



Expertise with Responsibility

Bayer is a diversified, international chemicals and health care group.

We offer our customers a wide variety of products and services in areas ranging from pharmaceuticals and crop protection to plastics, specialty chemicals and imaging technologies.

Bayer is research-based and aims for technological leadership in its core activities. Our goals are to steadily increase corporate value and generate a high value added for the benefit of our stockholders, our employees and the community in every country in which we operate. We believe that our technical and commercial expertise involves a responsibility to work for the common good and contribute to sustainable development. Bayer:

Success through Expertise with Responsibility.



Bayer Group				
		<i>1998</i>	<i>1997</i>	<i>Change in %</i>
Sales	<i>DM million</i>	54,884	55,005	– 0.2
Operating result	<i>DM million</i>	6,151	6,018	+ 2.2
Income before income taxes	<i>DM million</i>	5,336	5,108	+ 4.5
Net income	<i>DM million</i>	3,157	2,941	+ 7.3
Gross cash flow	<i>DM million</i>	6,602	6,480	+ 1.9
Stockholders' equity	<i>DM million</i>	24,991	23,923	+ 4.5
Total assets	<i>DM million</i>	57,216	54,170	+ 5.6
Capital expenditures	<i>DM million</i>	5,165	4,559	+ 13.3
Employees	<i>at year end</i>	145,100	144,600	+ 0.3
Personnel expenses	<i>DM million</i>	15,854	15,442	+ 2.7
Research and development expenses	<i>DM million</i>	3,920	3,878	+ 1.1

Bayer AG				
		<i>1998</i>	<i>1997</i>	<i>Change in %</i>
Total dividend payment	<i>DM million</i>	1,461	1,388	+ 5.3
Dividend per share	<i>DM</i>	2.00	1.90	+ 5.3
Tax credit	<i>DM</i>	0.65	0.81	– 19.8

This complete version of the Annual Report is published in English and German. A shorter report on the fiscal year is also available in English, German, French, Italian, Japanese and Spanish. The financial statements of Bayer AG are published in English and German.

All of these publications and lists of Bayer AG's direct and indirect holdings may be obtained on request from Bayer AG, Corporate Communications Division, 51368 Leverkusen, Germany

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March 6, 1999: To celebrate the 100th birthday of its most famous product, Bayer wraps its 120 x 65 x 19 meter high-rise headquarters building in Leverkusen, turning it into a gigantic Aspirin® box (cover picture). Watched by a crowd of nearly 45,000 people, 30 professional mountaineers finally close the 32 zip fasteners (top right) in the 22,500 square meters of fabric (center right). The completely transfigured administration building goes down in the "Guinness Book of Records" as the "biggest Aspirin" box in the world". Two more entries are earned for technical records broken during the wrapping process.



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Leverkusen, March 1999



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Polymers: Major investment at Baytown, Texas. **Page 46**



Aspirin®: The "pharmaceutical of the century" is 100 years old. **Page 34**

Agfa: Clinical information systems link images with diagnostic data. **Page 58**





Dr. Walter Wenninger

Born in 1938. Doctorate in veterinary medicine, diploma in business studies. Joined Bayer AG in 1968. Board member since 1994. Representative for the Health Care and Agriculture business segments and the North America and Mexico region.

Werner Spinner

Born in 1948. Diploma in business studies. Joined Bayer AG in 1974, Board member since 1998. Chairman of the Board Committee for Marketing and Logistics and representative for the Polymers business segment.

Werner Wenning

Born in 1946. Joined Bayer AG as commercial trainee in 1966. Board member since 1997. Chairman of the Board Committee for Finance and representative for the Central and South America, Africa and Middle East regions.

Dr. Manfred Schneider

Born in 1938. Diploma in business studies, doctorate in business administration. Joined Bayer AG in 1966, Board Chairman since 1992. Chairman of the Board Committee for Corporate Coordination.



Hans-Jürgen Mohr

Born in 1938. Degree in law. Joined Bayer AG in 1969, Board member since 1996. Chairman of the Board Committee for Human Resources, Labor Director and representative for the Europe region.

Dr. Dieter Becher

Born in 1936. Doctorate in chemistry. Joined Bayer AG in 1967, Board member since 1990. Chairman of the Board Committee for Technology and Environment and representative for the Far East region.

Dr. Pol Bamelis

Born in 1939. Doctorate in chemistry. Joined Bayer AG in 1965, Board member since 1991. Chairman of the Board Committee for Research and Development and representative for the Agfa business segment.

Dr. Udo Oels

Born in 1944. Doctorate in chemistry. Joined Bayer AG in 1976, Board member since 1996. Representative for the Chemicals business segment and responsible for environmental protection.

Sehr geehrte Aktionäre,

In 1998 we took some major steps that will help to shape Bayer's future.

We decided to float Agfa on the stock market as an independent company. We acquired Chiron Diagnostics, giving our diagnostics business a much stronger market position and access to innovative technologies. We entered into an alliance with Millennium Pharmaceuticals, providing new stimulus to our pharmaceutical research, which last year yielded seven promising compounds for clinical development. We drove forward the realignment of our chemicals operations by placing the titanium dioxide and silicones activities into joint ventures and divesting the citric acid business. And we substantially expanded our polymers capacity in core areas such as Makrolon® polycarbonate and polyurethane raw materials.

All of these actions are designed to achieve our strategic objective of becoming the world's leading integrated chemicals and health care group. At the same time, we are striving for further productivity gains and making portfolio adjustments that will boost our earning power. We are stepping up research in our own laboratories and in collaboration with carefully selected outside partners. We are maintaining a growth-oriented investment strategy to capitalize on market opportunities, while looking to realize additional growth through acquisitions.

We are closely monitoring the consolidation process in our industry, always alert for worthwhile opportunities to expand our core activities.



Faced with mounting competitive pressure and worldwide structural change, we frequently review the possibilities for a major step in that direction. But we are standing by our principles. This means, firstly, that in any such transaction we will aim for overall control of at least the core businesses. Secondly, we must gain new innovative potential and significantly increase our global market presence. Finally, we will only make this kind of decision if we are convinced it will lead to sustained growth in corporate value.

Meanwhile, Bayer is strong enough to achieve its goals through its own efforts, supplemented by alliances with other companies.

Ultimately, the key to our long-term success is the knowledge and skills of the people who work for Bayer. Therefore we aim to attract the best employees, offering them the scope and the incentives necessary to fulfill their potential and achieve optimum performance. To this end, we are increasing the performance-related component of their compensation. My sincere thanks go to all Bayer employees for their hard work and dedication.

The global economic environment deteriorated steadily during 1998. This inevitably affected our business, particularly in Asia. Nevertheless, we are basically satisfied with our earnings for 1998 and will propose to the Annual Stockholders' Meeting that the dividend be increased to DM 2.00 per share.

In 1999, it will not be easy to maintain the earnings trend of recent years. While the outlook is quite favorable in western Europe, especially in the euro currency zone, the uncertainties surrounding economic policy in Germany entail a degree of risk. In North America, there are prospects for further growth. The crises in the Far East and Russia are still with us, although there are some initial signs of recovery. In Latin America, we trust the problems will soon be overcome.

In these circumstances it is difficult to make firm predictions. We plan to increase sales, partly through our recent acquisitions, and we will endeavor to match last year's earnings – a challenging task in view of the current state of the world economy and continuing pressure on our selling prices.

We will, however, do everything we can to achieve a level of commercial success that will justify your continued confidence in Bayer and its employees.
Sincerely,



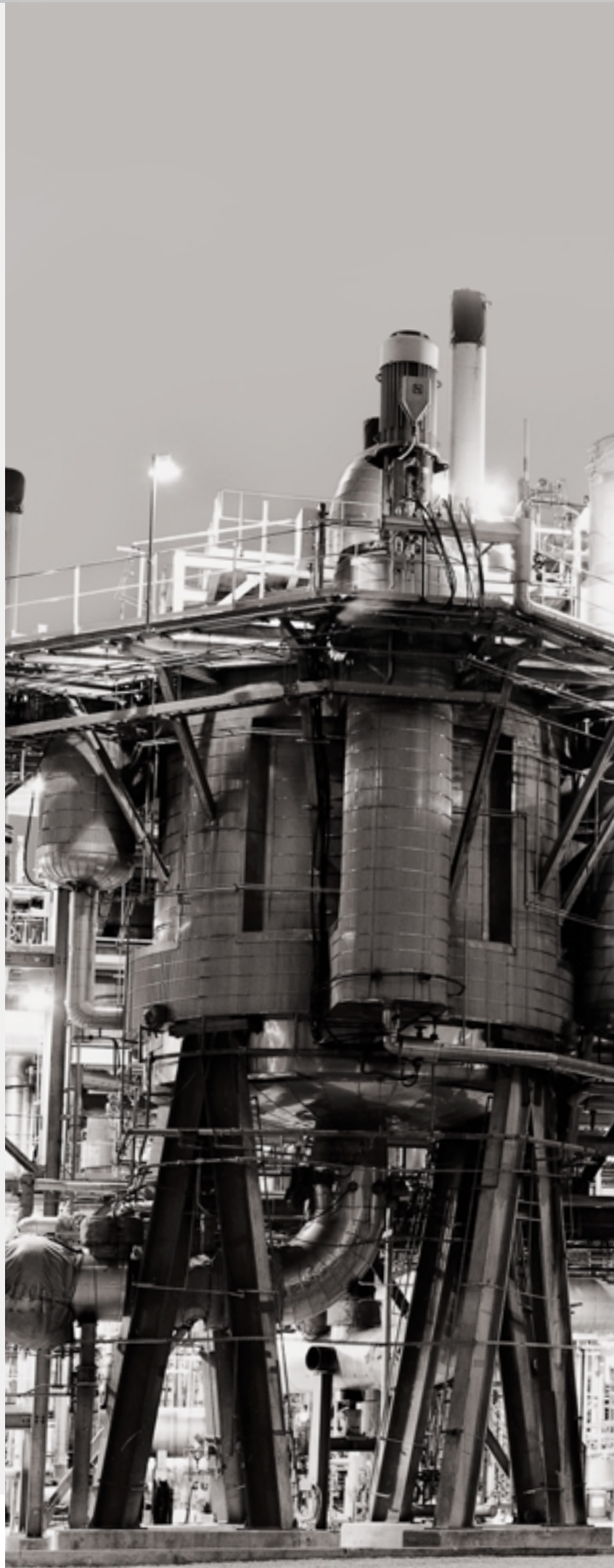
Dr. Manfred Schneider

Key Data DM billion

	1998	1997	Change
Sales	54.9	55.0	- 0.2 %
Net income	3.2	2.9	+ 7.3 %

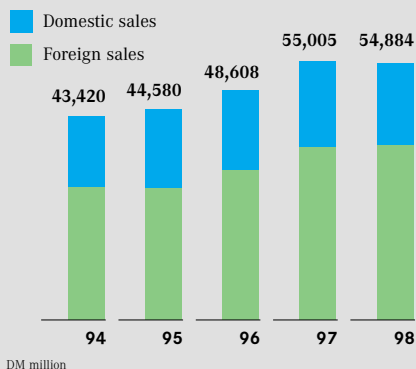
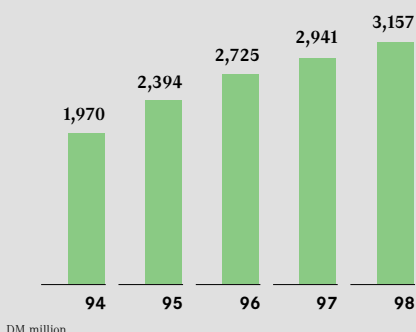
Success through diversification

We are satisfied with Bayer's overall performance in 1998, particularly as we succeeded in further raising earnings despite stagnating sales and the crises in Asia and Latin America. Net income grew by 7 percent to DM 3.2 billion, a new record. One of the reasons for this success lies in the broad diversification of our activities, with the focus on the specialties of our Chemicals and Polymers segments and the life science products of our Health Care and Agriculture segments. Another important factor is our well-balanced presence in the various regional markets with our emphasis on Europe and North America, where sales moved higher.



The site at Baytown, Texas, is currently being expanded into one of Bayer's largest production centers. The picture shows the maleic anhydride plant.



Sales**Net Income**

Although demand slackened during 1998, volumes over the year as a whole grew by 2 percent – equivalent to DM 1.1 billion in sales – compared with the previous year. The crises in the Asian and Latin American markets diminished sales by DM 1 billion.

The continuing pressure on prices led to a reduction in sales of DM 0.6 billion. In contrast to the previous year, the effects of currency changes were also negative, depressing sales by a further DM 0.4 billion. In local currencies, Group sales rose by 0.5 percent.

Changes in our portfolio trimmed sales by DM 0.2 billion. This was the net result of a gain of DM 0.8 billion through acquisitions and a decline of DM 1 billion through divested businesses.

Economic environment**Overall economic situation**

The business environment in 1998 was characterized by increasing gloom due to the economic and currency crises in Asia, Latin America and Russia. Particularly in the ASEAN countries, the economic situation deteriorated further over the course of the year. Japan's economy has not yet emerged from recession. In Europe

Net income exceeds DM 3 billion for the first time

Sales stagnate due to Asian crisis, price erosion and exchange rate movements

Portfolio streamlined, core businesses expanded

Earnings in 1999 expected to stabilize in a difficult environment

and North America, on the other hand, conditions generally remained favorable, with a stable monetary framework and falling raw material prices supporting economic growth.

In Germany, growth in GDP was 2.8 percent, compared with 2.2 percent in the previous year.

In the run-up to the introduction of the euro, exchange rates within Europe stabilized. The dollar weakened during the year, while the yen recovered.

Economic situation by industry

The economic picture in the industries we serve varied considerably from one segment to another and from one region to another. Health care continues to be affected by state intervention, especially in Europe and Japan. Nevertheless, the world market is still expanding at an above-average rate. Growth is especially dynamic in the U.S. pharmaceuticals market.

For agriculture, 1998 was a difficult year, affected by weather-related problems and falling prices.

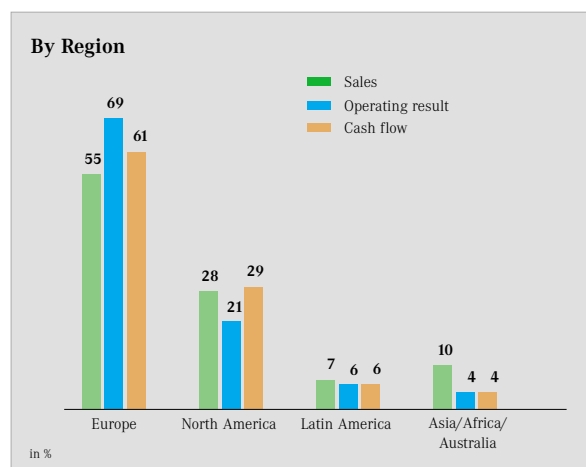
The automotive industry, one of our biggest customers, achieved good growth rates in 1998, except in Asia. The electrical and electronics industries also continued to expand, especially in North America. This had a favorable effect above all on our Polymers segment.

In the chemical industry – which is itself one of our major customers – business as a whole developed well. In spite of expanding production in western Europe and the U.S., the economic difficulties in Asia had a negative effect on prices and volumes over the course of the year.

Consumer products suffered from weak demand. The fall in raw material prices due to the Asian crisis compensated to a certain extent for the decline in selling prices.

Change in Sales

<i>Volumes</i>	+ 2.0 %
<i>Prices</i>	- 1.0 %
<i>Exchange rates</i>	- 0.8 %
<i>Acquisitions/ Divestitures</i>	- 0.4 %
Total	- 0.2 %



Business trend by region

Europe

(DM million)	1998	Change
<i>Sales</i>	30,093	+ 0.5 %
<i>Operating result</i>	4,287	+ 8.8 %
<i>Return on sales</i>	14.2 %	+ 1.0 %pts.
<i>Cash flow</i>	4,023	+ 4.2 %
<i>CFROI</i>	11.2 %	+ 0.4 %pts.

In Europe, our companies posted sales of DM 30.1 billion, which was 0.5 percent more than in 1997.

The operating result – before exceptional items – improved by 9 percent to DM 4.3 billion. The exceptional items are the income from spin-offs less the expenses for restructuring measures. The 14 percent return on sales achieved by our European companies is well above the average for the Group. The cash flow developed very well, increasing by 4 percent to DM 4 billion.

North America

(DM million)	1998	Change
<i>Sales</i>	15,380	+ 2.1 %
<i>Operating result</i>	1,324	– 8.1 %
<i>Return on sales</i>	8.6 %	– 1.0 %pts.
<i>Cash flow</i>	1,884	– 4.9 %
<i>CFROI</i>	10.0 %	– 1.8 %pts.

In North America the increase in sales in local currencies was 0.3 percent. Stronger growth was prevented by temporary shortfalls in plasma production and the more difficult market conditions for polymers.

After translation to DM, there was an increase of 2 percent to DM 15.4 billion.

The operating result fell by 8 percent to DM 1.3 billion, before net exceptional charges of DM 240 million that were due to restructuring measures in the Chemicals and Polymers segments. Gross cash flow fell by 5 percent to DM 1.9 billion.

Latin America

(DM million)	1998	Change
<i>Sales</i>	3,720	– 0.7 %
<i>Operating result</i>	365	+ 18.5 %
<i>Return on sales</i>	9.8 %	+ 1.6 %pts.
<i>Cash flow</i>	398	+ 42.1 %
<i>CFROI</i>	15.7 %	+ 4.8 %pts.

Our Latin American companies posted sales of DM 3.7 billion. Without the citric acid divestiture, there was an increase of 4 percent.

The operating result climbed 19 percent to DM 0.4 billion. The return on sales moved up to 10 percent, and the cash flow, at DM 0.4 billion, was well above the 1997 figure.

Asia, Africa and Australia

(DM million)	1998	Change
<i>Sales</i>	5,691	– 9.0 %
<i>Operating result</i>	272	– 24.2 %
<i>Return on sales</i>	4.8 %	– 0.9 %pts.
<i>Cash flow</i>	297	– 17.0 %
<i>CFROI</i>	7.2 %	– 1.7 %pts.

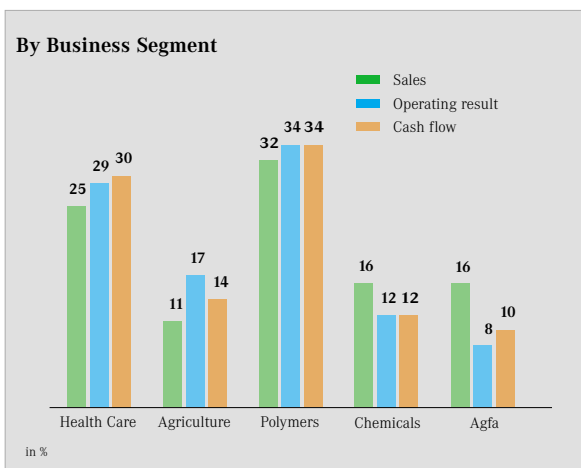
In the Asia/Africa/Australia region, sales were down 9 percent on the previous year's figure. The Japanese companies accounted for half of the decrease. Sales were also down significantly in South Korea and the ASEAN countries. Because of the favorable developments in Singapore, Taiwan, China, India and South Africa, there was 3.5 percent growth in local currencies.

As a result of these lower sales, the operating result fell 24 percent from the previous year to DM 272 million. The cash flow dropped 17 percent to DM 0.3 billion.

Business trend by segment

<i>Business Segment</i>	<i>Business Groups</i>
Health Care	Pharmaceuticals; Consumer Care; Diagnostics
Agriculture	Crop Protection; Animal Health
Polymers	Plastics; Rubber; Polyurethanes; Coatings, Colorants and Special Raw Materials; Fibers; Wolff Walsrode
Chemicals	Basic and Fine Chemicals; Specialty Products; Haarmann & Reimer; EC Erdölchemie; H. C. Starck; DyStar
Agfa	Photographic Products; Graphic Systems; Technical Imaging Systems

The portfolio of the Chemicals segment was restructured as part of our strategic focusing on core businesses to align it even more closely with the markets. The basic and fine chemicals activities of our former Inorganics and Organic Chemicals business groups have been merged into the new Basic and Fine Chemicals Business Group. The Specialty Products Business Group has now been enlarged to include the paper industry, leather industry, textile chemicals, material protection, ion exchange resins and polymer additives business units. The Coatings, Colorants and Special Raw Materials Business Group, which is part of the Polymers segment, serves many areas of the coatings industry. Alongside coating raw materials, it now also includes adhesive raw materials and organic and inorganic pigments. The previous year's data have been adjusted to take the reorganization into account.



With the exception of the Chemicals segment, which has become smaller through the placing of activities into minority joint ventures, sales of all the business segments increased. The highest growth in percentage terms was posted – due to acquisitions – by the Agfa Group.

Health Care

<i>(DM million)</i>	<i>1998</i>	<i>Change</i>
Sales	13,745	+ 3.1 %
Operating result	1,798	– 0.5 %
Return on sales	13.1 %	– 0.5 %pts.
Cash flow	1,927	+ 8.9 %
CFROI	14.4 %	+ 0.1 %pts.

Best-Selling Bayer Products		
	<i>DM million</i>	<i>Change in %</i>
Ciprobay®/Cipro®	2,468	– 0.5
Adalat®	1,839	– 3.9
Aspirin®	1,036	+ 4.2
Kogenate®	754	+ 28.2
Glucometer Elite®	566	+ 42.9
Baygon®	517	– 8.3

Sales in the Health Care segment advanced by 3 percent to DM 13.7 billion. Without the effects of currency changes, growth was 5 percent. Temporary shortfalls in plasma production in North America and state-imposed price reductions for pharmaceuticals in Europe and Japan had a negative effect.

For this reason, the operating result remained at the previous year's level of DM 1.8 billion. The net effect of restructuring expenses and income from divestitures was to improve this result by DM 63 million.

To increase efficiency in the pharmaceuticals area, we have resolved measures that should bring medium-term savings and improve the operating result by DM 700 million.

The gross cash flow in the Health Care segment rose by 9 percent to DM 1.9 billion. The CFROI – cash flow return on investment – passed 14 percent.

Sales of the **Pharmaceuticals** Business Group in 1998 were up 1 percent to DM 8.5 billion.

Demand for our anti-infective Ciprobay®/Cipro® remained strong despite increased competition. The success of our genetically engineered blood-coagulating factor Kogenate® exceeded our forecasts.

After its successful launch in Europe, our lipid-lowering product Baycol®/Lipobay® has not yet fulfilled our expectations in the United States. However, with the higher dosage scheduled for release in fall 1999, we assume that this product will enjoy greater success in the U.S. market.

Natrecor, a drug we have licensed from the biopharmaceutical company Scios Inc. for the treatment of congestive heart failure, was submitted for regulatory approval in the United States and Europe. The market launch of our Alzheimer's drug ProMem® has, however, been delayed.

The pharmaceuticals partnership formed in 1998 with Millennium, one of the leading U.S. research companies in the field of medical biotechnology, will give us broader, more effective access to key technologies for active ingredient research. At the same time, we are receiving a steady inflow of new targets for high-efficacy drugs.

In the **Consumer Care** Business Group, sales were up 2 percent. The "pharmaceutical of the century", Aspirin®, made an important contribution to this growth, as did various new products based on a combination of herbal substances and vitamins.

The **Diagnostics** Business Group posted sales of DM 2.1 billion, which was 14 percent above the figure for 1997. Strong sales of our diabetes systems and hematology products contributed to the growth. The technical problems encountered with some of our new instruments – for example the complex sensor technology in our blood glucose meter Glucometer Dex® – have now been overcome.

The acquisition of the U.S. company Chiron Diagnostics at the end of November 1998 will strengthen and further expand our business. It gives us access to new technologies such as NAD tests, improves our position in immunodiagnosics and gives us a leading position in blood gas analysis. Calculated on a yearly basis, this acquisition gives us additional sales of over DM 1 billion. Our diagnostic products now have a 10 percent share of the world market, moving us up from sixth to fourth place.

Agriculture

(DM million)	1998	Change
Sales	5,733	+ 3.0 %
Operating result	1,018	+ 4.8 %
Return on sales	17.8 %	+ 0.4 %pts.
Cash flow	916	+ 12.4 %
CFROI	16.5 %	+ 0.4 %pts.

Best-Selling Bayer Products	DM million	Change in %
Confidor® / Gaucho® / Admire®	810	+ 9.5
Folicur® / Raxil®	490	+ 12.6
Advantage®	376	+ 31.3

Sales of the Agriculture segment rose 3 percent over the previous year to DM 5.7 billion. In local currencies, sales climbed 5 percent. The operating result grew by 5 percent to DM 1 billion, and the 18 percent return on sales was the highest in the Bayer Group.

The strong earnings performance is also evidenced by the high operating cash flow of DM 0.9 billion and the related CFROI of 16.5 percent.

The **Crop Protection** Business Group posted sales of DM 4 billion, up 2 percent from the already high 1997 level. Following the acquisition of a 50 percent interest in the seed treatment business of the U.S. company Gustafson – the largest player in this sector in the United States – we also now have access to this interesting market segment in North America and additional sales of DM 100 million per year.

Our imidacloprid-based insecticides continue to be particularly successful. Apart from this, we anticipate a significant boost from the launch of new herbicides.

The **Animal Health** Business Group grew sales by 5.5 percent to DM 1.7 billion. For our veterinary product Baytril®, a leading anti-infective, a new production plant has been built in the United States so that we can exploit the market potential even more effectively. Our flea control product Advantage® remains successful, achieving global sales in 1998 of DM 376 million.

Acquisition of the animal health company Sanvet (Pty) Ltd., Pretoria, has strengthened our presence in the market for animal health products in South Africa and makes us the leading player there. We expect an additional stimulus to come from our part ownership of the Canadian company Microtek International Ltd. in the field of fish vaccines, which are marketed through the Canadian subsidiary Bayotek.

Polymers

Polymers booked sales in 1998 of DM 17.2 billion. This makes Bayer one of the biggest polymers companies worldwide and, with our focus on engineering thermoplastics – especially our Makrolon® polycarbonate – and polyurethane raw materials, we have a particularly attractive product range.

The operating result before exceptional charges climbed 22 percent to DM 2.1 billion. The return on sales was 12 percent.

Restructuring measures in the United States resulted in exceptional charges of DM 182 million.

The operating cash flow increased by 9 percent to DM 2.2 billion, and the CFROI was above 11 percent.

(DM million)	1998	Change
<i>Sales</i>	17,216	+ 0.7 %
<i>Operating result</i>	2,065	+ 22.0 %
<i>Return on sales</i>	12.0 %	+ 2.1 %pts.
<i>Cash flow</i>	2,194	+ 8.9 %
<i>CFROI</i>	11.2 %	+ 0.2 %pts.

Best-Selling Bayer Products		
	DM million	Change in %
<i>Makrolon®</i>	1,671	+ 14.2
<i>MDI</i>	1,598	+ 2.9
<i>Lustran® / Novodur®</i>	1,240	+ 1.5
<i>Polyether</i>	1,021	+ 1.5
<i>TDI</i>	855	– 3.7
<i>Butyl rubber</i>	716	– 5.3

The **Plastics** Business Group was particularly successful, with sales up 6 percent to DM 4.9 billion. The two companies Bayer ABS Ltd., India, and Bayer Polímeros S. A., Brazil, acquired the previous year, contributed to this growth. A gratifying increase in volumes and a fall in prices for petrochemical feedstocks also played a role. Exceptional charges resulted from the scheduled closure of production facilities in Muscatine, Iowa, United States.

Through the acquisition of the plastics sheet business of the Dutch chemical group DSM, we have further strengthened our position in the market for solid plastics sheeting, which is used above all as a transparent building material for greenhouses and roof structures. The takeover is scheduled for completion in March 1999.

Sales of the **Rubber** Business Group declined by 3 percent to DM 3.6 billion because of a drop in selling prices, despite stable demand from the automotive and tire industries. As part of our strategy to optimize our business structure, capacities for specialty products,

such as Therban® and butyl rubber, are being expanded. Our facilities for the production of Baypren® rubber were centralized, enabling the plant in Houston, Texas, to be shut down. This resulted in additional charges of DM 43 million.

Polyurethanes expanded its business by 1 percent to DM 4.1 billion. Here, we are replacing our U.S. facilities in Baytown and New Martinsville by much larger and more modern production plants. The closure of old facilities led to exceptional charges of DM 83 million.

The **Coatings, Colorants and Special Raw Materials** Business Group had sales of DM 3.0 billion, slightly less than in the previous year.

Fibers, too, with sales of DM 0.9 billion, was unable to match its 1997 revenues. The main reason for this was the heavy fall in Dralon® prices due to tough competition.

The **Wolff Walsrode** Business Group expanded worldwide, especially with its cellulosic products for various applications. Sales were 3 percent above those of the previous year, reaching DM 0.8 billion.

Chemicals

The Chemicals segment achieved sales of DM 8.5 billion, which was 14 percent down on the previous year's figure. The main reasons for the decline were the sale of our citric acid and zeolites businesses and the placement of our silicones and titanium dioxide activities into minority joint ventures.

Our citric acid business was sold to the British Tate & Lyle Group. The sale covers two production facilities in the United States and one in England, plus the operations of subsidiary companies in Brazil, Mexico and Colombia.

Our silicone activities in Europe, Africa and the Middle East were transferred to a joint venture in which the U.S. company GE Plastics holds the majority interest. The main production facilities are at Bayer AG's Leverkusen site, where capacities have been expanded considerably.

We have also placed our titanium dioxide business into a joint venture. The U.S. company Kerr-McGee Chemical LLC holds the majority interest.

A further step toward streamlining our chemicals portfolio was the divestiture of our zeolites business, which we sold to the U.S. company UOP LLC. Production is continuing in Leverkusen, and the employees have been taken over by UOP.

For the forward integration of our pigment operations, we have taken over the pigment business of the British company W. Hawley & Son Ltd. As a result, we are now no longer just a raw materials supplier, but also have

(DM million)	1998	Change
Sales	8,511	– 13.8 %
Operating result	768	– 10.0 %
Return on sales	9.0 %	+ 0.4 %pts.
Cash flow	770	– 21.7 %
CFROI	5.7 %	– 1.2 %pts.

Best-Selling Bayer Products		
	DM million	Change in %
Custom manufacturing (Life sciences, information technology, electronics)	620	+ 3.3
Bayferrox® (iron oxide)	590	– 0.8
Tanning agents	300	– 3.2
Optical brighteners	220	– 8.3
Material protection products	195	+ 5.0

direct contact with customers. At the same time, the move will enable us to safeguard our competitiveness in this keenly contested market.

The operating result of the Chemicals segment was down 10 percent. The return on sales was 9 percent.

The cash flow diminished by 22 percent to DM 0.8 billion. The CFROI was 6 percent.

Sales of the **Basic and Fine Chemicals** Business Group amounted to DM 1.8 billion, and were thus 6 percent down on the previous year. The decline was due mainly to lower sales of basic chemicals resulting from the economic crises in Asia and Russia in the second half of the year.

In the **Specialty Products** Business Group, sales declined by 6 percent to DM 2.2 billion. The restructuring of our chrome activities, which again involved considerable expenses, continued at full speed. In South Africa, new chrome facilities came on stream.

At **Haarmann & Reimer**, sales dipped 19 percent to DM 1.6 billion due to the sale of its citric acid activities. This business group will in future concentrate on the production and marketing of fragrances and flavors.

The sales of **EC Erdölchemie** in 1998 were down 10 percent at DM 0.9 billion. Despite the drop in sales, margins were better due to the low raw materials prices.

H.C. Starck managed to assert itself in a difficult environment caused by the negative effects in Asia. Sales decreased by 3 percent to DM 0.7 billion.

DyStar, our textile dyes joint venture with Hoechst, had sales of DM 0.7 billion, which was 12 percent less than in the previous year. The business group's strong involvement in Asia was responsible for the decline in sales.

Agfa

We intend to float Agfa on the stock market in 1999. This will give it the necessary room to maneuver and, through the issue of shares, provide it with new financing options to more effectively implement its growth strategy as one of the world's leading imaging technology companies. This move is being backed by acquisitions and restructuring measures. We are convinced that, in its core businesses – especially in prepress and technical imaging systems – Agfa has the first-class expertise and strong market position necessary for further expansion.

(DM million)	1998	Change
Sales	8,505	+ 5.2 %
Operating result	499	– 12.9 %
Return on sales	5.9 %	– 1.2 %pts.
Cash flow	643	– 11.3 %
CFROI	8.2 %	– 0.7 %pts.

Sales of the Agfa Group grew by 5 percent in 1998 to DM 8.5 billion. The increase was due primarily to the acquisition of new businesses.

The operating result diminished by 13 percent to DM 0.5 billion. Here, the economic crisis in Asia had a negative impact. Return on sales was 6 percent and the CFROI was 8 percent.

The acquisition of the offset printing plates and graphic film activities of the U.S. company DuPont generated an increase in sales of 8 percent. On the other hand, there was a decrease in sales of over DM 200 million through the divestiture of Agfa's copying systems activities. Both transactions relate to the **Graphic Systems** Business Group, which raised sales by 13 percent to DM 4.2 billion. In addition, through the purchase of Monotype Typography Inc. in the United States, Agfa has acquired the largest font library in the world, as well as relevant design and engineering resources. We are anticipating that the acquisition will not only extend the product range, but also lead to further joint product development, to which Agfa can contribute its know-how in font management and font compression.

The **Photographic Products** Business Group, which posted a decline in sales of 8 percent to DM 2.4 billion, suffered mainly from the fall in prices due to tough competition.

Technical Imaging Systems was particularly successful in 1998, achieving an increase in sales of 8 percent to DM 1.9 billion. There was an especially pleasing trend in medical imaging systems and non-destructive materials testing. In the spring, we expect to receive approval from the antitrust authorities for the takeover of the U.S. company Sterling Diagnostic Imaging, a leading player in the field of X-ray film and equipment. Merging Sterling's activities will strengthen Agfa's worldwide position in the field of imaging systems for medical diagnostics.

Financial Condition

As a globally operating company, we prepare our financial statements according to the rules issued by the International Accounting Standards Committee, London. This provides our stockholders and the financial world with a reliable, internationally comparable basis for evaluating our company and its performance. At the same time, it acts as the basis for our value-based corporate controlling.

Liquidity and capital resources

In 1998 we succeeded in raising the gross cash flow – which reflects our internal financing capability – by 2 percent to DM 6.6 billion. The gross cash flow is also the numerator for our profitability indicator, the CFROI, with which we measure the return on investment for the Group as a whole and for the individual business segments.

		1998	1997
CFROI (%)	$\frac{\text{Gross cash flow}}{\text{Capital invested}}$	10.8	10.9

The capital invested is the denominator for the CFROI, and represents the gross invested capital.

The net operating cash flow was DM 1.2 billion lower than in 1997. This is attributable to the utilization of the provisions made in the previous year for restructuring measures and to the increase in inventories.

As the statement shows, the cash and cash equivalents diminished by DM 1.1 billion.

The net cash outflow from investing activities was DM 1.6 billion higher than in the previous year. The figure was affected by the increased expenditures for property, plant and equipment and acquisitions totaling DM 8.1 billion, compared with DM 5.4 billion in 1997. Particular mention should be made of the acquisition of Chiron Diagnostics and the purchase of stakes in Gustafson and Millennium Pharmaceuticals. The net operating cash flow amounted to 89 percent of the net cash outflow from investing activities.

Summary Cash Flow Statements

DM million	1998	1997
Cash and cash equivalents at beginning of year	3,414	3,015
Gross operating cash flow	6,602	6,480
Changes in working capital	(1,086)	227
Net cash provided by operating activities	5,516	6,707
Net cash used in investing activities	(6,227)	(4,647)
Net cash used in financing activities	(356)	(1,773)
Exchange rate movements/ changes in companies consolidated	(32)	112
Change in cash and cash equivalents	(1,099)	399
Cash and cash equivalents at end of year	2,315	3,414

Financing the acquisitions resulted in higher net borrowings. One important capital procurement measure was the launch of a US\$ 600 million bond issue in two tranches by Bayer Corporation. The nominal rate of interest is 6.2 and 6.65 percent with a maturity of up to 30 years.

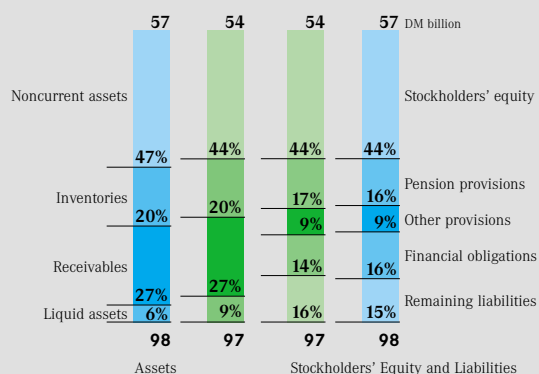
The operating cash flow covers the net debt.

Asset and capital structure

Capital expenditures and acquisitions raised total assets by DM 3 billion to DM 57.2 billion.

Noncurrent assets increased by DM 3.1 billion or 13 percent to DM 27.1 billion. The capital expenditures of DM 5.2 billion were well above the depreciation expense of DM 3 billion. For this reason, the depreciation and amortization in percent of capital expenditures fell from 63 to 58 percent. As a result of the acquisitions, goodwill (which is included in the intangibles of DM 3.7 billion) increased to DM 2.4 billion.

Balance Sheet Structure



Property, plant and equipment increased by DM 1 billion to DM 21.2 billion. The acquisition of an interest in the GE Bayer Silicones and Kerr-McGee Pigments joint ventures and the stake in Millennium Pharmaceuticals resulted in an increase in investments of DM 450 million.

	1998	1997
<u>Noncurrent assets</u>		
Total assets	47.3	44.2
<u>Depreciation</u>		
Capital expenditures	57.6	63.4
in %		

Current assets remained virtually constant at DM 30.2 billion. There was an increase of DM 1.3 million in inventories and receivables because of slackening demand in the fourth quarter, and a decline in liquid assets of DM 1.4 billion to DM 3.4 billion.

	1998	1997
<u>Net sales</u>		
Inventories	4.9	5.2
<u>Net sales</u>		
Trade accounts receivable	5.0	5.1

Stockholders' equity grew by DM 1.1 billion to DM 25 billion. DM 1.8 billion was added out of Group net income after payment of the dividend. Currency changes produced a decline of DM 0.7 billion after translation. The equity-to-assets ratio declined by 0.5 percentage points due to the increase in total assets.

	1998	1997
<u>Stockholders' equity</u>		
Total assets	43.7	44.2
<u>Stockholders' equity</u>		
Noncurrent assets	92.3	100
in %		

The **liabilities**, amounting to DM 32 billion, are made up of provisions of DM 14 billion, financial obligations of DM 9 billion and remaining liabilities of DM 9 billion.

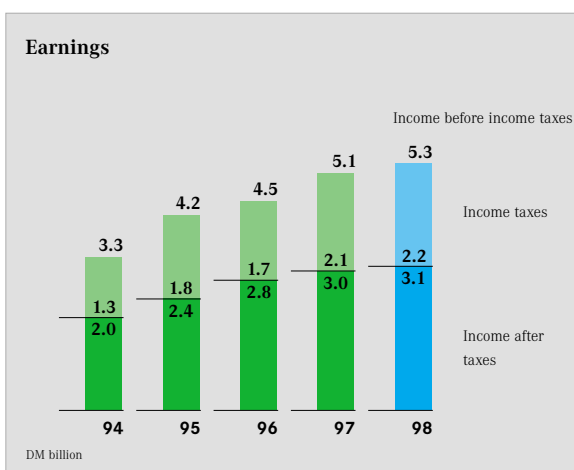
The high ratio of provisions to total liabilities (44 percent) is due to the pension commitments of DM 9.2 billion, which are shown in the balance sheet as is customary in Germany. The other provisions amounting to DM 5 billion involve other personnel-related commitments and provisions for taxes, environmental protection and trade accounts payable.

The financial obligations rose by DM 1.4 billion. A considerable proportion of this increase is due to the launch of the US\$ 600 million bond issue by Bayer

Corporation. After deduction of liquid assets, net debt was DM 5.6 billion compared with DM 2.8 billion in the previous year.

Remaining liabilities include in particular deferred taxes, payroll liabilities and social expenses.

Earnings performance



Income before income taxes grew by 4.5 percent to DM 5.3 billion. The operating result moved up 2 percent to DM 6.2 billion, and the non-operating result improved by 10 percent to minus DM 0.8 billion.

In contrast to the previous years' convention, the interest component of DM 605 million (previous year: DM 590 million) contained in the pension expenses was reclassified from the operating result to the non-operating result. This change was made above all to improve international comparability. It has no influence on pre-tax earnings.

The **operating result** includes exceptional charges for restructuring and plant closures amounting to DM 473 million (previous year: DM 481 million) and exceptional income amounting to DM 376 million (previous year: DM 452 million). As a result, net exceptional items were DM 68 million higher than in 1997.

Summary Statement of Income

DM million	1998	Change in %*
Operating result	6,151	+ 2.2
Non-operating result	(815)	+ 10.4
Income before income taxes	5,336	+ 4.5
Net income	3,157	+ 7.3

* previous year's figures restated

The negative **non-operating result** improved by DM 95 million because of the better net interest position.

Income taxes increased by 1 percent to DM 2.2 billion. Because earnings rose by a larger percentage, the effective tax rate dropped from 42 to 41 percent. Net income grew by 7 percent compared with the previous year to reach DM 3.2 billion. Earnings per share thus rose by DM 0.27 to DM 4.32.

The profitability ratios developed as follows:

		1998	1997
Return on sales (%)	Operating result Net sales	11.2	10.9
Return on stockholders' equity (%)	Income after taxes Average stockholders' equity	12.9	13.1
Return on total assets (%)	Income before income taxes and interest on borrowed capital Average total assets	10.9	11.2

Value added

In 1998, the value added of the Bayer Group was DM 22.9 billion, an increase of 3 percent compared with the previous year.

Our employees again received the largest share of this, namely 69 percent or DM 15.9 billion. Governments received DM 2.5 billion or 11 percent. As in the previous year, interest expense accounted for 6 percent of the value added. Stockholders will receive DM 1.5 billion. The remaining DM 1.7 billion will be retained to strengthen the company's growth potential.

Proposal for distribution of the profit

Bayer AG, the parent company of the Bayer Group, had net income in 1998 of DM 2.1 billion. The operating result declined by 3 percent to DM 1.6 billion. The non-operating result increased by DM 0.6 billion as a result of the much higher income from affiliated companies to DM 1.3 billion.

Summary Financial Statements of Bayer AG¹

Statements of income

DM million	1998	1997 ²
Net sales	19,383	18,697
Cost of goods sold	(12,358)	(11,891)
Gross profit	7,025	6,806
Selling, R & D and administration expenses	(5,515)	(5,414)
Other operating income – net	126	297
Operating result	1,636	1,689
Non-operating result	1,296	689
Income before income taxes	2,932	2,378
Income taxes	(791)	(920)
Net income	2,141	1,458

Balance sheets

DM million	Dec. 31, 1998	Dec. 31, 1997
Intangible assets, property, plant and equipment	4,338	4,398
Investments	17,405	13,297
Noncurrent assets	21,743	17,695
Inventories	2,502	2,551
Receivables	5,672	3,430
Liquid assets	2,165	3,518
Current assets	10,339	9,499
Total assets	32,082	27,194
Stockholders' equity³	15,820	15,067
Provisions³	8,232	8,138
Other liabilities	8,030	3,989
Total stockholders' equity and liabilities	32,082	27,194

¹ The complete financial statements of Bayer AG with an unqualified opinion by the auditors are published in the "Bundesanzeiger" and have been included in the Commercial Register in Leverkusen. They are available from Bayer AG.

² previous years' figures adjusted

³ including share of special item with an equity component

After allocation of DM 680 million to retained earnings, the balance sheet profit amounts to DM 1.5 billion.

Value Added

Source	1998	Change in %
DM million		
Net sales	54,884	- 0.2
Other income	2,159	+ 19.7
Total operating performance	57,043	+ 0.4
Cost of materials	(18,653)	- 0.8
Depreciation	(2,974)	+ 2.8
Other expenses	(12,546)	- 2.9
Value added	22,870	+ 3.1

Distribution

DM million	1998	Share in %
Stockholders and minority interests	1,463	6.4
Employees	15,854	69.4
Governments	2,527	11.0
Lenders	1,330	5.8
Earnings retention	1,696	7.4
Value added	22,870	100.0

We are proposing to the Annual Stockholders' Meeting on April 30, 1999 that the balance sheet profit be used to pay a dividend of DM 2.00 (previous year: DM 1.90) per share (730,341,920 no-par shares) on the capital stock of DM 3,652 million entitled to the dividend for 1998. Together with the tax credit of DM 0.65, domestic shareholders will thus receive DM 2.65 per share (previous year: DM 2.71).

After payment of the dividend, DM 1.7 billion out of the Group net income of DM 3.2 billion will remain to strengthen stockholders' equity.

Employees

At the end of 1998, the Bayer Group had 145,100 employees worldwide, an increase of 500 over the previous year.

3,280 employees were added to the work force as a result of the acquisition of Chiron Diagnostics, and a further 140 through our purchase of an interest in Gustafson's seed treatment business.

In North America, Bayer Corporation hired an additional 400 staff in the pharmaceuticals segment, while a further 200 left the Group as a result of the divestiture of our citric acid activities. The sale of our citric acid operations also produced a decrease of 1,000 jobs in Latin America. In our European companies, the number of employees decreased by 1,400, with 1,260 attributable to the spin-off of our titanium dioxide and silicone activities alone. These employees were taken over by the joint ventures. In the other regions, an extra 600 jobs were created.

Additional employees were hired in all business segments apart from Chemicals, chiefly in Health Care and Agriculture. In the Chemicals segment, the work force decreased as a result of the divestitures.

Personnel expenses rose 2.7 percent compared with the previous year to DM 15.9 billion. The ratio of personnel expenses to sales was 29 percent. The value added per employee rose by 4 percent to DM 160,000.

Capital expenditures

In 1998, we spent a total of DM 8 billion on intangible assets, property, plant and equipment and acquisitions, which was DM 3 billion more than in the previous year.

The capital expenditures of DM 4.7 billion were made for:

DM million	1998	Change in %
Capacity increases	2,671	+ 16.2
Replacement and modernization	1,459	+ 1.0
Improving efficiency	523	+ 3.4

DM 251 million was invested in environmental protection facilities.

Major projects included:

Health Care

Investment volume: DM 1.0 billion

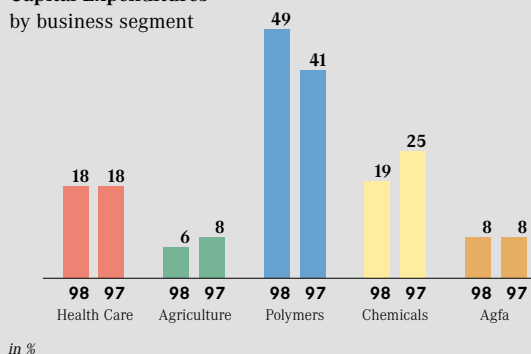
- Pilot plant for chemical process development, Wuppertal, Germany
- Expansion of capacities for Kogenate®, Berkeley, California
- Modernization and expansion of blood plasma facilities, Clayton, North Carolina
- Modernization of pharmaceuticals production in Ilopango, El Salvador
- Launch plant for Avelox®, Leverkusen, Germany
- Production plant for Lipobay®, Wuppertal, Germany (completed 1998)
- Production facility for metrifonate tablets, West Haven, Connecticut (completed 1998)
- Consumer Care plant, Pilar, Argentina
- Production plants for Aleve® and Milk of Magnesia®, Myerstown, Pennsylvania, United States
- Expansion of capacities for Glucometer Dex® and Glucometer Esprit®, 2nd and 3rd phases, Mishawaka, Indiana, United States

Agriculture

Investment volume: DM 0.3 billion

- Capacities for veterinary products in Shawnee, Kansas, United States
- Plant for producing a new insecticide, Dormagen, Germany
- Formulating facility for herbicides, Kansas City, Missouri, United States
- Formulating plant for crop protection products (Bayer Zhongxi Agrochemical Co. Ltd.), Shanghai, China
- Production facility for animal health products, Chengdu, China

Capital Expenditures
by business segment



Polymers

Investment volume: DM 2.6 billion

- Bisphenol A plant, Baytown, Texas (completed 1998)
- Expansion of bisphenol A capacity, Antwerp, Belgium
- Polycarbonate plant, Map Ta Phut, Thailand
- Expansion of polycarbonate capacities in Antwerp, Belgium and Baytown, Texas (completed 1998)
- Expansion/restructuring of styrenics facilities, Dormagen, Germany; Tarragona, Spain and Addyston, Ohio, United States
- Expansion of capacities for Durethan® plastics, Uerdingen, Germany
- Modernization of the butyl rubber facility, Sarnia, Canada
- Therban® facility, Leverkusen, Germany
- Expansion of latex facilities (PolymerLatex GmbH), Marl, Germany (completed 1998)
- Expansion of butadiene rubber capacities, Port-Jérôme, France, and Orange, Texas
- Rock salt electrolysis to supply the Plastics and Polyurethanes business groups, Baytown, Texas (completed 1998)
- Expansion of iron oxide production, New Martinsville, West Virginia, United States and Branston, United Kingdom
- Expansion of TDA/TDI capacity, Baytown, Texas
- Expansion of MDI monomer capacity, Baytown, Texas
- Expansion of MDI capacity, Baytown, Texas (completed 1998)
- Expansion of Dorlastan® capacity, Bushy Park, South Carolina, United States, and Dormagen, Germany

**We will continue
our ambitious
investment strategy
in 1999**

- Expansion of ethylene oxide/ethylene glycol production capacities (EC Erdölchemie), Dormagen, Germany
- Reactive dyes (DyStar Cilegon), Jakarta, and textile dye facility (DyStar Polkrik), Cikande, Indonesia (completed 1998)
- Nickel hydroxide production facility, Sarnia, Canada (completed 1998)
- Modernization and expansion of the tantalum/niobium facility, Map Ta Phut, Thailand
- Expansion of flavor formulation plant, Holzminde, Germany

Investment projects

We will continue our ambitious investment strategy in 1999. The planned capital expenditures amounting to DM 5.2 billion are the same as for 1998 and will again be well in excess of expected depreciation.

Capital expenditures in Europe will increase in

relative terms. One of the reasons for this is that the high expenditures for expanding capacities in the United States are slowly decreasing as the projects reach completion. One of the main projects in North America is the expansion of Baytown, Texas, to become one of Bayer's biggest locations worldwide. The emphasis here is on significant capacity increases for

polyurethane preproducts and engineering plastics (Makrolon®).

In 1999, we will again step up our capital expenditures in Asia, with the focus continuing to be on Thailand and China. In Map Ta Phut, Thailand, we will expand our polycarbonate production – including the necessary preproducts – and implement a number of new projects, for coating raw materials, for example.

If we look at the individual business segments, **Polymers** will again be one of the main beneficiaries of our investment strategy in 1999, accounting for DM 2.2 billion or 43 percent. By building new capacities, we want to participate in the growth of the relevant markets. Due to increased demand for our Makrolon® polycarbonate, we are expanding our capacities at our Antwerp site alone by 40,000 tons per year. Together with Uerdingen, Germany, and Baytown, Texas, the Belgian plant is one of Bayer's three major production sites for Makrolon®. In the medium term, we are making preparations to manufacture polycarbonate in the growth market of China, where it already holds a strong market position. More capacity increases are planned in Germany and Belgium. Further restructuring measures are scheduled at our thermoplastics manufac-

Chemicals

Investment volume: DM 1 billion

- Expansion of fine chemicals, Leverkusen, Germany
- Expansion of phthalic anhydride production, Uerdingen, Germany
- Expansion/modification of electrolysis process, Dormagen and Uerdingen, Germany, (Uerdingen completed 1998)
- Second and third phases of the production facility for silicon wafers, Freiberg, Germany (second phase completed 1998)
- Ion exchange resin plant, Bitterfeld, Germany (completed 1998)
- Chrome plant, Isando, South Africa, and expansion of facilities for chrome tanning agents, Merebank, South Africa (both completed 1998)
- Production of leather chemicals, Wuxi, China (completed 1998)

turing plants (styrenics) in Germany, Spain and the United States. In the Polyurethanes Business Group, we are currently extending our capacities for the polyurethane preproducts diphenylmethane diisocyanate (MDI) and toluene diisocyanate (TDI) in the United States. In the Rubber Business Group, we intend to build a new facility in Germany for producing the antioxidant Vulkanox® HS.

The Coatings, Colorants and Special Raw Materials Business Group is expanding its iron oxide capacities in the United States and the United Kingdom.

We will invest DM 1.1 billion or 22 percent in the **Chemicals** segment. In Germany, the alkali chloride electrolysis process in Dormagen is to be modernized and expanded now that the relevant work has been concluded in Uerdingen. In addition, we will expand our production capacity for fine chemicals in Leverkusen. EC Erdölchemie is building new plants for ethylene oxide glycols in Dormagen, Germany.

In the **Health Care** segment, capital expenditures will decline slightly to DM 0.9 billion. To extend our research and development activities in the United States, we are planning the construction of a new research building in West Haven. Following the success of our genetically engineered blood-coagulating factor Kogenate®, we now intend to increase the production capacity of our facility in the United States. For Avelox®, our new antibiotic, we are building a launch plant in Leverkusen. Diagnostics is enlarging its production facilities in the United States for its successful blood glucose meters and other products.

In the **Agriculture** segment more than DM 0.4 billion are planned. At our Dormagen site, new capacities are being created as part of our strategy to consolidate the Crop Protection Business Group's production of active ingredients. Besides this, the formulating plant for crop protection products in Shanghai is scheduled for completion in 1999. A new facility for the Animal Health Business Group is being built in Chengdu, China.

Work is to begin on the new administration building for the Bayer Group in Leverkusen in Fall 1999.

Acquisitions

We spent DM 2.8 billion on acquisitions in 1998. These included:

- *The acquisition of the U.S. company Chiron Diagnostics for DM 1.9 billion*
- *The acquisition of DuPont's graphic film and offset printing plate business for DM 210 million*
- *DM 160 million for an equity investment of 14 percent in Millennium Pharmaceuticals Inc., United States*
- *The acquisition of 50 percent of the U.S. company Gustafson for DM 303 million.*

Probably in March 1999, we will take over DSM's sheeting business with facilities in Belgium and the United States.

Procurement

Procurement is a service function for the operating units and, as such, forms part of our value management. We will further enhance the efficiency of purchasing by realigning our internal procurement procedures even more closely with our customers' needs and by striving for global standardization.

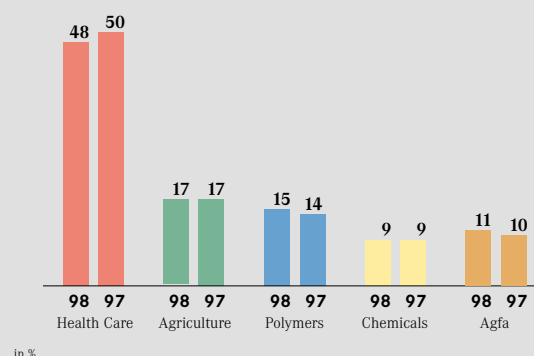
Prices on the international raw material markets moved favorably for us since the beginning of the second quarter of 1998. Our raw materials costs have therefore fallen significantly. Our purchasing volume amounted to DM 25 billion, with the procurement of petrochemicals and other raw materials accounting for the biggest share.

With our international procurement network, we are making full use of the synergies of Group-wide purchasing in order to obtain the most favorable terms. In so doing, we are also countering the increasing level of concentration on the supplier markets. As Europe grows closer together in economic terms, we anticipate additional savings potential and greater price transparency.

Research and development

R & D is the basis for our innovative growth strategy, with the focus clearly on the life sciences. First and foremost, we rely on our own resources and their global integration, but we are also increasingly tapping external potential through an expanding network of

Research and Development
by business segment



cooperation arrangements with leading international research institutes, universities and other companies.

In 1998, we spent DM 3.9 billion on research and development, equivalent to 7 percent of sales. Globally, we have some 14,000 employees engaged in R & D at over 25 sites.

Health Care

In 1998, we spent DM 1.9 billion, or half of the Group's research and development budget, in the Health Care segment. The emphasis is clearly on the search for new drugs to combat life-threatening diseases such as arteriosclerosis, diabetes and cancer, to improve over-the-counter consumer care products, and to develop effective and economical diagnostic systems.

Our pharmaceutical research centers in Germany, the United States and Japan are working on 15 major indications. New key technologies are bringing radical changes within pharmaceutical research. Typical examples are genome research, which provides a better understanding of the causes of a disease and makes it possible to access new active ingredient targets; high-throughput screening for the automated testing of new active ingredients; and combinatorial chemistry, with which we can synthesize vast numbers of test compounds. We are expanding these capacities further. One important milestone for our pharmaceuticals research is the cooperation agreement we signed with the research company Millennium Pharmaceuticals Inc. We will receive access to 225 targets over the next five years for identifying new active ingredients for innovative therapeutic approaches.

With the acquisition of the diagnostics activities of Chiron Corporation, we have strengthened the immuno-diagnostics sector, and we are now the leading player in the field of critical care and nucleic acid diagnostics (NAD). The existing range of equipment for central laboratories was supplemented by new products for clinical chemistry (Advia® 1650) and hematology (Advia® 120). These systems are noted for their outstanding performance and customer acceptance, and can be customized according to individual testing needs. In immunodiagnostics, we have developed new parameters for identifying cancers and are now able to offer the world's largest range of assays in this segment.

**In 1998, we
spent DM 3.9 billion
on research
and development.**

Agriculture

In 1998, we spent DM 0.7 billion on R & D in the Agriculture segment. Our goal is to help safeguard worldwide food supplies through the development of innovative crop protection and animal health products. In so doing, we attach major importance to optimum efficacy, user friendliness, environmental compatibility and economic efficiency.

New research milestones include the Herold®/Terano®/Axiom® herbicide, which can be used in a wide range of crops, and the new rice fungicide Win® for the Japanese market.

In our crop protection research, too, we are using biotechnology as a future-oriented research tool. We are currently building a new center for the high-throughput screening of new active ingredients that will enable us to carry out over 1 million single tests a year from spring 2000. In addition, we are setting up a computer-controlled substance library for 1.2 million test substances. Apart from expanding our own capacities, cooperation with external partners is also playing an increasing role. In the field of genome analysis of insect pests, fungal diseases and weeds, we are working together with three research companies: Exelixis, Lion and Paradigm. The aim is to identify new sites and mechanisms of action.

The Animal Health Business Group has submitted 13 new vaccines for registration. In Europe, the registration process is currently under way for a marker vaccine for swine fever that makes it possible to distinguish between vaccinated and infected animals. A cooperation agreement has been signed with the Japanese company Fujisawa to develop a product to eliminate worms in companion animals and livestock. A gel based on the versatile active ingredient imidacloprid has been developed to control cockroaches.

Polymers

Research and development expenses in the Polymers segment amounted to DM 0.6 billion. The focus here is on the development of new and improved processes for our polymer materials and their preproducts. We are also aiming to enhance the properties of our materials, optimize their ecological characteristics and identify new areas of application. Our goal is to maintain cost and technological leadership for our core products.

In the newly founded joint venture Exatec with GE Plastics, we are developing car windows made of Makrolon®. They are 40 percent lighter than glass,

easier to install and break-resistant. Makrolon® grades have also been developed for the production of audio and video CDs and CD-ROMs. These plastics are also suitable for DVDs (Digital Versatile Discs), where high storage density places very stringent demands on the material. For the next generation of rewritable data storage systems, we are working with the Japanese company Teijin Ltd. to develop a new grade of polycarbonate. Our high-strength, polyamide-based (Durethan®) plastic/metal hybrid systems have now proven their suitability for large-scale production, and have been used since 1997 in the Audi A6 and, since 1998, in the Ford Focus.

Important developments to come from our rubber research are new styrene-butadiene rubbers, which are used to reduce the rolling resistance of car tires and improve the grip of winter tires.

New applications for polyurethanes – for example as a binder for natural fiber mats made of flax or sisal – allow the production of lightweight, high-strength door liners for the automotive industry.

We have concentrated our research for coating raw materials at a new center in Leverkusen.

With a new pilot plant, Wolff Walsrode is becoming a competence center for cellulose and will be able to systematically exploit the potential of cellulose and other renewable raw materials.

Chemicals

R & D expenses in the Chemicals segment amounted to DM 0.3 billion in 1998. Our activities include basic and industrial chemicals, fine chemicals for the electronics, photographic, pharmaceutical and crop protection industries, textile chemicals, polymer additives, material protection products, chemicals for the leather and paper industries, ion exchange resins, fragrances and flavors, silicon wafers for solar cells, engineering ceramics, special metals and metal powders.

We started up a pilot plant in 1998 with a capacity of 2,000 tons to allow us to utilize new processes for the biodegradable polyaspartic acid (PAA) and iminodisuccinate (IDS) for a wide variety of different applications.

In the field of fine chemicals, we develop tailor-made products and processes for our customers. One of our main activities covers active ingredient intermediates for life science companies.

Since the end of 1998, trials have been carried out at H.C. Starck to produce the new spherical nickel hydroxide for use in rechargeable batteries.

Agfa

The Agfa Group spent DM 0.4 billion on research and development in 1998. The focus is on new digital processes for producing print forms and images, as well as the accompanying electronics and software. At the same time, we are continuing with our developments in the field of traditional photography.

In the Graphic Systems Business Group, a new large-format imagesetter and a number of software products have been developed. They not only control individual steps such as screening, proofing and color management, but also look after the entire process of electronic prepress.

Technical Imaging Systems upgraded its successful Agfa Diagnostic Center (ADC) for digital radiography and launched a new model, the ADC Solo. The "dry" hardcopy segment was strengthened with the introduction of the DryStar® 3000. The digital hospital network IMPAX® for image and data exchange is to be expanded to create a complete clinical information system that can combine the images and diagnostic data from different medical disciplines.

We aim to take full advantage of global market opportunities.

Risk management

We aim to take full advantage of global market opportunities. At the same time, we want to avoid risks as far as possible, control them where necessary and take appropriate precautions at all times.

To achieve this, we employ a number of instruments, depending on the particular risk profile. We are constantly upgrading these instruments.

For example, we counter financial and currency risks by financing our business in the local currency or by hedging currency and interest positions with derivative financial instruments. These instruments are employed in accordance with the respective risk appraisal, also observing detailed guidelines and requirements.

To counter possible risks arising from the many different laws and regulations concerning taxes, competition, patents, antitrust issues and the environment, our decisions and the design of our business processes are based on comprehensive legal advice, both from our own experts and from acknowledged external specialists.

To ensure that our employees act responsibly from both a professional and a legal point of view within their respective local environment, we have decided to introduce a worldwide code of behavior, supported by thorough training. This "legal compliance" documents

the obligation to observe laws and regulations. Complying with rules at all times and controlling the way staff handle risks are fundamental requirements for all management staff in the Group.

We combat risks involving products and environmental protection by taking appropriate measures relating to quality assurance. This includes having our activities certified to international standards, consistently upgrading our plants and processes, and developing new and improved products. We are committed to the international Responsible Care initiative of the chemical industry and to our safety and environmental management system, which we report on at regular intervals.

The monitoring and control of economic risks in our everyday business is one of the tasks of our worldwide controlling function, which continually submits reports to the Board of Management and operating units for evaluation. Another of our Group-wide monitoring systems is the regular checks carried out by our corporate auditing department on the efficiency of the hedging instruments being used, and the reliability of the control systems.

To guard against possible claims and liability risks, we have concluded insurance agreements to ensure that the financial consequences of any possible claim are kept within reasonable limits or are excluded entirely. The insurance contracts are continuously reexamined and adjusted where necessary. Even if there can be no guarantee that the insurance cover eliminates all conceivable risks, it is safe to assume that any claims would not affect the Group's liquidity, financial position or earnings situation to the extent of jeopardizing the company's existence.

An analysis of the present risk situation showed that, within the reporting period, there were no risks that were likely to endanger the continuing existence of the company, nor were any such risks recognizable in the future.

We will make optimum use of the growth opportunities in the chemical and pharmaceutical industry.

Subsequent events

Pending approval by the antitrust authorities, we will acquire Sterling Diagnostic Imaging Inc. of Greenville, South Carolina, United States. Sterling is a leading supplier of x-ray film and equipment, and has world sales of around US\$ 500 million.

A further acquisition involves the transparent polycarbonate and polyester plastics sheet business of the Dutch chemical group DSM. The purchase includes the Belgian company Axxis N.V., Tielt, and DSM Sheffield Plastics of Sheffield, Massachusetts, United

States. We are expecting to receive approval from the antitrust authorities in March 1999.

Strategy

We will make optimum use of the growth opportunities in the chemical and pharmaceutical industry. For this reason, we will retain our diversified Group portfolio, with its emphasis on chemical specialties, high-performance plastics, health care and agriculture. By doing this, we not only want to stand out from our competitors, we also want to consistently exploit the many synergies to gain clear competitive advantages.

With this in mind, we are focusing on innovative products and processes, strengthening our position on specific global markets, aligning our activities to the benefit of our customers and managing our portfolio efficiently to produce a steady increase in corporate value.

Our target is to raise the share of the life sciences in Group sales from its present 36 percent to 50 percent (excluding Agfa). In so doing, we will rely on our own resources – our intensive R & D activities, our marketing organization and especially our dedicated employees – but also on cooperation agreements with other companies and research institutes.

We also see outstanding opportunities for our polymers business, which we expect to account for one third of our sales in the future. With this in mind, we are constantly expanding our production capacities. We are aiming for cost and technology leadership – at least with our core products. By streamlining our plant

structure and optimizing our processes and portfolio, we intend to increase the economic efficiency of our polymer activities still further.

In our Chemicals segment, which accounts for 16 percent of sales, we expect the biggest opportunities to come from our specialty products, which are based on our extensive know-how and experience of particularly complex and sophisticated processes. We are aiming to further

strengthen the solid position our subsidiary companies already hold in consumer-oriented specialties such as flavors and fragrances, special metals for the electrical and optical industries and cellulose chemistry. The restructuring of our chemicals business also made good progress in 1998, but has not yet been concluded.

In expanding our global market presence, we are building on the strong base we have for our European business. We have identified considerable potential for improvement through structural measures and produc-

tivity increases, not least in our German plants. In North America, especially in the United States, we are pursuing a consistent growth strategy, stepping up our investment in larger production capacities, increasing our research and making carefully chosen acquisitions.

Despite the current crisis in Asia, we still regard the region as an interesting development market in the long term, with good sales prospects for our products. We will therefore continue to expand our presence there, above all in China and Thailand. We will further consolidate the good positions we hold in Japan and Latin America.

Our goal is to achieve a steady increase in corporate value. We want to significantly exceed our minimum return on investment (CFROI) of 10 percent on a lasting basis. To do this, we are pursuing a consistent value management strategy incorporating concrete targets for all operating units, as well as an appropriate incentive system for our management staff.

In 1999, we intend to continue the good progress made in the last few years.

Outlook

Global economic trend

The world economy will continue to grow in 1999, but probably at a much slower rate. In our view, the crisis in Asia has bottomed out, and even if there is no sign yet of a lasting turnaround, we do not expect the situation to become any worse. In Latin America, the outlook is rather subdued after the appreciable devaluation of the Brazilian currency. In North America, especially in the United States, we expect a moderate continuation of growth, whereas in Europe, the economic risks have increased. In Germany, in particular, less favorable economic policies are having a negative effect.

We assume raw material prices will remain at a relatively low level, partly because of the lack of dynamism in the world economy. On the other hand, we anticipate a sustained downward trend for selling prices because of the strong international competition.

Following the introduction of the euro, the influence of currency movements as a whole will decline, although the situation will continue to be heavily affected by the U.S. dollar, for which we expect the exchange rate this year to be below the average for 1998 (DM 1.76).

Objectives for 1999

In 1999, we intend to continue the good progress we have made in the last few years, even though it will not be easy to exceed our earnings record. The wide ranging changes we made to our portfolio last year have significantly strengthened our operating structure and will help us reach our goal. We will safeguard and increase our earning power through further productivity increases.

A particularly important contribution will come from the Health Care segment, in which we are expecting earnings to improve. Agriculture and Polymers should maintain their high earnings levels, although we see certain risks regarding prices. In the Chemicals segment, the operating result will decline, as there were a

large number of exceptional income items last year. Agfa will probably still contribute to the Group's sales and earnings in the first half-year.

During the first few months we nevertheless expect business trends to be generally weaker year-on-year, partly because the first quarter of 1998 was strong. However, during the further course of the year, we see good prospects for a fairly significant recovery.

Forward-looking statements

This Annual Report contains statements and forecasts relating to the future development of the Bayer Group as a whole and the individual consolidated companies. Such forecasts constitute estimates we have made on the basis of all the information currently available to us. Should the assumptions underlying these forecasts prove unreliable or should risks as outlined above under "Risk management" materialize, the companies' actual performance may differ from current expectations.

"K '98" Plastics and Rubber Fair in Düsseldorf

Advances through innovation

October: At the world's largest trade fair for polymeric materials, Bayer announces investments totaling DM 2.2 billion in its Rubber, Plastics and Polyurethanes business groups. Of this amount, DM 500 million is earmarked for research and development of new products that will be launched over the next few years. Some 130 promising projects are currently in the research pipeline. Bayer's booth at K '98 focuses on innovations such as the biodegradable polyester amide BAK® (used in the production of films and injection-molded articles), new Makrolon® grades for digital versatile discs (compact discs with increased storage capacity), a new composite material made from polyurethane and natural fibers for automotive components, Bayer's patented hybrid technology for joining polyamide and metal, and numerous innovative applications for plastics in the automotive industry. In a special exhibit, Bayer demonstrates new applications for Makrolon® in medical equipment, including the production of dialysis machines, blood filters, three-way valves and small sterilizable components.



About 200,000 people visited the Bayer stand to learn about the most recent developments in the field of polymers (large photo). Visitors could view all plastic components of a car (small photo).

Year 2000 compliance

Preparations for date change well under way

November: Bayer is preparing thoroughly for the new millennium. Since the date change could cause faults in certain electronic equipment, experts have been reviewing the company's computer systems and computer-controlled processes since 1996 so that problems in manufacturing, logistics and administration can be avoided. Year 2000 project teams are currently at

work throughout the Group to test the control systems of all production, logistics and environmental protection facilities and repair or replace them where necessary. Bayer is cooperating closely with business partners in its efforts to safeguard the reliability of its raw material supplies and deliveries to customers over the turn of the millennium and thereafter.

Bayer acquired the U.S. company Chiron Diagnostics in September 1998.

Titanium dioxide

Joint venture secures market position

April: Bayer places its titanium dioxide business (with the exception of a minority holding in Brazil) into a joint venture with the U.S. company Kerr-McGee Chemical LLC. The joint venture is part of Kerr-McGee's worldwide titanium dioxide business and is among the four largest suppliers. Bayer takes a 20 percent stake in the new company, safeguarding its international competitive position. At the same time, the move helps to ensure the future of the German sites concerned. The joint venture, with 650 employees and projected annual sales of DM 400 million, plans to build a new production facility in Krefeld-Uerdingen.

Diagnostics

Joining the world's top companies

September: Acquisition of the U.S. company Chiron Diagnostics makes Bayer one of the world's largest suppliers of diagnostic systems. The DM 1.9 billion acquisition strengthens Bayer's activities in the fields of blood gas analysis, nucleic acid diagnostics and immunology. Chiron Diagnostics is among the most successful manufacturers of clinical laboratory equipment and systems. The deal also widens Bayer's international customer base and adds to its research capacities.



Pharmaceutical research

Bayer and Millennium work together

September: Bayer and the U.S. company Millennium Pharmaceuticals Inc. form a drug discovery alliance believed to be the world's largest to date. The partnership with Millennium, one of the leading genome research companies, will provide Bayer with a continuous flow of new genomics-based targets for use in developing new drug therapies.

The focus will be on drug targets identified as relevant for cardiovascular disease, cancer, osteoporosis, pain, liver fibrosis, hematology and viral infections. Bayer's total investment will be DM 800 million, including the purchase of a 14 percent equity interest in Millennium.

Bayer and General Electric

Europe's second-largest silicones company formed

July: Bayer and General Electric form a joint venture that is Europe's second largest producer of silicones. The new company, GE Bayer Silicones GmbH & Co. KG., enables both partners to take advantage of a multitude of synergy effects in research, development, production, marketing and sales that will be the springboard for developing the

silicones business in the future. GE Bayer Silicones plans to expand the plant in Leverkusen into one of the world's largest silicones manufacturing operations. The new joint venture, in which Bayer holds a 49.9 percent interest, has 900 employees and expects to post annual sales of DM 700 million.

Agfa

New stimulus to come from stock exchange listing

September: Bayer decides to float its Agfa subsidiary on the stock exchange in order to sharpen its future focus on its core competencies in life sciences, polymers and specialty chemicals. Up to 75 percent of the shares of Agfa-Gevaert, the international imaging technology group, are to be listed on the stock exchange in the second quarter of 1999, provided that conditions on the capital market at that time are favorable. One of the advantages of entrepreneurial independence for Agfa will be new financing options to enable it to expand and continue its technological development. Deutsche Bank and Goldman Sachs have since been appointed joint lead managers for the flotation.



Agfa scanners are used in homes and offices worldwide.

January

Bayer increases its interest in Nihon Bayer Agrochem K.K. to 95.6 percent, thereby enhancing its position in the Japanese crop protection market.

February

Bayer's subsidiary Agfa acquires DuPont's graphic films and offset printing plates businesses.

March

Bayer and the U.S. company Symyx Technologies sign a cooperation agreement in the field of combinatorial materials research worth up to US\$ 52.1 million.

April

Bayer's Animal Health Business Group signs an agreement with the Japanese company Fujisawa to develop new substances for combating worms in pets and livestock.

Agfa sells its copying systems business unit to Lanier.

May

Bayer signs a genetic engineering research agreement with the U.S. company Exelixis Pharmaceuticals Inc. aimed at finding new modes of action for crop protection products, particularly insecticides.

June

At an international pharmaceuticals press conference, Bayer announces investments for research and development in the Health Care business segment totaling DM 10 billion through the year 2003.

July

Bayer's Board of Management votes to construct a new headquarters building at the Leverkusen site. Work is scheduled to begin in fall 1999.

August

Bayer establishes joint ventures in the People's Republic of China for the production of crop protection agents and household insecticides.

September

Bayer's technical monitoring department commemorates its 100th anniversary.

Bayer acquires 50 percent of the seed treatment business of Gustafson, Inc., based in Dallas, Texas.

October

A new production facility for polyurethane raw materials with a capacity of 150,000 tons per year comes on stream at our Baytown, Texas, site. The plant is part of a DM 2.3 billion investment program at Baytown.

November

Bayer's site in Brunsbüttel, Germany, commemorates its 25th anniversary with an official ceremony.

December

Bayer and the U.S. company Cambridge Neuroscience sign a cooperation agreement for research to find a new treatment for multiple sclerosis.

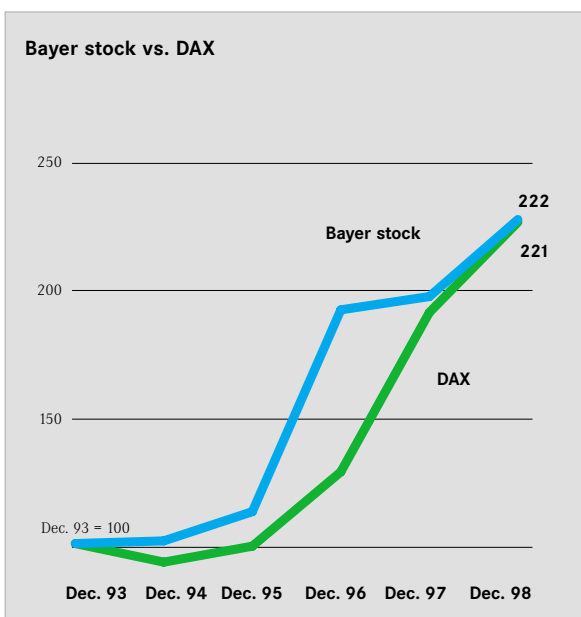
Record payout

Capital market turbulence affects price trend

Dividend rises for the fifth year in a row

Bayer stock remains an attractive, high-yielding investment, especially over the long term. This is reflected in the buy recommendations of financial analysts.

1998 was a year marked by considerable turbulence on the international financial markets. After rising almost continuously in the first half of the year to reach a new high of DM 96.37 on July 3, 1998, Bayer stock was unable to buck the downward trend in the second half. As a result, it ended 1998 up only 5 percent year-on-year at DM 69.90. This disappointing performance compared with the DAX index, which rose 18 percent over the year, does not adequately reflect the company's earnings momentum.



Further dividend increase

In line with our performance-oriented dividend policy, the Board of Management and Supervisory Board are proposing that the dividend for 1998 be raised again by DM 0.10, or 5.3 percent, to DM 2.00 per share. This is the fifth consecutive rise in the dividend and brings the total payout to a new record of DM 1,461 million, giving a payout ratio of 46.3 percent of Group net income. Domestic stockholders receive a tax credit of DM 0.65 per share. The dividend yield based on the share price of DM 69.90 at year-end 1998 is the same as for 1997 at 2.9 percent, or 3.8 percent if the tax credit is included.

Attractive investment

Bayer stock remains an attractive, high-yielding long-term investment. For example, a stockholder who invested DM 10,000 in Bayer shares at the start of 1989 and reinvested all dividend payments and revenues from subscription rights would have had a portfolio worth DM 33,000 at the end of 1998. That equates to an average annual return of 13 percent.

Comparative performance of Bayer stock

	1 year 1998 p.a.	5 years 1994-1998 p.a.	10 years 1989-1998 p.a.	15 years 1984-1998 p.a.
<i>Bayer share price</i>	5 %	14 %	9 %	10 %
<i>FAZ price index</i>	16 %	14 %	11 %	11 %
<i>Yield on Bayer stock (change in price + dividend)</i>	7 %	17 %	13 %	14 %
<i>Yield on German stocks (DAX index)</i>	18 %	17 %	14 %	13 %
<i>Yield on Bayer stock for domestic stockholders (change in price + dividend + tax credit)</i>	7 %	18 %	15 %	16 %
<i>Yield on Bayer stock for foreign stockholders (change in price + dividend, less taxes)</i>	7 %	16 %	12 %	13 %
<i>Performance of German government bonds (REXP index)</i>	11 %	8 %	8 %	8 %

Buy recommendations head the list

Analyst opinion throughout the world reflects the attractiveness of Bayer stock to both private and institutional investors. Buy recommendations predominate, reflecting a positive assessment of the company's future earning power and the upside potential of the stock.

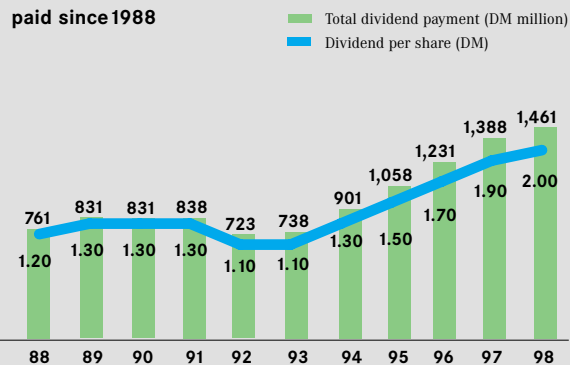
Switch to no-par stock

Following a resolution of the 1998 Annual Stockholders' Meeting, Bayer switched to no-par stock on July 1, 1998. There are currently about 730 million shares in circulation, each representing an equal proportion of the company's capital stock.

Introduction of the euro

Since the introduction of the euro on January 1, 1999, Bayer stock has been traded in euros on the stock markets of all countries participating in European Monetary Union (EMU). We will propose to the Annual Stockholders' Meeting on April 30, 1999 that the capital stock be converted from DM to euros.

Dividends paid since 1988



Bayer stock data

		1998	1997
<i>Dividend</i>	DM	2.00	1.90
<i>Tax credit</i>	DM	0.65	0.81
<i>Earnings per share</i>	DM	4.32	4.05
<i>Cash flow per share</i>	DM	9.04	8.92
<i>Equity per share</i>	DM	33.65	32.15
<i>Year-end price*</i>	DM	69.90	66.75
<i>High for the year*</i>	DM	96.37	79.00
<i>Low for the year*</i>	DM	59.10	58.00
<i>Shares issued as of year end</i>	million	730.34	730.34
<i>Shares to be issued upon the exercise of warrants</i>	million	—	—
<i>Share turnover on German stock exchanges</i>	million	2,199.3	2,137.4
	DM billion	165.4	145.1
<i>Market capitalization</i>	DM billion	51.1	48.8
<i>Total dividend payment</i>	DM million	1,460.7	1,387.7
<i>Price/earnings ratio</i>		16.2	16.5
<i>Price/cash flow ratio</i>		7.7	7.5
<i>Dividend yield</i>	%	3.8	4.1

* fixing on the Düsseldorf Stock Exchange

Growth potential in life sciences strengthened

Regular communication with stockholders

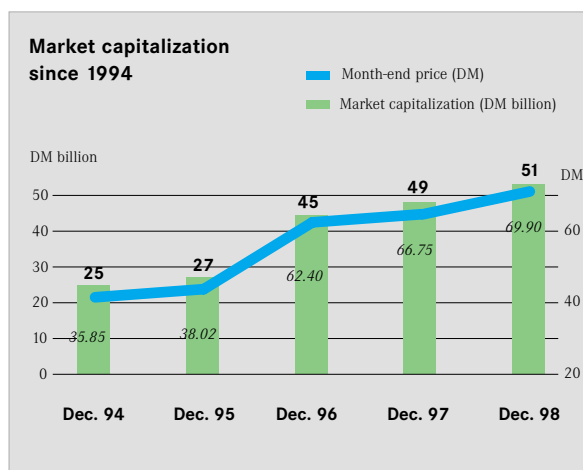
Successful value management

We aim to steadily increase the value of Bayer through efficient portfolio management and further investment in research and technology.

We consistently pursued and developed our value management strategy in 1998, though our efforts have not yet been fully acknowledged by the stock market. Bayer's market capitalization rose DM 2.3 billion year-on-year to DM 51 billion, having reached a peak of DM 70 billion in July.

Value-based controlling

The cash flow return on investment (CFROI), introduced in 1994, has proved an efficient reference parameter for portfolio management. We aim to achieve a CFROI of at least 10 percent for the Group as a whole. This covers asset reproduction and capital costs. Last year, we exceeded this minimum profitability requirement.



Value-based portfolio management

To ensure that we can create value consistently, we are focusing our portfolio on high-earning operations in the Health Care, Agriculture, Polymers and Chemicals business segments. In line with this strategy, we plan to float Agfa on the stock market since it operates in completely different technologies and markets. In the medium to long term we aim to raise the proportion of Group sales generated by our life science businesses, i.e. our Health Care and Agriculture segments, from the present level of 36 percent to over 50 percent. At the same time, we plan to expand our position as a leading polymer manufacturer, raising the sales contribution of our Polymers businesses from currently 30 percent to 35 percent. Focusing our Chemicals portfolio more strongly on high-earning activities will mean that this segment's share of sales will in future be about 15 percent.

To achieve this portfolio structure, we will continue to acquire profitable operations, form alliances and divest businesses that do not fit with our core strategy. We will also be stepping up our research effort and making carefully selected capital investments.

The acquisition of Chiron Diagnostics has strengthened our presence in high-tech areas of the diagnostics business where growth and earnings prospects are excellent. Our crop protection joint venture with the U.S. company Gustafson will ensure a lasting improvement in our position in the profitable North American seed treatment market.

At the same time, we have divested non-core operations or placed them into minority joint ventures. Specifically, these were the citric acid, copying systems, zeolites, titanium dioxide and silicones activities.



Successful portfolio management is a crucial part of Bayer's value creation strategy. To further expand the activities of its profitable Health Care business segment, Bayer has acquired the U.S. company Chiron Diagnostics. The picture shows an intermediate stage in the manufacture of reagents for diagnostic tests.

Portfolio adjustments during the past three years, plus Agfa's listing on the stock exchange, relate to a sales volume of DM 15 billion, equivalent to nearly 30 percent of total Group revenues.

To enhance our growth potential, we spent DM 3.9 billion on research and development for new products and processes in 1998, with about one half of that amount going to strengthen our health care businesses. In this area we are increasingly entering research alliances, an important example being our collaboration with the U.S. biotechnology company Millennium Pharmaceuticals. The scale of this collaboration, in which we will invest about DM 800 million over the next few years, makes it unique in the pharmaceutical industry.

As far as our capital expenditures are concerned, a major focus is on the creation of new manufacturing capacities for our very profitable polymers business.

Share buyback

Following the introduction of legislation allowing German companies to repurchase their own shares, a proposal to authorize this will be put to this year's Annual Stockholders' Meeting.

Investor relations work intensified

A frank and open information policy is a key factor in ensuring a fair stock market valuation. We therefore expanded our investor relations activities in 1998. In addition to presentations and roadshows in major financial centers, we are stepping up our focus on direct dialogue. A list of our main investor relations events can be found on the back flap of this report.

More flexible working hours, new working methods and a more achievement-oriented compensation system enhance performance and productivity

Motivation as the key to success

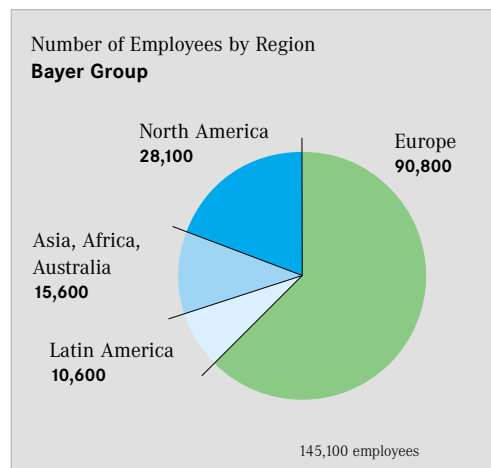
New systems of workplace organization: Employees from a wide variety of disciplines work together in independent teams to find answers to future challenges. Team spirit, flexible working hours and dialogue put people in the center of things.

The knowledge, creativity and dedication of our employees are crucial for our business performance and international competitiveness. Mindful of this, we are involving our employees even more closely in shaping work processes and work organization. Our aim is to increase motivation and enhance performance, thereby creating an environment that encourages the ideas and innovation that are vital

to the company's commercial success and technological leadership. 1998 saw the introduction at Bayer of a whole range of measures that are in line with this forward-looking human resources policy and benefit both the company and its employees.

The focus is on flexibility. Constantly changing market conditions and mounting competitive pressure require us to rethink many aspects of our work organization, including our policy on working hours. To enhance efficiency and cut costs, we are moving away from rigid processes specifying a set number of working hours per day or week.

Our pioneering teamworking concept is enhancing the commitment of the work force and making our processes more productive. Here, too, flexibility is a central element. For example, the concept has to be adapted to meet the needs of individual units, and tasks have to be allocated flexibly within the interdisciplinary teams. Chemical production technicians work with



maintenance specialists and colleagues from a variety of other disciplines in teams that have responsibility for a specific plant or product. Former functional barriers and departmental boundaries have given way to team spirit and flexibility. In this way employees receive broader assignments, more extensive decision-making powers and greater responsibility. By 2002 the concept will be implemented throughout our German manu-

facturing and engineering operations. More than 2,300 of the parent company's 43,400 employees are presently organized in teams, and the number will rise to 16,000 within about three years. We have also piloted teamworking successfully at various foreign sites including facilities in the United States, the Bayer Diagnostics plant in Ireland, the Consumer Care Business Group at Bayer S.p.A. in Italy, and our Belgian sites.

To enhance dialogue between employees and managerial staff, we have introduced a management feedback system. This is based on an agreement with the Employee Committee. Employees fill out a questionnaire giving line managers insight into how their management style comes across. This helps managers better understand the impact of their behavior, and follow-up



Here in a pharmaceutical plant at our Wuppertal site, interdisciplinary work teams increase employees' commitment and help to boost productivity.

discussions enable staff to gain a better understanding of their managers. Together, they learn to give and take constructive criticism, express themselves more openly, consciously foster mutual understanding and thus work together more effectively. The response to this system of dialogue has been largely favorable.

We aim to involve our employees more closely in shaping the company's future by agreeing on individual performance targets. This program has already been introduced for senior managers and is currently being extended to other managerial staff. Attainment of individual targets will be rewarded by a performance-related bonus payment, ensuring that our employees participate directly in the company's commercial success in line with their individual performance. We also are introducing tax-efficient deferred compensation to help staff provide for their retirement.

Further increase in training places

Other major elements in our future-oriented human resources policy include vocational training and a special focus on the development of talented young managers, for example through a mentoring program developed by our U.S. subsidiary. In 1998 our German companies had 3,590 trainees, 5.6 percent more than in the previous year. 1,088 of these young people started their vocational training in 1998, 800 of them at Bayer AG's five German sites. We are thus once again training a significantly larger number of youngsters than the company is likely to need. Employment contracts of unlimited duration were signed with 559 young people who successfully completed their training with Bayer AG in 1998.

Labor agreement secures major investment

The agreement reached with representatives of the workforce in June 1997 to safeguard the future of our German sites has resulted in substantial cost-savings, increasing the competitiveness of our production plants and paving the way for new investment, such as expansion of polyurethane feedstock capacities at Brunsbüttel and Krefeld-Uerdingen, the concentration of agrochemical active ingredients production at our Dormagen site and the construction of a new production facility for Therban® rubber in Leverkusen.

On December 31, 1998 the Bayer Group had a total of 145,100 employees worldwide, 500 more than at the end of 1997.

Global safety concept to protect people and the environment is a significant contribution to Responsible Care



Further improvements in safety and energy conservation

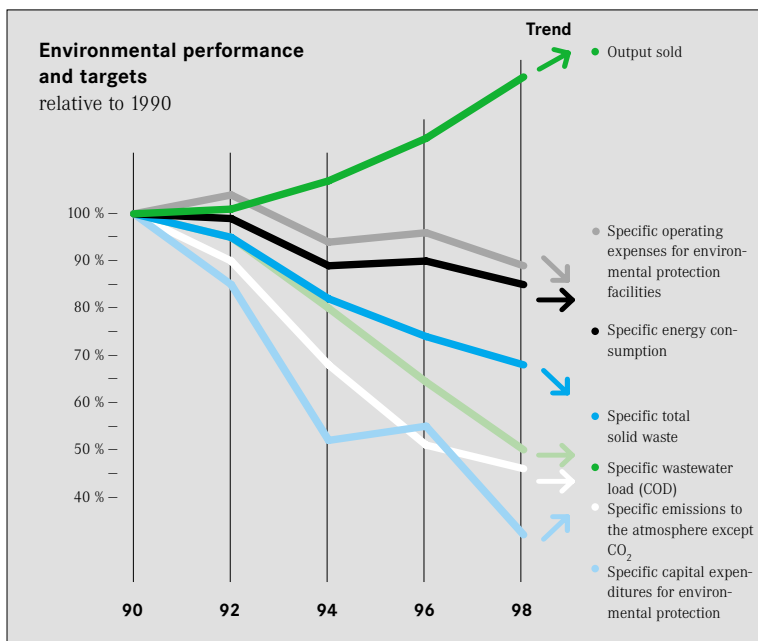
The principles of Responsible Care, the international initiative launched by the chemical industry, are implemented at Bayer across a wide range of projects. Major components of the company's environmental protection strategy are occupational safety, plant safety and energy conservation.

Trust is one thing – but systematic preventive analyses and technical monitoring are something else. Bayer's safety policy is based on this principle. Every year we carry out more than 10,000 substance assessments, several hundred process and plant inspections and over 60,000 checks on plant apparatus and equipment. These form the basis for our exemplary standards of occupational and plant safety. A glance at the statistics for Bayer's German sites shows that these activities bear fruit. With 2.4 notifiable injuries per million hours worked, equivalent to less than four industrial injuries a

year per 1,000 employees, Bayer is one of the safest manufacturing companies in Germany.

We are also one of the few companies in Germany to carry out our own technical monitoring. Bayer was first granted an official permit to do this exactly 100 years ago.

Bayer maintains the same strict safety standards all over the world. Both in Germany and in many other countries, technical monitoring of Bayer facilities is the responsibility of central groups of experts who work independently of the actual production units.



Information exchange on a global scale ensures that all safety inspectors have access to the latest findings and experience. Other important aspects of our global safety concept include regular training programs for employees and a continuous improvement process. Last year alone, 30,000 employees took part in safety and environmental protection seminars.

We believe that our comprehensive technical monitoring concept, now implemented in 750 Bayer production units across the globe, is contributing significantly to the chemical industry's Responsible Care initiative, to which Bayer is firmly committed. The safety assessments we carry out whenever we apply new processes, plan projects



One of more than 60,000 checks carried out every year by the Technical Monitoring Department: Karl-Heinz Prochno examines the weld seam of a column.

or develop new products even take into account highly improbable errors and malfunctions. In addition, we are continuing to improve our safety activities and control systems from year to year.

High safety standards form the basis for Responsible Care

Among the features of Bayer's concept is a newly developed audit program that will monitor Bayer's worldwide safety and environmental management system in the future. The aim is to develop standardized processes and concepts that will help further reduce possible risks to humans and the environment. The focus is not only on the technical monitoring of plants but also on a review of the organizational measures designed to ensure that all safety and environmental protection equipment functions properly. We launched the audit program as a pilot project in 1998 at our sites in Marinette, Wisconsin; Orange, Texas; Map Ta Phut, Thailand; and Bitterfeld and Wuppertal, Germany. Since the beginning of 1999, all of Bayer's sites have been linked to a central database to give our specialists constant online access to information on organization, production, safety and environmental protection.

New energy concepts and modern technology help to conserve the climate

In 1998, saving energy was again a key aspect of our Responsible Care activities, especially with regard to climate conservation. Bayer is resolved to continue reducing carbon dioxide (CO₂) emissions from all its sites, despite rising output. We made substantial progress toward this goal in 1998, an example being the plan to shut down our lignite-fired power plant and build a new modern gas and steam power station at the Dormagen site instead. Scheduled for completion by July 2000, this facility is to be erected on our production site by RWE Energie AG, who will also operate it. The modern turbine plant will run on natural gas and will generate high yields of both electricity and steam. This combined heat and power generation from natural gas will emit 500,000 tons a year less carbon dioxide than the present power plant.

Another example of our environment-oriented energy policy is the conversion of the alkali-chloride electrolysis plants in Dormagen and Krefeld-Uerdingen to membrane technology. The low electricity consumption in this new process will reduce CO₂ emissions by a further 200,000 tons a year.

Thanks to this and other measures in the fields of fuel substitution and energy conservation, we anticipate an approximately 40 percent reduction in greenhouse gas emissions by 2005 relative to the figures for 1990, despite steadily increasing production volumes.

Aspirin® turns 100 – but:



The future has just begun

Hippocrates of Kos (top) was aware of the willow bark's pain-relieving effect 2,500 years ago. At right, Dr. Felix Hoffmann, the “father” of Aspirin®.



Advertisement on wheels: An “Aspirin®” car in the Netherlands around 1930.

March 6, 1999 – a historic date. On this day a certain tall building in Germany became famous throughout the world. Fifty professional mountaineers transformed Bayer's 122 meter high, 66 meter long and 19 meter wide administration building in Leverkusen into a gigantic Aspirin® box – in honor of what is probably the best-known brand name in the history of medicine. Aspirin®, the name for what was to become the “pharmaceutical of the century,” was registered as a trademark exactly a century earlier on March 6, 1899. Aspirin®, whose active ingredient is acetylsalicylic acid (ASA), is still the world's most widely used pain reliever. As a treatment for headaches and migraine, it is seen as the “Gold Standard” – the medical community's term for the best product for a certain indication. And now, on the threshold of the new millennium, Aspirin® has embarked on a new career in the prevention of heart attack and stroke. But that's not all. The results of clinical studies increasingly suggest that regular use of ASA even prevents certain types of cancer. In December 1998 the American microbiologist Dr. Paul Schwenger of the University of New York was presented the “International Aspirin® Young Researchers' Award” in Budapest for his findings concerning the possible effects of ASA in cancer prevention.

Felix Hoffmann's discovery: a medical milestone

Bayer chemist Dr. Felix Hoffmann could never have imagined that the natural substance he chemically “refined” (salicylic acid) would one day become the world's most famous and widely used remedy. A legend may well throw light on the subject: a very personal family circumstance was evidently at the bottom of one of the greatest success stories in medical history. Felix Hoffmann's father had been suffering for many years from rheumatoid arthritis, with the chronic pain rendering him all but unable to move. Doctors had prescribed sodium salicylate, a revolting-tasting medicine based on salicylic acid – which, as we know today, is



Aspirin® was on board when the American spacecraft "Apollo 11" landed on the moon in 1969. In tablet form, the volume of Aspirin® produced each year would reach to the moon and back.

produced by many plants as a substance to defend them against their natural enemies. It was prescribed 2,500 years ago as a natural remedy by Hippocrates of Kos, the father of medicine – as an extract from the bark of the willow tree. Each time Hoffmann's father took the medicine, he vomited. Also, his stomach lining was severely affected by the long years of treatment. Whether Hoffmann junior took it upon himself out of concern for his father to improve the natural substance salicylic acid, as he later declared, or whether he was instructed to do so, can now no longer be established with absolute certainty.

The formula for success:

Aspirin® is both effective and well tolerated

What is certain is that Felix Hoffmann was the first to succeed in producing salicylic acid in a 100 percent chemically pure and stable form through acetylation, on August 10, 1897, according to his laboratory journal. Although other chemists from Germany, France and Italy had tried this as well, none had met with success. Unlike previous researchers, Hoffmann succeeded in producing acetylsalicylic acid that no longer contained free salicylic acid, so the dreaded side-effects triggered by this substance did not occur. Moreover, since it remained stable, it was not in danger of losing its therapeutic efficacy so quickly.



The Never-Ending Story



Hoffmann's strength lay in the fact that he had made use of the information provided by his predecessors in literature and had learned from their mistakes. The first clinical trials showed that, in addition to being highly effective, the compound that he had synthesized was well tolerated. This was the crucial breakthrough: The new Bayer product became the best-known painkiller in the world almost overnight. It was on January 23, 1899 – just 15 months after its successful synthesis – that the name “Aspirin®” was suggested. The “A” stands for acetyl, and the second syllable “spir” is derived from spireic acid, obtained from meadowsweet (*Spiraea ulmaria*) and chemically identical to salicylic acid.

Legend has it the preparation was named after Saint Aspirinus, a bishop of Naples who was said to be the patron saint of headache sufferers. Just a few days later, on February 1, 1899, an application was filed to register the name as a trademark. Aspirin® was finally entered into the trademark register of the Imperial Patent Office in Berlin on March 6, 1899.

The “pharmaceutical of the century” makes history

Yet not only the preparation was right on target – its name was, too. For countless people the world over, Aspirin® is still, 100 years down the line, quite simply the quintessential painkiller. Despite an abundance of imitations, the original Aspirin® is still just as inseparable from the Bayer name as it was 100 years ago. In the last two decades, the substance from Bayer's laboratories has broken all records in medical history. ASA has been tested in more clinical trials than any other medicine in the world, with hundreds of thousands of patients taking part.

Recent discoveries about Aspirin® – such as that of the mechanism of action for acetylsalicylic acid, for which the British pharmacologist John Vane in 1982



Since 1995, one of Bayer's locations for Aspirin® production has been at Bitterfeld in eastern Germany. The facility is among the most modern of its kind in the world.



Bayer Bitterfeld GmbH produces 2.3 billion Aspirin® tablets a year – to the strictest quality standards. The five-billionth tablet rolled off the production line in September 1998.

received the Nobel Prize for Medicine and a knighthood from Queen Elizabeth II – have prompted many experts to dub the preparation the “pharmaceutical of the century”. And not without reason. If the current annual output of the active substance acetylsalicylic acid were pressed into 500-milligram tablets, the resulting 100 billion tablets would make a chain that would easily stretch from the earth to the moon and back.

Heading into a promising future

Despite its unusually old age for a product, Aspirin® has never lost its youth. The Bayer medication is as much a focus of scientific interest as ever, which is proven by the appearance of more than 3,500 scientific publications on ASA each year. And Aspirin® is always good for surprises. A new worldwide career is being predicted for ASA – in prevention of heart attack and stroke. The accompanying clinical studies are among the most extensive in medical history, and have shown that ASA, the active substance in Aspirin®, can also help to prevent colon cancer.

Aspirin® is and remains a phenomenon. A phenomenon that continues to fascinate Nobel laureate Sir John Vane: “The Aspirin® star is shining more brightly than ever. Hardly a day goes by without sensational reports of further ASA successes. No medicine has as fascinating and record-laden a story – a story which, it appears, will in future be further enriched by many exciting chapters.”



Looking confidently into the future

The fact that new Bayer drugs either in the pipeline or on the verge of market introduction have a sales potential of DM 12 billion shows the importance of research and development as a growth driver for our health care business.

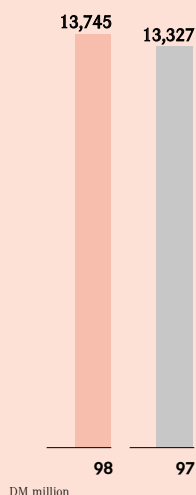
This is why we will invest over DM 10 billion in research and development in the Health Care business segment over the next five years. Our commitment to the future is likewise evident in the field of diagnostics, where we are among the world's top companies following the acquisition of Chiron Diagnostics Corporation. Despite turbulent conditions in some important foreign markets, sales of the business segment grew by 3.1 percent over 1997, to DM 13.7 billion. The operating result fell slightly, to DM 1.8 billion – 0.5 percent below the previous year. The return on sales was 13.1 percent.



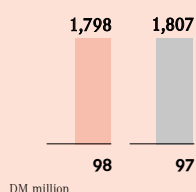
Bayer Healthcare in Beijing supplies products for the Chinese pharmaceuticals market, in which rapid growth is forecasted for the coming years. Bayer Healthcare employee Liu Ying (large photo) prepares the ointment mixer with which products such as Canesten® cream (small photo) are manufactured.



Sales
Health Care
+ 3.1 %



Operating result
Health Care
-0.5 %



Pharmaceuticals

Technological offensive in the search for active substances

Arteriosclerosis, diabetes, cancer – more than half of all diseases today are incurable or only partially curable. Our researchers are rising to this challenge, working with great dedication to find new active substances to combat these diseases. In 1998 Bayer invested DM 1.5 billion in pharmaceutical research and development.

Sales rose by only 1 percent, to DM 8.5 billion, due to further government-mandated price reductions in Japan, the economic crises in Russia and Latin America, temporary shortfalls in plasma production resulting from higher regulatory standards and a weak business trend in the United States.

In contrast to its success in Europe, our lipid-lowering agent Lipobay®/Baycol®, which we introduced in the United States in 1998, has not yet lived up to expectations in this important market. However, our genetically engineered drug Kogenate® for the treatment of hemophilia achieved a growth rate of about 30 percent. Despite fierce competition, sales of our anti-infective drug Ciprobay® remained firm. The strong sales performance of these drugs, coupled with the introduction in

Billions invested in drug research

2 percent sales increase in Consumer Care

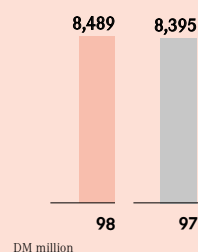
Diagnostics on the way to the top

some countries of Avelox® to treat respiratory tract infections and Natrecor for heart failure, will allow good growth to resume in 1999. These are the first of a dozen new products which we expect to bring to market by 2005, with sales potential of DM 12 billion. To ensure that the active substances can make a smooth transition from development to production, we are building a new pharmaceutical pilot plant on our Wuppertal site, at a cost of DM 140 million. It will be completed in 2000.

Genetic engineering plays a central role in the

development of innovative drugs. Bayer gains access to the results of genetic engineering research both by expanding its in-house research and by entering into new collaborations. The outstanding event in this area in 1998 was the signing of the world's largest-scale drug research col-

Business group sales
Pharmaceuticals
+ 1.1 %



laboration with the U.S. company Millennium Pharmaceuticals Inc., adding to our research capability in the fields of cardiovascular disease, liver fibrosis, osteoporosis, cancer and pain. The agreement also enhances Bayer's technological potential and its expertise in the development of innovative active substances.

Novel genetic engineering processes developed by the U.S. company Novalon Pharmaceutical Corporation for screening innovative drug products will be applied at Bayer in the development of drugs to combat infectious diseases. This cooperation will enable us to establish more substance libraries. We have already spent DM 30 million on a robot-assisted storage facility that contains 1.5 million substances.

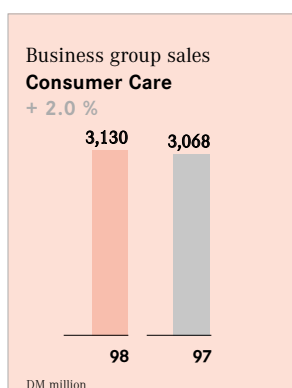
Through these actions, we have simultaneously laid the foundation for a sustained increase in our research activity and safeguarded the innovative potential of the Pharmaceuticals Business Group for years to come.

Consumer Care

Renowned brands give strong global position

It started with a simple number: 36433 – the number under which, on March 6, 1899, officials at the Imperial Patent Office in Berlin registered a product that would develop into the “pharmaceutical of the century”. That product was Aspirin®.

This pain reliever is still number one for the Consumer Care Business Group. Last year Aspirin® sales grew at an above-average rate, reaching over DM 1 billion. Recent studies concerning the potential of Aspirin® to prevent heart attack, stroke and cancer have proven anew the versatility of the Bayer product.



In 1998, Consumer Care launched a number of new products, laying the foundations for further growth. One example was the introduction in Germany of Biogenis® One-A-Day®, an over-the-counter medication based on herbal substances that compensate for vitamin E deficiency.

Biogenis® thereby prevents hardening of the arteries (arteriosclerosis), the cause of many cardiovascular diseases.

The business group achieved above average growth in the United States with the One-A-Day® vitamin product line and new vitamin/herbal/mineral combinations. Some 40 million Americans use such products on a regular basis. Thanks to a complete product line and a nationwide sales network, Bayer is well ahead of competitors in this high-growth market. Also in the U.S., the pain reliever Aleve®, which we market jointly with Hoffmann La Roche, made good progress. In South America we strengthened our leading position in a difficult environment.

The most important foreign investments include the household insecticides joint venture – established together with the Crop Protection Business Group – in the People's Republic of China with the Chinese company Shanghai Zhonxi Pharmaceuticals Co., and the construction of a new pharmaceuticals plant in Argentina. We will produce 3.3 billion units of Aspirin® annually in this US\$ 40 million facility.

Sales of the Consumer Care Business Group rose 2 percent in 1998, to DM 3.1 billion. In local currencies, sales were up 7 percent.

Diagnostics

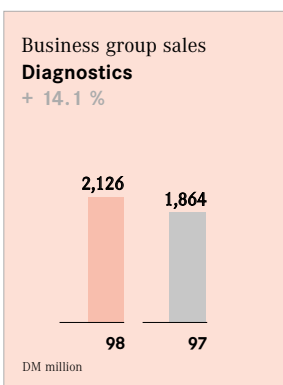
Major acquisition ensures continued growth

Thursday, September 17, 1998: Bayer agrees to acquire the diagnostics activities of the U.S. company Chiron Corporation, making headlines worldwide. The \$1.1 billion (DM 1.9 billion) takeover makes Bayer the world's fourth-largest supplier of diagnostic systems, affording major opportunities for business growth. Chiron is a world leader in the diagnostic techniques of the future. Its position in the fields of blood gas analysis, automated immunodiagnostics and NAD (used to identify the presence of serious infectious diseases) ideally complements the existing product portfolio of the Diagnostics Business Group.

The new Advia® series has been part of Bayer's equipment offering for large and central laboratories since 1998. With their differing capability levels, these machines can be individually tailored to the requirements of doctors, laboratories and clinics. A license agreement signed with Roche in mid-1998 allows the use of a new PCR methodology in various assays, such as those for infectious diseases and cancer, on a wide range of analyzer systems.

Bayer researchers also made further progress in the field of immunodiagnostics. We have developed new parameters for identifying different types of cancer, enabling us to offer the widest range of tests in this field.

Today Bayer has one of the most modern and comprehensive lines of blood glucose meters. The market is responding very well to the recently introduced Glucometer DEX® and Glucometer Espirit®. These meters



complement our most successful blood sugar measurement device, the Glucometer Elite® – a user-friendly system based on biosensors and featuring particularly accurate measurement. In 1998 we strengthened a cooperation dating back to 1992 with Kyoto Daiichi Kagaku Corporation (KDK) of Japan, signing

a long-term marketing agreement for the Glucometer Elite®.

Overall, 1998 was a good year for the Diagnostics Business Group. Sales rose sharply to DM 2.1 billion, 14 percent more than in 1997.

Research at the Monheim Agricultural Center: Young test plants on the way to the spraying facility, where they will be treated with a new active substance (small photo). After a few weeks, scientific assistant Roland Kuckel checks out the plants' response (large photo).

Agriculture



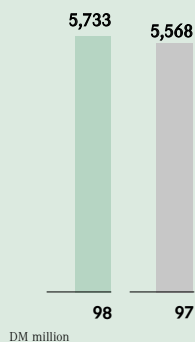


New active ingredients spur growth

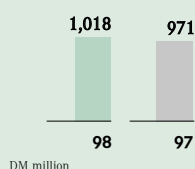
With an overall increase in sales of 3 percent from the previous year, the crop protection and animal health businesses contributed substantially to growth in our life science operations. The research efforts of recent years and our systematic exploitation of synergies among the business groups are showing a clearly positive effect and forming the basis for further growth. More innovative products with major sales potential are under development for both the crop protection and animal health areas. The operating result of the Agriculture business segment in 1998 rose 4.8 percent from the previous year to a record DM 1.0 billion. The return on sales was 17.8 percent.



Sales
Agriculture
+ 3.0 %



Operating result
Agriculture
+ 4.8 %



Crop Protection

Two new products per year

1998 was an encouraging year for the Crop Protection Business Group. This was due to heightened motivation and teamwork and to the innovative research work that has brought forth a long line of successful products in recent years. The star performer was imidacloprid, with sales of products containing this active ingredient continuing to grow last year after already passing the DM 1 billion threshold in 1997. Sales of the imidacloprid-based crop protection products Gaucho®, Confidor®, Admire® and Provado® – products that give us a leading position in the world market for insecticides – amounted to DM 800 million in 1998. Imidacloprid as the active ingredient in the flea control product Advantage® accounted for another DM 376 million in sales in the Animal Health Business Group, with further growth anticipated.

Tebuconazole, our proven broad-spectrum fungicidal active ingredient for cereals, peanuts, vegetables and many other crops, also posted further sales growth in 1998, reinforcing our role as a global leader in fungicides.

A new product to emerge from our crop protection research pipeline is a herbicide sold in Europe in combination with other active ingredients under the trade name Herold® or Terano®. Here it is used mainly in corn and winter cereals. In the United States, the same substance is the active ingredient in

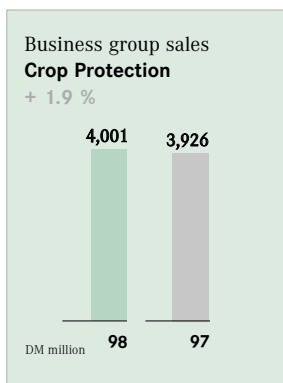
Crop Protection sales reach DM 4 billion

Animal Health grows faster than the market

Axiom® and has been specially adapted to the needs of U.S. corn growers. The great market success of Terano® is proof that both the product's efficacy and our marketing concept are on target, strengthening our position in this market segment.

The new rice fungicide Win® was successfully introduced to the Japanese market in 1998. The combination of this fungicide with the insecticide Admire® is a monumental technological advance with significant

benefits for farmers. For the first time, simultaneous application of the two products offers protection against insects and fungi that are harmful to rice seedlings. This means only one spraying is necessary – true to the principle of integrated crop protection.



The growth of this business group in the coming years will continue to be based on intensive and innovative crop protection research. We intend to bring at least two new products to market per year and start the new millennium with a greatly rejuvenated product line. 17 active substances currently in the research pipeline will be introduced on the world market within the next few years and we estimate that these will have sales of DM 1.7 billion by 2005.

In the search for new active ingredients for crop protection products, we apply biotechnology as a ground-breaking research tool. Bayer has secured expertise in the field of genome analysis through cooperations with competent partners in the United States and Germany. To increase our success rate in identifying new modes of action, we have signed agreements with the companies Exelixis, Lion and Paradigm to cooperate in deciphering the genetic codes of insect pests, fungal diseases and weeds.

Currently under construction at the Monheim Agricultural Center, at a cost of DM 44 million, is a new building in which our researchers will be able to conduct over one million individual tests a year by automated methods, starting in spring 2000. We are also setting up a computerized substance library for about 1.2 million potential active ingredients.

In the U.S., we are investing in a US\$ 85 million capital fund for start-up companies in the agricultural biotechnology industry. This will provide us with future access to expertise and research results attained by these companies using genetic engineering techniques.

Since 1997 the Crop Protection Business Group has also included the new Garden/Professional Care Business Unit, which has registered extraordinary success in North America with the termite control agent Premise®. We expect additional growth from the joint venture established with Pursell Industries, Inc. in the United States. This will enhance our already strong position in the rapidly growing garden products market.

Of particular importance to us is the seed treatment business. Ecologically and economically, the application of crop protection products to seed is highly beneficial. Bayer holds one of the top positions in this fast-growing market segment. To further expand this business, particularly in the NAFTA region, Bayer acquired 50 percent of the seed treatment business of Gustafson, Inc., based in Dallas, Texas.

The Crop Protection Business Group boosted its sales by 2 percent over 1997, to DM 4 billion.

Animal Health

Good market position strengthened

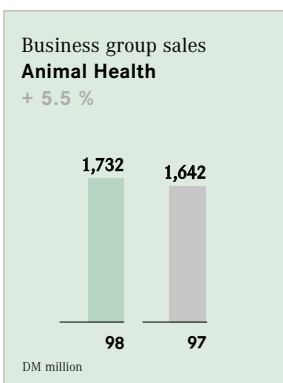
55 million tons of beef, 40 million tons of pork, 40 million tons of poultry: These figures illustrate the scale of world meat consumption, which is continuing to rise. Supplying the world's population is a challenge with regard to both the quantity and the quality of food products of animal origin. Our products for protecting animals' health have a significant contribution to make.

The Animal Health Business Group books more than two thirds of its sales in Europe and the United States, where new products have put us on course for further growth. Among these products is the successful anti-infective Baytril®, which in the U.S. is now being used to treat infectious diseases in cattle as well. We have met the increasing demand for this and other veterinary pharmaceuticals from Bayer by building a new production facility in Shawnee, Kansas, at a cost of more than DM 100 million. The facility was dedicated in October 1998.

We gained ground in 1998 with the innovative marker technology for vaccines. 13 new vaccines were submitted for registration in Europe and the United States. Of particular significance for Europe is the registration of a marker vaccine against classical swine fever with which vaccinated animals can be clearly distinguished from infected ones.

The Animal Health Business Group signed a cooperation agreement with the Japanese company Fujisawa to develop a novel substance for the control of worms in pets and livestock. Bayer will invest about DM 100 million in this project over the next few years.

About one quarter of the worldwide demand for fish is already met by breeding. This rapidly growing sector requires innovative vaccines and diagnostics which Bayer will develop in cooperation with a Canadian partner.



Bayer is also among the foremost suppliers of pharmaceutical products for dogs and cats – thanks in large part to the innovative flea control product Advantage®, which was launched in 1996 and became the market leader in the United States within two years.

Worldwide sales of Advantage® totaled DM 376 million in 1998. The preparation is based on the active ingredient imidacloprid, which is such a versatile substance that it is sure to open up further business opportunities in the future. For example, our scientists have developed a gel based on imidacloprid to combat cockroaches.

Intensive research efforts will continue to serve as the basis for our internal growth. Active substances currently in advanced stages of development have the potential to add about DM 1 billion to sales in the medium to long term.

In 1998 Bayer continued to strengthen its position as one of the world's top three suppliers of animal health products. The business group again substantially outperformed the market in 1998, raising sales 6 percent to DM 1.7 billion.

Baytown, Texas: A new production facility for polyurethane raw materials came on stream here in October 1998 (large photo). In the control room, Jesus Segura monitors its operation (small photo).

Polymers





Capacities expanded worldwide

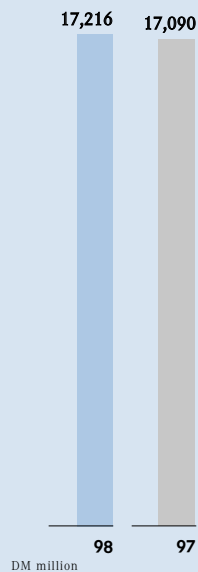
We have identified good growth opportunities for our polymeric materials and have therefore invested DM 2.6 billion to expand global production capacities and strengthen our international market presence.

To better utilize synergy potentials and focus on our core competencies, we have reorganized the business. The Rubber Business Group is now concentrating on its core activities in synthetic rubber and rubber chemicals. The Coatings, Colorants and Special Raw Materials Business Group now combines all our coatings raw materials and pigments so we can more effectively target specific end-use areas and work more closely with customers.

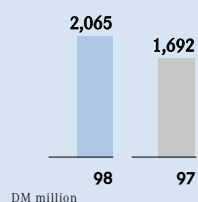
Sales of the Polymers segment edged up 0.7 percent in 1998, driven by continuing high volumes. The operating result improved by 22 percent. The return on sales was 12 percent.



Sales
Polymers
+ 0.7 %



Operating result
Polymers
+ 22.0 %



Growing demand for Bayer plastics

Leading position in synthetic rubber maintained

Higher volumes and sales of polyurethane raw materials

Good business in innovative products for coatings

Uptrend in fibers

Wolff Walsrode successful with cellulosics

with Teijin of Japan to achieve a further advance in optodigital data storage systems by developing a new grade of polycarbonate for the next product generation.

Bayer has prepared for the steady growth in demand for engineering thermoplastics by building new production capacities or enlarging existing ones. In October 1998 we increased Makrolon® capacity at our site in Baytown, Texas, to 180,000 tons. We now have some 500,000 tons of capacity worldwide and will raise this to 700,000 tons by 2002. The necessary increase in the supply of bisphenol A, the essential feedstock for Makrolon®, will be ensured through the construction of a new 160,000-tons-a-year plant, also at Baytown. These investments in plastics production at Baytown total about DM 400 million. To reinforce our market presence in the Far East, we will start up a new Makrolon® facility with an annual capacity of 40,000 tons at Map Ta Phut in Thailand in the third quarter of 1999.

In Europe, we will build a new plant in Antwerp, Belgium, to produce Makrolon® by Bayer's new melt polycarbonate process, adding 40,000 tons of capacity by 2000. Our production capacity for ABS plastics

(acrylonitrile-butadiene-styrene), including blends, will be increased from the current 700,000 to 850,000 tons by 2002. To strengthen our position in Latin America, we have acquired the ABS and SAN (styrene-acrylonitrile) thermoplastics businesses of Nitriflex, Brazil, and Unistar, Argentina. Our Brazilian

subsidiary Bayer Polímeros S.A. will in future manufacture 50,000 tons per year of ABS resin.

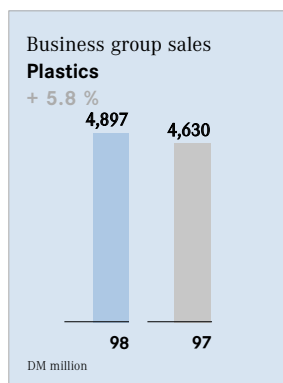
Our PC/ABS material Bayblend® received the "Blue Angel" award and continued to gain popularity with the

Plastics

In the fast lane with Makrolon®

Break resistance, transparency and impact strength are the properties that continue to make Makrolon® polycarbonate one of the world's most successful plastics, 45 years after it was invented. In 1998, Makrolon® again posted double-digit growth rates. Added to such established uses as optical data storage media, bottles, eyeglasses and medical equipment is a growing number of applications in the automobile industry, where low weight is one of this material's main advantages. Headlight lenses made of Makrolon® are some 40 percent lighter than glass. Our Exatec joint venture with GE Plastics, established in spring 1998, is working to develop automotive glazing of Makrolon® that helps make vehicles lighter, and therefore more fuel-efficient, and is far more resistant to breakage than glass.

To strengthen our business in optical data carriers, we have developed special grades of Makrolon® that meet the more stringent material requirements posed by the high storage density of digital versatile discs (DVDs). We are also collaborating in a joint venture



manufacturers of personal computers, giving it double-digit growth rates again in 1998. The new Bayblend® facility at Map Ta Phut, Thailand, came on stream in September 1998.

Our Durethan® engineering plastic is gaining ground in the automotive industry, where its use for intake manifolds, cooling or ventilation systems and parts made of high-strength plastics/metal hybrid materials offers weight savings and simplifies production operations. As of 1998, Bayer's hybrid technology has been used in the Audi A6 and the Ford Focus. We will boost Durethan® production capacity in Krefeld-Uerdingen to about 90,000 tons by 2000 to satisfy the growing demand.

Volumes rose sharply in 1998, mainly because of the broad product range and a large number of innovative technical applications for our materials. Sales of the Plastics Business Group increased by 5.8 percent from the previous year to DM 4.9 billion.

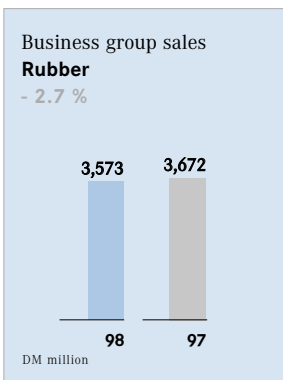
Rubber

Expansion in North America and Europe

Rubber materials from Bayer have become firmly established in many areas of everyday life – in the home, in cars, in the factory or in sports. They help make life safer and more comfortable. The results of our research provide new potential for product improvements, such as our new tire grades of styrene-butadiene rubber that reduce rolling resistance and give snow tires a better grip. Another material with a promising future is our Therban® nitrile rubber, which is used for heavy-duty components, especially under the hood. Examples are timing belts, hoses and heat-resistant seals.

Our strong position in the world synthetic rubber market holds out bright prospects for the future. Synthetic rubber is so versatile that it is sure to find even more applications in the coming years. The global market has been expanding for a long time, and people's basic need for mobility will continue to ensure solid growth rates. Bayer is responding to this development by boosting its global capacities for rubber and rubber chemicals to create the conditions for further growth.

Last year we completed expansion projects at almost every location and increased annual output of polybutadiene and styrene-butadiene rubber to more than 500,000 tons. A further 100,000 tons will be added by 2001.



In 1998 the site at Port-Jérôme, France, became Europe's largest center for polybutadiene and styrene-butadiene rubber production, following a DM 135 million investment. We also added to the capacities of our rubber facilities at Orange, Texas; Sarnia, Canada; Zwijndrecht,

Belgium; and Dormagen, Germany, and are currently spending DM 120 million to build a production facility in Leverkusen for Therban® specialty rubber that is due on stream in 2000.

Bayer subsidiary Rhein Chemie also is expanding. Acquisition of iSL-Chemie GmbH, a producer of color preparations located at Kürten, near Cologne, Germany, has added a very promising product line to Rhein Chemie's existing range of chemical preparations and specialty additives for the rubber, plastics and lubricants industries. In a strategically significant move, our affiliate PolymerLatex acquired a 50 percent share in the Finnish company Eka PolymerLatex Oy, an important partner of the major paper manufacturers in the Nordic countries. The production facilities in Finland are currently being expanded to supply latex to northern Europe's fast-growing paper industry.

To combine our businesses in raw materials for adhesives, sealants and coatings, the adhesive raw materials business unit was transferred within the Polymers segment to the Coatings, Colorants and Special Raw Materials Business Group, effective January 1, 1999. Polymer additives became part of the reorganized Specialty Products Business Group in the Chemicals segment as of the same date.

Sales of the Rubber Business Group – based on the new organizational structure – were down by 2.7 percent from the year before, to DM 3.6 billion.

Polyurethanes

Major investment at Baytown, Texas

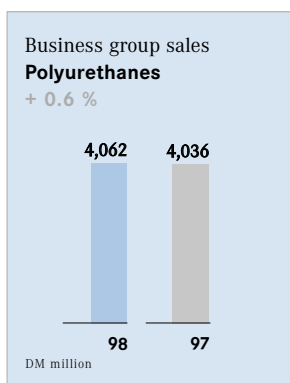
With an investment of DM 2.3 billion in new facilities for several business groups, we are developing the Baytown, Texas, site into one of our largest manufacturing bases. In 1998, a new plant with a capacity of 150,000 tons a year of diphenylmethane diisocyanate (MDI), a key feedstock for polyurethane materials used in a wide range of applications, came on stream. With capacity at Baytown for toluene diisocyanate (TDI), another polyurethane raw material, also being enlarged, this location is becoming another major production center for the Polyurethanes Business Group. From Baytown we plan to supply customers not only in North America but in Latin America and Asia, too.

The sustained growth in our polyurethane business is based not just on increasing demand from our

customers in the automotive, furniture, construction and refrigerating appliance industries, but also on trend-setting innovations. Continual improvements in our raw materials, systems and processing methods are laying the foundations for further end-uses. In 1998, for example, we developed automotive interior door trim in

which polyurethane serves as a binder for natural fiber mats of flax or sisal, offering substantial weight savings. Another factor in the success of the Polyurethanes Business Group is the comprehensive service we offer our customers throughout the world. That service is currently provided by five regional marketing centers complemented by local technical service centers whose staff pass on the necessary expertise to PU processors.

Although our polyurethane activities were among those marred in 1998 by the difficult economic situation in Asia, eastern Europe and Latin America, sales of the business group rose 0.6 percent to DM 4.1 billion.



Coatings, Colorants and Special Raw Materials

Reorganization strengthens market presence

Effective January 1, 1999, the Coatings, Colorants and Special Raw Materials Business Group now pools our expertise in the fields of coating raw materials, adhesives, pigments and dyes for the coatings and plastics industries. This reorganization will enable us to further enhance our reputation in major markets, such as automotive and construction, by providing superior know-how, individual service and customized solutions.

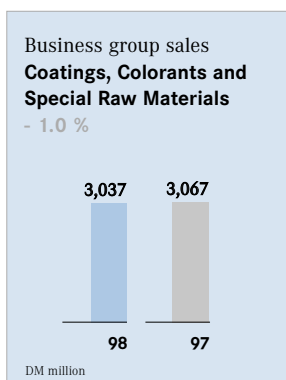
Our partners are increasingly using Bayer raw materials in major construction projects. A recent example of this was the application of coating systems based on Desmodur® and Desmophen® as floor finishes in the multi-story airport parking garages in Kuala Lumpur, Malaysia, and Munich, Germany. Demand from the automotive, plastics and other industries for our waterborne Bayhydrol® and Bayhydur® coating resins has risen, with double-digit growth rates pointing to our technological leadership in this rapidly expanding market segment.

Confident that innovations will continue to fuel the growth of this enlarged business group, we have concentrated our research in coating binders at a new center in Leverkusen, opened in 1998, and we will continue to invest heavily in R&D to expand our expertise in this area.

Bayer is the world's leading supplier of raw materials for polyurethane coatings. We are increasing capacity for the key feedstock hexamethylene diisocyanate (HDI) by 30,000 tons a year and plan to build a new derivatives plant in the Far East. Through this invest-

ment we are establishing new production locations as close as possible to our customers. We currently manufacture coating raw materials in Europe, North America, Brazil and Japan.

Business in organic colorants for coatings and plastics varied from one region to another in 1998. In the Far East, sales were down because



of the slump in the economy, but elsewhere the upward trend of recent years continued. There was a pleasing increase in the demand for our new, low-dust Macrolex® granular dyes, which are used to color high-performance thermoplastics.

In the field of inorganic iron oxide pigments, which also became part of the Coatings, Colorants and Special Raw Materials Business Group at the beginning of 1999, we successfully continued with our forward integration strategy in 1998, placing us in an even better position to meet individual customer requirements.

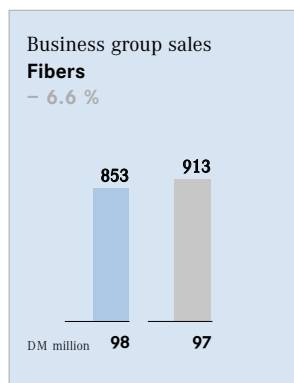
In adhesive raw materials, the recent positive trend was sustained, with our Dispercoll®, Baycoll® and Desmodur® S grades for environmentally compatible, solvent-free adhesives growing faster than the average. 1998 saw the successful launch of the promising new Desmomelt® family of raw materials for hot melt applications in the textile and footwear sectors.

Sales of the business group – based on the new organizational structure – declined by 1 percent from the year before, to DM 3 billion.

Fibers

Growth for Dorlastan® and Perlon® monofil

Our Dorlastan® spandex fiber has been giving shape to clothing for years, imparting a perfect fit to sportswear, intimate apparel, ladies' hosiery and other garments. Dorlastan® has proven so popular that the production facilities in the United States and Germany operated at full capacity in 1998. Sales of this business unit advanced by 7 percent.



Business in Perlon® monofil, which find major usage in paper

machinery felt, made good headway. Bayer is the world market leader in this field.

Raw material costs for Dralon® fiber, the business group's highest-volume product, fell in 1998, but fierce competition compelled us to pass on the full savings to customers. As a result, sales for the entire business group fell 7 percent to DM 853 million.

We are standing by our investment plans despite the increasing economic problems in Asia and eastern Europe. We are modernizing our Dralon® plants and expanding Dorlastan® capacity in Germany and the

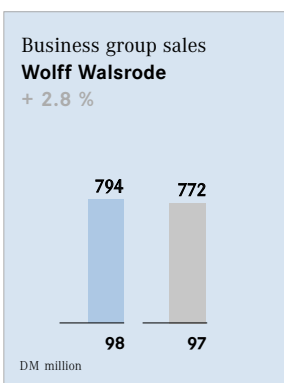
United States by 5,500 tons a year. The associated capital expenditures will amount to DM 160 million by the end of 1999, of which Dorlastan® accounts for DM 140 million.

Wolff Walsrode

New cellulose competence center

Bayer's subsidiary Wolff Walsrode has achieved worldwide success with products based on cellulose, a natural raw material. It is the feedstock for the production of substances such as methylcellulose – an additive

or precursor for building materials, paints and adhesives. Yet cellulose has an even broader spectrum of promising applications, which are now to be researched by experts at a new pilot-plant facility in Walsrode, Germany. We intend to expand this facility into a competence center for cellulose derivatives. The center's



activities will also focus on increasing the use of other renewable raw materials, such as starch or guar.

Another development project involves cellulose-based thermoplastics in the form of light, environmentally compatible fiber composites for use in the automotive industry. Already a major focus of business activity are additives for cosmetics, drug products, foodstuffs and construction materials. Our market position in thermoplastic polyurethane films for the automotive, textile and other industries has been strengthened by Wolff Walsrode's acquisition of the technical films unit of Elf Atochem Deutschland GmbH.

The Wolff Walsrode Business Group had another growth year in 1998. Sales rose 2.8 percent from the previous year to DM 794 million, with foreign business accounting for some 60 percent of the total.

Perfumers at Haarmann & Reimer are constantly creating new fragrances. Here, Petra Sporleder mixes a new composition in the laboratory according to the recipe (large photo). Volume production of the perfume oils then takes place with the aid of computerized blending systems (small photo).

Chemicals





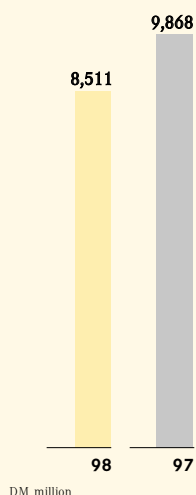
Preparing for the future means more effectively exploiting synergy potentials and increasing our presence in those chemical markets that hold promise for our business. With these aims in mind, we have greatly strengthened our chemicals portfolio: The titanium dioxide and silicones businesses, which were not core activities, have been transferred to minority joint ventures, while our activities in basic and fine chemicals, textile processing chemicals, polymer additives, material protection products, chemicals for the leather and paper industries, and ion exchange resins have been streamlined and regrouped to more directly

Portfolio restructured

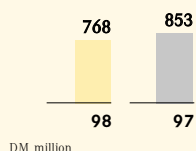
address their specific markets. The Chemicals business segment had sales in 1998 of DM 8.5 billion, down 13.8 percent from 1997. The operating result fell 10 percent to DM 768 million. The return on sales was 9 percent.



Sales
Chemicals
- 13.8 %



Operating result
Chemicals
- 10.0 %



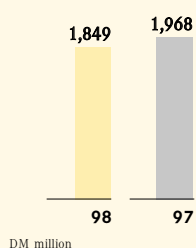
Basic and Fine Chemicals

Looking to the future with new concepts and innovations

Biological products are gaining ground in the chemicals sector because of their environmental integrity and biodegradability – properties that will assure them a bright future. They are used in detergent and cleaning products, for example, as water softeners to make the

products more efficient. Bayer is a leader in the development of “bio-design” chemicals and already manufactures polymers such as polyaspartic acids (PAA). Another biodegradable product we have developed is iminodisuccinate (IDS), a new type of complex-

Business group sales
Basic and Fine Chemicals
- 6.0 %



Capacity expansions in new Basic and Fine Chemicals Business Group

Wider portfolio for Specialty Products

Haarmann & Reimer still going strong

Expansion at EC Erdölchemie

H.C. Starck takes over advanced ceramics

DyStar expands production facilities

ing agent. In 1998 we began operating a 2,000-tons-a-year pilot plant to manufacture PAA and IDS. The first commercial-scale facility, which will have a capacity of 12,000 tons, is due on stream in 2000.

The manufacturing and marketing of basic and fine chemicals has been a core activity of the Bayer Group from the very beginning, and we are a major global player. As of January 1, 1999 we have combined all of these activities in the new Basic and Fine Chemicals Business Group. It comprises business units of the former Organic Chemicals Business Group, plus the inorganic basic chemicals and inorganic specialties business units and the electronic chemicals activities of the former Inorganics Business Group. The ion exchange resins and material protection business units of the former Organic Chemicals Business Group have now been transferred to the Specialty Products Business Group.

We will spend a billion DM over the next five years to build new production facilities and enlarge existing ones around the world so that we can continue to satisfy the growing demand for our fine chemicals. Our goal is to create flexible multi-purpose facilities in which different products for different sectors of industry can be manufactured in rotation. These include custom-made chemicals for companies in the electronics, photographic, agrochemical and pharmaceutical industries. The starting materials for them – and a major part of our output – are the basic chemicals. For example, we have established the world's most significant network of integrated production facilities for chemical aromatics, supplying our customers with substances essential to the manufacturing of many everyday products. Integrated facilities mean we can take advantage of synergies, do

not need to ship products over such long distances and can respond flexibly to customers' needs. These factors make Bayer an ideal source of basic chemicals.

Our growth drivers in the area of inorganic specialties are Baysix® silicon wafers, which, with their patented multicrystalline structure, are used to manufacture high-performance solar cells. Bayer subsidiary Bayer Solar GmbH has been producing these wafers at Freiberg in eastern Germany since 1994. We will spend DM 35 million to raise Baysix® capacity at Freiberg from six to 16 million wafers per year.

Although 1998 got off to a good start, the basic chemicals business felt the effects of the economic crises in the Far East and Russia from August onward. As a result, sales of the business group – based on the new organizational structure – were down 6 percent from the previous year to DM 1.8 billion.

Specialty Products

Industry-specific activities and customized systems

Customer focus was made an essential feature of the Specialty Products Business Group when it was formed in 1996. Addressing specific user industries directly and adopting a customer-oriented approach enables us to respond flexibly to the needs of the market, develop customized systems and capitalize on additional sales opportunities.

We have now taken this successful strategy a step further by transferring the marketing of our material protection products and ion exchange resins, previously the responsibility of the Organic Chemicals Business Group, to the Specialty Products Business Group effective January 1, 1999. Also now part of Specialty Products are the inorganic fine chemicals activities of the former Inorganics Business Group and polymer additives, which formerly belonged to the Rubber Business Group. These additions to its product lines will enable the Specialty Products Business Group to enhance its market position.

Through this realignment we are improving our marketing in the areas concerned and pooling expertise to develop innovative products, increasingly tailoring their performance profiles to meet specific customer needs. Examples are our biodegradable Levotan® L tanning agent for leather processing and the new Baysynthol® AGP surface sizing agent for paper manufacturing. Both products have been well received by the market.

Our leading position as a competent partner to the paper industry was enhanced in 1998 by the completion and start-up of the new Blankophor® plant in Lever-

kusen. The facility, which cost DM 60 million to build, manufactures optical brighteners by a patented, fully automated process. A redesigned logistics system ensures fast, reliable deliveries to our customers throughout the world.

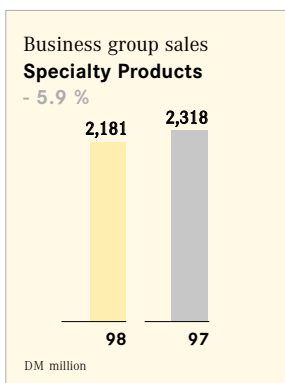
Important additional capacities were created for our leather industry business unit: Our joint venture Bayer Wuxi Leather Chemicals Co. Ltd. in China started production of synthetic tanning agents, so we can now significantly expand our market position in that country, the world's biggest leather producer. The enlarged facilities for chrome tanning agents in South Africa and Argentina came on stream. These plants are cornerstones of our activities in this field.

Also in South Africa, Chrome International South Africa, our 50:50 joint venture with Dow Chemical, started production of chromic acid and sodium dichromate. We ceased manufacturing chromium compounds at Leverkusen and in Brazil.

Lower sales of textile processing chemicals in Asia were largely offset by increases elsewhere. Examples of products with further growth potential are Persofter® U, an innovative softening agent that makes textiles easier to sew, and our new, environmentally compatible Diadavin® ESW, for cleaning textile fibers, which eliminates the need to use CFCs or PER as solvents.

There are also good prospects in the market for solvent-free organic pigment dispersions, where our Levanyl® LF line is performing well. Seven new products have been added to the range.

In the area of material protection, we expanded our already strong position in the markets for wood preservatives, disinfectants, cosmetic ingredients and technical preservatives. To achieve this we provided even more comprehensive customer service, stepped up our active ingredients research and opened up new applications for existing products. To strengthen our overseas presence we established regional centers.



We are spending more than DM 200 million to modernize our production facilities in Bitterfeld and Leverkusen, Germany, for Lewatit® ion exchange resins, which are used primarily to demineralize water in power plants and the home. This investment will form the basis for increasing our sales of Lewatit® in eastern Europe and the rapidly growing markets of Asia.

At the same time as being transferred to the Specialty Products Business Group under the restructuring referred to above, our line of polymer additives has been extended, making Bayer one of the market leaders. Customers enjoy the benefit of our technical service support and the ability to purchase from a global, single-source supplier.

Sales of the Specialty Products Business Group – based on the new organizational structure – declined by 5.9 percent from 1997, to DM 2.2 billion.

Haarmann & Reimer

Concentration on core activities

Luxurious perfumes, imaginative new colognes, refreshing aftershaves: Many pleasantly scented products are based on fragrances from our Haarmann & Reimer (H&R) Business Group.

In 1998, H&R became even more firmly established in the fine fragrance segment of the market following the reorganization of its fragrances and flavors business units into four industry-specific sub-units that address the needs of multinational customers. Also highly

successful last year were H&R's Optamint® flavors for toothpastes and oral care products.

Among our aroma chemicals, the top-selling products are menthols. Increasing acceptance of new aroma chemicals by major customers leads us to expect further growth in this area. H&R has

divested the citric acid business to focus entirely on its core activities in fragrances and flavors.

The Haarmann & Reimer Business Group maintained sales in its core businesses at the high level of

the previous year, despite a decline in the Asian region. Sales, excluding citric acid, amounted to DM 1.6 billion.

In 1999 Haarmann & Reimer celebrates the 125th anniversary of its founding. The company, headquartered at Holzminden, Germany, was the world's first industrial producer of synthetic fragrances and flavors in 1874.

EC Erdölchemie

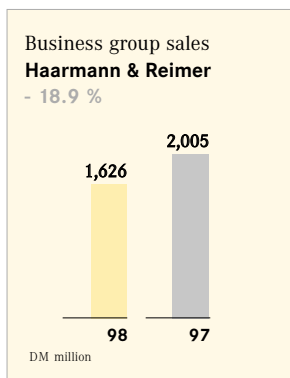
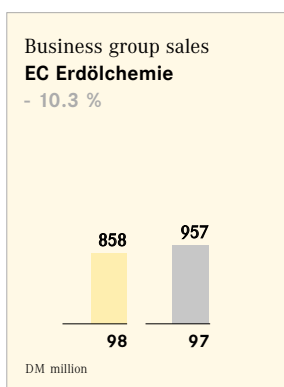
Higher output and volumes

Cologne-based EC Erdölchemie GmbH, in which Bayer holds a 50 percent interest, continues to expand its operations.

In 1998, the successful completion of several capacity expansions, in which the company invested a total of DM 90 million, formed the basis for a 3 percent rise in output and volumes.

Despite this, the joint venture's contribution to Group sales dropped by 10.3 percent

from the previous year to DM 858 million, mainly because of the decline in selling prices for petrochemicals. The drop in earnings, however, was mitigated by lower feedstock costs and higher volumes.



H. C. Starck

Specialties in worldwide demand

The specialty metals and metal powders manufactured by Bayer's H.C. Starck subsidiary are indispensable to high-tech products in the automobile, machinery and information technology industries. The tremendous strides made in the field of microelectronics would not have been possible without H.C. Starck's intermediates, such as metallic and advanced ceramic powders.

Here, and in the manufacture of heavy-duty battery systems, H.C. Starck anticipates continuing good market opportunities. This Bayer business group currently

supplies nearly 50 percent of world requirements of tantalum, one of its principal products.

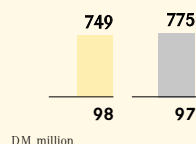
The newly built tungsten plant at Sarnia, Canada, has been successfully brought on stream. The second major facility at this site began operating experimentally late in 1998, producing spherical nickel hydroxide, an

important intermediate for rechargeable batteries.

As of January 1, 1999, H.C. Starck has assumed responsibility within the Bayer organization for the advanced ceramics activities that were formerly handled by the Inorganics Business Group. Those activities include the former Cremer Forschungsinstitut (CFI), now known as Ceramics For Industry, in Rödental, Germany, which is being expanded into a competitive production facility.

Sales did not reach the high level of the previous year, mainly because of a cyclical decline in volume sales of products for the electronics industry, price erosion for molybdenum and cobalt products triggered by a slump in raw material costs, and heavy pressure on the prices of products for the hardmetal industry. The H.C. Starck Business Group had 1998 sales of DM 749 million, compared with DM 775 million the year before.

Business group sales
H. C. Starck
- 3.4 %



DyStar

Global presence expanded

Quality, service, innovation and a competitive cost structure are the crucial success factors in the textile dyes business. In 1998 DyStar, the joint venture of Bayer and Hoechst, continued to invest in research and development to improve products and processes with regard to both ecology and economy for the benefit of its customers. The results of these efforts are apparent in innovative products such as Dianix Eco® liquid disperse dyes, which allow environmentally compatible dyeing and printing of polyester, Remazol RR Trichromie® reactive dyes with good reproducibility, and Imperon HF® lightfast pigment preparations, which offer significant advantages to customers.

DyStar again met its cost containment targets in 1998, with lower production costs resulting from its global manufacturing concept and advances in process technology. The company's program of investment to establish an internationally competitive manufacturing base continued in 1998, with site expansions helping to strengthen its market position and global presence.

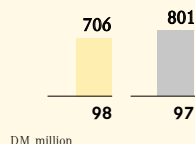
The Chinese joint venture DyStar Wuxi, which has

been producing disperse dyes since 1997, now also manufactures 1,500 tons per year of reactive dyes. In Indonesia, DyStar plans to increase its capacity for reactive dyes from 3,000 to 6,000 tons per year.

The world market for textile dyes shrank by more than 15 percent in 1998 and, with Asia accounting for nearly 30

percent of DyStar's business, its financial results were hampered by the severe economic slowdown in that region. The joint venture's contribution to Bayer Group sales declined by 12 percent to DM 706 million.

Business group sales
DyStar
- 11.9 %





Fit for the stock market

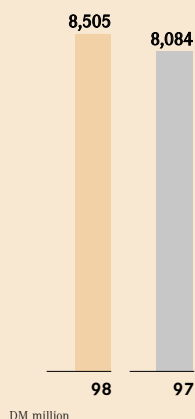
In the Agfa Group, the countdown is on for the beginning of a new and exciting future. The globally successful imaging company is due to be listed on the stock exchange in the second quarter of 1999, providing it with new ways to strengthen its position and develop its expertise in fast-growing core areas. Sales rose 5 percent compared with 1997, and the operating result declined by 12.9 percent to DM 499 million due to the effects of the Asian economic crisis. The return on sales was 5.9 percent.



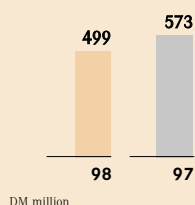
In the surgical clinic of Ludwig Maximilian University in Munich, every patient's data is digitally recorded during treatment (large photo) so it is available whenever and wherever needed. Digitized x-ray photographs provide an additional aid to diagnosis (small photo).



Sales
Agfa
+ 5.2 %



Operating result
Agfa
- 12.9 %



Photographic Products

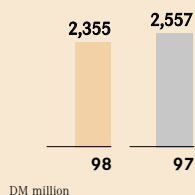
Innovations in all business units

Photography is, and will continue to be, one of the world's most popular and interesting hobbies: More than three billion rolls of film were exposed in 1998. Nevertheless, the photo market is heavily dependent on the general economic situation. In 1998, volumes stagnated and prices fell. Agfa's photo business was severely affected by the Asian economic crisis, with substantial import barriers to the Chinese market exacerbating the situation. Sales of this business group, at DM 2.4

billion, were down 8 percent from the previous year and only just above the 1996 level. As far as Agfa's product line is concerned, 1998 saw a new wave of innovations, with some 80 percent of sales coming from products that had been launched during the previous twelve months. The entire film

range was renewed, led by Agfacolor HDC Plus®, which was voted Europe's best color negative film of 1998/99 by the Technical Image Press Association (TIPA). A new

Business group sales
Photographic Products
- 7.9 %



Major innovations in Photographic Products

Graphic Systems becomes the world leader in prepress

Record year for medical imaging business

type was added to the range of color negative paper, which is Agfa's biggest-selling photo product. The Group's healthy photochemistry business also was boosted by a number of product introductions.

The "photokina" trade show proved an outstanding success for Agfa's laboratory equipment business. More than half the photos produced in wholesale photofinishing labs are printed with Agfa equipment, with the Agfa MSP DIMAX® high-speed printer impressively underscoring the Group's technological leadership in photofinishing equipment. This new model produces significantly better photos because it combines optical-analog exposure with digital imaging. A technologically unique index print system also was showcased at "photokina". Index prints show all the pictures from one roll of film on a single sheet.

A small but growing area of business involves the printing of digital images on photo paper, and Agfa's laboratory machines are also well equipped for this field of application. In cooperation with the Swiss software company FotoWire, Agfa is now also offering network concepts that allow scanned or digitally captured images to be transferred from a home PC or a photo shop directly to the photofinishing lab. Agfa acquired a financial interest in FotoWire in 1998.

Graphic Systems

Acquisitions make Agfa the market leader

The Graphic Systems Business Group accounts for nearly 50 percent of Agfa's sales. In 1998, revenues rose by 13 percent to DM 4.2 billion. Excluding the DuPont business, acquired in March 1998, and the Copying Systems Business Unit, divested in mid-year, growth was 3 percent. All of the business units posted increases.

Acquisition of the graphic films and offset printing plates business of DuPont has made Agfa the leading player in the expanding world market for prepress systems. Currently, about 40 percent of all print media worldwide are generated using Agfa products.

Growth in the photographic prepress area continues to be driven by recorder films. These are special films for recording digital data – such as print pages compiled on the computer – in a laser imager. Business in

offset printing plates is also showing a stable upward trend and has benefited particularly from the DuPont acquisition.

The electronic prepress business unit launched a new large-format imager and various software products last year. These have become key products not only for individual operations, such as screening, proofing and color management, but also for controlling the entire work process. This range is now being extended by the font software for computers and peripherals offered by Monotype Typography of Chicago. Agfa acquired Mono-

type in July 1998, gaining access to the world's largest font library.

Digital printing continued to show very strong growth, with products for desktop publishing, particularly digital cameras, scanners and inkjet materials for the small office/home office

segment continuing to boom. Volumes have tripled. Agfa sold around 100,000 digital cameras and 750,000 scanners in 1998. On the other hand, this growth was accompanied by a comparatively steep drop in prices, which is characteristic of this business today. Premiered at "photokina" were the Agfa ePhoto 1680® digital camera, four SnapScan® scanners and two new DuoScan® midrange scanners. Agfa is the world leader in this market segment, accounting for more than one in three scanners sold.

Technical Imaging Systems

Strong growth again

Sales of the Technical Imaging Systems Business Group rose 8 percent in 1998, to DM 1.9 billion. As in previous years, the medical business unit, with its imaging systems for medical diagnostics, contributed a good three quarters of business group sales, again showing a two-digit rise.

Using the slogan "Classics for the Future," Agfa markets films and processing systems for traditional x-ray systems, on which the medical imaging market remains firmly based. It is one of the world's leading players in this segment. With the acquisition of the U.S. company Sterling Diagnostic Imaging Inc. due to take place in spring 1999 subject to the approval of antitrust authorities, Agfa will further expand the good position it already holds in this market.

Agfa's activities in this segment are also being increasingly influenced by digital technology. In 1996, for example, the company entered the digital radiography market with its Agfa Diagnostic Center® (ADC 70). Some 300 ADC 70 systems were sold in the space of three years. The estimated demand for the follow-up model, the ADC Solo, which was introduced in 1998, illustrates just how popular these systems are, and there is a realistic chance that sales will soon pass 1,000 units per year. Still small, but very growth-intensive, are the dry hardcopy segment – the market for Agfa's Drystar® systems – and the area of digital radiography networks. In the latter segment, Agfa's IMPAX® systems are well established, with a number of new, mainly software, offerings added in 1998.

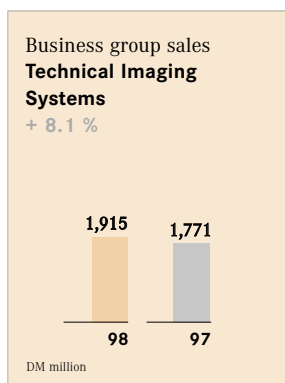
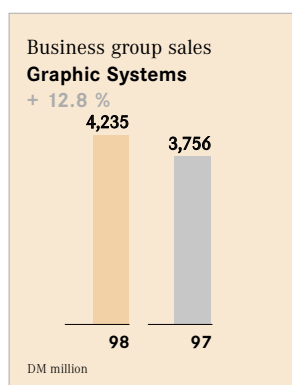
Agfa's aim is that these picture archiving systems will not merely be used in radiology but will also

be combined with the communication systems of other medical disciplines to create a complete clinical information system that can link images with diagnostic data.

Nondestructive materials testing has made more progress in recent times than any other business unit.

For five years now, including 1998, this segment has enjoyed substantial growth rates and very satisfactory earnings. The main activities in this field are air and space travel and the pipeline sector.

The three smallest business units – motion picture, micrographic systems and specialty foils and components – increased their earnings significantly.



Global presence safeguards earnings

Europe

In **Germany**, the economy continued to develop well in 1998, especially in the first quarter of the year. Low interest and inflation rates created a favorable climate for new investment. However, the economic picture was marred by mounting pressure on prices and growing uncertainty about future economic policy. In addition, exports deteriorated over the course of the year due to the crises in Asia, Russia and Latin America. Against this background, our German companies developed as follows:

Sales of **Bayer AG** rose by DM 0.7 billion to DM 19.4 billion. The growth came from European markets, while overseas exports flattened out slightly due to the crisis in Asia. The spin-offs of our titanium dioxide and silicone activities diminished sales by DM 0.4 billion. Disregarding these businesses, sales grew by 5.9 percent. The operating result was down. Because of higher income from affiliates, net income rose to DM 2.1 billion.



Films from Wolff Walsrode are used as an oxygen barrier in the walls of the International Space Station (the picture shows a model) as well as in the airtight packaging for the astronauts' food.

Bayer Vital GmbH & Co. KG, our domestic marketing company for life science products, achieved its sales target of DM 1.7 billion despite the difficult underlying conditions. Falling prices were almost offset by the success of cost-cutting measures. The company posted net income of DM 54 million.

Agfa-Gevaert AG had to cope with falling prices and also had significant exceptional expenses in 1998. This resulted in a substantial decline in earnings. Graphic Systems was strengthened by the acquisition of DuPont's printing plates business, which helped it hold sales at the previous year's level despite generally weak demand.

EC Erdölchemie GmbH, our joint venture with Deutsche BP Holding AG, posted income before transfer of DM 244 million. Compared with the previous year, sales were down by 11 percent due to lower prices for petrochemicals.

Wolff Walsrode AG, which manufactures high-grade packaging film and cellulosic products, raised sales by DM 24 million to DM 771 million. Earnings remained at the previous year's level.

Sales of **Haarmann & Reimer GmbH**, a leading manufacturer of flavors and fragrances, were the same as in 1997 at DM 719 million, despite the crisis in Asia. Because of lower tax expense, net income rose to DM 58 million.

Sales of **H.C. Starck GmbH & Co. KG**, a manufacturer of specialty metals, dipped 5 percent to DM 608 million due to weaker demand from the electrical industry. Net income rose 4 percent to DM 56 million, reflecting an improved cost structure.

Good progress was again made by **Bayer Faser GmbH**. The 5 percent sales decline, to DM 535 million, was due to lower selling prices for our Dralon® acrylic fiber. Nevertheless, income before transfer climbed by 13 percent to DM 77 million, due in large part to higher sales of Dorlastan® spandex fiber.

Rhein Chemie Rheinau GmbH, an international supplier of specialty chemicals, advanced sales by 5 percent to DM 392 million and net income by DM 9 million to DM 28 million. Integrating the expanding color preparations business of iSL-Chemie GmbH stimulated the company's development.

Our joint venture with Hüls, **PolymerLatex GmbH & Co. KG**, expanded its position in western Europe with sales of DM 499 million. Net income improved to DM 6 million.

The **DyStar group** is particularly affected by the 15 percent shrinkage in the world market for textile dyes because of the economic crisis in key Asian countries that account for one third of the company's business. Against this background, the relatively stable sales figure of DM 1.6 billion may be judged a success. Earnings, however, were down on the previous year.

Belgium's economic environment was characterized by stable domestic demand and lively export business.

Agfa-Gevaert N.V. expanded sales by 4 percent to DM 2.9 billion. Higher silver prices and exceptional charges in its Asian business resulted in a reduction in earnings.

Bayer Antwerpen N.V. recorded higher sales, and the net income of DM 87 million was significantly higher than the previous year.

Thanks to the increases in production capacity completed in 1997, **Bayer Rubber N.V.** pushed up sales by 8 percent to DM 338 million. Net income advanced to over DM 40 million.

The **French** economy grew by 3 percent in 1998, with a low rate of inflation.

With an increase in sales of 9 percent, **Agfa-Gevaert S.A.** expanded its strong market position in the field of digital technologies. Earnings improved considerably.

Sales of our marketing company **Bayer S.A.** rose by 3 percent to DM 776 million. Net income declined due to lower income from affiliates.

Sales of **Bayer Pharma S.A.** climbed 12 percent to DM 486 million. The launch of new products and higher marketing costs incurred as a result had a negative effect on earnings.

In the **United Kingdom**, economic growth slowed to 2 percent, with inflation still low.

Bayer plc maintained sales at the previous year's level of DM 1.1 billion. Earnings were affected by falling prices for chemical products and the sale of the citric acid business to the Tate & Lyle Group.

Sales of **Agfa-Gevaert Ltd.** rose by 68 percent to DM 855 million. Net income improved to DM 6 million. This pleasing performance was mainly due to the acquisition of DuPont's offset printing plates and graphic films businesses.

Italy had the lowest rate of growth in the European Union. This was due to subdued domestic demand and the resulting slow growth in industrial production.

Bayer S.p.A. saw sales increase from the previous year. The operating result was up, and the non-operating result also improved due to lower interest charges, raising net income to DM 32 million.

Agfa-Gevaert S.p.A. posted a sales increase of 12 percent. Earnings declined due to lower prices in the photo business.

Good domestic demand and stronger exports led to growth of 2 percent in **Switzerland**.

Bayer International S.A., which markets our synthetic rubber and polyurethanes, raised sales to DM 836 million. Net income dipped to DM 51 million.

Compared with the other European countries, the **Spanish** economy grew at an above-average rate, with stable prices and rising employment.

Sales of our manufacturing and marketing company **Bayer Hispania, S.A.** decreased by 5 percent to DM 806 million due to weaker foreign demand. There was a pleasing increase of 7 percent in net income to DM 98 million due to a combination of falling raw material prices and successful cost management.

Química Farmacéutica Bayer, S.A. increased sales by 4 percent to DM 576 million and net income by 9 percent to DM 32 million.

Sales of **Agfa-Gevaert, S.A.** rose to DM 419 million, mainly due to the acquisition of the DuPont business units. Net income advanced to DM 14 million.

North America and Latin America

The economy of the **United States** showed solid growth again in 1998. Domestic demand was high while unemployment and inflation remained low.

Bayer Corporation performed well in its various markets. However, sales were temporarily affected by a shortfall in plasma production and more difficult market conditions for polymeric materials. At DM 14.3 billion, sales did not quite match the previous year's figure. The company paved the way for future growth with high investment in R & D and capital assets, totaling DM 2.9 billion. In addition, DM 2.1 billion was spent to acquire Chiron Diagnostics Corporation and an interest in Gustafson. Net income increased to DM 367 million.

Despite the strikes in the automotive and construction industries, **Canada's** economy developed favorably.

Sales of **Bayer Inc.** advanced by 3 percent in local currency, especially in the rubber, pharmaceuticals, polymers and Agfa businesses. Net income improved to DM 26 million.

In 1998, the economies of **Latin America** suffered from the fall in oil prices, financial crises and high interest rates. Growth slowed considerably.

Bayer de México, S.A. de C.V. outperformed the market, with record sales and net income of DM 602 million and DM 82 million respectively.

Bayer Argentina S.A. had sales of DM 641 million, about the same as in the previous year. Net income was DM 51 million.

Sales of **Bayer S.A.** in Brazil advanced to DM 1.1 billion, mainly due to the positive trend in Health Care and Agriculture. Net income of DM 61 million was achieved following completion of a restructuring program in the Chemicals segment.

Asia, Africa and Australia

Last year, most Asian countries suffered from the continuing economic crisis.

In **Japan**, the gross domestic product declined by 3 percent. Historically low interest rates were unable to stimulate either consumption or investment.

Employees make preparations for trials at Millennium Pharmaceuticals Inc. in Boston: In 1998, Bayer signed the most far-reaching collaboration agreement in the history of pharmaceutical research with this U.S. company.





Bayer Guangyi, headquartered in Beijing, manufactures polycarbonate sheeting for the Chinese market.

Sales of our pharmaceutical company **Bayer Yakuhin, Ltd.** decreased by 8 percent to DM 1.1 billion as a result of statutory price cuts and volume shortfalls for biological products. Net income was down to DM 5 million, partly because of exceptional charges.

Sales of **Bayer Ltd.** dipped to DM 351 million due to a change in the distribution system within the Group. The animal health products and plastics businesses developed well. Helped by low tax expenses and favorable currency movements, net income improved to DM 10 million.

Nihon Bayer Agrochem K.K. turned in a solid performance in a keenly contested market, due not least to the successful launch of the new Win[®]/Win-Admire[®] fungicide. Sales and earnings improved significantly.

Sumitomo Bayer Urethane Co., Ltd., which manufactures products for the Chemicals and Polymers segments, suffered from a decline in orders from the construction and automotive industries, with sales down 4 percent to DM 369 million. Earnings were below the previous year's level.

In **South Africa**, economic growth has slowed considerably. The rand was devalued and interest rates were raised.

Bayer (Proprietary) Ltd. did well in these difficult conditions, with sales up 13 percent in local currency. Net income improved significantly to DM 16 million on sales of DM 440 million.

The **Australian** economy grew as a result of expanding domestic demand, although the Australian dollar weakened.

Bayer Australia Ltd. boosted sales in local currency by 3 percent. Sales amounted to DM 355 million and net income climbed 18 percent to DM 15 million.

Principal Consolidated Companies

<i>Company Name and Place of Business</i>	<i>Bayer's interest</i>	<i>Sales *</i>	<i>Net * income</i>	<i>Employees</i>
	<i>(%)</i>	<i>(DM million)</i>	<i>(DM million)</i>	
Germany				
Agfa-Gevaert AG, Leverkusen	100	2,787	(40)**	5,781
EC Erdölchemie GmbH, Cologne	50	2,472	244**	2,291
Bayer Vital GmbH & Co. KG, Leverkusen	100	1,720	54	1,359
DyStar group	50	1,584	(18)	3,179
Wolff Walsrode AG, Walsrode	100	771	22	2,409
Haarmann & Reimer GmbH, Holzminden	100	719	58	1,792
H. C. Starck GmbH & Co. KG, Goslar	99.9	608	56	1,799
Bayer Faser GmbH, Dormagen	100	535	77 **	911
PolymerLatex GmbH & Co. KG, Marl	50	499	6	418
Rhein Chemie Rheinau GmbH, Mannheim	100	392	28	569
Other European Countries				
Agfa-Gevaert N.V., Belgium	100	2,947	224	5,597
Bayer Antwerpen N.V., Belgium	100	1,787	87	2,405
Bayer Rubber N.V., Belgium	100	338	41	456
Agfa-Gevaert S.A., France	99.9	873	6	1,076
Bayer S.A., France	99.9	776	18	528
Bayer Pharma S.A., France	99.9	486	(1)	730
Bayer plc, U.K.	100	1,115	(56)	1,249
Agfa-Gevaert Ltd., U.K.	99.9	855	6	1,187
Bayer S.p.A., Italy	100	1,518	32	2,223
Agfa-Gevaert S.p.A., Italy	100	416	(5)	309
Bayer International S.A., Switzerland	100	836	51	63
Bayer Hispania, S.A., Spain	100	806	98	1,065
Química Farmacéutica Bayer, S.A., Spain	100	576	32	1,064
Agfa-Gevaert, S.A., Spain	100	419	14	546
North America				
Bayer Corporation (group)	100	14,283	367	23,405
Bayer Inc., Canada	100	1,605	26	2,470
Latin America				
Bayer de México, S.A. de C.V., Mexico	100	602***	82***	2,157
Bayer Argentina S.A., Argentina	99.9	641***	51***	1,141
Bayer S.A., Brazil	99.9	1,134***	61***	2,355
Asia / Africa / Australia				
Bayer Yakuhin, Ltd., Japan	75.6	1,084	5	1,818
Bayer Ltd., Japan	100	351	10	262
Nihon Bayer Agrochem K.K., Japan	95.6	336	2	373
Sumitomo Bayer Urethane Co., Ltd., Japan	50	369	4	150
Bayer (Proprietary) Ltd., South Africa	100	440	16	1,484
Bayer Australia Ltd., Australia	99.9	355	15	575

* The figures are taken from the respective financial statements prepared in line with local regulations. Foreign companies' figures are translated at average rates of exchange.

** income before transfer

*** These figures are taken from the hard-currency statements used for the consolidation.

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Management Responsibility for Financial Reporting

The consolidated financial statements of the Bayer Group have been prepared by the management, who are responsible for the substance and objectivity of the information contained therein. The same applies to the management report, which is consistent with the financial statements.

Our financial reporting takes place according to the rules issued by the International Accounting Standards Committee, London.

Effective internal monitoring procedures instituted by Group management at the consolidated companies along with appropriate staff training ensure the propriety of our reporting and its compliance with legal provisions. Integrity and social responsibility form the basis of our corporate principles and of their application in areas such as environmental protection, quality, product safety, plant safety and adherence to local laws and regulations. The worldwide implementation of these principles and the reliability and effectiveness of the monitoring procedures are continuously verified by our Corporate Auditing Department.

These measures in conjunction with a uniform reporting system throughout the Group ensure that Group companies present the management with an accurate view of their business operations, enabling us to discern risks to our assets or fluctuations in the economic performances of Group companies at an early stage and at the same time providing a reliable basis for the consolidated financial statements and the management report.

The Board of Management conducts the business of the Group in the interests of the stockholders and in awareness of its responsibilities toward employees, communities and the environment in all the countries in which we operate. Our declared aim is to deploy the resources entrusted to us in order to increase the value of the Bayer Group as a whole. In accordance with the resolution of the Annual Stockholders' Meeting, the Board of Management appointed C&L Deutsche Revision AG as independent auditors of the consolidated financial statements and of their compliance with the International Accounting Standards. The auditors' report appears on the following page. The consolidated financial statements, the management report and the auditors' report were discussed in detail, in the presence of the auditors, by the Presidial Committee of the Supervisory Board and at a plenary meeting of the Supervisory Board. The Report of the Supervisory Board appears separately on pages 106 – 107 of this Annual Report.

The Board of Management

Independent Auditors' Report

We have audited the accompanying consolidated financial statements of the Bayer Group as of December 31, 1998, which comprise the statement of income, balance sheet, statement of cash flows and the notes for the year then ended. The financial statements are the responsibility of the Group's management. Our responsibility is to express an opinion to these financial statements, based on our audit, as to whether they comply with the International Accounting Standards (IAS).

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

In our opinion, the consolidated financial statements of the Bayer Group as of December 31, 1998 give a true and fair view of the net worth and financial position of the Group, the consolidated results of its operations and its cash flows for the year then ended in accordance with IAS.

Our audit, which also covered the management report of the Bayer Group for 1998, gave rise to no objections. In our opinion, the management report gives a fair understanding of the Group's position and is consistent with the consolidated financial statements. We also confirm that the consolidated financial statements of the Bayer Group as of December 31, 1998 and the management report of the Bayer Group for 1998 meet the requirements for the company to be exempted from the obligation to prepare consolidated financial statements and a management report for the Group in accordance with German law.

Essen, February 26, 1999

C&L Deutsche Revision
Aktiengesellschaft
Wirtschaftsprüfungsgesellschaft

C.-F. Leuschner
Wirtschaftsprüfer
(Certified Public Accountant)

J. Schilling
Wirtschaftsprüfer
(Certified Public Accountant)

Bayer Group Consolidated Statements of Income

(DM million)	Note	1998	1997*
Net sales	[1]	54,884	55,005
Cost of goods sold		(30,269)	(30,999)
Gross profit		24,615	24,006
Selling expenses		(12,404)	(11,989)
Research and development expenses	[2]	(3,920)	(3,878)
General administration expenses		(1,910)	(1,737)
Other operating income	[3]	1,585	1,351
Other operating expenses	[4]	(1,815)	(1,735)
Operating result	[5]	6,151	6,018
Income from investments in affiliated companies – net	[6]	41	39
Interest expense – net	[7]	(350)	(308)
Other non-operating expense – net	[8]	(506)	(641)
Non-operating result		(815)	(910)
Income before income taxes		5,336	5,108
Income taxes	[9]	(2,177)	(2,156)
Income after taxes		3,159	2,952
Minority stockholders' interest	[11]	(2)	(11)
Net income		3,157	2,941
Earnings per share	[12]	DM 4.32	DM 4.05

*1997 figures restated

Bayer Group Consolidated Balance Sheets

(DM million)	Note	Dec. 31, 1998	Dec. 31, 1997
Assets			
Noncurrent assets			
Intangible assets	[16]	3,733	2,056
Property, plant and equipment	[17]	21,177	20,158
Investments	[18]	2,156	1,706
		27,066	23,920
Current assets			
Inventories	[19]	11,306	10,608
Receivables and other assets			
Trade accounts receivable	[20]	10,899	10,686
Other receivables and other assets	[21]	3,249	2,816
		14,148	13,502
Liquid assets	[22]	3,366	4,802
		28,820	28,912
Deferred taxes	[23]	754	872
Deferred charges	[24]	576	466
		57,216	54,170
Stockholders' Equity and Liabilities			
Stockholders' equity			
Capital stock of Bayer AG		3,652	3,652
Capital reserves of Bayer AG		5,760	5,760
Retained earnings		13,923	12,276
Net income		3,157	2,941
Translation differences		(1,914)	(1,143)
Minority stockholders' interest		413	437
	[25]	24,991	23,923
Provisions			
Provisions for pensions and other post-employment benefits	[26]	9,225	9,144
Other provisions	[27]	4,996	5,085
		14,221	14,229
Other liabilities			
Financial obligations	[28]	9,012	7,620
Trade accounts payable	[29]	3,155	3,134
Miscellaneous liabilities	[30]	3,962	3,726
	[31]	16,129	14,480
Deferred taxes	[23]	1,534	1,208
Deferred income	[32]	341	330
		57,216	54,170

Bayer Group Consolidated Statements of Stockholders' Equity

(DM million)	Capital stock of Bayer AG	Capital reserves of Bayer AG	Retained earnings	Net income	Bayer stock- holders' interest	Minority stock- holders' interest	Translation differences	Total
Dec. 31, 1996	3,621	5,589	10,571	2,725	22,506	457	(1,907)	21,056
Changes in stockholders' equity resulting from capital contributions and dividend payments								
Capital contributions	31	171			202			202
Dividend payments				(1,231)	(1,231)	(9)		(1,240)
	31	171		(1,231)	(1,029)	(9)		(1,038)
Other changes in stockholders' equity not recognized in income								
Exchange differences							932	932
Other differences			211		211	(22)	(168)	21
			211		211	(22)	764	953
Changes in stockholders' equity recognized in income								
Allocation to retained earnings			1,494	(1,494)	0			0
Income after taxes for 1997				2,941	2,941	11		2,952
			1,494	1,447	2,941	11		2,952
Dec. 31, 1997	3,652	5,760	12,276	2,941	24,629	437	(1,143)	23,923
Changes in stockholders' equity resulting from capital contributions and dividend payments								
Capital contributions								
Dividend payments				(1,388)	(1,388)	(5)		(1,393)
				(1,388)	(1,388)	(5)		(1,393)
Other changes in stockholders' equity not recognized in income								
Exchange differences							(771)	(771)
Other differences			94		94	(21)		73
			94		94	(21)	(771)	(698)
Changes in stockholders' equity recognized in income								
Allocation to retained earnings			1,553	(1,553)	0			0
Income after taxes for 1998				3,157	3,157	2		3,159
			1,553	1,604	3,157	2		3,159
Dec. 31, 1998	3,652	5,760	13,923	3,157	26,492	413	(1,914)	24,991

Bayer Group Consolidated Statements of Cash Flows

(DM million)	Note	1998	1997*
Cash and cash equivalents at beginning of year		3,414	3,015
Operating result		6,151	6,018
Income taxes currently payable		(1,687)	(1,941)
Depreciation and amortization		3,001	3,050
Change in long-term provisions		(655)	(622)
Gains (losses) on retirements of noncurrent assets		(208)	(25)
Gross cash provided by operating activities		6,602	6,480
Increase in inventories		(735)	(43)
Increase in trade accounts receivable		(265)	(623)
Increase in trade accounts payable		99	419
Changes in other working capital		(185)	474
Net cash provided by operating activities	[36]	5,516	6,707
Cash outflows for additions to property, plant and equipment		(5,232)	(4,615)
Cash inflows from sales of property, plant and equipment		993	276
Cash outflows for additions to investments		(33)	(337)
Cash outflows for acquisitions		(2,825)	(748)
Interest and dividends received		484	445
Cash inflows from marketable securities		386	332
Net cash used in investing activities	[37]	(6,227)	(4,647)
Capital contributions		0	226
Bayer AG dividend and dividend payments to minority stockholders		(1,393)	(1,240)
Issuances of debt		3,319	2,398
Retirements of debt		(1,608)	(2,488)
Interest paid		(674)	(669)
Net cash used in financing activities	[38]	(356)	(1,773)
Change in cash and cash equivalents due to business activities		(1,067)	287
Change in cash and cash equivalents due to changes in companies consolidated		(36)	67
Change in cash and cash equivalents due to exchange rate movements		4	45
Cash and cash equivalents at end of year	[39]	2,315	3,414
Marketable securities and other instruments		1,051	1,388
Liquid assets as per balance sheets		3,366	4,802

* 1997 figures restated

Notes to the Consolidated Financial Statements of the Bayer Group

Accounting policies

The consolidated financial statements of the Bayer Group are prepared – pursuant to Article 292a of the German Commercial Code – in accordance with the rules of the International Accounting Standards Committee (IASC), London, in effect at the closing date. They comply with the European Union's guidelines on consolidation of financial statements (Directive 83/349/EEC).

The financial statements of the consolidated companies are prepared according to uniform recognition and valuation principles. Valuation adjustments made for tax reasons are not reflected in the Group statements. The individual companies' statements are prepared as of the closing date for the Group statements.

Certain income statement and balance sheet items are combined for the sake of clarity, as explained in the Notes.

In a few instances, estimates and assumptions have to be made. These affect the classification and valuation of assets, liabilities, income, expenses and contingent liabilities. The actual values may vary from the estimates made.

Companies consolidated

The financial statements of the Bayer Group include Bayer AG and 35 German and 198 foreign consolidated subsidiaries in which Bayer AG, directly or indirectly, has a majority of the voting rights or which are under its uniform control. The number of companies consolidated has increased by 33 from the previous year. Excluded from consolidation are 133 subsidiaries that in aggregate are of minor importance to the net worth, financial position and earnings of the Bayer Group; they account for less than 1 percent of Group sales.

Forty-two joint ventures are included by proportionate consolidation in compliance with IAS 31 (Financial Reporting of Interests in Joint Ventures). These companies account for DM 2,382 million of the income and DM 2,246 million of the expenses recognized in the income statement, and thus, on aggregate, for income of DM 136 million. They also account for DM 1,021 million of noncurrent assets, DM 1,168 million of current assets, DM 345 million of financial obligations and DM 640 million of the remaining liabilities. The number of companies included by proportionate consolidation has increased by six.

Twelve companies are included at equity. Thirty-nine associated companies that in aggregate are of minor importance are included at their accounting values.

Forty-seven companies are included in the statements for the first time. Eight companies are no longer consolidated. The changes in the companies consolidated do not affect comparability with the preceding year's statements.

In 1998 a total of DM 2.8 billion was spent on **acquisitions**.

The Chiron Diagnostics group of the United States was wholly acquired on November 30, 1998 for DM 1.9 billion. Chiron Diagnostics is a manufacturer of diagnostic systems, mainly for hematology and immunology. The companies in the group are consolidated as of the date of acquisition on the basis of the figures currently available. Goodwill of DM 1,161 million resulting from the acquisition is amortized over an estimated economic life of 15 years.

To expand its activities in crop protection, the Bayer Group purchased 50 percent of the seed treatment business of the U.S. company Gustafson on November 20, 1998 for

DM 303 million. This amount includes goodwill of DM 285 million, which is being amortized over a 15-year period. The interest in Gustafson is included in the 1998 statements by proportionate consolidation on the basis of provisional values.

The acquisition of the offset printing plates and graphic films business units of the U.S. company DuPont, agreed on in 1997, closed on March 1, 1998. The acquired business and the related assets and liabilities were integrated directly into the local Agfa companies worldwide. The total purchase price paid to DuPont was DM 210 million.

On November 10, 1998 Bayer AG concluded a cooperation agreement with Millennium Pharmaceuticals Inc. of the United States, giving Bayer access to key technologies in modern genome research. The collaboration also involves a 14.37 percent equity investment in Millennium, for which a purchase price of DM 160 million was paid.

In the United Kingdom, Bayer strengthened its crop protection business by acquiring the seed treatment business of Zeneca on May 13, 1998. The price paid for the business and the related assets and liabilities was DM 35 million, of which acquired goodwill accounts for DM 32 million. The goodwill is being amortized over a period of 10 years.

On July 15, 1998 our subsidiary Wolff Walsrode AG purchased the plastic films business of Elf Atochem to further expand its position as a supplier of high-quality polyurethane films. The purchase price was DM 30 million, of which the acquired assets account for DM 23 million and goodwill for DM 7 million; this is being amortized over four years.

On November 4, 1998 the Swiss company Agevogel, which formerly acted as an agent for Bayer AG in Switzerland, was acquired for DM 21 million. The company, which also owned the office building of Bayer (Schweiz) AG, was immediately merged with the latter.

In Israel, Bayer purchased interests in two companies specializing in the manufacture of polycarbonate sheeting for industry and agriculture: 25 percent of Polygal Plastics Industries Ltd. was acquired on September 14, 1998 for DM 21 million, and 20 percent of Palthough Industries (1998) Ltd. was acquired on July 6, 1998 for DM 20 million. These participating interests will be included at equity in the financial statements as of 1999.

Our U.K. subsidiary Bayer plc purchased all the shares of W. Hawley & Son Ltd. on May 29, 1998 for DM 18 million. Hawley is one of Britain's largest producers and distributors of inorganic specialty pigments for construction, coatings and plastics applications. The company will be consolidated as of 1999.

On March 31, 1998 our subsidiary Frucade Essenzen GmbH, part of the Haarmann & Reimer group, wholly acquired the KAJO group of Gröbenzell, Germany, thereby expanding its soft drinks licensing business. KAJO will be merged with Frucade in 1999.

The Agfa-Gevaert group wholly acquired the U.S. company Monotype Typography Inc. on July 1, 1998 for DM 18 million. Monotype is among the world's best-known suppliers of software for fonts.

The most significant **divestiture** during 1998 was the sale at mid-year of the citric acid business to the Tate & Lyle group of the U.K. for DM 400 million.

Also divested was the copying systems business unit of Agfa, which was bought by Lanier Worldwide of the U.S. for DM 295 million.

Foreign currency translation

In addition, 1998 saw restructuring in the inorganics field. Bayer's titanium dioxide business was placed into a joint venture – in which Bayer holds a 20 percent interest – with Kerr-McGee Chemical LLC of the United States. Our silicones activities were combined in a joint venture with those of GE Plastics of the U.S., with Bayer taking a 49.9 percent share in the new company. The zeolites business was sold to the German subsidiary of the U.S. company UOP LLC for DM 25 million.

Lists of Bayer AG's direct and indirect holdings of at least 20 percent have been included in the Leverkusen commercial register. They also are available directly from Bayer AG on request.

Most foreign currency receivables and payables of the consolidated companies are hedged, and are translated at the hedged rates in their financial statements. The remaining foreign currency receivables and payables are translated at closing rates.

The majority of foreign consolidated companies are to be regarded as foreign entities since they are financially, economically and organizationally autonomous. Their functional currencies according to IAS 21 (The Effects of Changes in Foreign Exchange Rates) are thus the respective local currencies. The assets and liabilities of these companies are therefore translated at closing rates, income and expense items at average rates for the year.

Where, in exceptional cases, the operations of a foreign company are integral to those of Bayer AG, the functional currency is the German mark. A temporal translation method is therefore used that is recognized in income. Property, plant and equipment, intangible assets, investments in affiliated companies and other securities included in investments are translated at the average exchange rates in the year of addition, along with the relevant amortization, depreciation and write-downs. All other balance sheet items are translated at closing rates. Income and expense items (except amortization, depreciation and write-downs) are translated at average rates for the year.

Companies operating in hyperinflationary economies prepare their statements in hard currency and thus, in effect, by the temporal method described above.

Exchange differences arising from the translation of foreign companies' balance sheets are shown in a separate stockholders' equity item. In case of divestiture, the respective exchange differences are reversed and recognized in income.

The exchange rates for major currencies varied as follows:

(DM)	Closing rate		Average rate	
	1998	1997	1998	1997
1 U.S. dollar	1.67	1.79	1.76	1.72
1 pound sterling	2.80	2.98	2.93	2.83
100 Belgian francs	4.85	4.85	4.85	4.85
100 French francs	29.81	29.88	29.83	29.71
100 Spanish pesetas	1.18	1.18	1.18	1.18
100 yen	1.45	1.38	1.35	1.42
1,000 Italian lire	1.01	1.02	1.01	1.02

**Consolidation
methods**

Capital consolidation is made by offsetting investments in subsidiaries and joint ventures against the underlying equities at the dates of acquisition. Differences between the purchase prices and the equities are allocated to assets or liabilities and depreciated or amortized over the lives of the assets or liabilities. Remaining differences are recognized as goodwill.

Consolidation entries for companies no longer to be consolidated are reversed. Where the assets of such companies include goodwill acquired prior to 1995 that was offset against retained earnings, the corresponding amounts are added back to retained earnings.

Where the statements of individual consolidated companies reflect write-downs or write-backs of investments in other consolidated companies, these are reversed for the Group statements.

Intragroup sales, profits, losses, income, expenses, receivables and payables are eliminated.

Deferred taxes are recognized for timing differences related to consolidation entries.

Joint ventures are included by proportionate consolidation according to the same principles.

Intercompany profits and losses on transactions with companies included at equity were immaterial in 1998.

**Cash flow
statement**

The cash flow statement shows how the liquidity of the Bayer group was affected by the inflow and outflow of cash and cash equivalents during the year. The effects of acquisitions, divestitures and other changes regarding the companies consolidated are eliminated. Cash flows are classified by operating, investing and financing activities in accordance with IAS 7 (Cash Flow Statements). An adjustment is shown to reconcile cash and cash equivalents at the end of the year to the liquid assets reflected in the balance sheet.

The amounts reported by foreign consolidated companies are translated at average exchange rates for the year, with the exception of cash and cash equivalents, which are translated at closing rates as in the balance sheet. The effect of changes in exchange rates on cash and cash equivalents is shown separately.



Notes to the Statements of Income

[1] Net sales

Sales declined by DM 0.1 billion compared with 1997, to DM 54.9 billion. Sales growth of DM 1.1 billion from higher volumes was offset by declines of DM 0.6 billion from price changes, DM 0.4 billion from exchange rate fluctuations and DM 0.2 billion from the net effect of acquisitions and divestitures. The effects on sales of the acquired or divested businesses and companies in the periods for which they are consolidated are as follows:

(DM million)

Acquisitions

Offset printing plates and graphic films (from DuPont)	611
Chiron Diagnostics (group)	89
Bayer Animal Health (Pty) Ltd., South Africa	48
ISL-Chemie GmbH, Kürten, Germany	30
Polyurethane films (from Elf Atochem)	13
Seed treatment business U.S./Canada (from Gustafson)	6
Other	47
	844

Divestitures

Copying systems (to Lanier)	(233)
Titanium dioxide (placing into joint venture with Kerr-McGee)	(225)
Citric acid (to Tate & Lyle)	(214)
Silicones (placing into joint venture with GE Plastics)	(213)
Enamels (to Advent International in 1997)	(117)
Other	(22)
	(1,024)
	(180)

Breakdowns of net sales by business segment and by region are given in the table on pages 82 – 83.

[2] Research and development expenses

According to IAS 9 (Research and Development Costs), research costs cannot be capitalized; development costs can only be capitalized if specific conditions are fulfilled. Development costs must be capitalized if it is sufficiently likely that the future economic benefits to the company will cover not only the usual production, selling and administrative costs but also the development costs themselves. There are also several other criteria relating to the development project and the product or process being developed, all of which have to be met to justify asset recognition. As in previous years, these conditions are not satisfied.

[3] Other operating income

Among the items of other operating income for 1998 are DM 177 million (1997: DM 391 million) from reversals of unutilized provisions, DM 297 million (1997: DM 40 million) from retirements of noncurrent assets, and DM 96 million (1997: DM 132 million) from sideline operations. The cost of goods sold incurred for sideline operations has been offset against the corresponding revenues to present a clearer picture of the earnings situation.

Also included here in 1997 was a DM 80 million exchange gain recorded on operating activities. In 1998 there was a net exchange loss, which is recognized in other operating expenses.

Income from divestments of business activities totaled DM 291 million (1997: DM 173 million). Major items were DM 54 million and DM 184 million from the placing of the titanium dioxide and silicones businesses, respectively, into joint ventures.

[4] Other operating expenses

Included in other operating expenses for 1998 are DM 145 million (1997: DM 109 million) of write-downs of receivables, DM 138 million (1997: DM 134 million) of amortization of acquired goodwill and DM 56 million (1997: DM 45 million) of losses from the sale of property, plant and equipment.

Also reflected here is an exchange loss of DM 75 million recorded on operating activities after the results of hedging transactions are offset against the underlying foreign currency receivables or payables. In 1997 there was a net exchange gain of DM 80 million, which was recognized in other operating income.

Restructuring expenses in 1998 were DM 473 million (1997: DM 388 million). These expenses relate mainly to the Chemicals and Polymers segments and comprise the charges incurred in connection with plant closures and discontinuations of business activities.

The other operating expenses for 1997 included DM 55 million to cover the settlement of a civil lawsuit following antitrust litigation in the United States concerning alleged anti-competitive practices of Haarmann & Reimer Corporation.

[5] Operating result

As of 1998, contrary to previous practice, the interest portion of allocations to provisions for pensions or other comparable interest-bearing provisions is no longer included in the cost of goods sold, selling expenses, research and development expenses or general administration expenses, and therefore is no longer recognized in the operating result. Instead, it is recognized in miscellaneous non-operating expenses (see Note 8). The change increases the operating result for 1998 by DM 605 million; the operating result for 1997 is restated to reflect the corresponding increase of DM 590 million.

Breakdowns of the operating result by business segment and by region are given in the table on pages 82-83.

Notes on segment reporting

In accordance with IAS 14 (Reporting Financial Information by Segment), a breakdown of certain data in the financial statements is given by business segment and geographical region; the business segments and regions are the same as those used for internal reporting. The aim is to provide users of the financial statements with information regarding the profitability and future prospects of the Group's various activities.

The business segments embrace the following activities:

- The **Health Care** segment comprises the Pharmaceuticals, Consumer Care and Diagnostics business groups, which develop, manufacture and market throughout the world both prescription and over-the-counter pharmaceuticals, diagnostic testing systems and household insecticides.
- The **Agriculture** segment consists of the Crop Protection and Animal Health business groups. These research, develop and market crop protection products for all climate zones as well as healthcare, nutrition and grooming products for livestock and companion animals.
- The business groups in the **Polymers** segment develop, manufacture and market a wide variety of polymeric materials for diverse applications. In addition to the Plastics, Rubber, Polyurethanes, and the Coatings, Colorants and Specialty Raw Materials business groups, this segment also includes the subsidiaries Bayer Faser and Wolff Walsrode.
- In the **Chemicals** segment, organic and inorganic chemical products and specialty chemicals for industrial use are developed, manufactured and marketed. The segment comprises the Basic and Fine Chemicals and the Specialty Products business groups, the subsidiaries Haarmann & Reimer and H.C. Starck, and the joint ventures DyStar and EC Erdölchemie.
- **Agfa**, in its Photographic Products, Graphic Systems and Technical Imaging Systems business groups, develops, manufactures and markets photographic and digital imaging systems for the graphic arts industry, photography, and medical and industrial radiography.

The table shows the business segments before consolidation. A **reconciliation** to the Group totals is given in a separate column. This reconciliation also reflects revenues and earnings from transactions not allocable to business segments.

The business segment and regional data are calculated as follows:

- The intersegment and interregional sales reflect intragroup transactions effected at transfer prices fixed on an arm's-length basis.
- Comparability of the operating results of different years may be restricted by exceptional items such as restructuring charges. For this reason an operating result before exceptional items is shown in addition.
- The return on sales before exceptional items is the ratio of the operating result before exceptional items to external sales.
- Gross operating cash flow is the excess of cash receipts over cash disbursements before any application of funds.
- Capital invested includes assets required to yield a return, less interest-free liabilities.
- The CFROI is the ratio of the gross cash flow to the capital invested.
- The equity items are those reflected in the balance sheet and income statement. They are allocated to the business segments where possible.
- The other liabilities shown here do not include the financial obligations reflected in the balance sheet.
- Capital expenditures, amortization and depreciation relate to intangible assets, property, plant and equipment.
- Research and development expenses correspond to those recognized in the income statement.

Key Data by Business Segment and Region

(DM million)	1998	1997	1998	1997	1998	1997
Business Segments	Health Care		Agriculture		Polymers	
Net sales (external)	13,745	13,327	5,733	5,568	17,216	17,090
– Change in DM	3.1%	15.4%	3.0%	14.8%	0.7%	
– Change in local currencies	4.8%	7.1%	5.2%	7.7%	0.7%	
Intersegment sales	33	34	103	122	429	480
Operating result before exceptional items	1,798	1,807	1,018	971	2,065	1,692
Return on sales before exceptional items	13.1%	13.6%	17.8%	17.4%	12.0%	9.9%
Exceptional items	63	130	(3)	8	(182)	22
Operating result	1,861	1,937	1,015	979	1,883	1,714
Gross cash flow	1,927	1,770	916	815	2,194	2,015
Capital invested	13,417	12,394	5,548	5,052	19,601	18,368
CFROI	14.4%	14.3%	16.5%	16.1%	11.2%	11.0%
Equity-method income		(3)	4	(4)	0	0
Equity-method investments	56	93	19	18	0	0
Other liabilities	1,786	1,610	654	623	2,032	2,040
Capital expenditures	959	851	281	354	2,584	1,882
Amortization and depreciation	642	646	222	200	947	930
Research and development expenses	1,886	1,939	684	639	591	561
Number of employees (as of Dec. 31)	44,000	40,600	14,900	14,500	36,500	36,200
Regions	Europe		North America		Latin America	
Net sales (external) – by market	26,599	25,961	15,286	14,943	4,368	4,425
Net sales (external) – by point of origin	30,093	29,935	15,380	15,067	3,720	3,746
– Change in DM	0.5%	7.6%	2.1%	23.6%	- 0.7%	30.8%
– Change in local currencies	0.4%	6.1%	0.3%	8.1%	- 2.7%	14.1%
Interregional sales	6,159	6,181	1,992	1,818	59	69
Operating result before exceptional items	4,287	3,939	1,324	1,441	365	308
Return on sales before exceptional items	14.2%	13.2%	8.6%	9.6%	9.8%	8.2%
Exceptional items	117	182	(239)	(47)	54	(152)
Operating result	4,404	4,121	1,085	1,394	419	156
Gross cash flow	4,023	3,860	1,884	1,982	398	280
Capital invested	35,890	35,869	18,755	16,789	2,541	2,568
CFROI	11.2%	10.8%	10.0%	11.8%	15.7%	10.9%
Equity-method income	13	15	0	0	0	(1)
Equity-method investments	381	25	59	63	31	71
Other liabilities	4,215	4,021	2,223	2,205	324	328
Capital expenditures	2,681	2,596	1,967	1,488	223	219
Amortization and depreciation	1,727	1,817	989	852	130	220
Research and development expenses	2,799	2,813	923	854	33	31
Number of employees (as of Dec. 31)	90,800	92,200	28,100	25,800	10,600	11,600

1998	1997	1998	1997	1998	1997	1998	1997
Chemicals		Agfa		Reconciliation		Bayer Group	
8,511	9,868	8,505	8,084	1,174	1,068	54,884	55,005
- 13.8%		5.2%	8.4%			- 0.2%	13.2%
- 13.5%		5.9%	2.1%			0.5%	7.1%
1,039	1,180	0	37	(1,604)	(1,853)		
768	853	499	573	100	151	6,248	6,047
9.0%	8.6%	5.9%	7.1%			11.4%	11.0%
25	(176)	0	(13)			(97)	(29)
793	677	499	560	100	151	6,151	6,018
770	983	643	725	152	172	6,602	6,480
13,538	14,219	7,857	8,133	1,336	1,061	61,297	59,227
5.7%	6.9%	8.2%	8.9%			10.8%	10.9%
11	(1)	0	0	2	15	17	7
365	38	5	0	46	83	491	232
1,209	1,258	1,038	965	739	694	7,458	7,190
1,005	1,141	403	387			5,232	4,615
662	755	417	473	111	46	3,001	3,050
343	333	416	406			3,920	3,878
25,600	29,300	24,100	24,000			145,100	144,600

Asia/Africa/Australia		Bayer Group	
8,631	9,676	54,884	55,005
5,691	6,257	54,884	55,005
- 9.0%	9.1%	- 0.2%	13.2%
3.5%	4.6%	0.5%	7.1%
151	238		
272	359	6,248	6,047
4.8%	5.7%	11.4%	11.0%
(29)	(12)	(97)	(29)
243	347	6,151	6,018
297	358	6,602	6,480
4,111	4,001	61,297	59,227
7.2%	8.9%	10.8%	10.9%
4	(7)	17	7
20	73	491	232
696	636	7,458	7,190
361	312	5,232	4,615
155	161	3,001	3,050
165	180	3,920	3,878
15,600	15,000	145,100	144,600

[6] Income from investments in affiliated companies - net

This comprises the following items:

<i>(DM million)</i>	<i>1998</i>	<i>1997</i>
Dividends and similar income <i>of which DM 14 million (1997: DM 6 million) from subsidiaries</i>	27	21
Income from profit and loss transfer agreements <i>of which DM 4 million (1997: DM 23 million) from subsidiaries</i>	4	23
Expenses from loss transfer <i>of which DM 3 million (1997: DM 1 million) from subsidiaries</i>	(3)	(1)
Income from companies included at equity	17	7
Gains from the sale of investments in affiliated companies	20	1
Losses from the sale of investments in affiliated companies	(19)	(1)
Write-downs of investments in affiliated companies	(5)	(12)
Write-backs of investments in affiliated companies	0	1
	41	39

[7] Interest expense - net

Interest income and expense comprises:

<i>(DM million)</i>	<i>1998</i>	<i>1997</i>
Income from other securities and loans included in investments	45	47
Other interest and similar income <i>of which DM 8 million (1997: DM 8 million) from subsidiaries</i>	330	326
Interest and similar expenses <i>of which DM 11 million (1997: DM 5 million) to subsidiaries</i>	(725)	(681)
	(350)	(308)

Interest expense incurred to finance the construction phase of major investment projects is not included here. Such interest expense, amounting to DM 104 million for 1998, is capitalized as part of the cost of acquisition or construction of the property, plant or equipment concerned.

[8] Other non-operating expense - net

This item comprises:

<i>(DM million)</i>	<i>1998</i>	<i>1997</i>
Write-downs of investments and marketable securities	(5)	(1)
Interest portion of interest-bearing provisions	(605)	(590)
Miscellaneous non-operating expenses	(54)	(90)
Miscellaneous non-operating income	158	40
	(506)	(641)

Other non-operating expenses include, for the first time, the interest portion of allocations to interest-bearing provisions. This was previously included in the cost of goods sold, selling expenses, research and development expenses or general administration expenses and thus recognized in the operating result. The 1997 figures have been restated for comparison. Interest-bearing provisions are primarily those for personnel-related commitments such as pensions and other post-employment benefits.

Miscellaneous non-operating income for 1998 includes DM 24 million (1997: DM 15 million) of gains from the sale of marketable securities.

[9] Income taxes

This item comprises the income taxes paid or accrued in the individual countries, plus deferred taxes:

<i>(DM million)</i>	<i>1998</i>	<i>1997</i>
Income taxes		
Germany	1,313	1,205
Other countries	864	951
	2,177	2,156

The income taxes of DM 2,177 million include DM 489 million (1997: DM 214 million) of deferred taxes.

Deferred taxes are calculated at the rates which – on the basis of the statutory regulations in force, or already enacted in relation to future periods, as of the closing date – are expected to apply in the individual countries at the time of realization.

Changes in the tax rates in certain countries diminished deferred tax expense for 1998 by DM 1 million; in 1997, such changes increased it by DM 1 million.

Utilization of tax loss carryforwards from previous years diminished income tax expense in 1998 by DM 18 million (1997: DM 6 million) and increased deferred tax expense by DM 10 million (1997: DM 6 million). The potential tax savings relating to tax loss carryforwards are only recognized as deferred tax income if it is sufficiently likely that this income will be realized. Tax loss carryforwards of DM 43 million (1997: DM 58 million) remained unutilized.

The actual income tax expense of DM 2,177 million for 1998 is DM 42 million higher than the DM 2,135 million that would result from applying to the pre-tax income of the Group a tax rate of 40.0 percent (1997: 45.8 percent), which is the weighted average of the theoretical tax rates for the individual Group companies. The reconciliation of theoretical to actual income tax expense for the Group is as follows:

	1998		1997	
	DM million	%	DM million	%
Theoretical income tax expense	2,135	100	2,342	100
Lower taxes due to tax-free income	(136)	(6)	(263)	(11)
Higher taxes due to non-tax-deductible expenses	304	14	77	3
Other tax effects	(126)	(6)	–	–
Actual income tax expense	2,177	102	2,156	92
Effective tax rate in %	40.8		42.2	

Income tax expense for 1998 includes income of DM 4 million (1997: expense of DM 22 million) relating to prior periods.

[10] Other taxes

Other taxes amounting to DM 350 million (1997: DM 367 million) are included in the cost of goods sold, selling expenses, research and development expenses or general administration expenses. These are mainly property-related taxes.

[11] Minority stockholders' interest

Minority interest in income amounts to DM 13 million (1997: DM 20 million), and minority interest in losses to DM 11 million (1997: DM 9 million), yielding a net minority interest of DM 2 million (1997: DM 11 million) in Group income after taxes.

[12] Earnings per share

Earnings per share are determined according to IAS 33 by dividing the net income by the average number of shares.

In 1998, the number of shares remained constant at 730,341,920; earnings per share were DM 4.32. There were no subscription rights outstanding, and therefore no dilutive potential shares.

In 1997, the new shares issued during the year were included as of their dates of issuance, giving a weighted average of 726,812,601 shares in issue and basic earnings per share of DM 4.05; it was also necessary to determine diluted earnings per share, taking subscription rights into account for the portion of the year during which they were outstanding. Given the average share price of DM 67.83 over the year and the subscription price of DM 33.00, there was a weighted average during 1997 of 1,812,289 dilutive potential shares. Calculation of diluted earnings per share was therefore based on 728,624,890 shares. Due to the small number of subscription rights outstanding, diluted earnings per share for 1997, at DM 4.04, differed only very slightly from basic earnings per share.

[13] Cost of materials

The total cost of materials of DM 18,653 million (1997: DM 18,808 million) comprises DM 17,474 million (1997: DM 17,599 million) of expenses for raw materials, supplies and goods purchased for resale, and DM 1,179 million (1997: DM 1,209 million) of expenses for purchased services.

[14] Personnel expenses

Personnel expenses in 1998 rose by DM 412 million to DM 15,854 million. Exchange rate fluctuations, on aggregate, had no effect on the total. The breakdown of personnel expenses is as follows:

(DM million)	1998	1997
Wages and salaries	12,444	12,116
Social expenses	3,410	3,326
<i>of which pension expenses</i>	[1,213]	[1,059]
	15,854	15,442

As of 1998, wages and salaries and pension expenses no longer include the interest portion of allocations to provisions for pensions and other post-employment benefits or other personnel-related commitments. The 1997 figures are restated for comparison.

[15] Number of employees

The average number of employees, classified by corporate functions, was as follows:

	1998	1997
Marketing	41,820	41,378
Technology	76,471	78,506
Research	12,858	12,879
Administration	11,732	11,965
	142,881	144,728
<i>of which trainees</i>	2,926	2,967

The employees of joint ventures are included in the above figures in proportion to Bayer's interests in the respective companies. The total number of people employed by our joint ventures was 6,176 (1997: 5,572).

Notes to the Balance Sheets

[16] Intangible assets

Intangible assets that have been acquired are recognized at cost and amortized over their estimated useful lives. Purchased software is amortized over a maximum period of four years. Write-downs are made for any declines in value that are expected to be permanent. Assets are written back if the reasons for previous years' write-downs no longer apply.

Goodwill, including that resulting from capital consolidation, is capitalized in accordance with IAS 22 (Business Combinations) and normally amortized over a period of five, or at most 20, years. The value of goodwill is regularly reassessed in line with IAS 36 (Impairment of Assets) and written down if necessary.

Self-created intangible assets are not capitalized.

Changes in intangible assets in 1998 are as follows:

<i>(DM million)</i>	<i>Acquired concessions, industrial property rights, similar rights and assets, and licenses thereunder</i>	<i>Acquired goodwill</i>	<i>Advance payments</i>	<i>Total</i>
Gross carrying amounts, Dec. 31, 1997	1,751	1,189	20	2,960
Exchange differences	(66)	(40)	(8)	(114)
Changes in companies consolidated	54	86	11	151
Acquisitions	18	1,467	–	1,485
Capital expenditures	437	–	137	574
Retirements	(82)	(25)	–	(107)
Transfers	42	–	(41)	1
Gross carrying amounts, Dec. 31, 1998	2,154	2,677	119	4,950
Accumulated amortization and write-downs, Dec. 31, 1997	715	189	–	904
Exchange differences	(25)	(6)	–	(31)
Changes in companies consolidated	10	7	–	17
Amortization and write-downs in 1998	284	136	–	420
– of which write-downs	[–]	[5]	[–]	[5]
Write-backs	–	–	–	–
Retirements	(73)	(20)	–	(93)
Transfers	–	–	–	–
Accumulated amortization and write-downs, Dec. 31, 1998	911	306	–	1,217
Net carrying amounts, Dec. 31, 1998	1,243	2,371	119	3,733
Net carrying amounts, Dec. 31, 1997	1,036	1,000	20	2,056

The exchange differences are those parts of the differences between the amounts at the beginning and the end of the year that result from translating foreign companies' figures at the respective different exchange rates.

**[17] Property,
plant and
equipment**

Property, plant and equipment is carried at the cost of acquisition or construction. Assets subject to depletion are depreciated over their estimated useful lives. Write-downs are made for any declines in value that are expected to be permanent, aside from those reflected in depreciation. Assets are written back if the reasons for previous years' write-downs no longer apply.

The cost of construction of self-constructed property, plant and equipment comprises the direct cost of materials, direct manufacturing expenses, appropriate allocations of material and manufacturing overheads, and an appropriate share of the depreciation and write-downs of assets used in construction. It includes the shares of expenses for company pension plans and discretionary employee benefits that are attributable to construction.

If the construction phase of property, plant or equipment extends over a long period, the interest incurred on borrowed capital up to the date of completion is capitalized as part of the cost of acquisition or construction.

Expenses for the repair of property, plant and equipment are normally charged against income. They are, however, capitalized in exceptional cases if they result in an enlargement or substantial improvement of the respective assets.

Property, plant and equipment is depreciated by the straight-line method, except where the declining-balance method is more appropriate in light of the actual utilization period.

The following depreciation periods, based on the estimated useful lives of the respective assets, are applied throughout the Group:

Buildings	20	to	50 years
Outdoor infrastructure	10	to	20 years
Plant installations	6	to	20 years
Machinery and apparatus	6	to	12 years
Laboratory and research facilities	3	to	5 years
Storage tanks and pipelines	10	to	20 years
Vehicles	4	to	8 years
Computer equipment	3	to	5 years
Furniture and fixtures	4	to	10 years

In accordance with IAS 17 (Leases), assets leased on terms equivalent to financing a purchase by a long-term loan (finance leases) are capitalized at the cost which would have been incurred if the assets had been purchased. They are depreciated over their estimated useful lives or the respective lease terms, whichever are shorter. The future lease payments are recorded as liabilities.

Changes in property, plant and equipment in 1998 are as follows:

<i>(DM million)</i>	<i>Land and buildings</i>	<i>Machinery and technical equipment</i>	<i>Furniture, fixtures and other equipment</i>	<i>Construction in progress and advance payments to vendors and contractors</i>	<i>Total</i>
Gross carrying amounts, Dec. 31, 1997	14,676	35,721	5,054	2,325	57,776
Exchange differences	(234)	(705)	(85)	(129)	(1,153)
Changes in companies consolidated	10	(28)	98	69	149
Acquisitions	153	149	46	–	348
Capital expenditures	180	955	489	2,967	4,591
Retirements	(442)	(2,331)	(982)	(83)	(3,838)
Transfers	363	1,581	144	(2,203)	(115)
Gross carrying amounts, Dec. 31, 1998	14,706	35,342	4,764	2,946	57,758
Accumulated depreciation and write-downs, Dec. 31, 1997	8,269	25,778	3,569	2	37,618
Exchange differences	(75)	(369)	(48)	–	(492)
Changes in companies consolidated	(6)	(65)	(1)	(2)	(74)
Depreciation and write-downs in 1998	401	1,783	557	–	2,741
– of which write-downs	[–]	[174]	[8]	[–]	[182]
Write-backs	(84)	(64)	(1)	–	(149)
Retirements	(298)	(1,995)	(770)	–	(3,063)
Transfers	(4)	3	1	–	–
Accumulated depreciation and write-downs, Dec. 31, 1998	8,203	25,071	3,307	–	36,581
Net carrying amounts, Dec. 31, 1998	6,503	10,271	1,457	2,946	21,177
Net carrying amounts, Dec. 31, 1997	6,407	9,943	1,485	2,323	20,158

The exchange differences are those parts of the differences between the amounts at the beginning and the end of the year that result from translating foreign companies' figures at the respective different exchange rates.

Capitalized property, plant and equipment includes assets with a total net value of DM 32 million held under finance leases. The gross carrying amounts of these assets total DM 60 million.

Also included are products leased to other parties. Where the relevant agreement is a finance lease as defined in IAS 17 (Accounting for Leases) and the lessee is to be regarded as the economic owner, a receivable is recognized in the balance sheet in the amount of the discounted future lease payments.

[18] Investments

Investments in non-consolidated subsidiaries, other affiliated companies and other securities are carried individually at cost. Write-downs are made for any declines in value that are expected to be permanent. Investments are written back if the reasons for previous years' write-downs no longer apply.

The cost of acquisition of investments in companies included at equity is adjusted annually to reflect changes in Bayer's share of their stockholders' equity.

In the first-time consolidation, differences between the cost of acquisition and the underlying equities at the dates of acquisition of the investments are allocated to assets or liabilities by the same method applied to fully consolidated subsidiaries.

Loans receivable that are interest-free or bear low rates of interest are carried at present value; other loans receivable are carried at nominal value.

Changes in investments in 1998 are as follows:

<i>(DM million)</i>	<i>Investments in subsidiaries</i>	<i>Loans to sub- sidiaries</i>	<i>Investments in other affiliated companies</i>		<i>Loans to other affiliated companies</i>	<i>Other securities</i>	<i>Other loans</i>	<i>Total</i>
			<i>Associated companies</i>	<i>Other companies</i>				
Gross carrying amounts, Dec. 31, 1997	520	8	349	81	87	204	680	1,929
Exchange differences	(18)	–	(13)	(4)	–	(8)	(6)	(49)
Changes in companies consolidated	(88)	–	(6)	(2)	(38)	1	2	(131)
Acquisitions	49	–	45	162	–	7	–	263
Other additions	72	–	337	1	–	37	71	518
Retirements	(24)	(1)	(109)	(7)	–	(20)	(106)	(267)
Transfers	15	–	114	–	–	–	(15)	114
Gross carrying amounts, Dec. 31, 1998	526	7	717	231	49	221	626	2,377
Accumulated write-downs, Dec. 31, 1997	37	1	143	1	–	2	39	223
Exchange differences	(1)	–	(1)	–	–	–	–	(2)
Changes in companies consolidated	(5)	–	–	–	–	–	–	(5)
Write-downs in 1998	3	–	2	–	–	4	1	10
Write-backs	–	–	–	–	–	–	(4)	(4)
Retirements	–	–	–	–	–	–	(1)	(1)
Transfers	–	–	–	–	–	–	–	–
Accumulated write-downs, Dec. 31, 1998	34	1	144	1	–	6	35	221
Net carrying amounts, Dec. 31, 1998	492	6	573	230	49	215	591	2,156
Net carrying amounts, Dec. 31, 1997	483	7	206	80	87	202	641	1,706

The market value of other securities included in investments exceeds their carrying amount by DM 10 million.

[19] Inventories

Raw materials, supplies, and goods purchased for resale are valued at the cost of acquisition; work in process and finished goods are valued at the cost of production. If the inventory values are lower at the closing date because of a drop in market prices, for example, the lower amounts are shown. Of the DM 11,306 million of inventories carried as of December 31, 1998, DM 1,443 million represents those included at their net realizable value.

Inventories are normally valued by the weighted-average method.

The cost of production comprises the direct cost of materials, direct manufacturing expenses, appropriate allocations of material and manufacturing overheads, and an appropriate share of the depreciation and write-downs of assets used for production. It includes the shares of expenses for company pension plans and discretionary employee benefits that are attributable to production. Administrative costs are included where they are attributable to production.

Work in process and finished goods are grouped together in light of the production sequences characteristic of the chemical industry.

Inventories are comprised as follows:

<i>(DM million)</i>	<i>Dec. 31, 1998</i>	<i>Dec. 31, 1997</i>
Raw materials and supplies	1,979	1,932
Work in process, finished goods and goods purchased for resale	9,305	8,649
Advance payments	22	27
	11,306	10,608

[20] Trade accounts receivable

Trade accounts receivable are stated at nominal value, less write-downs of DM 470 million (1997: DM 528 million) for amounts unlikely to be recovered.

Trade accounts receivable as of December 31, 1998 include DM 10,791 million (1997: DM 10,571 million) maturing within one year and DM 108 million (1997: DM 115 million) maturing after one year. Of the total, DM 74 million (1997: DM 47 million) is receivable from subsidiaries, DM 158 million (1997: DM 92 million) from other affiliated companies and DM 10,667 million (1997: DM 10,547 million) from other customers.

[21] Other receivables and other assets

Other receivables and other assets are stated at nominal value, less any necessary write-downs for amounts unlikely to be recovered. As of December 31, 1998 they include, among other items, claims for tax refunds (DM 397 million), short-term loans receivable (DM 128 million) and accrued interest on loans receivable (DM 96 million).

Lease agreements in which the other party, as lessee, is to be regarded as the economic owner of the leased assets (finance leases) give rise to accounts receivable in the amount of the discounted future lease payments. These receivables amount DM 524 million, including an interest portion of DM 127 million. The lease payments are due as follows:

<i>(DM million)</i>	<i>Lease payments</i>	<i>Of which interest</i>	<i>Account receivable</i>
1999	186	44	142
2000 to 2003	386	61	325
after 2003	79	22	57
	651	127	524

The total of other receivables and other assets includes DM 166 million (1997: DM 172 million) pertaining to subsidiaries.

DM 477 million (1997: DM 402 million) of other receivables and other assets matures in more than one year; of this amount, DM 65 million (1997: DM 66 million) pertains to subsidiaries.

Other assets include DM 66 million (1997: DM 99 million) that represents income earned in the fiscal year but not due to be received until after the closing date. This income consists mainly of accrued interest.

[22] Liquid assets

(DM million)	Dec. 31, 1998	Dec. 31, 1997
Marketable securities and other instruments	1,051	1,388
Cash and cash equivalents	2,315	3,414
	3,366	4,802

Marketable securities are shown at the lower of cost of acquisition or market value as of the closing date. The market values of marketable securities and other instruments as of December 31, 1998 amount to DM 1,186 million (1997: DM 1,494 million).

[23] Deferred taxes

Deferred taxes result primarily from timing differences between the carrying amounts of assets or liabilities in the accounting and tax balance sheets of the individual consolidated companies, as well as from consolidation measures. The deferred taxes are computed according to IAS 12 (Income Taxes). Deferred taxes are comprised as follows:

(DM million)	Dec. 31, 1998	Dec. 31, 1997
Deferred tax assets	754	872
– of which from consolidation measures	[488]	[585]
Deferred tax liabilities	(1,534)	(1,208)

[24] Deferred charges

Deferred charges as of December 31, 1998 include unamortized debt discounts of DM 45 million (1997: DM 58 million). The debt discounts are amortized annually over the lives of the underlying liabilities.

Total deferred charges include DM 426 million that is expected to be used up in 1999.

[25] Stockholders' equity

The capital stock of Bayer AG amounts to DM 3,652 million as in the previous year. It is divided into 730,341,920 no-par bearer shares of a single class.

Authorized capital totaling DM 500 million was approved by the Annual Stockholders' Meeting on April 30, 1997. It expires on April 30, 2002. The authorized capital can be used to increase the capital stock through the issuance of new shares against cash contributions.

Capital reserves include the paid-in surplus from the issuance of shares and subscription rights by Bayer AG. They remain unchanged from the previous year, at DM 5,760 million.

The retained earnings contain prior years' undistributed income of companies included in the consolidation.

Minority interest comprises third parties' shares in the equity of consolidated affiliates. Substantial minority interests exist in the equity of the Japanese subsidiaries Bayer Yakuhin, Ltd., Bayer-Sankyo Co., Ltd. and Nihon Bayer Agrochem K.K., the Indian subsidiaries Bayer (India) Ltd. and Bayer ABS Ltd., and the Brazilian subsidiary Bayer Polímeros S.A.

The various components of stockholders' equity and the changes therein during 1998 and 1997 are shown in the Consolidated Statements of Stockholders' Equity on page 72.

[26] Provisions for pensions and other post-employment benefits

Group companies provide retirement benefits for most of their employees, either directly or by contributing to independently administered funds. The way these benefits are provided varies according to the legal, fiscal and economic conditions of each country, the benefits generally being based on the employees' remuneration and years of service. The obligations relate both to existing retirees' pensions and to pension entitlements of future retirees.

Group companies provide retirement benefits under defined contribution and/or defined benefit plans. The resulting expenses – except the interest portion of the provisions and the return on plan assets – are included in the cost of goods sold, selling expenses, research and development expenses or general administration expenses.

In the case of defined contribution plans, the company pays contributions to publicly or privately administered pension insurance plans on a mandatory, contractual or voluntary basis. Once the contributions have been paid, the company has no further payment obligations. The regular contributions constitute expenses for the year in which they are due. In 1998, these expenses totaled DM 740 million (1997: DM 891 million).

All other retirement benefit systems are defined benefit plans, which may be financed either by provisions (accruals) or through pension funds. In 1998, expenses for defined benefit plans amounted to DM 855 million (1997: DM 758 million), comprised as follows:

	(DM million)
Expenses for pension entitlements earned during the year	495
Expenses for pension entitlements earned in prior years	20
Interest portion of pension entitlements earned in prior years	1,177
Return on plan assets	(933)
Amortization of actuarial losses	96
Pension expenses	855

The Bayer Pension Fund is treated for the first time as a defined benefit plan according to IAS 19 (Employee Benefits – revised 1998).

The pension provisions for defined benefit plans are calculated in accordance with IAS 19 by the projected unit credit method. The future benefit obligations are valued by actuarial methods on the basis of a prudent assessment of the relevant parameters. Benefits expected to be payable after retirement are spread over each employee's entire period of employment, allowing for future changes in remuneration. No exceptional expenses or income arose in 1998 from plan terminations, curtailments or settlements.

All defined benefit plans necessitate actuarial computations and valuations. These are based not only on life expectancy but also on the following parameters, which vary from country to country according to economic conditions:

	Parameters for Germany	Parameters for other countries
Discount rate	6.5 %	3.0 to 8.8 %
Projected future remuneration increases	2.5 %	1.0 to 7.0 %
Projected future pension increases	2.0 %	1.0 to 7.0 %
Projected employee turnover (according to age and gender)	2.0 %	empirical data
Projected return on plan assets (where applicable)	7.0 %	2.1 to 16.4 %

In Germany, the status of commitments financed through provisions, computed by the appropriate methods, is as follows:

(DM million)	Dec. 31, 1998	Dec. 31, 1997
Accumulated benefit obligation	7,685	7,242
Effect of projected future remuneration increases	336	469
Present value of defined benefit obligation	8,021	7,711
Fair value of provident fund assets	(92)	(89)
Present value of defined benefit obligation after deducting fair value of provident fund assets	7,929	7,622
Experience adjustment	(635)	(563)
Defined benefit liability as per IAS 19	7,294	7,059

The as yet unrecognized DM 635 million experience adjustment representing the difference between the actuarial present value of the accumulated benefit obligation and the provisions arises mainly from actuarial losses caused by differences between actual and previously assumed trends in employee turnover and remuneration. In accordance with IAS 19, this amount will be recognized as an expense over the expected remaining working lives of existing employees (currently 15 years in Germany) and reflected in the balance sheet.

Commitments under defined benefit plans that are not covered by provisions are financed through independently administered funds. The capital of these funds is invested in real estate, stocks and fixed-income securities. Their overall status in 1998 was as follows:

	Plans with assets in excess of accumulated benefits	Plans with accumulated benefits in excess of assets
Actuarial present value of accumulated benefit obligation	10,983	637
Market value of plan assets	13,802	369
Excess	2,819	(268)

[27] Other provisions

Funds and benefit obligations are valued on a regular basis at least every three years. For all major funds, comprehensive actuarial valuations are performed annually.

Provisions are also set up under this item for the obligations of certain group companies, especially in the United States, to provide health care and certain other benefits ("other post-retirement benefits") to their retirees, since these obligations are similar in character to pension obligations. Like pension obligations, they are valued in line with international standards. In 1998 such obligations amounted to DM 483 million (1997: DM 501 million). The resulting expenses for 1998 amounted to DM 44 million, comprising DM 31 million of expenses for entitlements earned during 1998, DM 2 million of expenses for entitlements earned in prior years, DM 55 million of interest cost, DM 35 million of return on plan assets and DM 9 million of actuarial gains.

Other post-employment benefits covered by provisions also include severance payments and early retirement benefits. These benefit obligations are determined using actuarial methods on the basis of local discount rates.

Other provisions are established to cover future payment obligations, foreseeable risks and uncertain liabilities of the Group, based on reasonable estimates of such commitments as of the closing date. Interest-bearing provisions are discounted to present value.

Provisions for taxes amounted to DM 845 million (1997: DM 1,067 million). Of the remaining provisions, DM 1,945 million (1997: DM 1,810 million) was for personnel commitments, DM 593 million (1997: DM 718 million) for environmental protection, and DM 637 million (1997: DM 563 million) for trade-related commitments.

Personnel commitments mainly include annual bonus payments, long service awards and vacation entitlements.

Provisions for environmental protection relate to future relandscaping, landfill modernization and the remediation of land contaminated by past industrial operations. Sufficient provisions have been established for such commitments.

[28] Financial obligations

Financial obligations are carried at nominal or redemption value, whichever is higher. They comprise the following:

(DM million)	Dec. 31, 1998		Dec. 31, 1997	
	Total	Maturing in 1999	Total	Maturing in 1998
Debentures	3,722	578	3,188	24
Liabilities to banks	3,149	2,033	2,474	1,615
Liabilities under lease agreements	21	15	27	14
Liabilities from the issuance of promissory notes	5	5	68	68
Commercial paper	1,794	1,794	1,559	1,559
Other financial obligations	321	110	304	134
	9,012	4,535	7,620	3,414

The financial obligations are predominantly in U.S. dollars, which account for DM 5.8 billion (1997: DM 4.9 billion). U.S. dollar borrowings represent 64 percent of total financial obligations in both years.

The other financial obligations include DM 52 million (1997: DM 66 million) to non-consolidated subsidiaries.

Debentures include the following:

	Volume	DM million
Bayer Capital Corporation B.V.		
2½ percent Bonds with Warrants Attached 1987/2002	Sfr 250 million	306
Bayer Corporation		
7¾ % Notes 1994/1999	US\$ 300 million	502
6½ % Notes 1995/2002	US\$ 400 million	669
7⅞ % Notes 1995/2015	US\$ 200 million	335
6¾ % Notes 1996/2001	US\$ 250 million	418
2¼ % Bonds 1997/2002	Sfr 200 million	244
3½ % Revenue Bonds 1997/2009	US\$ 33.1 million	55
4 % Revenue Bonds 1997/2027	US\$ 25 million	42
6.65 % Notes 1998/2028	US\$ 350 million	586
6.20 % Bonds 1998/2028	US\$ 250 million	418
Other debentures		147
		3,722

In February 1998, Bayer Corporation offered US\$ 350 million of 6.65 % Notes and US\$ 250 million of 6.2 % Bonds to qualified institutional buyers. The Notes have a term of 30 years. The Bonds have a combined call and put option giving the lead manager the right to repurchase them, and the investors the right to cash them, after 10 years. At this time the lead manager can reset the interest rate and remarket the Bonds for a further period of 20 years so they would mature in 2028. If the lead manager does not exercise its call option and the investors exercise their put option, the Bonds must be redeemed in 2008.

The other debentures are due between 1999 and 2011; their average interest rate is 11.2 percent.

[29] Trade accounts payable

Trade accounts are payable mainly to third parties; they are carried at nominal or redemption value, whichever is higher. As in the previous year, the entire trade accounts payable are due within twelve months.

[30] Miscellaneous liabilities

Miscellaneous liabilities are carried at nominal or redemption value, whichever is higher. The individual items are as follows:

(DM million)	Dec. 31, 1998		Dec. 31, 1997	
	Total	Maturing in 1999	Total	Maturing in 1998
Payroll liabilities	758	587	711	543
Tax liabilities	456	447	421	414
Liabilities for social expenses	339	336	324	320
Accrued interest on liabilities	143	106	91	82
Advance payments received	120	100	61	57
Liabilities from the acceptance of drafts	25	25	32	32
License liabilities	49	49	49	49
Other miscellaneous liabilities	2,072	2,054	2,037	2,032
	3,962	3,704	3,726	3,529

Tax liabilities include not only Group companies' own tax liabilities, but also taxes withheld by them for paying over to the authorities on behalf of third parties.

Liabilities for social expenses include, in particular, social insurance contributions that had not been paid over by the closing date.

The other miscellaneous liabilities comprise numerous individual items such as guarantees, commissions to customers, and expense reimbursements.

The total of miscellaneous liabilities includes DM 157 million (1997: DM 111 million) to non-consolidated subsidiaries and DM 24 million (1997: DM 52 million) to other affiliated companies.

[31] Further information on other liabilities

Total other liabilities include DM 2,049 million (1997: DM 1,769 million) maturing in more than five years.

DM 153 million (1997: DM 174 million) of other liabilities are secured, mainly by mortgages.

Total other liabilities include DM 204 million (1997: DM 216 million) that represents expenses attributable to the fiscal year but not due to be paid until after the closing date. These expenses consist partly of accrued interest.

[32] Deferred income

In accordance with IAS 20 (Accounting for Government Grants and Disclosure of Government Assistance), grants and subsidies that serve to promote investment are treated as deferred income. The amounts – which are mainly from government sources – are gradually reversed during the useful lives of the respective assets and recognized in income. Deferred income as of December 31, 1998 includes DM 224 million (1997: DM 212 million) of investment grants; the amount reversed and recognized in income in 1998 was DM 14 million.

[33] Contingent liabilities

Contingent liabilities as of December 31, 1998 – almost all of which exist toward third parties – amount to DM 581 million. They result from:

<i>(DM million)</i>	<i>Dec. 31, 1998</i>	<i>Dec. 31, 1997</i>
Issuance and endorsement of bills	192	107
Guarantees	92	88
Warranties	297	611
	581	806

[34] Other financial commitments

In addition to provisions, other liabilities and contingent liabilities, there are other financial commitments resulting primarily from long-term lease and rental agreements.

Minimum non-discounted future lease payments total DM 1,380 million (1997: DM 1,632 million). With a few exceptions, these commitments exist toward third parties. They also include agreements under which Group companies, as lessees, are to be regarded as the economic owners of the assets, which are therefore capitalized in the balance sheet (finance leasing); such agreements result in future commitments of DM 14 million (1997: DM 30 million). The commitments under lease and rental agreements mature as follows:

<i>(DM million)</i>	
1999	302
2000	223
2001	153
2002	125
2003	73
after 2003	504
	1,380

Financial commitments resulting from orders already placed under purchase agreements related to planned or ongoing capital expenditure projects total DM 880 million (1997: DM 1,409 million). The payments concerned are due in their entirety in 1999. Further financial commitments result from possible future acceptances of part-time work arrangements offered to older employees under collective agreements.

[35] Financial instruments

Financial instruments entail contractual claims on financial assets. Under IAS 32 (Financial Instruments: Disclosure and Presentation), financial instruments include both primary instruments, such as trade accounts receivable and payable, investments, and financial commitments; and derivative financial instruments, which are used to hedge risks arising from changes in currency parities and interest rates. The following paragraphs report on both types of financial instrument.

PRIMARY FINANCIAL INSTRUMENTS

Primary financial instruments are reflected in the balance sheet. Those on the asset side are recognized at nominal value less any necessary write-downs; financial instruments constituting liabilities are carried at nominal or redemption value, whichever is higher.

Fair value

The fair value of a primary financial instrument is the price at which it could be exchanged in a current transaction between knowledgeable, willing parties in an active market. The fair values of other securities included in investments (DM 225 million) and marketable securities (DM 1,186 million) are derived from their market prices. Financial obligations are valued mainly on the basis of quoted prices, or in some cases by discounting future cash flows. Their total fair value is DM 8 million less than their carrying value. The remaining receivables and liabilities and the liquid assets have such short terms that there is no significant discrepancy between their fair and carrying values.

Credit risk

Credit risk arises from the possibility of asset impairment occurring because counterparties cannot meet their obligations in transactions involving financial instruments.

Since we do not conclude master netting arrangements with our customers, the total of the amounts recognized in assets represents the maximum exposure to credit risk.

Currency risk

Currency risk is the potential decline in the value of financial instruments due to exchange rate fluctuations. Exposure to currency risk arises mainly when receivables and payables are denominated in a currency other than the company's local currency.

Such risks may be naturally hedged, as when a receivable in a given currency is matched by one or more payables in the same amount, and having an equivalent term, in the same currency. They may also be hedged using derivative financial instruments.

Finally, there is the option of foregoing hedging in full or in part and thus consciously accepting a foreign currency risk. We hedge between 40 and 100 percent of the currency risks relating to operating business. The level of hedging required is reviewed once a week, taking into account natural hedges and forecast exchange rate movements for each currency. At year-end 1998, the situation was as follows:

(DM million)	Dec. 31, 1998	Dec. 31, 1997
Foreign currency risks relating to assets	4,562	5,144
Foreign currency risks relating to liabilities	3,093	2,835
Natural hedges	(2,267)	(2,016)
Hedging through derivative financial instruments	(2,164)	(2,512)
Residual unhedged currency risks	3,224	3,451

On the asset side, 40 percent of currency risks relate to the U.S. dollar and 19 percent to the Japanese yen. On the liabilities side, 45 percent of foreign currency risks relate to the U.S. dollar, and 17 percent to DM risks of foreign subsidiaries. The U.S. dollar also accounts for 62 percent of the assets and 46 percent of the liabilities hedged through derivative financial instruments. Liabilities in DM of affiliates domiciled outside the euro currency zone account for a significant 32 percent of hedged liabilities. The increased proportion of dollar hedging is partly due to the fact that Agfa-Gevaert N.V. had hedged an additional notional amount of more than DM 0.5 billion because of its acquisition of Agfa Corporation in the United States; the purchase price was due at the beginning of 1999. A further factor was the run-up to the permanent fixing of exchange rates in the euro zone, where the need for hedging ceased as of the beginning of 1999.

Of the DM 3.2 billion not hedged either naturally or by derivative instruments, U.S. dollars account for 36 percent, the Japanese yen for 21 percent and foreign subsidiaries' DM exposure – mainly relating to liabilities – for 9 percent. The proportion of unhedged risks in other currencies is far lower.

The other securities included in investments are almost exclusively denominated in the currency used by the Group company making the investment, so no currency risk is involved. Similarly, the other loans are made only to borrowers in the same currency zone. Where currency risks are entered into through intragroup loans, these are fully hedged either naturally or through derivative financial instruments.

Currency risks arising from financial commitments are fully hedged. The instruments used are mainly currency swaps, interest and principal currency swaps and forward exchange contracts.

Interest-rate risk

An interest rate risk – the possibility that the value of a financial instrument will change due to movements in market rates of interest – applies mainly to receivables and payables with maturities of over one year.

Items with such long maturities are not of material significance on the operating side but are relevant in the case of investments and financial commitments. Here, derivative financial instruments are used as the main method of interest rate hedging, though in some cases interest rate risk is not hedged, especially where attractive fixed interest rates are obtained.

The other securities included in investments are almost entirely floating rate investments at market rates of interest. For a small proportion of them, interest rate swaps are used to effectively convert floating rate investments into fixed rate investments.

The other loans chiefly comprise loans to employees, generally at market-oriented, fixed interest rates. A small proportion of loans to employees are interest-free. Since the interest rates on loans to employees are fixed, they are exposed to an interest rate risk. However, since this risk was entered into for specific reasons, it is not hedged. More than three-quarters of loans to employees have terms of over five years.

DERIVATIVE FINANCIAL INSTRUMENTS

The derivatives we use are mainly over-the-counter instruments, particularly forward exchange contracts, option contracts, interest rate swaps, and interest and principal currency swaps. We deal only with banks of high credit standing. The instruments are employed according to uniform guidelines and are subject to strict internal controls. Their use is confined to the hedging of the operating business and of the related investments and financing transactions.

Market risk

Market risk arises from the fact that the value of financial instruments may be positively or negatively affected by fluctuating prices on the financial markets.

The fair values quoted are the current values of the derivative financial instruments, disregarding any opposite movements in the values of the respective hedged transactions. The fair value is the repurchase value of the derivatives on the closing date, based on quoted prices or determined by standard methods. The notional amount is the total value of the hedged purchase and sale transactions. The notional amounts and fair values of the derivative financial instruments held at the closing date were as follows:

(DM million)	Notional amount		Fair value	
	Dec. 31, 1998	Dec. 31, 1997	Dec. 31, 1998	Dec. 31, 1997
Forward exchange contracts	3,101	2,217	(38)	(47)
Currency options	374	755	(13)	0
Currency swaps and other exchange hedging instruments	555	556	26	14
Interest-rate hedging instruments	3,024	2,529	(67)	(68)
	7,054	6,057	(92)	(101)

Gains and losses from changes in fair values are offset - wherever possible - against corresponding losses and gains from operating activities. Provisions are established for excess losses from operating activities; excess gains are not recognized.

Credit risk

Credit risk exposure is DM 117 million (1997: DM 88 million), this amount being the total of the positive fair values of derivatives that give rise to claims against the other parties to the instruments. It represents the losses that could result from non-performance of contractual obligations by these parties. We minimize this risk by imposing a limit on the volume of business in derivative financial instruments transacted with individual parties.

Currency risk

Exchange hedging instruments in the notional amount of DM 3.6 billion mature within one year after December 31, 1998, while instruments in the amount of DM 0.4 billion have longer remaining terms.

Interest rate risk

Short-term interest rate hedging contracts (including interest and principal currency swaps) total DM 260 million; those maturing after more than one year total DM 2.8 billion.

Notes to the Statements of Cash Flows

[36] Net cash provided by operating activities

The cash flow statement starts from the operating result. The gross cash flow of DM 6.6 billion is the cash surplus from operating activities before any changes in working capital. Breakdowns of the gross cash flow by business segment and by region are given in the table on pages 82 - 83. The net cash flow of DM 5.5 billion takes account of changes in working capital.

The interest portion of allocations to interest-bearing provisions is now reflected in the non-operating result and not in the operating result; this also affects the changes in provisions shown in the cash flow statement. The 1997 figures are restated for comparison.

[37] Net cash used in investing activities

Additions to property, plant and equipment and intangible assets resulted in a cash outflow of DM 5.2 billion in 1998. Cash outflows for acquisitions amounted to DM 2.8 billion, including DM 1.9 billion for Chiron Diagnostics alone. Sales of property, plant and equipment led to a cash inflow of DM 1.0 billion, while sales of investments and redemptions of marketable securities brought in a further DM 0.4 billion. Interest and dividends received amounted to DM 0.5 billion.

[38] Net cash used in financing activities

Net borrowings by the Bayer Group in 1998 gave rise to a cash inflow of DM 1.7 billion, a major part of which represents the proceeds of Bayer Corporation's US\$ 350 million note and US\$ 250 million bond issues, launched in February. Also in the United States, the commercial paper program was utilized in the amount of US\$ 1.1 billion, which was US\$ 0.2 billion more than in the previous year. The dividend for 1997 led to a cash outflow of DM 1.4 billion, and interest payments to an outflow of DM 0.7 billion.

[39] Cash and cash equivalents

Cash and cash equivalents as of December 31, 1998 amounted to DM 2.3 billion (1997: DM 3.4 billion). The liquid assets of DM 3.4 billion (1997: DM 4.8 billion) shown in the balance sheet also include marketable securities and other instruments.

Total remuneration of the Board of Management and the Supervisory Board, advances and loans

The remuneration of the Board of Management for 1998 amounted to DM 15,198,414. Emoluments to retired members of the Board of Management and their surviving dependents amounted to DM 13,679,368.

Pension provisions for these individuals, amounting to DM 104,924,934 are reflected in the balance sheet of Bayer AG.

The remuneration of the Supervisory Board amounted to DM 2,753,500.

Loans to members of the Supervisory Board outstanding as of December 31, 1998 amounted to DM 57,669, repayments during the year to DM 1,389. These loans are at interest rates of 6 percent per year.

The members of the Supervisory Board and the Board of Management are listed in the Annual Report.

Leverkusen, February 23, 1999

Bayer Aktiengesellschaft
The Board of Management

Supervisory Board

Professor Dr. Herbert Grünewald
Honorary Chairman, Leverkusen

Prof. Dr. Kurt Hansen
Honorary Chairman, Leverkusen

Members of the Supervisory Board – in addition to performing individual supervising functions at companies affiliated to those in which they hold legal offices – hold offices as members of the supervisory board or a comparable supervising body of the corporations listed:

Hermann Josef Strenger
Former Chairman of the Company's Board of Management, Leverkusen
Chairman
Commerzbank AG
Degussa AG
Karstadt AG (until July 1998)
Linde AG
Siemens AG (until February 1998)
VEBA AG

Rolf Nietzard
Chemical laboratory technician, Leverkusen
Vice Chairman

Dr. Klaus Alberti
Chemist, Leverkusen

Werner Bischoff, MdL
Member of the Executive Committee of the German Mine, Chemical and Power Workers Union, Hannover
Hüls AG
HMR-Deutschland GmbH
Hoechst AG (effective July 1998)
VIAG AG (effective July 1998)

Adolf Busbach (until June 30, 1998)
Electrician, Leverkusen

Erhard Gipperich (effective July 1, 1998)
Lathe operator, Leverkusen

Dr. h. c. Martin Kohlhaussen
Chairman of the Board of Managing Directors of Commerzbank AG, Frankfurt (Main)
Bertelsmann AG
Daimler-Benz AG (until December 1998)
GKN Automotive International GmbH
Hochtief AG
Karstadt AG
Kreditanstalt für Wiederaufbau
Liquiditäts-Konsortialbank GmbH
Rheinhyp Rheinische Hypothekenbank AG
Schering AG

Hilmar Kopper
Chairman of the Supervisory Board of Deutsche Bank AG, Frankfurt (Main)
Akzo-Nobel N.V.
Daimler-Benz AG (until December 1998)
DaimlerChrysler AG (effective December 1998)
Deutsche Bank AG
Mannesmann AG
Solvay S.A.
Unilever N.V. (effective May 1998)
Xerox Company

Dr.-Ing. Manfred Lennings
Management consultant, Essen-Kettwig
Deutsche Post AG
Fried. Krupp AG Hoesch-Krupp
Gildemeister AG
E. Heitkamp GmbH
IVG Holding AG

Dr. h. c. André Leysen
Chairman of the Board of Administration of Gevaert N.V., Mortsel, Belgium
Agfa-Gevaert AG; Agfa-Gevaert N.V.
BMW AG (until May 1998)
Cobepa N.V.
Deutsche Telekom AG
Gevaert N.V.
GIB Group
Hapag-Lloyd AG (until March 1998)
IVG Holding AG
KBC Bank N.V. (until June 1998)
Philips Electronics N.V.
Schenker AG
SHV Holdings N.V.
Tessenderlo Chemie N.V.
VEBA AG

Helmut Oswald Maucher
President and Chief Executive Officer of Nestlé S.A., Vevey, Switzerland
Deutsche Bahn AG
Henkel KGaA
L'Oréal/Gesparal
Ravensburger AG

Dieter Meinhardt
Machine fitter, Dormagen

Hans-Dieter Peppmeier
Engineering draftsman, Krefeld

Dr. Heinrich von Pierer
Chairman of the Board of Management of Siemens AG, Munich
Hochtief AG
Volkswagen AG

Bernd Reckschwardt
Chemical worker, Leverkusen

Waltraud Schlaefke
Chemical laboratory technician, Walsrode
Wolff Walsrode AG

Hubertus Schmoldt
Chairman of the German Mine, Chemical and Power Workers Union, Hannover
Buna Sow Leuna Olefinverbund GmbH
VEBA AG
RVM AG

Dieter Schulte
Chairman of the German Unions Federation, Düsseldorf
Fried. Krupp AG Hoesch-Krupp
Kreditanstalt für Wiederaufbau
Hermes Kreditversicherungs-AG
Thyssen AG

Lodewijk Christiaan van Wachem
Chairman of the Supervisory Board of Royal Dutch Petroleum Company, The Hague, Netherlands
ABB Asea Brown Boveri Ltd.
Akzo Nobel N.V.
ATCO Ltd.
BMW AG
IBM Corporation
N.V. Koninklijke Nederlandsche Petroleum Mij.
Philips Electronics N.V.
Zurich Allied / Allied Zurich

Prof. Dr. Ernst-Ludwig Winnacker
President of the German Research Association, Bonn
GPC-Genome Pharmaceuticals
MediGene AG

Dr. Hermann Wunderlich
Former Vice Chairman of the Company's Board of Management, Odenthal
Deutsche Babcock AG
Freudenberg & Co.

Manfred Pfleger (until December 31, 1998)
Gerling-Konzern Allgem. Versicherungs-AG
(until July 1998)
Lehnkering AG (until July 1998)

Werner Spinner (effective February 1, 1998)

Werner Wenning
Dresdner Bank Lateinamerika AG (effective March 1998)
Gerling-Konzern Allgem. Versicherungs-AG
(effective July 1998)
Rheinhyp Rheinische Hypothekenbank AG
(effective May 1998)

Dr. Walter Wenninger
VEMAG AG

Appointed to the Board of Management
effective April 1, 1999:

Dr. Attila Molnar

Board of Management

Members of the Board of Management – in addition to performing individual supervising functions at affiliated companies – hold offices as members of the supervisory board or a comparable supervising body of the corporations listed:

Dr. Manfred Schneider
Chairman
Allianz Lebensversicherung AG (until May 1998)
Allianz AG (effective July 1998)
Daimler-Benz AG (until December 1998)
DaimlerChrysler AG (effective December 1998)
Metro AG
RWE AG
Varta AG (until May 1998)

Dr. Pol Bamelis
Bekaert N.V.

Dr. Dieter Becher

Hans-Jürgen Mohr

Dr. Udo Oels

Alkali-chloride electrolysis

Rock salt and water are converted by an electric current into chlorine, caustic soda solution and hydrogen. Bayer uses the amalgam and the membrane processes (see below). Chlorine and caustic soda solution are among the most important feedstocks for chemical production.

Blood gas analysis

Measurement of the levels of oxygen and carbon dioxide in the blood and its pH value. Permits evaluation of gaseous exchange in the lungs and the acid-base balance in the blood. This is an important diagnostic technique in areas such as critical care and lung disease.

BPR

Abbreviation for business process reengineering. BPR involves redesigning the core processes of an organization from scratch, clearly documenting the to-be processes and ensuring the establishment of new processes within the organization. In general, the new processes will aim to reduce complexity and simplify the interfaces between functional areas while raising process quality, efficiency and speed.

COD

Abbreviation for chemical oxygen demand, the amount of oxygen required to chemically oxidize water constituents by a standardized method.

Disperse dyes

Synthetic dyestuffs with low solubility in water; used for dyeing polyurethane fibers, for example.

Dry hardcopy

Environmentally compatible method of producing x-ray or ultrasound photographs, for example, by laser technology without the need for wet film processing.

Engineering thermoplastics

Thermoplastics (see below) that give molded articles with the kind of performance characteristics – such as high heat resistance and impact strength – that enable them to be used in demanding technical applications.

Genome

The entire genetic information of an organism.

Guar

Leguminous plant grown in India and Pakistan. Its seeds produce a gum used as a thickening agent in foods. Guar derivatives are also used as additives for cosmetics, paints and building materials.

Heart failure

Inability of the heart to pump blood fast enough to satisfy the body's needs.

Immunodiagnosics

Techniques that detect antigenic substances in the blood to provide information on heart diseases, allergies, tumors, thyroid function and anemia.

Ion exchange resins

Solids with a large surface area, capable of exchanging ions with a surrounding solution. They are used in water treatment, as slow-release fertilizers for hydroculture, in extended-release formulations of pharmaceuticals and as catalysts in chemical reactions.

Lipid-lowering agent

Medication to reduce blood cholesterol.

Membrane technology

With this modern, energy-efficient method of alkali-chloride electrolysis (see above), the cathode and anode chambers are separated by an ion-conducting membrane that is impermeable to water. The Na⁺ ions carry the electricity from the anode chamber to the cathode chamber.

Monofil

A single, continuous strand of a manmade fiber.

NAD

Abbreviation for nucleic acid diagnostics, a method for accurately identifying serious infectious diseases.

PCR

Abbreviation for polymerase chain reaction, a method for replicating DNA sections in a test tube. Used to diagnose congenital diseases and various pathogens.

Radiography

Producing pictures by a form of radiation other than light, such as x-rays.

Reactive dyes

Dyestuffs containing a special component that reacts chemically with the textile fiber, improving the dye-fiber bond. They give fast, usually very brilliant dyeings.

Responsible Care

A global initiative by the chemical industry to steadily improve the protection of health and the environment and the safety of employees and the community. Bayer joined the initiative in 1994 together with the German Chemical Industry Association.

SAP

Abbreviation for systems, applications and products in data processing. SAP is both the most widely used commercial system software and the name of the manufacturer.

Screening

Testing large numbers of compounds with the aim of identifying potential new active ingredients for pharmaceuticals or crop protection products, for example.

Thermoplastics

Plastics materials that soften when heated to certain temperatures, without undergoing chemical change, and can then be molded into the required shape.

Dear Shareholders:

During 1998 the Supervisory Board monitored the conduct of the company's business and acted in an advisory capacity. We performed these functions on the basis of detailed reports from the Board of Management received at our meetings. In addition, the Chairman of the Supervisory Board and the Chairman of the Board of Management maintained a constant exchange of information and ideas. In this way the Supervisory Board was kept continuously informed about:

- *the company's business strategy;*
- *corporate planning, including financial, investment and human resources planning;*
- *the company's earnings performance; and*
- *the general state of the business.*

The documents relating to Board of Management decisions or actions requiring the approval of the Supervisory Board were inspected by the Supervisory Board at its plenary meetings, sometimes after preparatory work by its committees. In certain cases the Supervisory Board gave its approval on the basis of documents circulated to its members.

The business trends described in the reports from the Board of Management and the prospects for the development of the Bayer Group, the individual business groups and the principal affiliated companies in Germany and abroad were discussed at length. The company's investment and research strategies and the resulting actions of the business groups played a major part in these discussions. Special consideration was given to the crisis in Asian markets and its consequences for the company's strategy in that region. Also of major interest to the Supervisory Board was the Board of Management's report on the measures the company has adopted to identify business risks at an early stage. We concluded from this report that the management's obligations under the new German "Law on Corporate Supervision and Transparency" are already being met in a pragmatic manner. We also satisfied ourselves that all necessary steps are being taken to address the problems connected with Year 2000 compliance.

Further matters dealt with by the Supervisory Board, its Affiliates Committee and the Extended Affiliates Committee included:

- *the collaboration for the titanium dioxide business entered into with the U.S. company Kerr-McGee Chemical LLC in the form of a joint venture;*
- *the founding of a joint venture with GE Plastics of the U.S. in the field of silicones;*
- *the acquisition by Agfa-Gevaert of the graphic films and offset printing plates business of DuPont;*
- *Agfa-Gevaert's acquisition of the U.S. company Sterling Diagnostic Imaging Inc., a manufacturer of medical x-ray film and materials;*
- *the R&D collaboration in medical biotechnology with Millennium Pharmaceuticals, Inc., including an approximately 14 percent equity investment;*
- *the acquisition of Chiron Diagnostics Inc.; and*
- *the purchase of a 50 percent interest in the U.S. company Gustafson, Inc., which develops, formulates and markets seed treatment products.*



Deserving special mention is our thorough review of the issues involved in the stock exchange listing of Agfa-Gevaert, which is planned for 1999.

Other major topics reported to us and discussed during the year included:

- *the consolidation taking place in the pharmaceutical industry; and*
- *capital expenditures and restructuring in the Polymers and Chemicals business segments.*

During the year there were four plenary meetings of the Supervisory Board, two meetings of the Extended Affiliates Committee, two meetings of the Social Policy Committee, one meeting of the Affiliates Committee and one meeting of the Presidial Committee. The Human Resources Committee made a decision on the basis of circulated documents on one occasion.

The consolidated financial statements of the Bayer Group were drawn up according to the International Accounting Standards. These statements, as well as the financial statements of Bayer AG and the combined management report of the Bayer Group and Bayer AG, have been examined by the auditors C & L Deutsche Revision Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Essen. The conduct of the audit is explained in the Independent Auditors' Report. The auditors find that Bayer has fully complied with the International Accounting Standards and issue an unqualified opinion to the consolidated financial statements of the Bayer Group. The financial statements and management report of Bayer AG, the consolidated financial statements and management report of the Bayer Group, and the audit reports were submitted to all members of the Supervisory Board. They were discussed in detail by the Presidial Committee and at a plenary meeting of the Supervisory Board. The auditors submitted a report on both occasions and were present during the discussion.

We examined the financial statements and management report of Bayer AG, the consolidated financial statements and management report of the Bayer Group, and the proposal for distribution of the profit. We found no objections, thus we concur with the result of the audit.

We have approved the financial statements of Bayer AG prepared by the Board of Management. These financial statements are thus confirmed. We are in agreement with the management report of Bayer AG and, in particular, with the assessment of the company's future development.

We also concur with the dividend policy and the allocations to retained earnings. We assent to the proposal for distribution of the profit, which provides for payment of a dividend of DM 2.00 per share.

Adolf Busbach retired from the Supervisory Board on June 30, 1998; our sincere thanks go to him for his dedicated service. His seat as an employee representative was taken by Erhard Gipperich, an elected substitute.

Manfred Pflieger, who had been a member of the Board of Management since 1991, retired at the end of 1998 after 41 years with Bayer. We would like to take this further opportunity to thank him for his valuable service to the company.

The Supervisory Board has appointed Dr. Attila Molnar to the Board of Management effective April 1, 1999.

Leverkusen, March 1999

For the Supervisory Board



Hermann J. Strenger
Chairman

Organization Chart

Board of Management		<i>Member of Board Committees for (Chairman in bold type)</i>	<i>Representative for Business Segment(s)</i>	<i>Representative for Region(s)</i>	<i>Chairman of Central Conference(s)/ Committee(s) (CC)</i>
M. Schneider <i>Chairman</i>	Corporate Coordination Finance				Bayer Group Strategy Conference Bayer Group Conference Bayer AG Management Conference
P. Bamelis	Research and Development Technology and Environment	Agfa			CC Research and Development
D. Becher	Technology and Environment Marketing and Logistics			Far East	CC Manufacturing and Technology
H.-J. Mohr* <i>* Labor director</i>	Human Resources Finance Marketing and Logistics			Europe	CC Human Resources
U. Oels	Research and Development Corporate Coordination Technology and Environment	Chemicals			CC Environmental Protection and Safety
W. Spinner	Marketing and Logistics Human Resources Technology and Environment	Polymers			CC Marketing CC Logistics and Business Processes
W. Wenning	Finance Corporate Coordination Human Resources			Central and South America, Africa, Middle East	Executive Management Development Conference
W. Wenninger	Research and Development Corporate Coordination	Health Care Agriculture		North America Mexico	

Business Groups

Health Care			
Pharmaceuticals	H. Meyer	Diagnostics**	R. A. Classon
Consumer Care	F.-J. Morich	** headquartered at Bayer Corporation, U.S.A.	
Agriculture			
Crop Protection	J. Wulff	Animal Health	B. Krüger
Polymers			
Plastics	G. Zaby	Coatings, Colorants	
Rubber	J. Ick	and Special	
Polyurethanes	H.-J. Kaiser	Raw Materials	W. Held ¹⁾
		Fibers	K. Schrewe
		Wolff Walsrode	H.-J. Meißner
Chemicals			
Basic and		EC Erdölchemie***	H. Noerenberg
Fine Chemicals	A. Molnar ²⁾	Haarmann & Reimer	L. Courth
Specialty Products	P. Suchanek	H. C. Starck	P. Kählert
DyStar***	A. X. Rad	*** Bayer's interest: 50 %	
Agfa			
Agfa-Gevaert Group	K. Seeger	Photographic Products	F. Hujer
		Graphic Systems	W. Seufert
		Technical	
		Imaging Systems	L. Verhoeven

1) effective April 1, 1999: Dr. Ulrich Koemm

2) effective April 1, 1999: Dr. Martin Wienkenhöver

as of January 1, 1999

Service Divisions

Central Service Divisions	
Procurement	G. Römer
Informatics	B. Fink
Human Resources	W. Böckly
Site Services, Environmental Pro- tection and Safety	L. Schmidt
Central Research	H.-J. Rosenkranz
Central Logistics	A. Endlicher
Central Technology	K.-P. Ochel
Corporate Divisions	
Corporate Planning and Controlling	R. Pott
Corporate Finance, Accounting and Taxes	H.-W. Kohl
Legal, Patents, Licenses and Insurance	V. Charbonnier
Corporate Communications	H. Springer
BPR/SAP Program Management Bayer	H. Läßle

Ten-Year Financial Summary

<i>Bayer Group (DM million)</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>
Net sales	43,299	41,643	42,401	41,195	41,007
Sales outside Germany	78.6%	78.3%	78.3%	78.7%	81.0%
Sales of foreign consolidated companies	58.3%	58.1%	60.1%	61.2%	64.5%
Operating result	4,290	3,552	3,178	2,776	2,347
Income before income taxes	4,105	3,366	3,206	2,693	2,354
Income after taxes	2,116	1,903	1,853	1,563	1,372
Noncurrent assets	13,239	15,552	15,383	15,621	16,147
Intangible assets	220	282	322	314	321
Property, plant and equipment	12,182	13,959	14,112	14,203	14,681
Investments	837	1,311	949	1,104	1,145
Current assets	22,897	22,395	22,534	22,707	24,024
Inventories	8,235	8,419	8,345	8,517	8,167
Receivables	10,656	10,767	10,724	10,436	10,615
Liquid assets	4,006	3,209	3,465	3,754	5,242
Stockholders' equity	16,033	16,052	16,743	17,545	18,206
Capital stock of Bayer AG	3,195	3,195	3,225	3,287	3,354
Capital reserves and retained earnings	10,284	10,569	11,308	12,328	13,094
Net income	2,083	1,881	1,824	1,516	1,327
Minority stockholders' interest	471	407	386	414	431
Liabilities	20,103	21,895	21,174	20,783	21,965
Provisions	11,028	10,946	11,276	11,065	11,741
Other liabilities	9,075	10,949	9,898	9,718	10,224
Total assets	36,136	37,947	37,917	38,328	40,171
Proportion of total assets					
Noncurrent assets	36.6%	41.0%	40.6%	40.8%	40.2%
Current assets	63.4%	59.0%	59.4%	59.2%	59.8%
Stockholders' equity	44.4%	42.3%	44.2%	45.8%	45.3%
Liabilities	55.6%	57.7%	55.8%	54.2%	54.7%
Financial obligations	4,487	6,014	5,132	4,945	5,264
• Long-term	3,066	3,433	3,216	3,068	2,580
• Current	1,421	2,581	1,916	1,877	2,684
Interest income (expense) – net	(185)	(236)	(251)	(180)	(51)
Noncurrent assets financed by stockholders' equity	121.1%	103.2%	108.8%	112.3%	112.8%
Noncurrent assets and inventories financed by stockholders' equity and long-term liabilities	127.0%	116.0%	119.1%	122.1%	124.7%
Return on sales	9.9%	8.5%	7.5%	6.7%	5.7%
Return on stockholders' equity	13.5%	11.9%	11.3%	9.1%	7.7%
Operating cash flow (gross)	5,836	5,366	5,050	4,696	4,852
Capital expenditures	3,447	3,687	3,074	2,859	3,156
Depreciation and amortization	2,437	2,574	2,683	2,552	2,688
Depreciation and amortization in percent of capital expenditures	70.7%	69.8%	87.3%	89.3%	85.2%
Personnel expenses (including pension expenses)	13,228	13,386	14,604	14,434	14,306
Number of employees (year end)	170,200	171,000	164,200	156,400	150,400
Research and development expenses	2,695	2,738	3,007	3,096	3,157
<i>Bayer AG</i>					
Income after taxes/Net income	1,221	1,041	1,038	873	818
Allocation to retained earnings	390	210	200	150	80
Total dividend payment	831	831	838	723	738
Dividend per share	DM 1.30	DM 1.30	DM 1.30	DM 1.10	DM 1.10

1994	1995	1996	1997*	1998	Bayer Group (DM million)
43,420	44,580	48,608	55,005	54,884	Net sales
81.6%	80.5%	82.2%	83.9%	83.6%	Sales outside Germany
65.3%	63.4%	65.4%	67.0%	67.5%	Sales of foreign consolidated companies
3,238	4,111	4,510	6,018	6,151	Operating result
3,293	4,185	4,464	5,108	5,336	Income before income taxes
2,012	2,421	2,747	2,952	3,159	Income after taxes
16,748	18,458	20,907	23,920	27,066	Noncurrent assets
756	955	1,426	2,056	3,733	Intangible assets
14,762	15,580	17,553	20,158	21,177	Property, plant and equipment
1,230	1,923	1,928	1,706	2,156	Investments
25,615	25,838	28,541	30,250	30,150	Current assets
8,333	9,314	10,060	10,608	11,306	Inventories
11,502	11,318	13,746	14,840	15,478	Receivables
5,780	5,206	4,735	4,802	3,366	Liquid assets
17,055	18,301	21,056	23,923	24,991	Stockholders' equity
3,465	3,527	3,621	3,652	3,652	Capital stock of Bayer AG
11,167	11,895	14,253	16,893	17,769	Capital reserves and retained earnings
1,970	2,394	2,725	2,941	3,157	Net income
453	485	457	437	413	Minority stockholders' interest
25,308	25,995	28,392	30,247	32,225	Liabilities
13,276	13,540	13,802	14,229	14,221	Provisions
12,032	12,455	14,590	16,018	18,004	Other liabilities
42,363	44,296	49,448	54,170	57,216	Total assets
39.5%	41.7%	42.3%	44.2%	47.3%	Proportion of total assets
60.5%	58.3%	57.7%	55.8%	52.7%	Noncurrent assets
40.3%	41.3%	42.6%	44.2%	43.7%	Current assets
59.7%	58.7%	57.4%	55.8%	56.3%	Stockholders' equity
					Liabilities
6,276	6,268	6,883	7,620	9,012	Financial obligations
2,463	2,809	3,158	4,206	4,477	• Long-term
3,813	3,459	3,725	3,414	4,535	• Current
88	11	(87)	(308)	(350)	Interest income (expense) – net
101.8%	99.1%	100.7%	100.0%	92.3%	Noncurrent assets financed by stockholders' equity
116.7%	112.4%	114.9%	115.5%	108.3%	Noncurrent assets and inventories financed by stockholders' equity and long-term liabilities
7.5%	9.2%	9.3%	11.0%	11.4%	Return on sales
11.4%	13.7%	14.0%	13.1%	12.9%	Return on stockholders' equity
4,947	5,380	5,788	6,480	6,602	Operating cash flow (gross)
3,509	3,169	3,777	4,559	5,165	Capital expenditures
2,431	2,315	2,594	2,892	2,974	Depreciation and amortization
69.3%	73.1%	68.7%	63.4%	57.6%	Depreciation and amortization in percent of capital expenditures
14,457	14,624	15,096	15,442	15,854	Personnel expenses (including pension expenses)
146,700	142,900	142,200	144,600	145,100	Number of employees (year end)
3,177	3,259	3,608	3,878	3,920	Research and development expenses
					Bayer AG
931	1,158	1,361	1,458	2,141	Income after taxes/Net income
30	100	130	70	680	Allocation to retained earnings
901	1,058	1,231	1,388	1,461	Total dividend payment
DM 1.30	DM 1.50	DM 1.70	DM 1.90	DM 2.00	Dividend per share

* operating result, return on sales, personnel expenses and research and development expenses not comparable to prior years

Dates

Spring News Conference	Tuesday, March 16, 1999
Spring Investor Conference	Thursday, March 18, 1999
Annual Stockholders' Meeting 1999	Friday, April 30, 1999
Payment of Dividend	Monday, May 3, 1999
First Half Results	Thursday, August 12, 1999
London Investor Conference	Thursday, August 12, 1999
Fall News Conference	Tuesday, November 16, 1999
Fall Investor Conference	Thursday, November 18, 1999
Spring News Conference	Thursday, March 16, 2000
Annual Stockholders' Meeting 2000	Friday, April 28, 2000
Payment of Dividend	Tuesday, May 2, 2000

