BAYER AKTIENGESELLSCHAFT Form 6-K March 18, 2005

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Form 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 OF THE SECURITIES EXCHANGE ACT OF 1934

For the month of March 2005

Bayer Aktiengesellschaft Bayer Corporation*

(Translation of registrant s name into English)

Bayerwerk, Gebaeude W11 Kaiser-Wilhelm-Allee 51368 Leverkusen Germany (Address of principal executive offices)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F.

Form 20-F b Form 40-F o

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101 (b)(1): N/A

Indicate by check mark if the registrant is submitting the Form 6-K in paper as permitted by Regulation S-T Rule 101 (b)(7): N/A

Indicate by check mark whether, by furnishing the information contained in this form, the registrant is also thereby furnishing the information to the Commission pursuant to Rule 12g3-2(b) under the Securities Exchange Act of 1934.

Yes o No þ

If Yes is marked, indicate below the file number assigned to the registrant in connection with Rule 12g3-2(b): $\underline{N/A}$

* Bayer Corporation is also the name of a wholly-owned subsidiary of the registrant in the United States.

Science For A Better Life Annual Report 2004

Bayer Group Key Data

Bayer Annual Report 2004

Bayer Group million	2003	2004	Change in%
Net sales	28,567	29,758	+ 4.2
EBITDA ¹⁾	3,616	4,130	+ 14.2
Operating result [EBIT]	(1,119)	1,808	
Income (loss) before income taxes	(1,994)	985	
Net income (loss)	(1,361)	603	
Gross cash flow ²⁾	2,864	3,210	+ 12.1
Net cash flow ³⁾	3,293	2,450	25.6
Stockholders equity	12,213	12,268	+ 0.5
Total assets	37,445	37,804	+ 1.0
Capital expenditures	1,739	1,275	26.7
Employees at year end	115,400	113,000	2.1
Personnel expenses	7,906	7,306	7.6
Research and development expenses	2,404	2,107	12.4

Bayer AG	2003	2004	Change in %
Total dividend payment in million	365	402	+ 10.1
Dividend per share in	0.50	0.55	+ 10.0

1) EBITDA = operating result (EBIT) plus depreciation and amortization

2) Gross cash flow = operating result (EBIT) plus depreciation and amortization, minus income taxes, minus gains/plus losses on retirements of noncurrent assets, plus/minus changes in pension provisions

3) Net cash flow = cash flow from operating activities according to IAS 7

Ten-Year Financial SummaryBayer Annual Report 2004						
Bayer Group million	1995	1996	1997	1998	1999	
Net sales	22,793	24,853	28,124	28,062	27,320	
Sales outside Germany	80.5%	82.2%	83.9%	83.6%	84.3%	
Sales of foreign consolidated companies	63.4%	65.4%	67.0%	67.5%	68.3%	
Operating result [EBIT]	2,102	2,306	3,077	3,155	3,357	
Income (loss) before income taxes	2,140	2,282	2,611	2,728	2,836	
Income (loss) after taxes	1,238	1,405	1,509	1,615	2,018	
Noncurrent assets	9,437	10,689	12,230	13,981	15,614	
Intangible assets	488	729	1,051	1,909	2,213	
Property, plant and equipment	7,966	8,974	10,307	10,970	11,986	
Investments	983	986	872	1,102	1,415	
Current assets	13,211	14,593	15,467	15,396	15,665	
Inventories	4,762	5,144	5,424	5,781	4,992	
Receivables	5,787	7,028	7,588	7,894	7,533	
Liquid assets	2,662	2,421	2,455	1,721	3,140	
Stockholders equity	9,109	10,531	12,009	12,568	15,006	
Capital stock of Bayer AG	1,803	1,851	1,867	1,867	1,870	
Capital reserves and retained earnings	6,082	7,287	8,638	9,087	11,134	
Net income (loss)	1,224	1,393	1,504	1,614	2,002	
Minority stockholders interest	248	234	223	211	176	
Liabilities	13,291	14,517	15,465	16,598	16,097	
Provisions	6,923	7,057	7,275	7,271	6,714	
Other liabilities	6,368	7,460	8,190	9,327	9,383	

Total assets	22,648	25,282	27,697	29,377	31,279
Proportion of total assets					
Noncurrent assets	41.7%	42.3%	44.2%	47.6%	49.9%
Current assets	58.3%	57.7%	55.8%	52.4%	50.1%
Stockholders equity	40.2%	41.7%	43.4%	42.8%	48.0%
Liabilities	58.7%	57.4%	55.8%	56.5%	51.5%
Financial liabilities	3,205	3,520	3,896	4,730	4,466
Long-term	1,436	1,615	2,150	2,404	2,359
Short-term	1,769	1,905	1,746	2,326	2,107
Interest income (expense) net	6	(44)	(157)	(179)	(196)
Noncurrent assets financed by stockholders equity	96.5%	98.5%	98.2%	89.9%	96.1%
Noncurrent assets and inventories financed by stockholders equity and long-term liabilities	110.7%	113.4%	114.2%	105.0%	111.5%
Return on sales	9.2%	9.3%	11.0%	12.6%	11.2%
Return on stockholders equity	13.7%	14.0%	13.1%	12.9%	14.4%
Gross cash flow ¹⁾	2,751	2,959	3,313	3,394	3,192
Capital expenditures for intangible assets, property, plant and equipment	1,620	1,931	2,331	2,703	2,632
Depreciation and amortization	1,184	1,326	1,479	1,521	1,744
Depreciation and amortization in percent of capital expenditures	73.1%	68.7%	63.4%	56.3%	66.3%
Personnel expenses (including pension expenses)	7,477	7,718	7,895	8,106	7,549
Number of employees (year end)	142,900	142,200	144,600	145,100	120,400
Research and development expenses	1,666	1,845	1,983	2,045	2,252

Bayer AG

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Income (loss) after taxes/Net income (loss)	592	695	746	1,095	1,076
Allocation to (from) retained earnings	51	66	36	348	127
Total dividend payment	541	629	710	747	949
Dividend per share in	0.77	0.87	0.97	1.02	1.30

1) for definition see Bayer Group Key Data on front flap

Ten-Year Financial Summary

Bayer Annual Report 2004

2000	2001	2002	2003	2004	Bayer Group million
30,971	30,275	29,624	28,567	29,758	Net sales
85.6%	85.5%	86.4%	85.8%	86.3%	Sales outside Germany
69.0%	70.9%	72.2%	73.3%	72.7%	Sales of foreign consolidated companies
3,287	1,676	1,518	(1,119)	1,808	Operating result [EBIT]
2,990	1,115	956	(1,994)	985	Income (loss) before income taxes
1,842	961	1,063	(1,349)	600	Income (loss) after taxes
20,344	21,702	23,513	18,232	16,855	Noncurrent assets
4,843	5,014	8,879	6,514	6,017	Intangible assets
13,345	13,543	12,436	9,937	9,184	Property, plant and equipment
2,156	3,145	2,198	1,781	1,654	Investments
16,107	15,337	16,890	17,673	19,547	Current assets
6,095	5,818	6,342	5,885	6,215	Inventories
9,308	8,748	9,752	8,925	9,733	Receivables
704	771	796	2,863	3,599	Liquid assets
16,140	16,922	15,335	12,213	12,268	Stockholders equity
1,870	1,870	1,870	1,870	1,870	Capital stock of Bayer AG
12,454	14,087	12,405	11,704	9,795	Capital reserves and retained earnings
1,816	965	1,060	(1,361)	603	Net income (loss)
237	98	120	123	111	Minority stockholders interest
20,074	20,019	23,320	23,013	23,534	Liabilities
7,163	7,172	8,397	8,863	9,368	Provisions
12,911	12,847	14,923	14,150	14,166	Other liabilities

36,451	37,039	41,692	37,445	37,804	Total assets
					Proportion of total assets
55.8%	58.6%	56.4%	48.7%	44.6%	Noncurrent assets
44.2%	41.4%	40.5%	47.2%	51.7%	Current assets
44.3%	45.7%	36.8%	32.6%	32.5%	Stockholders equity
55.1%	54.0%	55.9%	61.5%	62.3%	Liabilities
6,665	7,380	10,159	9,426	9,722	Financial liabilities
2,803	3,071	7,318	7,378	7,117	Long-term
3,862	4,309	2,841	2,048	2,605	Short-term
(311)	(349)	(449)	(353)	(275)	Interest income (expense) net
79.3%	78.0%	65.2%	67.0%	72.8%	Noncurrent assets financed by stockholders equity
93.0%	93.9%	96.8%	107.1%	112.3%	Noncurrent assets and inventories financed by stockholders equity and long-term liabilities
11.2%	5.5%	5.1%	(3.9)%	6.1%	Return on sales
11.7%	5.8%	6.6%	(9.8)%	4.9%	Return on stockholders equity
4,164	3,009	2,782	2,864	3,210	Gross cash flow ¹⁾
2,647	2,617	2,383	1,739	1,275	Capital expenditures for intangible assets, property, plant and equipment
2,122	2,464	2,814	2,634	2,138	Depreciation and amortization
80.2%	94.2%	118.1%	151.5%	167.7%	Depreciation and amortization in percent of capital expenditures
7,735	7,849	8,176	7,906	7,306	Personnel expenses (including pension expenses)
122,100	116,900	122,600	115,400	113,000	Number of employees (year end)
2,393	2,559	2,588	2,404	2,107	Research and development expenses

Bayer AG

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1,702	657	1,162	(185)	289	Income (loss) after taxes/Net income (loss)
680	0	505	(550)	(113)	Allocation to (from) retained earnings
1,022	657	657	365	402	Total dividend payment
1.40	0.90	0.90	0.50	0.55	Dividend per share in

Corporate Structure Bayer HealthCare

Bayer Annual Report 2004

Bayer HealthCare plays a major role in improving the health of people and animals by researching, developing, manufacturing and marketing innovative products for disease prevention, diagnosis and treatment. Bayer HealthCare s activities are organized in six divisions: Animal Health, Biological Products, Consumer Care, Diabetes Care, Diagnostics and Pharmaceuticals.

Bayer HealthCare million	2003	2004	Change in %
Net external sales	8,871	8,485	4.4
Operating result [EBIT]	365	859	+ 135.3
Gross cash flow	815	962	+ 18.0
Net cash flow	782	1,007	+ 28.8
Capital expenditures	407	320	21.4

Operating Result [EBIT]

million

Bayer CropScience

Bayer CropScience is a global leader in crop protection and non-agricultural pest control. This company, with its highly effective products, pioneering innovations and keen customer focus, is aiming for further growth in the future. It is organized in three business groups Crop Protection, Environmental Science and BioScience. Bayer CropScience markets a balanced range of crop protection products and is among the leading suppliers of insecticides, fungicides, herbicides and seed treatments. It has a strong presence in all regions of the world.

Bayer CropScience million	2003	2004	Change in %
Net external sales	5,764	5,946	+ 3.2
Operating result [EBIT]	342	492	+ 43.9
Gross cash flow	860	893	+ 3.8
Net cash flow	1,165	778	33.2
Capital expenditures	413	209	49.4

Operating Result [EBIT] million

Corporate Structure Bayer MaterialScience

Bayer Annual Report 2004

Bayer MaterialScience is a renowned supplier of high-performance materials and innovative system solutions used in a wide range of products for everyday life. Products with leading positions on the world market account for a major share of sales. Principal customers are the automotive and construction industries, the electrical/electronics sector and manufacturers of sports and leisure articles, packaging and medical equipment.

Bayer MaterialScience million	2003	2004	Change in %
Net external sales	7,453	8,597	+ 15.3
Operating result [EBIT]	(397)	641	
Gross cash flow	935	884	5.5
Net cash flow	1,113	498	55.3
Capital expenditures	464	332	28.4

Operating Result [EBIT]

million

Bayer

Strategic management in the Bayer Group is kept separate from everyday business operations. The subgroups and service companies operate independently under the guidance of the management holding company Bayer AG, which defines common values, goals and strategies for the whole enterprise and is headed by the four-member Group Management Board. The Corporate Center supports the Group Management Board in its tasks and also performs certain common functions for the subgroups.

Bayer Business Services

Bayer Business Services is the Bayer Group s competence center for IT-based business, administrative and scientific services. From consulting through the development of technical solutions and systems operation to the handling of entire corporate processes, Bayer Business Services offers integrated single-source services in the fields of finance, accounting, procurement, human resources, logistics, information technology, science, pensions and law. Subsidiaries also provide travel and media services.

Bayer Technology Services

Bayer Technology Services, the technological backbone of the Bayer Group, is engaged in process development and in process and plant engineering, construction and optimization. This company also develops innovative technology platforms that contribute substantially to the efficiency of Bayer s operating units. Bayer Technology Services offers integrated solutions along the life cycles of facilities, processes and products.

Bayer Industry Services

Bayer Industry Services is the operator of Germany s largest chemical park, with sites at Leverkusen, Dormagen, Krefeld-Uerdingen and Brunsbüttel covering a total area of 17 square kilometers. The company provides the foundation for the smooth operation of facilities at these sites, offering both internal and external clients a customized service portfolio ranging from technology through environmental protection, waste management, utility supply, infrastructure, safety and analytics to vocational training and continuing education courses. Bayer Industry Services also markets available land and buildings to companies interested in setting up operations within the chemical park.

Bayer Annual Report 2004

Working to Create Value through Innovation, Growth and Improved Earning Power

Bayer is a global enterprise with core competencies in the fields of health care, nutrition and high-tech materials. Our products and services are designed to benefit people and improve their quality of life. At the same time we want to create value through innovation, growth and improved earning power.

We already successfully reorganized the Bayer Group and further streamlined our portfolio to create a new Bayer that is focused on its corporate strengths, its customers and the markets of the future. To help us achieve this goal, we then carried out a strategic realignment in order to concentrate in future on three high-potential, agile sub-groups with largely independent operations: HealthCare, CropScience and MaterialScience, supported by three service companies. Our operating companies give us the access we need to the growth markets of the future.

As an inventor company, we plan to continue setting trends in research-intensive areas. Innovations are the foundation for our competitiveness and our corporate growth, and thus for our success in the future.

We believe our technical and commercial expertise entails a duty to contribute to sustainable development a principle we wholeheartedly endorse, mindful of its social, ethical and environmental elements. In awareness of our responsibilities as a corporate citizen, we define economy, ecology and social commitment as objectives of equal rank.

We seek to retain society s confidence through performance, flexibility and open communication as we work in pursuit of our overriding corporate goals: to steadily create corporate value and generate high value-added for the benefit of our stockholders, our employees and the community in every country in which we operate.

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4 Chairman s Letter

Our realignment is clearly successful

Dear Stockholders:

I am pleased to report that 2004 was a successful year in terms of both our business performance and the Group s strategic realignment.

Earnings moved ahead substantially. While the general economic backdrop was indeed favorable, this increase in profitability is still a remarkable achievement considering the challenges presented by the strength of the euro and the sharp rise in raw material costs.

The upward trend is reflected in our core business data for 2004:

Sales up 4 percent to 29.8 billion

Underlying EBIT up 53 percent to 2.24 billion

Net income up to 603 million

CFROI up 1.8 points to 9.9 percent We thus exceeded our targets for sales and earnings.

I believe we can be satisfied with the advances made so far toward achieving the ambitious profitability goals we set ourselves for 2006.

We can also be satisfied with the major progress we made in 2004 with our strategic reorganization. We repositioned the Bayer Group, aligning it toward innovation and growth and thus laying the foundation for a sustained improvement in earning power.

Here, of course, I am thinking primarily of the spin-off of our chemicals activities and one third of our polymers business into LANXESS, which was accomplished in less than 15 months. With the successful stock-market listing of LANXESS, we have largely completed the comprehensive realignment of the Bayer Group, a process that took about three years in all.

Chairman s Letter

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Bayer now has a new face. We are heading into the future with our three subgroups Bayer HealthCare, Bayer CropScience and Bayer MaterialScience, supported by competent service companies. Our strategy is thus clearly defined.

We will now concentrate our financial resources and management expertise on the development and expansion of these businesses.

We have also made good progress with the refocus of Bayer HealthCare, aligning its Pharmaceuticals Division as a mid-sized European supplier without neglecting the important markets of North America, Asia and Latin America. Last year we formed a strategic alliance in the United States with Schering-Plough and thus strengthened the basis for our specialties business. Our pharmaceutical research activities will focus in the future on cardiovascular risk management including diabetes and cancer. With 2,200 highly skilled employees at two research centers and with excellent technology platforms, we have a wealth of expertise at our disposal. We are confident that concentrating on these areas will allow us to sustainably increase the productivity of our pharmaceutical R&D.

We have high hopes for two promising candidates in our research pipeline: one is a cancer drug that is currently undergoing phase III clinical testing and is expected to be launched next year. The other is our Factor Xa inhibitor for the prevention and therapy of thrombosis, which is currently in phase II clinical studies. We believe this substance could achieve annual sales of 1 billion if the trials continue to be successful. We also plan to strengthen our business through external growth options such as in-licensing.

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6 Chairman s Letter

I am convinced that this strategy is the right one to guide our pharmaceuticals business to success in the future.

Apart from Pharmaceuticals, we have also strengthened our other HealthCare divisions. Our acquisition of the Roche OTC business has made Consumer Care one of the world s top three suppliers of non-prescription medicines and brought us a step closer to our goal of attaining the number one position in this market.

We also hold strong to very strong positions worldwide in Diabetes Care, Diagnostics and Animal Health. The same applies to our Biological Products Division following the divestiture of the blood plasma business.

Our CropScience subgroup turned in a very pleasing performance in 2004, achieving its goal of becoming the world market leader in the crop protection sector. This underscores the excellent strategic positions we hold with our herbicides, insecticides, fungicides, seed treatments and Environmental Science products. In BioScience, both our conventional seed business and our genetically improved canola and cotton seed are on course for expansion. With an annual R&D budget of nearly 100 million, this area is a major focus of our investment. The innovative potential of Bayer CropScience is expressed by a well-stocked pipeline and a sales target of more than 1 billion a year from new products by 2006.

Our MaterialScience subgroup is among the global leaders in the fields of polyurethanes, polycarbonates and coating raw materials. We will continue to systematically expand in these promising areas, too, focusing primarily on the rapidly growing Chinese market. In the Shanghai region alone, we are currently building or planning several new production facilities for which we have scheduled capital expenditures totaling US\$ 1.8 billion over the next five years. New areas of application, such as automotive glazing or self-healing automotive coatings, also offer exciting prospects. With new products currently accounting for some 20 percent of sales, we believe there is significant further potential here.

Following the extensive realignment of the Bayer Group, we clearly have a high-quality portfolio. Now our efforts are focused above all on reaching our goal of a benchmark performance in all areas. With savings in the region of 2.2 billion in the past three years 1 billion of which was achieved in 2004 alone the foundations for this have been laid.

Yet despite our emphasis on profitability, it is important to me personally that our business strategy embraces responsible corporate governance and thoroughly ethical conduct. We have therefore included a definition of our values as a key element in our new mission statement, which is reproduced in full in this Annual Report.

In keeping with our principles, we responded quickly and informally to the tsunami disaster in South and Southeast Asia with donations of money and, above all, medicines worth a total of about 13 million. I would particularly like to thank our approximately 5,700 employees in the region, who fortunately came to no harm. These employees aided their fellow citizens by giving money and also assisting directly with relief work in the devastated areas. And I would also like to thank the many Bayer employees around the world who made donations to help ease the suffering of the flood victims.

Chairman s Letter

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We have now set Bayer on a new course. I promised you that we would have tangible success to show for our reorganization process in 2004 and I am glad I could keep my promise.

I find it particularly encouraging that our efforts have been reflected in the price of Bayer stock. First, we did better than the DAX in 2004, with a performance of nearly 10 percent over the year. Then, in early 2005, Bayer and LANXESS stock together outperformed the DAX by more than seven percentage points in the first ten days of trading after the spin-off of LANXESS. Bayer stock has now reached its highest level since mid-2002.

Of course we want you, our stockholders, to benefit from our commercial success. We therefore propose to raise the dividend for 2004 by 10 percent to 0.55. This gives a payout of about two thirds of net income for the year, underlining our confidence in the future earnings capability of the realigned Bayer Group.

On behalf of the entire Board of Management, I would like to express my special thanks to our employees, who all pulled together during the realignment process and now have a tremendous achievement to their credit. Their skills, their experience and their hard work are instrumental to the future success of the enterprise. The spin-off paves the way for a bright future not just for Bayer, but also for LANXESS. We wish our former colleagues at LANXESS the best of success.

Following my review of 2004, let me now touch on our plans for the coming year.

We anticipate a further improvement in the Bayer Group s operating performance. Provided that current business conditions do not worsen, we expect the underlying operating result from continuing operations to grow by around 20 percent.

I and my colleagues on the Board of Management thank you for the trust you have placed in Bayer. We will remain dedicated to the successful course we have embarked upon. In line with our new mission statement and the slogan Bayer. Science For A Better Life we are committed to sustainably improving people s quality of life through our

Bayer: Science For A Better Life , we are committed to sustainably improving people s quality of life through our products, now and in the future in the interests of the company and of society at large.

Sincerely,

/s/ Werner Wenning

8 Board of Management

Bayer Annual Report 2004

Board of Management WERNER WENNING

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Born in 1946, Werner Wenning joined Bayer AG in 1966 as a commercial trainee. He held a number of positions with Bayer in Germany and abroad, serving as Managing Director of Bayer subsidiaries in Peru and Spain and later as Head of the Corporate Planning and Controlling Division. Wenning was appointed to the Bayer AG Board of Management in 1997 and has been its Chairman since April 2002.

DR. RICHARD POTT

Born in 1953, Richard Pott studied physics at the University of Cologne, Germany, where he also obtained his doctorate. In 1984 he joined Bayer AG s Central Research Division. After holding various positions in the Corporate Staff Division he became Head of the former Specialty Products Business Group in 1999. Pott became a member of the Bayer AG Board of Management in May 2002. He is the company s Labor Director and is responsible for Strategy and Human Resources and the North, Central and South America regions.

KLAUS KÜHN

Born in 1952, Klaus Kühn studied mathematics and physics at the Technical University of Berlin, Germany, gaining a mathematics degree in 1978. He came to Bayer in 1998 as Head of the Finance Section. Shortly afterwards he was appointed Head of the Group Finance Division. Kühn joined the Bayer AG Board of Management in May 2002 as Chief Financial Officer. He is also responsible for the Europe, Africa and Middle East regions.

DR. UDO OELS

Born in 1944, Udo Oels studied chemistry at the Technical University of Hanover, Germany. He joined Bayer AG as a research chemist in 1976 and held a number of positions with Bayer in Germany and abroad. He was polycarbonate production manager in Baytown, Texas, and Head of Research and later General Manager of what was then the Organic Chemicals Business Group. Oels was appointed to the Bayer AG Board of Management in 1996. He is responsible for Innovation, Technology and Environment as well as the Asia region.

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Management Report

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Bayer Annual Report 2004

Currency- and portfolio-adjusted sales rise by 9 percent

EBIT before special items up 53 percent to 2.2 billion

Bayer Group strategically realigned

Further substantial improvement in operating performance expected in 2005 **Overview of Sales, Earnings and Financial Position**

Bayer had a successful year in 2004. We exceeded our earnings and sales targets and at the same time realigned the Group for the future. The stock-market listing of LANXESS on January 31, 2005 was very well received by the capital market. Based on the average price of LANXESS shares in the first ten days of trading, the spin-off caused the value of Bayer stockholders investments to grow by a good 7 percentage points more than the German stock index DAX over the same period, adding 1.4 billion in combined market capitalization. We also made good progress with the restructuring of our HealthCare portfolio.

Change in Sales Total	2003 -4%	2004 +4%
Volumes	+5%	+8%
Prices	0%	+1%
Exchange rates	-9%	-4%
Portfolio changes	0%	-1%

We greatly strengthened our consumer health activities through the acquisition of Roche s over-the-counter (OTC) business, which was largely completed in January 2005. In addition, we optimized our sales structures in the United States by forming a strategic alliance with U.S.-based Schering-Plough, at the same time strengthening the basis for our specialties business. In December 2004 as announced we reached an agreement to sell the blood plasma business to a group of U.S. investors.

Quarterly Sales by Subgroup in 2004

million

The economic background was favorable in 2004, and we saw a gratifying increase in demand for our products, particularly in the industrial businesses. Sales increased by 4.2 percent to 29,758 million (2003: 28,567 million). Adjusted for the effects of currency translations and portfolio changes, sales rose by 9.1 percent.

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The overall growth in business is even more gratifying in view of the decline in sales of our Cipro[®] anti-infective following the expiration of its U.S. patent and considerable adverse shifts in exchange rates. Sales expanded even faster in the fourth quarter, advancing by 8.8 percent to 7,748 million, with the currency- and portfolio-adjusted figure rising by 12.4 percent.

The upward trend in business was also reflected in earnings growth, to which all subgroups contributed significantly.

Before special items, EBIT increased by 53.1 percent to 2,244 million and EBITDA by 9.1 percent to 4,494 million. EBIT for the fourth quarter came in at 374 million also well ahead of the 42 million for the same period of the previous year.

The growth in underlying EBIT in 2004 was mainly the result of a marked recovery in business and our efforts to reduce costs and increase efficiency. These factors more than offset the sharp rise in raw material prices, negative currency effects and lower earnings from Cipro[®]. Lower depreciation and amortization also boosted income. Changes in obligations relating to the payment of employees post-retirement health care costs in the United States increased EBIT by 121 million.

There were, however, various special items in 2004 that had a net effect of minus 436 million (2003: minus

2,585 million). Chief among the special charges were litigation-related expenses (160 million), charges for the stock-market listing of LANXESS (77 million), losses on the sale of the plasma business (71 million), restructuring charges in Pharmaceuticals (24 million) and an allocation to environmental protection provisions for LANXESS (40 million). Positive special items comprised mainly a 39 million one-time gain from the sale of a license by Bayer HealthCare. Special items in the previous year consisted largely of 1,927 million in impairment losses and valuation adjustments related to the portfolio realignment and changes in economic conditions.

EBIT after special items in 2004 amounted to 1,808 million (2003: minus 1,119 million). EBITDA improved by 14.2 percent to 4,130 million. The non-operating result amounted to minus 823 million (2003: minus 875 million), yielding pre-tax income of 985 million (2003: minus 1,994 million). After taxes of 385 million and minority stockholders interest, the Bayer Group had net income of 603 million (2003: minus 1,361 million).

Business also developed well in the fourth quarter, with EBIT improving to 220 million (Q4 2003: minus 2,732 million). Fourth-quarter EBIT before special items rose to 374 million (Q4 2003: 42 million). Taking into account an improved non-operating result of minus 198 million, net income for the fourth quarter was 41 million (Q4

2003: minus 1,952 million).

The improvement in earnings in 2004 was also reflected in the gross cash flow, which climbed by 12.1 percent to 3,210 million (2003: 2,864 million). The considerably higher sales in the industrial businesses and Bayer CropScience, along with the sharp rise in raw material costs, led to an increase in working capital. Net cash flow thus fell by 25.6 percent to 2,450 million (2003: 3,293 million). Despite payments totaling 0.4 billion already made in 2004 in connection with the acquisition of the Roche OTC business, we achieved a further reduction in net debt, to 5.4 billion.

14 Management Report Operating Environment in 2004

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The global economy showed a marked improvement in 2004, expanding by around 4 percent, the principal growth engines being the United States and China. Over the course of the year, the economy slowed due to the sharp rise in oil prices and weaker economic policy impulses. The economy nevertheless remained on an expansionary course, especially as the situation on the crude oil markets eased somewhat in the fall.

Economic development in the euro zone was comparatively restrained in 2004. The economy was buoyed primarily by foreign demand, while domestic demand picked up only slowly during the year. The recovery in Germany continued thanks to strong export demand, but began to run out of steam in the second half as the global economy slowed, there being little stimulus from private consumption.

The U.S. economy continued to expand in 2004. Growth decelerated as time went on, but picked up again slightly toward the end of the year. The positive trend was supported by a sustained high level of private consumption and corporate investment, while the firm recovery on the employment market boosted overall consumer confidence.

The rapid pace of growth in the Asia-Pacific region as a whole slowed somewhat during the year due to constrained foreign demand, with widely divergent trends especially in the important markets of China and Japan. In China, higher oil prices and policy measures aimed at cooling the economy have so far done little to slow the boom. By contrast, the upswing in Japan has leveled off since the summer. Both exports, which suffered from the appreciation of the yen, and domestic demand have weakened despite adherence to an expansionary monetary policy.

The economy in Latin America grew strongly in 2004, although the outlook became somewhat less bright toward the end of the year. The robust growth in this region due more than anything to high raw material prices was aided by industrial exports, which benefited from global economic expansion, and by historically low interest rates.

Performance by Subgroup

In 2004 our business activities were grouped together in the Bayer HealthCare, Bayer CropScience, Bayer MaterialScience and LANXESS subgroups, comprising the following reporting segments:

Subgroup Bayer HealthCare	Segments Pharmaceuticals, Biological Products; Consumer Care, Diagnostics; Animal Health
Bayer CropScience	CropScience
Bayer MaterialScience	Materials; Systems
LANXESS	LANXESS

Bayer HealthCare

Sales of the **Bayer HealthCare** subgroup declined by 4.4 percent to 8,485 million due to the genericization of Cipr® in the United States and to adverse currency effects. Currency- and portfolio-adjusted sales edged up by 0.8 percent year on year. **EBIT** more than doubled, to 859 million. However, the previous year s figure contained extensive special charges for Lipobay/Baycol and substantial asset write-downs in the plasma business. Before special items, EBIT improved by 14.3 percent to 1,037 million. **Gross cash flow** climbed by 18.0 percent to 962 million. A decrease in working capital boosted **net cash flow** by 28.8 percent to 1,007 million.

Management Report	Bayer Annual Report 2004 15		
Bayer HealthCare	2003	2004	Change
million Sales	8,871	8,485	in % - 4.4
of which discontinuing operations	613	660	
EBITDA*	1,252	1,341	+7.1
of which discontinuing operations	(122)	(10)	
Operating result [EBIT]	365	859	+135.3
of which discontinuing operations	(349)	(56)	
of which special items	(542)	(178)	
Gross cash flow*	815	962	+18.0
of which discontinuing operations	(122)	60	
Net cash flow*	782	1,007	+28.8
of which discontinuing operations	(98)	(16)	

* for definition see Bayer Group Key Data on front flap

Best-Selling Bayer HealthCare Products	2004	Change	Change in local currencies
million		%	%
Ciprobay [®] /Cipro [®] (Pharmaceuticals)	837	- 40.7	- 38.1
Adalat [®] (Pharmaceuticals)	670	- 0.9	+1.9
Ascensia [®] product line (Diabetes Care)	627	+8.5	+9.7
Aspirin [®] (Consumer Care/Pharmaceuticals)	615	+7.1	+11.7
Kogenate [®] (Biological Products)	563	+13.3	+15.9
ADVIA Centaur [®] system (Diagnostics)	441	+14.0	+19.1
Gamimune [®] N/Gamunex [®] (Biological Products)	343	+12.8	+21.1
Avalox [®] /Avelox [®] (Pharmaceuticals)	318	+6.4	+12.4

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Glucobay® (Pharmaceuticals)	278	+1.8	+5.9
Advantage [®] /Advantix [®] (Animal Health)	206	+5.1	+12.2
Levitra [®] (Pharmaceuticals)	193	+34.0	+40.3
Trasylol [®] (Pharmaceuticals)	171	+8.9	+17.2
Prolastin [®] (Biological Products)	166	0.0	+7.2
Baytril [®] (Animal Health)	160	- 5.9	- 0.6
Canesten [®] (Consumer Care)	140	+3.7	+6.7
Total	5,728	- 4.0	- 0.1
Proportion of Bayer HealthCare sales	68%		

16 Management Report	Bayer Annual Report 2004		
Pharmaceuticals, Biological Products million	2003	2004	Change in %
Sales	4,745	4,388	- 7.5
of which discontinuing operations	613	660	
Pharmaceuticals	3,635	3,166	- 12.9
Biological Products	1,110	1,222	+10.1
EBITDA*	147	522	
of which discontinuing operations	(122)	(10)	
Operating result [EBIT]	(408)	302	
of which discontinuing operations	(349)	(56)	
of which special items	(832)	(148)	
Gross cash flow*	23	405	
of which discontinuing operations	(122)	60	
Net cash flow*	(163)	215	
of which discontinuing operations	(98)	(16)	

* for definition see Bayer Group Key Data on front flap Pharmaceuticals, Biological Products

Sales of our Pharmaceuticals, Biological Products segment receded by 357 million, or 7.5 percent, to 4,388 million.

Sales of the **Pharmaceuticals** Division were down by 469 million, or 12.9 percent, to 3,166 million, and by 9.2 percent before currency translations. This was mostly due to the expiration of our U.S. patent for the anti-infective Cipro[®]. Total sales of Ciprobay[®]/Cipro[®] (active ingredient: ciprofloxacin) fell by 574 million, or 40.7 percent, year on year. Our once-daily formulation Cipro[®] XR had gained a 14 percent share of ciprofloxacin prescriptions in the United States by year end. As part of the realignment of our pharmaceuticals business, we signed an extensive cooperation agreement in September 2004 under which Schering-Plough now markets and distributes certain of our primary care products in return for sales-dependent license payments. As expected, our sales declined as a result.

Sales of our erectile dysfunction treatment Levitra[®] rose by 49 million, or 34.0 percent (currency-adjusted: 40.3 percent), to 193 million, though this was a smaller increase than we had anticipated. Levitr[®] has now been registered in all the major countries. By year end the product had gained a roughly 11 percent global market share and a 10 percent share in the United States, the most important market.

Sales of our respiratory antibiotic Avalox[®]/Avelox[®] continued to advance in a highly competitive environment, increasing by 6.4 percent (currency-adjusted: 12.4 percent) to 318 million. Despite keen generic competition, sales of our antihypertensive drug Adalat[®] remained steady year on year. Further growth was achieved by Aspirin[®] Cardio (heart attack and stroke prophylaxis), Trasylol[®] (used in open-heart surgery) and Glucobay[®] (diabetes).

We received positive clinical study results both for our developmental product Bay 43-9006 to treat advanced renal cell carcinoma and for our Factor Xa inhibitor for the prevention and treatment of thromboembolic disorders. We discontinued clinical trials for two phase II developmental products, taxane and repinotan, as the results did not meet our target profiles.

Sales of the **Biological Products** Division rose by 10.1 percent to 1,222 million (currency-adjusted: 15.5 percent). Both our hemophilia drug Kogenate[®] and the plasma products contributed to this positive performance. Kogenate[®] grew sales primarily in Europe, posting a considerable increase in volumes. The plasma business developed very well in North America due to new product launches (Gamunex[®]), but receded in Japan due to fierce competition and regulatory changes.

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EBIT of the **Pharmaceuticals, Biological Products** segment improved from minus 408 million to 302 million. Before special items, EBIT rose by 6.1 percent to 450 million. The decline in EBIT of the Pharmaceuticals Division due to the expiration of our U.S. patent for Cipro[®] was more than offset by the higher sales of the Biological Products Division and further cost savings achieved. Special items in 2004 came to minus 148 million on aggregate, including a 71 million loss on the sale of the plasma business, further charges of 47 million for Lipobay/Baycol, total restructuring charges of 69 million in connection with the Schering-Plough alliance and the realignment of our pharmaceutical research, and 39 million in gains from the sale of a license to Alcon. In connection with the divestment of our plasma business and the related transfer of employees, we expect to book a gain of around 20 million in 2005 from the curtailment of pension plans. In addition, we will realize the operating result of the plasma business prior to closing of the transaction. Special items in the previous year mainly comprised expenses relating to the divestment of the plasma business and for accounting measures concerning Lipobay/Baycol.

Consumer Care, Diagnostics

Sales in the **Consumer Care, Diagnostics** segment dipped by 25 million, or 0.7 percent, to 3,311 million. Currency-adjusted sales grew by 4.6 percent.

Sales of the **Consumer Care** Division moved back by 4.8 percent to 1,336 million, but advanced by 3.2 percent when adjusted for portfolio effects related to the household insecticides divestiture and for shifts in currency parities. Business in Europe, particularly Italy, Germany and the United Kingdom, continued to expand thanks to the launch of new products such as Aspirin[®] Complex. In Latin America, Aspirin[®] sales were encouraging. By contrast, our OTC business in North America was level with the previous year.

Sales of blood glucose monitoring systems offered by our **Diabetes Care** Division grew by 4.5 percent to 653 million, and by 9.5 percent in local currencies. Particularly successful were the Ascensia[®] BREEZE and Ascensia[®] CONTOUR/MICROFILL test systems launched in 2003. Diabetes Care thus has the most extensive product range of any supplier worldwide. We achieved double-digit growth rates in important markets such as the United States, Germany, Spain and the United Kingdom.

The **Diagnostics** Division grew sales by 1.1 percent to 1,322 million, and by 5.7 percent before currency translation, with all business units and all regions contributing to the increase. We posted double-digit growth rates in some countries, particularly in Latin America and Asia-Pacific. Complementing the existing product line was the new ADVIA[®] 1200 system.

EBIT of the **Consumer Care, Diagnostics** segment dropped by 201 million to 400 million. Before special items, however mainly litigation-related charges and expenses for the integration of the Roche OTC business EBIT for the segment increased considerably to 430 million (plus 29.1 percent). This earnings growth was due particularly to the sales increases in the Diabetes Care and Diagnostics divisions and to cost savings achieved. The principal special item in the previous year was the income from the sale of the household insecticides business.

Consumer Care, Diagnostics million Sales	2003 3,336	2004 3,311	Change in % - 0.7
Consumer Care	1,403	1,336	- 4.8
Diagnostics**	1,308	1,322	+ 1.1

Diabetes Care**	625	653	+ 4.5
EBITDA*	901	639	- 29.1
Operating result [EBIT]	601	400	- 33.4
of which special items	268	(30)	
Gross cash flow*	648	448	- 30.9
Net cash flow*	719	667	- 7.2

^{*} for definition see Bayer Group Key Data on front flap

** Diagnostics (formerly Professional Testing Systems) / Diabetes Care (formerly Self Testing Systems)

18 Management Report	Bayer Annual Report 2004		
Animal Health million	2003	2004	Change in %
Sales	790	786	- 0.5
EBITDA*	204	180	- 11.8
Operating result [EBIT]	172	157	- 8.7
of which special items	22	0	
Gross cash flow*	144	109	- 24.3
Net cash flow*	226	125	- 44.7

* for definition see Bayer Group Key Data on front flap Animal Health

Sales of the **Animal Health** segment dipped by 4 million to 786 million, but advanced by 4.5 percent in local currencies. All regions contributed to this growth. Notable success was achieved with the launch of our antiparasitic Advantix[®] in Italy and with our Advantage[®] and Baytril[®] businesses in the United States.

EBIT of the Animal Health segment fell by 15 million to 157 million. Adjusted for the previous year s one-time gains from the sale of product rights, EBIT grew by 4.6 percent in 2004.

Bayer CropScience

Our **Bayer CropScience** subgroup grew sales by 3.2 percent to 5,946 million in 2004. Currency- and portfolio-adjusted sales rose by 8.4 percent. Fourth-quarter sales rose by 2.6 percent year on year, to 1,448 million. This sales growth helped Bayer CropScience to improve its market position in 2004, and it is now the global number one in the industry.

Sales of the **Crop Protection** Business Group increased by 3.2 percent year on year to 4,957 million.

In the Insecticides business unit, sales remained steady at 1,378 million, advancing by 5.5 percent in local currencies. Our Confidor®/Gaucho®/Admire®/Merit® product group achieved sales of 603 million due mainly to increased use in cotton, vegetables and soy-beans in the United States and Brazil. Envidor®, which we introduced in 2003 for use in perennial crops, continued to perform very well in its second year on the market.

Sales of the Fungicides business unit increased by 109 million, or 9.3 percent, to 1,277 million, thanks largely to strong gains for our top fungicides Folicur[®] and Flint[®]. The growth in sales, particularly in the first and fourth quarters, resulted mainly from the efforts to combat against Asian rust in Brazil. Sales of our broad-spectrum fungicide Folicur[®] climbed again by 30.5 percent in 2004, to 411 million, mainly on account of its

Bayer CropScience	2003	2004	Change
million			in %

Sales	5,764	5,946	+ 3.2
Crop Protection	4,801	4,957	+ 3.2
Insecticides	1,376	1,378	+ 0.1
Fungicides	1,168	1,277	+ 9.3
Herbicides	1,848	1,855	+ 0.4
Seed Treatment	409	447	+ 9.3
Environmental Science	692	678	- 2.0
BioScience	271	311	+ 14.8
EBITDA*	1,091	1,219	+ 11.7
Operating result [EBIT]	342	492	+ 43.9
of which special items	(81)	(30)	
Gross cash flow*	860	893	+ 3.8
Net cash flow*	1,165	778	- 33.2

* for definition see Bayer Group Key Data on front flap

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Best-Selling Bayer CropScience Products	2004	Change	Change in local currencies
million Confidor [®] /Gaucho [®] /Admire [®] /Merit [®] (Ins./Seed T./ES)	603	in % + 2.2	in % + 6.6
Folicur®/Raxil® (Fungicides/Seed Treatment)	411	+ 30.5	+ 34.9
Flint [®] /Stratego [®] /Sphere [®] (Fungicides)	240	+ 20.0	+ 25.0
Puma [®] (Herbicides)	227	+ 0.4	+ 4.9
Basta [®] /Liberty [®] (Herbicides)	197	+ 23.9	+ 28.3
Decis [®] /K-Othrine [®] (Insecticides/Environmental Science)	172	+ 8.2	+ 12.6
Betanal [®] (Herbicides)	144	+ 0.7	+ 3.5
Fenikan [®] (Herbicides)	118	+ 2.6	+ 2.6
Temik [®] (Insecticides)	109	+ 21.1	+ 28.9
Aliette® (Fungicides)	99	- 7.5	- 4.7
Total	2,320	+ 10.3	+ 14.4
Proportion of Bayer CropScience sales	39%		

increasing use to control the cereal disease fusarium. Business with Flint[®] grew by 20.0 percent to 240 million, although market conditions in western Europe remained difficult. Sales of our Sphere[®] and Stratego[®] formulations for soybeans rose strongly in Brazil and Argentina. We also increased sales in many other countries and crops. In addition we had major success with the launch of our new Proline[®] range of cereal fungicides in Germany.

Business in the Herbicides unit edged up by 0.4 percent to 1,855 million despite a difficult market environment. A key factor in this growth was our successful portfolio of herbicides for the important cereal, sugar beet and rice markets, as well as for herbicide-tolerant crops such as canola. Sales of Basta[®]/Liberty[®] improved by 23.9 percent to 197 million. Our recently launched product Atlantis[®] had a very successful year thanks to its consistently high efficacy against grass weeds in cereal crops. Atlantis[®] is an important element of our strategy for rejuvenating our portfolio.

The 9.3 percent growth in sales of seed treatment products was attributable not only to the acquisition of Crompton Corporation s 50 percent interest in Gustafson, but also to a substantial increase in sales of our successful new seed treatment Poncho[®].

Sales of the **Environmental Science** Business Group receded by 2.0 percent to 678 million, but grew by 3.2 percent before translation.

In the **BioScience** Business Group, sales climbed by 14.8 percent year on year to 311 million. The main contributors to this increase were InVigor[®] (canola seed) and FiberMax[®] (cotton seed), both with sales growth exceeding

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50 percent. Business in vegetable seeds was also well above the previous year.

Despite negative currency effects, **EBIT** of Bayer CropScience showed a pleasing 43.9 percent improvement from 342 million to 492 million. This earnings performance was attributable both to business expansion and to strict cost management. Charges for restructuring were significantly lower than in the previous year. EBIT before special items improved by 99 million, or 23.4 percent, to 522 million. **Net cash flow** fell by 33.2 percent to 778 million because of an increase in working capital particularly inventories and trade accounts receivable related to the growth in business.

20 Management Report	Bayer Annual Report 2004		
Bayer MaterialScience million	2003	2004	Change in %
Sales	7,453	8,597	+ 15.3
EBITDA*	980	1,216	+ 24.1
Operating result [EBIT]	(397)	641	
of which special items	(744)	(27)	
Gross cash flow*	935	884	- 5.5
Net cash flow*	1,113	498	- 55.3

* for definition see Bayer Group Key Data on front flap Bayer MaterialScience

Sales of our **Bayer MaterialScience** subgroup moved ahead strongly in 2004, increasing by 1,144 million, or 15.3 percent, to 8,597 million; currency- and portfolio-adjusted sales climbed by 21.0 percent. This growth was rooted largely in the economic recovery in Asia-Pacific and Latin America and strong demand in North America. **EBIT** of the subgroup improved by more than 1 billion to 641 million, the previous year s figure having contained substantial asset impairment charges. Before special items, EBIT rose by 321 million, or 92.5 percent, to 668 million. This very gratifying performance stemmed mainly from improved profitability in the polycarbonates and polyurethanes businesses. As the year progressed, we were increasingly able to raise prices to offset the sharp rise in raw material costs. The strong uptrend in business led to an increase in inventories and trade accounts receivable, causing **net cash flow** to recede by 55.3 percent to 498 million.

Materials

Sales in the **Materials** segment were well ahead of the previous year, rising by 471 million, or 17.0 percent, to 3,248 million; currency-adjusted sales increased by 22.1 percent. The Polycarbonates business unit and H.C. Starck were instrumental in this favorable performance, with persistently high demand from the plastics and electronics industries allowing both units to achieve price and volume increases. Currency-adjusted sales of the Polycarbonates business unit grew by 42.0 percent in Asia-Pacific due to heavy demand, particularly in China. Sales of H.C. Starck rose significantly, especially in Europe.

EBIT of the Materials segment jumped from 58 million to 293 million in 2004. If the previous year s figure is adjusted for special items, the underlying increase comes to 206 million. This was chiefly due to growth in demand and the resulting improvements in capacity utilization. Moreover, we were able to pass on a large part of the substantially increased raw material costs from the third quarter onward.

Materials	2003	2004	Change
million			in %
Sales	2,777	3,248	+ 17.0

Polycarbonates	1,713	2,035	+ 18.8
Thermoplastic Polyurethanes	177	182	+ 2.8
Wolff Walsrode	323	328	+ 1.5
H.C. Starck	564	703	+ 24.6
EBITDA*	327	542	+ 65.7
Operating result [EBIT]	58	293	
of which special items	(29)	0	
Gross cash flow*	312	400	+ 28.2
Net cash flow*	332	209	- 37.0

* for definition see Bayer Group Key Data on front flap

Management Report	Bayer Annual Report 2004 21		
Systems million	2003	2004	Change in %
Sales	4,676	5,349	+ 14.4
Polyurethanes	3,228	3,872	+ 20.0
Coatings, Adhesives, Sealants	1,191	1,237	+ 3.9
Inorganic Basic Chemicals	218	218	0.0
Other	39	22	- 43.6
EBITDA*	653	674	+ 3.2
Operating result [EBIT]	(455)	348	
of which special items	(715)	(27)	
Gross cash flow*	623	484	- 22.3
Net cash flow*	781	289	- 63.0

^{*} for definition see Bayer Group Key Data on front flap Systems

In the **Systems** segment, **sales** amounted to 5,349 million, up by 673 million or 14.4 percent from the previous year. On a currency-adjusted basis, business expanded by 18.8 percent. Continuing strong demand, particularly in Asia-Pacific, and price increases in the second half of the year helped sales of the Polyurethanes business unit to grow by 20.0 percent to 3,872 million. This included sales of raw materials, mainly styrene, manufactured in a new propylene oxide facility that was not in operation in the previous year. Sales of the Coatings, Adhesives, Sealants business unit improved by 3.9 percent to 1,237 million. While sales rose significantly in Asia-Pacific and Latin America, the picture in Europe was mixed, particularly due to the weakness of the automotive and construction sectors.

EBIT of the Systems segment climbed to 348 million in 2004. While the previous year s figure was depressed particularly by 622 million in impairments, the special items in 2004 consisted of a 27 million provision related to an agreement reached with the U.S. Justice Department in connection with an investigation into prices for polyester polyols. EBIT before special items advanced by 115 million, or 44.2 percent, to 375 million, helped by high utilization of capacities and successful cost-containment measures. In addition, the impairment losses recognized in the previous year led to lower depreciation and amortization. The sharp rise in raw material costs, particularly for aromatic raw materials, was offset in many cases by price increases.

LANXESS

Sales of the **LANXESS** subgroup grew in 2004 by 277 million, or 4.8 percent, from the previous year to 6,053 million. Currency-adjusted sales advanced by 7.8 percent.

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The Chemical Intermediates unit reported sales up by 6.6 percent, to 1,132 million, or by 9.0 percent in local currencies. This improvement resulted from price increases made to offset higher raw material and energy costs, and from volume growth in the Basic Chemicals and Inorganic Pigments areas. Sales in Fine Chemicals declined year on year, largely as a result of continuing difficult market conditions for photographic chemicals, and despite an improvement in the agrochemicals market.

Sales of the Performance Chemicals unit dipped by 1.5 percent, to 1,856 million. Adjusted for the effects of foreign currency translation, however, sales rose by 1.6 percent. The expansion of business, particularly in Rhein Chemie, Ion Exchange Resins and Material Protection Products, was offset by lower sales in Functional Chemicals, Textile Processing Chemicals and other areas.

The Engineering Plastics unit posted a sharp improvement in sales, with business expanding by 18.4 percent to 1,586 million. Both the Styrenics and the Semi-

22 Management Report	Bayer Annual Report 2004		
LANXESS million	2003	2004	Change in %
Sales	5,776	6,053	+ 4.8
Chemical Intermediates	1,062	1,132	+ 6.6
Performance Chemicals	1,884	1,856	- 1.5
Engineering Plastics	1,339	1,586	+ 18.4
Performance Rubber	1,358	1,400	+ 3.1
Other	133	79	- 40.6
EBITDA*	168	391	+ 132.7
Operating result [EBIT]	(1,290)	74	
of which special items	(1,204)	(99)	
Gross cash flow*	280	306	+ 9.3
Net cash flow*	131	234	+ 78.6

^{*} for definition see Bayer Group Key Data on front flap

Performance Rubber sales moved ahead by 3.1 percent, to 1,400 million, with currency-adjusted sales up by 6.2 percent from the previous year. Growth resulted largely from an increase in selling prices occasioned by significant rises in raw material and energy costs. This unit also benefited from stronger demand for rubber products.

EBIT of the **LANXESS** subgroup improved in 2004 by a very substantial 1,364 million, to 74 million. Special items mainly comprised a 40 million provision for environmental protection measures and 21 million in litigation-related expenses. Earnings in the previous year were diminished in particular by impairment charges of 988 million. EBIT before special items thus climbed sharply from minus 86 million to 173 million, an improvement of 259 million, thanks mainly to higher gross profit and cost savings achieved through business process optimization, and to the lower depreciation and amortization resulting from the impairment losses recognized in 2003. On the other hand, margins came under pressure from further increases in raw material prices. Faced with higher raw material and energy costs, we succeeded in implementing only limited price increases. **Net cash flow** improved by 78.6 percent to 234 million.

Performance by Region

Sales of our European companies advanced by 6.2 percent. The Pharmaceuticals, Biological Products segment and MaterialScience achieved double-digit growth rates, while sales of CropScience were slightly down. Sales in

Crystalline Products businesses contributed to this positive performance with price and volume increases. By contrast, sales of Fibers declined in a market characterized by global overcapacities and the resulting pressure on prices.

Germany grew much more slowly, posting a 0.7 percent increase to 4.1 billion.

In the North America region sales showed a small increase, measured in local currencies, on account of strong growth in our industrial businesses and CropScience. As expected, however, sales of the Pharmaceuticals, Biological Products segment fell sharply due to generic competition for Cipro[®], with business shrinking by 21.4 percent in local currencies.

Sales in Asia-Pacific also grew by a double-digit percentage in local currencies. Our industrial businesses registered particularly large increases, thanks to rapid expansion in customer industries, especially plastics and electronics.

In the Latin America/Africa/Middle East region, we took advantage of the favorable market conditions especially in Latin America and grew sales considerably. The business environment in the agricultural industry improved overall, especially in Brazil. The appearance of Asian rust, a fungal disease, created an additional market for our fungicides. CropScience benefited from these favorable market conditions, increasing its sales in this region by 23.1 percent before currency translations.

Management Report

Region and Segment in 2004

Latin America/ Europe North America Asia/Pacific Africa/Middle East adj. adi. adi. adi. % yoy iticals, 854 +9.84,388 1,582 +11.5+11.41.565 - 27.3 - 21.4 +5.5387 + 6.6+15.6- 7.5 Care, 1,186 +5.81,440 - 4.3 289 - 0.3 396 - 3.1 +5.13,311 - 0.7 +5.7+4.6- 4.0 s +2.2245 +0.9+0.8295 - 3.1 + 6.2120 - 1.4 126 +4.4+10.0786 - 0.5 ealth 5,946 + 3.2ce 2,238 - 2.5 - 2.4 1,412 +5.4+14.3927 - 3.6 +0.51,369 +17.4+23.11.382 +10.9+11.0703 +15.8+27.0947 +26.7+35.5216 +23.2+27.73,248 +17.02,494 1.483 +27.5+18.3+18.4+5.5+15.4822 +21.2550 +13.4+18.35.349 +14.45 +2.91,372 981 + 9.1 + 12.9+10.46,053 +4.83,134 +2.9+4.0+13.0566 +14.3ons 12,915 +6.28,277 - 4.2 4,946 + 9.2 +14.33,620 + 11.7 +17.729,758 + 4.2tion) + 6.2 + 4.3

Value Management

We need to implement our strategic portfolio decisions on the one hand and further improve our performance on the other.

WERNER WENNING, CHAIRMAN OF THE BOARD OF MANAGEMENT OF BAYER AG

CVA-based system

One of the prime objectives of the Bayer Group is to sustainably increase enterprise value. In 1994 we became one of the first German companies to embark on the development of a value management system, which we introduced throughout the Group in 1997. The system is used for the planning, controlling and monitoring of our businesses. Our basic controlling parameter is the cash value added (CVA), which indicates the degree to which the cash flows needed to cover the costs of equity and debt and of reproducing depletable assets have been generated. If the CVA is positive, the company or business entity concerned has created value. If it is negative, the anticipated capital and asset reproduction costs have not been earned. Gross cash flow (GCF) and CVA are profitability indicators for a single reporting period. For a year-on-year comparison we therefore use the delta CVA, which is the difference between the CVAs of two consecutive periods. A positive delta CVA shows that value creation has increased from one period to the next.

Calculating the cost of capital

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Bayer calculates the cost of capital by the weighted average cost of capital (WACC) formula. WACC is the average of the cost of the company s debt and equity financing, weighted according to their respective market values. The cost of equity corresponds to the return expected by our stockholders and is computed from capital market information. The cost of debt used in calculating WACC is based on the terms for our ten-year corporate bond issue.

To take into account the different risk and return profiles of our principal businesses, we calculate the cost of capital after taxes for each of our subgroups. This is 8.5 percent for HealthCare, 6.5 percent for CropScience and 6.0 percent for MaterialScience and LANXESS. The minimum return required for the Bayer Group as a whole comes out at 7.0 percent.

Gross cash flow, cash flow return on investment, and cash value added as performance yardsticks

The GCF, as published in our cash flow statement, is the measure of our internal financing capability. Bayer has chosen this parameter because it is relatively free of accounting influences and thus a more meaningful performance indicator.

The profitability of the Group and of its individual business entities is measured by the cash flow return on investment (CFROI). This is the ratio of the GCF to the capital invested (CI). The CI can be derived from the

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balance sheet and comprises the assets required for operations stated at cost of acquisition or construction plus working capital, less interest-free liabilities (such as short-term provisions). To allow for fluctuations during the year, the CFROI is computed on the basis of the average CI for the respective year.

Taking into account the costs of capital and of reproducing depletable assets, we determine the GCF hurdle. If the GCF hurdle is equaled or exceeded, the required return on equity and debt plus the cost of asset reproduction has been earned.

	2003	2004
million Gross cash flow	2,864	3,210
CVA	(809)	88
CFROI	8.1%	9.9%
Average capital invested	35,402	32,441

The GCF hurdle for 2004 was 3,122 million. The gross cash flow achieved was 3,210 million, or 103 percent of the hurdle. Thus in 2004 we earned our entire capital and asset reproduction costs, and the positive CVA of 88 million shows we created additional value. Given the previous year s CVA of minus 809 million, the Bayer Group therefore achieved a delta CVA of 897 million, which means we improved value creation by this amount in 2004 compared with the previous year.

The CFROI increased from 8.1 percent in 2003 to 9.9 percent in 2004, due both to the higher gross cash flow and to the lower capital invested.

The returns (CFROIs) of the subgroups also showed encouraging year-on-year gains in most cases. HealthCare posted a CFROI of 15.7 percent (2003: 10.9 percent), while the figure for CropScience was 10.6 percent (2003: 9.6 percent), for MaterialScience 9.9 percent (2003: 9.4 percent), and for LANXESS 6.7 percent (2003: 4.6 percent). The returns of our HealthCare and MaterialScience subgroups thus exceeded their hurdle rates (including asset reproduction costs), while CropScience approximately equaled the hurdle. The CFROI of LANXESS was below the hurdle.

Liquidity and Capital Resources

Gross cash flow increased by 12.1 percent from 2,864 million to 3,210 million, mainly due to the higher income from operations. The sales growth in CropScience and the industrial businesses, combined with significantly higher costs for petrochemical raw materials, led to an increase in inventories and trade accounts receivable. This in turn caused a 25.6 percent drop in net cash flow, to 2,450 million.

There was a net cash outflow of 814 million for investing activities, compared to a 460 million net inflow in the previous year. Disbursements of 1,251 million for additions to property, plant and equipment and 358 million for acquisitions were partially offset by 200 million in cash receipts from sales of property, plant and equipment,

90 million in inflows related to investments, 400 million in interest and dividend receipts and 105 million in inflows from marketable securities. The 358 million in disbursements for acquisitions comprised mainly the 100 million

purchase price for the remaining 50 percent of the shares of Gustafson and 208 million for the remaining 50 percent interest in the U.S. joint venture with Roche, both of which we now wholly own. The 90 million in receipts related to investments comprised mainly a 327 million payment from Aventis in connection with the 2002 acquisition of Aventis CropScience, as well as outflows of around 200 million for advance payments related to the acquisition of the Roche OTC business. The previous year s cash inflows of 258 million related to investments included, in particular, the proceeds from the divestment of our equity stake in Millennium Pharmaceuticals. The previous year s receipts from sales of property, plant and equipment contained mainly the 1,185 million in proceeds from the divestments of certain crop science businesses mandated by the antitrust authorities.

Management Report	Bayer Annual Report	2004 25
Bayer Group Summary Cash Flow Statements million	2003	2004
Gross cash flow*	2,864	3,210
Changes in working capital	429	(760)
Net cash provided by (used in) operating activities (net cash flow)	3,293	2,450
Net cash provided by (used in) investing activities	460	(814)
Net cash provided by (used in) financing activities	(1,761)	(761)
Change in cash and cash equivalents due to business activities	1,992	875
Cash and cash equivalents at beginning of year	767	2,734
Change due to exchange rate movements and to changes in scope of consolidation	(25)	(39)
Cash and cash equivalents at end of year	2,734	3,570
Marketable securities and other instruments	129	29
Liquid assets as per balance sheets	2,863	3,599

^{*} for definition see Bayer Group Key Data on front flap

We reduced net debt by 530 million during 2004, to 5,422 million. On December 31, 2004, we had higher liquid assets of 3,599 million to enable us to pay the remaining portion approximately 2 billion of the purchase price for the Roche consumer health business at the beginning of 2005.

We consider it important to draw on a balanced mix of capital resources to finance our activities. Chief among these resources in keeping with our requirements are a syndicated credit facility, a multi-currency commercial paper program and a multi-currency Euro Medium Term Note program. We also supplement our financing with various structured products, such as an asset-backed securities program. We are taking advantage of the currently favorable market conditions to improve the conditions of our syndicated credit line and safeguard them for the long term.

The net cash outflow of 761 million for financing activities in 2004 contained a total of 559 million for the dividend paid to our stockholders and advance capital gains tax payments on intragroup dividends, as well as 724 million in interest payments. These out-flows were partially offset by 512 million in net borrowings and 10 million in capital contributions to subsidiaries.

For details of our risk management objectives and the ways in which we hedge all the major types of transaction to which hedge accounting is applied, along with procurement market, credit, liquidity and cash flow risks, as they relate to our use of financial instruments, please refer to the section on financial strategy and note [38] (Financial instruments) to the financial statements.

Net Debt million	Dec. 31, 2003	Dec. 31, 2004
Long-term financial liabilities as per balance sheets (including derivatives)	7,378	7,117
Short-term financial liabilities as per balance sheets (including derivatives)	2,048	2,605
Derivative receivables as per balance sheets	(611)	(701)
Debt	8,815	9,021
Liquid assets as per balance sheets	(2,863)	(3,599)
Net debt	5,952	5,422

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Capital Expenditures million	2003	2004	Change in %	2005 Budget
Bayer HealthCare	407	320	- 21.4	260
Bayer CropScience	413	209	- 49.4	206
Bayer MaterialScience	464	332	- 28.4	596
LANXESS	312	279	- 10.6	

Acquisitions and divestitures

In 2004 we spent a total of 358 million for acquisitions. Of this sum, the acquisition of Roche s 50 percent interest in the OTC joint venture we founded with that company in the United States in 1996 accounted for 208 million. This acquisition was made in connection with the purchase of Roche s global consumer health business (excluding Japan). We spent a further 100 million to acquire Crompton s 50 percent interest in the Gustafson seed treatment joint venture in the United States, Canada and Mexico, thus increasing our interest in Gustafson to 100 percent.

To satisfy the last remaining antitrust conditions relating to the purchase of Aventis CropScience, we sold the 15 percent interest in KWS Saat AG that we had acquired as part of that transaction.

Earnings Performance

Net sales of the Bayer Group increased by 4.2 percent, or 1,191 million, from the previous year to 29,758 million. In local currencies and adjusted for portfolio effects, sales rose by 9.1 percent.

The cost of goods sold increased by 3.5 percent to 17.4 billion, mainly as a result of higher volumes. The ratio of the cost of goods sold to total net sales was 58.4 percent, compared with 58.8 percent in the previous year. Despite initial charges related to the alliance with Schering-Plough, selling expenses declined by 4.7 percent to 6.2 billion, largely due to currency effects. Research and development expenses declined by 12.4 percent to 2.1 billion, mainly because of our concentration on our strategic core businesses and also for currency reasons. Administration expenses increased in 2004 by 2.5 percent to 1.7 billion, on account of charges related to the integration of the OTC business acquired from Roche, the LANXESS spin-off and an organization-related reclassification of certain expenses. The reduction in the negative balance of other operating income and expenses in 2004 included charges related to the divestiture of the plasma business and litigation-related expenses. Among the items of other operating income was a 121 million gain from changes in obligations relating to the payment of employees postretirement health care costs in the United States.

EBIT in 2004 amounted to 1,808 million. Before special items, EBIT climbed by 53.1 percent to 2,244 million.

The non-operating result improved by 52 million to minus 823 million, largely because of a decrease in net interest expense, lower write-downs of investments in subsidiaries and a drop in equity-method loss. This is a particularly pleasing development in view of the fact that the previous year s item contained the 190 million gain from the sale of our interest in Millennium Pharmaceuticals.

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Income taxes in 2004 came to 385 million. In 2003, the global review of asset valuations led to substantial deferred taxes, resulting in net tax income of 645 million.

Group net income in 2004 thus improved by 1,964 million to 603 million.

Management Report	Bayer Annual Report 2004		
Bayer Group Summary Income Statements million	2003	2004	Change in %
Net sales	28,567	29,758	+4.2
Cost of goods sold	(16,801)	(17,382)	+3.5
Selling expenses	(6,460)	(6,155)	4.7
Research and development expenses	(2,404)	(2,107)	12.4
General administration expenses	(1,673)	(1,714)	+2.5
Other operating income and expenses - net	(2,348)	(592)	74.8
Operating result [EBIT]	(1,119)	1,808	
Non-operating result	(875)	(823)	+5.9
Income (loss) before income taxes	(1,994)	985	
Income taxes	645	(385)	
Minority stockholders interest	(12)	3	
Net income (loss)	(1,361)	603	

Asset and Capital Structure

Total assets increased by 0.4 billion from the end of the previous year, to 37.8 billion.

Noncurrent assets shrank by 1.4 billion, or 7.6 percent. Intangibles decreased by 0.5 billion, with amortization of 0.8 billion and negative currency effects of 0.1 billion partially offset by additions of 0.5 billion from capital expenditures and acquisitions. Property, plant and equipment declined by 0.8 billion after 1.5 billion in depreciation and 1.2 billion in capital expenditures and acquisitions, with translation adjustments and asset retirements each accounting for a 0.2 billion reduction. The value of investments declined by 0.1 billion as a result of an equity-method loss and write-downs of investments in subsidiaries.

Current assets increased by 10.6 percent, to 19.5 billion. Inventories were up by 5.6 percent to 6.2 billion, while trade accounts receivable rose by 10.0 percent to 5.6 billion. These increases were due to the substantial growth in business, as well as to higher inventory valuation stemming from the rise in raw material prices. Other receivables increased by 7.8 percent to 4.2 billion, largely because of a 0.2 billion advance payment in connection with the Roche consumer health acquisition.

Despite the dividend payment for 2003 and negative currency effects, stockholders equity rose by 0.1 billion overall to 12.3 billion, thanks mainly to the Group net income of 0.6 billion. Equity coverage of total assets for 2004 thus totaled 32.5 percent on December 31, 2004 (2003: 32.6 percent).

Liabilities grew by 0.5 billion to 23.5 billion, chiefly because of the increase in other provisions. The total of other liabilities remained steady year on year.

Summary Balance Sheets million	Dec. 31, 2003	Dec. 31, 2004
Noncurrent assets	18,232	16,855
Current assets	17,673	19,547
Deferred taxes and deferred charges	1,540	1,402
Stockholders equity	12,213	12,268
Minority stockholders interest	123	111
Liabilities	23,013	23,534
Deferred taxes and deferred income	2,096	1,891
Balance sheet total	37,445	37,804

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Bayer Group Profitability Ratios Cost of goods sold (%)	Cost of goods sold Net sales		2003 58.8	2004 58.4
R&D expenses (%)	R&D expenses Net sales		8.4	7.1
Return on sales (%)	Operating result [EBIT] Net sales		(3.9)	6.1
Return on stockholders equity (%)	Income (loss) after taxes Average stockholders equity		(9.8)	4.9
Return on assets (%) The Bayer Group balance sheet ratios were as follows	Income (loss) before income taxes and interest expense Average total assets		(2.8)	4.5
Bayer Group Balance Sheet Ratios	Noncurrent assets Total assets	(%)	2003 48.7	2004 44.6
	Depreciation and amortization Capital expenditures	(%)	151.5	167.7
	Net sales Inventories		4.9	4.8
	Net sales Trade accounts receivable		5.6	5.3
	Stockholders equity Total assets	(%)	32.6	32.5
	Stockholders equity Noncurrent assets	(%)	67.0	72.8
	Short-term liabilities Total liabilities	(%)	39.6	42.0

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Value-Added Source million	2004	Change in %
Net sales	29,758	+ 4.2
Other income	1,121	- 18.4
Total operating performance	30,879	+ 3.1
Cost of materials	11,722	+ 0.9
Depreciation	2,322	- 51.0
Other expenses	7,567	+ 6.4
Value-added	9,268	+ 43.1

Value-Added

The Group s total operating performance increased by 3.1 percent to 30.9 billion as a result of the increase in sales. Value-added rose by 43.1 percent to 9.3 billion, primarily due to considerably lower depreciation and amortization charges. Stockholders received 0.4 billion, employees 7.3 billion, governments 0.6 billion and lenders 0.7 billion. The remaining portion of value-added was retained by the company.

Proposal for Distribution of the Profit

Under German law the dividend is paid out of the balance sheet profit of the parent company Bayer AG, which amounted to 0.4 billion in 2004.

Distribution million Stockholders	2004 402	Share in % 4.3
Employees	7,306	78.8
Governments	617	6.7
Lenders	705	7.6
Earnings retention	238	2.6
Value-added	9,268	100.0

We will propose to the Annual Stockholders Meeting on April 29, 2005 that the balance sheet profit be used to pay a dividend of 0.55 per share (730,341,920 shares) on the capital stock of 1.9 billion entitled to the dividend for 2004.

Employees

On December 31, 2004 there were 113,000 employees in the Bayer Group, 2,400 fewer than at the beginning of the year. The average number of employees, at 113,825, was below the 2003 level. A breakdown of employees by reporting segment and region is provided in the notes to the financial statements on page 72 ff. Personnel expenses decreased by 7.6 percent in 2004 to 7.3 billion, equivalent to 24.6 percent of sales. The value added per employee increased to 82,000.

Bayer AG Summary Income Statements million	2003	2004
Net sales	5,224	233
Cost of goods sold	(4,204)	(184)
Gross profit	1,020	49
Selling, R&D and administration expenses	(1,081)	(189)
Other operating income and expenses net	(13)	(76)
Operating result [EBIT]	(74)	(216)
Non-operating result	(50)	523
Income (loss) before income taxes	(124)	307
Income taxes	(61)	(18)
Net income (loss)	(185)	289
Allocation from retained earnings	550	113
Balance sheet profit	365	402

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In 2004 we had an extensive range of measures in place aimed at enhancing the performance potential of our employees and equipping them to deal with new tasks. Customized continuing education programs and international job rotation helped to develop and strengthen their skills and self-initiative. While the total number of employees declined, our personnel structure improved through new hirings. At our German sites alone, more than 150 university graduates were given jobs in 2004, while a further 875 young people entered company-sponsored vocational training programs.

Our employees shared in Bayer s success in 2004 by way of variable income components. A new long-term incentive system was evolved for the United States.

Social responsibility at Bayer continues to be expressed in our measures to help employees reconcile family and career demands, lead healthier lives and provide themselves with dependable retirement incomes through the corporate pension plan.

Constructive cooperation with employees representatives was instrumental in enabling us to master the additional challenges presented by the Group reorganization. We implemented the restructuring and carve-out activities related to the formation of LANXESS speedily and in a socially responsible manner. This included signing the third employment pact for Bayer s German sites which, among other things, basically rules out dismissals on economic grounds through 2007.

At the European level, the employees representatives met with Group management at the 13th Bayer European Forum to continue their cross-border information exchange and consultation process. Representatives from the countries that joined the E.U. during 2004 took part in the event for the first time.

In connection with its corporate realignment, Bayer published its new global mission statement in 2004 under the slogan Bayer: Science For A Better Life (see also page 142 ff). The values specified in the mission statement, together with the leadership principles derived from them, define a framework for running a business successfully while at the same time behaving fairly toward people and nature. Our corporate compliance program, reissued in January 2004, provides our employees with guidance on legal aspects of their daily work.

Procurement and Distribution

Bayer HealthCare

The Pharmaceuticals Division procures the raw materials for the active ingredients of its prescription medicines both from LANXESS and from other external European and Asian suppliers. We hold strategic reserves to prevent supply bottlenecks and possible dependence on a single supplier. We mitigate major price fluctuations by purchasing the intermediates required to manufacture our principal active ingredients from several suppliers on the basis of global contracts. The active ingredients of our prescription medicines are currently manufactured almost entirely in Wuppertal, Germany, for Bayer production facilities worldwide. Our most important pharmaceutical production plants are located in Leverkusen, Germany; Garbagnate, Italy; and Shiga, Japan. Our products are primarily distributed through wholesalers, pharmacies and hospitals, and sometimes directly to patients.

Since we actively compete with other drug suppliers worldwide, we seek to reinforce our external distribution network with co-promotion and co-marketing arrangements. In November 2001, for example, we signed a co-promotion agreement with GlaxoSmithKline for Levitra® (vardenafil). In January 2005 we regained from GlaxoSmithKline the

Levitra® marketing rights for certain countries other than the United States. In September 2004 we entered into a strategic alliance with Schering-Plough under which that company will dis-

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tribute our primary care products in the United States. At the same time, we will co-market Schering-Plough s cancer drugs in selected countries. Bayer and Schering-Plough also plan to jointly market Schering-Plough s product Zetra in Japan.

The Biological Products Division manufactures plasma-based products and the recombinant Factor VIII at its U.S. sites. We procure raw plasma and certain intermediates and auxiliary materials for plasma derivatives from external suppliers or other manufacturers. We also purchase raw materials and packaging for Kogenate[®] from external suppliers throughout the world. Our products are generally distributed through governmental agencies, wholesalers, pharmacies and hospitals, and in some cases directly to patients.

The activities of our Consumer Care Division are focused on over-the-counter medicines that patients can generally purchase without a prescription. Consumer Care procures extensive volumes of certain raw materials from within the Bayer Group. The most important raw materials that we buy in bulk from third parties are sodium citrate, sodium carbonate, citric acid and ascorbic acid. These are generally readily available. To minimize business risks, we diversify our raw material procurement sources worldwide. The division s sales and distribution channels outside Europe are typically supermarket chains, drugstores and other consumer outlets. In Europe, pharmacies are the primary distribution channel.

The Diagnostics Division manufactures or assembles most of its products itself. We operate a supplier management process and procure raw materials, components and finished products on an OEM (original equipment manufacturer) basis. The materials we purchase directly are generally not subject to significant fluctuations in price or availability. Our diagnostic systems are marketed directly to customers, who are primarily reference laboratories, private laboratories and hospitals, as well as through a network of distribution companies. Our diabetes care products are channeled to the consumer market through distributors, pharmacies and retail chains.

The Animal Health Division procures pharmaceutical ingredients for its veterinary medicines from within the Bayer Group and from external suppliers throughout the world. Supplementary ingredients and packaging materials are bought from various suppliers worldwide. Depending on local regulatory frameworks, animal health products may be available to end users over the counter or with a prescription issued by a veterinarian.

Bayer CropScience

CropScience procures most of its raw materials from LANXESS and other external companies, partly through supply agreements. The cost of some raw materials tends to depend on fluctuating oil and energy prices and freight charges.

As more than 80 percent of our sales are generated in the northern hemisphere, the business depends especially on the growing seasons for the relevant crops and the respective distribution cycles. The products of our Crop Protection Business Group are marketed either to wholesalers or directly to retailers through a two- or three-tier distribution system, according to local market conditions.

Our Environmental Science Business Group markets its products to both professional and private customers through various distribution channels. In the professional market, which comprises pest control and green-industry products, we market directly to companies. In the consumer market, we sell lawn and garden products through specialist dealers.

BioScience makes its seed products available to end users, distributors and processing industries. Traits developed using plant biotechnology are either marketed to other seed companies, which produce seed for the market on our

behalf, outlicensed or sold through our own seed companies usually under the brand names InVigor or FiberMax[®]. In some cases we provide plant traits to other companies for use in their own research and products.

32 Management Report Bayer MaterialScience

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The Polycarbonates Business Unit of Bayer MaterialScience sells its products primarily to injection molding and extrusion processors and to manufacturers of plastics components used predominantly in the automotive, electronics, construction, data systems, medical equipment and leisure sectors. The key petrochemical raw materials used by our Polycarbonates business unit are acetone and phenol. With raw material costs affected mainly by the volatility of oil and benzene prices, we generally conclude long-term supply agreements containing cost-based and market-price-oriented adjustment formulas. Our products are marketed chiefly through regional distribution channels. We also use trading houses and sell to smaller customers through local distributors.

The activities of Wolff Walsrode focus on building materials, industrial coatings, printing inks for soft packaging, and the health care market. In Germany and the United States, Wolff Walsrode normally sells its cellulose products directly. Elsewhere, products are marketed through Bayer s global sales organization. The principal raw material for our cellulose derivatives is chemical-grade cellulose produced from raw cellulose and cotton. We regard our procurement risk for this material as low.

H.C. Starck supplies materials and components for the electronics, optics, aviation, aerospace and medical technology industries. China is the predominant source of tungsten. As we operate our own tungsten recycling facilities, however, we are only partially dependent on Chinese imports. The supply of raw materials is covered by long-term agreements which mostly run for three to five years. H.C. Starck maintains its own international sales organizations in Europe, the United States and Japan, its most important markets. In other countries, direct contact with customers is maintained through local liaison offices.

The polyurethane products of the Polyurethanes business unit, which are based on isocyanate-polyol systems, are used in the automotive, construction, electronics and furniture industries and in leisure articles. The primary raw materials are petrochemical feedstocks, which we mostly procure on the open market through long-term agreements. A global joint venture with Lyondell provides a supply source for propylene oxide, one of our most important raw materials. These petrochemical feedstocks are subject to price fluctuations on the crude oil and derivatives markets. We mostly sell our polyurethane products directly to customers. Europe and the NAFTA countries are the primary markets for our polyurethanes business, with the Asian market continuing to show the highest growth rates.

Our Coatings, Adhesives, Sealants business unit is a leading manufacturer of raw materials for coatings and adhesives used primarily in the automotive, furniture, plastics and construction industries. Temporary fluctuations in prices for oil or utilities, for example, can heavily impact the cost of our raw materials. For this reason, supplies of the principal chemical raw materials are secured through long-term agreements. Bulk customers with global operations are attended to directly by our key account managers.

Research and Development

Research and Development Expenses by subgroup in %

In 2004 Bayer invested a total of 2,107 million in research and development. It is particularly important for us to continuously optimize our product portfolio and manufacturing processes, while at the same time developing new products aimed at strengthening our core businesses. All the subgroups work hand in hand with Bayer Technology

Services (BTS) regarding engi-

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neering issues, particularly in the area of process technology. BTS is also responsible for maintaining and expanding the Bayer Group s technology platforms, for example in the area of catalysis. Other research focuses are enabling technologies such as plant biotechnology and nanotechnology, which offer enormous potential for developing new products and businesses.

For innovation projects in particular, we depend on our network of collaborations with leading universities, public-sector research institutes and partner companies. These collaborations allow the pooling of expertise in order to rapidly translate new ideas into successful products.

Bayer HealthCare

In 2004, 1,044 million, or 50 percent of the Bayer Group s research and development budget, was spent by Bayer HealthCare. With this investment, the subgroup is laying the foundation in the Pharmaceuticals, Biological Products, Consumer Care, Diagnostics, Diabetes Care and Animal Health divisions for the introduction of further innovative products in expanding markets.

In connection with the realignment of the Pharmaceuticals Division, we have adjusted our global pharmaceutical research and development activities to reflect changing business conditions. Research operations in this division in the future will focus on the therapeutic areas cancer and cardiovascular risk management, including diabetes, at the sites in West Haven, Connecticut, United States, and Wuppertal, Germany.

Developmental projects in other therapeutic areas, such as anti-infectives and urology, will continue until the next development phase. Thereafter, various internal and external options will be investigated to achieve the best possible value-added from these projects. New active substance classes for the treatment of viral and bacterial infections or urological disorders will no longer be included in the research program. At the same time, Pharmaceuticals will intensify its product-related research, the purpose of which is to fully exhaust the potential of candidates at advanced development stages and products that are already on the market.

Biotechnology projects focusing on respiratory diseases have been placed into the new company Aerovance, based in Berkeley, California, for development and future marketing.

In 2004 positive clinical study results were achieved with the developmental product Bay 43-9006, including the results of a phase II study for monotherapy in patients with advanced metastatic kidney cancer. Twelve weeks after participants had been assigned to a treatment group, there was a statistically significantly higher percentage of participants whose disease had stopped progressing in the BAY 43-9006 group than in the placebo group. In 2004, the United States Food and Drug Administration granted fast-track (expedited registration process) and orphan drug status (market exclusivity for drug products to treat less common diseases) to this product for the treatment of metastatic renal cell carcinoma, an advanced form of kidney cancer. The product also received orphan drug status in the European Union from the Committee for Orphan Medicinal Products (COMP) of EMEA, the European regulatory body. Jointly developed by Bayer and Onyx, BAY 43-9006 is a novel compound designed to prevent tumor growth by combining two anticancer activities. The substance is currently in phase III trials for the treatment of advanced kidney cancer, and we are planning to launch the product for this indication in 2006. Phase I and II studies are currently being conducted for a number of other tumor types. Together with Onyx, we plan to begin phase III studies in patients with advanced liver cancer and skin cancer, as well as additional phase II testing for other tumor types.

Bay 59-7939 is an oral development product that directly inhibits Factor Xa. It is currently being investigated for the prevention and therapy of thromboembolic diseases, where there is a clear medical need for improved treatment

options. As an oral medicine, BAY 59-7939 could be of particular use to patients requiring anticoagulation therapy to inhibit blood clotting, including long-term prophylaxis, both in the hospital setting and at home. The phase I and II clinical studies conducted to date have shown the substance to be safe and well tolerated across a broad dose spectrum. Based on promising clinical results, we plan to begin phase III clinical testing in 2005.

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The development program for repinotan, a substance to treat patients with acute ischemic stroke, was discontinued in December 2004, as phase IIb studies failed to demonstrate the expected clinical benefit. Other indications are currently being examined for this substance. We also discontinued the development of a novel active substance from the taxanes group, as the results of recently completed phase II studies did not correspond to the clinical target profile.

In the Biological Products Division we have identified five new protein variants for potential development of the next Kogenate[®] generation. We are currently evaluating the proteins and technology; a decision concerning the selection of product candidates for inclusion in clinical studies is expected to be made in 2005. We have signed an exclusive, worldwide license agreement with Dutch-based Zilip-Pharma concerning the development and marketing of a new, longer-acting Kogenate[®] formulation. The agreement involves the application of patented liposome technology developed over several years by Zilip-Pharma and its affiliated companies. Clinical results obtained by Zilip-Pharma suggest that the interval between bleeding episodes is prolonged when Factor VIII attached to liposomes is administered to individuals with hemophilia A. Kogenate[®] with BIO-SET[®] is a recombinant Factor VIII medicine administered with a unique needle-free system that eliminates the risk of needle-stick injuries. An application for registration of the product was submitted to the FDA in 2003. The BIO-SET[®] was approved by Health Canada in June 2004 and by the E.U. Commission in September 2004. Successive global launch of the product is scheduled to begin in 2005.

Research and development activities of the Consumer Care Division focus on the identification, development and market introduction of non-prescription products. Further initiatives focus on the expansion of indications to support existing brands and on the reclassification of current prescription medic