Primarily as a result of the factors previously discussed, the change in revenues together with the change in total costs and expenses unfavorably affected the company's pretax profits by $78.4 million for the full year 1998 and by $45.3 million for the second half of 1998 as compared with respective 1997 periods.

In the fourth quarter of 1998, the company recorded special charges aggregating $36.9 million. These special charges related to the first phase of the company's cost reduction program, which amounted to $23.3 million, and the write-off of $13.6 million of purchased technology under development originating from the Adibis acquisition. After-tax, these special charges reduced 1998 net income by $25.8 million, or $.47 per share. For further information see the caption "Special Charges and Adibis Assimilation" below.

On April 23, 1998, the company reached a settlement with Exxon Corporation of a lawsuit pending in federal court in Ohio and the company received cash of $19 million from Exxon. The pretax gain from this litigation settlement, net of related expenses, was $16.2 million. After-tax, the litigation settlement increased net income by $10.5 million or $.19 per share. Further information regarding the company's litigation with Exxon is contained in Note 17 to the financial statements.

The change in other income (expense) unfavorably affected 1998 pretax income by $6.3 million compared with 1997. This change mostly occurred during the second half of the year and resulted primarily from higher goodwill amortization, higher currency exchange transaction losses, and lower equity earnings from joint venture companies.

Interest expense increased $8.2 million in 1998 compared with 1997, reflecting significantly higher borrowings that were incurred primarily to finance acquisitions during the year.

While changes in the dollar value of foreign currencies will affect earnings from time to time, the longer-term economic effect of these changes should not be significant given the company's net asset exposure, currency mix and use of U.S. dollar-based pricing in certain countries. As the U.S. dollar strengthens or weakens against other international currencies in which the company transacts business, the financial results of the company will be affected. During 1998, the U.S. dollar strengthened and the change in currency exchange rates had an unfavorable effect on net income per share of $.07 for the year 1998 as compared with exchange rates in effect during 1997.

As a result of the factors discussed above, income before income taxes decreased by $112.3 million for the full year 1998 and by $93.8 million for the second half of 1998 as compared with the respective periods of 1997. Excluding from 1998 the litigation gain and special charges, income before income taxes decreased by $91.6 million or 40% for the full year 1998 and by $56.9 million for the second half of 1998 as compared with the respective periods of 1997.

The current year effective tax rate on income, before the litigation gain and special charges, increased to 38% as compared with 33% in 1997. This increase, which lowered 1998 earnings before these items by $.12 per share, was primarily a result of lower 1998 operating earnings and increased non-tax deductible 1998 translation losses incurred by the company's foreign subsidiaries using a U.S. dollar functional currency. Other reasons for the change in the effective tax rate included shifts in earnings between the various countries in which the company operates and the tax benefits recognized during the second half of 1997 resulting from favorable tax law changes enacted by France, the United States and the United Kingdom. Taking into account the litigation gain and the fourth quarter special charges, the overall effective tax rate for 1998 was 40%.

Net income in 1998 was $71.2 million, or $1.27 per share. In 1997, net income was $154.9 million, or $2.68 per share. After excluding from 1998 the litigation gain and the special charges, net income in 1998 was $86.5 million, a decrease of 44% from 1997. On this same basis, 1998 net income per share was $1.55, a decline of 42% from the $2.68 per share earned in 1997.

SPECIAL CHARGES AND ADIBIS ASSIMILATION

The company initiated a series of steps in 1998 to reduce costs and improve its worldwide operating structure and will execute these steps in two phases over a period approximating two years. The first phase, which began in the fourth quarter of 1998, will result in employee reductions of approximately 6%, or 250 employees at both domestic and international locations. Approximately 55% of the employee reductions occurred by December 31, 1998, and the remaining 45% will occur during the first half of 1999. Of the 250 employees, approximately 40% were in the manufacturing area and 60% were in the selling, administrative, research and testing areas. In addition, the company will permanently remove several component production units from service during this first phase.

The second phase of the company's cost reduction program will focus on lowering costs and improving efficiency in production and distribution activities. The company will continue to reduce its number of intermediate components, which will enable the number of its production units to be reduced by approximately 20% over the next two years. This will occur through the shutdown of certain production units and facilities worldwide. The company believes employee levels will be reduced a further 5% during this second phase. Definitive plans must be completed before the company is able to reasonably

estimate and recognize the costs of facility write-downs and employee reductions anticipated during this second phase of the cost reduction program. Such charges may be material to the operating results of the company for the period(s) in which they are recognized.

The company recorded a special charge of $23.3 million in the fourth quarter of 1998 for the cost directly associated with the first phase of the cost reduction program. Employee severance costs approximate $20.0 million and other exit costs approximate $3.3 million, including $2.8 million related to asset impairments for component production units to be taken out of service. Cash expenditures of approximately $5.0 million were made in 1998 related to the cost reduction program. Approximately $15.5 million remains as an accrued liability at December 31, 1998, most of which represents cash to be expended in 1999. The company estimates annual savings of $26 million from the first phase of the cost reduction program.

For financial reporting purposes, the company engaged an independent appraiser to provide a basis for allocating the purchase price of Adibis to the acquired intangible assets. The valuation included the amount to be assigned to technology under development which, under purchase accounting, is to be written off against income in the period of acquisition. Technology under development comprises ongoing research and development projects which may form the basis for new products or replacements for existing products. The fair value assigned to the Adibis technology under development was determined by the independent appraiser applying the income approach and a valuation model, incorporating among other assumptions revenue and expense projections, probability of success and present value factors. The resulting value allocated to each of the technology projects under development represents the product of the present value of debt-free cash flows and the percent of research and development completed. The fair value of technology under development was comprised of three projects within engine oil additives aggregating $7.1 million; six projects within fuel additives aggregating $3.4 million; and two projects within marine diesel additives aggregating $3.1 million. The amount of the purchase price allocated to technology under development was $13.6 million and was charged against income in the fourth quarter of 1998.

The company is in the process of assimilating the Adibis additives business, which it acquired effective August 1, 1998. The company's assimilation plan includes separation of a number of Adibis employees at an estimated cost of $3.9 million and terminating certain Adibis contracts for tolling arrangements, office leases and sales agents at an estimated cost of $2.7 million. These activities are planned for completion by the end of 1999, with the employee separations completed by the end of the first half of 1999. The aggregate cost of $6.6 million represents cash expenditures expected to be made in 1999. The cost of these activities was included in the allocation of the acquisition costs to the net assets acquired.

1997 RESULTS OF OPERATIONS

In 1997, the company made significant progress with each of its strategies to grow its business, improve its cost structure and build its franchise. During 1997, revenues increased 5% as product shipments increased 17% over 1996 and the company's market share grew. The company continued its focus to improve its cost structure as operating expenses were flat versus 1996, even with significantly higher production throughput. Net income per share in 1997 increased 20%, after excluding from 1996 the gain on investments. This record performance was achieved despite the unfavorable effect on earnings of the stronger U.S. dollar.

In 1997, the company had record revenues of $1.67 billion, an increase of $76.2 million over 1996. Increased revenues resulted from a 17% increase in specialty chemical shipment volumes (contributing a 15% increase in consolidated revenues), partially offset by a 10% decline in the average selling price. Although the average selling price stabilized during the second half of the year, the full-year decline for 1997 was attributable approximately 50% to changing product mix, 30% to unfavorable currency effects and 20% to lower product pricing. The unfavorable product mix effect resulted from volume gains in product lines having lower than the overall average selling price. On balance, the company's acquisition/divestiture activity did not significantly affect 1997 annual revenues as recent acquisitions offset a prior year disposition. However, acquisitions contributed one-fourth, or $11.4 million, of the 13% increase in consolidated revenues for the fourth quarter of 1997 compared with the fourth quarter of 1996.

A primary strategy of the company in 1997 was to grow its business. The company had success building global and regional alliances with targeted customers and continued actively pursuing additional strategic relationships with finished lubricant suppliers. As compared with 1996, sales volume increased throughout the year. Higher sales volumes were realized in all geographic zones and across a broad customer base. In 1997, sales volume increased 14% to North American customers and 18% to international customers, primarily in Asia-Pacific, Western Europe and Latin America. The growth in sales volume was derived principally from market share gains within established markets rather than overall industry growth.

Cost of sales reflected the higher sales volume as well as lower average raw material costs and level manufacturing costs. Compared with the respective prior year periods, average material costs, including favorable currency effects and the impact of less expensive product mix, were 10% lower in the first half of 1997, 6% lower in the second half of 1997 and 8% lower for the year. The company's manufacturing costs do not fluctuate significantly with changes in production volume. The effects of the company's ongoing manufacturing

rationalization program and other cost management initiatives have improved manufacturing efficiency as the company is operating fewer manufacturing units at higher capacity levels. Manufacturing costs, aided by currency effects, were flat in 1997 compared with 1996, even though production activity was significantly higher in 1997 and the company resumed pay increases following the salary freeze in effect during 1996.

Gross profit increased $36.2 million, or 7%, in 1997 compared with 1996. This improvement in gross profit amount was after unfavorable currency effects of $20.0 million, which occurred evenly over the four quarters. Acquisition/divestiture activity contributed $13.0 million to the increase in gross profit for 1997. Gross profit improved to 32.7% of sales in 1997 compared with 32.0% in 1996 as manufacturing efficiencies, lower material costs and the effect of acquisition/divestiture activities more than offset the effect of lower average selling price. Gross profit was 31.4% during the second half of 1997 due to sequentially lower average selling price, higher material costs and the effect of asset impairment losses of $4.4 million principally in the fourth quarter.

Selling and administrative expenses increased $12.6 million, or 8%, in 1997 compared with 1996. These expenses, which were higher in the second half of the year compared with the first half, increased primarily due to higher patent-related litigation expenses, the effect of acquisitions, incremental expenses related to the implementation of the new enterprise-wide management information system and increased variable compensation as a result of higher earnings.

During 1997, research, testing and development expense (technology expense) decreased $14.3 million, or 9%, from 1996. The lower spending level in 1997 was due to the timing of testing programs particularly within the engine oil and gear oil product lines, greater internalization of testing activity that reduced outside testing requirements and workforce reductions. The company's technology expense in 1997 includes some costs related to new performance specifications for heavy-duty engine oils which are expected to become effective during 1998 and new performance specifications for passenger car engine oils expected to become effective during 2000.

As discussed in Note 16 to the financial statements, in 1997, the company provided $9.4 million for the impairment of long-lived assets. These charges related to a shutdown of an intermediate manufacturing system and the write-off of certain computer equipment and legacy software systems that will be disposed of due to the computer equipment standardization project and the new enterprise-wide management information system being implemented.

Primarily as a result of these factors, consolidated revenues increased $37.7 million more than the increase in total costs and expenses in 1997.

Interest income in 1997 was lower than in 1996 as proceeds from the 1996 sale of investments (discussed below) were temporarily invested in interest-bearing instruments until used in the company's share repurchase program. Interest expense in 1997 was level with 1996. The average daily balance of total debt outstanding during 1997 was $195 million as compared with $188 million in 1996.

The company conducts a significant amount of its business outside of the United States and is subject to certain related risks including currency fluctuations. The U.S. dollar continued to strengthen during 1997, causing an unfavorable effect on net income of approximately $10.0 million, or $.17 per share.

As a result of the factors discussed above and after excluding from 1996 the gain on investments, income before income taxes increased 17%, or $33.8 million, from 1996. The company adjusted its tax provision in the third quarter of 1997 to reflect a legislated increase in the statutory tax rate applicable to its earnings in France, where the company has significant operations. This adjustment resulted in an effective tax rate of 33.0% for the full year 1997 as compared with 31.5% in 1996, after excluding the 1996 gain on investments on which a 35% tax rate applied. The higher effective tax rate reduced net income by $3.5 million, or $.06 per share in 1997.

Net income in 1997 was $154.9 million, or $2.68 per share. In 1996, net income was $169.8 million, or $2.80 per share, which included investment gains. After excluding from 1996 the non-recurring gains, net income in 1997 was 15% higher than the $135.2 million for 1996. On this same basis, net income per share was 20% higher than the $2.23 per share for 1996, reflecting the company's share repurchase program.

1996 RESULTS OF OPERATIONS

In 1996, management of the company took action early in the year to improve its cost structure as part of its continuing efforts to enhance its efficiency as an additive supplier. Although revenues in 1996 declined 4% from 1995, this was offset by the effects of aggressive cost management and management's focus on strengthening of customer and supplier relationships. In addition, lower working capital, significantly reduced capital expenditures and the sale of nonstrategic investments resulted in improved cash flow and enabled the company to repurchase 7% of its common shares outstanding during 1996. As a result, the company was able to grow net income and net income per share, despite unfavorable currency effects.

Consolidated revenues were $1.60 billion in 1996, a decrease of $66 million, or 4%, from 1995 levels. Volume in 1996 was equal with 1995 despite the introduction of a new industry specification discussed below. Revenues decreased 2% due to price/mix effects and 1% due to unfavorable currency effects. In addition, the sale of the specialty vegetable oil business in September 1996 reduced consolidated revenues by 1% as compared with 1995.

YEAR 2000 MATTERS

THIS IS A YEAR 2000 READINESS DISCLOSURE UNDER THE YEAR 2000 INFORMATION AND READINESS DISCLOSURE ACT, P.L. 105-271

The company relies on its computer-based management information systems, as well as computer-based systems used for other purposes, in conducting its normal business activities. Certain of these computer-based programs may not have been designed to function properly with respect to the application of dating systems relating to the Year 2000 and beyond.

The company has developed a global Year 2000 strategy covering each of its facilities designed to minimize Year 2000 disruptions to its computer-based systems, including business information systems and process control, testing and laboratory equipment and embedded systems. The Year 2000 project manager regularly updates the company's senior management as to the implementation status of the Year 2000 strategy, and periodic reviews are conducted with the company's Audit Committee and Board of Directors. The company believes that its computer-based systems will be functional and operate without significant disruption both before and after January 1, 2000.

The company's Year 2000 compliance strategy incorporates the conversion of most of its business information systems from mainframe systems to compliant, client/server systems. The company believes that implementation of such systems permits it to avoid approximately 80% of the effort that otherwise would have been required to make these legacy systems Year 2000 compliant. This conversion process is part of the company's global enterprise-wide management information system, which was implemented in the United States during 1998 and is scheduled for implementation in Europe in April 1999. Although the implementation date for the global enterprise-wide management system at a number of company facilities outside of the United States and Europe is anticipated to be after January 1, 2000, the company has developed Year 2000 compliance plans to address business information systems at each of those facilities.

The company estimates approximately 20% of the total remediation effort is attributable to activities not related to the global enterprise-wide management information system discussed above. Based upon the effort expended through December 31, 1998, the company believes it has completed approximately 30% of the desired remediation activities that are in addition to its progress on the enterprise-wide management information systems. The company has substantially completed its assessment of the actions necessary with respect to all of its other date-based computer systems in order to minimize Year 2000-related disruptions. The company has completed compiling, categorizing as to criticality, and prioritizing all of its date-based computer systems at each of its facilities. Plans for remediation, testing and certification of such systems have been developed for each site and are aggressively being implemented. The company has targeted completion of all remedial activities, including testing and certification, and final contingency plans by July 1, 1999.

Through December 31, 1998, the company incurred costs of approximately $61 million in connection with the implementation of its global enterprise-wide management information systems, of which approximately $46 million was capitalized and $15 million expensed. The company estimates additional costs in 1999 of approximately $18 million, of which approximately $6 million is expected to be capitalized. In addition, the company estimates the total costs for conducting its Year 2000 remedial activities not addressed by the global enterprise-wide management information system at approximately $10 million. The company has expended approximately $2.0 million for these activities, most of which was spent in 1998.

The company has also surveyed suppliers critical to its business for the purpose of obtaining assurance regarding their ability to properly operate their systems in the Year 2000. Based on this process, the company believes its ability to obtain critical materials will not be significantly affected by its suppliers' Year 2000 situations. The company has been surveying significant customers for this same purpose in the first quarter of 1999 and expects to complete this process early in the second quarter. However, the company has no contractual or other right to compel its suppliers or customers to be Year 2000 compliant.

The company has developed high-level contingency plans in the event any of its critical suppliers or significant customers should incur Year 2000 failures in their systems that would cause a disruption in the company's ability to conduct business. More detailed contingency plans are in the process of being developed for each facility. Some of the areas addressed in these plans include increased staffing, higher carrying levels of inventory for critical materials, components and finished goods and alternate suppliers for critical raw materials. The company's view of a "reasonably likely worst case scenario" would entail the temporary shutdown of a production unit at one or more of the company's major manufacturing sites. Although the company does not anticipate such a scenario will occur, if it were to occur, the company believes it would be able to correct the problem in a timely fashion, alternatively source the production or satisfy the customer demand from existing inventory. If the company's contingency plans are not adequate or its suppliers or customers fail to remedy their own Year 2000 matters, the company's results of operations and financial condition may be materially adversely affected.

EURO

In anticipation of the introduction of the Euro, the company initiated steps in 1998 to: (i) conduct business using the Euro on January 1, 1999; (ii) integrate the Euro into its business, with full integration targeted for January 1, 2002; and (iii) meet the Euro needs of customers, including assisting them in their Euro integration. As a result of this effort, the company expects minimal impact from pricing transparency beyond that which already exists with major international accounts and large European regional customers. Contract continuity disputes with customers and vendors are not anticipated given the company's long-standing relationships and European Council regulations precluding using Euro conversion as a reason to invalidate contracts.

The new enterprise software system being installed at the company's European sites is fully Euro compliant and no additional system enhancements are expected. Other conversion costs have been minor and absorbed in normal operating expense. Euro adoption also will consolidate a portion of the company's foreign currency exposures and reduce the number and cost of currency transactions. Although final tax guidance on all aspects of the Euro conversion has yet to be released, the company has no reason to believe that the conversion will have significant tax effects for the company.

CAUTIONARY STATEMENT FOR "SAFE HARBOR" PURPOSES UNDER THE PRIVATE SECURITIES LITIGATION REFORM ACT OF 1995

This Management's Discussion and Analysis of Financial Condition and Results of Operations and the letter "To Our Shareholders" from W. G. Bares, Chairman, President and Chief Executive Officer of the company, contain forward-looking statements within the meaning of the federal securities laws. As a general matter, forward-looking statements are those focused upon future plans, objectives or performance as opposed to historical items and include statements of anticipated events or trends and expectations and beliefs relating to matters not historical in nature. Such forward-looking statements are subject to uncertainties and factors relating to the company's operations and business environment, all of which are difficult to predict and many of which are beyond the control of the company. Such uncertainties and factors could cause actual results of the company to differ materially from those matters expressed in or implied by such forward-looking statements.

The company believes that the following factors, among others, could affect its future performance and cause actual results of the company to differ materially from those expressed or implied by forward-looking statements made in this annual report:

- the overall demand for lubricant additives on a worldwide basis, which has a slow growth rate in mature markets such as North America and Europe;
- the effect on the company's business resulting from economic uncertainty within the Asia-Pacific and Latin American regions;
- the lubricant additive demand in developing regions such as China and India, which geographic areas are an announced focus of the company's activities;
- technology developments that affect longer-term trends for lubricant additives, such as: improved engine design, fuel economy, longer oil drain intervals, alternative fuel powered engines and emission system compatibility;
- the company's success at continuing to develop proprietary technology to meet or exceed new industry performance standards and individual customer expectations;
- the frequency of change in industry performance standards, which affects the level and timing of the company's technology costs, the product life cycles and the relative quantity of additives required for new specifications;
- the rate of progress in continuing to reduce complexities and conversion costs and in modifying the company's cost structure to maintain and enhance its competitiveness;
- the success of the company in strengthening and retaining relationships with lubricant additive customers, growing sales at targeted accounts, and expanding geographically;
- the extent to which the company is successful in expanding beyond its core chemicals for transportation business and into new areas for its chemicals for industry businesses;
- the recoveries, judgments, costs and future impact of legal proceedings, including those relating to intellectual property litigation with Exxon Corporation and its affiliates;
- the potential impact of consolidation among lubricant additive manufacturers and finished lubricant marketers, including the pending merger between Exxon and Mobil, two of the company's larger customers;
- the relative degree of competitive and customer price pressure on lubricant additives;
- the cost, availability and quality of raw materials, including petroleum-based products, required for the manufacture of lubricant additives;
- the effects of fluctuations in currency exchange rates upon the company's reported results from its international operations, together with non-currency risks of investing in and conducting significant operations in foreign countries, including those relating to political, social, economic and regulatory factors;
- the ability to achieve and timing of cost efficiencies resulting from the multi-year program to implement the new enterprise-wide management information system;

- the ability of the company to operate its computer-based systems without significant disruption due to dating systems application in the Year 2000; and
- changes in significant government regulations affecting environmental compliance.

QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The company operates manufacturing and blending facilities, laboratories and offices around the world and utilizes fixed and floating rate debt to finance its global operations. As a result, the company is subject to business risks inherent in non-U.S. activities, including political and economic uncertainty, import and export limitations, and market risk related to changes in interest rates and foreign currency exchange rates. The company believes the political and economic risks related to its foreign operations are mitigated due to the stability of the countries in which its largest foreign operations are located.

In the normal course of business, the company uses derivative financial instruments including interest rate swaps and foreign currency forward exchange contracts to manage its market risks. Additional information regarding the company's financial instruments is contained in Notes 4 and 14 to the financial statements. The company's objective in managing its exposure to changes in interest rates is to limit the impact of such changes on earnings and cash flow and to lower its overall borrowing costs. The company's objective in managing its exposure to changes in foreign currency exchange rates is to reduce volatility on earnings and cash flow associated with such changes. The company's principal currency exposures are in the major European currencies, the Japanese yen and certain Latin American currencies. The company does not hold derivatives for trading purposes.

The company measures its market risk, related to its holdings of financial instruments based on changes in interest rates and foreign currency rates utilizing a sensitivity analysis. The sensitivity analysis measures the potential loss in fair values, cash flows and earnings based on a hypothetical 10% change (increase and decrease) in interest and currency exchange rates. The company used current market rates on its debt and derivative portfolio to perform the sensitivity analysis. Certain items such as lease contracts, insurance contracts, and obligations for pension and other post-retirement benefits were not included in the analysis.

The company's primary interest rate exposures relate to its cash and short-term investments, fixed and variable rate debt and interest rate swaps. The potential loss in fair values is based on an immediate change in the net present values of the company's interest rate-sensitive exposures resulting from a 10% change in interest rates. The potential loss in cash flows and earnings is based on the change in the net interest income/expense over a one-year period due to an immediate 10% change in rates. A hypothetical 10% change in interest rates does not have a material impact on the fair values, cash flows or earnings of the company.

The company's primary currency rate exposures are to its foreign denominated debt, intercompany debt, cash and short-term investments and foreign currency forward exchange contracts. The potential loss in fair values is based on an immediate change in the U.S. dollar equivalent balances of the company's currency exposures due to a 10% shift in exchange rates. The potential loss in cash flows and earnings is based on the change in cash flow and earnings over a one-year period resulting from an immediate 10% change in currency exchange rates. A hypothetical 10% change in currency exchange rates does not have a material impact on its fair values, cash flows or earnings of the company.

Independent Auditors' Report

Deloitte &
Touche LLP

TO THE SHAREHOLDERS AND BOARD OF DIRECTORS OF THE LUBRIZOL CORPORATION

We have audited the accompanying consolidated balance sheets of The Lubrizol Corporation and its subsidiaries as of December 31, 1998 and 1997, and the related consolidated statements of income, shareholders' equity, and cash flows for each of the three years in the period ended December 31, 1998. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these 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, such consolidated financial statements present fairly, in all material respects, the financial position of The Lubrizol Corporation and its subsidiaries at December 31, 1998 and 1997, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1998 in conformity with generally accepted accounting principles.

Deloitte & Touche LLP

Cleveland, Ohio
February 4, 1999

Consolidated Statements of Income

(In Thousands of Dollars Except Per Share Data)	Year Ended December 31		
	1998	1997	1996
Net sales	$1,614,558	$1,669,251	$1,592,877
Royalties and other revenues	3,361	4,531	4,685
Total revenues	1,617,919	1,673,782	1,597,562
Cost of sales	1,133,327	1,123,602	1,083,394
Selling and administrative expenses	179,759	171,244	158,633
Research, testing and development expenses	150,980	146,678	160,978
Total cost and expenses	1,464,066	1,441,524	1,403,005
Special charges	(36,892)		
Gain from litigation settlement	16,201		
Gain on investments			53,280
Other income (expense) – net	(1,152)	5,104	6,012
Interest income	5,780	4,588	7,714
Interest expense	(18,976)	(10,803)	(10,955)
Income before income taxes	118,814	231,147	250,608
Provision for income taxes	47,614	76,278	80,806
Net income	$ 71,200	$ 154,869	$ 169,802
Net income per share	$1.27	$2.68	$2.80
Net income per share, diluted	$1.27	$2.66	$2.79
Dividends per share	$1.04	$1.01	$ .97

The accompanying notes to financial statements are an integral part of these statements.

Consolidated Balance Sheets

(In Thousands of Dollars)	December 31 1998	1997
ASSETS		
Cash and short-term investments	$ 53,639	$ 86,504
Receivables	301,644	273,505
Inventories	277,612	260,118
Other current assets	54,575	36,949
Total current assets	687,470	657,076
Property and equipment – at cost	1,608,500	1,513,824
Less accumulated depreciation	889,650	821,147
Property and equipment – net	718,850	692,677
Goodwill and intangible assets – net	166,957	58,066
Investments in nonconsolidated companies	26,490	25,904
Other assets	43,470	28,569
TOTAL	$1,643,237	$1,462,292
LIABILITIES AND SHAREHOLDERS' EQUITY		
Short-term debt and current portion of long-term debt	$ 38,926	$ 38,095
Accounts payable	112,832	127,347
Accrued expenses and other current liabilities	118,270	96,488
Total current liabilities	270,028	261,930
Long-term debt	390,394	182,165
Postretirement health care obligation	106,641	105,962
Noncurrent liabilities	48,950	42,878
Deferred income taxes	58,106	53,909
Total liabilities	874,119	646,844
Contingencies and commitments		
Preferred stock without par value – unissued		
Common shares without par value – outstanding 54,548,110 shares in 1998 and 56,966,894 shares in 1997	84,651	82,669
Retained earnings	709,994	773,184
Accumulated other comprehensive income (loss)	(25,527)	(40,405)
Total shareholders' equity	769,118	815,448
TOTAL	$1,643,237	$1,462,292

The accompanying notes to financial statements are an integral part of these statements.

Consolidated Statements of Cash Flows

(In Thousands of Dollars)	Year Ended December 31 1998	1997	1996
CASH PROVIDED FROM (USED FOR):			
OPERATING ACTIVITIES:			
Net income	**$ 71,200**	$ 154,869	$ 169,802
Adjustments to reconcile net income to cash provided by operating activities:			
Depreciation and amortization	**88,047**	87,217	80,964
Deferred income taxes	**5,732**	8,585	23,074
Special charges and asset impairments	**36,892**	9,360	
Gain on investments			(53,280)
Change in current assets and liabilities net of acquisitions and dispositions:			
Receivables	**3,870**	(47,313)	9,834
Inventories	**9,839**	(16,919)	46,658
Accounts payable and accrued expenses	**(41,749)**	46,524	(38,693)
Other current assets	**(17,012)**	4,101	(1,610)
Change in noncurrent liabilities	**5,357**	(169)	(1,317)
Other items – net	**(6,985)**	(11,889)	(4,430)
Total operating activities	**155,191**	234,366	231,002
INVESTING ACTIVITIES:			
Proceeds from sale of investments	**3,500**	12,117	149,603
Capital expenditures	**(93,421)**	(100,700)	(94,297)
Acquisitions and investments in nonconsolidated companies	**(155,418)**	(23,636)	(27,309)
Other – net	**749**	5,164	4,357
Total investing activities	**(244,590)**	(107,055)	32,354
FINANCING ACTIVITIES:			
Short-term borrowing (repayment)	**4,175**	26,772	(52,890)
Long-term borrowing	**203,059**	5,572	28,425
Long-term repayment	**(5,515)**	(4,159)	(19,141)
Debt issuance costs	**(10,523)**		
Dividends paid	**(58,256)**	(58,469)	(59,033)
Common shares purchased, net of options exercised	**(76,542)**	(63,391)	(133,926)
Total financing activities	**56,398**	(93,675)	(236,565)
Effect of exchange rate changes on cash	**136**	(2,205)	(2,297)
Net increase (decrease) in cash and short-term investments	**(32,865)**	31,431	24,494
Cash and short-term investments at the beginning of year	**86,504**	55,073	30,579
Cash and short-term investments at the end of year	**$ 53,639**	$ 86,504	$ 55,073

The accompanying notes to financial statements are an integral part of these statements.

Consolidated Statements of Shareholders' Equity

(Dollars in Thousands)	Number of Shares Outstanding	Shareholders' Equity: Common Shares	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total
BALANCE, DECEMBER 31, 1995	62,951,288	$83,254	$762,747	$ 2,982	$848,983
Comprehensive income:					
Net income 1996			169,802		169,802
Other comprehensive income (loss)				(6,450)	(6,450)
Comprehensive income					163,352
Cash dividends			(59,033)		(59,033)
Common shares – treasury:					
Shares purchased	(4,496,427)	(5,982)	(129,206)		(135,188)
Shares issued upon exercise of stock options	67,815	1,262			1,262
BALANCE, DECEMBER 31, 1996	58,522,676	78,534	744,310	(3,468)	819,376
Comprehensive income:					
Net income 1997			154,869		154,869
Other comprehensive income (loss)				(36,937)	(36,937)
Comprehensive income					117,932
Cash dividends			(58,469)		(58,469)
Common shares – treasury:					
Shares purchased	(1,812,841)	(2,538)	(67,526)		(70,064)
Shares issued upon exercise of stock options	257,059	6,673			6,673
BALANCE, DECEMBER 31, 1997	**56,966,894**	**82,669**	**773,184**	**(40,405)**	**815,448**
Comprehensive income:					
Net income 1998			**71,200**		**71,200**
Other comprehensive income (loss)				**14,878**	**14,878**
Comprehensive income					**86,078**
Cash dividends			**(58,256)**		**(58,256)**
Common shares issued for subsidiary acquisition	**89,806**	**2,390**			**2,390**
Common shares – treasury:					
Shares purchased	**(2,621,173)**	**(3,944)**	**(76,134)**		**(80,078)**
Shares issued upon exercise of stock options	**112,583**	**3,536**			**3,536**
BALANCE, DECEMBER 31, 1998	**54,548,110**	**$84,651**	**$709,994**	**$(25,527)**	**$769,118**

Notes To Financial Statements

(In Thousands of Dollars Unless Otherwise Indicated)

NOTE 1 – NATURE OF OPERATIONS

The Lubrizol Corporation is a full-service supplier of performance chemicals and products to diverse markets worldwide. The company develops, produces and sells specialty additive packages used in transportation and industrial finished lubricants. The company's products are created through the application of advanced chemical and mechanical technologies to enhance the performance, quality and value of the products in which they are used. The company groups its product lines into two operating segments: chemicals for transportation and chemicals for industry. Chemicals for transportation comprise approximately 85% of the company's consolidated revenues and segment pretax operating profit in 1998. Refer to Note 13 for a further description of the nature of the company's operations, the product lines within chemicals for transportation and chemicals for industry and related financial disclosures.

NOTE 2 – ACCOUNTING POLICIES

CONSOLIDATION – The consolidated financial statements include the accounts of The Lubrizol Corporation and its subsidiaries where ownership is greater than 50% and the company has effective controlling financial interest. For nonconsolidated companies (affiliates), the equity method of accounting is used when ownership, unless temporary, exceeds 20% and when the company has the ability to exercise significant influence over the policies of the investee. The book value of investments carried at equity was $25.8 million and $25.0 million and of investments carried at cost was $.7 million and $.9 million at December 31, 1998 and 1997, respectively.

ESTIMATES – The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions pending completion of related events. These estimates and assumptions affect the amounts reported at the date of the financial statements for assets, liabilities, revenues and expenses and the disclosure of contingencies. Actual results could differ from those estimates.

CASH EQUIVALENTS – The company generally invests any of its excess cash in short-term investments with various banks and financial institutions. Short-term investments are cash equivalents, as they are part of the cash management activities of the company and are comprised primarily of investments having maturities of three months or less when purchased.

INVENTORIES – Inventories are stated at the lower of cost or market value. Cost of inventories is determined by the first-in, first-out (FIFO) method except for chemical inventories within the United States, which are valued using the last-in, first-out (LIFO) method.

PROPERTY AND EQUIPMENT – Property and equipment are carried at cost. Repair and maintenance costs are charged against income while renewals and betterments are capitalized as additions to the related assets. Costs incurred for computer software developed or obtained for internal use are capitalized for application development activities and immediately expensed for preliminary project activities or post-implementation activities. Accelerated depreciation methods are used in computing depreciation on certain machinery and equipment, which comprise approximately 23% of the depreciable assets. The remaining assets are depreciated using the straight-line method. The estimated useful lives are 10 to 40 years for buildings and land improvements and range from 3 to 20 years for machinery and equipment.

GOODWILL AND INTANGIBLE ASSETS – Intangibles resulting from business acquisitions including costs in excess of net assets of businesses acquired (goodwill), purchased technology and trademarks are being amortized on a straight-line method over years ranging from 5 to 25 years. Periodically, the company evaluates the recoverability of goodwill and intangible assets and measures the amount of impairment, if any, by assessing current and future levels of cash flows as well as other factors, such as business trends or market and economic conditions.

RESEARCH, TESTING AND DEVELOPMENT – Research, testing and development costs are expensed as incurred. Research and development expenses, excluding testing, were $78.3 million, $88.4 million and $93.4 million in 1998, 1997 and 1996, respectively.

FOREIGN CURRENCY TRANSLATION – The assets and liabilities of the company's international subsidiaries are translated into U.S. dollars at exchange rates in effect at the balance sheet date, and revenues and expenses are translated at weighted average exchange rates in effect during the period. Unrealized translation adjustments are recorded as a component of other comprehensive income in shareholders' equity. Transaction gains or losses that arise from exchange rate changes on transactions denominated in a currency other than the functional currency, except those transactions that function as a hedge of an identifiable foreign currency commitment or as a hedge of a foreign currency investment, are included in income as incurred.

SHARE REPURCHASES – The company utilizes the par value method of accounting for its treasury shares. Under this method, the cost to reacquire shares in excess of paid-in capital related to those shares is charged against retained earnings.

PER SHARE AMOUNTS – Net income per share is computed by dividing net income by average common shares outstanding during the period. Net income per diluted share includes the dilution effect resulting from outstanding stock options and stock awards. Per share amounts are computed as follows:

	1998	1997	1996
Numerator:			
Net income available to common shareholders	$ 71,200	$154,869	$169,802
Denominator:			
Weighted average common shares outstanding	55,939	57,843	60,694
Dilutive effect of stock options and awards	183	386	109
Denominator for net income per share, diluted	56,122	58,229	60,803
Net income per share	$1.27	$2.68	$2.80
Net income per share, diluted	$1.27	$2.66	$2.79

ACCOUNTING FOR DERIVATIVE INSTRUMENTS – In June 1998, the Financial Accounting Standards Board (FASB) issued Statement of Financial Standards (SFAS) 133, "Accounting for Derivative Instruments and Hedging Activities," which becomes effective for the company no later than January 1, 2000. SFAS 133 establishes accounting and reporting standards for derivative instruments and for hedging activities. It requires that all derivatives be measured at fair value and recognized as either assets or liabilities in the balance sheet. The accounting for changes in the fair value of a derivative (that is, gains or losses) depends on the intended use of the derivative and its resulting hedge designation. The company uses derivative financial instruments only to manage well-defined foreign currency and interest rate risks. The company does not use derivative financial instruments for trading purposes. The company is currently evaluating the requirements of SFAS 133 but, based on its limited use of derivative financial instruments, believes SFAS 133 will not have a significant effect on the company's reported financial position or results of operations when adopted.

NOTE 3 – INVENTORIES

	1998	1997
Finished products	$112,060	$ 94,010
Products in process	66,485	67,246
Raw materials	80,134	81,079
Supplies and engine test parts	18,933	17,783
	$277,612	$260,118

Inventories on the LIFO method were 27% and 29% of consolidated inventories at December 31, 1998 and 1997, respectively. The current replacement cost of these inventories exceeded the LIFO cost at December 31, 1998 and 1997, by $41.1 million and $43.7 million, respectively.

NOTE 4 – SHORT-TERM AND LONG-TERM DEBT

	1998	1997
Long-term debt consists of:		
5.875% notes, due 2008	$200,000	
7.25% debentures, due 2025	100,000	$100,000
Debt supported by long-term banking arrangements:		
Commercial paper at weighted average rates of 5.6% and 6.4%	50,000	35,000
6.5% Marine terminal refunding revenue bonds, due 2000	18,375	18,375
Term loans:		
Dollar denominated, at 5.0% to 9.0%, due 2000 - 2003	4,204	5,544
Yen denominated, at 2.0% to 3.8%, due 1999 - 2003	18,656	19,450
Deutsche mark denominated, at 4.1% to 6.0%, due 1999 - 2004	19,648	14,460
French franc denominated, at 3.5% to 5.0%, due 1999 - 2008	645	366
	411,528	193,195
Less current portion	(21,134)	(11,030)
	$390,394	$182,165
Short-term debt consists of:		
Commercial paper at weighted average rates of 5.6% and 6.4%	$ 5,300	$ 18,900
Other short-term debt at weighted average rates of 2.8% and 1.4%	12,492	8,165
Current portion of long-term debt	21,134	11,030
	$ 38,926	$ 38,095

In November 1998, the company issued notes having an aggregate principal amount of $200 million. The notes are unsecured, senior obligations of the company that mature on December 1, 2008, and bear interest at 5.875% per annum, payable semi-annually on June 1 and December 1 of each year, commencing June 1, 1999. The notes have no sinking fund requirement but are redeemable, in whole or in part, at the option of the company. The company incurred debt issuance costs aggregating $10.5 million, including a loss of $6.5 million related to closed Treasury rate lock agreements originally entered into as a hedge against changes in interest rates relative to the anticipated issuance of these notes. Debt issuance costs are deferred and then amortized as a component of interest expense over the term of the notes. Including debt issuance costs, these notes have an effective annualized interest rate of 6.6% to the company.

The company issued debentures in June 1995 having an aggregate principal amount of $100 million. These debentures are unsecured, senior obligations of the company that mature on June 15, 2025, and bear interest at an annualized rate of 7.25% payable semi-annually on June 15 and December 15 of each year. The debentures are not redeemable prior to maturity and are not subject to any sinking fund requirements.

Effective July 1, 1998, the company increased its committed revolving credit facilities from $75 million to $300 million. One-half of the aggregate amount of these facilities expires on June 30, 1999, and the remainder expires on June 30, 2003, subject in each case to annual extension provisions. These facilities, which were unused at December 31, 1998, permit the company to borrow at or below the U.S. prime rate. These facilities also permit the company to refinance beyond one year $150 million of debt, which by its terms is due within one year. As permitted by these and previously existing credit facilities, the company classified as long-term at each balance sheet date the portion of commercial paper borrowings expected to remain outstanding throughout the following year and the amount due under the Marine Terminal Refunding Revenue Bonds, whose bondholders have the right to put the bonds back to the company.

Amounts due on long-term debt are $21.1 million in 1999, $25.3 million in 2000, $1.7 million in 2001, $.7 million in 2002, $62.0 million in 2003 and $300.7 million thereafter.

The company has an interest rate swap agreement that effectively converts variable rate interest payable on $18.4 million of Marine Terminal Refunding Revenue Bonds due July 1, 2000, to a fixed rate of 6.5%. The company also has interest rate swap agreements, which expire in March 2005, that exchange variable rate interest obligations on a notional principal amount of $50 million for a fixed payment obligation of 7.6% (see Note 14).

Interest paid, net of amounts capitalized, amounted to $18.3 million, $10.9 million and $10.4 million during 1998, 1997 and 1996, respectively. The company capitalizes interest on qualifying capital projects. The amount of interest capitalized during 1998, 1997 and 1996 amounted to $1.2 million, $2.1 million and $3.0 million, respectively.

NOTE 5 – OTHER BALANCE SHEET INFORMATION

Receivables:	1998	1997
Customers	$269,264	$243,232
Affiliates	8,976	7,727
Other	23,404	22,546
	$301,644	$273,505

Receivables are net of allowance for doubtful accounts of $2.2 million in 1998 and $1.4 million in 1997.

Property and Equipment:	1998	1997
Land and improvements	$ 107,712	$ 102,831
Buildings and improvements	299,024	270,237
Machinery and equipment	1,145,471	1,059,575
Construction in progress	56,293	81,181
	$1,608,500	$1,513,824

Depreciation and amortization of property and equipment was $79.7 million in 1998, $82.7 million in 1997 and $78.7 million in 1996.

Goodwill and Intangible Assets:	1998	1997
Goodwill	$157,380	$58,026
Intangible assets	34,271	16,356
	191,651	74,382
Less accumulated amortization	24,694	16,316
	$166,957	$58,066

Accrued Expenses and Other Current Liabilities:	1998	1997
Employee compensation	$ 36,094	$34,757
Income taxes	16,910	25,509
Taxes other than income	20,675	12,105
Special charges and acquisition assimilation costs	18,738	
Other	25,853	24,117
	$118,270	$96,488

Noncurrent Liabilities:	1998	1997
Employee benefits	$33,976	$27,867
Other	14,974	15,011
	$48,950	$42,878

NOTE 6 – SHAREHOLDERS' EQUITY

The company has 147 million authorized shares consisting of 2 million shares of serial preferred stock, 25 million shares of serial preference shares and 120 million common shares, each of which is without par value. Common shares outstanding exclude common shares held in treasury of 31,648,000 and 29,229,000 at December 31, 1998 and 1997, respectively.

The company has a shareholder rights plan under which one right to buy one-half common share has been distributed for each common share held. The rights may become exercisable under certain circumstances involving actual or potential acquisitions of 20% or more of the common shares by a person or affiliated persons who acquire such stock without complying with the requirements of the company's articles of incorporation. The rights would entitle shareholders,

other than such person or affiliated persons, to purchase common shares of the company or of certain acquiring persons at 50% of then current market value. At the option of the directors, the rights may be exchanged for common shares, and may be redeemed in cash, securities or other consideration. The rights will expire in 2007 unless earlier redeemed.

Accumulated other comprehensive income or loss shown in the consolidated statements of shareholders' equity at December 31, 1998, 1997 and 1996 is solely comprised of the accumulated foreign currency translation adjustment, net of tax effects.

Components of other comprehensive income (loss) consists of the following:

	1998	1997	1996
Foreign currency translation adjustments	$14,840	$(36,941)	$ (6,663)
Income tax benefit	38	4	213
Other comprehensive income (loss)	$14,878	$(36,937)	$ (6,450)

NOTE 7 – GAIN ON INVESTMENTS

In 1996, the company sold its investments in Mycogen Corporation and Agrigenetics, Inc., for cash of $126.2 million. The company also sold certain rights to its SVO oilseed technology for $8.0 million, of which $2.0 million was collected in 1996, $2.5 million collected in 1997 and $3.5 million collected in 1998. Also, in 1996, the company sold substantially all the remaining assets of SVO for cash of $20.8 million. These transactions resulted in pretax gains of $57.3 million, but losses on other investment activity resulted in an overall gain of $53.3 million in 1996. After-tax, these gains contributed $.57 to 1996 net income per share.

NOTE 8 – OTHER INCOME (EXPENSE)

Other income (expense) – net consists of the following:

	1998	1997	1996
Equity earnings of nonconsolidated companies	$ 2,602	$ 4,804	$ 4,350
Amortization of goodwill and intangible assets	(7,512)	(3,764)	(1,629)
Currency exchange/ transaction gain (loss)	(1,260)	2,398	11
Other – net	5,018	1,666	3,280
	$(1,152)	$ 5,104	$ 6,012

NOTE 9 – INCOME TAXES

The provision for income taxes is based upon income before tax for financial reporting purposes. Deferred tax assets and liabilities are recognized for the expected future tax consequences of temporary differences between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. In estimating future tax consequences, the company considers anticipated future events, except changes in tax laws or rates, which are recognized when enacted.

Income before income taxes consists of the following:

	1998	1997	1996
United States	$ 78,305	$154,589	$196,390
Foreign	40,509	76,558	54,218
Total	$118,814	$231,147	$250,608

The provision for income taxes consists of the following:

	1998	1997	1996
Current:			
United States	$16,649	$35,556	$39,688
Foreign	25,233	32,137	18,044
	41,882	67,693	57,732
Deferred:			
United States	3,385	8,784	16,842
Foreign	2,347	(199)	6,232
	5,732	8,585	23,074
Total	$47,614	$76,278	$80,806

The United States tax provision includes the U.S. tax on foreign income distributed to the company. The portion of the tax provision for taxes outside the United States includes withholding taxes.

The differences between the provision for income taxes at the U.S. statutory rate and the tax shown in the consolidated statements of income are summarized as follows:

	1998	1997	1996
Tax at statutory rate of 35%	$41,585	$80,901	$87,713
Foreign sales corporation earnings	(3,152)	(4,704)	(3,477)
Equity income	(859)	(2,775)	(1,324)
Foreign deferred tax valuation allowance	4,878	(60)	674
Other foreign tax differences	5,995	3,523	1,866
Other – net	(833)	(607)	(4,646)
Provision for income taxes	$47,614	$76,278	$80,806

The company increased its 1997 tax provision by approximately $3.5 million primarily to reflect a legislated increase in the statutory tax rate applicable to its earnings in France, where the company has significant operations.

The tax effects of temporary differences that give rise to significant portions of deferred tax assets and liabilities at December 31 are as follows:

	1998	1997
Deferred tax assets:		
Accrued compensation and benefits	$ 48,178	$ 43,251
Intercompany profit in inventory	11,131	13,223
Net operating losses carried forward	18,284	15,217
Other	8,574	7,100
Total gross deferred tax assets	86,167	78,791
Less valuation allowance	(9,057)	(4,179)
Net deferred tax assets	77,110	74,612
Deferred tax liabilities:		
Depreciation and other basis differences	101,658	93,206
Undistributed foreign equity income	3,894	3,626
Inventory basis differences	3,706	2,588
Other	2,986	4,657
Total gross deferred tax liabilities	112,244	104,077
Net deferred tax liabilities	$(35,134)	$(29,465)

At December 31, 1998, certain foreign subsidiaries have net operating loss carryforwards of $51.5 million for income tax purposes, of which $11.2 million expire in years 2000 through 2004 and $40.3 million has no expiration. After evaluating tax planning strategies and historical and projected profitability, a valuation allowance has been recognized to reduce the deferred tax assets related to those carryforwards to the amount expected to be realized. The net change in the total valuation allowance for the years ended December 31, 1998, 1997 and 1996, was an increase of $4.9 million, a decrease of $.1 million and an increase of $.7 million, respectively.

U.S. income taxes or foreign withholding taxes are not provided on undistributed earnings of foreign subsidiaries, which are considered to be indefinitely reinvested in the operations of such subsidiaries. The amount of such earnings was approximately $386.6 million at December 31, 1998. Determination of the net amount of unrecognized U.S. income tax with respect to these earnings is not practicable.

Income taxes paid during 1998, 1997 and 1996 amounted to $52.0 million, $53.0 million and $55.0 million, respectively.

NOTE 10 – PENSION, PROFIT SHARING AND OTHER POSTRETIREMENT BENEFIT PLANS

At December 31, 1998, the company adopted SFAS 132, "Employers' Disclosure about Pensions and Other Postretirement Benefits." This statement revises the disclosures about pension and other postretirement benefit plans but does not change the way obligations or expense are measured or recognized in the financial statements. Disclosures for prior periods have been restated to conform to the requirements of SFAS 132.

The company has noncontributory defined benefit pension plans covering most employees. Pension benefits under these plans are based on years of service and the employee's compensation. The company's funding policy in the United States is to contribute amounts to satisfy the Internal Revenue Service funding standards and elsewhere to fund amounts in accordance with local regulations. Several of the company's defined benefit plans are not funded. Plan assets are invested principally in marketable equity securities and fixed income instruments.

The company also provides certain non-pension postretirement benefits, primarily health care and life insurance benefits, for retired employees. Substantially all of the company's full-time employees in the U.S. become eligible for these benefits after attaining specified years of service and age 55 at retirement. Participants contribute a portion of the cost of such benefits. The company's non-pension postretirement benefit plans are not funded.

Net periodic pension cost of the company's defined benefit pension plans consists of:

	1998	1997	1996
Service cost – benefits earned during period	$11,142	$10,269	$11,097
Interest cost on projected benefit obligation	17,519	17,704	17,690
Expected return on plan assets	(23,818)	(21,976)	(19,935)
Amortization of prior service costs	1,718	1,827	2,045
Amortization of initial net (asset) obligation	(753)	(1,295)	(1,260)
Recognized net actuarial (gain) loss	(381)	(127)	(206)
Net periodic pension cost	$ 5,427	$ 6,402	$ 9,431

The company also has defined contribution plans, principally involving profit sharing plans and a 401(k) savings plan, covering most employees in the United States and at certain non-U.S. subsidiaries. Expense for all defined contribution retirement plans was $8.1 million in 1998, $9.9 million in 1997 and $10.2 million in 1996.

As discussed in Note 16, the company initiated a cost reduction program and recognized special termination benefits of $18.3 million in 1998, which were included in the special charge recognized in the fourth quarter.

Net non-pension postretirement benefit cost consists of:

	1998	1997	1996
Service cost – benefits earned during period	$ 1,250	$ 1,465	$ 1,609
Interest cost on accumulated benefit obligation	4,415	4,989	4,987
Amortization of prior service costs	(3,218)	(3,218)	(3,218)
Recognized net actuarial (gain) loss	(252)		
Net non-pension postretirement benefits cost	$ 2,195	$ 3,236	$ 3,378

The change in benefit obligation, change in plan assets of the company's defined benefit pension and non-pension postretirement plans and the amounts recognized in the consolidated balance sheets at December 31 are as follows:

	Pension Plans		Other Benefits	
	1998	1997	1998	1997
Change in benefit obligation:				
Benefit obligation at beginning of year	$254,263	$248,719	$ 61,460	$ 66,547
Service cost	11,142	10,269	1,250	1,465
Interest cost	17,519	17,704	4,415	4,989
Actuarial (gain) loss	27,096	8,827	8,352	(9,055)
Currency exchange rate change	2,834	(4,793)	(80)	(1)
Amendments	709	(146)		
Curtailments	(195)			
Special termination benefits	4,684	974		
Benefits paid	(20,569)	(27,291)	(3,350)	(2,485)
Benefit obligation at end of year	297,483	254,263	72,047	61,460
Change in plan assets:				
Fair value of plan assets at beginning of year	298,130	271,887		
Actual return on plan assets	16,786	45,479		
Employer contributions	4,719	4,739	3,350	2,485
Currency exchange rate change	896	(3,331)		
Benefits paid	(19,958)	(20,644)	(3,350)	(2,485)
Fair value of plan assets at end of year	300,573	298,130		
Plan assets greater (less) than the benefit obligation	3,090	43,867	(72,047)	(61,460)
Unrecognized net loss (gain)	(7,981)	(42,550)	(1,225)	(9,819)
Unrecognized net transition obligation (asset)	(5,571)	(6,851)		
Unrecognized prior service cost	9,785	10,813	(30,620)	(33,838)
Net amount recognized	$ (677)	$ 5,279	$(103,892)	$(105,117)
Amount recognized in the statement of financial position consist of:				
Prepaid benefit cost	$ 15,885	$ 17,534		
Accrued benefit liability	(20,120)	(14,315)	$(103,892)	$(105,117)
Intangible asset	3,558	2,060		
Net amount recognized	$ (677)	$ 5,279	$(103,892)	$(105,117)

	Pension Plans		Other Benefits	
	1998	1997	1998	1997
The weighted average assumptions as of December 31:				
Discount rate for determining funded status	6.08%	6.92%	6.71%	7.21%
Expected return on plan assets	9.01%	9.00%		
Rate of compensation increase	3.78%	4.01%		

The projected benefit obligation and fair value of plan assets for pension plans with projected benefit obligations in excess of plan assets were $123.1 million and $97.2 million, respectively, as of December 31, 1998, and $25.5 million and $6.2 million, respectively, as of December 31, 1997. The accumulated benefit obligation and fair value of plan assets for pension plans with accumulated benefit obligations in excess of plan assets were $31.6 million and $13.9 million, respectively, as of December 31, 1998, and $19.2 million and $6.2 million, respectively, as of December 31, 1997.

For the company's postretirement health care plan in the United States, the company revised its assumed ultimate health care cost trend rate from 6% to 5% during 1997. This revision reduced the accumulated postretirement benefit obligation at December 31, 1997, by $8.9 million. Beginning in 1998, this gain is being amortized over the average remaining service period of participants.

The weighted average of the assumed health care cost trend rates used in measuring the accumulated postretirement benefit obligation for the company's postretirement benefit plans at December 31, 1998, was 7.45% (8.00% at December 31, 1997), with subsequent annual decrements to an ultimate trend rate of 5.00%. The assumed health care cost trend rates have a significant effect on the amounts reported for the health care plan. A one-percentage-point change in the assumed health care cost trend rate would have the following effects as of and for the year ended December 31, 1998:

	One Percentage Point	
	Increase	Decrease
Effect on postretirement benefit obligation	$ 8,810	$ (7,157)
Effect on total service and interest cost components	$ 961	$ (764)

NOTE 11 – LEASES

The company has commitments under operating leases primarily for office space, terminal facilities, land, railroad tank cars and various computer and office equipment. Rental expense was $18.7 million in 1998, $13.8 million in 1997 and $16.9 million in 1996. Future minimum rental commitments under operating leases having initial or remaining noncancelable lease terms exceeding one year are $13.2 million in 1999, $10.2 million in 2000, $6.9 million in 2001, $5.5 million in 2002, $5.4 million in 2003 and $17.6 million thereafter.

NOTE 12 – ACQUISITIONS

In 1998, the company completed six acquisitions for cash of $155.4 million and one acquisition for 89,806 of the company's common shares valued at $2.4 million. These acquisitions were in the company's existing business areas of lubricant and fuel additives, metalworking additives and coating additives and broaden the company's base in performance chemicals. These acquisitions were accounted for using the purchase method of accounting.

The fair value of assets acquired and liabilities assumed in these acquisitions is as follows:

Inventories	$ 20,713
Receivables	26,424
Property and equipment	8,502
Other tangible assets	2,986
Goodwill	97,882
Technology and other intangibles	16,173
Technology under development	13,598
Accounts payable and other liabilities assumed	(28,470)
Fair value of net assets acquired, less $2,165 of cash received	$157,808

These acquisitions were made at various times throughout the year; however, the two largest acquisitions were Adibis, formerly the lubricants and fuel additives business of British Petroleum Company P.L.C., which was acquired effective August 1, 1998, and Carroll Scientific, Inc., (Carroll), which was acquired in July 1998. Carroll specializes in the development and supply of varnish and wax-based performance additives to the ink market. The aggregate purchase price of these two acquisitions was $134 million, of which $111 million was assigned to goodwill and intangible assets. During 1997, the annual revenues of Carroll were approximately $30 million and of Adibis were approximately $150 million.

The impact of the acquisitions made in 1998 was not material in relation to the company's results of operations; consequently, pro forma information is not presented. However, these acquisitions had the following impact on revenues and expenses for 1998:

Revenues	$71,662
Gross profit	$15,267
Selling and administration expenses	$ 7,397
Research, testing and development	$ 5,591
After-tax loss, excluding write-off of technology under development and interest on acquisition debt	$ (1,844)

The company is in the process of assimilating the Adibis additives business. The company's assimilation plan includes separation of a number of Adibis employees at an estimated cost of $3.9 million and terminating certain Adibis contracts for tolling arrangements, office leases and sales agents at an estimated cost of $2.7 million. These activities are planned for completion by the end of 1999, with the employee separations completed by the end of the first half of 1999. The aggregate cost of $6.6 million represents cash expenditures expected to be made in 1999. The cost of these activities was included in the allocation of the acquisition costs to the net assets acquired.

The company engaged an independent appraiser to provide a basis for allocating the purchase price of Adibis to the acquired intangible assets for financial reporting purposes. The appraisal included the determination of the amount to be assigned to technology under development which, under purchase accounting, is written off against income in the period of acquisition. Technology under development comprises ongoing research and development projects that may form the basis for new products or replacements for existing products. The fair value assigned to the Adibis technology under development was determined by the independent appraiser applying the income approach and a valuation model, incorporating among other assumptions revenue and expense projections, probability of success and present value factors. The resulting value allocated to each of the technology projects under development represents the product of the present value of debt-free cash flows and the percent of research and development completed. The fair value of technology under development was comprised of three projects within engine oil additives aggregating $7.1 million; six projects within fuel additives aggregating $3.4 million; and two projects within marine diesel additives aggregating $3.1 million. The amount of the purchase price allocated to technology under development was $13.6 million and was charged against income in the fourth quarter of 1998 upon completion of the appraisal.

NOTE 13 – BUSINESS SEGMENTS AND GEOGRAPHIC REPORTING

At December 31, 1998, the company adopted SFAS 131, "Disclosures about Segments of an Enterprise and Related Information." This statement establishes standards for reporting information about operating segments and related disclosures about products and services, geographic areas and major customers. Prior year financial data by geographic area has been restated to conform to the current year's presentation. The company aggregates its product lines into two principal operating segments: chemicals for transportation and chemicals for industry. Chemicals for transportation is comprised of additives for lubricating engine oils, such as for gasoline, diesel, marine and stationary gas engines; additives for driveline oils, such as automatic transmission fluids, gear oils and tractor lubricants; and additives for fuel products and refinery and oil field chemicals. In addition, the company sells additive components to its larger customers and viscosity improvers within its lubricant and fuel additives product lines. The company's chemicals for transportation product lines are generally produced in shared manufacturing facilities and sold largely to a common customer base. Chemicals for industry includes industrial additives, such as additives for hydraulic fluids, metalworking fluids, and compressor lubricants; performance chemicals, such as additives for coatings and inks and process chemicals; and performance systems, comprised principally of fluid metering devices and particulate emission trap devices.

The company's accounting policies for its operating segments are the same as those described in Note 1. The company evaluates performance and allocates resources based on segment contribution income, which is revenues less expenses directly identifiable to the product lines aggregated within each segment. In addition, the company allocates corporate research, testing, selling and administrative expenses in arriving at segment operating profit before tax.

The following table presents a summary of the company's reportable segments for the years ended December 31:

	1998	1997	1996
Chemicals for transportation:			
Revenues from external customers	$1,361,306	$1,446,342	$1,375,759
Equity earnings	2,434	4,540	4,063
Goodwill and intangibles amortization	2,964	1,239	1,207
Segment contribution income	238,076	322,377	286,620
Operating profit before tax	130,149	213,184	185,068
Segment total assets	1,191,175	1,076,153	1,057,959
Capital expenditures	90,369	98,482	91,340
Chemicals for industry:			
Revenues from external customers	$ 256,613	$ 227,440	$ 221,803
Equity earnings	168	264	287
Goodwill and intangibles amortization	5,414	3,274	1,083
Segment contribution income	33,959	37,302	27,330
Operating profit before tax	22,552	24,178	15,501
Segment total assets	256,905	194,492	179,675
Capital expenditures	3,052	2,218	2,957
Reconciliation to consolidated income before tax:			
Segment operating profit before tax	$ 152,701	$ 237,362	$ 200,569
Gain from litigation settlement	16,201		
Gain on investments			53,280
Special charges	(36,892)		
Interest expense – net	(13,196)	(6,215)	(3,241)
Consolidated income before tax	$ 118,814	$ 231,147	$ 250,608
Revenues from external customers by product group:			
Engine oil additives	$ 799,795	$ 862,488	$ 805,683
Driveline oil additives	384,880	400,154	397,475
Fuel additives and refinery oil additives	78,023	69,904	73,425
Additive components	98,608	113,796	99,176
Chemicals for transportation	1,361,306	1,446,342	1,375,759
Industrial additives	149,087	133,200	103,881
Performance chemicals	84,478	73,702	68,559
Performance systems	23,048	20,538	15,986
Specialty vegetable oils			33,377
Chemicals for industry	256,613	227,440	221,803
Total revenues from external customers	$1,617,919	$1,673,782	$1,597,562

Revenues are attributable to countries based on the location of the customer. The United States is the only country where sales to external customers comprise in excess of 10% of the company's consolidated revenues. Revenues from external customers by geographic area are as follows:

	1998	1997	1996
United States	$ 605,145	$ 602,918	$ 565,516
Other North American	50,685	53,030	57,647
Europe	509,728	498,852	529,006
Asia-Pacific	262,341	315,426	272,551
Latin America, Middle East, other	190,020	203,556	172,842
Total revenues from external customers	$1,617,919	$1,673,782	$1,597,562

The company's sales and receivables are concentrated in the oil and chemical industries. The company's lubricant and fuel additive customers consist primarily of oil refiners and independent oil blenders and are located in more than 100 countries. The ten largest customers, most of which are international oil companies and a number of which are groups of affiliated entities, comprised approximately 42% of consolidated sales in 1998, and 44% of consolidated sales in 1997 and 1996. The company's largest single customer, including its affiliated entities, accounted for less than 10% of consolidated revenues in 1998, but in each of 1997 and 1996 accounted for revenues of $161.2 million and $163.7 million, respectively, predominately within chemicals for transportation segment.

The table below presents a reconciliation of segment total assets to consolidated total assets for the years ended December 31:

	1998	1997	1996
Total segment assets	$1,448,080	$1,270,645	$1,237,634
Corporate assets	195,157	191,647	164,481
Total consolidated assets	$1,643,237	$1,462,292	$1,402,115

Segment assets include recievables, inventories, and long-lived assets including goodwill and intangible assets. Corporate assets include cash and short-term investments, investments accounted for on the cost basis, and other current and noncurrent assets.

The company's principal long-lived assets are located in the following countries at December 31:

	1998	1997
United States	$554,983	$503,589
France	109,990	105,777
England	134,127	72,001
All other	86,707	69,376
Total long-lived assets	$885,807	$750,743

Net income of non-U.S. subsidiaries was $13 million in 1998, $43 million in 1997 and $29 million in 1996; and dividends received from these subsidiaries were $15 million, $7 million and $18 million, respectively.

NOTE 14 – FINANCIAL INSTRUMENTS

The company has various financial instruments, including cash and short-term investments, investments in nonconsolidated companies, foreign currency forward contracts, interest rate swaps and short- and long-term debt. The company has determined the estimated fair value of these financial instruments by using available market information and generally accepted valuation methodologies. The use of different market assumptions or estimation methodologies could have a material effect on the estimated fair value amounts. The estimated fair value of the company's debt instruments at December 31, 1998, approximates $437.1 million compared with the carrying value of $429.3 million. The company believes the carrying values of its other financial instruments approximate their fair values, except for certain interest rate swap agreements discussed below. The company uses derivative financial instruments only to manage well-defined foreign currency and interest rate risks. The company does not use derivative financial instruments for trading purposes.

The company is exposed to the effect of changes in foreign currency rates on its earnings and cash flow as a result of doing business internationally. In addition to working capital management, pricing and sourcing, the company selectively uses foreign currency forward contracts to lessen the potential effect of currency changes. Such contracts are generally in connection with transactions with maturities of less than one year. The maximum amount of foreign currency forward contracts outstanding at any one time was $65.0 million in 1998, $58.4 million in 1997 and $41.2 million in 1996. At December 31, 1998, the company had short-term forward contracts to sell currencies at various dates during 1999 for $4.2 million. Realized and unrealized gains or losses on these contracts are recorded in the statement of income, or in the case of transactions designated as hedges of net foreign investments, in the foreign currency translation adjustment account in other comprehensive income. Additionally, foreign currency forward contract gains and losses on certain future transactions may be deferred until the future transaction is recorded. Deferred currency losses on foreign exchange contracts at December 31, 1998, were not significant.

The company is exposed to market risk from changes in interest rates. The company's policy is to manage interest rate cost using a mix of fixed and variable rate debt. To manage this mix in a cost-efficient manner, the company may enter into interest rate swaps, in which the company agrees to exchange, at specified intervals, the difference between fixed and variable interest amounts calculated by reference to an agreed upon notional principal amount. The company has entered into interest rate swap agreements to convert variable rate debt to fixed rates (see Note 4). Interest payments receivable and payable under the terms of the interest rate swap agreements are accrued over the period to which the payment relates and the net difference is treated as an adjustment of interest expense related to the underlying liability. Changes in the underlying market value of the remaining swap payments are recognized in income when the underlying liability being hedged is extinguished or partially extinguished to a level less than the notional amount of the interest rate swaps. Consequently, market value losses of $1.0 million and $1.1 million were accrued in 1997 and 1996, respectively, and no amount was accrued in 1998. The company would have paid approximately $7.7 million, including accrued interest of $.9 million, if it had terminated these interest rate swap agreements at December 31, 1998.

NOTE 15 – STOCK COMPENSATION PLANS

The 1991 Stock Incentive Plan provides for granting of restricted and unrestricted shares and options to buy common shares up to an amount equal to 1% of the outstanding common shares at the beginning of any year, plus any unused amount from prior years. Options are intended either to qualify as "incentive stock options" under the Internal Revenue Code or "non-statutory stock options" not intended to so qualify. Under the 1991 Plan, options generally become exercisable 50% one year after grant, 75% after two years, 100% after three years, and expire up to ten years after grant. "Reload options," which are options to purchase additional shares if a grantee uses already-owned shares to pay for an option exercise, are granted automatically under the 1991 Plan and may be granted at the discretion of the administering committee under the 1985 Employee Stock Option Plan. The 1991 Plan generally supersedes the 1985 Plan, although options outstanding under the 1985 Plan remain exercisable until the expiration dates. The option price under both plans is the fair market value of the shares on the date of grant. Both plans permit or permitted the granting of stock appreciation rights in connection with the grant of options. In addition, the 1991 Plan provides to each outside director of the company an automatic annual grant of an option to purchase 2,000 common shares, with terms generally comparable to employee stock options.

Under the 1991 Stock Incentive Plan, the company granted to certain executive officers 3,000 and 65,000 performance share stock awards in 1998 and 1997, respectively. Common shares equal to the number of performance share stock awards granted will be issued if the market price of the company's common stock reaches $45 per common share for ten consecutive trading days or after six years from date of grant, whichever occurs first. Under certain conditions such as retirement, a grantee of performance share stock awards may be issued a pro-rata number of common shares. The market value of the company's common shares at date of grant of the performance share stock awards was $38.25 per share in 1998 and $33.75 per share in 1997. The company recognizes compensation expense related to performance share stock awards ratably over the estimated period of vesting. Compensation costs recognized for

performance share stock awards was $.8 million in 1998 and $.5 million in 1997. At December 31, 1998, 67,166 performance share stock awards were outstanding.

Generally accepted accounting principles encourage the fair-value based method of accounting for stock compensation plans under which the value of stock-based compensation is estimated at the date of grant using valuation formulas, but permit the continuance of intrinsic-value accounting. The company accounts for its stock compensation plans using the intrinsic-value accounting method (measured as the difference between the exercise price and the market value of the stock at date of grant). If the fair value method to measure compensation cost for the company's stock compensation plans had been used, the company's net income would have been reduced by $1.6 million in 1998, $2.6 million in 1997 and $2.0 million in 1996 with a corresponding reduction in net income per share of $.03 in 1998, $.05 in 1997 and $.03 in 1996.

Disclosures under the fair value method are estimated using the Black-Scholes option-pricing model with the following weighted-average assumptions for grants of stock options in the following years:

	1998	1997	1996
1985 Plan:			
Risk-free interest rate	4.6%	5.7%	6.6%
Dividend yield	4.0%	2.7%	3.4%
Volatility	21%	20%	23%
Expected life (years)	2.8	3.1	3.7
1991 Plan:			
Risk-free interest rate	4.7%	5.8%	6.3%
Dividend yield	4.0%	2.7%	3.4%
Volatility	23%	22%	23%
Expected life (years)	9.5	9.9	8.8

The fair value per share of the performance share stock awards granted in 1998 and 1997 was $33.94 and $31.80, respectively, using the following assumptions in 1998 and 1997, respectively: risk-free interest rate of 4.58% and 5.7%; volatility of 21% and 20%; and an expected life of three years. Dividends do not accumulate on performance share stock awards.

Information regarding these option plans, excluding the performance share stock awards, follows:

	Shares	Weighted-Average Exercise Price
Outstanding, January 1, 1998	3,212,157	$31.88
Granted	410,248	37.69
Exercised	(125,463)	29.38
Forfeited	(13,626)	31.23
Outstanding, December 31, 1998	3,483,316	$32.64
Options exercisable, December 31, 1998	2,842,719	$31.97
Weighted-average fair value of options granted during the year		$ 7.74
Outstanding, January 1, 1997	3,248,113	$30.93
Granted	417,561	35.07
Exercised	(361,179)	25.85
Forfeited	(92,338)	35.88
Outstanding, December 31, 1997	3,212,157	$31.88
Options exercisable, December 31, 1997	2,590,556	$31.67
Weighted-average fair value of options granted during the year		$ 9.37
Outstanding, January 1, 1996	2,958,416	$30.70
Granted	497,566	29.96
Exercised	(99,427)	18.25
Forfeited	(108,442)	31.86
Outstanding, December 31, 1996	3,248,113	$30.93
Options exercisable, December 31, 1996	2,574,762	$30.57
Weighted-average fair value of options granted during the year		$ 8.05

The following table summarizes information about stock options outstanding, excluding the performance share stock awards, at December 31, 1998:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding at 12/31/98	Weighted-Average Remaining Contractual Life	Weighted-Average Exercise Price	Number Exercisable at 12/31/97	Weighted-Average Exercise Price
$13 – $19	73,160	1.1 Years	$16.66	73,160	$16.66
19 – 25	81,875	1.0	21.94	81,875	21.94
25 – 31	1,125,982	4.9	28.88	1,035,313	28.78
31 – 38	2,129,965	6.0	35.28	1,586,037	34.85
38 – 45	72,334	2.4	41.77	66,334	42.09
	3,483,316	5.4	$32.64	2,842,719	$31.97

NOTE 16 – SPECIAL CHARGES AND ASSET IMPAIRMENTS

In the fourth quarter of 1998, the company recognized special charges of $36.9 million comprised of $23.3 million related to the first phase of the company's cost reduction program and $13.6 million for the write-off of purchased technology under development resulting from the acquisition of Adibis (see Note 12). After-tax, these charges reduced net income by $25.8 million, or by $.47 per share in the fourth quarter. These special charges related predominately to the company's chemicals for transportation segment.

The company initiated a series of steps to reduce costs and improve its worldwide operating structure and will execute these steps in two phases over a period of approximately two years. The first phase, which began in the fourth quarter of 1998, will result in employee reductions of approximately 6%, or 250 employees worldwide. Approximately 55% of these employee reductions occurred prior to December 31, 1998, and the remaining 45% will occur during the first half of 1999. Of the 250 employees, approximately 40% were in the manufacturing area and 60% were in the selling, administrative, research and testing areas. In addition, the company will permanently remove several component production units from service during this first phase.

The first phase of the company's cost reduction program included employee reduction cost estimated at $20.0 million and other exit costs estimated at $3.3 million, including $2.8 million related to asset impairments for production units to be taken out of service. Cash expenditures of approximately $5.0 million were made in 1998 related to the cost reduction program. Approximately $15.5 million remains as an accrued liability at December 31, 1998, most of which represents cash to be expended in 1999.

The second phase of the company's cost reduction program will be focused on lowering costs and improving efficiency in production and distribution activities. The company will continue to reduce its number of intermediate components, which will enable the number of its production units to be reduced by approximately 20% in the next two years. This will occur through the shutdown of certain production units and facilities worldwide. The company believes employee levels will be reduced a further 5% from these steps. Definitive plans must be completed before the company is able to reasonably estimate and recognize the costs of facility write-downs and employee separations anticipated during this second phase of the cost reduction program.

In 1997, the company provided $9.4 million for the impairment of long-lived assets. This included $6.3 million to reduce the carrying value of certain computer equipment and software made obsolete prior to expiration of their original estimated useful lives due to new systems being implemented. Also, during the fourth quarter the company decided to utilize a toll processor, beginning in 1998, rather than to produce an intermediate internally. This decision resulted in the permanent impairment of certain manufacturing equipment, and a provision of $3.1 million was recorded to reduce the asset carrying value to its estimated fair value. Fair value was determined by estimating the present value of future cash flows. These impairment losses are reflected in the consolidated statements of income for the year ended December 31, 1997, as follows: cost of sales – $4.4 million; research, testing and development expenses – $.9 million; selling and administrative expenses – $1.8 million and other income (net) – $2.3 million.

NOTE 17 – LITIGATION

The company has filed claims against Exxon Corporation and/or its affiliates relating to various commercial matters, including alleged infringements by Exxon of certain of the company's patents. These suits are pending in the United States (in Ohio) and Canada.

On April 23, 1998, the company reached a settlement with Exxon of a lawsuit pending in federal court in Ohio and received cash of $19 million. After deducting related expenses, this settlement increased pretax income by $16.2 million in 1998. Other lawsuits then pending between the company and Exxon in the United States, Canada and the United Kingdom were not settled by this agreement.

The company has prevailed in a case brought in Canada against Exxon's Canadian affiliate, Imperial Oil, Ltd., for infringement of the company's patent pertaining to dispersants, the largest additive component used in motor oils. A 1990 trial court verdict in favor of the company regarding the issue of liability was upheld by the Federal Court of Appeals of Canada in December 1992, and in October 1993, the Supreme Court of Canada dismissed Imperial Oil's appeal of the Court of Appeals' decision. The case has been returned to the trial court for an assessment of compensation damages, but no date has been set for a determination of such damages. In October 1994, the trial court judge determined that Imperial Oil had violated an earlier injunction for the manufacture or sale of the dispersant that is the subject of this case. The determination of penalty damages, if any, on account of this violation will be made after the court has determined the compensation damages for patent infringement.

In November 1996, a patent trial court in London declared a Lubrizol United Kingdom patent invalid, which patent was the subject of litigation brought by the company against Exxon in that country. Although the trial court decision did not involve any damage payments, the court awarded Exxon its recoverable legal costs in the case, as is customary under U.K. practice. Exxon originally filed with the court a request for legal costs of approximately $12.0 million. The company made a $3.0 million contingent payment to Exxon in July 1997, which was fully expensed in that year. On April 30, 1998, some, but not all, of the findings against the company were reversed and the percentage of Exxon's legal costs which are recoverable was reduced from 90% to 25%. The proceedings in this case are completed except for the final determination of Exxon's recoverable legal costs. The company presently believes it will not be required to make any further payments to Exxon for this matter.

A reasonable estimation of the company's potential recovery relating to the Exxon litigation referenced above cannot be made at this time, and no amounts that may be recovered in the future have been recorded in the company's financial statements as of December 31, 1998.

Quarterly Financial Data (Unaudited)

	Three Months Ended			
	March 31	June 30	Sept. 30	Dec. 31
	(In Thousands of Dollars Except Per Share Data)			
1998				
Net sales	$399,900	$405,160	$403,262	$406,236
Gross profit	122,865	126,143	120,252	111,971
Net income (loss)	29,668	39,963	16,614	(15,045)
Net income (loss) per share	$.52	$.71	$.30	$(.27)
Net income (loss) per share, diluted	$.52	$.71	$.30	$(.27)
1997				
Net sales	$387,749	$432,556	$426,824	$422,122
Gross profit	129,642	149,543	136,540	129,924
Net income	38,861	46,900	38,652	30,456
Net income per share	$.66	$.81	$.67	$.53
Net income per share, diluted	$.66	$.80	$.66	$.53

In the second quarter of 1998, the company recorded a pretax gain from litigation settlement of $16.2 million ($.19 per share).

In the fourth quarter of 1998, the company recorded pretax special charges of $23.3 million ($.30 per share) related to a cost reduction program and $13.6 million ($.17 per share) related to the write-off of purchased technology under development resulting from the company's acquisition of Adibis.

Historical Summary

(In Millions, Except Shareholders, Employees and Per Share Data)	**1998**	1997	1996
OPERATING RESULTS:			
Revenues	**$1,617.9**	$1,673.8	$1,597.6
Total cost and expenses	**1,464.1**	1,441.5	1,403.0
Other income (charges)	**(35.0)**	(1.1)	56.1
Net income	**71.2**	154.9	169.8
– Before unusual items and accounting changes	**86.5**	154.9	135.2
Net income per share	**1.27**	2.68	2.80
– Before unusual items and accounting changes	**1.55**	2.68	2.23
FINANCIAL RATIOS:			
Gross profit percentage	**29.8**	32.7	32.0
Percent of revenues:			
Selling and administrative expenses	**11.1**	10.2	9.9
Research and testing expenses	**9.3**	8.8	10.1
Return on average shareholders' equity (%)	**9.0**	19.0	20.4
– Before unusual items and accounting changes (%)	**10.9**	19.0	16.2
Debt to capitalization (%)	**35.8**	21.3	19.5
Current ratio	**2.5**	2.5	2.6
OTHER INFORMATION:			
Dividends declared per share	**$ 1.04**	$ 1.01	$ .97
Average common shares outstanding	**55.9**	57.8	60.7
Capital expenditures	**$ 93.4**	$ 100.7	$ 94.3
Depreciation expense	**79.7**	82.7	78.7
At Year End:			
Total assets	**$1,643.2**	$1,462.3	$1,402.1
Total debt	**429.3**	220.3	198.5
Total shareholders' equity	**769.1**	815.4	819.4
Shareholders' equity per share	**14.10**	14.31	14.00
Common share price	**25.69**	36.88	31.00
Number of shareholders	**5,609**	5,661	5,764
Number of employees	**4,324**	4,291	4,358

1995	1994	1993	1992	1991	1990	1989	1988
$1,663.6	$1,599.0	$1,525.5	$1,552.2	$1,476.3	$1,452.7	$1,227.9	$1,125.7
1,478.0	1,397.0	1,362.2	1,390.5	1,308.7	1,288.4	1,109.7	1,009.9
40.0	49.4	(43.6)	15.4	10.5	106.9	19.5	69.9
151.6	175.6	45.6	124.6	123.7	190.0	94.0	140.0
126.6	148.8	113.5	124.6	123.7	133.5	94.0	88.4
2.37	2.67	.67	1.81	1.79	2.67	1.26	1.81
1.98	2.26	1.67	1.81	1.79	1.87	1.26	1.14
31.5	32.7	32.0	31.7	32.4	30.3	29.2	29.9
9.8	10.0	10.4	11.7	11.7	10.9	10.8	10.5
10.8	10.3	11.2	10.0	9.8	8.5	9.2	9.6
18.0	22.5	5.9	15.4	16.2	27.2	14.2	21.8
15.1	19.0	14.6	15.4	16.2	18.0	14.2	13.7
22.5	16.8	8.7	5.6	7.9	8.3	8.5	8.4
2.4	2.5	2.5	2.9	2.7	2.7	3.0	3.1
$ .93	$ .89	$ .85	$ .81	$ .77	$ .73	$ .69	$ .65
63.8	65.7	67.7	69.0	69.3	71.1	74.7	77.4
$ 189.3	$ 160.5	$ 127.9	$ 95.8	$ 82.4	$ 77.4	$ 64.7	$ 54.6
71.8	63.9	59.6	58.4	54.6	54.0	48.7	46.6
$1,492.0	$1,394.4	$1,182.6	$1,127.1	$1,171.7	$1,114.6	$ 960.2	$ 970.7
247.1	167.9	69.6	48.4	67.8	66.6	61.2	60.8
849.0	832.0	732.2	819.4	794.5	736.2	663.3	664.3
13.48	12.83	11.00	11.97	11.51	10.61	8.96	8.74
27.75	33.88	34.13	27.25	28.25	23.63	18.75	17.75
6,304	6,494	6,616	6,822	6,767	6,692	7,370	7,782
4,601	4,520	4,613	4,609	5,299	5,169	5,030	4,781

Board of Directors

W. G. Bares
Chairman of the Board, President and Chief Executive Officer

Edward F. Bell
Retired President and Chief Executive Officer of Ameritech Ohio, which provides telephone, data transmission and telecommunications services in Ohio.

L. E. Coleman
Retired Chairman and Chief Executive Officer of The Lubrizol Corporation.

Peggy Gordon Elliott
President of South Dakota State University.

Forest J. Farmer, Sr.
President and Chief Executive Officer of North American Interiors, Inc., a company that provides sequencing and value-added subassemblies to the automotive industry.

Gordon D. Harnett
Chairman, President and Chief Executive Officer of Brush Wellman Inc., the world's largest producer of beryllium and beryllium-containing engineered products.

Victoria F. Haynes
Vice President–Research and Development and Chief Technical Officer of The BFGoodrich Company, a specialty chemicals and aerospace company.

David H. Hoag
Retired Chairman and Chief Executive Officer of The LTV Corporation and Chief Executive Officer of LTV Steel Company, a metals company engaged in the production of flat rolled carbon steel.

William P. Madar
Chairman of the Board of Nordson Corporation, a company that manufactures and markets industrial equipment.

Ronald A. Mitsch
Retired Vice Chairman and Executive Vice President of 3M, a manufacturer of products for industrial, commercial, health care and consumer markets.

M. Thomas Moore
Retired Chairman and Chief Executive Officer of Cleveland-Cliffs Inc., the world's largest iron ore pellet producer.

Transfer Agent, Registrar and Dividend Disbursing Agent

American Stock Transfer & Trust Company

40 Wall Street

New York, NY 10005

(212) 936-5100 (800) 937-5449

Annual Meeting

The Annual Meeting of Shareholders will be held at the Radisson Hotel & Conference Center Cleveland Northeast, Eastlake, Ohio, on April 26, 1999.

Form 10-K

The Form 10-K Annual Report to the Securities and Exchange Commission will be available March 31, 1999. A copy may be obtained without charge upon written request to the Secretary of the Corporation or from the Lubrizol Web site.

Shareholder Information

The Common Shares of The Lubrizol Corporation are listed on the New York Stock Exchange under the symbol LZ. The number of shareholders of record of Common Shares was 5,619 as of February 10, 1999.

Lubrizol shareholders of record may purchase additional shares of stock through a dividend reinvestment program. Interested shareholders should contact our transfer agent, American Stock Transfer & Trust Company, at the address and telephone number listed above.

Internet Web Site

Company and investor information is available at the Internet Web site: http://www.lubrizol.com.

Officers

W. G. Bares
Chairman, President and Chief Executive Officer

George R. Hill
Senior Vice President

Ray A. Andreas
Vice President

Joseph W. Bauer
Vice President and General Counsel

Charles P. Cooley
Vice President, Treasurer and Chief Financial Officer

Stephen A. Di Biase
Vice President

Joe E. Hodge
Vice President

K. H. Hopping
Vice President and Secretary

S. F. Kirk
Vice President

Yannick Le Couédic
Vice President

Mark W. Meister
Vice President and Chief Ethics Officer

Richard D. Robins
Vice President

J. Alun Thomas
Vice President

Gregory P. Lieb
Controller—Accounting and Financial Reporting

Leslie M. Reynolds
Assistant Secretary

29400 Lakeland Boulevard • Wickliffe, Ohio 44092-2298 • (440) 943-4200 • http://www.lubrizol.com

Principal Subsidiaries and Branches

Lubrizol Adibis (Africa) (Pty.) Ltd.
Lubrizol Adibis (UK) Limited
Lubrizol Adibis Holdings (UK) Limited
Lubrizol Adibis Scandinavia A/S
Lubrizol Australia
Lubrizol do Brasil Aditivos, Ltda.
Lubrizol Canada Limited
Lubrizol de Chile Limitada
Lubrizol China, Inc.
Lubrizol Coating Additives Company GmbH (Germany)
Lubrizol Española, S.A.
Lubrizol Europe B.V. (The Netherlands)
Lubrizol France S.A.R.L.
Lubrizol Gesellschaft m.b.H. (Austria)
Lubrizol GmbH (Germany)
Lubrizol International Inc.
Lubrizol International Management Corporation
Lubrizol Italiana, S.p.A.
Lubrizol Japan Limited
Lubrizol Korea
Lubrizol Limited (England)
Lubrizol Metalworking Additives Company, Inc.
Lubrizol de Mexico S. de R.L.
Lubrizol de Mexico Comercial S. de R.L. de C.V.
Lubrizol Overseas Trading Corporation
Lubrizol S.A. (Belgium)
Lubrizol Scandinavia AB
Lubrizol Servicios Tecnicos S. de R.L. (Mexico)
Lubrizol South Africa (Pty.) Limited
Lubrizol Southeast Asia (Pte.) Ltd. (Singapore)
Lubrizol de Venezuela C.A.
Carroll Scientific, Inc.
CPI Engineering Services, Inc.
Dia-Meter Pumps Limited (England)
Engine Control Systems, Ltd. (Canada and England)
Gate City Equipment Company, Inc.
Gateway Additive Company
Hyrolec Technical Services Limited (England)
The John Heinrich Company, Inc. of Nevada
Shuttleworth Exhaust Systems Inc. (Canada)
Unikat AB (Sweden)

Affiliates

Industrias Lubrizol S.A. de C.V. (Mexico)
Lanzhou Lubrizol – Lanlian Additive Co., Ltd. (China)
Lubrizol India Limited
Lubrizol Transarabian Company Limited (Saudi Arabia)
Tianjin Lubrizol – Lanlian Additive Co., Ltd. (China)

Technical Centers

Atsugi, Japan
Hazelwood, England
Wickliffe, Ohio

Manufacturing Plants

Atlanta, Georgia
Countryside, Illinois
Midland, Michigan
Reno, Nevada
Painesville, Ohio
Mountaintop, Pennsylvania
Bayport, Texas
Deer Park, Texas
Houston, Texas
Sydney, Australia
Rio de Janeiro, Brazil
London, Canada
Newmarket, Canada
Niagara Falls, Canada
Nyborg, Denmark
Bromborough, England
Fareham, England
LeHavre, France
Mourenx, France
Rouen, France
Hamburg, Germany
Ritterhude, Germany
Mumbai, India
Kinuura, Japan
Apodaca, Mexico
Yanbu, Saudi Arabia
Jurong, Singapore
Durban, South Africa
Malmo, Sweden