

2004 10-K and stockholder summary

To the Stockholders of The Dow Chemical Company:

Against the mixed backdrop of better economic conditions and higher hydrocarbon costs, 2004 was a year of continued progress for Dow. On the positive side, global economic growth drove a significant increase in demand for both chemicals and plastics, and supply continued to tighten. But on the negative side, Dow's feedstock and energy costs rose by $3.4 billion to unprecedented highs.

In this environment of countervailing forces, our Company met the objectives we set for the year, both substantially increasing earnings and reducing debt.

Overall 2004 earnings were $2.93 per share, compared with 2003 results of $1.87 per share. Excluding special items in both years, earnings were $2.71 per share versus $1.39 per share, a 95 percent increase that placed Dow well above the 19 percent growth in earnings estimated for the S&P 500 Index and the 41 percent increase in earnings estimated for the S&P Chemicals Index.

We continued to expand profit margins – the spread between product prices and feedstock costs – by a total of $2 billion for the year. Over the past two years, we've improved margins by a total of $3.3 billion, which is roughly one-third of the $8.9 billion in cumulative margin we lost between the last peak of the industry cycle in 1995 and the industry trough in 2002.

We also further reduced debt, with our net-debt-to-total-capital ratio moving downward to 41 percent at year-end, compared with 50 percent at year-end 2003 and 56 percent in 2002. We are well on our way to achieving the financial flexibility we need to continue to invest in our Company at all stages of the industry cycle.

Meanwhile, Dow stock rose 19 percent during the year, and total shareholder return (stock appreciation plus the dividend) was 23 percent. Here again, Dow outperformed both the S&P 500 Index and the S&P Chemicals Index for the year. In fact, over the past year, three years and ten years, Dow's total shareholder return has outperformed both indices. On a five-year basis, Dow has outperformed the S&P 500 Index and tracked just slightly below the S&P Chemicals Index.

Throughout 2003 and again in 2004, the unpredictability of the price of oil and natural gas – to which our own costs are directly related – reinforced our conviction that our success would depend on strict adherence to our Action Plan: controlling the things we could control. Given the impact of the things we could *not* control – in particular, the towering $3.4 billion increase in our feedstock and energy costs (which came on top of the $2.7 billion increase that occurred in 2003) – this Action Plan played a critical role in Dow's success.

Action Plan Results

The Action Plan had five objectives for 2004, which are listed here, along with the results of each.

- *Aggressively manage the price of our products without sacrificing volume.* For the year, we increased sales 23 percent to an historic high of $40 billion, with 17 percent from higher prices and 6 percent from increased volume.
- *Maintain discipline in discretionary spending and capital expenditures in order to improve both labor and capital productivity.* We did both. As a percent of sales, our SARD expenses (selling, administrative, research and development) reached their lowest level ever (6.1 percent). And we held capital expenditures to $1.3 billion, well below depreciation – even as we improved our environmental, health and safety performance to all-time best levels.
- *Close non-competitive and under-utilized assets.* During the year, we shut down 12 small facilities – in most cases shifting production to more efficient facilities. Over the past two years, we have either announced or completed the shutdown of 33 facilities, with the overall result of utilizing the most efficient plants and lowest-cost feedstocks to supply our customers.
- *Make strategic divestitures.* We sold our Canadian ethylene glycol assets and our PET assets to form two 50/50 joint ventures, MEGlobal and Equipolymers, with PIC, our partner in Kuwait. These transactions generated roughly $1 billion in cash for Dow and furthered a number of our long-term objectives: shifting our future asset base to a region with low-cost feedstocks; improving our ability to serve our global customers, particularly those in the growth markets of Asia; and reducing our capital intensity. In addition, we established a joint venture in Oman that combines that country's natural gas resources with Dow's technology and global reach. The Omani venture will include a natural gas/ethane cracker and three polyethylene plants.
- *Streamline the organization.* We reduced our workforce by more than 3,100 positions for annual savings of $350 million. This reduction, combined with the 3,600 job eliminations in 2003, translates to a 14 percent reduction in our workforce over the past two years. And what's important about 2004 is that we not only reduced headcount, we streamlined the organization so that we can operate under a more efficient business model going forward … with greater leveraging, fewer top-down initiatives, better use of technology, less bureaucracy and enterprise-wide use of Six Sigma methodology … all with the aim of creating a more simplified organization that concentrates only on the things that increase margins, improve safety and enhance our corporate governance.

We were once again reminded that a plan is only as good as the people who implement it. The success of the Action Plan, therefore, was testimony to the hard work and dedication of Dow people, who rose to the occasion, as they did in 2003.

Building for the Future

Our results in 2004 give us some confidence that the global industrial recovery that gained traction in 2004 will continue in 2005. Feedstock and energy costs, however, remain a large question mark, and reasonable prudence persuades us that these higher costs – which accounted for 43 percent of our overall Company costs in 2004 – are now a permanent part of the industry landscape. As you've read on these pages from Bill Stavropoulos over the past two years, we cannot count on lower feedstock costs or better economic conditions for us to be successful. The world remains an uncertain place, both politically and economically. To be successful, we must make things happen on our own.

With that in mind, we recently completed a thorough review of our Company's strategy going forward. While we made no fundamental changes in the strategy, we identified four specific areas where we need to sharpen our focus and accelerate implementation to keep our Company strong during the peaks and troughs of the industry cycle – and all points in between.

Andrew Liveris
President and Chief Executive Officer

Strategic Themes
The first is *financial discipline and low-cost-to-serve.* Even as the industry outlook improves, and with it our sales and profit margins, we will resist the impulse to increase overhead and to overbuild. Since 1992, we have increased productivity by more than 8 percent a year, and we will continue to find ways to improve through better work processes, greater precision in resource allocation and Six Sigma, which is fast becoming a part of our collective DNA.

The second is *setting new standards in sustainability,* including not only workplace safety and environmental stewardship, but excellence in corporate governance and corporate responsibility. When all is said and done, any organization's most valuable asset is its reputation and what that means to its investors, employees, customers and communities. With a sterling reputation, anything is achievable; with a bad reputation, nothing is possible.

The third theme is *building a culture around people and performance,* including leadership development, performance management and diversity. This means attracting and retaining the most talented people from throughout the world, developing them, and rewarding them for the results they achieve. This may sound simple in theory, but in practice, especially in a large organization like ours, it is difficult. Given the fact that the quality of the workforce is the one true lasting source of competitive advantage, this theme warrants the full participation of every Dow senior executive, starting with me.

The fourth theme is *investing for strategic growth,* and in this area we have made significant progress during 2004, some of it well-publicized, such as our commitments in Kuwait, Oman and China, and some of it less obvious. An example of the latter is portfolio management, where we have characterized all of our profit centers by their investment potential: from businesses that we will grow at above-industry levels … to businesses that we will run for cash … to those that we must rehabilitate or divest. The most important part of portfolio management is not the characterization itself, but the use of comprehensive criteria to allocate resources appropriately. A run-for-cash business will receive fewer resources than a grow-above-industry business, but the two will share one important measurement: they (and the people responsible for them) must contribute to Dow's profitability.

Investing for strategic growth also means selecting strategic customers – those with whom Dow can develop strong relationships for our mutual profitability. A large part of that relationship involves new products and new technology developed for specific markets and specific customers. Toward that end, we have reorganized our commercial, R&D and geographic organizations so that, collaboratively, we can offer greater value to our customers – and pass on that value to our investors. Every Dow senior manager is required to participate in this effort. Meanwhile, we are placing new emphasis on R&D – not by spending more money, but by improving R&D productivity through greater market and customer knowledge – and greater accountability for results.

In addition, we have targeted areas of growth by country and region. Going forward, we will ratchet up our focus on China, Southeast Asia, Eastern Europe, the Middle East, India, Russia and Brazil – not only to increase sales and profits, but to secure low-cost sources of feedstocks and energy. That does not mean we are abandoning our long-established markets in North America, Japan and Europe. Our intent is to build upon our ongoing success in those regions, just as we did 60 years ago when we built assets on the U.S. Gulf Coast to capture low-cost manufacturing, 50 years ago when we entered Japan with our first overseas joint venture and 40 years ago when we expanded in Europe to achieve stronger growth.

As we pursue geographic growth, we will do so using various business models, including joint ventures, where we have a proven track record of success and which last year accounted for about 25 percent of our earnings. Joint ventures offer many advantages: lower capital intensity, access to regional expertise and advantaged feedstocks; the ability to leverage our technology and know-how; and accelerated penetration in high-growth markets.

We believe that our strategy is sound and we are on the right track. But we are mindful that the best strategy in the world is only as good as how well it is implemented. So you can expect an intense focus on implementation and accountability in 2005 and beyond.

Leadership
This is my first letter to you as CEO of Dow. I am both thrilled and humbled at the opportunity to lead this great Company and, especially, its dedicated and talented people. I think I speak for all Dow stakeholders – particularly investors and employees – in thanking Bill Stavropoulos (who continues as chairman of the Board of Directors) for leading this Company over the past two years. Under Bill's leadership, our Company has improved its results across the board, creating a strong foundation for future growth and profitability.

Now the task before us is to build on that strong foundation. Given the current outlook for higher demand and tightening supply in 2005, we will work to further restore margins going forward – both in our Basics businesses and in our Performance businesses.

We are approaching 2005 the same way we approached 2003 and 2004, taking it one quarter at a time and maintaining our discipline and focus on results.

By doing so, and by building on our strengths – our global reach, our diverse customer base and end-use markets, our ability to remain the low-cost producer (to name just a few) – we have it in our power to take Dow to an even higher level of performance, so that we continue to be both a great company and a great investment.

Andrew Liveris
President and Chief Executive Officer
February 9, 2005

Arnold A. Allemang | Jacqueline K. Barton | Anthony J. Carbone | J. Michael Cook | Willie D. Davis | Jeff M. Fettig | Barbara H. Franklin

Andrew N. Liveris | Keith R. McKennon | J. Pedro Reinhard | James M. Ringler | Harold T. Shapiro | William S. Stavropoulos | Paul G. Stern

Board of Directors (at March 1, 2005)

Arnold A. Allemang
Senior Advisor
Director since 1996

Jacqueline K. Barton
Arthur and Marian Hanisch Memorial
Professor of Chemistry,
California Institute of Technology
Director since 1993

Anthony J. Carbone
Vice Chairman of the Board
Director since 1995

J. Michael Cook
Retired Chairman/Chief Executive Officer,
Deloitte & Touche LLP
Director since 2000

Willie D. Davis
President and Chief Executive Officer,
All Pro Broadcasting, Inc.
Director since 1988

Jeff M. Fettig
Chairman, President and Chief Executive Officer,
Whirlpool Corporation
Director since 2003

Barbara Hackman Franklin
President and Chief Executive Officer,
Barbara Franklin Enterprises and
Former U.S. Secretary of Commerce
Director 1980–1992 and 1993 to date

Andrew N. Liveris
President and Chief Executive Officer
Director since 2004

Keith R. McKennon
Former Chairman/Chief Executive Officer,
PacifiCorp
Director 1983–1992 and 2003 to date

J. Pedro Reinhard
Executive Vice President and
Chief Financial Officer
Director since 1995

James M. Ringler
Retired Vice Chairman of the Board,
Illinois Tool Works Inc.
Director since 2001

Harold T. Shapiro
Presiding Director
President Emeritus and Professor of Economics
and Public Affairs, Princeton University
Director since 1985

William S. Stavropoulos
Chairman of the Board
Director since 1990

Paul G. Stern
Founding Partner,
Arlington Capital Partners
and Thayer Capital Partners
Director since 1992

Committees of the Board of Directors

Audit Committee
P.G. Stern, Chair
J.M. Cook
J.M. Fettig
H.T. Shapiro

Committee on Directors and Governance
J.M. Cook, Chair
J.K. Barton
W.D. Davis
J.M. Fettig
B.H. Franklin

Compensation Committee
J.M. Ringler, Chair
J.K. Barton
W.D. Davis
B.H. Franklin

Environment, Health & Safety Committee
J.K. Barton, Chair
A.A. Allemang
A.J. Carbone
J.M. Fettig
A.N. Liveris
J.M. Ringler
H.T. Shapiro

Executive Committee
W.S. Stavropoulos, Chair
A.N. Liveris
J.P. Reinhard
H.T. Shapiro

Finance Committee
J.P. Reinhard, Chair
A.J. Carbone
A.N. Liveris
K.R. McKennon
J.M. Ringler
W.S. Stavropoulos

Public Interest Committee
K.R. McKennon, Chair
J.M. Cook
W.D. Davis
B.H. Franklin
J.P. Reinhard
W.S. Stavropoulos
P.G. Stern

Corporate Governance > At Dow, we believe our success depends on maintaining the highest ethical and moral standards everywhere we operate. That focus on integrity starts at the top. Effective corporate governance begins with the performance of the Board of Directors.

Dow exemplifies good governance with a presiding director; directors with solid, diverse experience and credentials; corporate governance guidelines; codes of business conduct and financial ethics; and the corporate governance website on www.dow.com. Independent directors comprise a substantial majority of Dow's Board.

In 2004, Dow's Board of Directors elected Andrew N. Liveris president and chief executive officer. William S. Stavropoulos continues as chairman of the Board, and Harold T. Shapiro remains the presiding director. Additionally, a management proposal to change to the annual election of all directors for one-year terms was endorsed heavily by Dow stockholders. The transition from a classified board will be completed in 2007.

Dow's corporate governance guidelines, Board Committee charters and Code of Business Conduct are available on-line at www.dow.com. Dow's corporate governance guidelines address important aspects of Dow's corporate governance structure such as criteria for director qualifications, election, continuing education and tenure; ongoing improvement of Board effectiveness; and a framework for management evaluation and succession planning.

Andrew N. Liveris, president and chief executive officer, and J. Pedro Reinhard, executive vice president and chief financial officer, executed the certifications required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 on February 18, 2005. The certifications were filed as exhibits to the Company's Annual Report on Form 10-K for the year ended December 31, 2004. In addition, William S. Stavropoulos, chief executive officer of the Company through October 31, 2004, and chairman of the Board, certified to the New York Stock Exchange (NYSE) on June 11, 2004, that he was unaware of any violation by the Company of the NYSE corporate governance listing standards in effect as of that date.

Office of the Chief Executive (at March 1, 2005)

Andrew N. Liveris
President and Chief Executive Officer

J. Pedro Reinhard
Executive Vice President and Chief Financial Officer

Phillip H. Cook
Senior Vice President, Performance Chemicals and Thermosets

Michael R. Gambrell
Senior Vice President, Chemicals and Intermediates

David E. Kepler
Corporate Vice President, Shared Services, and Chief Information Officer

Romeo Kreinberg
Senior Vice President, Plastics

Luciano Respini
Corporate Vice President, Geography, Marketing and Sales, Human Resources and Public Affairs

Gary R. Veurink
Corporate Vice President, Manufacturing and Engineering

Company Officers (at March 1, 2005)

William S. Stavropoulos
Chairman of the Board

Anthony J. Carbone
Vice Chairman of the Board

Andrew N. Liveris
President and Chief Executive Officer

J. Pedro Reinhard
Executive Vice President and Chief Financial Officer

Lawrence J. Washington, Jr.
Corporate Vice President, Sustainability, Environment, Health and Safety

David E. Kepler
Corporate Vice President, Shared Services, and Chief Information Officer

Richard L. Manetta
Corporate Vice President

Gary R. Veurink
Corporate Vice President, Manufacturing and Engineering

Luciano Respini
Corporate Vice President, Geography, Marketing and Sales, Human Resources and Public Affairs

Charles J. Kalil
Corporate Vice President and General Counsel

Frank H. Brod
Vice President and Controller

Fernando Ruiz
Vice President and Treasurer

Tina S. Van Dam
Secretary of the Company

Douglas J. Anderson
Corporate Auditor

Charles J. Hahn
Assistant Secretary

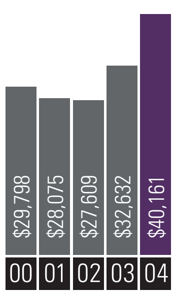
Thomas E. Moran
Assistant Secretary

Office of the Chief Executive
Front: Andrew N. Liveris
Seated (left to right): Romeo Kreinberg, J. Pedro Reinhard
Standing (left to right): David E. Kepler, Luciano Respini, Gary R. Veurink, Phillip H. Cook, Michael R. Gambrell

2004 Financial Highlights

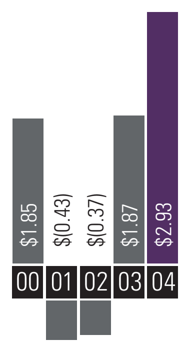
In millions, except as noted	2004	2003
Net Sales	**$40,161**	$32,632
Net Income Available for Common Stockholders	**2,797**	1,730
Return on Stockholders' Equity	**22.8%**	18.9%
Earnings per Share – Basic (in dollars)	**2.98**	1.88
Earnings per Share – Diluted (in dollars)	**2.93**	1.87
Dividends Declared per Share (in dollars)	**1.34**	1.34

NET SALES
(dollars in millions)

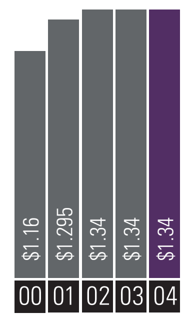


NET INCOME (LOSS)
(dollars in millions)

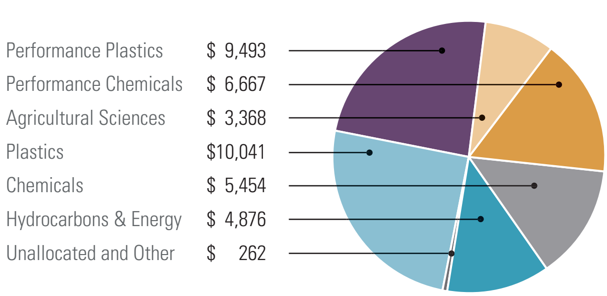
EARNINGS (LOSS)
PER SHARE – DILUTED
(dollars)



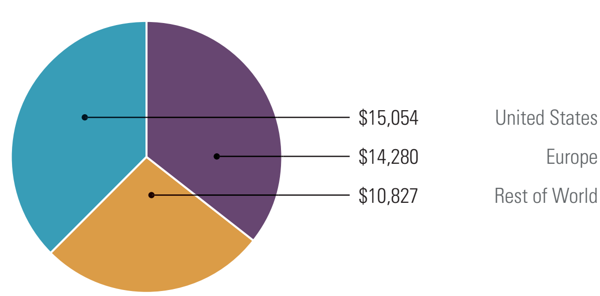
DIVIDENDS DECLARED
PER SHARE
(dollars)



2004 SALES BY OPERATING SEGMENT
(dollars in millions)



2004 SALES BY GEOGRAPHIC AREA
(dollars in millions)





Above: Among the many activities undertaken by the Company in 2004, Dow began exploring the potential of industrial-scale power generation using hydrogen fuel cells; it formed the MEGlobal joint venture; it announced plans for a new UCAR Emulsion Systems latex facility; and it began work on the expansion of the FilmTec Corporation membrane manufacturing plant.

First Quarter

- Dow completes the acquisition of the Celanese acrylates business and becomes one of the largest global producers of acrylate esters.
- UCAR Emulsion Systems announces plans to construct a new latex facility at St. Charles Operations in Louisiana, U.S.A., and to close its U.S. sites in Texas and Georgia.
- Dow declares 370th consecutive quarterly cash dividend.
- Dow and General Motors Corporation begin Phase 1 installation operations of a fuel cell that will convert hydrogen into electricity at Dow's Freeport site in Texas, U.S.A.
- Dow Building and Construction introduces STYROFOAM all-purpose tape – designed to enhance energy conservation in homes by sealing the joints between sheets of foam panel insulation.

Second Quarter

- Dow forms two new joint ventures with Petrochemical Industries Company of Kuwait. The joint ventures, MEGlobal and Equipolymers, started operations on July 1.
- Dow receives the RESPONSIBLE CARE Sustained Excellence Award and the American Chemistry Council's RESPONSIBLE CARE Leadership Award in recognition of the Company's long-term commitment to RESPONSIBLE CARE, workplace safety and environmental protection.
- Dow announces the commercial launch of AFFINITY GA polyolefin plastomers, a new line of versatile polyolefin polymers developed using the Company's proprietary INSITE technology and solution process.
- Dow declares 371st consecutive quarterly cash dividend.
- Dow hosts 107th Annual Meeting of Stockholders.
- Mycogen Corporation, an affiliate of Dow AgroSciences, is granted U.S. patent rights to glyphosate resistance in cotton, greatly strengthening the Company's position in the biotechnology business.
- FilmTec Corporation, a subsidiary of Dow, announces plans to expand its existing membrane manufacturing plant in Minnesota, U.S.A., to meet growing demand from the water treatment industry.
- Dow Latex announces plans to add a second styrene-butadiene latex line to its production facility in Zhangjiagang, China. The announcement comes less than two years after start-up of the first line, which is now running at capacity, in response to escalating customer demand.

Third Quarter

- The Government of the Sultanate of Oman, Oman Oil Company S.A.O.C. and Dow agree to form a joint venture that will design, build and operate a petrochemical complex at Sohar, Oman.
- Dow receives the highest rating possible for corporate governance from Governance Metrics International, an independent corporate governance ratings agency.
- Dow is named to Dow Jones Sustainability World Index for the sixth consecutive year. The Company continues to be ranked as one of the top performers in the global chemical industry.
- Dow's polyurethane support ring for Michelin's PAX System run-flat tire debuts in the 2005 Honda Odyssey at the International Auto Show in Paris, France.
- Dow declares 372nd consecutive quarterly cash dividend.
- The first manufacturing facility dedicated to the production of DOW XLA elastic fiber begins operations at Tarragona, Spain.
- Dow commissions the first commercial-scale plant for VERSIFY plastomers and elastomers at Tarragona, Spain.
- Dow Automotive commercializes an industry-leading, low-gloss, thermoplastic polyolefin resin for molded-in-color interior applications, using INSPIRE performance polymer materials.

Fourth Quarter

- The Shenhua Group and Dow sign an agreement to jointly evaluate the feasibility of coal-to-olefins projects in China.
- Andrew N. Liveris assumes responsibility as Dow president and chief executive officer. William S. Stavropoulos continues as chairman of the Board.
- Dow announces plans to build a new world-class specialty polyethylene train at Tarragona, Spain, that will produce a broad range of high-value polyethylene resins.
- Dow and The University of Texas at Austin in the United States renew their ongoing research collaboration to develop and commercialize drug solubilization technology for critical pharmaceutical applications.
- Dow declares 373rd consecutive quarterly cash dividend.
- Dow sells its DERAKANE epoxy vinyl ester resin business to Ashland Specialty Chemical.
- Dow and General Motors Corporation launch the second phase of their joint project to prove the viability of hydrogen fuel cells by expanding it from a single test cell to a multi-cell pilot plant at Dow's Texas Operations in the United States.
- Texas LNG Holdings, LLC, a wholly owned subsidiary of Dow, acquires a 15 percent ownership interest in Freeport LNG Development, LP – the company implementing a project to construct a liquified natural gas receiving terminal in Texas, U.S.A.
- Dow's 2004 sales increase to $40.2 billion, a Company record.

The Dow Chemical Company
Midland, MI 48674 U.S.A.

Living.
Improved daily.

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