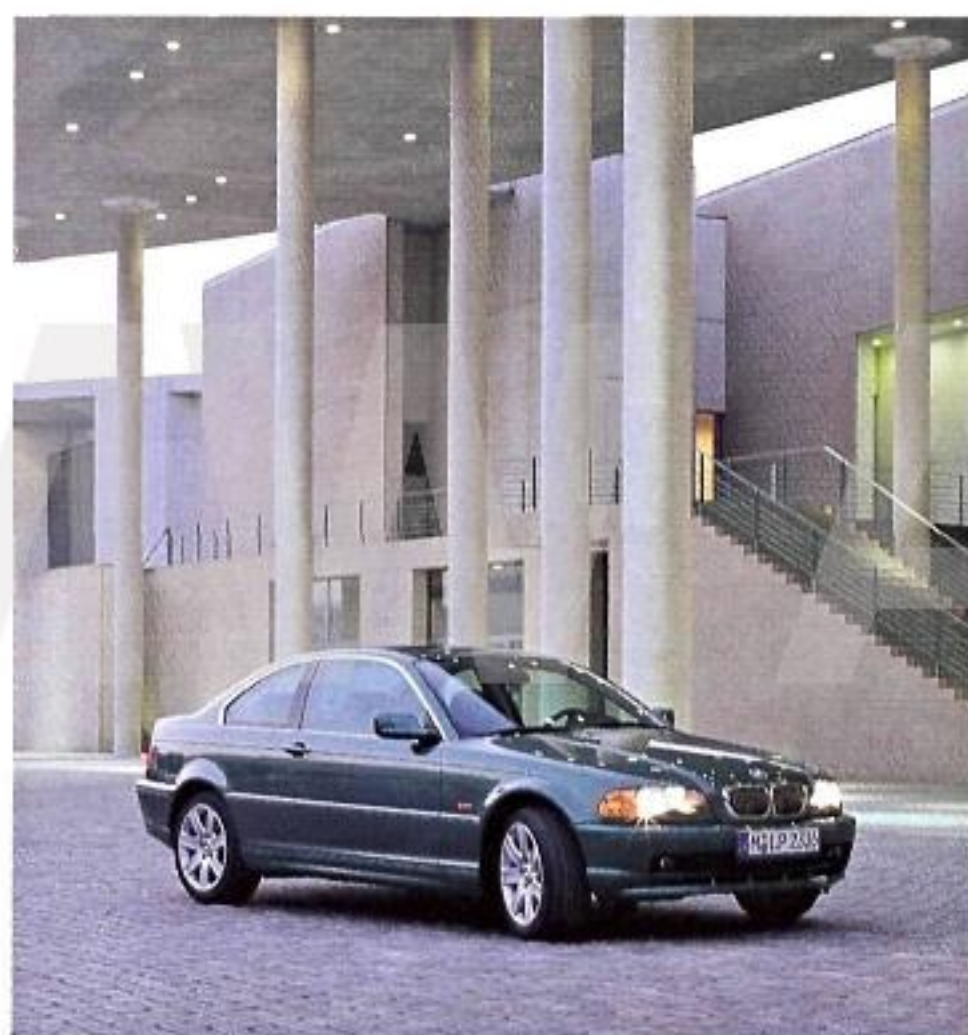


**1998**

# BMW Annual Report



## BMW year-to-year comparison

In the case of differences of opinion, the German text shall prevail.

<b>BMW Group</b>		1998	1997	Change in %
Sales	DM million	63,134	60,137	+ 5.0
Automobile production				
Group	units	1,204,000	1,194,704	+ 0.8
BMW Automobiles	units	706,426	672,238	+ 5.1
Rover Automobiles	units	497,574	522,466	- 4.8
Automobile deliveries to customers				
Group	units	1,187,115	1,196,096	- 0.8
BMW Automobiles	units	699,378	675,076	+ 3.6
Rover Automobiles	units	487,737	521,020	- 6.4
Motorcycle production <sup>1)</sup>	units	60,152	54,933	+ 9.5
Motorcycle deliveries to customers	units	60,308	54,014	+ 11.7
Workforce at end of year		119,913	117,624	+ 1.9
Investment	DM million	4,262	4,520	- 5.7
Depreciation	DM million	3,635	3,543	+ 2.6
Cash flow	DM million	4,849	4,925	- 1.5
Net income	DM million	903	1,246	- 27.5

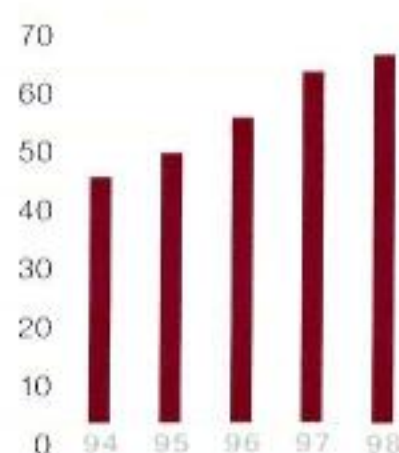
### BMW AG

Dividends	DM million	457 <sup>2)</sup>	397	+ 15.1
per ordinary share of DM 50 nominal value	DM	20.00 <sup>2)</sup>	20.00	
per preference share of DM 50 nominal value	DM	21.00 <sup>2)</sup>	21.00	

<sup>1)</sup> Incl. F 650 assembly at Aprilia S. p. A.

<sup>2)</sup> Proposal of the Board of Management

**Sales**  
in DM billion



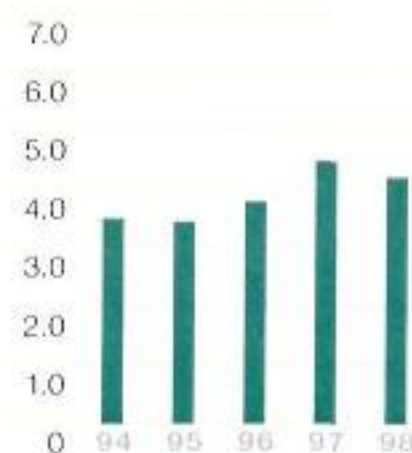
**Automobile production**  
in thousands



**Workforce**  
in thousands



**Investment**  
in DM billion





Bayerische Motoren Werke  
Aktiengesellschaft, Munich

**Annual Report 1998**

BMW AG

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People build brands

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**Committed to  
independence**

To the shareholders, staff and friends of our company

*Ladies and gentlemen,*



the acquisition of Rover and the Rolls-Royce Motor Cars brand name by the BMW Group is a vital step towards securing the company's economic strength and independence in the long term: BMW now plays an active role in all major market segments and world markets with an attractive range of models – an essential requirement, and one which has also proved to be the driving force behind the most recent changes in the automobile industry. In the course of market globalisation, other mergers and alliances have also taken shape.

Sustained success for the BMW Group in the face of global competition depends on our continuing ability to offer well-known and sought-after brands worldwide. It is the brands which make our products unique, and commit us to uphold our promise of top quality.

The culture of true brands evolves from the passions and desires of people. These passions and desires are clearly reflected in our brands. We employ and shape technology to give substance to these desires; customers are also guided towards the purchase of our products by an emotive appeal to their imagination, expressed through ideas such as "sheer driving pleasure" and "relaxed motoring". Constantly implementing innovations and refinements, BMW keeps its brands attractive and alive – prerequisite to our ability to gain new customers as well.

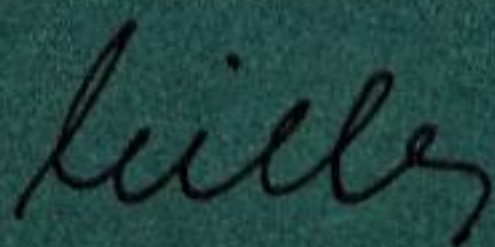
These innovations are only possible because BMW has also won itself a high reputation as an industrial employer – this prompts exceptionally qualified and highly motivated young men and women to aspire to work at BMW. And with the best and most committed staff throughout our company, it becomes possible to create fascinating brands characterised by reliable standards of quality.



The BMW Group today is one of the most admired and respected employers in the whole of Europe. Our company's product innovations are as widely acknowledged as the soundness of our financial base. BMW is one of the few brand names known throughout the world, and together with the brands Rover Cars, Land Rover, Mini and MG, the BMW Group plays an active role in all major segments of all key markets around the globe.

The BMW Group thus draws on all required potential, particularly under difficult market conditions, to work towards the future with intensified commitment on the development of new, top-quality products for all relevant segments of the market. The necessary potential is available within the BMW Group.

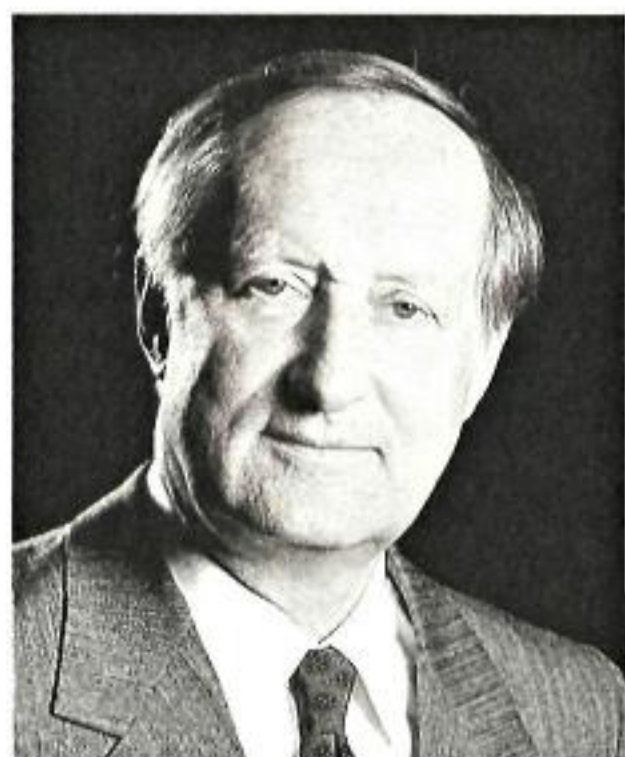
It is the numerous virtues inherent in the company that have enabled it to grow over recent decades, and which we will continue to strengthen: time to market, long-standing partnerships with customers, dealers and suppliers, alacrity and consistency in decision-making, genuine acceptance of responsibility, perfection, capacity for enthusiasm – and the sense of belonging. After all, you can't drive a car if you are constantly looking in the rear-view mirror – which is why the focus of our attention, more than ever before, is on shaping the future of BMW.



Joachim Milberg  
Chairman of the Board of  
Management of BMW AG



## Report of the Supervisory Board



The Supervisory Board throughout the 1998 financial year regularly reviewed the business of the company and supervised the Board of Management. At five joint meetings, supported by the Board of Management's written and verbal reports, the Supervisory Board closely studied the company's overall position, the development of business and the business policies pursued, discussing these matters with the Board of Management. In addition to the regular meetings, the Chairman of the Supervisory Board held discussions with the Chairman of the Board of Management concerning business questions of key importance.

The Supervisory Board and the Board of Management addressed all measures aimed at maintaining and strengthening the earnings capability of the Group, as well as securing its independence as an automobile manufacturer present in all product segments and in all markets around the world.

The course of action taken by BMW in the company's bid for the carmaker Rolls-Royce was discussed in detail between the Supervisory Board and the Board of Management. Rights to the Rolls-Royce brand were acquired by BMW at favourable terms and conditions, thus expanding the Group's portfolio in the luxury-class market segment.

The introduction of new and future-oriented technologies was a further subject of consultations between the Supervisory Board and the Board of Management. The competitiveness of the BMW brand was strengthened significantly by the introduction of a new generation of diesel engines. BMW has thereby assumed a leading position in this technology. Advancements continue on new model variants introduced into the 3 Series. Rover presented the new Rover 75 model range, this luxurious British-made saloon being the first vehicle developed independently by Rover in the last twenty years.

Throughout the entire financial year, the Supervisory Board was informed by the Board of Management on all aspects concerning the situation in the Rover business segment. When the Board of Management reported significant divergence from budgeted sales and earnings figures in the course of the first months of the second half of the year, the Chairman of the Supervisory Board called upon the



Board of Management to conduct detailed investigations and implement appropriate counter-measures. Following consultation between the Supervisory Board and the Board of Management during a meeting called by the Supervisory Board on October 23 1998, the Board of Management approved a broad-based programme of turn-around activities. These were aimed at providing a detailed and comprehensive analysis of Rover business, an evaluation of alternative courses of action, and the drawing up of proposals for a restructuring of this business segment – with due account to be taken of the different prevailing situation for Rover Cars, on the one hand, and Land Rover on the other. Changes were introduced in the management structure in order to accelerate the convergence of procedures and systems.

A report on the status of restructuring measures was presented by the Board of Management during a meeting of the Supervisory Board held on December 1 1998. An improvement of standards to levels comparable with those existing at BMW, as well as measures introduced towards cost reduction, restructuring, greater flexibility of working time in production and towards improvements in sales performance, were discussed in detail with the Board of Management. The pursuit of strategic policies derived from the restructuring analysis of Rover, as well as the successful implementation of measures, represent a major task in the 1999 business year.

Attention was also paid by the Supervisory Board to all aspects of development of business in the fields of aero engines and software. Long-term development of all fields of business was furthermore dealt with in detail.

In the year under review, particularly in the second half of 1998, the Supervisory Board purposely focused its activities on supporting the Board of Management in overcoming the situation at Rover. Thanks to the excellent segment result from BMW Automobiles, it is once again possible to present shareholders with a satisfactory overall result for the Group, which – with the exception of a particularly successful business year in 1997 – exceeds the results achieved in previous years.

The Income Statement of the year-end result for the 1998 financial year is for the first time presented in the cost-of-sales format, in accordance with



## **Report of the Supervisory Board**

customary international practice, facilitating comparisons made by shareholders.

The Financial Statements for Bayerische Motoren Werke Aktiengesellschaft and the Consolidated Financial Statements of the BMW Group as of December 31 1998, as well as the Business Review of the Group have been examined and given an unrestricted confirmatory audit certificate by the auditors KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Munich. The Supervisory Board also examined these reports prepared by the Board of Management. The audit reports drawn up by KPMG were presented to all members of the Supervisory Board. Attending the meeting on March 18 1999, in which the financial statements were examined by the Supervisory Board, the auditor reported on the key results of the audit. The Supervisory Board agrees to the results of this audit, and approves the Financial Statements for Bayerische Motoren Werke Aktiengesellschaft prepared by the Board of Management for the 1998 financial year. The Financial Statements are thus complete. The Supervisory Board has examined and supports the proposal made by the Board of Management for the distribution of profits. According to the concluding result of examination by the Supervisory Board, no objections remain which must be raised.

The Executive Committee, which also assumes the function of the personnel committee, held scheduled meetings on three occasions. The statutory mediation committee also appointed by the Supervisory Board (Section 27 Article 3 MitbestG) did not have reason to meet.

Upon conclusion of the Annual General Meeting on May 12 1998, Dr. h.c. André Leysen retired from the Supervisory Board. Dr. Leysen had been a member of the Supervisory Board since 1989, as well as of the Executive Committee since 1997. The Supervisory Board expressed its thanks to Dr. Leysen for the work he contributed as one of its members. Mr. Volker Doppelfeld was elected by the Annual General Meeting to succeed Dr. Leysen, and was subsequently elected to the Executive Committee by the Supervisory Board at its next meeting.

Mr. Volker Doppelfeld, who retired from the Board of Management upon conclusion of the Annual General Meeting on May 12 1998, has worked for the



company for almost 30 years, and has been a member of the Board of Management for the last 17 years (since 1981). The Supervisory Board voiced its exceptional indebtedness to Mr. Doppelfeld, who has made a decisive contribution to the success of the company. Dr. Walter Hasselkus stepped down as a member of the Board of Management at the close of 1998. The Supervisory Board expressed its gratitude to Mr. Hasselkus for the services he rendered the company. Mr. Günter Lorenz was appointed a member of the Board of Management by the Supervisory Board on May 12 1998, followed by Prof. Dr. Werner Sämman on December 1 1998.

At its meeting on February 5 1999, the Supervisory Board was again informed by the Board of Management on the position of the company, in particular on the situation in respect of Rover Automobiles. At this meeting, Mr. Bernd Pischetsrieder requested that he be relieved of his duties as member and Chairman of the Board of Management. The Supervisory Board complied with this request and thanked Mr. Pischetsrieder for his 25 years of successful work. Dr. Wolfgang Reitzle also resigned from the Board of Management, with the agreement of the Supervisory Board. The Supervisory Board voiced its thanks to Dr. Reitzle for his successful work over the course of 23 years.

At the same meeting on February 5 1999, the Supervisory Board appointed Prof. Dr.-Ing. Joachim Milberg as the new Chairman of the Board of Management, furthermore appointing Mr. Carl-Peter Forster, Dr. Henrich Heitmann and Dr.-Ing. Wolfgang Ziebart as new members of the Board of Management. At the meeting on March 18 1999 Mr. Ernst Baumann was also appointed as a member of the Board of Management.

Munich, March 18 1999

A handwritten signature in blue ink, appearing to read 'E. von Kuenheim', with a stylized, flowing script.

The Supervisory Board  
Eberhard von Kuenheim  
Chairman



## **Supervisory Board**

as of March 30 1999

Dr.-Ing. E.h. Dr.-Ing. E.h.  
Eberhard v. Kuenheim  
Munich, Chairman  
Former Chairman of the Board  
of Management of BMW AG

Manfred Schoch\*  
Munich, Deputy Chairman  
Chairman of the Works Council

Prof. Dr.-Ing. E.h. Berthold Leibinger  
Ditzingen, Deputy Chairman  
Managing Partner of  
TRUMPF GmbH + Co.  
Maschinenfabrik Stuttgart

Johann Vilsmeier\*  
Dingolfing, Deputy Chairman  
Chairman of the Works Council  
Dingolfing plant

Dr. h.c. André Leysen  
Mortsel, Belgium,  
Deputy Chairman  
Chairman of the Supervisory Board of  
Gevaert N.V.  
(until May 12 1998)

Volker Doppelfeld  
Munich,  
Deputy Chairman  
Former Member of the Board of  
Management of BMW AG  
(from May 12 1998)

Reinhold Bauer\*  
Landshut,  
Deputy Chairman of the Works Council  
Landshut plant

Dr. Karin Benz-Overhage\*  
Frankfurt/Main,  
Executive Member of the  
Executive Board of IG Metall

Ulrich Eckelmann\*  
Frankfurt/Main,  
Head of Department for the  
Executive Board of IG Metall  
(from January 26 1998)

Hans Glas\*  
Dingolfing,  
Director Dingolfing plant

Gerhard Gutsmedl\*  
Munich,  
Deputy Chairman of the Works Council  
Munich plant

Arthur L. Kelly  
Chicago, Illinois,  
Managing Partner of  
KEL Enterprises Ltd.

Susanne Klatten  
Bad Homburg v.d.H.,  
Economist, MBA

Rudolf Lukes\*  
Munich,  
Trade union secretary

Prof. Dr. Hubert Markl  
Munich,  
President of Max-Planck-Gesellschaft  
zur Förderung der Wissenschaften e.V.



## Board of Management

Hans-Günther Niklas\*  
Regensburg,  
Chairman of the Works Council  
Regensburg plant

Stefan Quandt  
Bad Homburg v.d.H.,  
Graduate industrial engineer

Ernst Rehmeier\*  
Dingolfing,  
Member of the Works Council  
Dingolfing plant

Dr. Wolfgang Röllner  
Frankfurt/Main,  
Former Chairman of the Supervisory  
Board of Dresdner Bank AG

Dr.-Ing. Dieter Soltmann  
Munich,  
Member of the Managing Board of  
Gabriel Sedlmayr  
Spaten-Franziskaner-Bräu KGaA

Lodewijk C. van Wachem  
The Hague, Netherlands,  
Chairman of the Supervisory Board of  
Royal Dutch Petroleum Company/Shell

\*employees' representative

Bernd Pischetsrieder  
Chairman  
(until February 5 1999)

Prof. Dr.-Ing. Dr. h.c. Dr.-Ing. E.h.  
Joachim Milberg  
Chairman  
(from February 5 1999)

Ernst Baumann  
(from March 18 1999)

Volker Doppelfeld  
(until May 12 1998)

Carl-Peter Forster  
(from February 5 1999)

Dr. Walter Hasselkus  
(until December 31 1998)

Dr. Henrich Heitmann  
(from February 5 1999)

Günter Lorenz  
(from May 12 1998)

Dr. Helmut Panke

Dr.-Ing. Wolfgang Reitzle  
(until February 5 1999)

Prof. Dr. -Ing. Werner Sämman  
(from December 1 1998)

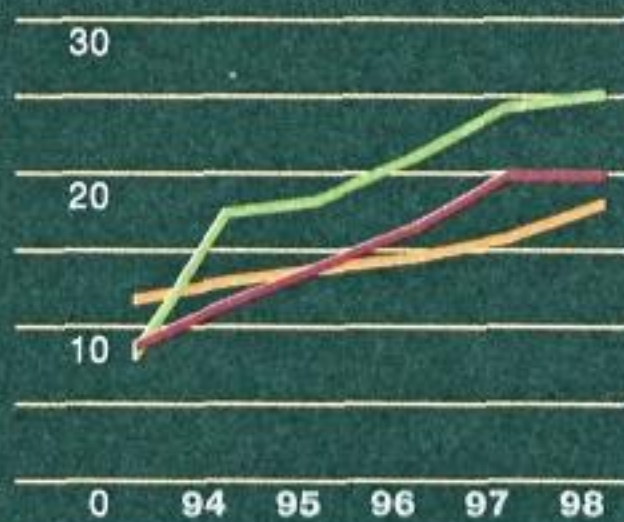
Dr. h.c. Horst Teltschik

Dr.-Ing. Wolfgang Ziebart  
(from February 5 1999)

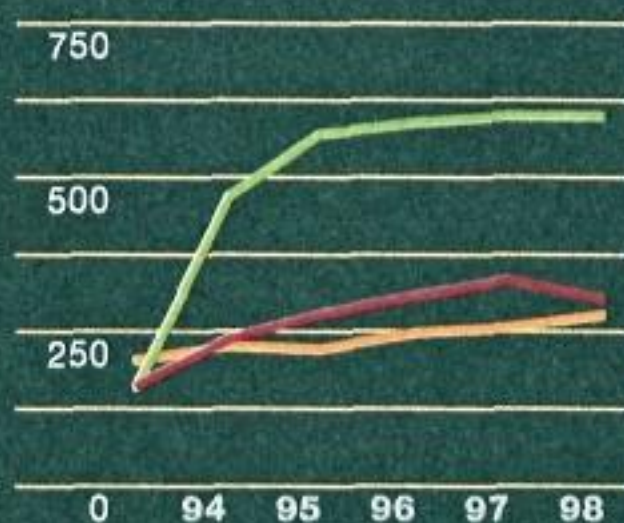
Executive Director:  
Dr. Hagen Lüderitz

General Counsel:  
Dr. Dieter Löchelt

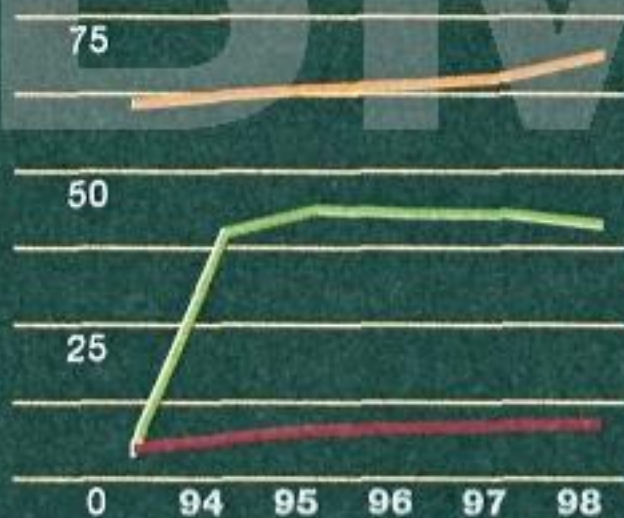




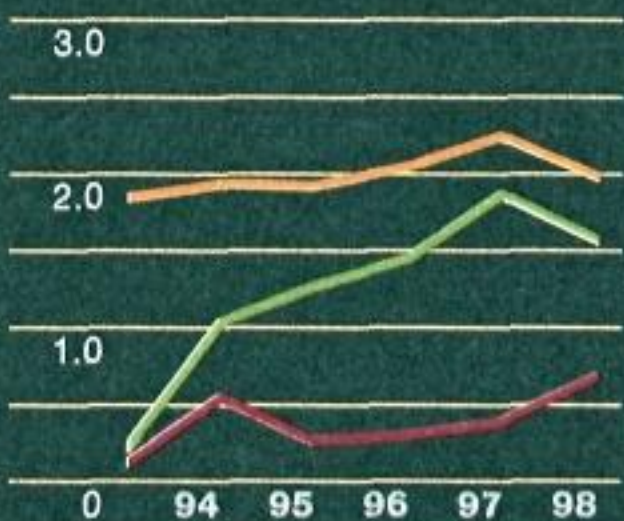
**BMW Group sales according to regions**  
in DM billion



**Deliveries of BMW Group cars to customers according to regions**  
in thousands



**BMW Group employees according to regions**  
in thousands



**BMW Group investments according to regions**  
in DM billion



**Business Review.** 1998 was a successful year for the BMW Group overall. Results achieved by BMW Automobiles were the best ever on company record. Losses in the Rover Automobiles segment, however, were markedly higher – attributable in part to the high costs of reorganisation and restructuring. BMW Rolls-Royce made decisive progress in aero-engine sales and currently holds a record number of orders. Success on international markets created new jobs within the BMW Group in 1998.

**BMW AG**



## **Business review of the BMW Group**

### **Positive overall development for the Group**

BMW Automobiles business improved once more in 1998, both in terms of volume and results. The new 3-Series saloon was excellently received on the market; the Z3 coupé, M coupé, and the M5 added further impetus to sales of BMW cars. Record figures were also recorded for BMW motorcycles.

The competitive position of Rover Automobiles was negatively influenced in the year under review by model changes, currency fluctuation and market conditions, particularly in the UK, its home market, and in Japan. Numerous short and medium-term counter-active measures were introduced in 1998. A team of experts has been working for several months to identify cost-saving measures and improvements to operating procedures which are to be implemented at Rover Automobiles. The proposed improvements are to be implemented without delay.

Agreements quickly reached with British trade unions and company staff, particularly those pertaining to increased flexibility in working hours, will have a positive long-term influence on the cost situation of the Rover Automobiles segment.

BMW Rolls-Royce made decisive progress in aero-engines business in 1998. The commercial potential to the BMW Group of this business segment is underscored by the certification of the new BR715 engine, which has been selected exclusively for use in the Boeing 717-200, and a new record for engines on order, totalling over DM 3 billion.

Exceptional growth was achieved by BMW Financial Services during the 1998 business year, following major increases achieved in 1997. The volume of these services – leasing and financing business for BMW and Rover Automobiles – climbed 20% in comparison with the previous year, to a total value of DM 31.5 billion.

### **Rolls Royce rounds off the brand portfolio of the BMW Group**

In the year under review, keen interest was generated by acquisition of the Rolls Royce Motor Cars brand, the British carmaker of long-standing tradition. The brand portfolio of the BMW Group has thus found a perfect complement in the top luxury class.

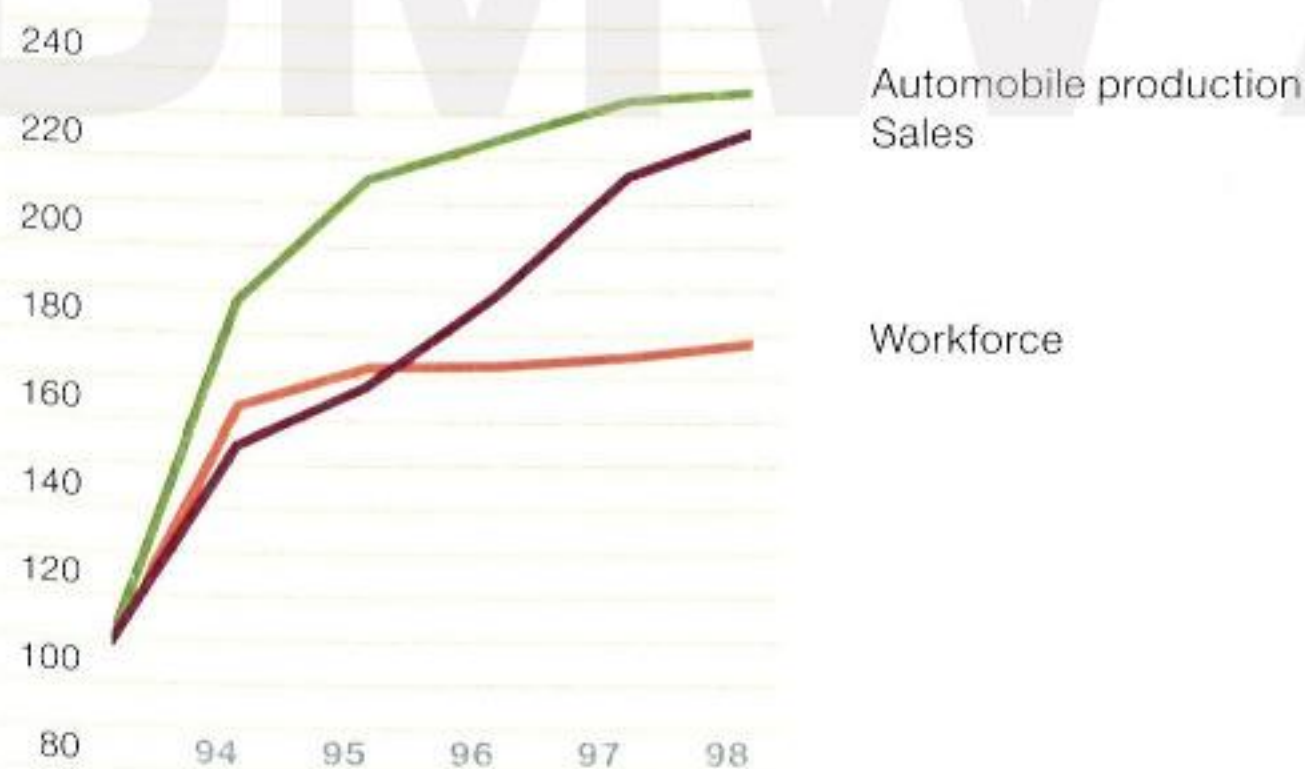


In 1998, a subsidiary of the BMW Group acquired all rights to the name Rolls Royce in respect of cars for the sum of 40 million pounds Sterling (approx. DM 115 million). The company Rolls Royce Motor Cars, acquired by VW from the British Vickers Group for DM 1.44 billion, received the license at no charge from BMW to manufacture and sell vehicles under the Rolls Royce name for a limited period, ending December 31 2002. BMW will then itself make use of these rights from 2003 onwards.

### **The BMW Group produces a record 1.2 million vehicles**

Car production in the BMW Group rose by nearly 1% in 1998 compared with the previous year, reaching a total of 1,204,000 vehicles sold under the BMW, Rover Cars, Land Rover, Mini and MG brands.

Production of BMW cars rose by 5% to 706,400 units in 1998. Capacities were utilised to the full, and sales could not be further increased in spite of the existing demand. In the same period production of BMW motorcycles climbed to 60,200 units, an increase of over 9%. At a total of 497,600 units, on



**Sales, automobile production and workforce of the BMW Group**  
Index: 1993 = 100

the other hand, 5% fewer vehicles were produced by Rover Automobiles.

Vehicle sales of the BMW Group in 1998 matched the high level achieved in the previous year. Close to 1.19 million vehicles were delivered to customers of the BMW Group. Germany, the UK and the USA remained the key markets. The Group operates its own factories in these markets.



## **Business review of the BMW Group**

Deliveries of BMW cars rose by 4% in the year under review, reaching a new record figure of 699,400 units. BMW once again achieved new sales records in many countries, including the USA, Canada, Great Britain and Australia, as well as the Middle East and numerous other markets represented by importers.

Very gratifying progress was also recorded in the BMW motorcycle segment: on the seventy-fifth anniversary of the company's activities in this product sector, BMW delivered more than 60,300 motorcycles to customers around the world. This increase of almost 12% represents almost double that of approximately 6.6% recorded on the world market for motorcycles.

In the year under review, total deliveries of Rover Automobiles declined by over 6%, to 487,700 units. The performance of individual brands of Rover Automobiles did, however, vary widely: while customer interest in Rover Cars waned, demand rose particularly for Land Rover and Mini models. Deliveries of MG sports cars remained at the level of the previous year.

The sales organisation of the BMW Group at the end of 1998 comprised a total of 37 wholly owned distribution companies; seven of these are engaged in the sale of both BMW models and those belonging to Rover Cars, Land Rover, Mini and MG.

In addition to the dealer organisation, 17 company showroom outlets in Germany sell BMW cars.

### **BMW Group sales increase to DM 63 billion**

For greater ease of international comparison, the income statement for the year under review is presented here according to cost-of-sales accounting principles.

In cost-of-sales-accounting, sales revenue is stated in direct relation to the costs incurred in manufacture of the respective products. Other expenditure is primarily attributed to the operating functions of marketing and general administration. Only such expenditure as can not be categorised under these functions is stated in the respective other, separate items of the income statement.



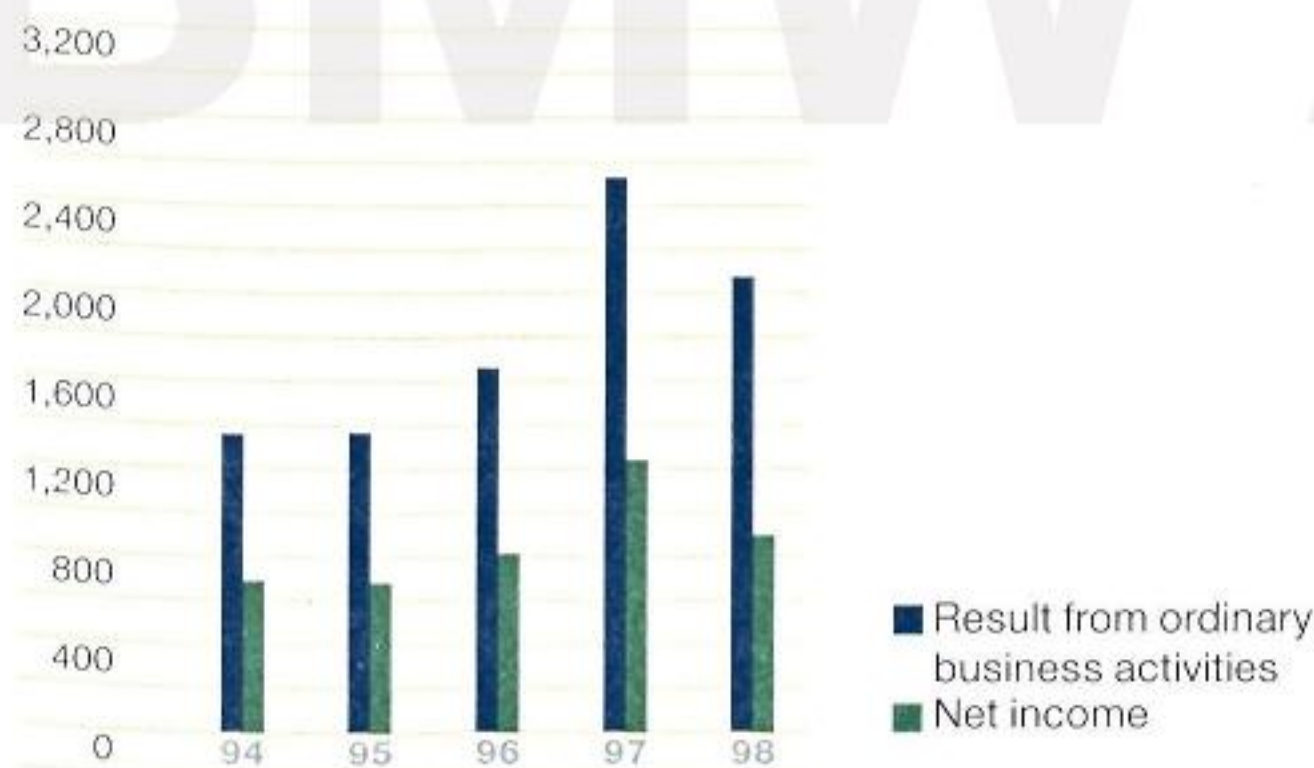
Whereas sales with external and other segments in the BMW Automobiles segment rose by 6.2% to DM 43 billion, they declined by 11.1% in the Rover Automobiles segment, to DM 16.6 billion.

BMW Motorcycles sales showed a renewed healthy increase of 15.6%, to total DM 1.3 billion.

BMW Rolls-Royce increased sales by 38.2%, to DM 723 million.

Sales achieved by Financial Services increased by 45.5%, to DM 11.3 billion, primarily due to sales of used leasing vehicles. Sales consolidations between the segments, amounting to DM 9.7 billion, led to total Group sales revenue of DM 63.1 billion – an increase of 5% against the previous year, and once again a sharper rise than in production and sales volume.

At 68.4% of total sales, the European market accounted for by far the largest part of sales by the BMW Group. North America accounted for 19.9% of sales, the remaining 11.7% of sales revenue being generated in markets of the Asia Pacific region, Latin America and Africa.



**Development of result of the BMW Group**  
in DM million

Manufacturing costs increased by 6.3% in comparison with the previous year, to DM 53 billion – a greater rise than in sales. The ratio to sales revenue thus rose by 1.1 percentage points to 84%. The gross operating result declined by 1.3%, to DM 10.1 billion.

Marketing and general administration costs rose overall by 1.8%, to DM 8.1 billion. The positive result from other operating income and expenses declined by DM 147 million.



## **Business review of the BMW Group**

In spite of the negative result in the Rover Automobiles segment, the overall result from ordinary activities fell only by 17.9%, to DM 2.076 billion. After deduction of earnings-related and other taxes, totalling DM 1.173 billion, net income for the Group is stated at DM 903 million, 27.5% down on the previous year's figure.

### **Renewed record result for the BMW Automobiles segment; losses in the Rover Automobiles segment**

For the business segment of BMW Automobiles, the 1998 result from ordinary activities improved by 24.5%, to DM 3.9 billion – and thus once again made the most important contribution to the result of the entire Group.

The Rover Automobiles segment showed a loss of DM 1.9 billion, attributable to changes in the model range, prevailing market conditions and fluctuating currencies, as well as restructuring measures newly introduced.

The result in the segment of BMW Motorcycles was a further improvement, increasing by DM 23 million to DM 31 million.

A substantial improvement was also returned by BMW Rolls-Royce GmbH, due primarily to the first full year of sales of the BR710 engines. Preparatory development work on the BR715 engine variant led to a loss of DM 458 million in the Aero Engines business segment, cutting back these losses by 30.8% against 1997.

Financial Services continued the positive development of the previous year. The result for this segment improved by DM 100 million, to DM 847 million. Taking interest expenditure in financing of leasing business into account, the result from ordinary activities was DM 175 million.

### **Higher dividend amount**

The Board of Management and the Supervisory Board propose to the Annual General Meeting of Shareholders that the unappropriated profit of BMW AG available for distribution, totalling DM 457 million, be used to pay a dividend of DM 20.00 per ordinary share and DM 21.00 per preference share, each with DM 50 nominal value and with full dividend entitlement, on the subscribed share capital (DM 920.5 million in ordinary shares and DM 69.4 million in pre-



ference shares). It is furthermore proposed that a dividend be paid of DM 10.00 per ordinary share and DM 10.50 per preference share, each with DM 50 nominal value and with dividend entitlement as of July 1 1998 (DM 276.1 million in ordinary shares and DM 20.8 million in preference shares from the capital increases of 1998).

### **Slightly lower prices in procurement**

The material costs for products, together with the investments of the BMW Group, totalled DM 33.4 billion in 1998. The product costs declined due to a favourable combination of effects: increased productivity, falling raw materials prices and only moderate pay increases.

The continued decline in raw materials prices was primarily attributable to the recession in Asia and the stronger presence of eastern European countries on the world market.

High priority continues to be given to cooperation between procurement departments at BMW and Rover. Following step-by-step integration, these two departments were amalgamated in 1998 into a combined procurement function for the entire Group.

### **The BMW Group creates new jobs**

1998 saw the creation of new jobs once again within the BMW Group. By the end of the year the number employed rose overall by a total of nearly 2,300 to a record figure of 119,900 employees worldwide.

Thanks to the positive development of business at BMW Automobiles, around 4,000 employees joined the staff here – primarily in production and sales – bringing the relevant total to over 76,000.

In the year under review, new jobs were also created once again at BMW Motorcycles, where 150 employees joined a staff that now counts nearly 2,100 employees within its ranks.

BMW in Germany once more took up the training initiative begun in 1997: in the year under review, positions were found for more than 1,000 new apprentices, a larger number than ever before.

In comparison with the previous year, the number of staff employed at Rover Automobiles declined by 2,350, to a new total of roughly 36,800 employees. Reductions in the number employed there were



## Business review of the BMW Group

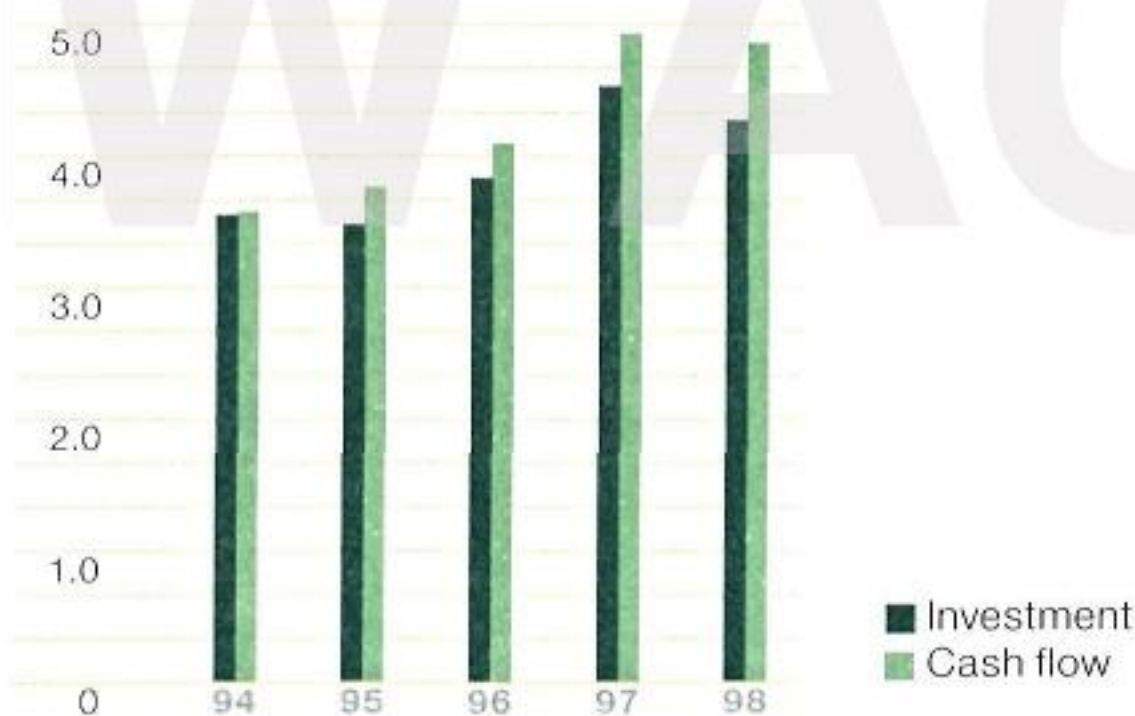
primarily the result of a weakened competitive position, as well as preparatory measures towards the introduction of more flexible working hours in production.

### Level of investments remains high

Overall investments in preparatory work on new models, the modernisation and expansion of production capabilities, and in the strengthening of international sales and marketing activities, remained high at approximately DM 4.3 billion. This figure represents a ratio of 6.8% against total sales in the year under review.

Investment in the BMW Automobiles segment focused on production facilities in Spartanburg, South Carolina, where the BMW X5 is to be produced. Investment activities at Rover were primarily directed at preparation for production of the Rover 75 at the Cowley works and modernisation of the works at Longbridge.

Investment and cash flow  
of the BMW Group  
in DM billion



### New approaches in research and development

Competitive pressure and time constraints have meant that the BMW Group today no longer develops cars in sequential steps, but through simultaneous engineering. This relies on a continuous exchange of information between the BMW Research and Engineering Centre (FIZ) in Munich, its counterpart at Rover in Gaydon and other international research and development facilities, as well as planning departments, production and suppliers to the BMW Group.

New impetus to product development is being generated by the Technology Office, which opened in



June 1998 in Palo Alto, California. Working in collaboration with leading US companies in the fields of electronics, communications and new materials, this engineering office works at the very earliest phase of the design process towards developing innovative systems and components for future car models of the BMW Group.

In order to complete complex development tasks more rapidly, with greater flexibility and improved cost-effectiveness when compared with manually constructed vehicle models, the BMW Group increasingly relies on computer-based development techniques. In future, a growing number of steps in the development process will be carried out in digital form, beginning with the virtual three-dimensional representation of the design, to component engineering, through to testing of specific functions. The new methods furthermore ensure comprehensive assurance of product quality. BMW makes use of these technological advances in order to respond more readily and flexibly to the needs of individual customers. This growing "virtualisation" in BMW's worldwide research and development activities calls for the introduction of new methods and processes; they are all employed with the express objective of preserving the characteristics typical of each brand.

### **A record number of orders for BMW Rolls-Royce aero-engines**

Significant progress was achieved in business with aero-engines manufactured by BMW Rolls-Royce GmbH in 1998. Certification of the new BR715 engine for the Boeing 717-200 was completed on schedule. Boeing's new passenger airliner will make exclusive use of the engine. The 717-200 successfully completed its maiden flight in September, and the test programme is due to be concluded in mid-1999.

At the same time, the BR710 engine is already in everyday service aboard the Gulfstream V long-haul business jet. Up to the close of 1998, Gulfstream Aerospace Corporation had placed orders for a total of 400 BR710 engines. Thanks to international certification of the Bombardier Global Express aircraft, the second variant of the BR710 engine was also successfully introduced on the market. BMW Rolls-Royce has up to now received contracts to deliver over 700 BR710 engines.



The new factory under construction at Hams Hall near Birmingham, where four-cylinder petrol engines for BMW and Rover vehicles are to be manufactured as of the second half of the year 2000.







## **Business review of the BMW Group**

### **Preparations for the euro in two stages**

BMW is completing its transition throughout the Group to the new currency in two stages for reasons of cost and to maintain maximum flexibility.

The capability of the BMW Group to transact business in euros with outside partners was already successfully implemented by the end of 1998, so that the new currency could be fully accepted in transactions with them from the very beginning of the new year. By the time the second stage of the euro transition is completed, latest at the end of 2001, all relevant data will have been converted into euro from the currencies of participating countries.

### **BMW well prepared for year 2000 conversion**

Computer programs or technical systems operating with two-digit year numbers can cause errors as soon as the year 2000 arrives. Synchronisation or sorting of dates as they are generated, processed, stored or read can then lead to system failures

BMW began to address this problem as early as 1996, identifying, successively testing and subsequently correcting all relevant systems and products of the Group.

In a concerted campaign with the association of the automobile industry, suppliers to the Group were reviewed in detail and without exception to ensure that their operations would not be disrupted by the advent of the year 2000.

Conversion and adaptation measures will be completed by mid-1999. These measures ensure that any residual constraints posed by the "millennium bug" can be overcome.

### **Developments in the first quarter of 1999**

The generally gratifying sales situation for BMW car models has continued in the opening months of the new year.

Further impetus was given to sales of the 3 Series with the market introduction of the 316i saloon. Preparations for the production of the recently presented 3-Series coupé and 3-Series touring are proceeding according to plan.

Activities at Rover Cars are focused on preparing for production of the Rover 75. The positive response to this model received from the trade press, dealers and the general public allow optimism with regard to



the future sales prospects of this model. Land Rover continues to be successful in many international markets, the brand's progress fuelled by the introduction of the new Discovery II as well as the Freelander, entering its first full year of sales following market introduction in 1998.

## **Prospects**

Prevailing conditions in the world economy will weaken growth in 1999, a development from which the automobile markets will not be completely immune.

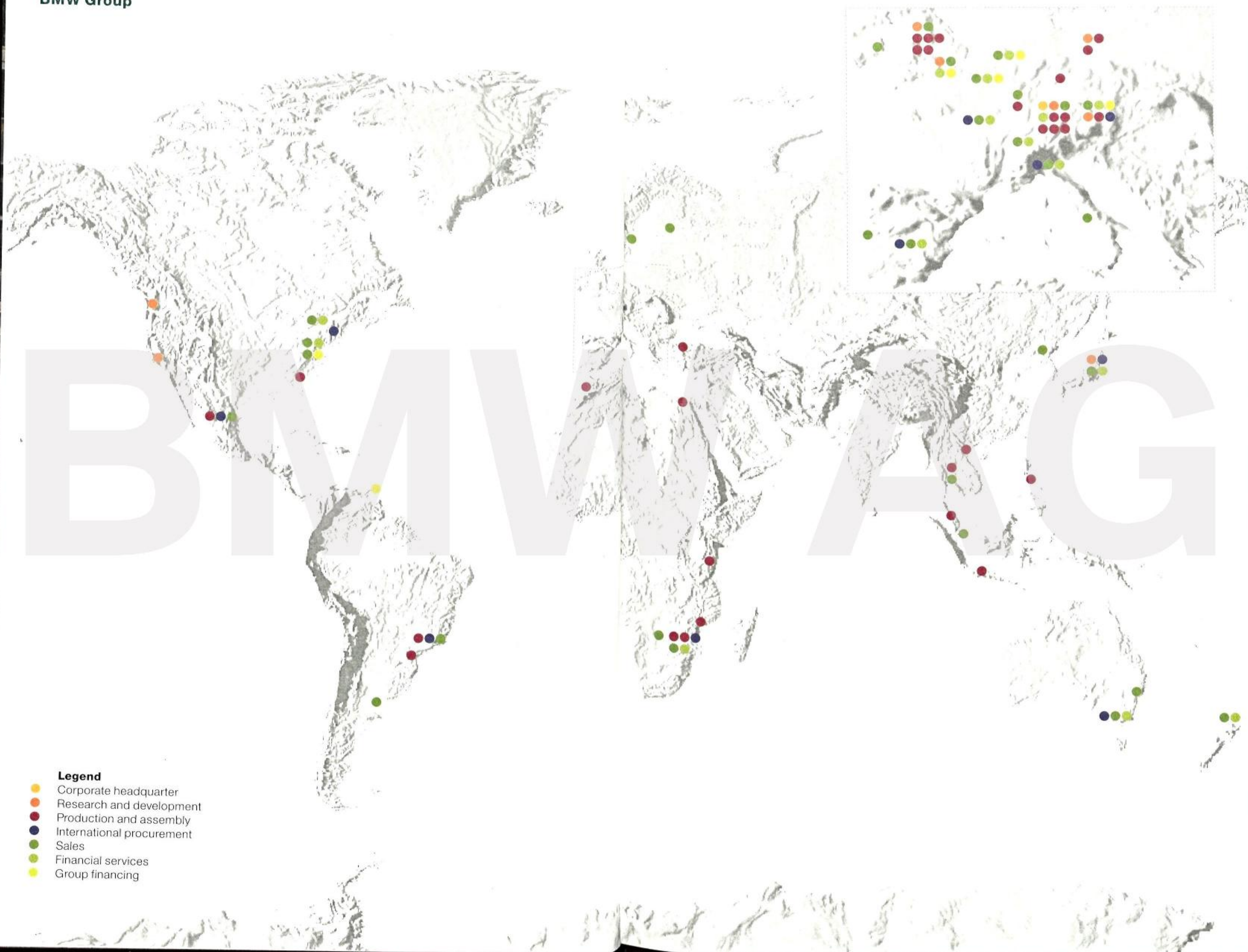
Particularly in regions with a high degree of market saturation, insecurity with regard to earnings expectations will lead to postponements of intended purchases. Western Europe and North America will be especially affected. The markets of Latin America are also suffering from stagnation in the region; consequently sales of cars must be expected to decline slightly and temporarily worldwide.

At the same time, additional growth in BMW's car business will be stimulated in the current year through the introduction of three new models, beginning with the market launch of the 3-Series coupé in April and the 3-Series touring in the autumn. A new market segment will be penetrated with the X5 "Sports Activity Vehicle", due to be launched on the North American market towards the end of the year, followed by introduction on the other world markets from 2000 onwards.

Further opportunities in the diesel market segment will be opened up through the full availability of the new 4 and 6-cylinder direct-injection engines, as well as the 8-cylinder diesel engine to be introduced at the top of this segment. The latter, unique for its exceptionally smooth and quiet performance and low consumption, will be available in the BMW 740d in the course of 1999.

Improvements to the competitive position of Rover Automobiles will be achieved through focused restructuring measures and the introduction of new products. The determined pursuit of a broader international scope of sales and marketing activities and the continued success of Land Rover through the Freelander and new Discovery II, combined with the market introduction of the Rover 75, are firmly expected to improve the overall position of Rover in car markets around the world.







## **BMW Group**

### **BMW Automobiles and Motorcycles**

#### **BMW AG Munich**

##### **Development**

Research and Engineering  
Centre, Munich  
Diesel Development Centre,  
Steyr, Austria  
BMW M GmbH Gesellschaft für  
individuelle Automobile,  
Munich  
BMW Technik GmbH,  
Munich  
Designworks/USA, Inc.,  
Newbury Park, CA, USA,  
Munich office  
BMW Technology Office,  
Palo Alto, CA, USA  
BMW Engineering Japan,  
Tokyo  
Motorsport Ltd.,  
Bracknell, UK

##### **Sales**

Austria  
Belgium  
France  
UK  
Spain  
Italy  
Netherlands  
Norway  
Switzerland  
Finland  
Sweden

##### **Production**

Munich plant  
Dingolfing plant  
Regensburg plant  
Wackersdorf plant  
Landshut plant  
Berlin plant  
Eisenach plant  
  
Spartanburg plant, USA  
Rosslyn plant, South Africa  
Steyr plant, Austria  
BMW Motoren Hams Hall GmbH,  
UK  
Tritec Motor Ltda., Campo Largo,  
Brazil

##### **CKD assembly plants**

Toluca plant, Mexico  
Amata City plant, Thailand  
Hanoi plant, Vietnam  
Cairo plant, Egypt  
Jakarta plant, Indonesia  
Kuala Lumpur plant, Malaysia  
Manila plant, Philippines

##### **Sales**

Singapore  
Australia  
Argentinien  
Brazil  
Canada  
Japan  
South Korea  
Mexico  
New Zealand  
USA  
South Africa  
Thailand

### **Rover Automobiles**

#### **Rover Group Ltd. Warwick**

##### **Development**

Design and Engineering Centre,  
Gaydon

##### **Production**

Longbridge plant (Birmingham)  
Solihull plant (Birmingham)  
Oxford plant  
Swindon plant

##### **Assembly plants**

Mutare plant, Zimbabwe  
Nairobi plant, Kenya  
Istanbul plant, Turkey  
Kuala Lumpur plant, Malaysia  
Pretoria plant, South Africa  
São Paulo plant, Brazil  
Casablanca plant, Morocco

##### **Sales**

Austria  
Belgium  
Germany  
Spain  
France  
Ireland  
Italy  
Netherlands  
Portugal  
Switzerland  
Australia  
Brazil  
Japan  
South Africa  
USA



**BMW Rolls-Royce  
Aero Engines**

**BMW Rolls-Royce GmbH  
Oberursel**

**Development and production**

Development Centre  
Dahlewitz

Dahlewitz plant  
Oberursel plant

**BMW Financial Services**

Australia  
Belgium  
Germany  
France  
UK  
Italy  
Japan  
Canada  
New Zealand  
Netherlands  
Austria  
Switzerland  
Spain  
South Africa  
USA

**Group Financing**

Belgium  
Netherlands  
Austria  
Curaçao  
UK  
USA

BMW AG

**International procurement**

Austria  
France  
Italy  
Spain  
Japan  
Australia  
Mexico  
Brazil  
USA  
South Africa

**Other subsidiaries**

Bavaria  
Wirtschaftsagentur GmbH,  
Munich  
BETEK Bau- und  
Energietechnik GmbH,  
Munich  
Kontron Elektronik GmbH,  
Eching  
softlab GmbH  
für Systementwicklung und  
EDV-Anwendung,  
Munich

Most of the companies shown  
here are wholly-owned BMW  
companies.



## **Highlights of the business year**

### **January**

An important milestone for BMW Rolls-Royce: Boeing decides to equip its new 100-seat 717-200 passenger airliner exclusively with BR715 engines. In the next 20 years, Boeing estimates that worldwide demand for aircraft of this category will total around 2,600 units.

### **February**

Two world premieres in Geneva: BMW presents the new 3-Series saloon and the M5 for the first time.

### **March**

BMW opens the "Institute for Mobility Research" in Berlin. The key purpose of the Institute is to initiate and promote research work, as well as to further dialogue amongst industrial companies, professional associations, and government.

### **April**

The foundations are laid for two new engine plants. 4-cylinder petrol engines for cars of the BMW Group are to be built in future at Hams Hall in England; and in a joint venture with DaimlerChrysler, a new factory for smaller 4-cylinder petrol engines is to be constructed in Campo Largo in Brazil. These engines are designated for the Mini as well as for models of the Chrysler brand.

The 3-Series enters its fifth generation with market introduction of the new saloon.

BMW introduces online ordering in Germany.

### **May**

Opening of the exhibition "The Art of the Motorcycle" at the Guggenheim Museum in New York. BMW acts as a partner to the exhibition.

### **June**

The market-research company J.D.Power and Associates awards the BMW Dingolfing plant the "Platinum Plant Award" for the best production quality worldwide. The Munich and Regensburg plants each receive the "Silver Plant Award".

The BMW Z3 coupé is presented to the international media.



## **July**

BMW acquires from Rolls Royce plc. the rights and name of Rolls Royce Motor Cars. An agreement is concluded with VW on further utilisation of these rights.

The new innovation park in Wackersdorf is inaugurated, where BMW collaborates closely with more than a dozen suppliers.

On July 1, BMW takes up occupation of its new representative office in central Berlin; it will serve as a key link between the BMW Group and political decision-makers.

## **August**

The 530d and 730d, with the new 3-litre, six-cylinder diesel engine, are presented to the international press in Bremen.

## **September**

Market introduction of the new R 1100 S sporting tourer motorcycle; the new BMW K 1200 LT luxury tourer is presented at the INTERMOT in Munich.

## **October**

At the beginning of October, Alphabet, the subsidiary of the British fleet-management company, commences business operations in Germany.

World premiere at the Birmingham motor show: the new Rover 75 is shown to the public for the first time. BMW announces that a new assembly plant is to be built in Thailand, where BMW models, Land Rovers and Rover Cars are to be produced.

## **November**

The BMW 320i saloon is awarded the "Golden Steering Wheel" for 1998, as the best new mid-range car model on the market.

The BMW Technology Office USA in Palo Alto, California, is officially opened.

## **December**

The BMW Group and trade union representatives in the UK reach agreement on flexible structures of working time at Rover plants and facilities.



## **The world economic climate**

**The economic climate in 1998 was marked by turbulent economic developments in Asia and Russia, resulting in generally sluggish economic growth. This did not, however, escalate into a worldwide economic crisis. Europe and North America, in particular, were able to evade the crisis affecting these regions, and contributed towards maintaining stability in world economic activity. This is in sharp contrast to the world's second largest economy in Japan, which continued to suffer from a deep recession. Major centres of economic growth in South-East Asia have also been drawn into the crisis in the last few years.**

### **The world economy shaken by financial crisis**

The general trend in the world economy in 1998 continued to point towards further growth, despite hardships experienced through the economic and monetary turmoil prevailing in Asia, Russia and Latin America. Recession, particularly in Japan, resulted in a tangibly slower rate of growth in total GNP worldwide, which increased by 2% compared with 3.5% in the previous year.

Gratifying growth was registered in Western Europe and North America. By contrast, marked decline prevailed throughout the year in Japan and the emerging economies in Asia. Growth in Latin America gradually drifted towards stagnation, albeit without immediate indications of these economies being drawn into a protracted crisis.

Whilst its financial crisis pulled Russia into deep recession, the reform economies of central and eastern Europe were able to avoid being decisively affected. Any decline in growth in these countries was negligible, as they furthered their decisive pursuit of a market-driven process of economic transformation.

World trade continued to profit from the dynamism prevailing in North America and Europe, so that the value of goods and services traded increased once again by 4.1% in 1998.

### **North America – dynamic growth continues**

The strong expansion of overall economic activity in the USA prevailed in the course of 1998. Private consumer expenditure, stimulated by a significant rise in



real earnings, formed the basis for the growth achieved. Corporate investment also increased markedly despite factors contributing to uncertainty in the world economy.

The rate of inflation declined once more in 1998. This was attributable primarily to lower prices for imports and raw materials, as well as rationalisation measures, cost cutting and technical advances.

Thanks to the US Federal Reserve's cautious policy towards lower interest rates, fluctuations on financial markets had no lasting affect on the productive economy in the USA. The strength of the US currency on the other hand is gradually being undermined by the balance of trade deficit, and this development continues to dominate the debate on US economic policies.

Despite the growth achieved there, dynamism in the Canadian economy dropped off slightly. This is largely attributable to months of strike action in the automobile industry, which resulted in somewhat diminished growth both in the private sector and in industrial investments. Inflation returned to moderate levels.

### **Latin America – recession avoided by a narrow margin**

Although Latin America did not suffer directly from the crisis in Asia, the financial turmoil in Russia did have a noticeable impact: losses incurred by capital lenders through Russia's default on payments led to a related withdrawal of capital investments in Latin America. Commitments in emerging markets were also subject to increasingly critical appraisal, creating an overall cutback in investment activity.

At the same time, restrictive budgetary measures introduced by the region's governments did help to maintain temporary stability. The general economic mood also honoured the progress made by Latin American countries in recent years towards overcoming their structural problems.

It was thus possible to fend off an acute recession in 1998, although a great deal of the momentum driving economic growth in recent years was lost.



## **The world economic climate**

### **Japan – caught in a crisis**

The economic slide in Japan continued, with GNP falling by 2.9% compared with the previous year. The economy is experiencing its worst-ever post-war recession, fuelled by weak domestic demand. This in turn is attributable to a fall in real income and a lack of public confidence in economic development.

Corporate investment also declined significantly in the wake of worsening sales and earnings prospects. A further burden is being exerted on the economy through deeply-rooted structural problems (banking crisis, the need for deregulation), as well as through an economic system that appears to have lost its grasp of new imperatives dictated by the emergence of free global markets. Declining exports to neighbouring countries in Asia could thus not be compensated by growth in other regions.

A downward trend in the Japanese economy can only be halted if the spiral of declining production, lower real income and diminishing consumer spending is broken. Nevertheless, numerous programmes launched to stimulate the economy have thus far achieved little, as they have proved inadequate in regenerating either consumer or business confidence in the country's economic prospects.

### **South-East Asia – an end to further decline?**

Turbulence on currency markets in the emerging economies of Asia grew more acute in specific regions. This resulted in a negative flow of capital and a fall-off in exports that led many countries into recession, accompanied by massive cutbacks in production. The declining value of the Japanese yen placed additional burdens on the region's economies in maintaining price-competitiveness.

Towards the end of the year there were initial indications that a further fall in production had been prevented. This was accompanied by an easing of interest rates, less restrictive financial policies and at least partial recovery of liquidity. Exports, too, grew once more. There are thus indications that consolidation of gross national product has taken hold at a low level. A swift recovery is not to be expected.



## **Europe – the safe haven**

Western Europe continued to experience buoyant economic growth, disregarding the growing spread of consequences from regions hit by crisis. Compared with the previous year, however, there was a perceptible shift in the driving forces responsible for that growth. Whilst exports slackened in the wake of a tangible decline in demand from Asia, lower interest rates encouraged general economic performance. This stimulated private consumption as well as investment in plant, equipment and building construction.

Inflation remained moderate, held primarily in check by sinking import prices. These followed a decline in world market prices for raw materials and a simultaneous strengthening of major European currencies. Positive economic developments nevertheless exerted only marginal influence on employment figures, with unemployment persisting at a level of 11%.

General indications of a gradual weakening in dynamic growth appeared towards the end of the year. Despite the confidence generated by the positive effects of European monetary union, the prevailing business climate was negative, influenced by the changing fortunes of the stock market and uncertainty regarding the overall economic picture worldwide.

## **The UK – growth weakens during the year**

Following the recession which afflicted the manufacturing sector, services, too, had to contend with stagnation in the course of the year. The downward trend was attributable for the most part to the overvalued British currency and weakness in the world economy. These had a much more severe effect on Britain than on its partners in the EU. Export orders sank to their lowest level since the recession of 1991.

A total growth in GNP of 2.5% was achieved mainly through private consumption and government spending. The unemployment rate, at 4.7%, was very low in comparison to the rest of Europe.

Inflation, at 2.7%, was slightly lower. This permitted the Bank of England to lower interest rates towards the end of the year in order to encourage investment, which began to fall off at around the same time.



## **The world economic climate**

### **Germany – recovery continues**

Economic recovery continued in 1998, despite external burdens. The German economy expanded at a rate of 2.8%, compared with 2.2% one year previously.

The rate of expansion did lose momentum as the year progressed, but a broader spectrum of the economy benefited from the recovery. Growth found increasing support from domestic demand, encouraged by low interest rates and only moderate inflation. Private consumption rose more steeply than in the previous year as a result of slight improvements in the employment situation and a rise in real incomes. Favourable financing terms and improved sales prospects created strong growth in investments in plant, machinery and equipment. Investments in building construction nevertheless continued to decline.

Exports were not able to maintain their earlier rate of expansion, shrinking by a third to the emerging economies in South-East Asia. Deliveries to emerging markets elsewhere also suffered losses. The reasons for this decline are to be found in the limited import capacity of client markets affected by lower raw material prices, as well as in the strong position held by the German mark in relation to numerous other currencies. German exports to markets in western and central Europe, however, continued to make dynamic progress.

### **Future prospects**

General fiscal conditions will remain favourable in 1999 and contribute to general stimulation of economic growth. Positive momentum will be fuelled to an increasing degree by domestic demand as private consumption continues to grow, encouraged by increasing employment and improved earnings prospects.

Uncertainty in the world economy can be expected to dampen dynamic growth of investments in plant and machinery, but this should be accompanied by a gradual recovery from recession in the building industry. Export expansion is suffering from a weaker economic performance in the USA, the UK and in the Far East, and only partial compensation can be achieved through demand from neighbouring countries in Europe.



The course of further economic development is however ultimately defined by how legislators address problems faced in fiscal policies. It is essential that overall conditions here act as a reliable foundation which encourages an optimistic view of future prospects. This could manifest itself in a positive climate for innovation and investment, stabilising the upward trend. Provided such conditions prevail, GNP in Germany can be expected to grow at a rate of nearly 2% in 1999.

Western Europe, too, will not be able entirely to escape the effects of declining economic performance around the world. Like Germany, other euro countries will be able to partially offset cutbacks in their exports through stable domestic demand. The dynamic performance of the US economy will slightly lose momentum if growth in private consumption declines and investment demand levels out. Monetary policy will have to steer a steady course between stimulating continued healthy growth with only moderate price increases, and at the same time stabilising the financial markets.

Japan will continue to suffer from recession, accompanied by an ongoing credit squeeze, deflation and stagnating exports – the downward trend could, however, bottom out by mid-year. The crisis afflicting countries in South-East Asia has not been overcome, but there are indications that the heavy cut-back in production at the root of the recession will gradually come to an end.



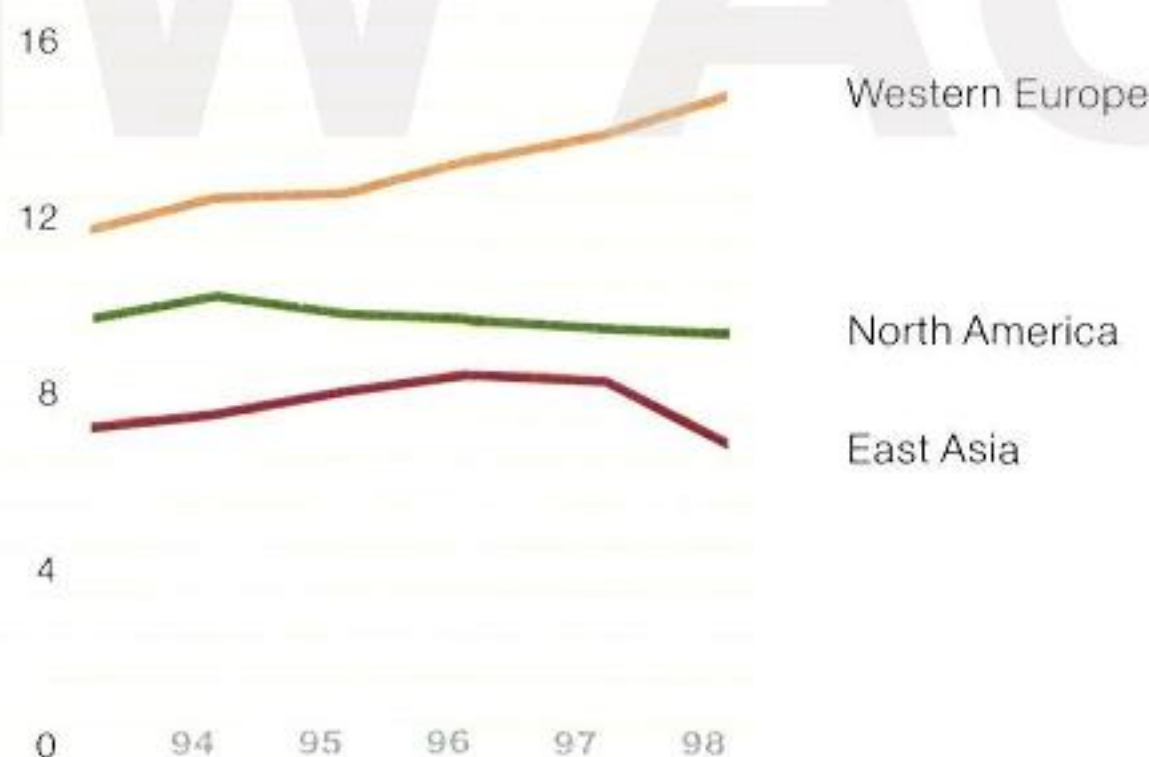
## Car markets

**Demand for cars could not escape the curtailed dynamism of economic developments worldwide. Whereas sales volume and production rose in western Europe, demand fell off significantly in the crisis-afflicted regions of Japan, South-East Asia and Latin America. Producers in these regions were unable to meet their volume targets which, supported by the changes in currency exchange parities, further intensified competitive pressures.**

### **Car production and demand markedly influenced by slackening of economic activity worldwide**

The world market for private cars (excluding so-called light trucks) was characterised by declining demand in 1998. Deliveries to customers in North America and Japan decreased by 1% and 9% respectively. The generally positive development in western Europe reflected the region's revitalised growth, a delayed surge in replacement requirements and the appealing range of models offered. Government support measures, such as the premium scheme for

**Automobile registrations**  
in millions



scrapping old cars, were not uniformly effective in all countries in 1998, although they exerted a positive influence overall. Compared with the previous year, around 2% fewer cars were sold worldwide.

Production of private cars also declined by 2%. Whilst production in western Europe rose by 7%, to a total of 14.3 million units, it declined by the same proportion in North America to 7.0 million units. Japan's hard-hit economy is also reflected in the 5% decline in its car production, to a new total of 8 million units.

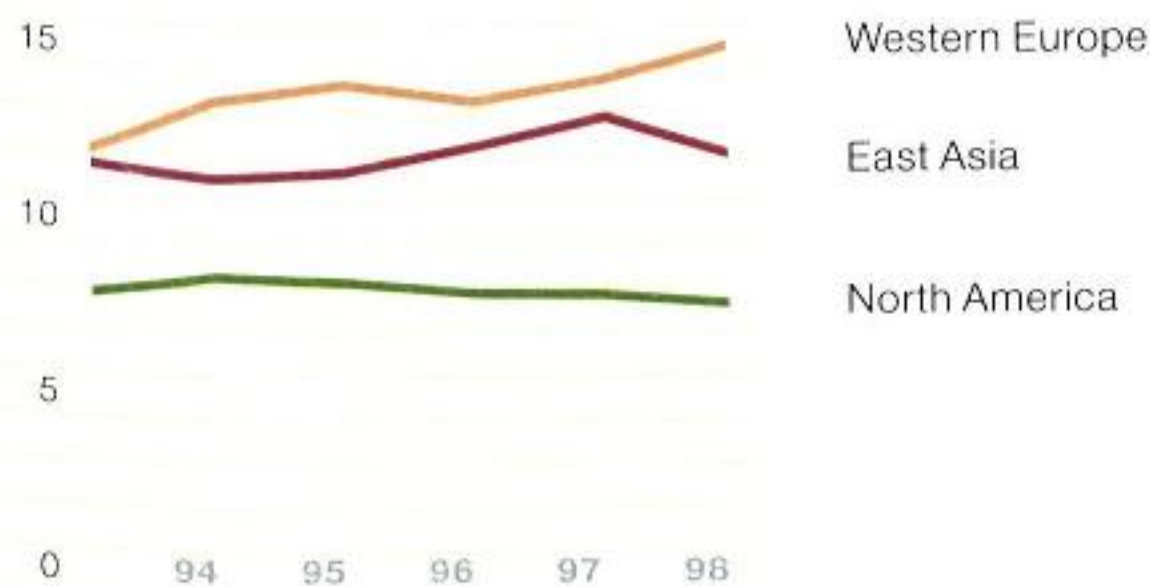


Sustained expansion of car production in Latin America over the last several years was cut off by an abrupt fall of 12% in 1998, to 2.6 million units. Car manufacturers in Brazil played a major role in this development, pulling back their total output by 27%, to 1.2 million units, whereas production in Mexico once again managed to surge ahead by 12% to almost 1 million.

The car industry in South-East Asia, at the centre of the currency-exchange crisis, suffered a severe fall in production of 24%, to 2.5 million units. Annual production in South Korea plunged by 30% to 1.6 million units, whilst the number of cars produced in Malaysia and Thailand plummeted still further by 50%. The impetus for growth in car production in the region was seen to shift towards China and India.

20

**Automobile production**  
in millions



### **North America – upper market segment bucks the trend**

The car market in the USA expanded by 3% in 1998 within a generally positive economic climate. This was accompanied by an ongoing market shift towards light trucks – mini-vans, off-road vehicles, pick-ups – which increased by 8% to 7.5 million units. Sales of private cars were lower for the fourth time in succession, dipping by a further 2%, to 8.1 million units.



## Car markets

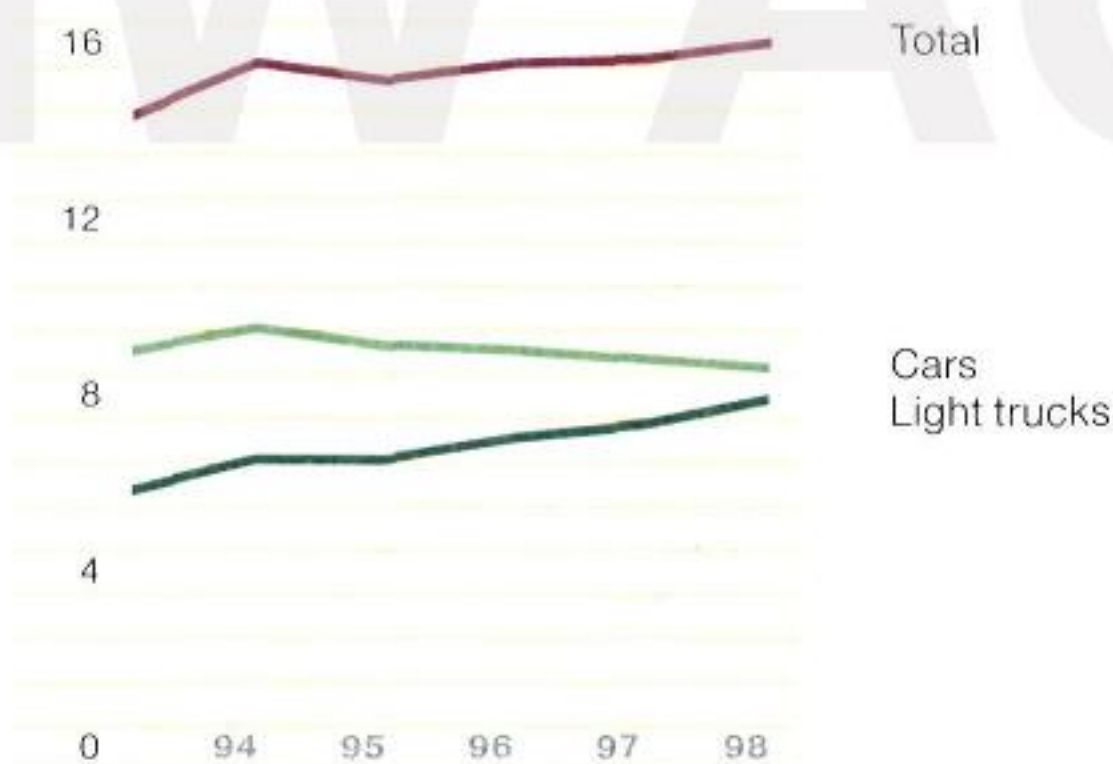
American brands were the worst hit by this weak demand, registering a drop of 6%; their market share fell by 2 percentage points to approximately 57%.

Imported cars in the USA grew in total by 2%, to nearly 1.4 million units, improving their market share to a firm 17%. German carmakers increased their market share to 7% following a best-ever increase of 31%. In 1998, German car manufacturers after 25 years again achieved sales of over 500,000 units on the US market.

Luxury and performance class models were able to brush off the weak trend experienced by the market overall. Car registrations in this segment rose by 6% to 1.3 million units. European manufacturers were the prime beneficiaries of this exceptional growth, recording an increase of 15%, whilst American and Japanese producers made only relatively marginal gains of 3% and 1% respectively.

The shift from private cars to light trucks was more pronounced in Canada than in the USA – in the former market this category represents more than half of new car registrations. Demand for private cars stagnated at around 740,000 units. In marked con-

**Automobile registrations  
in the USA**  
in millions



trast to this stagnation, deliveries to customers of imported vehicles climbed by 12%, increasing their share to 46%. German manufacturers delivered 36% more cars to their customers, and were thus able to raise their market share to 8%.



### **Japan – continued weakness**

Demand for cars in 1998 was held back by a weak economic performance overall and through low consumer confidence. The figure of 4.1 million new car registrations represents a drop of 9% against the previous year.

Deliveries of imported vehicles to customers shrank by 22%; their share of the market slid to somewhat over 6%. Whilst imports from Japanese manufacturing plants in the USA and Europe were halved, the losses of 18% incurred by European manufacturers were, by comparison, moderate. German car brands registered a decline of 16%, only marginally short of the 4% market share they held in the previous year.

Export opportunities were indeed overshadowed by the weak performance of car markets in South-East Asia, but Japan nevertheless did achieve a 3% increase in vehicles shipped to these countries, totalling 3.7 million units. This improved figure could not however compensate for sales losses in the domestic market, resulting in a 5% drop in car production, to 8 million units.

### **Western Europe – positive trend maintained**

New car registrations in western Europe climbed by 7% in 1998, to a total of 14.3 million units. Following a sudden drop in the previous year, registrations in France rose by 13%, to a firm 1.9 million units. A renewed jump of 17% created a new top-mark figure of 1.2 million units in Spain – whilst new car registrations in Italy were down 2%, to 2.4 million, as government-supported premiums for scrapped cars were discontinued.

Confidence in economic performance, demand for replacement vehicles and the market introduction of new models, all combined to exert a positive influence on car markets in Germany and the Benelux countries. Growth here was reported at 6% and 14% respectively. A reduction in taxes levied on new cars in Sweden led to a renewed increase of sales of 13%.



## **Car markets**

New registrations of Japanese cars in Europe climbed by 9% to 1.7 million units; their market share nevertheless remained unchanged at 12%. By contrast, sales by South Korean manufacturers expanded significantly at a rate of 33%. Their presence on the market remains relatively minor, however, manifested by the total of 383,000 units sold and a market share of 2.7%.

The European car market was at the same time characterised by a trend towards diesel models: their share of new vehicle registrations rose to a record level of 25%, equivalent to more than 3.5 million units.

Despite a cutback in exports to the crisis-hit regions of South-East Asia and Latin America, European production of private cars improved by 7%, to a total of 14.4 million units.

### **Great Britain – sustained dynamic growth in the car market**

For the seventh year in succession, a positive trend prevailed in the UK car market, failing by only a narrow margin to achieve a new record in new car registrations after a rise of 3.5% to 2.25 million units. This continuing growth is supported equally by private demand and the market for company cars, which is here of comparable importance in terms of size. The competitiveness of foreign car manufacturers was significantly enhanced as a result of the strong sterling exchange rate. Total car production in 1998 rose by 2.5%, to 1.74 million units.



## **Germany – production exceeds the 5 million mark for the first time**

Many factors contributed to the positive development of demand for cars in Germany, stimulated under stable economic conditions by both a demand for replacement purchases and a generally attractive product policy. The market was driven at the same time by a need to reduce – through favourable pricing policies – the high number of cars still on order. The number of new car registrations rose accordingly by 6%, reaching 3.74 million units. Diesel models successfully reclaimed an almost 18% share of the market.

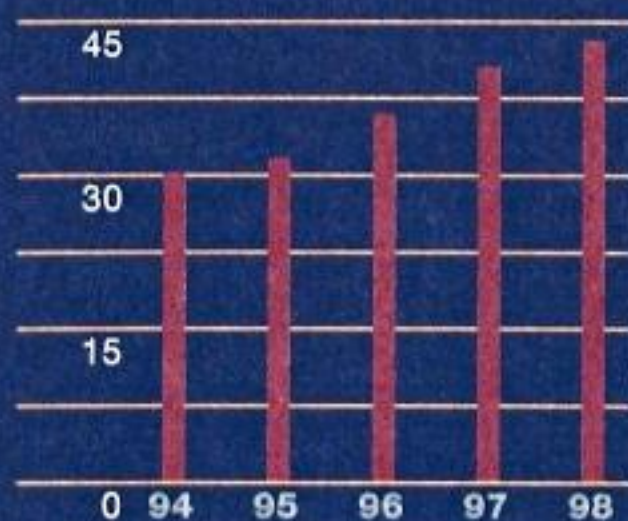
Every third car delivered to customers came from a foreign manufacturer. They were able to increase their sales by 8% overall, to 1.3 million units.

A record number of cars was produced in Germany in 1998, their total exceeding five million for the first time. Up by 14% compared with the previous year, car production figures reached nearly 5.35 million vehicles. Exports, too, topped the 3 million mark – a new first. A gratifying increase of 16% compared with 1997 led to exports of 3.3 million cars, amounting to an export quota for the industry of 61%.

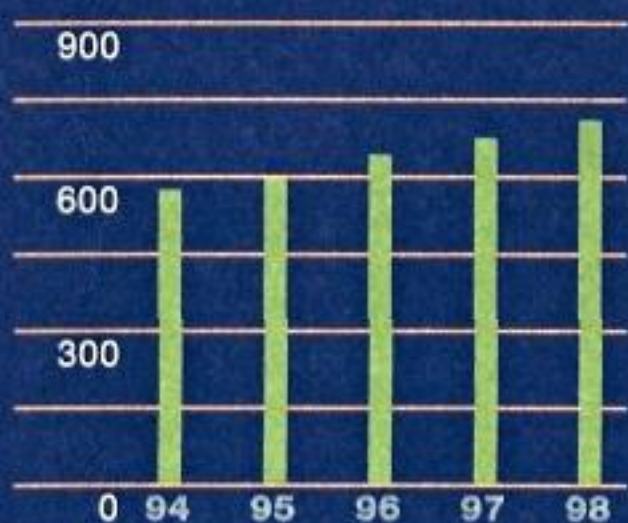
More than a third of the cars exported from Germany were destined for other markets within the EU. Exports to Asia and Latin America fell on the other hand by 17%.

The volume of cars manufactured by German car-makers in plants located abroad rose by 3% in 1998. A total of 2.8 million cars sold under German brands were produced outside the country, the majority in Spain.

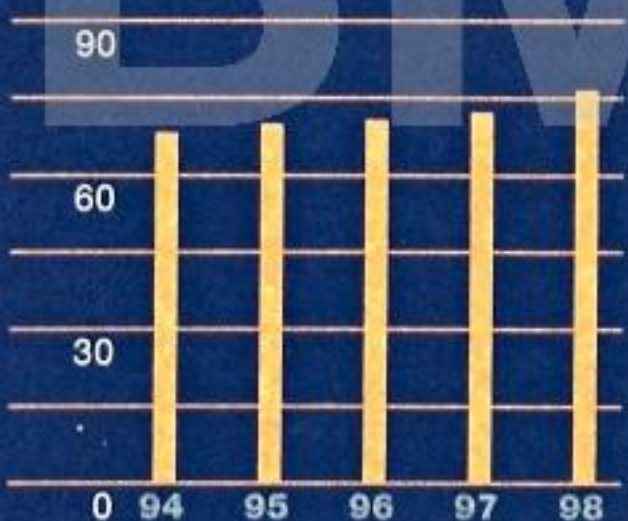




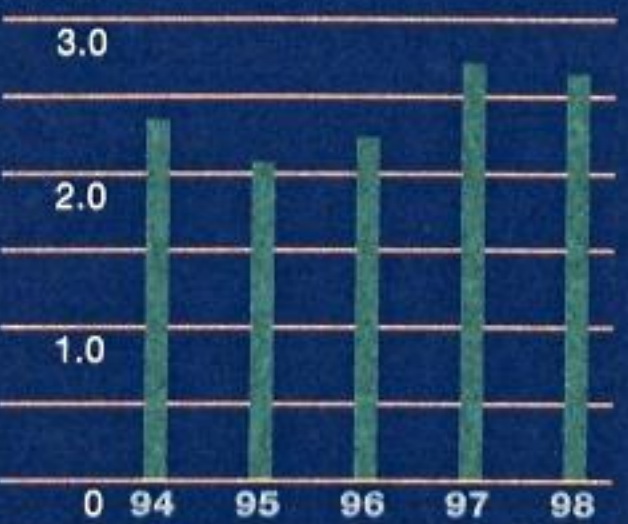
**Sales of  
BMW Automobiles**  
in DM billion



**Production of  
BMW Automobiles**  
in thousands



**Employees in the  
BMW Automobiles business**  
in thousands



**Investment in the  
BMW Automobiles business**  
in DM billion



**BMW Automobiles and Motorcycles. Deliveries of cars of the BMW brand reached an all-time high in the year under review. The new 3-Series saloon led the way, having received an outstanding response from the market. The 5 and 7 Series continued to arouse immense customer interest, and the new generation of BMW diesel engines met with keen demand.**

**1998 not only marked the 75th anniversary of BMW motorcycles, but also the most successful year ever for the company's motorcycle segment. BMW motorcycles achieved a much greater increase in sales than the international market as a whole, thereby expanding the company's market share. The most successful motorcycle was the R 1200 C Cruiser for the first time, closely followed by the R 1100 RT Tourer.**



## BMW Automobiles

### Almost 700,000 BMWs delivered to customers worldwide

1998 was the most successful year in the company's history for the number of cars sold, with a total of 699,400 BMWs delivered to customers. This increase of approximately 4% against the previous year's figure was primarily due to the rapid response to market demand for the new 3-Series saloon.

Due to this model change, BMW's small-car series increased its sales by 9%, to a new annual record of 429,900 units. Of these, 146,250 were the new 3-Series saloon, which became available in April 1998. The main reasons for the model's success are its elegant design, the attractive series-standard equipment and features, and the entirely redesigned four and six-cylinder petrol engines, as well as the first BMW direct-injection diesel engine in the 320d.

Despite the launch of the new 3-Series saloon, deliveries of the 3-Series compact, still in production – around 60,000 units – only just dipped below the previous year's level.

Demand for the 3-Series convertible (27,900 units) and touring models (28,100) slightly declined, as expected in connection with the impending model changes.

Alongside the new saloon, continuing brisk demand for the Z3 roadster was crucial to the sales success of the current 3 Series. Following the dramatic rise in sales of the Z3 in the previous years, figures stabilised in 1998 at 53,000 units worldwide.

Deliveries of cars in the BMW 5 Series declined slightly, by 3%, to 221,600, following record sales in the previous year; the sales volume for 1998 was the second-highest ever achieved for the current mid-range car. The touring models of the 5 Series met with exceptional customer interest: their share in sales of this model series as a whole rose from 14% to 17%. The 7 Series modified in autumn 1998 retained its leadership in Europe in the top luxury segment – thanks in considerable measure to numerous innovative features such as the active seat, voice input for the telephone, notebook and navigation system, ITS head-airbag, and the new diesel-engine options. With 47,200 vehicles delivered to customers in 1998 (-5%), the 7 Series maintained its overall strong position on the world market.

BMW Automobiles	1998	1997
Sales in DM billion	43.0	40.5
Production in thousands	706	672
Employees in thousands	76.0	72.0
Investment in DM million	2,638	2,708



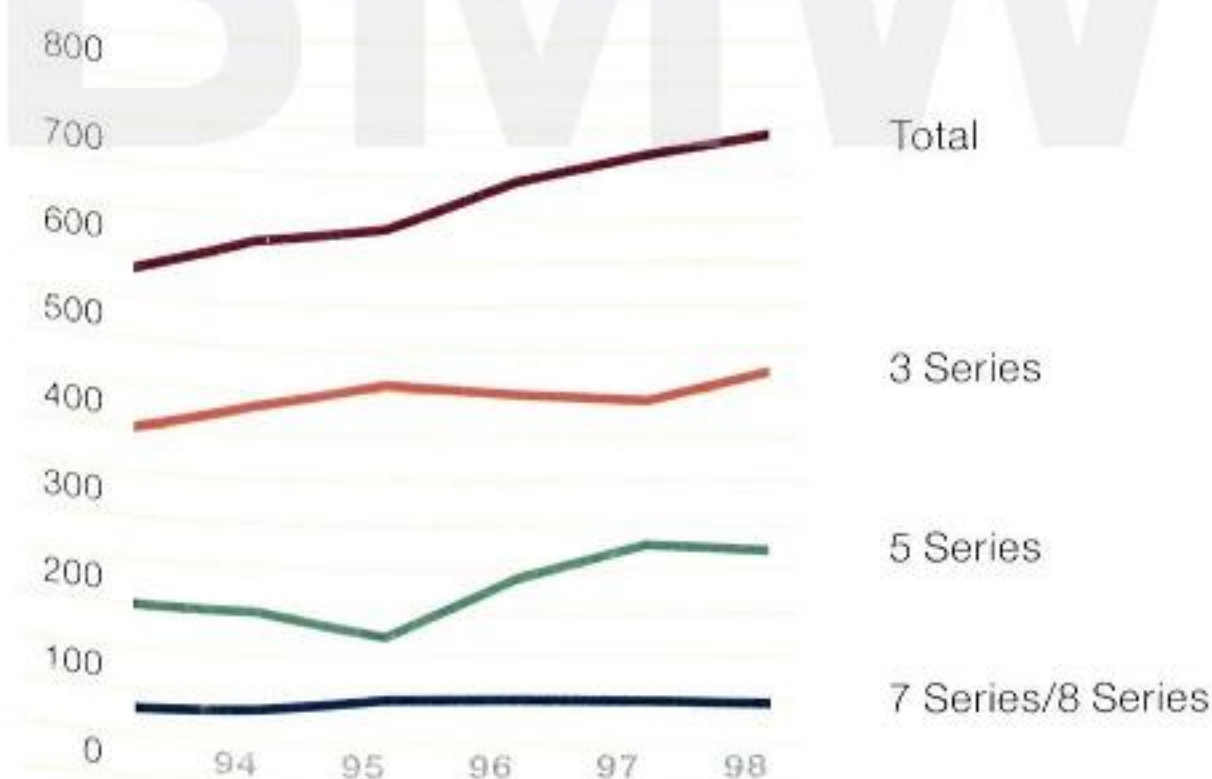
The new 4 and 6-cylinder diesel engines achieved top positions from the very outset in all comparative tests. In 1998, the share of diesel-engine models in BMW production overall climbed to 13%, its highest level ever. Renewed growth in BMW car sales is expected in 1999 from the new 320d, 530d and 730d diesel models – fully available for the first time – as well as from the introduction of the new 8-cylinder diesel engine for the 740d.

### Continued growth for BMW in Europe

BMW car registrations in western Europe rose by nearly 5% in the year under review, to 451,000 units.

The BMW 3 Series accounted for the largest proportion of new registrations in this region, a total of 276,700 cars, this representing an increase of 11%, or 27,000 units.

Demand for models of the BMW 5 Series eased by 5% in the same period, with 152,700 cars sold in 1998. The saloons of the 7 Series, with sales of 21,000 units (-4%), nonetheless retained leadership in their class in western Europe in terms of volume demand.



**Deliveries of BMW cars according to models**  
in thousands

In Germany, BMW car registrations (232,500 units) increased by 2% against 1997, achieving a market share of 6.2%. In the UK, the second most important European market for BMW cars, deliveries exceeded the previous year's level for the fifth year in succession. More than 64,000 BMW cars were sold here, even though the right-hand drive 3-Series saloon was not introduced until September. In Spain, the Netherlands and France, as well as in the Scandinavian markets of Finland and Sweden, BMW achieved



## BMW Automobiles

double-digit growth rates in cars newly registered in 1998. In the western European car markets in which BMW is represented by independent importers, sales rose by 20% to more than 14,000 units.

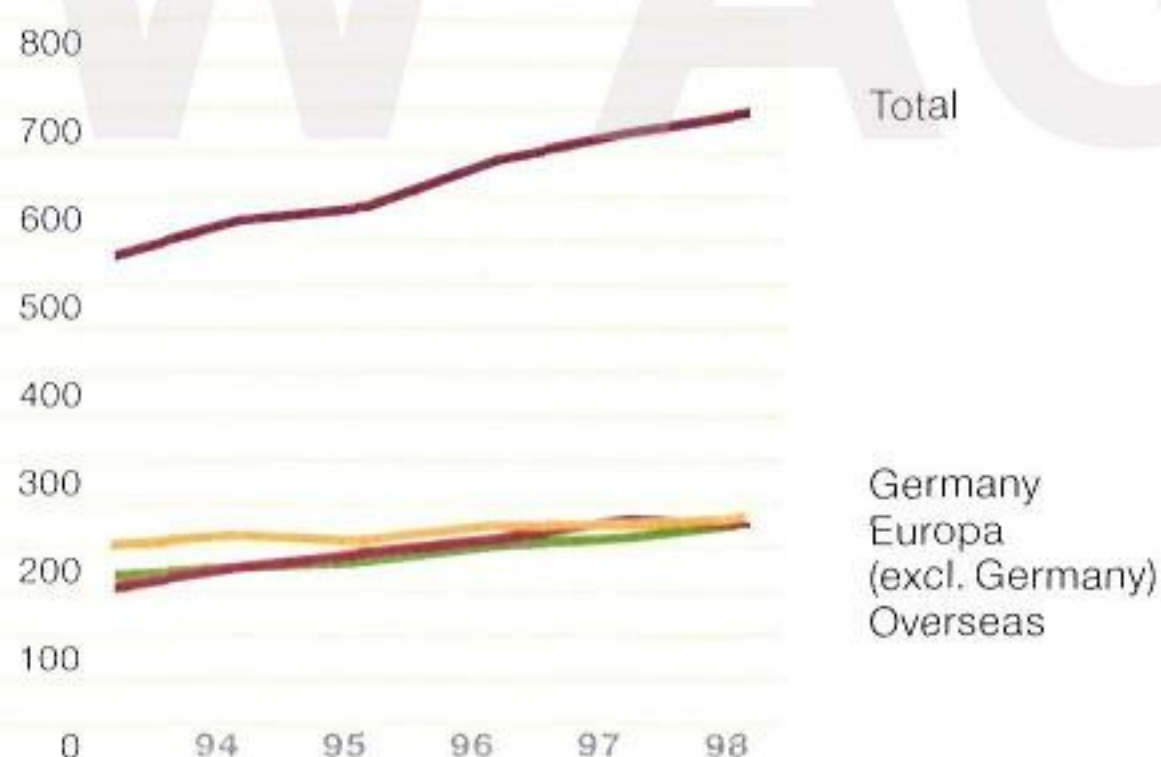
In eastern Europe, Turkey and Israel, sales of BMW cars increased by 11% to a total of 10,100 units.

### Continuing upward trend in the USA

In the slightly easing US car market in 1998, BMW sold an all-time-high figure of 131,600 units, an increase of a full 7%. The 5 and 3 Series led the way, with the 7 Series also exceeding the previous year's record. The USA thus remained the most important market for the BMW top-of-the-range series.

A gratifying increase in sales was achieved in Canada, where a 45% unit-volume rise for 5-Series cars contributed to total of 7,700 car sales, an overall increase of 8% against 1997.

**Deliveries of BMW Cars  
to customers  
according to regions  
in thousands**



Improved sales figures were also returned in the markets of Latin America where BMW is represented by importers (+7%), and by BMW Mexico (+44%). In Brazil, on the other hand, severely afflicted by economic crisis, BMW sales suffered too, falling by around 30% in 1998.



Car markets in countries with BMW sales companies		1998	1997
<b>Europe</b>			
Austria	Total market	295,900	275,000
	BMW	10,300	10,100
Belgium	Total market	452,100	396,200
	BMW	15,300	15,000
Finland	Total market	125,700	104,500
	BMW	1,280	1,100
France	Total market	1,943,600	1,713,000
	BMW	28,500	24,000
Germany	Total market	3,736,000	3,528,200
	BMW	232,500	228,100
Great Britain	Total market	2,247,400	2,170,700
	BMW	64,200	63,700
Italy	Total market	2,369,700	2,403,700
	BMW	36,300	35,200
Netherlands	Total market	543,100	478,300
	BMW	12,000	10,700
Norway	Total market	118,000	127,700
	BMW	2,780	2,770
Spain <sup>1)</sup>	Total market	1,191,300	1,015,700
	BMW	18,500	14,800
Sweden	Total market	253,400	225,300
	BMW	4,800	4,000
Switzerland	Total market	296,900	272,800
	BMW	11,800	11,700
<b>Overseas</b>			
Australia	Total market	584,400	540,400
	BMW	9,300	9,000
Brazil	Total market	1,195,600	1,522,400
	BMW	2,290	3,350
Canada	Total market	740,800	738,600
	BMW	7,700	7,100
Japan	Total market	4,093,100	4,492,000
	BMW	33,500	36,500
Mexico	Total market	426,000	303,500
	BMW	1,940	1,350
New Zealand	Total market	53,800	58,400
	BMW	730	800
South Africa	Total market	203,800	239,800
	BMW	13,400	13,500
South Korea	Total market	568,800	1,159,400
	BMW	320	1,220
Thailand	Total market	46,500	132,100
	BMW	1,010	1,840
United States	Total market	8,142,900	8,272,700
	BMW	131,600	122,500

<sup>1)</sup> Including Canary Islands



## **BMW Automobiles**

### **BMW increases its market share in Japan, despite recession**

The automobile sector suffered considerably from the economic and monetary crisis in many countries of Asia; BMW was also affected by this trend. In Japan, following the record year of 1997, with 36,500 new BMW registrations, the figure fell to 33,500 in 1998. In spite of this 8% decline in sales, BMW Automobiles fared better than the market as a whole and that for luxury vehicles; this increased BMW's market share in Japan. In the most seriously crisis-hit markets of the region – Thailand and South Korea – the deep recession also affected BMW. Massive import restrictions in China led to a sharp fall in vehicle sales.

### **BMW affected by market slump in South Africa**

The overall market for cars in South Africa declined by 15% in 1998. BMW's sales of 13,400 cars, however, were at a comparable level with the previous year. Following sharp rises in the previous year, BMW's sales figures across the remainder of Africa and in the markets of the Caribbean declined in the year under review.

Available since autumn 1998:  
the newly modified 7 Series with  
numerous technical innovations.

### **Growth for BMW in Australia and the Middle East**

Deliveries of all series increased in Australia, rising on average 3%, to a total of 9,300 cars.

In the markets of the Middle East, BMW's positive business development continued as in 1997, although overall economic growth tailed off as a result of the steep drop in oil prices. Alongside the luxury stretch version (L7) of the 7-Series saloon, specially built for the markets of Asia and the Middle East, the BMW 5 Series played the leading role in growing sales. Over 6,500 cars (+18%) were delivered to customers in this region in the year under review.



BMW AG







BMW cars and motorcycles  
in front of the Kunstmuseum in  
Bonn. The building is the work of  
the architect Axel Schultes, and  
was opened in 1994.

Top row:  
328i convertible, 323i touring, 328Ci, 320d saloon,  
323ti compact, M coupé, Z3 roadster 2.8

Middle row, cars:  
M5, 528iA touring, 530d saloon, X5,  
K1200 LT, R1100 S, R1200 C, F650 ST

Bottom row:  
850Ci, 750iL, 730d











## **Quality and innovation in service**

Training of staff in the worldwide BMW dealer organisation focused on two themes in 1998: the technology embodied in the new 3 Series, and the newly introduced generation of BMW diesel engines. In addition to its national customer-service training centres in the most important sales markets, BMW also operates international training centres where technicians and mechanics acquire further qualifications. Two new centres were established, in Cairo for the north African and neighbouring Arabian countries, and Peking. The international network ensures adequate service know-how for staff around the globe – thereby upholding BMW's standards of universal and comprehensive customer service.

The BMW MoDic (Mobile Diagnosis Computer) introduced worldwide in 1998 gives maintenance technicians immediate and precise support when cars are brought in for repairs.

The longer maintenance intervals achieved with the new 3 Series now also apply to cars in the 5 and 7 Series as of production since September 1998. This means less frequent maintenance calls for BMW owners, and lower costs.

Comprehensive customer service includes individual advice to customers on the technological innovations incorporated in vehicles. One example is Car and Key Memory, which allows individual parameters to be stored, such as the position of the driving seat and settings for heating and air-conditioning.

Share driving pleasure on roads or unpaved tracks: the new BMW X5 "Sports Activity Vehicle".



## BMW M

### 1998: also an outstanding year for BMW M

BMW M plans, develops and markets the high-performance BMW cars bearing the legendary "M" brand insignia. The company also offers exclusive customisation programmes for BMW series-production models, and has been operating the BMW Driver Training scheme for over 20 years.

Total sales volume of near-series BMW sports cars topped the 20,000 mark, with the M roadster and the new M5 and M coupé featuring prominently. Production of the M3 coupé, on the other hand, was terminated in the course of the model change within the 3 Series. The M3 convertible still remains available.

The products sold by BMW Individual, a further business field of BMW M, range from single components through limited-series models to completely personalised cars. In 1998, BMW Individual delivered more than 40,000 customised vehicles to customers. An addition to the programme was the luxury stretch version of the 7 Series (L7), which attracted keen interest particularly in Asia and the Middle East. Response was especially gratifying to the "Collections" programme: special designer models offering exclusive combinations of colours, materials and accessories, supplied by BMW Individual.

1998 was the first full year in which regular courses were held at the BMW Driver Training centre at Munich airport, opened the year before. Extended collaboration with leading daily newspapers has been a success. Reasonably priced courses in safe driving techniques, aimed at recently qualified new drivers, are now available nationwide. Outside Germany too, new markets are being opened up for training courses. BMW Driver Training achieved new record figures in 1998, with over 12,000 participants in 900 programmes. This also reflects the growing demand for specialist and advanced courses and for active holidays combined with Driver Training.

A sports car in the guise of a saloon: the BMW M5.



BMW AG





## BMW Motorcycles

### Increasing worldwide demand for motorcycles

The positive trend on the world market, prevailing since 1995, continued in the year under review. The 7% increase overall, with around 990,000 motorcycles sold worldwide, set a new record level for the 1990s.

The three leading markets – the USA, Germany and Japan – varied widely in their results: whereas sales increased by over 12% in the United States, and Japan recorded figures only marginally lower than in 1997, sales in Germany slightly declined. In the rest of Europe, the markets of Belgium, the UK, France, Italy, Sweden and Finland registered double-digit growth.

The market share held by motorcycles of up to 250 cc in capacity decreased worldwide from 15.7% to 13.5%. This was primarily attributable to the 20% drop in demand in Japan, traditionally the largest market for this class of machine. The category of motorcycles between 251 and 500 cc in capacity saw a 3.5% decline in sales (44,200 units sold worldwide, market share 4.4%). This was due to lower demand in Germany.

Motorcycles in the 501-cc to 750-cc class increased their sales worldwide by 4%, to total 288,500 units (29% market share), although in Germany, the leading market for this segment, demand declined.

### A boom for "big bikes"

A dramatic 14% rise in worldwide sales of "big bikes" – motorcycles of 750 cc in capacity and more – was registered in 1998. Half of all the motorcycles sold last year were in this category. All markets showed increased sales of big bikes in 1998, albeit with widely varying growth rates.

In the segment of 500 cc and above, popularity of two previously highly successful motorcycle types, the Tourer and the Enduro, declined somewhat.

Other segments benefited: the super-sports bikes increasing in volume sales by 3.6% or 44,000 units to a total of 181,000. Their worldwide market share thus reached around 22%. The Cruiser segment also grew last year, by 10%, or 26,000 units. The total worldwide market share of this type of motorcycle – now 33% – underlines the importance it has now attained.

BMW Motorcycles	1998	1997
Sales in DM million	1,277	1,105
Production in thousands	60.2	54.9
Employees at end of year <sup>1)</sup>	2,052	1,905
Investment in DM million	69	67

<sup>1)</sup> Excl. sales outlets in Germany



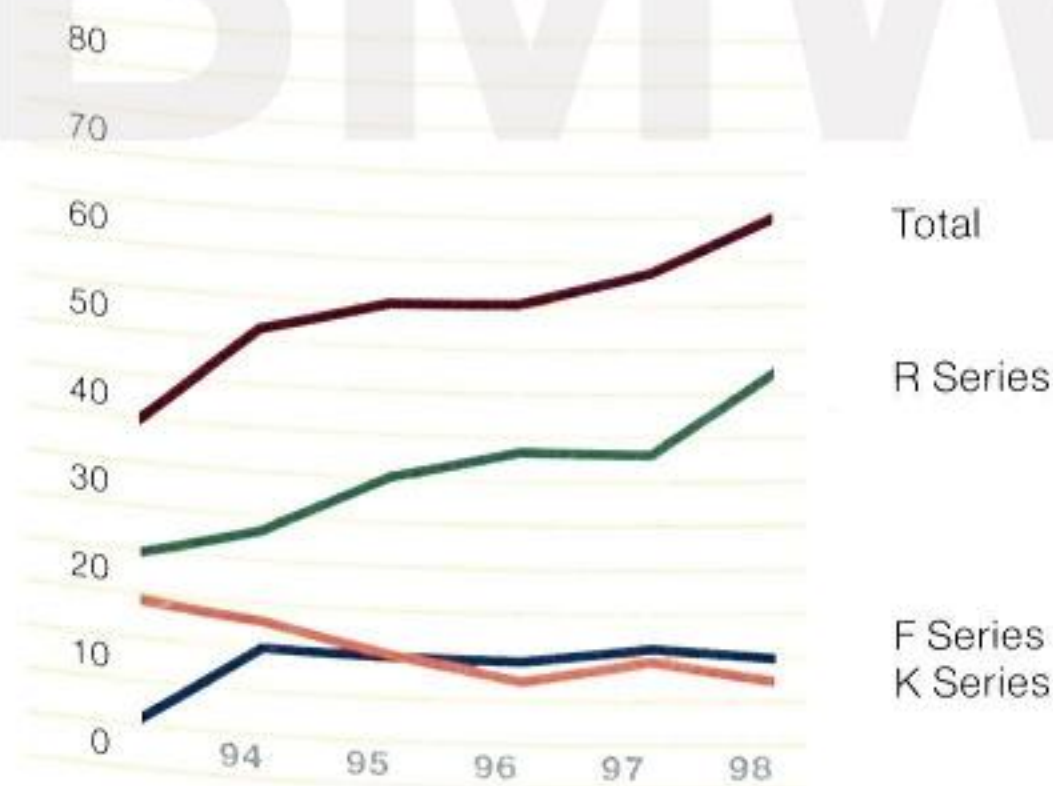
### Slight decline in Germany

In Germany, the second-largest market for motorcycles after the United States, the number of new registrations decreased by 5% in 1998, to 176,000. Except for the category of big bikes (+2.6%), all others registered a decline. The category up to 250 cc was most severely affected; here sales volume fell by 32% to a mere 3,000 units.

Development within the "concept segments" of the German market reflected the prevailing tendencies on the world market overall: sports and luxury touring bikes, super-sports bikes, cruisers and naked bikes all returned growth; Tourers and Enduros both declined in sales.

### Another record year for BMW

Demand for BMW motorcycles in 1998 reached a new record level yet again. For the sixth year in succession, the number of BMW motorcycles delivered to customers increased: in the course of the year, more than 60,300 BMW motorcycles were newly registered – 6,300 more than in 1997, a rise of 12%. BMW thus out-performed the worldwide market as a



**Deliveries of  
BMW motorcycles  
to customers**  
in thousands

whole, which registered growth of 7%. BMW's market share around the world rose from 5.8% to 6.1%.

With 22,132 units sold in Germany, the company's domestic market remained by far the most important. Here, BMW exceeded its 1997 result by 4.7%.

Other important markets for BMW in 1998 were once again the United States with 7,900 motorcycles sold, Italy with 6,800 and France with 4,300 units. Approximately 65% of BMW's motorcycle production was destined for export.



## **BMW Motorcycles**

The most successful BMW model for the first time was the R 1200 C Cruiser, selling 9,065 units, closely followed by the R 1100 RT Tourer with 9,000 units sold. In Germany, the BMW Cruiser is the best-selling model in the large-volume Cruiser segment. The R 1100 GS Enduro increased its sales – against the trend – to 8,100 units. The single-cylinder F 650 models, of which altogether over 10,000 were delivered to customers, also played a major part in the sales success of the year under review.

### **Two model launches**

The new luxury K 1200 LT Tourer first presented at the INTERMOT fair in September 1998 provides optimum comfort and numerous luxury features combined with dynamic handling in a completely new quality of design in the top touring segment. Its market launch took place in spring 1999.

The R 1100 S, available since September 1998, continues the tradition of sporting BMW Tourers. It is expected to benefit from the currently prevailing trend and win new market shares for BMW.

The new K 1200 LT luxury tourer, combining comfort with exceptionally dynamic performance.



BMW AG





## BMW automobile and motorcycle range

as of March 30 1999



### 3 Series

#### **316i**

1895cc, 77kW (105bhp)

#### **318i**

1895cc, 87kW (118bhp)

#### **320i**

1991cc, 110kW (150bhp)

#### **320d**

1951cc, 100kW (136bhp)

#### **323i**

2494cc, 125kW (170bhp)

#### **328i**

2793cc, 142kW (193bhp)

#### **320 Ci coupé**

1991cc, 110kW (150bhp)

#### **323 Ci coupé**

2494cc, 125kW (170bhp)

#### **328 Ci coupé**

2793cc, 142kW (193bhp)

#### **318tds touring**

1665cc, 66kW (90bhp)

#### **323i touring**

2494cc, 125kW (170bhp)

#### **325tds touring**

2498cc, 105kW (143bhp)

#### **328i touring**

2793cc, 142kW (193bhp)

#### **316i compact**

1895cc, 77kW (105bhp)

#### **316g compact**

1596cc, 64kW (87bhp)

#### **318tds compact**

1665cc, 66kW (90bhp)

#### **323ti compact**

2494cc, 125kW (170bhp)

#### **318i convertible**

1796cc, 85kW (115bhp)

#### **320i convertible**

1991cc, 110kW (150bhp)

#### **328i convertible**

2793cc, 142kW (193bhp)

#### **Z3 roadster 1.8**

1895cc, 87kW (118bhp)

#### **Z3 roadster 2.0**

1991cc, 110kW (150bhp)

#### **Z3 roadster 2.8**

2793cc, 142kW (193bhp)

#### **Z3 coupé 2.8**

2793cc, 142kW (193bhp)

### 5 Series

#### **520i**

1991cc, 110kW (150bhp)

#### **523i**

2494cc, 125kW (170bhp)

#### **525td**

2498cc, 85kW (115bhp)

#### **525tds**

2498cc, 105kW (143bhp)

#### **528i**

2793cc, 142kW (193bhp)

#### **530d**

2926cc, 135kW (184bhp)

#### **535i**

3498cc, 180kW (245bhp)

#### **540i**

4398cc, 210kW (286bhp)

#### **520i touring**

1991cc, 110kW (150bhp)

#### **523i touring**

2494cc, 125kW (170bhp)

#### **525tds touring**

2498cc, 105kW (143bhp)

#### **528i touring**

2793cc, 142kW (193bhp)

#### **530d touring**

2926cc, 135kW (184bhp)

#### **540i touring**

4398cc, 210kW (286bhp)

#### **X5**

4398cc, 210kW (286bhp)\*

\* Engine at time of model introduction, further variants to follow.





## 7 Series

### 725tds

2498cc, 105kW (143bhp)

### 728i

2793cc, 142kW (193bhp)

### 730d

2926cc, 135kW (184bhp)

### 735i

3498cc, 175kW (238bhp)

### 740d

3901cc, 175kW (238bhp)

### 740i

4398cc, 210kW (286bhp)

### 750i

5379cc, 240kW (326bhp)

### 728iL

2793cc, 142kW (193bhp)

### 735iL

3498cc, 175kW (238bhp)

### 740iL

4398cc, 210kW (286bhp)

### 750iL

5379cc, 240kW (326bhp)

## 8 Series

### 840 Ci

4398cc, 210kW (286bhp)

### 850 Ci

5379cc, 240kW (326bhp)

## M

### M3 convertible

3201cc, 236kW (321bhp)

### M roadster

3201cc, 236kW (321bhp)

### M coupé

3201cc, 236kW (321bhp)

### M5

4941cc, 294kW (400bhp)

## Motorcycles

### F 650, F 650 ST

652cc, 25kW (34bhp) or

652cc, 35kW (48bhp)

### R 850 R

848cc, 25kW (34bhp) or

848cc, 52kW (70bhp)

### R 850 GS

848cc, 25kW (34bhp) or

848cc, 52kW (70bhp)

### R 850 C

848cc, 25kW (34bhp) or

848cc, 37kW (50bhp)

### R 1100 R, R 1100 GS

1085cc, 59kW (80bhp)

### R 1100 RS, R 1100 RT

1085cc, 66kW (90bhp)

### R 1200 C

1170cc, 45kW (61bhp)

### R 1100 S

1085cc, 72kW (98bhp)

### K 1200 LT

1171cc, 72kW (98bhp)

### K 1200 RS

1171cc, 72kW (98bhp) or

1171cc, 96kW (130bhp)



## 75 years of BMW motorcycles

**The history of BMW motorcycles began in the autumn of 1923, when the R 32 was presented at the Paris motor show. This 500-cc machine, designed by BMW's chief engineer Max Friz, had an output of 8.5 hp. The first-ever motorcycle bearing the blue and white propeller emblem had an air-cooled two-cylinder flat-twin engine with cardan drive, mounted transversely, and was already representative of the qualities for which BMW motorcycles are famous today: low centre of gravity for excellent handling, extremely reliable and easy to maintain.**

Bayerische Motoren Werke, which started out in 1916 as a manufacturer of aircraft engines, and moved on to automobiles in 1928, is one of the world's oldest motorcycle companies still in operation. Since 1923, BMW has built over 1.2 million motorcycles, of which more than half are still on the road, somewhere in the world.

BMW was often the first company to incorporate new innovations in its bikes. Examples include the 1935 R 12, the first machine ever built with a hydraulically damped front-wheel telescopic fork, and the 1976 R 100 RS, the world's first series-production machine with full fairing.

BMW motorcycles also made history in motor sport. In 1937, Ernst Henne pushed the world speed record up to 279.5 km/h, and in 1939 Schorsch Meier shocked the British sporting nation by being the first "foreigner" ever to win the Senior trophy in the legendary Isle of Man TT – on a "foreign-built" compressor BMW. Between 1954 and 1974, BMW collected 20 world championship titles in sidecar racing. In the 1980s, BMW Enduro machines ridden by Hubert Auriol and Gaston Rahier won the Paris-Dakar rally four times, the most challenging endurance race in the world. Then in 1998, after a 13-year absence from competition rallies, BMW returned to the fold, and by January 1999 Richard Sainct had brought home BMW's fifth trophy from Dakar.



In 1998, special events were held in many countries to celebrate the 75th anniversary of BMW motorcycles.

The BMW Museum in Munich, for instance, mounted a special exhibition on the history of BMW motorcycles, which was extremely well received by over 130,000 visitors. Although this exhibition was originally planned to close at the end of October 1998, it proved to be so popular that it was extended for a further four months.

BMW's headquarters in Munich and the BMW motorcycle plant in Berlin were the venues of meetings of BMW motorcycle fans, with parades of classic two-wheelers.

A special highlight of this last year was the exhibition on motorcycling history at the world-famous Guggenheim Museum in New York. Sponsored by BMW in honour of its 75th anniversary and entitled "The Art of the Motorcycle", this exhibition attracted the largest number of visitors ever recorded there.

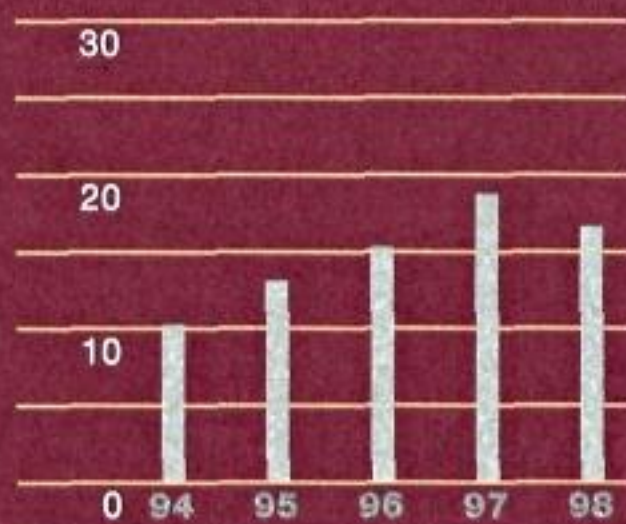
In financial terms too, 1998 was a year to celebrate: the anniversary year was also BMW's most successful year of motorcycle business to date.

A special exhibition celebrated the 75th anniversary of BMW motorcycles - "The Art of the Motorcycle" at the Guggenheim Museum in New York.

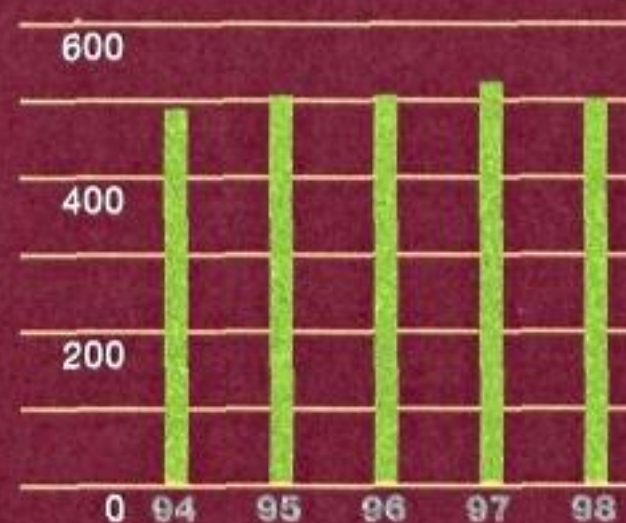




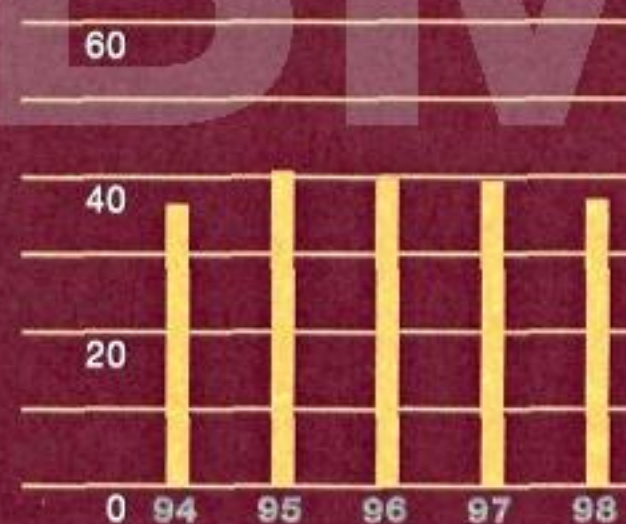




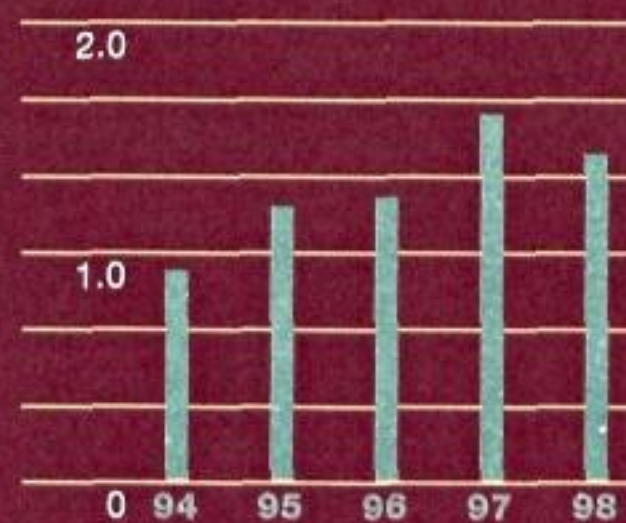
**Rover Automobiles  
sales**  
in DM billion



**Rover Automobiles  
production**  
in thousands



**Rover Automobiles  
workforce**  
in thousands



**Investment in  
Rover Automobiles**  
in DM billion



**Rover Automobiles. In terms of its model policy, 1998 was a year of crucial decisions for Rover. The successful launch of the Rover 75 marked the beginning of a new chapter for Rover Cars. Land Rover extended its popular range of models with the Freelander and the new Discovery II. Whereas Rover Cars suffered serious losses in the UK, sales by Rover as a whole in the rest of Europe made gratifying progress.**

**BMW AG**



## Rover Automobiles

### A new look for the Rover Cars range

Total sales of new Rover Automobiles vehicles to customers declined worldwide in 1998 by a good 6% to a total of 487,700 units. The main reasons for this negative development, in addition to the disappointing market conditions in the UK, were the phasing out, as planned, of the Rover 100 and the earlier Discovery model, and the announcement of the forthcoming replacement of the Rover 600 and 800 by the new Rover 75.

In the course of these changes to the model range, and in the face of falling demand, sales by Rover Cars declined by 17% to 303,800 units. The Rover 75, which is to be introduced on the market in the first half of 1999, is expected to stimulate a renewed upswing in sales. This elegant saloon, jointly developed by BMW and Rover, and luxuriously styled and equipped, reaffirms the traditional brand values of Rover Cars, "style and substance". Its presentation at the Birmingham motor show in October 1998 prompted an extremely positive response from journalists, dealers and the motoring public.

For Land Rover, 1998 was the sixth record year in succession, due both to the brand's legendary and widely acclaimed characteristics and to the introduction of new models. Deliveries to customers increased by no less than 20%, to total 153,500 units. The new Freelander was an immediate success, with 46,500 vehicles sold in its first complete year on the market – almost one third of all Land Rover models sold in 1998. Introduction of the Freelander in the USA, the most important off-road market in the world, is scheduled for the year 2000.

The new Land Rover Discovery II – presented at the international motor show in Paris last October – will bring new growth to the brand. With its numerous outstanding technical features, it is regarded as the currently most advanced four-wheel drive vehicle of its class. The first customers received their new models in November 1998.

Range Rover's leading position in the luxury four-wheel segment is strengthened by the fact that electronic four-wheel traction control is now fitted as standard and the V8 engine has been comprehensively modified.

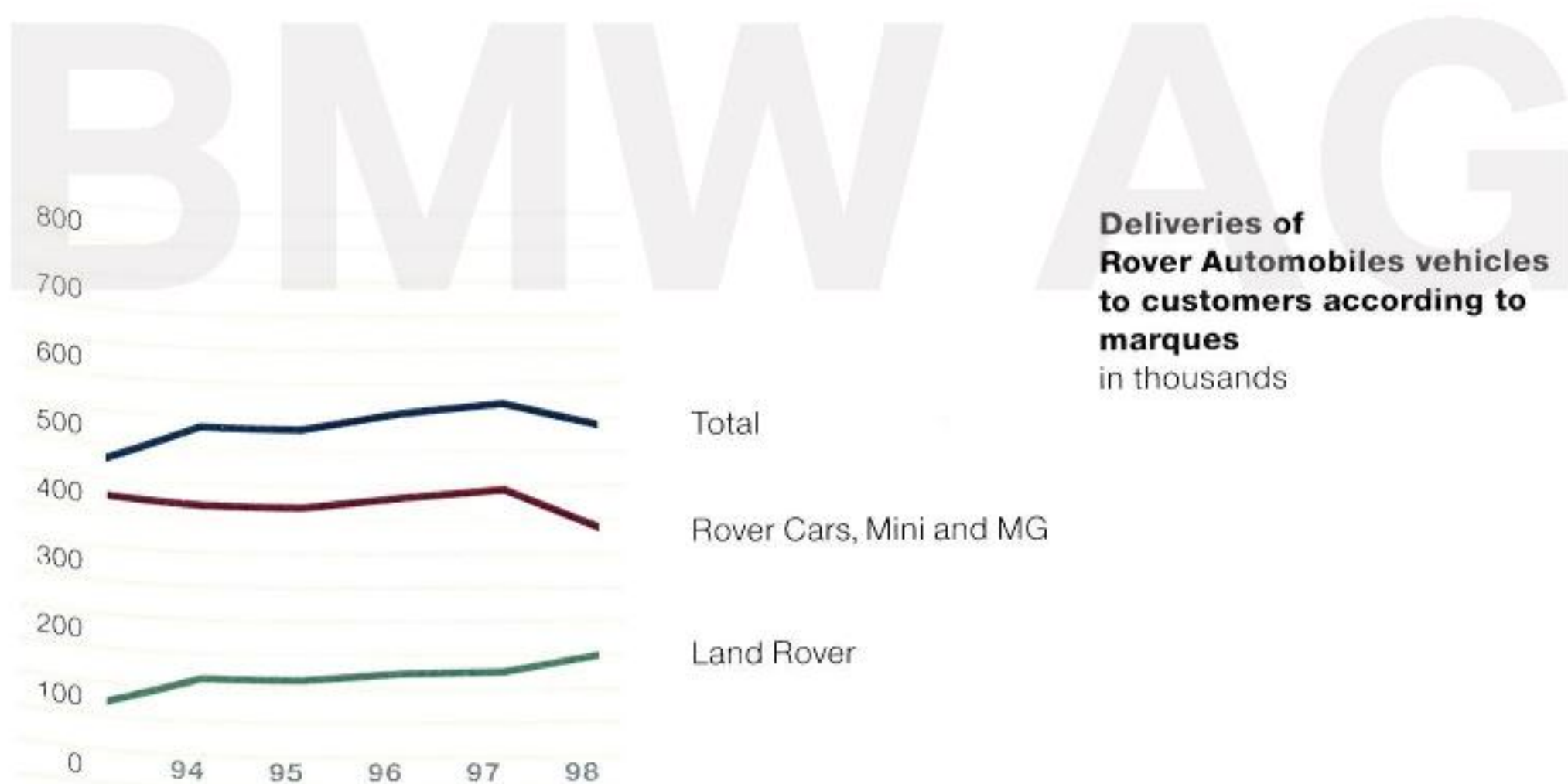
<b>Rover Automobiles</b>	1998	1997
Sales in DM billion	16.6	18.6
Production in thousands	498	522
Employees in thousands	36.8	39.2
Investment in DM million	1,426	1,601



Demand for the Defender is expected to increase with the availability of the powerful Td5 diesel engine and the introduction of traction control as a standard feature.

For the Mini, demand remained brisk. A total of 16,000 Minis were delivered to customers in the year under review – an increase of 8% against 1997. In spite of the economic crisis in Japan, the Mini was more popular there than ever before, and more than 8,400 units were sold. Thanks in particular to limited-series variants, sales also continued to increase in the UK and western Europe.

The 21.3% rise in sales of the MGF in continental Europe was especially gratifying. This substantial growth compensated in large measure for the decline in sales in Asian markets resulting from economic recession. Overall, with a total of 14,400 units sold, deliveries of the MGF sports car to customers reached a level only slightly below that of the previous year.





Car markets in countries with Rover Automobiles sales companies <sup>1)</sup>	1998	1997
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**Europe**

Belgium	Total market	452,100	396,200
	Rover Automobiles	7,200	5,400
France	Total market	1,943,600	1,713,000
	Rover Automobiles	30,200	29,300
Germany	Total market	3,736,000	3,528,200
	Rover Automobiles	42,500	30,700
Great Britain	Total market	2,247,400	2,170,700
	Rover Automobiles	205,200	230,400
Ireland	Total market	144,500	136,700
	Rover Automobiles	5,300	4,900
Italy	Total market	2,369,700	2,403,700
	Rover Automobiles	51,200	62,200
Netherlands	Total market	543,100	478,300
	Rover Automobiles	8,400	7,100
Portugal	Total market	267,000	235,000
	Rover Automobiles	11,300	8,800
Spain <sup>2)</sup>	Total market	1,191,300	1,015,700
	Rover Automobiles	31,000	24,500

**Overseas**

Australia	Total market	584,400	540,400
	Rover Automobiles	7,100	7,000
Canada	Total market	740,800	738,600
	Rover Automobiles	1,000	1,100
Japan	Total market	4,093,100	4,492,000
	Rover Automobiles	15,800	27,500
USA	Total market	8,142,900	8,272,700
	Rover Automobiles	21,400	23,800
South Africa	Total market	203,800	239,800
	Rover Automobiles	5,300	3,500

<sup>1)</sup> Total market: cars

Rover Automobiles: Rover Cars, Land Rover, Mini and MG

<sup>2)</sup> Including Canary Islands

A luxury British saloon of quality and style: the new Rover 75.









Rover Cars, Land Rover, Mini and MG models in front of architect Richard Rogers's Millennium Dome in Greenwich, England.

Top row:

Freelander XEi Softback, Freelander XEi Station Wagon, Discovery ESV8, Range Rover dHSE, Defender 110CSW

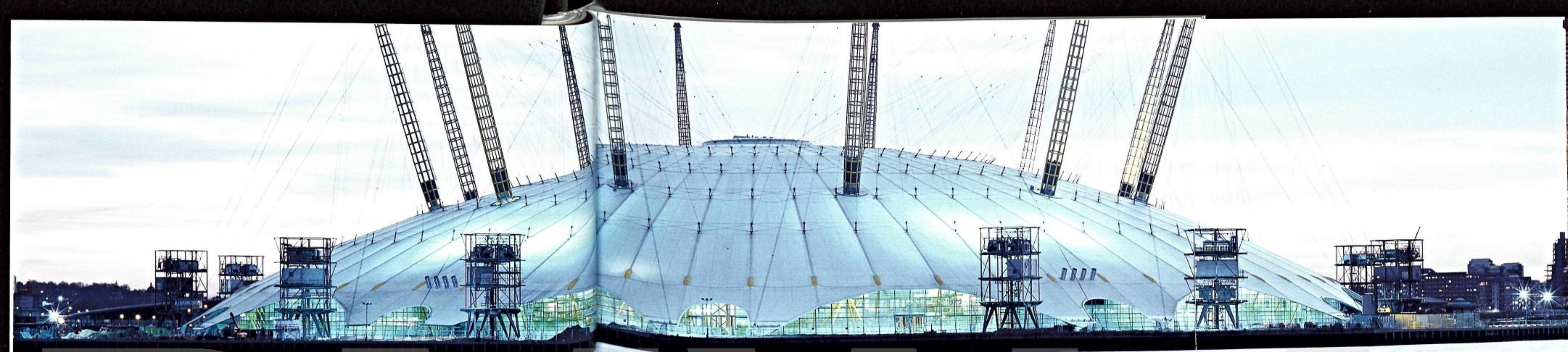
Middle row:

Rover 200vi (3-door), Rover 211i (5-door), MGF 1.8i, Mini Cooper 1.3i

Bottom row:

Rover 416SLi (5-door), Rover 420SLi (saloon), Rover 75







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## **Marked decline in the competitiveness of Rover Automobiles in the UK – growth in continental Europe**

The high exchange rate of the pound sterling led to a serious fall in prices on the British market. This brought about a considerable weakening of the competitive position of Rover Automobiles and a consequent 11% decline in sales, to 205,000 units.

At the same time, sales by Rover Automobiles in the western European markets (excluding the UK) rose by 7%, to a total of 185,200 vehicles. Italy, in spite of an 18% drop in sales against the previous year, remained Rover's leading foreign market, and accounted for 51,200 units. Sales figures for Rover Automobiles, as for the industry as a whole, were significantly affected here by the ending of the Italian government's incentive scheme for scrapping old cars, which expired mid-year.

In Germany, by contrast, sales rose by more than 40% for the third year in succession, to over 42,500 vehicles, with the Rover 200 and 400 and the Freelander in particular demand. Rover Automobiles also registered substantial growth in Belgium (33%), Spain (19%) and Portugal (28%), in each case well above average for the market as a whole.

A classical off-road vehicle with new engine and numerous technical innovations exclusive to Land Rover: the new Discovery II.



## Rover Automobiles

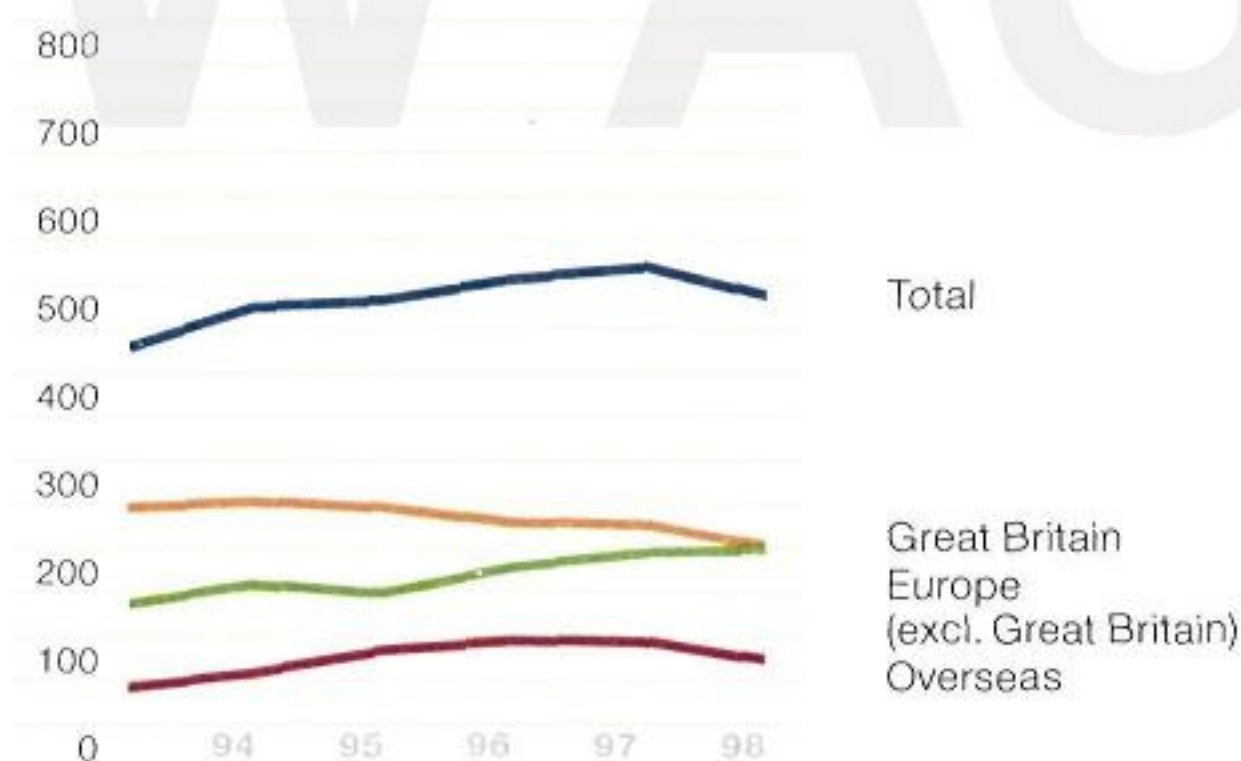
### Mixed results in overseas markets

The economic instability in the Far East also affected sales by Rover Automobiles in this region. In Japan, for example, only 15,800 vehicles were delivered to customers, a drop of over 40%.

In North America, legal restrictions put a stop to sales of the Land Rover Defender in 1998. The sales figures of Land Rover in the USA thus declined by 10%, to a total of 21,400 units. The Range Rover, on the other hand, registered another excellent annual result, with 7,100 units sold.

In Australia, sales rose slightly, to 7,100 vehicles. Here, the new Freelander and the MG sports car met with growing demand.

**Deliveries of Rover Automobiles vehicles to customers according to regions**  
in thousands



1998 was a particularly successful year for Land Rover South Africa. Sales shot up by 51%, with 5,300 new vehicles finding customers. This success was based on increasing demand for the Freelander, and for the Defender built at Rosslyn in South Africa.



Deliveries to customers in those markets of Asia, Africa and South America where Rover is represented by importers reflect the difficult overall economic situation faced by these countries in 1998. Sales in the Far East, Africa and Latin America were consequently down on the previous year; only in the Middle East was the result an improvement on 1997.

Strengthening of Rover's competitiveness in the UK and abroad continues to hold top strategic priority. The share of exports within total sales increased marginally, by 2%, to 57% of all vehicles sold. Rover Automobiles currently exports vehicles to more than 120 countries around the world.



### **New efforts towards greater customer satisfaction**

In 1998, Rover installed new IT systems for improved global data exchange, including implementation of a new electronic parts catalogue. The services provided by the mobile breakdown units were extended. These activities were practical expressions of Rover's commitment to working towards greater customer satisfaction.



## Rover automobile range

as of March 30 1999



### Rover 200

#### **211i**

1119cc, 44kW (60bhp)

#### **214i**

1396cc, 55kW (75bhp)

#### **214Si**

1396cc, 76kW (103bhp)

#### **216Si, 216SLi**

1588cc, 82kW (111bhp)

#### **218iS**

1796cc, 88kW (120bhp)

#### **200vi**

1796cc, 107kW (145bhp)

#### **220D, 220SD**

1994cc, 63kW (86bhp)

#### **220SDi**

1994cc, 77kW (105bhp)

### Rover 400

#### **414i, 414Si**

1396cc, 76kW (103bhp)

#### **416Si, 416SLi**

1588cc, 82kW (111bhp)

#### **420D, 420SD**

1994cc, 63kW (86bhp)

#### **420SDi, 420SLD, 420GSDi**

1994cc, 77kW (105bhp)

#### **420i, 420Si, 420SLi, 420GSi**

1994cc, 100kW (136bhp)

### Rover 75

#### **Classic, Club, Connoisseur**

1796cc, 88kW (120bhp)

#### **Classic, Club, Connoisseur (diesel)**

1951cc, 85kW (116bhp)

#### **Classic, Club, Connoisseur**

1997cc, 110kW (150bhp)

#### **Classic, Club, Connoisseur**

2497cc, 130kW (177bhp)

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## Land Rover

### Freelander i/XEi

1796cc, 88kW (120bhp)

### di/XEdi

1994cc, 72kW (97bhp)

### Defender

#### 90

2487cc, 90kW (122bhp) oder  
3950cc, 134kW (182bhp)

#### 110

2487cc, 90kW (122bhp)

#### 130

2487cc, 90kW (122bhp)

### Discovery II

#### Td5

2487cc, 102kW (138bhp)

#### V8

3950cc, 136kW (185bhp)

### Range Rover

#### 2.5DT/DSE

2498cc, 100kW (136bhp)

#### 4.0/4.0SE

3950cc, 136kW (185bhp)

#### 4.6HSE

4554cc, 160kW (218bhp)



## Mini

### Mini 1.3i

1275cc, 46kW (63bhp)

### Mini Cooper 1.3i

1275cc, 46kW (63bhp)



## MG

### MGF 1.8i

1796cc, 88kW (120bhp)

### MGF 1.8iVVC

1796cc, 107kW (145bhp)



## 50 years of Land Rover

### Land Rover: The fifty-year miracle – Origin of the species

1998 marked the fiftieth anniversary of the truly remarkable and uniquely British institution, the Land Rover. A name which has become universally identified with the definitive four-wheel-drive vehicle, Land Rover is recognised from Anchorage to Ankara and Zürich to Zimbabwe.

The pivotal figures at the helm of the Rover company in 1948 were the Wilks brothers – Spencer and Maurice. They put their minds to the problem of coming up with a vehicle which would be simple in design, cheap to build, required minimal tooling and preferably would use as little sheet steel as possible. It was not long before the two brothers homed in on the idea of some sort of utilitarian vehicle to suit the immediate post-war climate. But it was Maurice who provided the germ of the idea which became the sturdy Land Rover.

Work on the prototype began in earnest in the spring of 1947, and by the summer it had been finished. Not surprisingly, the new vehicle bore some resemblance to the WW II Jeep, but it would be unjust to dismiss it as a copy; the Rover engineers were far too thorough to simply copy a design, for good or for bad. The power take-off points which Maurice Wilks specified were just the beginning of many firsts for the company.

Over the next two decades the Land Rover name became firmly established as a watch-word for durability and off-road excellence. From its origins as the “farmer’s friend”, the Land Rover had gone to the far corners of the globe and grown in importance far beyond its creators’ vision. Throughout the 1960s the versatility of four-wheel-drive vehicles became better known and research showed demand for a vehicle that could work equally well on-road as off.

Rover’s Chief Engineer, Spen King, combined unique suspension designs and body style with an aluminium V-8 engine Rover had acquired from General Motors. The culmination of this exercise was of course the “Range Rover”, launched at the Blue Hills Mine at St. Agnes, Cornwall on June 17 1970.

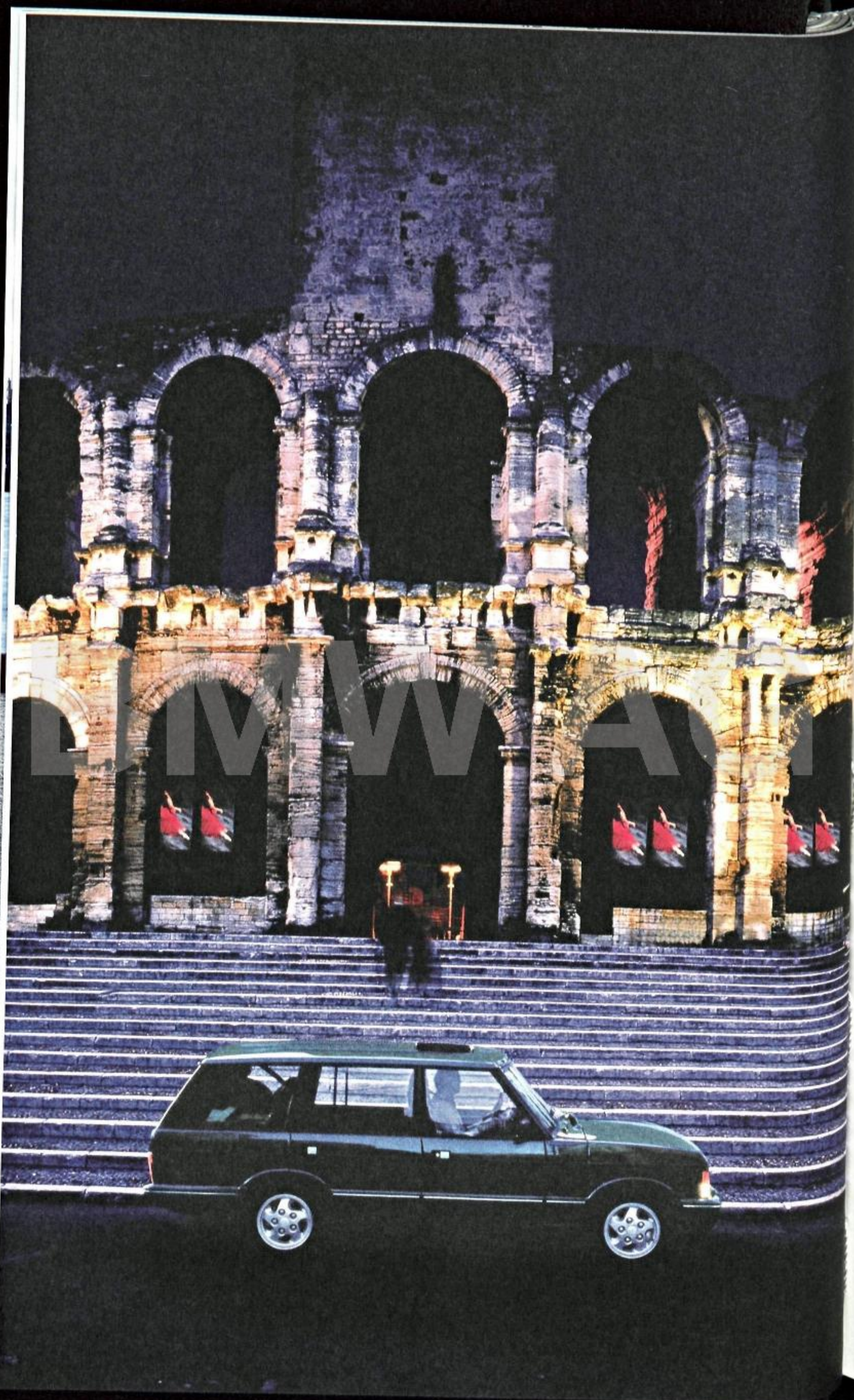
The reception accorded the Range Rover was nothing short of astonishing; press coverage was immense, and virtually every report was ecstatic.

Sir Winston Churchill and  
the Series I Land Rover –  
two British legends











The orders came flooding in and the company once again found itself with order books full to bursting, a situation which would continue for many years as the Range Rover assumed the mantle of unrivalled leader of the pack.

By the beginning of the 1980s, it was obvious that some of the traditional export markets were in decline, and much greater profits could be achieved with more luxurious vehicles. Consequently, the Range Rover was eased up-market, with an all-new version launched in 1995 using height-adjustable airsuspension.

In the mid-1980s, a major study to determine the future vision for Land Rover gave rise to several major projects, most important being the Land Rover Discovery, shown at the Frankfurt Motor Show in three-door form on September 16 1989. With the addition of a five-door version the following year, and a facelift in March 1994, the Discovery carved out a new niche for Land Rover – the “Family 4x4”. The Discovery Series II with the world’s first active suspension in a four-wheel-drive vehicle was launched in late 1998 after a unique press “test drive” around the world. Over 30,000 km were driven in 58 days.

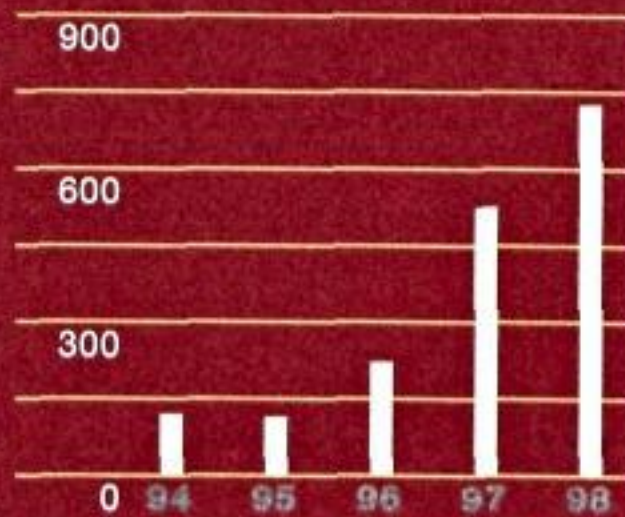
Whilst the glamorous part of the action was generally focused on the Discovery and Range Rover, the Defender, as the traditional Land Rover came to be called, shared many of the improvements brought about as its younger siblings evolved. These enhancements allowed it to thrive in existing and new market sectors including as a sports utility in the USA.

The latest chapter in this remarkably packed fifty-year story is of course the compact Land Rover Freelander. Carrying the Land Rover badge as it does, the Freelander was developed from the outset as a capable off-roader, as well as being fun to drive around town.

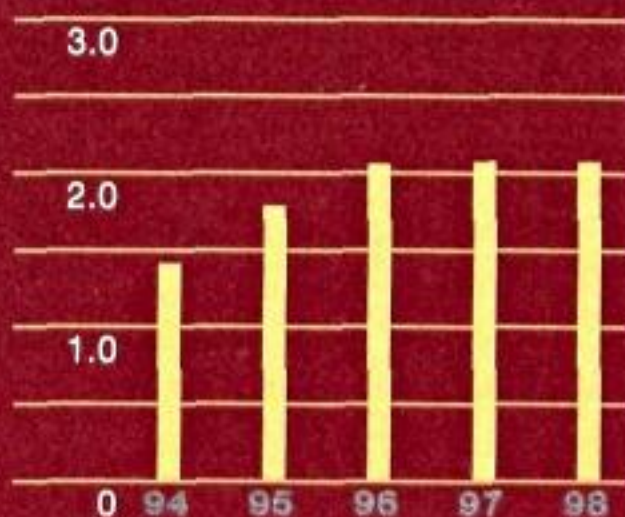
In partnership with its Defender, Discovery and Range Rover stablemates, the Freelander is part of a family of four-wheel-drive vehicles which is absolutely without peer. Remarkably, of the more than 2,2 million Land Rovers ever built, 70% are still in service around the world.

Functionalism, elegance and timelessness – the Classic Range Rover in front of the Colosseum in Rome.

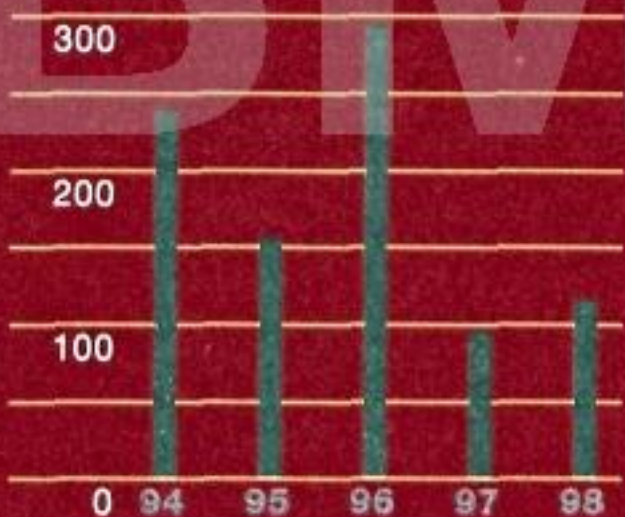




**Sales of  
BMW Rolls-Royce  
Aero Engines**  
in DM million



**Employees at  
BMW Rolls-Royce  
Aero Engines**  
in thousands



**Investment in  
BMW Rolls-Royce  
Aero Engines**  
in DM million

BMW AG



**Aero Engines.** International certification of the BR715 engine represented a crowning achievement for BMW Rolls-Royce in the 1998 business year, as was the maiden flight, shortly thereafter, of the Boeing 717-200. BR710 engines are already a fully proven success in everyday operation. Production of close on 100 engines in the course of the year increased sales revenue by DM 200 million, to more than DM 700 million. Further major orders served to underscore the market position already attained. Development work on new technologies for the next generation of low-emission aero engines brought encouraging initial results.

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## BMW Rolls-Royce Aero Engines

### The BR715 engine: international certification and maiden flight

The certification programme for the BR715 engine was concluded on schedule in 1998. This engine model has been selected for exclusive use in the new Boeing 717-200 passenger jet, the most recent addition to the Boeing range and at present the only 100-seater of the latest generation of short and medium-haul aircraft. The B717-200 was presented to the public at the roll-out ceremony at Boeing's production facility in Long Beach, California, in June 1998, and took off on its maiden flight in early September. Conclusion of the test and certification programme is planned for mid-1999.

Certification of the BR715 engine for international passenger service took place in August 1998, with approval granted by the aviation authorities in Europe and shortly afterwards in the USA. Extensive and extremely rigorous tests were conducted prior to successful certification; these clearly confirmed the robustness and stability of the BR715 engine under extreme loads. It is moreover the cleanest, quietest and lowest-consumption engine system in its class.

The BR715 engine will first be put into scheduled service with AirTran Airways, the launching customer for the Boeing 717-200, in the second half of this year. This US airline has ordered 50 models of the latest Boeing, and taken out options on the same number again. In May 1998, Boeing confirmed contracts received from Bavaria International Aircraft Leasing of Munich for purchase of a further five B717-200s. BMW Rolls-Royce is also to supply the engine systems for up to 100 Boeing 717-200 aircraft ordered by Trans World Airlines; these will replace the DC-9s in the TWA fleet. In December, TWA placed 50 firm orders plus options on a further 50 of this aircraft model. Altogether, if confirmed, these firm orders and options represent contracts for BMW Rolls-Royce worth up to 600 million dollars. At the end of the year, Pemboke Capital, a leasing company based in Ireland, announced its intention to buy ten Boeing 717-200s.

According to projections by Boeing, there will be a world demand for approximately 2,600 aircraft seating between 80 and 120 passengers in the coming 20 years.

#### BMW Rolls-Royce Aero Engines

	1998	1997
Sales in DM million	723	523
Employees at end of year	2,066	2,065
Investment in DM million	115	95



### **Proven reliability of the BR710**

The BR710 engine was able to prove its reliability in everyday operation in 1998. More than 30 Gulfstream V aircraft, each equipped with two engines of this type, are currently in operational service around the world.

Gulfstream Aerospace Corporation of Savannah, Georgia, awarded a contract on 200 BR710 engines, worth more than 500 million dollars, in November 1998; the engines are due for delivery between 2000 and 2002. In all, BMW Rolls-Royce has now received orders for around 700 BR710 engines. As production is further stepped up, the company now plans to introduce a third work shift at its plant in Dahlewitz near Berlin.

The new Global Express aircraft fully completed its type certification flight-test programme in 1998, and the first models will be handed over to the launching customers in early 1999. Certification by aviation authorities in Canada and the USA of the Global Express, the new long-range business jet developed by Bombardier of Canada, cleared the way for successful market introduction of the second variant of the BR710 engine.

The third variant of the BR710 successfully concluded its trial phase in July. It will be used to power the British Nimrod MRA4 naval reconnaissance aircraft. Four of these engines will be delivered to British Aerospace for flight tests in early 1999; certification is scheduled for mid-2000, and the beginning of series production for 2001.

The new Boeing 717-200 on its maiden flight in September 1998 – powered by BR715 aero engines.







## **BMW Rolls-Royce Aero Engines**

### **BMW Rolls-Royce enters joint venture in helicopter engine systems**

BMW Rolls-Royce GmbH aims to participate in the development, production, marketing and field service of the RTM 322 helicopter engine system, following an agreement signed by BMW Rolls-Royce and Rolls-Royce Turboméca Ltd., London, in spring 1998. The RTM 322 helicopter engine is part of the NH 90 helicopter programme of the German armed forces; BMW Rolls-Royce's share in the project is to be 23%. Assembly of the engines is to take place at BMW Rolls-Royce's Oberursel plant, where testing will also be carried out. Qualifying tests and prototype certification of the RTM 322 destined for NH 90 are planned for the end of 1999. Decisions on comparable procurements are also pending in other European NATO countries.

### **Successful tests of the BR700 core engine with multi-stage combustion chamber**

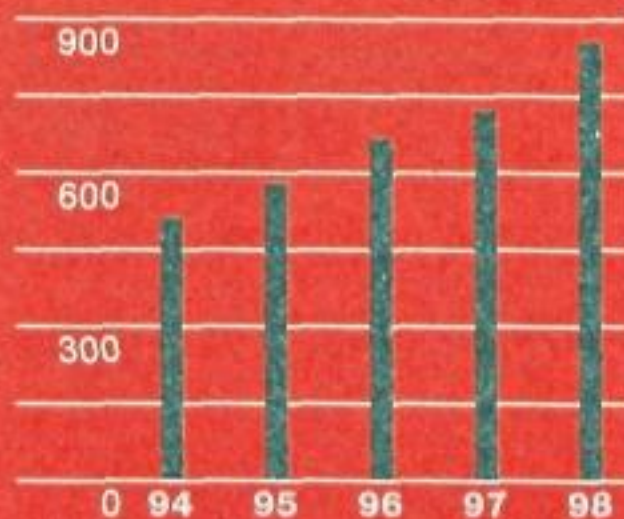
In 1998, BMW Rolls-Royce also continued work on the development of low-emission aero engines; these activities received support from the German government within its aviation research programme. At an altitude test-rig of the University of Stuttgart, successful tests were carried out on the multi-stage combustion chamber of a core engine belonging to BMW Rolls-Royce's BR700 family. The emissions recorded were substantially below existing tolerance levels: around 50% for oxides of nitrogen (NOx), and around 80% for carbon monoxide (CO). Emissions of unburned hydrocarbons (UHC) were registered at less than 3% of permitted levels.



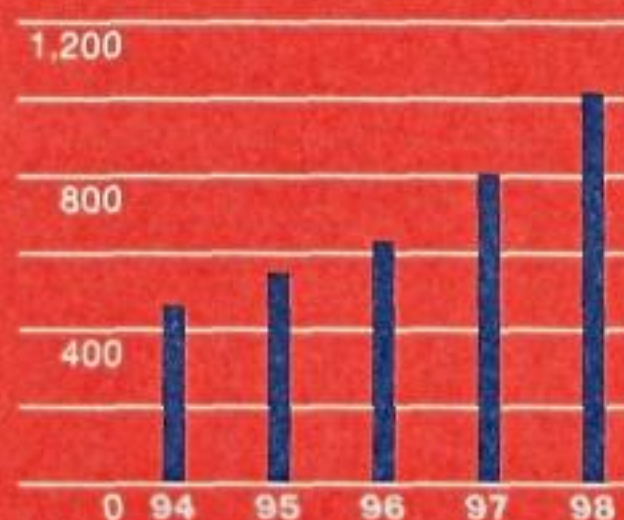
### **Management of BMW Rolls-Royce now solely in Dahlewitz**

Since December 1998, executive management of BMW Rolls-Royce GmbH has been based in its entirety in Dahlewitz, Brandenburg, near Berlin. The decision to consolidate two formerly separate management entities reflects the shift of company policy from pure development work to customer-oriented full-scale production. The Oberursel plant, the location of BMW Rolls-Royce GmbH at the time of its foundation, has been managed as an independent profit centre with complete profit-and-loss accountability since spring 1998. Here, components and parts are produced for the BR700 generation of engines, as well as for civil aero-engine programmes of other manufacturers. In Oberursel, development, production and customer service for helicopter engines and other propulsion systems are located – a sector in which the Oberursel plant has been a close partner of the German armed forces for around thirty years. At its two locations, BMW Rolls-Royce GmbH employed a staff of around 2,000 in 1998.

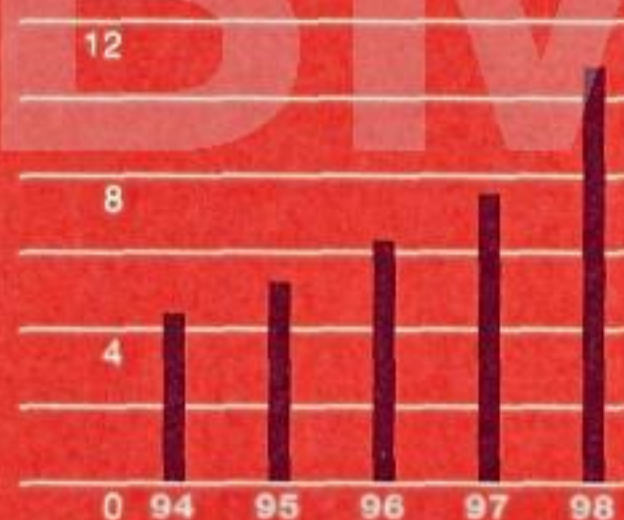




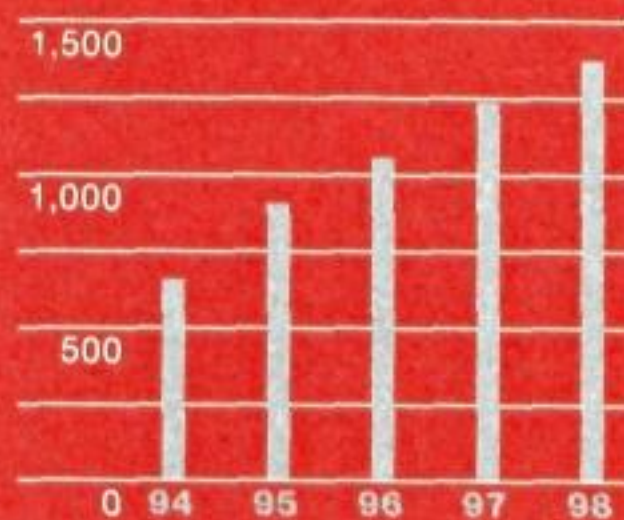
**Total contracts for  
BMW Financial Services**  
in thousands



**New contracts for  
BMW Financial Services**  
in thousands



**Sales from leasing**  
in DM billion



**Employees in  
BMW Financial Services**



**Financial Services and other subsidiaries.**  
**Innovation and dynamism – these core values of BMW's corporate philosophy generate the thrust of the company's marketing of financial services in all fields of relevance to the car. They are complemented by the customer orientation and quality of professional advice that distinguish BMW Financial Services from its competition. Integration of Rover Financial Services within the BMW Group was successfully concluded in 1998. This field of business made a substantial contribution to the commercial success of the BMW Group in the year under review.**

**Other subsidiaries round off the spectrum of services and products offered by the BMW Group.**

**BMW AG**



## **BMW Financial Services**

### **Attractive financing products strengthen market position**

Individual financing solutions as well as efficient and fast customer service helped to fulfil a wide spectrum of customer requirements, while at the same time successfully supporting sales in the markets of the Group. The concept of "one-stop shopping", which provides customers with both their car and a tailor-made financing and insurance package from a single source, has been extremely successful, particularly in the last few years.

Surveys have shown that customers who finance their purchase of a vehicle through a financing company belonging to the manufacturer demonstrate greater brand loyalty. In terms of market penetration, BMW Financial Services holds a leading position in this regard. More than one in three BMWs – in markets with Group companies providing these services – is leased or financed in this way; for Rover Automobiles vehicles, the figure is one in five. In spite of the prevailing market conditions, the long-term implementation and positioning of financial services generated a 20% increase in financial volume in 1998, to DM 31.5 billion. In the year under review, a total of 1,015,000 new leasing and credit agreements were concluded in respect of BMW and Rover automobiles and motorcycles – a rise of 27% against 1997. The most dramatic increase, of 30%, was in credit financing contracts.

<b>BMW Financial Services</b>	1998	1997
Total contracts in thousands	855	720
New financing contracts in thousands	1,015	802
Sales from leasing in DM billion	10.5	7.8
Employees at end of year	1,366	1,234



### **Continued successful international orientation**

BMW Financial Services is represented in 22 countries by direct subsidiaries and cooperating agencies; the international network is to be further expanded in the coming years. The company's market position has been strengthened by the new structural orientation implemented in 1998, which established centres of competence for customer service and segments to be centrally handled – such as risk management and systems administration. Numerous awards received provide external testimony of the success of these efforts to provide outstanding service to customers. In the USA, the most important market after Germany, a study by J.D.Power and Associates ranked BMW Financial Services first in terms of dealer satisfaction, as had also been the case in 1997. In the UK and Switzerland, BMW Financial Services was also given top ranking.

Stronger European orientation, aiming at overall harmonisation, brought about a 30% rise in newly concluded contracts, to more than 701,000. Germany was once again the most important market, with 316,000 new contracts. The 386,000 new contracts concluded in the remaining markets of Europe represent an increase of 52% against 1997. The UK registered above-average growth: the takeover of Rover Financial Services from the joint-venture partner almost doubled newly concluded business, with a total of 212,000 contracts. BMW Financial Services now holds responsibility for sales financing in the most important market for Rover Automobiles. In Italy, growth of 15% brought the number of new contracts to around 100,000.

The comprehensive range of services offered via the Internet for customers and dealers gave a significant boost to the marketing of financial services. In North America, it contributed to a 21% rise in new contracts. Centralisation of customer service for Canada and the USA, based in Columbus, Ohio, was concluded in 1998, and contributed toward this growth.



## **BMW Financial Services**

In spite of overall economic difficulties, the trend remained positive in Japan, Australia and South Africa. The takeover of dealer financing in Japan led to an increase of 21% in new contracts, to a total of 60,000. A 10% rise was registered in Australia. The success of measures implemented in this difficult economic sector was also confirmed by the nomination of BMW Financial Services as the most efficient company of its kind in Australia. New contracts concluded in South Africa increased by 29%.

### **Start-up of European fleet management with Alphabet**

The centre of competence in fleet management is BMW Financial Services in the UK, which has gained substantial experience here in fleet management through its 100% subsidiary Alphabet; this concentrated specialist expertise is now to be applied and exploited in other countries in the context of ongoing harmonisation of the markets of Europe – with the aim of gradually establishing a pan-European fleet-management service for large national and international customers. Since the launch of Alphabet Flottenmanagement GmbH in October 1998, the BMW Group now offers individual fleet solutions in Germany, together with professional service leasing for companies. Alphabet pursues a multi-brand strategy, aimed not only at BMW customers, but managing vehicles of all brands with the know-how and quality standards typical of BMW. BMW and BMW Financial Services see great development potential in the longer term for qualitative growth in the field of fleet management.



### **Successful business in deposit banking**

Whereas financing and leasing serve primarily in support of sales of BMW core products – cars and motorcycles – a further business field allows the company to enter a growth market of substantial volume and earnings potential for the Group as a whole: deposit banking.

Since 1994, BMW Bank GmbH, acting as a pioneer for future European business, has offered its customers in Germany competitive interest rates for deposit accounts. BMW Bank is a member of the Federation of the German Banking Industry and of the German deposit guaranty fund, thus providing customers with the assurance of serious professional practices and the highest possible degree of security for their investments. These services encourage and strengthen brand loyalty to BMW products and services.

At the same time, successful deposit business improves the refinancing capabilities of BMW Bank. In 1998, the total volume of customer accounts exceeded the level of DM 2 billion for the first time – an increase of more than 40% since the end of 1997.

The BMW Card – introduced together with the launch of the new 3-Series saloon – played an important part in this success. This credit card (EURO-CARD/VISA) not only gives customers worldwide financial independence and mobility, it also offers substantial interest on credit balances.

### **Sales offensive with new communications technology**

BMW Bank Deutschland won the 1998 BAK innovation prize for its Internet presentation under <http://www.bmw.financialservices.de>. This first "BAK" prize (denoting "banks, automation, communications") is awarded for innovation in building customer loyalty, and for the professional presentation of a variety of services in a form appealing to potential customers. The online website visitor can use various calculation and information modules to ascertain optimum leasing and financing conditions for the BMW of his choice, inclusive of numerous insurance packages. BMW Bank also provides customers with a rapid and confidential check-list for evaluating deposit investments and credit-worthiness.



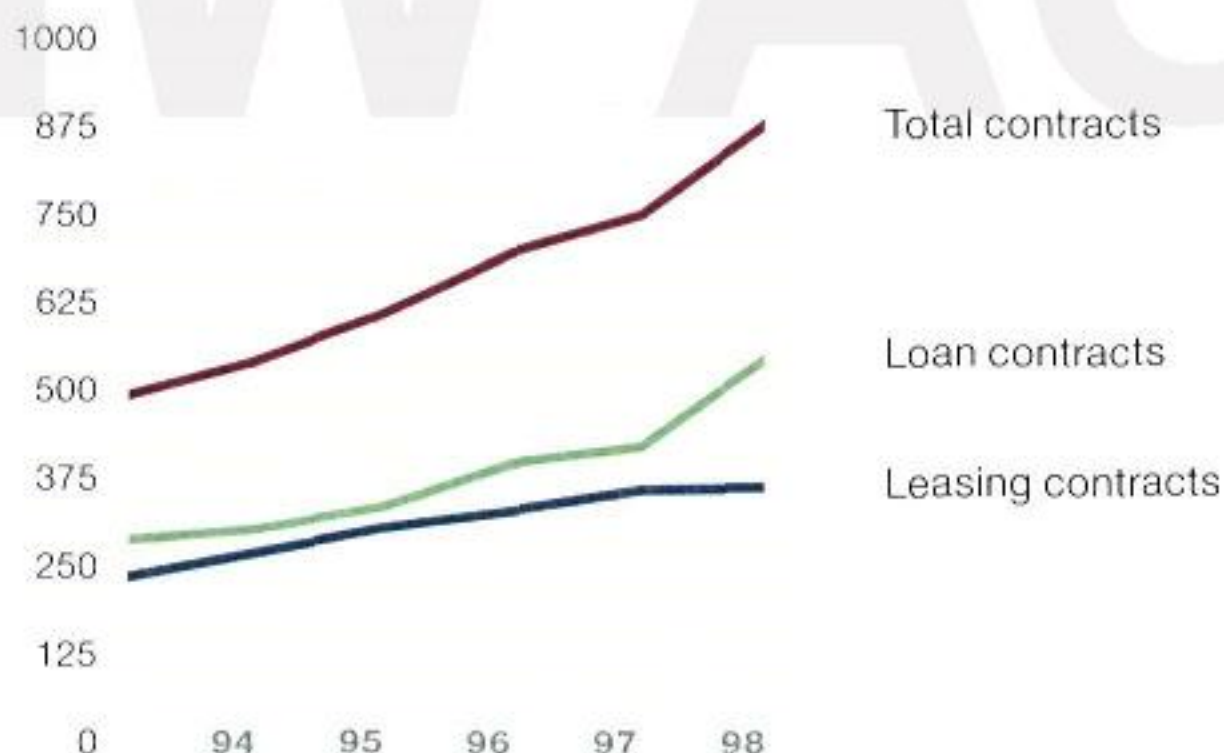
## **BMW** **Financial Services**

### **Security through risk management**

Risk management was further developed through standardised handling of the most important risk categories by BMW Financial Services, based on uniform guidelines and procedures applied worldwide. A system was successfully installed in 1998 for assessment and monitoring of credit risk. Risks pertaining to the residual value of financed vehicles were controlled in close cooperation with the sales organisation, particularly through strategies employed throughout the Group aimed at ensuring the quality of used vehicles.

The refinancing of leasing and credit business was accomplished through Group financing companies and directly on the capital market. Currency risks were eliminated by means of congruent currency refinancing. Risks through changes in interest rates were avoided as far as possible through refinancing at matched maturities. Furthermore, the value-at-risk of the interest items is constantly monitored.

**Total loan and  
leasing contracts**  
in thousands



### **Prospects**

BMW Financial Services is pursuing a consistent policy of international orientation, aiming at leadership in all sectors of relevance to worldwide mobility – with customer-oriented products geared to maximising customer satisfaction, efficiency and profitability.



### **Bavaria Wirtschaftsagentur GmbH, Munich**

Bavaria Wirtschaftsagentur handles insurance activities worldwide on behalf of the BMW Group and its customers. It advises the Group companies on the assessment of risks, and procures all necessary insurance cover from insurance companies in Germany and abroad. It furthermore makes its services available to employees of the BMW Group and to outside customers.

Subsidiaries of Bavaria Wirtschaftsagentur GmbH are Bavaria Insurance Co. Ltd. and BL Reinsurance Co. Ltd., both with their principal place of business in Dublin, Ireland. These two companies act primarily as reinsurers, covering risks from all sectors of business. Bavaria Insurance Brokers Ltd., also based in Dublin, brokers insurance policies abroad and provides related services.

Bavaria-Lloyd Reisebüro GmbH of Munich, in which Bavaria Wirtschaftsagentur has a 51% holding, provides services as a travel agency, handling business and private travel, event and similar bookings.

### **Other subsidiaries**



## Other subsidiaries

### **BETEK Bau- und Energietechnik GmbH, Munich**

Under contract to the BMW Group, BETEK designs and develops buildings and plant for production, research, administration and sales. The spectrum of projects handled ranges from complete manufacturing complexes and industrial parks to factory buildings and commercial property, and extends to plant maintenance, including implementation of energy, environmental and safety systems.

Consulting, as well as planning and control of activities – ranging from site selection and initial planning, through to supervision of building construction and completion of premises ready for occupancy – is carried out by around 150 architects and engineers of various specialist disciplines. BETEK is a highly regarded systems partner of BMW and other external customers.

Major projects on behalf of BMW in 1998 included the construction of a supply centre for manufacturing activities outside of Germany, a central building at the Wackersdorf Innovation Park, and the redesign of BMW's showroom in Hamburg.

On behalf of outside customers, BETEK planned a large-scale cleaning plant for local trains for Deutsche Bahn AG, and a combined heat and power plant for Energieversorgung Ostbayern AG. Among BETEK's project management activities, two sites in Berlin are now nearing completion: the official buildings for the Bundesrat (second chamber of the Federal German parliament) and the Federal Ministry of Finance. BETEK received further project management contracts for the construction of new representative offices in Berlin for the states of Lower Saxony and Schleswig-Holstein.

### **Kontron Elektronik GmbH**

The core business of Kontron Elektronik GmbH in the year under review was the production and marketing of industrial computers and the development of customer-specific system solutions. Having sold off five of its existing six business units in 1997, Kontron GmbH will terminate its business activities as of September 30 1999.



## **softlab GmbH für Systementwicklung und EDV-Anwendung, Munich**

softlab, a European leader in consultancy on information technology and in systems integration, recorded above-average growth once again in 1998. This was attributable to successful expansion of business in IT services. With its focal fields within this sector, process consulting and systems integration, softlab's customer base encompasses banks, insurance companies, the telecommunications sector, and industry – with automobile manufacturers predominating.

On April 1 1998, softlab took over AT&T Istel, the largest supplier of information technology and software to Rover Automobiles. With a staff of over 300, this company works in a long-term strategic partnership exclusively with this customer in the fields of software development, integration and maintenance for all business processes throughout Rover Automobiles. Istel came into being in 1979 when the formerly internal activities of information technology at Rover or, more precisely, British Leyland, were devolved into an independent company. softlab UK aims to acquire new customers over and beyond Rover Automobiles, not only in the car and other manufacturing industries, but also in the market for financial services.

This purchase strengthens softlab's position as the leading supplier of information technology to the BMW Group. In addition to the company's expansion of its IT service business, softlab developed new data-processing solutions on the basis of its own repository software, in which it is the world leader. Used by large corporations, these tools facilitate optimum utilisation and security of data and information that is subject to continuous revision.

softlab's staff worldwide grew in number from 900 to more than 1,300 in 1998, and the company's sales reached around DM 320 million – an increase of 40% against 1997.



## Outstanding innovations in BMW und Rover Automobiles

Year	Component/Concept	Model
1957	Semi-trailing arm axle	BMW 600
1959	Disc brakes	BMW 502 saloon
1968	Level control system	BMW 2800
1976	Malfunction display (Check Control)	BMW 630 CS
1977	Elektronic speedometer	BMW 7 Series
1978	Catalytic converter	BMW 528i J/USA
1979	Digital Motor Electronics	BMW 732i
1980	On-board computer	BMW 745i
1981	Service interval indicator	BMW 5 Series
1986	Double ellipsoid headlights	BMW 735 i
1986	Metal catalysts	BMW Alpina B7
1987	Electronic injection control for diesel engines	BMW 324td
1991	Glow-discharge headlights	BMW 7 Series
1991	Park Distance Control (PDC)	BMW 750i
1992	Continuously variable valve control	BMW M3
1994	Seat sensor for passenger airbag	BMW 7 Series
1994	Navigation system	BMW 750i
1994	Four-channel anti-lock braking for four-wheel drive	Range Rover
1995	Natural gas propulsion	BMW 316g/518g
1996	Sequential M transmission	BMW M3
1997	ITS airbag for the head	BMW 7 Series
1997	Hill Descent Control (HDC)	Land Rover Freelander
1997	Water-repellent windscreen	BMW 8 Series
1997	Short-circuit prevention in case of crash	BMW
1998	Head exchanger transmission oil/ cooling circuit	BMW 5/7 Series V8/V12
1998	Cornering Brake Control (CBC)	BMW 3 Series
1998	Tyre pressure warning system (large series)	BMW except 3 Series
1998	Active seat	BMW 7 Series
1998	Water-cooled generator	BMW 5/7 Series V8/12
1998	Personalised central locking system	BMW 3 Series
1998	Anti-theft glass in series	BMW 7 Series
1998	Active Cornering Enhancement (ACE)	Land Rover Discovery II
1998	Electronic unit injector (EUI) for diesel engines	Land Rover Discovery II TD5

Innovations in Rover Automobiles included from 1994 onwards



**Research and Development.** The first saloons of the new 3 Series were delivered to customers in April 1998. An exceptional degree of sports car dynamism has been uniquely combined with superior travelling comfort in the M5. The models of the 7 Series underwent comprehensive modification and modernisation. Individual sports car flair hallmarks the BMW Z3 coupé and the BMW M coupé. The new in-line six-cylinder diesel engines set new standards and once again underscore BMW's leadership in automobile engineering. And finally, the BMW X5 provides access to a new market segment.

The 1998 model year at Rover was dominated by Land Rover's ongoing success with the new Discovery II, and by the presentation of the first saloon developed jointly with BMW: the Rover 75. Even before their market introduction, both products aroused keen public interest, and received excellent ratings from the motoring press.



## **Research and development networked worldwide**

It was in the late 1980s that the BMW Research and Engineering Centre ("FIZ") was inaugurated, built in immediate proximity to BMW's main production complex and headquarters in Munich. The primary function of this centralised "brain" was to optimise coordination of research activities – the search for new solutions – accompanied by concrete development and series implementation of viable results. The concept of the FIZ was an "architecture of communication" based on short distances and direct interaction of all concerned in the development process; this soon proved itself so effective that the FIZ has become a model for other car manufacturers. Around 6,000 engineers, designers, model builders, computer experts and scientists of various disciplines work here – side by side with procurement staff and technical specialists from supplier companies – creating the BMW cars of the future. The best approved designs are developed to series readiness in the facility's own pilot plant. All conceivable tests and trials are carried out on acoustic test-rigs, in climate chambers and in crash-test installations.

At the same time, the FIZ has put new forms of organisation into practice. Project-oriented organisation based on specific model series complements traditional specialist structures. Staff responsible for a particular model series control and coordinate vehicle projects, maintaining the focus on priority targets in collaboration with specialised technical departments. The emphasis is thus firmly placed on efficient, interdisciplinary teamwork.

The dramatic speed of advances in computer and communications technology has led to a further development of the "FIZ idea". To a substantial extent, R&D within the worldwide operations of the BMW Group also needs to take place in the regional sales markets, in order to take immediate account of trends and specific customer demands.



The FIZ therefore collaborates extremely closely with the new development centre of Rover in Gaydon near Birmingham, England; moreover, Designworks in California addresses particular creative challenges – also on behalf of other manufacturers and in respect of other products. The FIZ maintains an additional specialist branch in Japan, allowing early consideration and evaluation of new technological trends. BMW Technik GmbH in Munich, as part of the new “Product and Technology Innovation Center” implements pioneering projects beyond the scope of daily business which can ultimately benefit series production at a later date. Since mid-1998, further support has been provided by the new Technology Office in Palo Alto, California. It works closely with US companies in electronics, telecommunications and new materials – at very early stages of development – in search of innovative systems and components for the R&D network of the BMW Group.

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## **New BMW products**

### **The BMW 3 Series enters its fifth generation of new models**

Following its presentation in February, deliveries to customers of the new BMW 3-Series saloon began in April 1998. Compared with its predecessor, it has a slightly roomier body – providing its occupants with greater comfort and enhanced safety.

### **The 3-Series coupé – the elegant alternative**

The 3-Series coupé is to follow the saloon exactly one year later, in April 1999. In technical substance, the two models are virtually identical. Differences in body styling and the interior, however, give the coupé its distinctive sporting elegance. It is available with the newly developed four-cylinder and modified six-cylinder engines from 87kW/118bhp up to 142 kW/193 bhp.

### **The M5: a sports car in the guise of a saloon**

The new M5, the sportiest model in the 5 Series, was presented to the international motoring press in September 1998. The focus of its fascinating appeal is the engine – an entirely new V8-cylinder development with 5 litres of capacity, delivering 294kW/400bhp. Its extraordinary performance values are combined with exceptional smoothness, with maximum torque of 500 Nm at 3800 revs. The M5's acceleration is thus superb – its outward appearance at the same time representing a conscious understatement. The motoring press were unanimous in their praise. The M5 is the most powerful BMW series model to date, launching the third generation of comfortable sporting saloons begun in 1984 with the first BMW M5.

### **Modifications to the 7-Series range: new engines, refined outward appeal, new technical details**

The BMW 7 Series is now entering its latest model year with the new 730d engine, modifications to the engines of the 728i/L, 735i/L, 740i/L and 750i/L, as well as numerous innovations in technical features and outward visual refinement. The primary innovations in engineering terms are the hydraulically oper-



ated active seat, voice input for the telephone, navigation system and notebook, RDC tyre-pressure control, car and key memory for adaptation of the car to the habits and preferences of the driver, and DBC dynamic brake control. In 1999, these special features also become available for the 5 Series.

### **The Z3 coupé: the sports car par excellence**

The Z3 coupé began to leave the production line in autumn 1998. After a long interval BMW once again revives the traditional concept of classical sports cars reduced to their essentials. The two-seater sports coupé was developed on the basis of the Z3 roadster. Two model variants are available: the Z3 coupé 2.8 with 2.8-litre six-cylinder engine delivering 142 kW/193 bhp, and the M coupé with 3.2-litre six-cylinder engine rated at 236 kW/321 bhp. Their exceptional agility and traction embody the ultimate driving experience in a car of extraordinary and distinct design.

### **The BMW six-cylinder diesel engine: setting new standards**

The new direct-injection six-cylinder diesel engine has been available for the BMW 530d and 730d since autumn 1998. This is a completely new development, incorporating the latest diesel technology such as common-rail direct injection, turbocharger, charge-air cooling and four-valve configuration. This engine sets new standards in performance and torque, economy and comfort. With an output of 135 kW/184 bhp at 4000 revs, the new BMW development is the most powerful diesel engine on the market at the present time. With average fuel consumption of only 7.2 litres per 100 km – and a top speed of 225 km/h – the 530d saloon is the fastest diesel-fuelled car on the road today.

### **The X5, the first Sports Activity Vehicle (SAV) in the world**

The X5 made its first public appearance in the world in January 1999, at the Detroit Motor Show. It represents a unique development with the most advanced four-wheel drive technology. The X5 opens up a new market segment for BMW, the Sports Activity Vehicle



## New BMW products

segment. As with all BMW cars, the SAV is defined by the classical characteristics of aesthetic appeal, dynamism, technical innovation and safety. A completely new driving experience is generated by the high seating position and excellent handling both on asphalt and unpaved roads. Market introduction of the X5, at first in the USA, will begin in the first half of 1999; the new model will be available worldwide from early 2000.

### **The BMW C1 – a new form of urban mobility**

BMW motorcycles developed this innovative vehicle specially for the road conditions prevailing in cities and larger conurbations. It combines the space-saving agility of a motorcycle with the safety and weather protection of a car. The brand new, integral safety concept allows the BMW C1 to be ridden in Germany without a helmet; in other countries, the decision on exemption from the requirement of wearing a helmet is now pending.

The single-seater, with a maximum output of 11kW/15 bhp, and a top speed of 100 km/h, will be brought onto the market in the year 2000. The C1's engine is to come from the Austrian manufacturer Bombardier-Rotax. Final assembly of the C1 is to take place at Bertone in Turin.

The BMW Z3 roadster, available from April 1999, with new outward refinements and modified engine.

### **BMW Technik GmbH**

The task of BMW Technik GmbH is to devise new approaches to automobile construction. In the course of the restructuring of research and technology activities, Technik GmbH, other research departments, and the Palo Alto Technology Office founded in 1998, were integrated into the "Innovation Center Product and Technology" within the FIZ (Research and Engineering Centre). This working group seeks to carry out advance work in areas of strategic importance to future product development.

In 1998, BMW Technik GmbH initiated concepts for the future in all fields of vehicle technology, electronics and telecommunications. The company's staff of around 100 employees worked simultaneously on new vehicle projects. The objective is to introduce these innovations into series production as rapidly as possible.



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## BMW Motorsport

### BMW Motorsport Ltd.

Last year, BMW won racing victories in eleven countries and brought home a total of 21 titles in various race categories. The BMW 320i (E 46) super touring car performed in its last season as a works racer. With Johnny Cecotto at the wheel, and the BMW Motorsport Team Schnitzer, BMW won the German Super Touring Car Championships. The BMW 320i has collected no fewer than 29 international championship titles since 1993, and is thus the most successful super touring car in the world.

The new BMW 320i (E46) was developed to qualify for touring car racing on the basis of homologation rules defined by the German Touring Car Challenge, now increasingly the standard applied in international events.

BMW recorded a historical victory in the Nürburgring 24-hours race in 1998; the BMW 320d was the first-ever diesel-engined touring race car to take the chequered flag at a leading international endurance event.

BMW Motorsport Ltd. is preparing for more intensive involvement in international motor racing. A newly developed BMW V12 LM was entered in the 1998 Le Mans 24-hours, making a highly promising impression as an open sports car in this category. In 1999, BMW is to enter Le Mans with a further development of the 1998 model: the roadster version BMW V12 LMR.

The return to Formula 1 is planned for the year 2000. BMW plans to team up with Williams F1, the most successful of all Formula 1 teams and presently the holder of nine manufacturers' and seven drivers' championship titles. In spring 1999 the BMW 10-cylinder developed in Munich by a team headed by Paul Rosche will be put through its first tests by Jörg Müller in a Williams Formula 1 chassis.

The first victory in a long-distance race by a touring car with diesel engine – the BMW 320d.







## New Rover products

### **Closer integration of BMW and Rover**

In spring 1997, the development teams and all important technical departments at Rover Automobiles were brought together at the newly opened research and development centre in Gaydon near Birmingham. This was a vital step towards effective networking of all development activities within the BMW Group.

The establishment of uniformity in the communications and data-processing systems used in the development sector of BMW and Rover, and more rigorous orientation of Rover's development activities in accordance with BMW's R&D structures served further to intensify collaboration between BMW and Rover in 1998.

### **The Rover 75: "One of Britain's fine cars"**

A completely new, luxury British saloon with style and quality, character and individual flair – this was the development brief for the latest Rover model. The result of years of work was presented at the Birmingham motor show in late October 1998: the Rover 75.

The elegant five-seater saloon is the first entirely new development by the Rover Cars brand since the acquisition by BMW in 1994; it is manufactured at an ultra-modern plant near Oxford.

Its features are clear testimony of meticulous attention to detail; the design encapsulates fine materials such as chrome in the interior as well as exterior, soft leather and wood. Special sealing techniques effectively minimise wind, tyre and engine noise, allowing absolute relaxed motoring with the Rover 75.

The Rover 75 is available with four engine variants: a 1.8-litre four-cylinder, the fundamentally modified six-cylinder versions with 2 and 2.5 litres capacity, and a common-rail version of the latest BMW 2-litre direct-injection diesel. Market introduction of the Rover 75 is scheduled for the first half of 1999.



### **The new Discovery II in the Land Rover range**

The BMW Group presented the new Land Rover Discovery II at the international Paris motor show in 1998. The vehicle's body was substantially lengthened in comparison to its predecessor model. The model includes unique technical innovations greatly improving both the vehicle's handling by the driver and its typical off-road capabilities.

A key innovation incorporated in the new suspension is the hydraulically powered and electronically controlled Active Cornering Enhancement (ACE), developed for the first time for an off-road vehicle. It provides car-like response on the road yet without compromise to the vehicle's off-road prowess, and thus greatly improves driving comfort.

The electronically regulated Hill Descent Control (HDC) patented by Land Rover and incorporated for the first time in the Freelander is now available in its second generation in the Land Rover Discovery II. It supports the braking action of the engine on steep slopes, and transmits precise braking signals to the wheels via the ABS system. Both systems, ACE and HDC, are exclusive to Land Rover vehicles throughout the world.

The Land Rover Discovery II furthermore has an air-cushioned rear axle with automatic load-detection regulation, as well as the new electronically controlled traction system, which replaces the central differential lock formerly required.

The new Discovery's 2.5-litre five-cylinder turbodiesel engine is a completely new development, providing 102kW/138bhp. Electronic unit injector technology was employed for the first time in the relatively small diesel engine of an off-road vehicle. Originally developed for the large diesel engines of commercial trucks, this technology ensures good responsiveness, extremely smooth engine operation and economy, as well as such a high combustion ratio that the Td5 engine complies with the most stringent exhaust regulations in the world without a catalytic converter. The Discovery II is also available with the newly modified 4-litre V8-cylinder petrol engine rated at 136kW/185bhp. The latest Land Rover model has been on the market since November 1998.



## **New Rover products**

### **Rover 200 "British Racing Motors" edition**

The new Rover 200 BRM limited edition revives a long-standing tradition: as long ago as 1962, Rover and British Racing Motors (BRM) collaborated on construction of a racing car for the Le Mans 24-hour event. The design concept of the suspension and drive system of the Rover 200 is decidedly sporty in orientation; the interior recalls the typical racing styling of the 1960s. The car will be available at first in the UK, from April 1999, then in selected other European countries in the course of the spring.

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## **An energy strategy for road transport**

BMW continued to pursue its long-term energy strategy in 1998, progressing from fuels in use today, via natural gas, to hydrogen. For the first time, car manufacturers and energy suppliers in Germany agreed on a joint approach to development and market implementation of alternative vehicle fuels. On the initiative of BMW, seven companies and the Federal Ministry of Transport joined forces in the project "energy strategy for road transport". BMW's industrial partners at the present moment are DaimlerChrysler, MAN and VW, Aral, Shell and RWE.

The first objective is to pool existing technological know-how. In concrete terms, two alternative, ecologically sound fuels are to be selected by the end of 1999, and strategies for their market introduction drawn up. The partners aim to generate in tandem a comprehensively networked energy infrastructure, with the long-term objective of securing a fully adequate energy supply for road transport in the coming millennium.

## **BMW – pioneer of the hydrogen era**

In the course of the last two decades, BMW has developed the technology for using hydrogen as a motor fuel almost to the stage of market readiness. There is, however, as yet no adequate infrastructure to allow wide-scale implementation of the technology that already exists. In spring 1999, the first public filling station for liquid hydrogen is to begin operation at Munich airport.

BMW supports the global hydrogen forum HYFORUM 2000, which serves the exchange of ideas and initiatives amongst all concerned in preparation for the era of hydrogen.

In the long term, BMW is committed to hydrogen-fuelled motor vehicles. Nevertheless, a viable alternative to petrol and diesel already exists: engines running on natural gas. Since 1995, BMW has been the first car manufacturer in Europe to offer customers series-produced vehicles capable of running alternatively on either natural gas or petrol.

**Alternative drive  
systems,  
traffic management  
and recycling**



**Alternative drive  
systems,  
traffic management  
and recycling**

**New solutions through multimodal transport  
management**

In order to secure mobility in the longer term and minimise the undesired consequences of private and commercial transport, BMW has been involved for many years in the development of solutions to problems of transportation.

The Munich pilot project MOBINET, a collaborative venture of industrial companies, scientific institutions and the city of Munich, represents a centre of competence for ecologically compatible and commercially viable transport technology. Scheduled to operate for a period of five years, the project aims to facilitate improved networking of private and public transport.

**Recycling – new regulations on disused cars in  
Germany**

New regulations, which govern the handling of disused cars based on a voluntary obligation by car owners, came into effect in Germany on April 1 1998. These regulations set uniform standards for the ecological disposal of old cars in Germany. They incorporate elements long called for by the automobile industry, including certification of recycling companies and documented confirmation of proper disposal. The number of illegally abandoned vehicles and poorly managed recycling companies has already been substantially reduced by this market-principle approach. 16 commercial associations have joined forces to found the "Altauto" working group on coordination and harmonisation of recycling procedures.

**Gradual implementation of recycling  
structures in all important markets**

For BMW, this represents confirmation of its long-term recycling strategy. The network of BMW recycling partners has been rigorously brought into line with standards determined by the new regulations now in effect in Germany. There are now more than 200 collection points and almost 100 recycling facilities in the country; this represents a sufficient geographical basis for recycling in accordance with uniform BMW standards. The sole criterion for selection of authorised partners is compliance with environmental and quality stipulations.

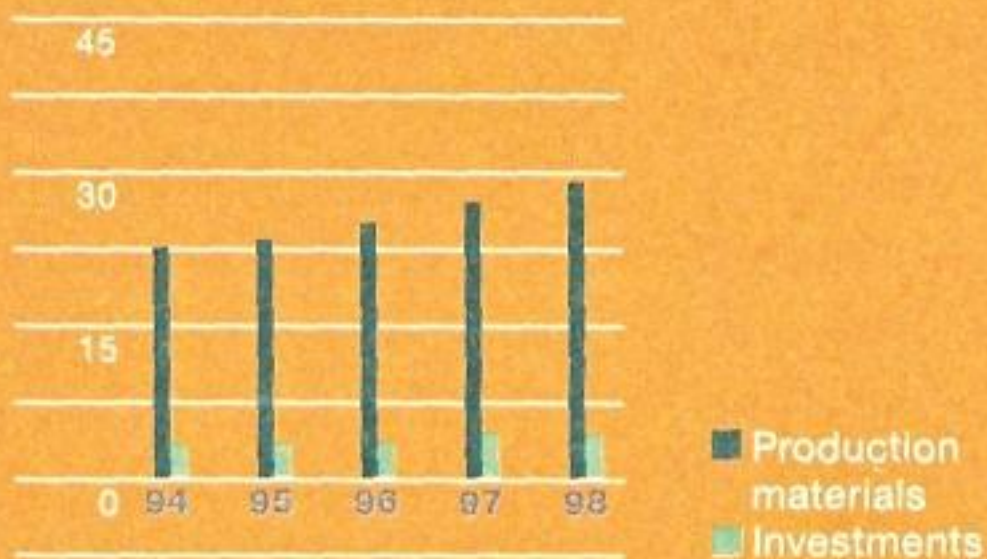


In the Netherlands, Austria, Switzerland and Sweden, an adequately widespread network is now also in place. Through international cooperation with Fiat and Renault, as well as through Rover, the same applies to Italy, France and the UK. Furthermore, BMW offers its own recycling programme in the USA, and is the first and as yet only manufacturer to do so also in Japan.

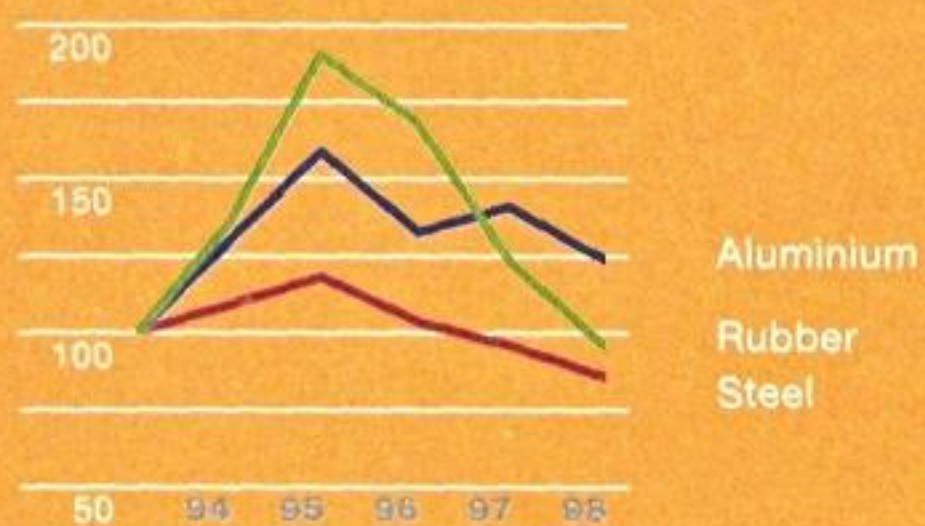
### **Design for recycling – new criteria in product design**

Key parameters of the product development process at BMW are environmental compatibility of cars and their components throughout the entire product lifespan, and a high proportion of recycled value. The primary criteria towards classification of environmental compatibility are efficiency of resource management, economical recycling, re-use of recycled materials, and avoidance of contaminating substances. Innovative solutions in all BMW model series confirm the company's leading position in "design for recycling". The new 3 Series, for example, can be effectively and economically recycled almost in its entirety. The proportion of plastics conducive to recycling, for example, was increased once again in comparison with the preceding model by 28%, to the level of 90 kilograms.





**Purchasing volume of the BMW Group according to materials and investments in DM billion**



**World market prices of important raw materials in US dollars**  
Index: 1993 = 100

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**Procurement and suppliers.** Cooperation with suppliers was intensified. In order to exploit the advantages of a unified market approach, BMW and Rover procurement was incorporated into one central function. International procurement activities and collaboration with suppliers were extended further.

**BMW AG**



## Procurement and suppliers

### Joint procurement for BMW and Rover results in considerable savings

Material expenditure for products of the BMW Group rose by 4.8% to DM 29.1 billion. This increase is attributable to greater volumes, the higher value of features and equipment supplied with the vehicles, a higher ratio of assembled components and altered exchange-rate parity between the DM and pound sterling. The total volume of investments amounted to DM 4.3 billion.

The individual specialist procurement departments are now incorporated within a central function. Responsibility for each field of procurement is thus managed centrally for the entire Group. At the same time, the services provided by procurement will continue to be represented in the most important manufacturing locations. It will thus henceforth be possible to exploit more fully those opportunities derived from the use of common parts and suppliers, as well as pooled market and product knowledge.

### Favourable development of material costs

Material costs were on average slightly lower in 1998. This was largely the result of generally favourable economic conditions, including stable currencies in the euro region, increased productivity, lower raw material prices and an only moderate increase in wage costs.

The price of industrial raw materials declined on average by just over 14% against the previous year, based on their value in dollars. Prices for precious metals, such as those used in catalytic converters, rose sharply, by over 55% in total. It was primarily BMW locations in the US dollar and pound sterling regions – the “raw material currencies” – that were able to benefit from these price advantages. In view of overall economic developments, raw material prices are expected to remain generally stable in 1999.

BMW's procurement staff supports and advises suppliers in South Africa – an important factor in facilitating smooth manufacturing operations at the Rosslyn plant.







**Further development of cooperation  
with suppliers**

Changes to overall parameters affecting vehicle development and manufacture call for new forms of collaboration between BMW and its suppliers. Questions of procurement were addressed at a much earlier stage of product development, and suppliers were integrated into the concept phase of the product. This resulted in further improvements to quality, as well as cost and time requirements along the entire value-added chain.

A project carried out with suppliers aimed at enhancing market appeal led to the establishment of an innovation agency, which is to help accelerate implementation of innovative ideas. Suppliers were furthermore encouraged to give their own assessment of BMW in the "Lieferantenreport" ("Suppliers' report"), contributing to the company's awareness of how collaboration with suppliers could be further improved.

A newly designed information system, which can also be accessed by external development partners, has helped to provide a clearer picture of the product development process. BMW is today linked with 700 suppliers in an electronic data network for the handling of deliveries for series production.

BMW has become a consultant to its suppliers in the course of their further development as partners. Collaborative problem-solving teams, which have until now focused primarily on improving manufacturing procedures, began in 1998 to address concerns relating to the entire value-added process. This ensures the active support of key suppliers throughout all phases of the product.

Suppliers to BMW presented their capabilities to the company and its staff under the motto "Learning from suppliers". This also provided the opportunity to exploit innovative ideas and processes more fully.



### **International procurement activities extended**

The growing international scope of the BMW Group creates new requirements in its procurement activities. Two new procurement offices were opened in Latin America and eastern Europe. Purchasing offices have now been set up in ten countries around the world, ensuring that Group procurement has an active presence in all major procurement markets.

Working together with suppliers, procurement activities in Spartanburg, South Carolina, focused on further improvements to methods and procedures. Particular emphasis was placed on assuring product quality, consistent supply and productivity. Suppliers were integrated into the early stages of preparing for production of the BMW X5. This process benefited from the positive experience gained through modular purchased-component configuration used in the Z3 roadster.

In South Africa, procurement supported the integration of suppliers into the BMW suppliers' network. This is prerequisite to achieving a local value-added share of over 50%.

In view of the over-valued pound sterling, a comprehensive worldwide analysis of procurement markets was carried out in 1998 in order to improve the cost structure for Rover Automobiles. A further shift in the supply flow sources to other regions outside the UK is thus foreseeable.



<b>BMW Group Automobile plants</b>	
<b>Germany</b>	
Munich plant	3-Series saloon and compact version
Dingolfing plant	3-Series saloon, 5-Series saloon, 5-Series touring, 7-Series saloon, 8-Series coupé
Regensburg plant	3-Series saloon and coupé, touring version and convertible
Berlin plant	BMW Motorcycles
<b>Great Britain</b>	
Longbridge plant (Birmingham)	Rover 200, 400, MGF, Mini
Solihull plant (Birmingham)	Land Rover Defender, Discovery II, Range Rover, Freelander
Oxford plant	Rover 75
<b>Overseas</b>	
Spartanburg plant, United States	Z3 roadster, Z3 coupé, X5
Rosslyn plant, South Africa	3-Series saloon, Land Rover Defender

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**Manufacturing and logistics.** The capabilities of the production system were once again enhanced with respect to quality and flexibility. The BMW plants in Dingolfing, Munich and Regensburg received awards for their achievements. The production lines at four sites were successfully tooled up for the new 3-Series saloon, the Z3 coupé and M5 were smoothly integrated into series production of the respective basic models. Over a billion marks were invested in modernising the Cowley plant near Oxford for Rover Cars' new flagship, the Rover 75. The Rover 75, built to the high quality standards of the BMW Group, is scheduled to come on stream in the first half of 1999.

A central objective of logistics in 1998 was to improve "time quality". A major step in this direction was introduction of online ordering in Germany. The priority in collaboration with Rover Automobiles was to establish synergies through uniform and inter-linked structures; the corporate function "Group Transport Logistics" represents one of the results of this work.



## **The BMW production network**

### **Linking up for the customer**

The core principle of the BMW production philosophy is to optimise the company's ability to respond to short-term and future changes in market demands. A high degree of product customisation and fast, flexible completion of customers' orders represent a huge challenge for the BMW production system. Other central issues dealt with by the BMW production units include quality, productivity and innovation in processes, technologies and organisation, plus the focus on environment, supply chain and employees.

The key factor determining innovation, agility and management of the complexity in this network is the workforce: work groups, teamwork and networks based on shared goals and values are the hallmark of the international system of linked production facilities.

### **Several start-ups in 1998**

One example of this interlinked system in action is that it took only one year to set up the production lines for the new 3-Series saloon at the plants in Munich, Dingolfing, Regensburg and Rosslyn.

To be able to start parallel production of the new 3-Series saloon in four plants on two different continents, it was essential that the development, planning and production teams agreed upon precise targets. The project also called for an integrated approach to workflow organisation and extremely intensive communication between project managers at the various locations. In addition to continuous training of the entire production workforce, around 2,500 employees took part in courses at training centres specially installed for the start-up of the new 3 Series.

Staff from Rosslyn received training on the product and plant engineering in the German plants as preparation for the start of production in South Africa.



The Dingolfing plant was a latecomer to the production programme for the 3-Series saloon, added at short notice. This was made possible by the extreme flexibility and mobility of the workforce, appropriate working-time arrangements and the system of linked plants. The Dingolfing paint shop was supplied with body shells from the Regensburg facilities – where a special night shift was introduced to deal with the volume.

In turn, staff from Dingolfing are currently providing support to their American colleagues in the run-up to production of the X5 "Sports Activity Vehicle" at the Spartanburg plant.

Now that the investment programme has been completed and the new 3-Series saloon has come on stream at the Rosslyn plant in South Africa, the five BMW car plants in Munich, Dingolfing, Regensburg, Rosslyn and Spartanburg are manufacturing vehicles for the world market in close collaboration. The efficiency of this production network is backed up by the facilities in Steyr, Landshut, Berlin, Eisenach and Wackersdorf, which manufacture and supply components.

An "Initial Quality Study" carried out by the American market research organisation J. D. Powers confirmed the quality of BMW's work. Three plants received awards for the world's best production quality: Dingolfing the "Platinum Plant Award", Munich and Regensburg the "Silver Plant Award".

The production plant network also has links to assembly plants at various overseas locations, where Rover and BMW cars are assembled from supplied kits. Despite the current low level of sales in the Asia-Pacific region, prospects for future sales are good in the long term. Consequently, in 1998, BMW founded BMW Manufacturing Thailand Co. Ltd. and invested over DM 43 million in the new manufacturing facilities there. It is planned to produce around 10,000 units a year by 2004, and employ a workforce of somewhere between 500 and 600.



## BMW plants

### BMW car production still at an all-time high

In 1998, output of new BMW cars rose by approximately 5% to 706,426 units. Demand for the new BMW 3 Series has been particularly pleasing. During the year under review, 3-Series models including the BMW Z3 accounted for a total worldwide production volume of some 440,000 units, an increase of over 50,000 in comparison with the previous year. In anticipation of these market developments, production of the 3-Series saloon was started simultaneously in Munich and Regensburg, the first time this has been done. In the period under review, almost 180,000 3-Series saloons and compacts came off the line at the Munich plant.

In Regensburg, the 3-Series variants coupé, convertible and touring were manufactured in addition to the saloon – a total of 182,000 vehicles. Despite the extra workload associated with the start-up for the new 3-Series saloon, the Munich and Regensburg plants together exceeded their previous year's output by some 54,000 units.

The Dingolfing plant kept up last year's record production level and high capacity utilisation, manufacturing just under 275,000 units. The new M5 sports saloon was integrated into the plant's series production according to plan.

The Spartanburg plant in South Carolina added the Z3 coupé and M coupé to the Z3 roadster in their production programme. In total, around 54,600 vehicles were manufactured by this plant in the last year.

The start of production of the new 3-Series saloon marked the full integration of the Rosslyn plant, South Africa, in the BMW system of linked production facilities. In 1998, this plant manufactured around 13,600 BMW cars and over 2,100 Land Rover Defenders.

Output of the assembly plants in Mexico, Egypt, Thailand, Indonesia, Vietnam, Malaysia and the Philippines, who are supplied with German-manufactured kits, came to around 3,000 vehicles in 1998.

With the start-up of the new 3 Series, the Rosslyn plant in South Africa was fully integrated in the worldwide production network.







### **Investments in the car plants ensure future success**

The 1.2-billion mark investment programme for the Munich plant, started in 1995, is now complete. After extensive technological and structural improvements in all areas of production, the plant has virtually been rebuilt. As part of a new project, some areas of engine production were renewed. The 3-Series start-up enabled more than 400 new jobs to be created. Further changes were implemented to improve flexibility and facilitate efforts to respond to customer demand as swiftly as possible, including cancellation of the traditional summer break, for the first time, and the introduction of flexible lunch breaks, allowing production to continue non-stop.

Production of the new 3-Series saloon and the preparations for the 3-Series coupé enabled 2,000 new jobs to be created at the Regensburg plant by year-end. A total of DM 820 million was invested here for the 3-Series start-up. With the new pressing shop, Regensburg is now a fully-fledged production facility. A new third shift has been introduced to supply additional body shells to the Dingolfing plant, where final assembly takes place.

In the autumn of 1998, the Dingolfing plant celebrated its 25th year of car manufacturing. Since it started operating, more than 4.7 million vehicles have come off the production line. The second phase of development was completed in 1997, and since that date almost all vehicles produced at Dingolfing have been painted using the innovative powder-coating technology process. BMW has spent over DM 350 million so far on the construction of the new paint shop. Construction of a new pressing-shop wing marks the beginning of a major investment programme for expansion of the plant.



Following investments of DM 530 million in the Spartanburg plant in 1998, BMW intends to invest a further DM 400 million in 1999, creating around 1,000 new jobs. Including direct suppliers who have located in the vicinity, this will bring the total number of jobs generated there to around 5,500.

The additional capacity will be used primarily for production of the BMW X5. It is planned to double the output of the Spartanburg plant to more than 100,000 vehicles a year. After successfully starting up production of the Z3 coupé and the M coupé in 1998, preparations are now completed on schedule for the new version of the BMW Z3 roadster to be built at the Spartanburg plant.

The start of production of the new 3-Series saloon in early October marked the final stage of restructuring of the Rosslyn plant near Pretoria, South Africa, and its integration as a fully-fledged car plant in BMW's international network of production facilities. Products from Rosslyn are supplied to more than 24 export markets, including South America and Australia. After completion of the modernisation work, which cost around DM 310 million, the production capacity has been increased from 13,000 to 40,000 units.



## BMW plants

### Foundation stones laid for two new engine plants

Eight new engines on stream in a single year, including two brand new engine designs, one completely revised drive train and five variants of new and existing models – that sums up the performance of BMW's engine plant at Steyr in Austria.

In February, production started on the 2-litre four-cylinder direct-injection diesel engine for the BMW 320d, currently the "best-value" BMW in terms of fuel efficiency and emissions. Production of the revised six-cylinder petrol engine also started in February. This engine complies with the strict anti-pollution laws in the USA and Canada and also meets the EU-3 emissions standard which is due to come into force in the year 2000. These two were followed in August by the production of the 3-litre version of the six-cylinder direct-injection diesel engine, which met with equal enthusiasm on the part of the motoring press. The 2,300 employees at the Steyr plant built a total of nearly 477,000 engines – an increase of 4.1% with respect to the preceding year. BMW Motoren GmbH in Steyr is the largest engine plant in the BMW Group.

The largest of its kind: the  
suction press of the Regensburg  
plant, with a pressing capacity of  
8,100 tons.

As part of the ongoing internationalisation of the BMW Group, the foundation stones for two more engine plants were laid in April:

The plant at Hams Hall near Birmingham in England will be building up to half a million four-cylinder petrol engines a year with capacities between 1.6 and 2 litres for BMW and Rover cars from the second half of 2000 onward. The construction of this plant has helped to secure some 1,500 jobs at Rover Automobiles and related jobs at the BMW facilities in Berlin, Landshut and Steyr.

In cooperation with DaimlerChrysler, production facilities are being set up at Campo Largo in Brazil, where 1.4-litre and 1.6-litre engines will be built for the new Mini and for the Chrysler Neon. This plant is also due to go into operation in mid-2000. The joint venture bears the name Tritec Motors Ltda. and is expected to employ between 500 and 1,000 people once full production capacity has been reached.







## BMW plants

At the BMW motorcycle plant in Berlin, the new K 1200 LT and R 1100 S models were successfully integrated into series production. Restructuring of the assembly facility for two- and four-cylinder engines started in 1998 and is due to be completed by mid-1999. The aim of this restructuring is to significantly improve the logistics and human resources aspects of plant operations by centralising the parts-dispensing functions and introducing a more flexible, demand-oriented system of workforce deployment to the various assembly lines. As part of the general upgrade of the plant's facilities, a new painting plant went into operation in 1998. The Berlin plant also manufactures engine and chassis components for the BMW product range and for the new Rover 75.

Expansion activities at Landshut in 1998 concentrated on the establishment of a competence centre for lightweight vehicle construction. As a first step in that direction, a materials science laboratory for magnesium has been set up.

The BMW plant at Eisenach works in close collaboration with the toolmaking shops in Munich and Dingolfing and together these units offer system solutions on the machine tools market. Customers include other European car manufacturers besides the BMW Group. In 1998, the plant qualified as a so-called class-A supplier in accordance with DIN ISO 9004.

July saw the inauguration of the Wackersdorf innovation park, which BMW shares with thirteen components suppliers. BMW and its suppliers intend to practice a new form of inter-company collaboration, building up even more efficient structures of manufacturing in order to achieve greater cost savings. By the end of the year under review, 1,600 jobs had been created here; BMW plans to create a further 400 through new projects. To date, BMW and its associates have invested DM 400 million in the 55-hectare park.



### **Slight drop in output at Rover Automobiles**

In 1998, Rover plants produced 497,600 vehicles, which represents a drop of just under 5%. Production at the Longbridge plant near Birmingham fell by 18% to 281,900 units. The Rover 200 and 400, the Mini and the MGF are manufactured there.

### **Rover plants**

### **Rise in production at Land Rover**

The Solihull plant near Birmingham increased its output of Land Rovers by 40,600 to a total of 168,500, primarily as a result of the introduction of the new Land Rover Freelander. Production of the original version of the Land Rover Discovery has ceased. Its successor, the Land Rover Discovery II, went into production in October 1998. Total investment on the development and manufacturing of the Discovery II amounted to around DM 400 million.

### **Preparations for production of the Rover 75 on schedule**

Owing to the imminent phasing-out of the Rover 600 and 800 models, output at the Cowley plant near Oxford did not exceed 47,200 units last year.

The new Rover 75 is to be manufactured here from spring 1999 onwards. Preparations for the production of this model have progressed according to plan.

Over DM 1 billion has been invested in the ultra-modern new Oxford plant for Rover Cars' new flagship, the Rover 75, which will be built to BMW Group quality standards.



## Logistics

### **Order processing simplified and speeded up**

A key success factor for the BMW Group has always been the capability to control and speed up complex procedures of logistics. "Time quality" was consequently established as a further important criterion in planned objectives pursued by the Group. Measuring systems were implemented to monitor the entire process chain from incoming order through to delivery of the completed vehicle. This clearly underlines the importance BMW attaches to what customers expect – in terms of delivery time, reliability and flexibility.

The 1998 New Car Buyer Survey (NCBS) confirmed the success achieved: in comparison with all direct competitors, BMW emerged as the brand leader in respect of punctual delivery and acceptable completion time.

In order to underpin this position still further, structures, procedures and systems in production and sales were substantially improved in 1998, including the option of online ordering, introduced by BMW in Germany in April. Use of the latest information technology further simplifies and speeds up the ordering process. Preparations are now under way to implement online ordering in several other European countries and the USA.

The new factory in Cowley near Oxford, where the new flagship of Rover Cars, the Rover 75, is to be built from spring 1999 onwards.

### **"Group Transport Logistics" as a new integrated international function**

All activities relating to transport planning, procurement of transport facilities and services for vehicles, materials and parts for both BMW and Rover Automobiles, including their financial and operational controlling, are to be incorporated as of 1999 within the corporate function "Group Transport Logistics". Preparations for this measure were initiated in the year under review. The concentration of transport volume and demand will allow fuller exploitation of synergy potential, lower overhead costs, while at the same time lessening the burden on the environment.







<b>Workforce at end of year</b>	<b>1998</b>	<b>1997</b>
<b>BMW Automobiles</b>	<b>76,026</b>	<b>72,020</b>
Head Office and Munich plant		
BMW Research and Engineering Centre (FIZ)	24,699	23,268
Dingolfing plant	19,522	19,067
Regensburg plant (incl. Wackersdorf)	8,740	7,313
Landshut plant	3,096	3,147
Eisenach plant	213	219
Berlin plant (excl. motorcycles)	498	484
Sales outlets	5,763	5,642
Steyr plant, Austria	2,293	2,176
Spartanburg plant, United States	2,217	2,046
Roslyn plant, South Africa	3,201	2,794
Other facilities, sales companies and investments	5,784	5,864
<b>Rover Automobiles</b>	<b>36,821</b>	<b>39,172</b>
Longbridge plant (Birmingham)	12,017	14,388
Solihull plant (Birmingham)	12,414	12,366
Oxford plant	3,620	3,693
Swindon plant	3,475	3,723
Gaydon Design and Engineering Centre	2,769	2,618
Other facilities, sales companies and investments	2,526	2,384

BMW AG



**Workforce.** Markets and production facilities are becoming increasingly interdependent. The continuing process of globalisation imposes a wide variety of challenges on the company and its employees, especially in terms of intercultural management, but also exerting a tangible effect on the creation of jobs in Germany.

BMW AG



### **The four essential elements of BMW human resources policy**

International success and the preparation of new products enabled BMW to expand its German workforce by around 3,700 in 1998. With a total of 69,000 employees working for BMW AG, its German associated companies and Rover Deutschland, the workforce in the company's native country has never been so large. Worldwide, the Group provided jobs for just under 120,000 people in 1998, three times as many as 20 years ago.

Consequently, human resources activities at BMW in 1998 focused on four essential elements:

- Market orientation and highly flexible systems
- A systematic international approach to human resources management
- Long-term safeguarding of employees' skills
- Measures to stimulate innovation and creativity.

### **Market orientation and highly flexible systems**

The scope of action needed to capitalise on market opportunities is determined by the interaction between production facilities in different countries, the flexibility of technical and logistics processes and by new systems of working hours, giving employees greater flexibility. A cornerstone of BMW's strategy is emphasis on the individual employee. It is the basis for the long-term success of the company. In addition to promoting the performance and commitment of staff at BMW, the human resources department and its systems make a significant contribution towards enhancing the capabilities of employees.

Specific elements of this approach include BMW's remuneration system (which incorporates personal performance appraisal in the manufacturing plants), new working and management structures, extensive exchange programmes between Rover and BMW plants, international assignments and exceptionally flexible schedules of working hours. The overall objective is to break down the rigid links between the working hours of the individual employee and the operating hours of the machines, to the benefit of the company and the people it employs.



Introduction of such flexible schemes for working hours is also the key element in a set of agreements between Rover Automobiles and representatives of the British trade unions. An agreement concluded in December 1998 is expected to produce annual savings of some DM 400 million by increasing plant efficiency. The capacity of the Rover production facilities can be utilised for up to 100 hours a week, in two shifts. Work-shift models apply to a timeframe of Monday to Friday, but allow Saturday morning working at normal pay rates by prior arrangement. Working-time credit accounts with a range of plus/minus 200 working hours will allow working time to be adapted to the life cycles of the individual models.

The workforce at Rover Automobiles was reduced in number by 2,350 (-6.4%) by December 31 1998 in comparison with the previous year; further cutbacks are planned for 1999. The pay increase of 3.5% originally planned to take effect on November 1 1999 is to be reduced to 0.8%. In compensation, working-time accounts will be credited with one hour per week. Similar measures will be applied with effect from November 2000. The scheduled pay rise will be reduced by 2.8 percentage points, and one more hour's credit will be granted per week. The regular working week will remain at 37 hours. The set of agreements also foresees the cancellation of various bonuses and the reduction of pension costs.

These agreements represent a milestone for Rover Automobiles and for British industry, and were approved by a three-quarters majority of staff at all Rover plants.



### **International approach to human resources management**

The process of internationalisation in human resources work is based on the following principles: Sharing in the process of defining values and practices creates and determines the identity of the corporation. National values are nevertheless retained and given tangible expression as a desirable aspect of the diversity to be found in a "multicultural culture".

BMW's worldwide presence has a considerable influence on the Group's human resources management, giving the BMW Group various opportunities of using expertise across and beyond national boundaries.

In 1998, joint principles of human resources policy were established, along with policy guidelines for management and cooperation within the Group. The decentralised personnel systems and programmes are based on these principles and guidelines to ensure that they are put into practice.

Examples that illustrate international cooperation in human resources management include transfers between different countries, corporation-wide training courses and worldwide networks for projects.

The number of personnel assignments worldwide has grown by a third. International orientation workshops are held to prepare employees and their families for a period of work in another country. Internationalisation of the BMW Group has continued with use of "International Management Training", which provides managers with the skills they require when working in an international environment.

### **Long-term safeguarding of employees' skills**

In view of the fact that Germany has the world's highest labour costs and shortest working hours, competitive advantage has to be sought in other areas. Germany's greatest asset is knowledge, which in the case of BMW means the combined skills of its employees. Staff training and development is therefore of the utmost strategic importance. And, for a company with a strong international bias, this does not apply to Germany alone, but to all countries of the world.

There are numerous possibilities in this field, including international recruitment of highly qualified personnel, a wide variety of skills-enhancement and



training programmes available in-house, and the building up of a well-balanced staff structure.

Examples in the 1998 business year: More than a thousand new apprentices started work at BMW AG, 23% more than five years ago. This continues BMW's training initiative launched in 1997, which aimed to gradually raise the number of training positions in over 40 different professions to 3,000 by the year 2000.

Also in 1998, a new project with the title "Euro-Apprentice" was launched. It gives BMW apprentices an opportunity to work and train at Rover and to take exams to obtain the equivalent vocational qualifications there – in addition to the German skilled-trade qualifications.

The apprentice exchange programme between BMW and Rover was further expanded. Its aim is to improve apprentices' intercultural understanding and encourage their independence, qualities that will later enable them to work on a more international scale. In 1998, 90 BMW apprentices spent a total of 13 weeks at Rover during their training. In return, 45 Rover apprentices spent time at BMW. 729 young employees are currently being trained at Rover.

In this way, BMW is helping to improve the current situation of apprenticeships in Germany and at the same time assure the company a supply of suitably qualified candidates for recruitment to permanent positions.

1998 saw the launch of DRIVE, an induction and development programme for college and university graduates with little (maximum three years) or no professional experience. DRIVE stands for mobility and activity and for entrepreneurial thinking and action. 640 young people embarked on this programme in 1998. DRIVE is a forward-looking, fast-track initiative to strengthen and widen the capabilities of junior members of staff with a view to establishing a pool of competent potential managers. From the very start, emphasis is placed on practical experience, the assumption of responsibility and producing results in concrete tasks. The programme is designed to be highly individual and flexible, aiming to find the best fit between an employee's capabilities and the requirements of company business.



## BMW workforce

Expenditure on training and development can be compared to the budget of a small university: in total, BMW AG invests over DM 123 million every year in the education of its employees.

An increasing number of people at BMW are using information technology to learn on an individual basis. The online training market in the BMW Intranet is permanently open to all staff, wherever they may be: at their desks, in the self-teaching centre, or at home in the case of teleworkers.

BMW is one of the leaders in the field of vocational and technical further training. A comparison with external institutes shows that the cost of in-house training is on average about 20% less than the price on the open market.

Rover's Learning Centre in Longbridge opened in 1998. Its purpose is to enable young employees to gain additional qualifications, teach new, supplementary subjects to trainees and, above all, promote life-long learning. The centre's facilities are open to permanent staff, trainees and equally to external students.

Since May 1 1998, non-managerial BMW staff aged 55 or over have had the option of entering into a part-time working agreement with the company. It allows employees to plan a gradual transition to full retirement and helps the company to retain a balanced workforce structure. It is particularly important to ensure that the knowledge and experience of older employees are passed on to their younger colleagues, thus safeguarding the company's knowledge base.

The central element of the part-time working agreement is that it covers two equally long periods of time, one of full-time work and one of effective retirement. In addition, BMW has made use of an option in the collective bargaining agreement that allows the company to define its own system of remuneration, equivalent in value to that defined in the standard agreement. This part-time working agreement gives the young and the unemployed a chance to find work when positions become vacant. A similar scheme for management-level employees was introduced as of January 1 1999.



## **Measures to stimulate innovation and creativity**

The expertise of the workforce, and above all their inherent potential to produce new ideas, is what determines a company's ability to innovate. If a company is to maximise its creativity, its employees must be given the freedom and encouragement to develop their individual talents. This is the objective of BMW's systems and models.

As part of its human resources strategy, BMW actively promotes processes that accelerate change in the interests of increasing efficiency. One aspect is that BMW places great value on diversity, expertise and creative freedom when selecting members of a team, assessing their skills and initiating team processes. This applies, for instance, to BMW's continuous improvement process, which has been in practice for a long time, producing positive results.

To reinforce this drive for creativity, the company's suggestion scheme was completely revised in 1998. In order to bring this classical innovation tool into line with the principles of modern ideas management, a new works agreement was concluded in 1998. The new system is named "i-motion" and its objective is to establish rapid, direct and unbureaucratic decision-making processes which will dramatically speed up the processing of suggestions. The trials run at all sites of BMW AG were so convincing in their results that the system will be introduced throughout the Group in 1999.

The number of suggestions for improvement submitted has risen once again, and now stands at over 54,000; the savings achieved as a result rose even more steeply to some DM 99 million. A further 28,000 or more suggestions were implemented that did not lead directly to cost savings but created improvements in quality, workflow and occupational safety.

A prime example of linking individuality and innovative ways of working is teleworking. The teleworking project TWIST (TeleWorking In flexible STructures), started in October 1995 in collaboration with the Bavarian government involved some 400 employees by the end of the year under review. The experience of employing teleworking in research and development departments has been extended to other, less-investigated functions such as purchasing, logistics, material requirements planning and production



## BMW workforce

(foremen) and has proven to be extremely promising as a future form of working. The research study accompanying the alternating teleworking project at BMW is Germany's largest scientific investigation in this field to date, and its findings can be accessed openly on the Internet at <http://www.twist.bmw.de>.

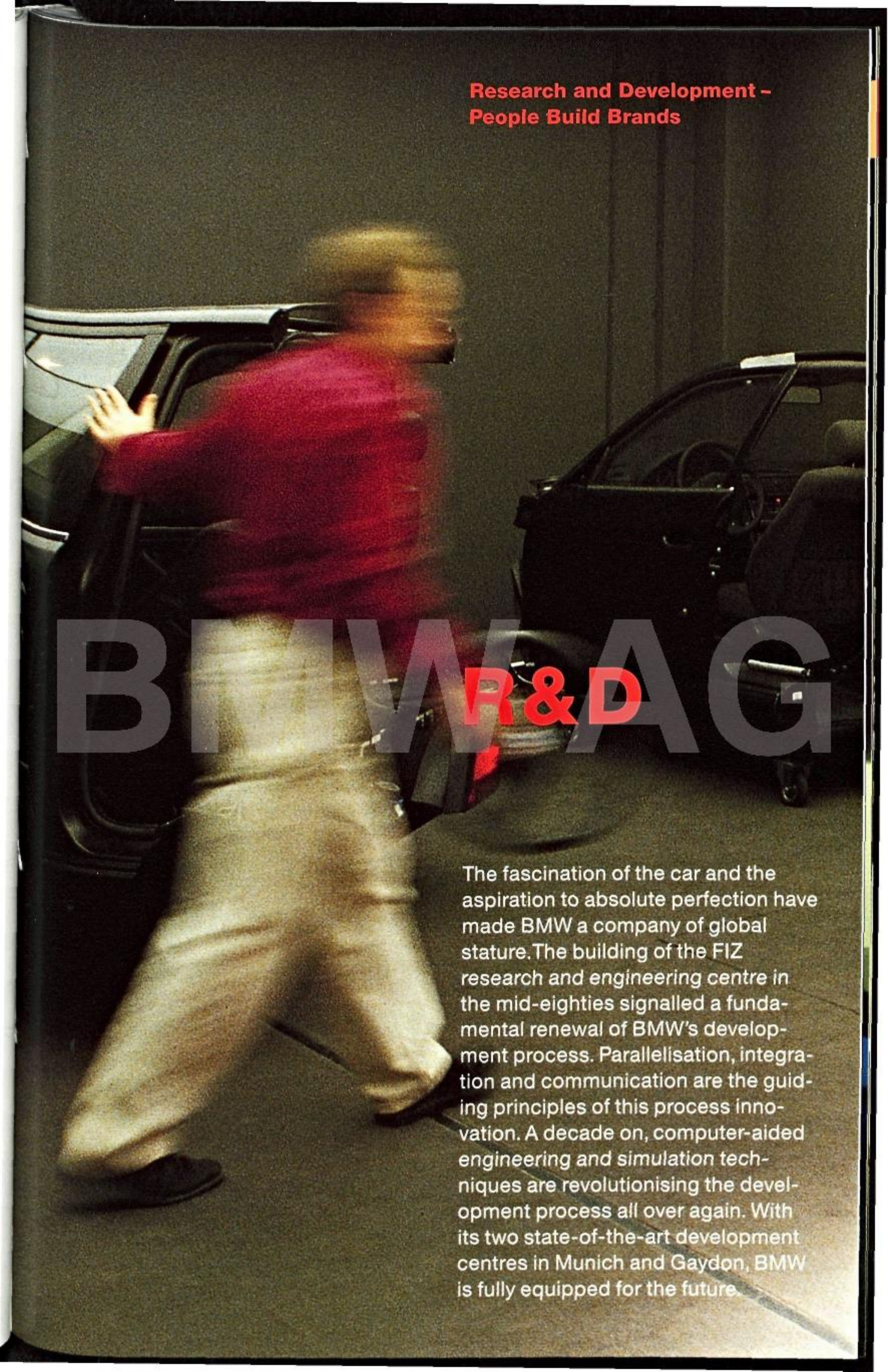
The project also included the trial deployment of CAx workstations for teleworking and the opening of a satellite office, which allows employees in various regional locations to make shared use of the workstations.

A company's success depends on the skills and performance of its employees, and BMW believes in the principle of fair reward. Consequently, the employees' financial share in the company's success rose to its highest ever value: in 1998, a total of DM 380 million was paid out. Above and beyond this financial recognition, BMW would like to thank its employees for their commitment and for their exceptionally good work.

### Innovations in the field of human resources

<b>1973</b>	"Learning shop" model as the basis for new working structures and teamwork Participation of employees in the company's success
<b>1978</b>	Flexible working hours
<b>1980</b>	Establishment of financial savings with registered dividend right certificates
<b>1983</b>	Value-oriented human resources policy
<b>1984</b>	Upward appraisal techniques introduced
<b>1985</b>	BMW maxims for action (guidelines of corporate culture)
<b>1986</b>	System of flexible working hours in Regensburg (separation of machine operation and personal working hours)
<b>1989</b>	Portfolio process for the development of executives Preference shares for employees
<b>1990</b>	BMW health insurance scheme
<b>1991</b>	Teamwork in production University prize: BMW Scientific Award
<b>1992</b>	Children's office and parents' initiative "BMW Scamps"
<b>1993</b>	New system of flexitime (adaptation of working hours within several months)
<b>1994</b>	Long-term human resources policy in the BMW Group Part-time initiative
<b>1995</b>	Piecework replaced by premiums Teleworking pilot project
<b>1996</b>	"Credit accounts" for working hours in production International management training throughout the Group
<b>1997</b>	Agreement on part-time work for older employees "We at BMW", guidelines for workforce and management
<b>1998</b>	DRIVE – new recruitment and career-development programme for young staff "i-motion" – modern ideas management at BMW Introduction of flexitime at Rover Automobiles





**Research and Development -  
People Build Brands**

**BMW AG**  
**R&D**

The fascination of the car and the aspiration to absolute perfection have made BMW a company of global stature. The building of the FIZ research and engineering centre in the mid-eighties signalled a fundamental renewal of BMW's development process. Parallelisation, integration and communication are the guiding principles of this process innovation. A decade on, computer-aided engineering and simulation techniques are revolutionising the development process all over again. With its two state-of-the-art development centres in Munich and Gaydon, BMW is fully equipped for the future.



## **The nature of the new**

**Companies thrive by constantly reinventing themselves. At BMW, the will to innovate through continuous improvement of products and processes, as well as to adopt completely new approaches, is a fundamental principle – a mindset.**

**In its original meaning, disegno\* offers a conceptual framework for targeted management of constant change. The motivation is to strive for the unachievable ideal. The limitless possibilities of the conceivable have always been the inspiration for human creativity.**

**At the end of the 20th century, this creativity has been given a new high-performance tool in the form of the computer. It is a digital workspace for solving complex problems, a seedbed for new forms of interactive teamwork on a global scale. BMW is banking on the intelligent symbiosis of these innovative technologies with tried and tested engineering know-how and traditional craft skills.**

**Individuality and originality are human qualities which are fostered by BMW's particular corporate and development culture. But they cannot be digitised or reproduced by machines. To recognise and experience an original it takes the peculiarly human faculties of holistic perception, imagination, sensitivity and curiosity.**

\*Disegno (Ital.) from designare (Lat.):  
to develop a project in the imagination before carrying it out.



Dialogue  
Basis for research and develop-  
ment

EMW AG





Lab vehicle  
Testing of electronic components



EE-10

E-39 [High] 1.Vorserie

Laborfahrzeug

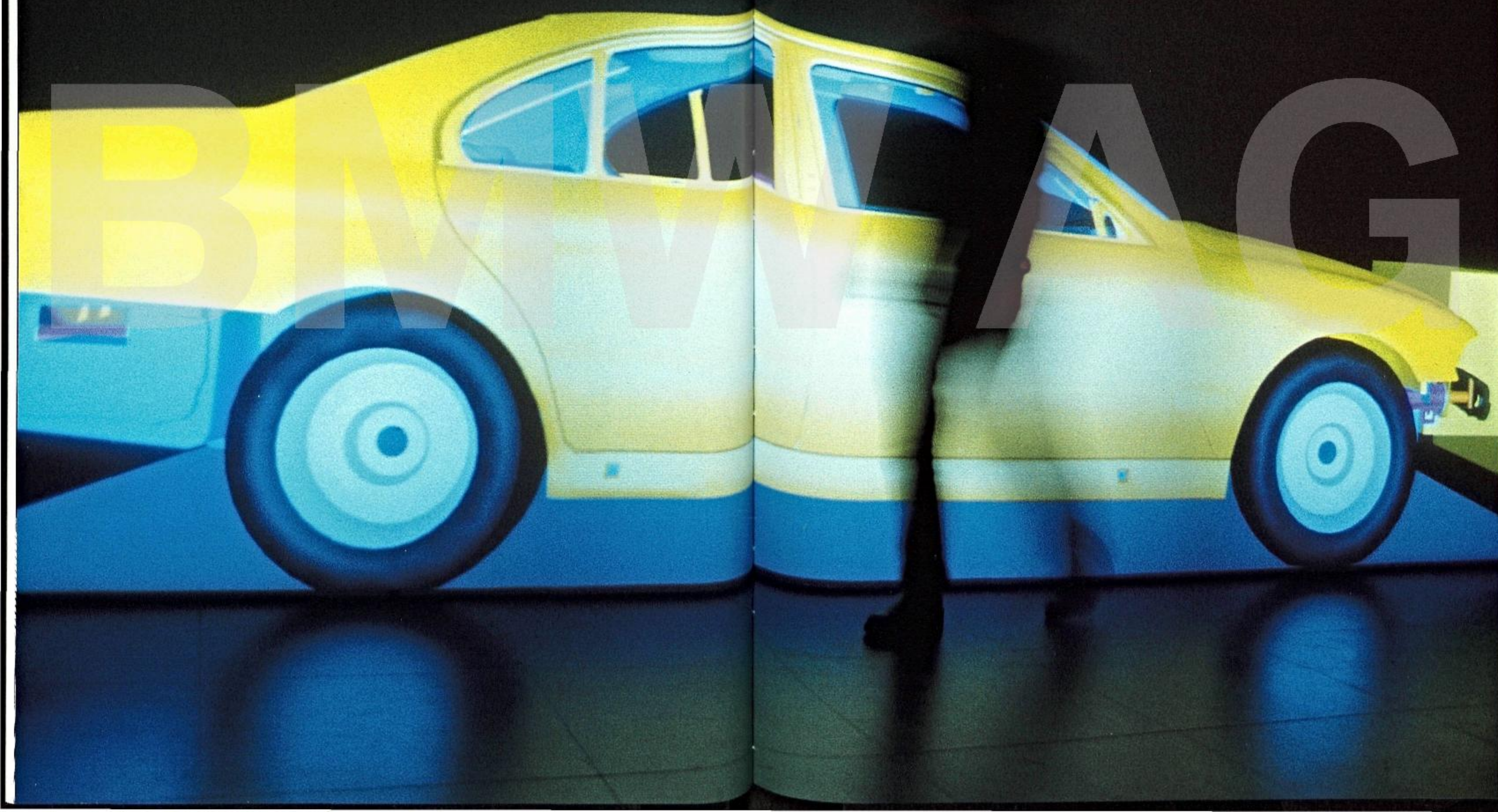


EE-10





Virtual reality  
3-D 1:1 visualisation of car-body





5-axle milling machine  
A basic model is created using  
CAx data





## Designing the future

The brief given BMW design engineers is simply formulated: to build fascinating cars, which capture the imagination of customers and the large public. The job itself is rather more complex: At BMW, it takes around three years to develop a new car from concept to production line. Shortening this critical "time to market" is the key to offering the right product at the right time. The only way the Group can gain on the pace is to focus on improving its development and manufacturing processes.

Years before the decision to develop a new model, BMW starts to think hard about the profile of future buyers and the nature, needs and preferences of the society of which they are part. It studies trends in engineering and manufacturing methods, while developing and testing new technologies of its own.

The faster things change, the more efficient and thorough the groundwork has to be. A worldwide network of creative people – from research, industry and wider cultural fields – creates fertile ground for new ideas and nurtures curiosity.

In line with the basic FIZ principle, networked multidisciplinary teams develop innovative vehicle concepts that will express the various brand identities in the Group and still be state-of-the-art in tomorrow's world. What is created in the minds and computers of the engineers is a piece of consciously designed future.

Customers have become more demanding, but also less predictable. "Go down to the forest where the wild beasts live" could be the motto of design and development. To be close to customers means getting inside their skin and exploring their world.

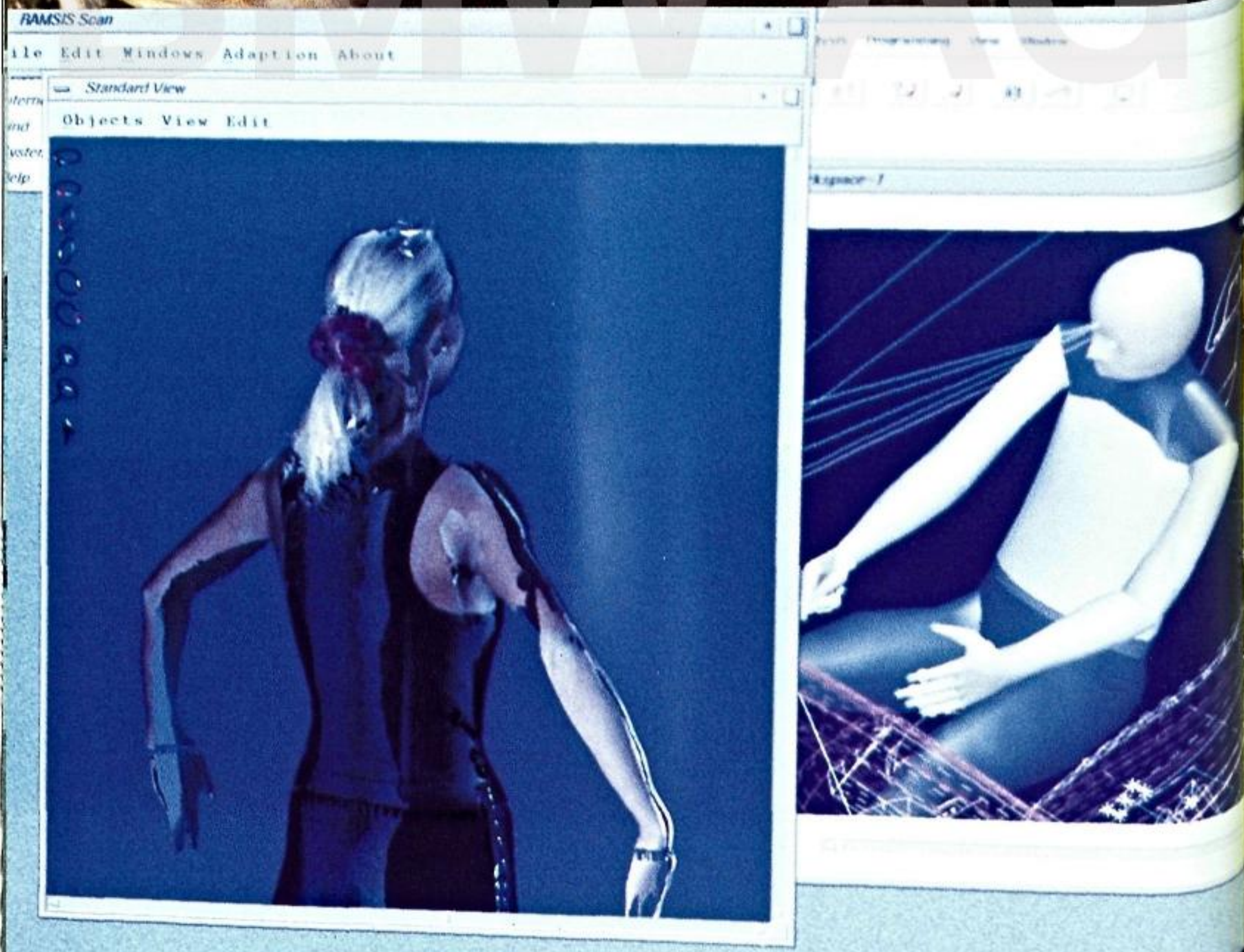
Car making is increasingly a matter of finding lucrative niches and supplying exactly what is needed. For example, roads and driving habits are quite different in Japan. The local office in Tokyo makes sure the development people back in Munich adapt the suspension to take account of this. Designworks in Newbury Park, California, and in Munich envisions all kind of products, from spectacle frames and phones to mountain bikes – as a form of hands-on exploration of the lifestyle of various cultures. And at the newly established Technology Office in Palo Alto, BMW engineers are harnessing the leading-edge technologies of tomorrow.

Nowadays, market leadership can only be achieved through knowledge leadership. Innovation management begins with a goal-directed exercise in assembling the relevant intelligence. Understanding customers' perception of dynamics is a basic precondition for being able to create a car which delivers the authentic experience of dynamics.

Product development is an integrated process which addresses customer needs from start to finish. In the end, the car is nothing less than an expression of the individual's lifestyle.



**Digitisation**  
**Ergonomic analysis as a basis**  
**for safety and comfort**





**Stereolithography**  
Rapid prototyping process for  
manufacture of structural  
elements for assembly tests

BMW AG





**Clay models**  
The clay model is indispensable  
for accurate assessment of  
styling





**Model making**  
It needs a skilled hand to  
achieve true perfection

BMW AG



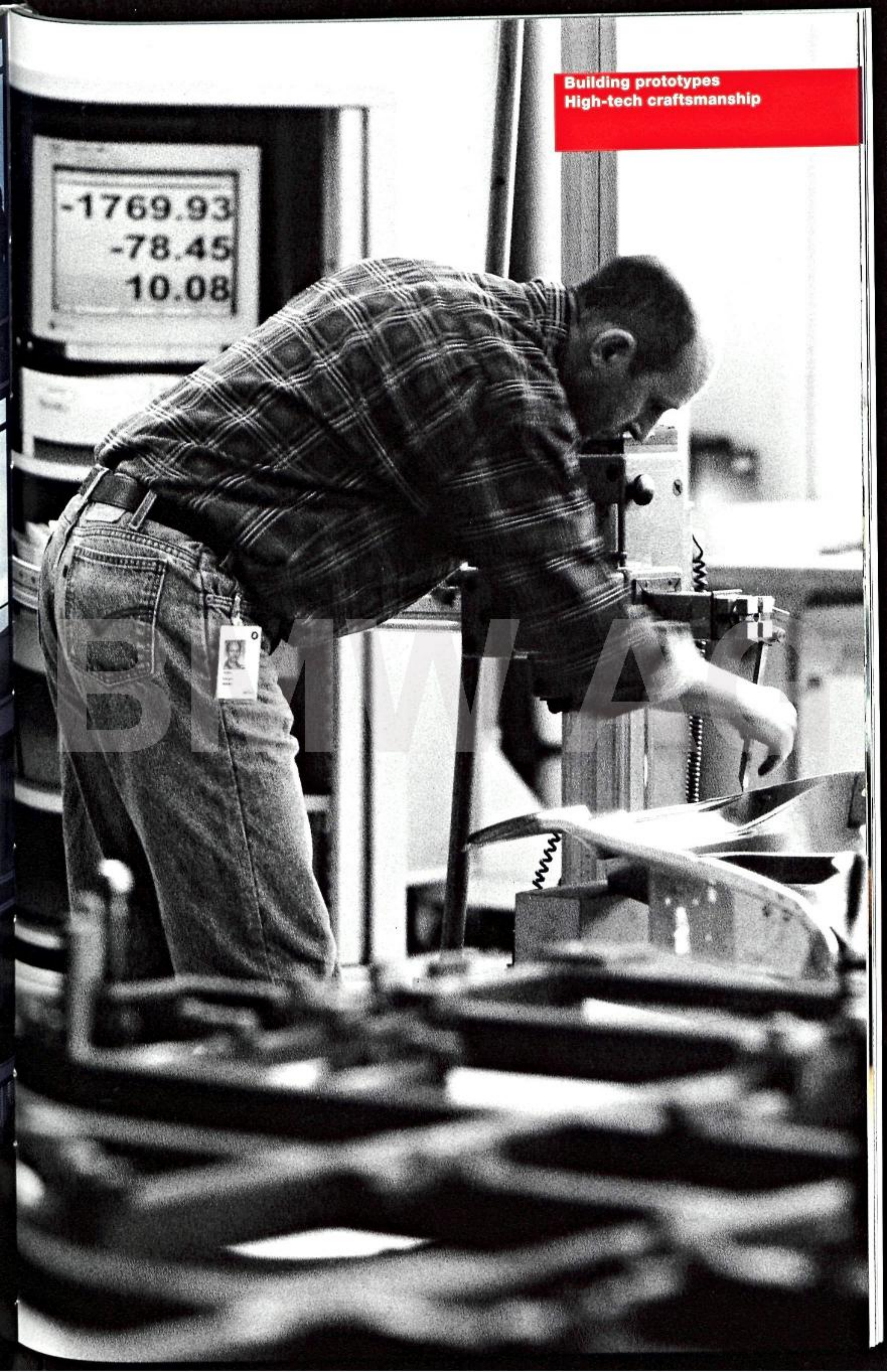
**FIZ**  
Architectural layout fosters  
communication and innovation





**Building prototypes  
High-tech craftsmanship**

-1769.93  
-78.45  
10.08





3-D measuring equipment  
for measurement of complex  
components at a precision  
of 1/1000 mm

BMW AG





**Engine test block**  
**Functional test under extreme**  
**conditions**

BMW





## **Realising ideas**

**The countdown is running; the starting point for every new model is a comprehensive target catalogue, defining the precise technical and customer-related characteristics of the vehicle. Nowadays, this covers the entire life cycle of the car – everything from road performance, through cost of ownership to recycling. It also describes the quality of the car as experienced by the customer.**

**This early stage of development should produce as many different potential solutions as possible. Various teams work on alternative basic concepts. The real creative challenge is to resolve the many conflicting goals of design ideal, overall package and engineering within the predetermined cost framework.**

**Any of the prototypes that make it to the short list could roll off the production lines as a series model within a few years. It is fascinating how realistically these vehicles can be developed in digitized models. Computer-aided design, construction and simulation tools allow accurate evaluation thanks to long experience in comparing these new techniques with conventional methods. Design studies and fully functional concept prototypes can now be built rapidly and efficiently.**

**By intelligently combining traditional craft skills and powerful computer-aided development tools, highly qualified technicians and engineers are fashioning the cars of tomorrow. Personal commitment and BMW's unique development culture guarantee their individuality and originality.**

"Without design, no products. Without products, no industry." Buying a car is more than just a rational decision. The emotions play a critical part as well. Computers have done little to change that. It all begins with a stroke of genius, a bold design, the alluring flow of the lines. Charcoal on paper, maybe something scribbled with a felt-tip on a napkin. The two-dimensional surface is a wide open space for the imagination to roam at will.

By adding the third dimension, the computer opens up new worlds. With two or three mouse clicks, the A-pillar can be rounded, the rear stretched, the front emphasised. At BMW, there must be a clearly formulated objective behind every option. In the end, the traditional clay model is still the only way to achieve true perfection. It needs this direct interaction between man and form for the final touch that gives the new BMW its singular, brand-specific character.

While the design studio grapples with the form, engineering is asking such questions as: metal or synthetics, standard parts or special package? With many thousands of components, a cost difference of 20 pence here or 1 mark there can easily be crucial to the economic viability of a new model. The computer keeps track and shows at every stage whether the costings are realistic.

The new Rover 75 is British to the core. Its noble styling is seen in the hardwood used as a structural element in the cockpit, recalling the early days of car-making. Cutting-edge technology coupled with solid craftsmanship in design and build achieve a convincing synthesis of form and function.

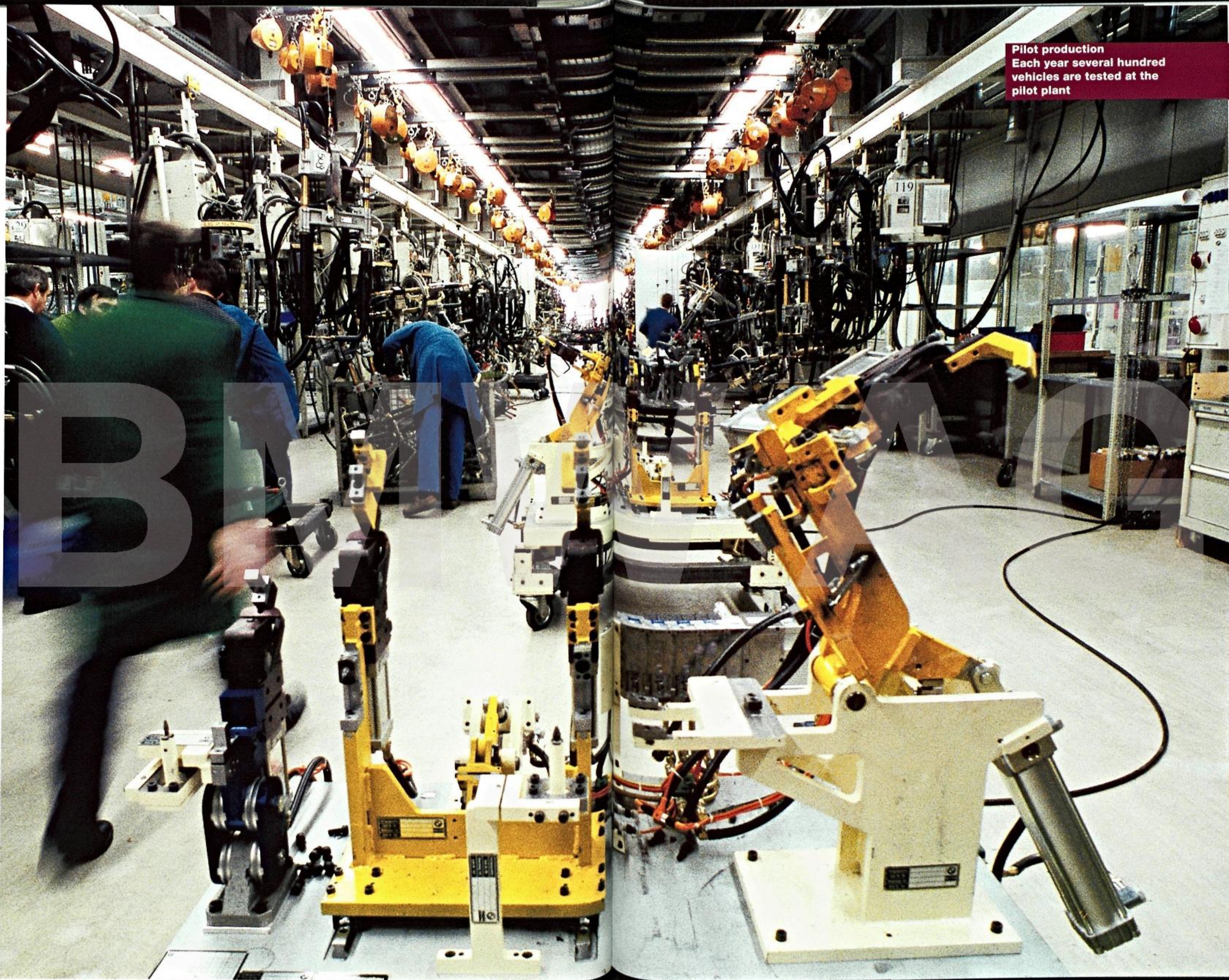


**Detail design**  
**Testing specifications for**  
**prototypes**





**Pilot production**  
Each year several hundred  
vehicles are tested at the  
pilot plant



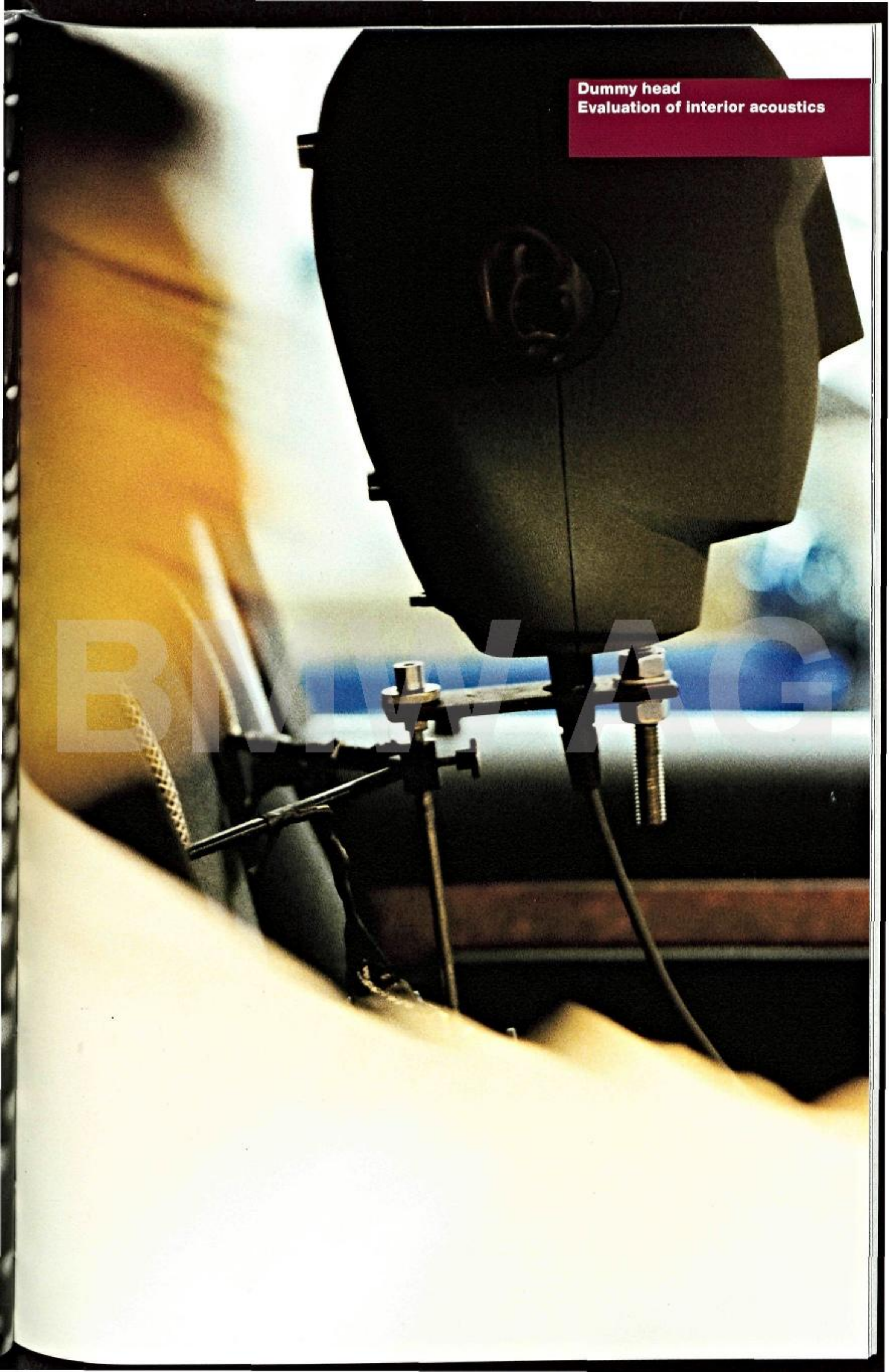


Digital contour model  
Visualisation of three-dimen-  
sional bodies

BMW A



**Dummy head**  
**Evaluation of interior acoustics**





**Body in white**  
A combination of craft skills  
and the latest technology – the  
result is precision

BMW AG

A close-up photograph of a welder working on a car chassis. The welder is wearing a dark helmet and a blue protective band around their neck. Bright orange sparks are flying from the welding point. The car chassis is made of metal and has several circular holes. The background is dark and industrial.



### **Accomplishing goals**

**After selecting the definitive concept, the actual work of realisation and construction begins. The "Design And Package Freeze" is the cut-off point for formulation of the precise model specifications. In series development, from this point on only minor modifications and improvements are possible. Within a matter of months, and depending on the model, up to 20,000 parts have to be selected, made and matched. External suppliers and system partners are increasingly being integrated into the development process.**

**The digitally defined vehicle, modelled on the computer, makes it possible to establish and resolve fundamental conflicts at an early stage, before the first panel is shaped. While designers, design engineers, ergonomists and electronics engineers search for optimum solutions in this shared digital workspace, the "digital car" is assembled in a computer-simulated factory. Critical phases of manufacture can be checked in this simulation, so that the individual stages will mesh smoothly in series production.**

**Two years before the production lines start up, the new vehicle "leaves" the virtual workshop for the first time. The first hand-made prototypes are put through every test imaginable to verify the computed results. This close and continuous interaction between computer-assisted development and tests on the actual product assure the future integrity of BMW cars.**

"The new techniques and development tools are superb. The legendary 12-cylinder was only released by its developers when a coin stood on its edge on the cylinder head wouldn't fall over, even at full revs." It is still the case today that the concept modelled on the computer has to prove itself in real day-to-day conditions.

Digital suns shed the cool light of the Scandinavian winter to check the quality of the finish. Almost anything can be simulated: from a test drive on the digitised Nürburgring to a virtual crash. Today, even human behaviour can be reproduced on the computer. Who wants to open the doors and get in behind the wheel thousands of times? The ergonomic program RAMSIS, in its incarnation as a digital dummy, has learned over the years to imitate the movements of driver and passengers in cyberspace.

Computer networks and telecommunications bring a new quality to cooperation with suppliers. It is a central aspect of BMW R&D culture that system partners are directly integrated into the development team and can work with them at the FIZ. There, they not only have access to the current project data, but can also tap directly into the resources of their own company. This seamless integration has made BMW's suppliers committed partners in the development and value creation process.

The architecture of the FIZ complex encourages communication: direct discussions are conducive to creativity and innovation. The close proximity of office and workshops, the predominantly horizontal layout and the interior design encourage an active exchange of ideas – a tangible expression of BMW's development culture.



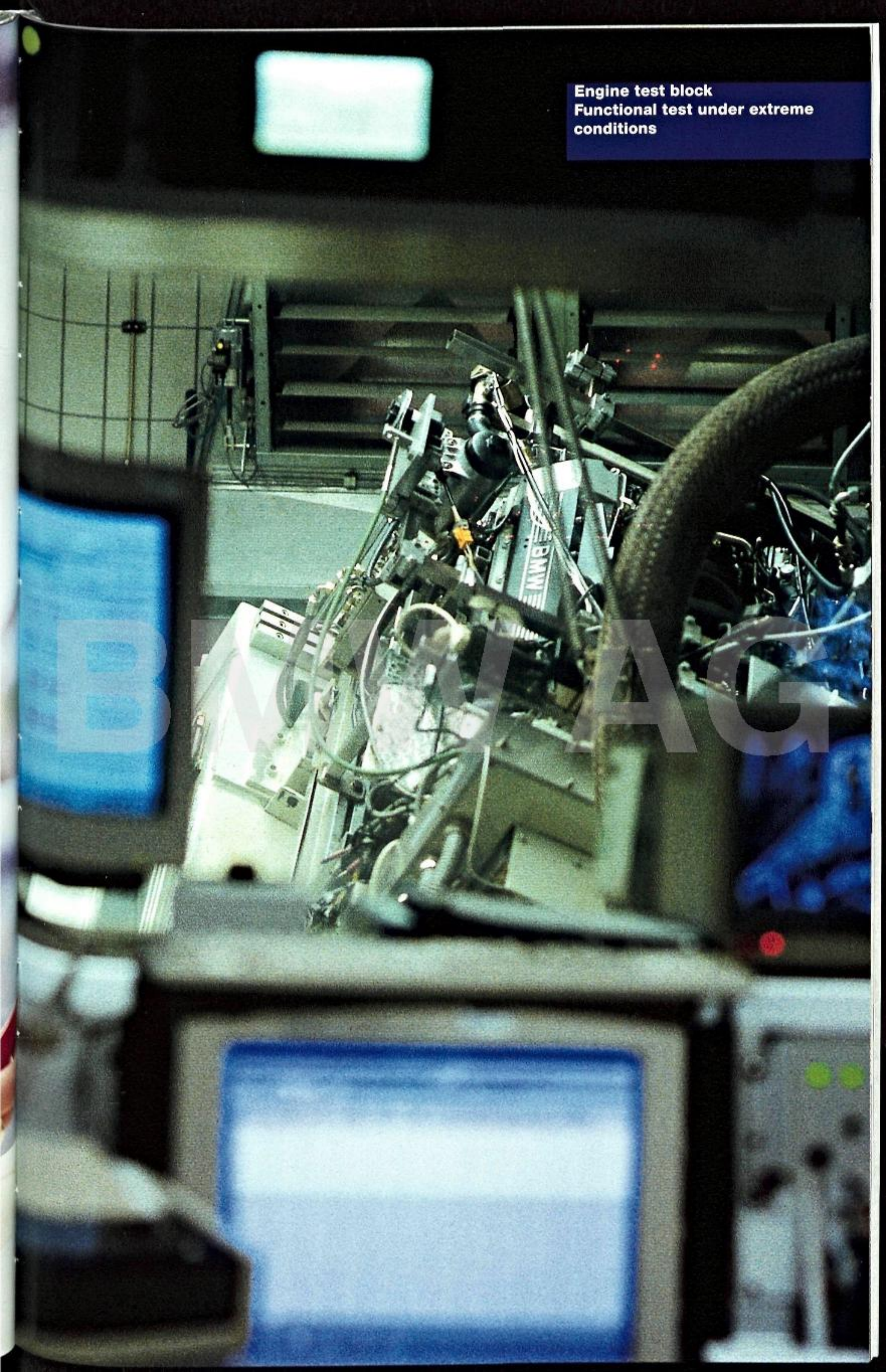
**Finishing of seats**  
Fine craft skills are used to  
finish prototypes individually

BMW AG



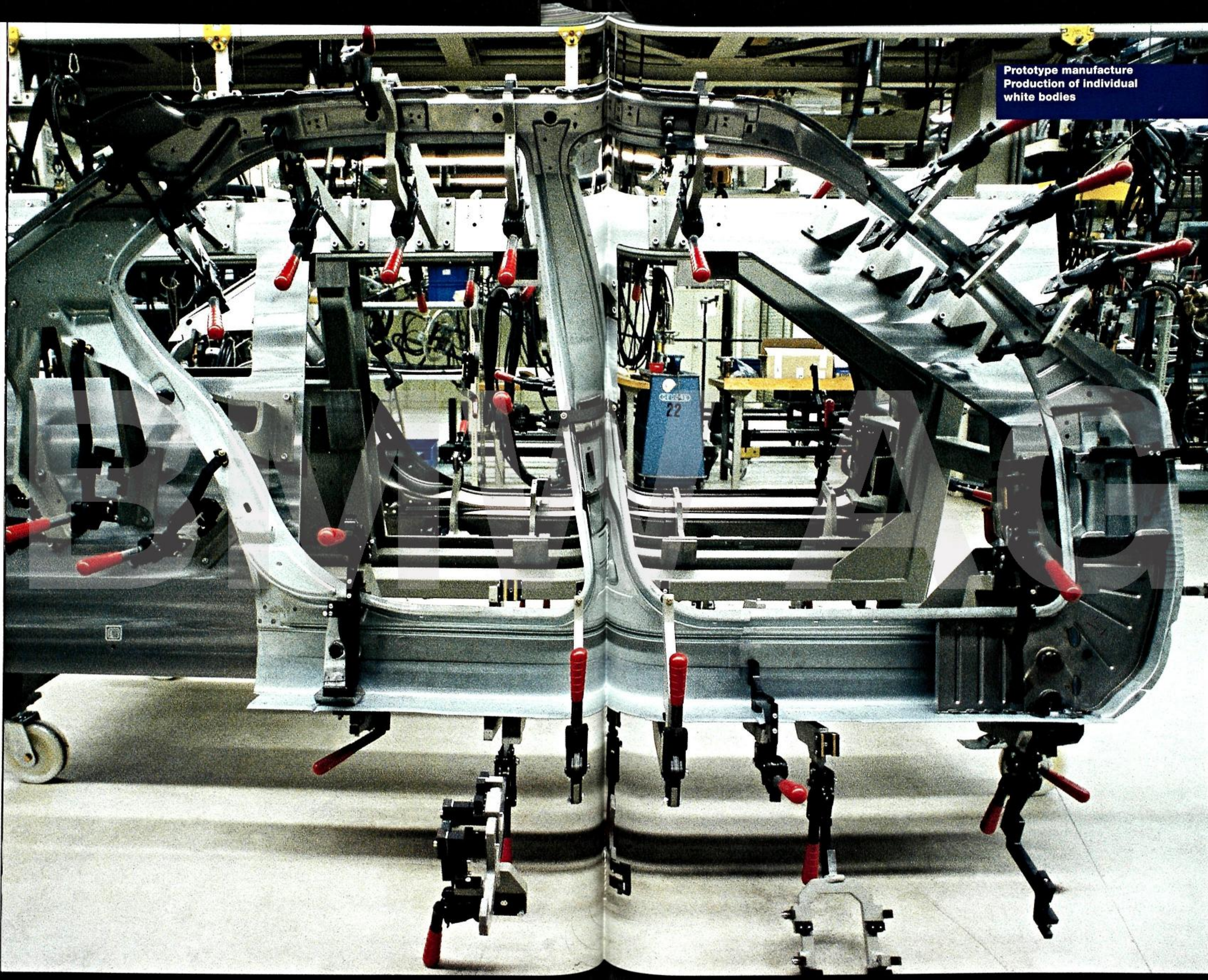


Engine test block  
Functional test under extreme  
conditions





Prototype manufacture  
Production of individual  
white bodies





**Crash simulation**  
**Absolute fidelity of results**  
**in comparison to the actual**  
**crash test**



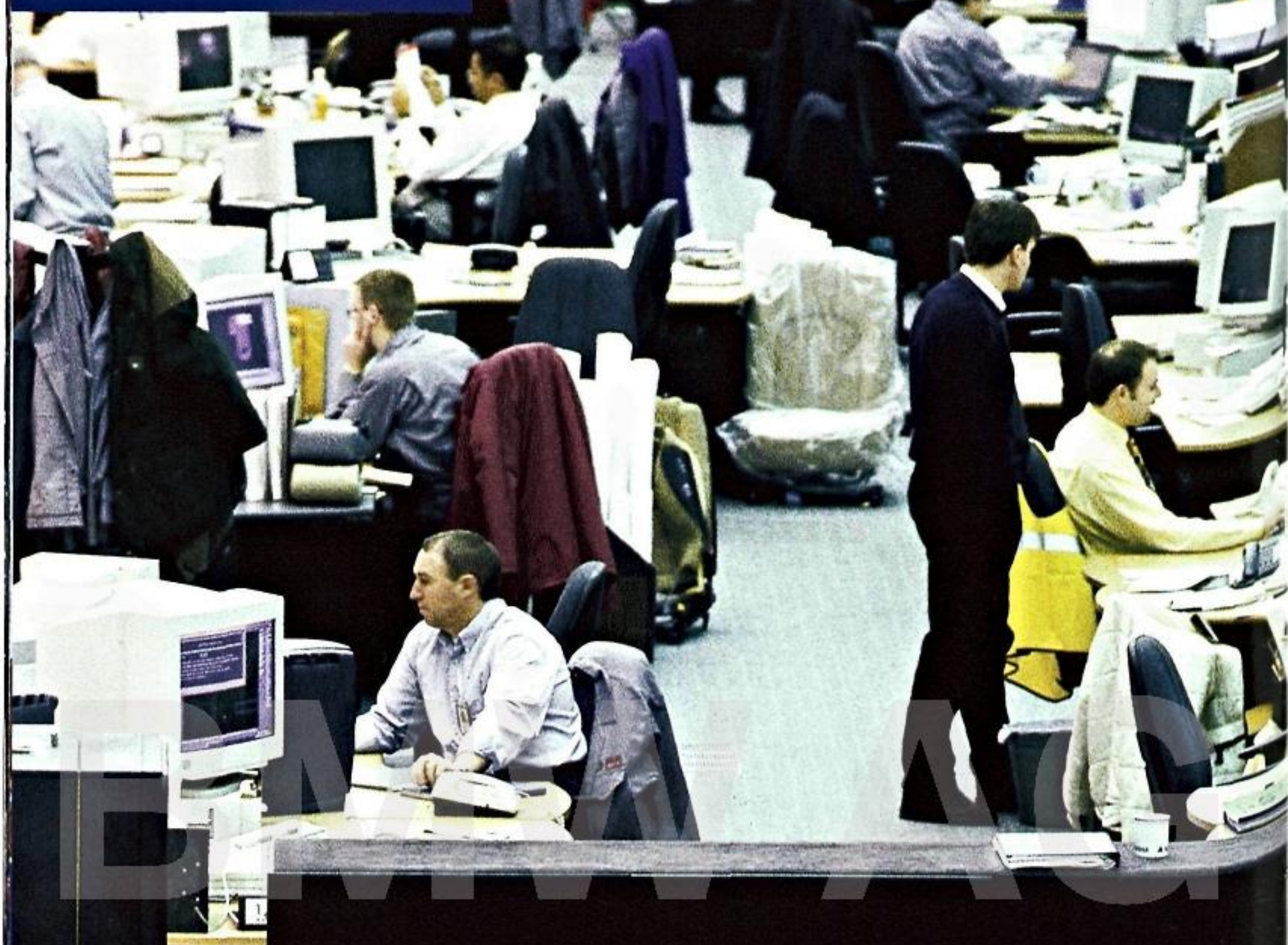


CAX visualisation  
Rigidity analysis of underseal

BMW



**GDEC Gaydon**  
**Direct communication**  
**increases efficiency**





## **Verifying results**

**Central to this phase of development are preparations for series production and final testing of prototypes. The innumerable components and subsystems, already tried individually in extended test series, must attain their specified performance as an integral part of the new car.**

**BMW cars have to meet quite specific, subjective brand-related customer expectations. Test engineers, working with people from the specialist departments, therefore pay particular attention to the "brandworthiness" of the chosen solution, as well as its full function and performance.**

**The vehicle has to undergo endurance tests under the most extreme conditions and countless fine adjustments if it is to meet the strict criteria of the target catalogue both under the objective scrutiny of the engineer and the subjective viewpoint of the customer. Only then will the new car be released for production.**

**Simultaneously, preparations for series production are under way. Series tools are made, production facilities equipped, the logistics worked out and the lines for series manufacture geared up. In a preliminary series, hundreds of vehicles are turned out to test production processes for the new model and to train the first operatives.**

**At the same time, steps are taken to ensure that customer service in the dealerships will match the high quality standards of the new vehicle.**

"Putting the soul in" is how test engineers describe the final stage of development. From the look of the elegant body-line to the feel of the fine materials, from the pleasing clunk as the door closes, to the taut handling on sharp bends – there must be an overall harmony which satisfies all the senses. Fine adjustment of the suspension needs a touch that takes years of experience to develop, and varies from one model family to another.

The X5, the new "Sports Activity Vehicle", must be a true BMW – on any kind of road. Specifically, it has to complete the northern loop of the Nürburg-ring in under nine and a half minutes. In fact, 9 minutes and 29 seconds is the best time achieved so far, thanks to meticulous fine-tuning by highly qualified technicians and engineers. Sometimes, morale is boosted by a small shipment of Bavarian beer and sausages into the remote test areas.

Through team spirit you can achieve anything, even the impossible. The development of the Rover 75, for example, presented some tough challenges. Engineers were working against the clock to resolve certain issues. But the new Rover has the distinctive profile that was desired. It is the foundation for a new generation of Rover models.

BMW engineers often go the extra mile to achieve the perfection they aspire to. The new Series 3 models, for example, were taken down to southern Europe to put the finishing touches to the body-line in the uncompromising Mediterranean light.



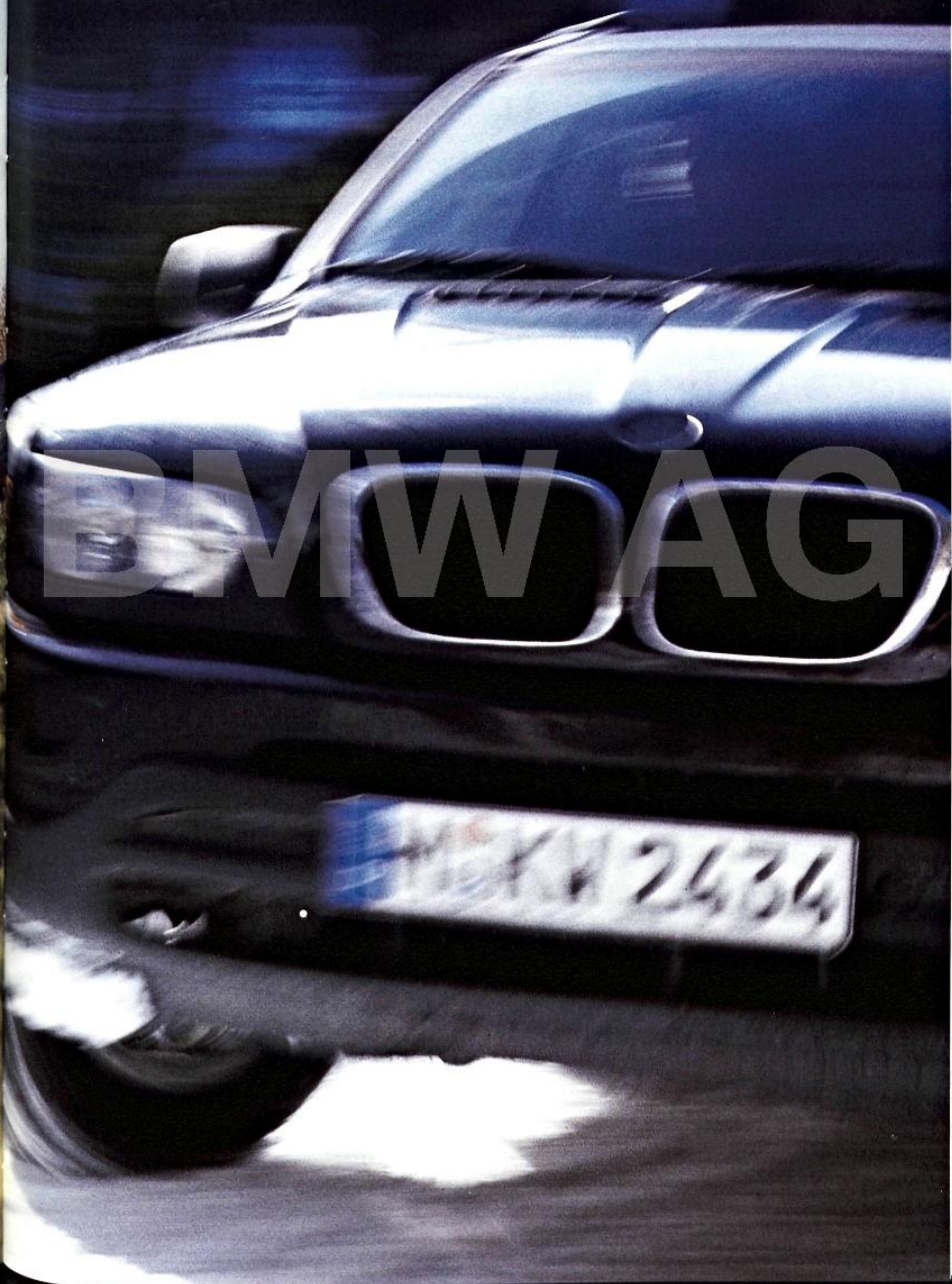
**Rover 75**

**The Rover 75 on the test circuit**





**BMW X5**  
The BMW X5 takes the  
mountain test





## **Distinguishing brands**

**Individuality is crucial to market success. Well-defined brands are priceless assets, founded on distinctive values. There is a fresh interpretation of these values with every new model that comes out of research and development. In this way, every product is a vehicle for a distinct message.**

**The BMW Group offers a broad product range of attractive and distinctive brands. BMW's Ultimate Driving Machine, Rover Cars Relaxed Motoring and Land Rover's Best 4 x 4 by Far express the individual strengths which fuse in the integral experience of form and dynamism. BMW, Rover Cars, Land Rover, Mini and MG – well-defined brands – made by individuals.**



## Glossary

### **Computer-Aided Styling, CAS**

Software for styling and visualisation of high-grade exterior surfaces and interiors.

### **Computer-Aided Technologies, CAx**

Generic term for all software used in computer-aided styling, design and manufacture.

### **Computer-Aided Virtual Environment, CAVE**

System for visualisation of objects with 3D effects in virtual reality.

### **Digital Car**

All product data for a vehicle resulting from the virtual development process using computer-aided construction and calculation methods.

### **Digital Mock-Up, DMU**

Vehicle model generated and visualised on the computer by simulation of assembly tests, production and servicing processes.

### **Functional Integration**

Integration of vehicle parts based on their function. The objective is to optimise the general vehicle characteristics, such as comfort and safety.

### **Innovation**

New developments offering customer benefits and market success.

### **Innovation Management**

Management of resources and processes for the efficient generation of ideas and innovation.

### **Outsourcing**

Use of external suppliers for services previously provided internally, for example development work with system partners.

### **Package**

The key internal and external specifications of a vehicle, as well as the designation and integration of all components.

### **Production Simulation**

Simulation of manufacturing processes for optimization and planning.

### **RAMSIS**

Software for 3D simulation of human movement in and outside the vehicle.

### **Rapid Prototyping**

Generic term for all processes that ensure minimum delay in realisation of virtual parts, i. e. those designed on the computer during the development phase.

### **Re-engineering**

Upgrading of development and manufacturing processes by increasing efficiency and reducing costs.

### **Stereolithography**

A method used in Rapid Prototyping whereby a laser activates photosensitive liquid plastics, layer by layer, hardening them in accordance with geometric component data.

### **Simulation**

Reproduction of behaviour of real systems using mathematical models.

### **Target Catalogue**

Document which describes specifications of the car to be met in development.

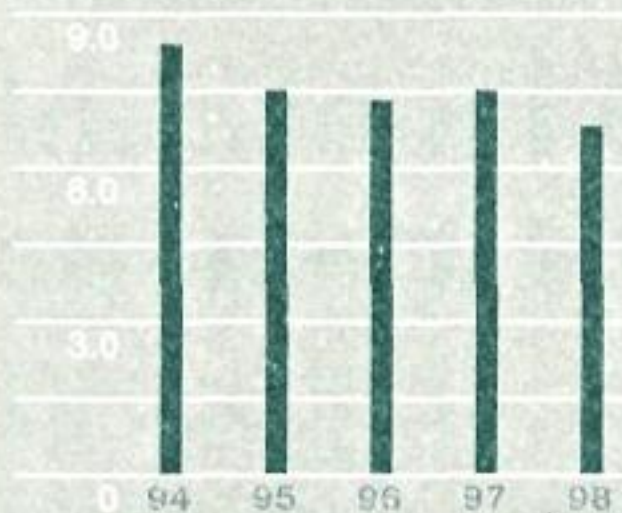
### **Telemetry**

Transmission of measurement data by wire, radio or other means.

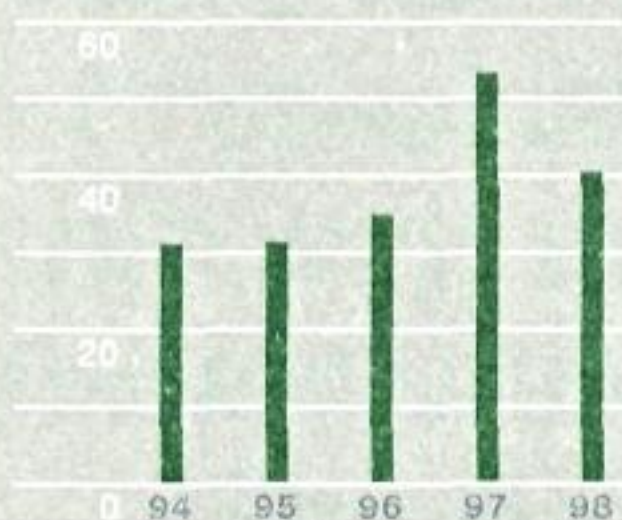
### **Virtual Reality, VR**

Realistic, real-time computer simulation in which the operator experiences him- or herself as part of a digitally simulated environment.

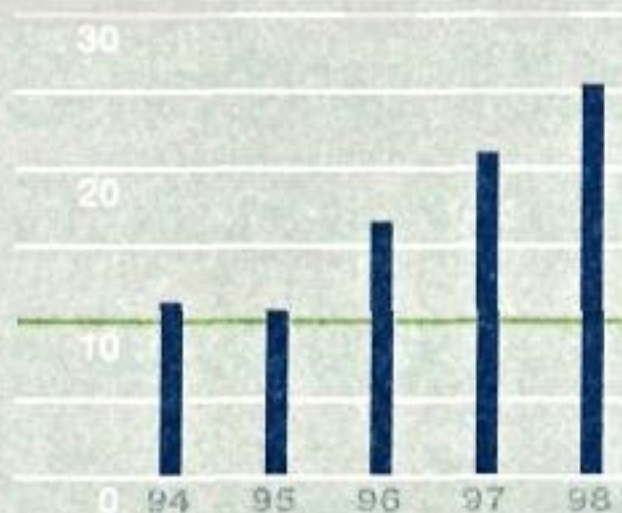




**Investment in the BMW Group**  
in % of sales



**DVFA/SG result per share BMW Group**  
in DM



**Development in value of a BMW share portfolio**  
from DM10,000 on 1.1.1994,  
incl. dividend and proceeds  
from subscription rights  
in DM thousand



**Finance and Financial Statements.** In 1998, the BMW Group upheld its excellent financial position and sound balance sheet structures. Cash flow exceeded investments. Net income declined by 27.5% from the record level of 1997, to DM 903 million. The total dividend sum is once again higher than in the previous year.



**BMW AG**



### **Continued strong balance sheet growth through financial services**

The balance sheet total of the BMW Group increased by 12.5% in 1998, to DM 59.9 billion, DM 6.6 billion more than in 1997. Financial services once again accounted for a considerable share of growth, with DM 3.3 billion. The share of these services within the balance sheet total increased by 1.1 percentage points to 41%. Inventories made a substantial contribution, with DM 1.6 billion, as did liquid funds, stated at DM 1.3 billion.

BMW's industrial business is financed with a higher proportion of capital resources than is the case with financial services. The consolidated balance sheet is correspondingly divided, in accordance with legal provisions, into industrial business and business with financial services. The balance sheet structures of the two fields of business are explained separately below.

#### **Industrial business**

Total assets in industrial business increased by 10.3%, or DM 3.3 billion, to DM 35.4 billion.

Investments in intangible and tangible fixed assets, at DM 4.3 billion, were offset by depreciations totalling DM 3.6 billion.

Investments amounted to 8.1% of sales revenue from industrial business, with 85.3% covered by depreciations. Once again, investments were financed in their entirety from cash flow.

Inventories rose by 26.6%, and thus more markedly than the balance sheet total. This was primarily due to the increase of stocks at Rover. The decrease in sales by Rover Automobiles led to a decline in receivables from trade. Other receivables increased as a result of financing of subsidiaries not yet included in the consolidated financial statements. Receivables, including prepaid expenses and tax accruals, rose overall by 5.6%.

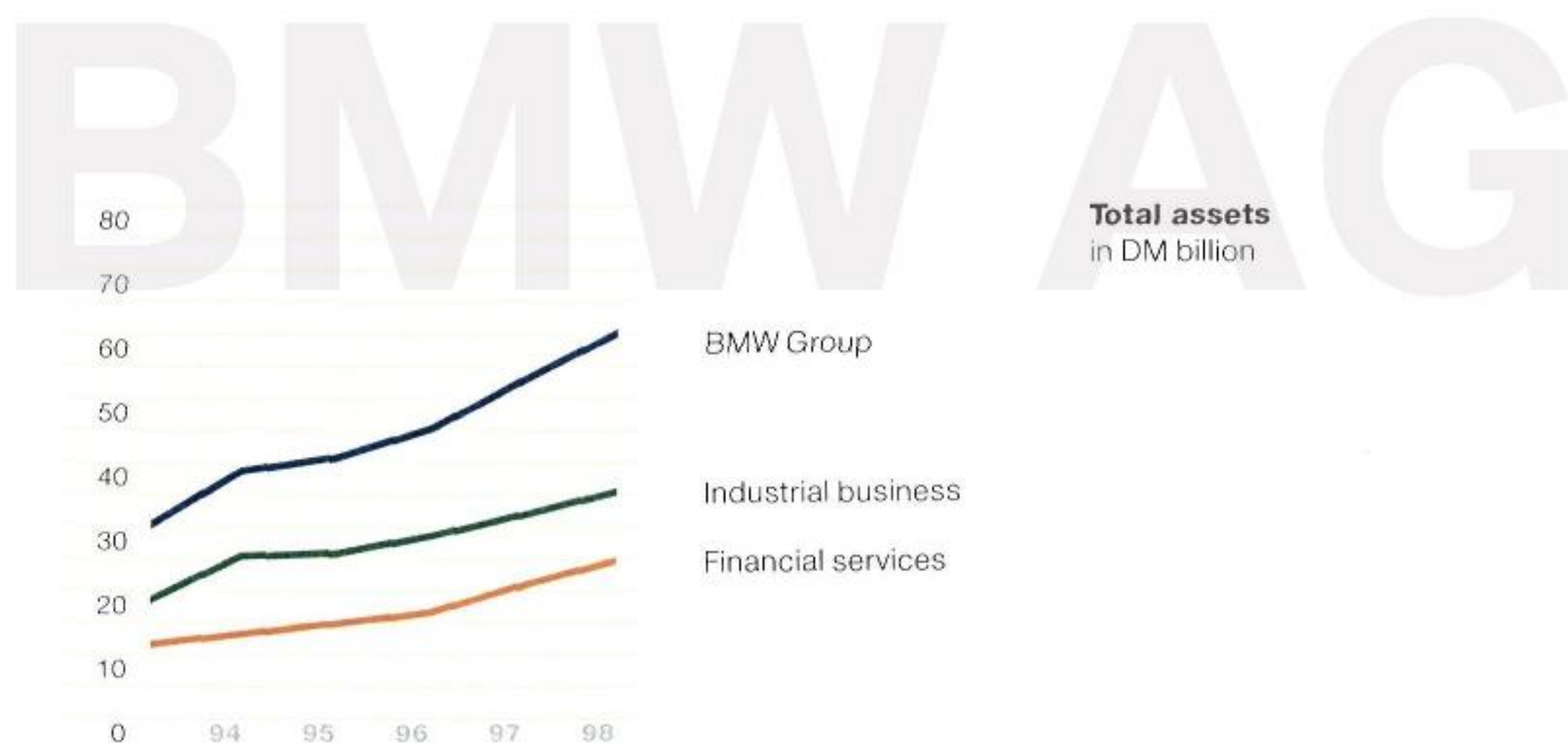


Liquid funds increased by DM 1.3 billion in the year under review. Net financial assets – liquid funds less financial liabilities – increased by DM 386 million, to DM 1.4 billion.

Due to the capital increase in 1998, the proportion of capital resources in industrial business rose markedly by 3.4 percentage points to 28.7%, financing 66.4% of fixed assets. Including provisions, BMW's own funds cover 151.8% of fixed assets.

Provisions rose overall by 2.4%, which was primarily attributable to increased pension reserves.

Financial liabilities increased by 33.7% in comparison with the previous year. Other liabilities remained virtually unchanged.



### Financial services

Business in financial services encompasses assets and liabilities from sales financing within the BMW consolidated balance sheet.

The balance sheet total in this field of business increased by 15.7%, to DM 24.6 billion. Sales of used cars led to a decline in leased products. Receivables from sales financing, however, rose sharply, by 40.5%. The share of leased products in the total assets of financial services thereby fell by 9.4 percentage points, to 46.9%.



## Finance

<b>Balance Sheet structure</b>		31. 12. 1998		31. 12. 1997		Change	
<b>BMW industrial business</b>		DM million	%	DM million	%	DM million	%
Fixed assets		15,274	43.2	15,234	47.5	+ 40	0.3
Inventories		7,470	21.1	5,900	18.4	+ 1,570	26.6
Receivables		7,604	21.5	7,199	22.5	+ 405	5.6
Liquid funds		5,002	14.2	3,702	11.6	+ 1,300	35.1
<b>Balance Sheet total</b>		<b>35,350</b>	<b>100.0</b>	<b>32,035</b>	<b>100.0</b>	<b>+ 3,315</b>	<b>10.3</b>
Corporate funds		10,140	28.7	8,119	25.3	+ 2,021	24.9
Provisions and accruals		13,048	36.9	12,736	39.8	+ 312	2.4
Financial liabilities		3,629	10.3	2,715	8.5	+ 914	33.7
Other liabilities		8,533	24.1	8,465	26.4	+ 68	0.8
<b>Balance Sheet structure</b>							
<b>BMW Financial Services</b>							
Leased products		11,532	46.9	11,962	56.3	- 430	- 3.6
Receivables from sales financing		13,042	53.1	9,283	43.7	+ 3,759	40.5
<b>Balance Sheet total</b>		<b>24,574</b>	<b>100.0</b>	<b>21,245</b>	<b>100.0</b>	<b>+ 3,329</b>	<b>15.7</b>
Corporate funds		2,466	10.0	2,129	10.0	+ 337	15.8
Liabilities from sales financing		22,108	90.0	19,116	90.0	+ 2,992	15.7

Leased products were valued at manufacturing cost to the Group, less depreciation at the lower of cost or market. Investments in leased products amounted to DM 9.8 billion (DM 9.4 billion in 1997). Depreciations totalled DM 5.8 billion (DM 5.0 billion in 1997). Sales of used cars decreased residual book values by DM 3.9 billion (DM 2.1 billion in 1997). The effects of foreign currency translation lowered the value of leased products by DM 0.5 billion (as against a rise of DM 0.7 billion in 1997).

BMW's capital resources in business with financial services increased by DM 0.3 billion, the share in total assets remaining at 10% as in the previous year.



## Segment report

The segment report details the activities of the BMW Group according to fields of business and regions. The separate segments are the business fields of BMW Automobiles, Rover Automobiles, BMW Motorcycles, Aero Engines and Financial Services.

BMW Automobiles and Rover Automobiles account for the larger part of business within the BMW Group. These business fields develop, manufacture, assemble and sell cars, including off-road vehicles, as well as spare parts and accessories.

Products of the BMW brand are sold in Germany by the sales outlets of BMW AG and by independent authorised dealers. Rover products are sold in the UK exclusively by legally independent authorised dealers. Subsidiary companies handle sales in the most important foreign markets.

The BMW Motorcycles segment develops, manufactures, assembles and sells motorcycles, as well as spare parts and accessories.

In the Aero Engines segment, BMW Rolls-Royce develops, manufactures, assembles and markets aero engines worldwide, including spare parts.

The Financial Services segment focuses on the leasing of cars and financing credit for customers and dealers. Only the interest expenditure from financing of the leasing business is included in the financial result of this segment; interest income from financing credit for customers and dealers is stated in the segment result.

The activities of the BMW Group covering several segments are essentially those of Group financing and participating interests.

In the consolidated companies, receivables and liabilities, provisions, income and expenditure between the segments are eliminated.



## Finance

Segment information by business	External sales		Intersegment sales		Total sales	
	1998	1997	1998	1997	1998	1997
DM million						
BMW Automobiles	35,100	33,292	7,890	7,174	42,990	40,466
Rover Automobiles	15,137	17,749	1,421	884	16,558	18,633
BMW Motorcycles	1,275	1,103	2	2	1,277	1,105
Aero Engines	707	510	16	13	723	523
Financial Services	10,780	7,282	507	475	11,287	7,757
Miscellaneous, consolidated companies	135	201	- 9,836	- 8,548	- 9,701	- 8,347
<b>BMW Group</b>	<b>63,134</b>	<b>60,137</b>	<b>-</b>	<b>-</b>	<b>63,134</b>	<b>60,137</b>

Segment information by business	Segment result (loss)		Financial result (loss)		Result from ordinary business activities	
	1998	1997	1998	1997	1998	1997
DM million						
BMW Automobiles	3,807	3,044	110	103	3,917	3,147
Rover Automobiles	- 1,476	88	- 395	- 348	- 1,871	- 260
BMW Motorcycles	31	23	-	-	31	23
Aero Engines	- 415	- 625	- 43	- 37	- 458	- 662
Financial Services	847	747	- 672 <sup>1)</sup>	- 607 <sup>1)</sup>	175	140
Miscellaneous, consolidated companies	13	16	269	124	282	140
<b>BMW Group</b>	<b>2,807</b>	<b>3,293</b>	<b>- 731</b>	<b>- 765</b>	<b>2,076</b>	<b>2,528</b>

<sup>1)</sup> Interest expense from the financing of leasing business



Segment information by business		Assets		Capital expenditure		Depreciation and amortisation	
DM million	1998	1997	1998	1997	1998	1997	
BMW Automobiles	19,152	18,077	2,638	2,708	2,240	2,096	
Rover Automobiles	11,157	10,826	1,426	1,601	1,219	1,209	
BMW Motorcycles	593	633	69	67	55	44	
Aero Engines	959	807	115	95	106	176	
Financial Services	26,604	22,203	12	44	14	12	
Miscellaneous, consolidated companies	1,459	734	2	5	1	6	
<b>BMW Group</b>	<b>59,924</b>	<b>53,280</b>	<b>4,262</b>	<b>4,520</b>	<b>3,635</b>	<b>3,543</b>	

Segment information by regions		Assets		Capital expenditure		External sales	
DM million	1998	1997	1998	1997	1998	1997	
Germany	21,579	19,164	1,988	2,255	18,133	15,834	
Great Britain	13,938	12,133	1,433	1,619	10,982	10,885	
Rest of Europe	6,141	5,123	146	253	14,070	13,490	
North America	10,089	9,355	549	217	12,542	10,570	
Asia	2,525	2,106	8	13	4,326	5,741	
Miscellaneous, consolidated companies	5,652	5,399	138	163	3,081	3,617	
<b>BMW Group</b>	<b>59,924</b>	<b>53,280</b>	<b>4,262</b>	<b>4,520</b>	<b>63,134</b>	<b>60,137</b>	



The assets of the various business fields are specifically those assets which have contributed to the achievement of that particular segment result.

The segment information by region gives sales figures according to customer domicile.

The same principles of accounting and valuation are applied to the segments as to the Group in the consolidated financial statements.

The item "Miscellaneous, consolidated companies" now includes, in addition to consolidated companies and activities covering several segments in the year under review, only the software activities of the Group, since Kontron Elektronik GmbH, Eching, is no longer part of the consolidation.

### **Investments covered by cash flow**

Cash flow declined by DM 76 million in 1998. Total cash flow was DM 4,849 million, which once again fully covered investments in tangible fixed assets. Net investments in leased products are 98.2% financed by depreciations on leased products. The continuing dynamic development of financial services and the lower cash flows from operating activities resulted in additional financial requirements of DM 5 billion. Cash flows from financing activities totalled DM 6.4 billion. Liquid funds, adjusted to account for currency translation, thus increased by DM 1.3 billion.

### **Interest rates continue to fall**

The central banks of the leading industrial nations continued to uphold their expansive policies of recent years. Key interest rates were reduced in both the USA and the UK in 1998.

Interest rates on short-term loans consequently fell in all important markets – including the USA and the UK, where they had risen in 1997. In Japan, short-term interest rates remained below the already low level of the previous year.



<b>Cash Flow Statement</b>	1998	1997
DM million		
Net income	903	1,246
Depreciation of intangible and tangible fixed assets	3,635	3,543
Increase in pension fund provisions	311	136
Cash flow	4,849	4,925
Depreciation of leased products	5,740	4,983
Increase in other provisions and accruals	302	1,094
Income from the sale of fixed assets	- 47	- 39
Retained income of associated companies	- 38	- 13
Changes in current assets and liabilities		
Inventories	- 1,881	- 205
Receivables	- 535	- 1,299
Liabilities	605	718
<b>Cash flows from operating activities</b>	<b>8,995</b>	<b>10,164</b>
Investment in tangible fixed assets	- 4,262	- 4,520
Investment in financial assets	- 157	- 146
Investment in leased products (less disposals)	- 5,844	- 7,292
Increase in receivables from sales financing	- 4,015	- 1,170
Other	290	232
<b>Cash flows from investing activities</b>	<b>- 13,988</b>	<b>- 12,896</b>
Issue of new shares	2,135	22
Payment of dividends for the previous year	- 397	- 297
Increase in bonds	2,003	500
Change in financial liabilities	2,201	1,069
Change in commercial papers	417	976
Other	- 1	- 5
<b>Cash flows from financing activities</b>	<b>6,358</b>	<b>2,265</b>
Influence of exchange rates on the value of liquid funds	- 65	136
<b>Change in liquid funds</b>	<b>1,300</b>	<b>- 331</b>
Liquid funds on January 1	3,702	4,033
<b>Liquid funds on December 31</b>	<b>5,002</b>	<b>3,702</b>
of which: marketable securities and notes	1,218	1,244
liquid funds (as per Consolidated Balance Sheet)	3,784	2,458

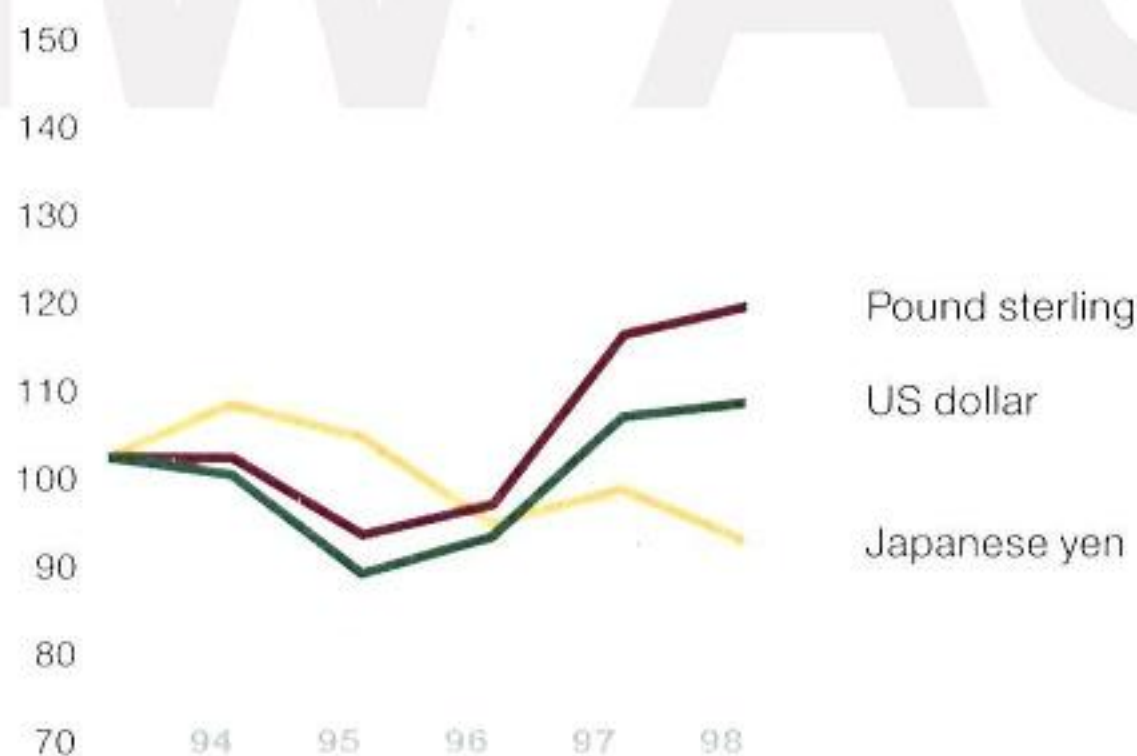


The yields on long-term investments declined still further in comparison with the year before. In Germany, the yield – in respect of the interest rate for ten-year loans – fell below 4% at year's end (5.4% in 1997); in the UK the comparable figure was 4.4%, against 6.3% at the end of 1997.

In the countries which introduced the euro on January 1 1999, a harmonisation of interest rates was evident, on both short-term and long-term loans. With long-term yields at around 4% at year's end 1998, short-term interest rates levelled out at 3.25%. The interest markets had thus anticipated the introduction of the new currency. In the UK, on the other hand, interest rates for both long and short-term financing were pegged well above the level prevailing in the euro countries – still more so in the longer than the shorter term.

**Yearly average exchange rates of major trading currencies against the mark**

Index: 1993 = 100



**Dollar and sterling remain high**

The major trading currencies fluctuated to a lesser degree against the mark in 1998 than in the previous year.

The exchange rates amongst countries of the EMU changed little, and have fluctuated in similar proportion on currency markets for almost two years now. The foreign currency market also in this respect anticipated the introduction of the euro.



The pound sterling remained at an extremely high level throughout the year under review. Its average exchange rate for 1998 was DM 2.91, a further rise of 2.5% against 1997. In March, it peaked at DM 3.10, then sharply declined to DM 2.74, concluding the year at DM 2.80.

The US dollar strengthened slightly, its annual average rising from DM 1.73 in 1997 to DM 1.76 in the year under review. Following its peak at DM 1.85 in April, it weakened to below DM 1.59, before recovering to its year-end exchange rate of DM 1.67.

The Japanese yen declined in value in relation to the mark by 6%, with an average rate for 1998 of DM 1.35. This devaluation was primarily due to the structural problems afflicting the Japanese financial sector, and to the drastic devaluations of other South-East Asian currencies. The yen fell from DM 1.48 in February to DM 1.20 in October, before increasing in value by more than 15% within only a few days, to DM 1.40.

The external value of the mark against the major trading currencies dipped slightly in 1998. This continued the depreciation of the mark in real terms; since 1995 its value has fallen by more than 7%.

### **Financial requirements of the BMW Group primarily for financing of sales**

The BMW Group's need for external financing derives from the continuous growth of business in sales financing. It is catered for by loans and via the international capital market. External financing is for the most part acquired by BMW AG and its financing companies in the USA, the UK, Belgium and the Netherlands, and passed on to the respective operating companies.

In 1998, BMW issued three public bonds on the international capital market to ensure long-term coverage of financial requirements. In January, BMW Australia Finance issued a bond of 150 million US dollars in value, with a time to maturity of 4 years; in August, the value of the bond was increased by a further 100 million dollars. BMW US Capital Corp. acquired 300 million US dollars through a bond with a 3-year maturity period. In November, BMW (UK) Capital plc. made its first bond issue on the UK capital market, valued at 150 million pounds with a time to maturity of 7 years.



The Euro Medium Term Note Programme raised to 3 billion US dollars in 1996 was once again used in 1998 in several tranches, in various currencies and at different volumes and times to maturity. Plans foresee extension of this successful financing instrument.

BMW AG utilises a Commercial Paper Programme of DM 1.5 billion in value to cover short-term financial requirements, BMW US Capital Corp. similarly one of 3.5 billion US dollars in value, and BMW Coordination Center N. V. one valued at 3 billion Belgian francs.

### **Currency and interest management**

Derivative financing instruments serve to protect BMW against interest and currency risks. These instruments are used exclusively to balance transaction flows in operative business.

Currency risks arise chiefly through deliveries of vehicles and in international procurement of production materials. Interest risks, on the other hand, arise primarily through refinancing of the financial services activities of the BMW Group.

Foreign currency forward contracts and options are the main instruments used to hedge currency risks. Cross currency swaps are also employed.

At year's end, hedging applied almost exclusively to payments in Japanese yen, American dollars and pounds sterling – currencies which greatly affect Group results.

In the long term, BMW strives to balance currency flows within the Group as fully as possible. Extension of production capacity in Spartanburg and increased procurement in the USA reduced the Group's level of dependence on the US currency. BMW is pursuing a similar policy in respect of the pound sterling: deliveries of BMW vehicles to Great Britain are compensated for by deliveries of Rover Automobiles to continental Europe. Following introduction of the euro, the two will virtually balance out.



Interest swaps and forward rate agreements were predominantly used as precautions against interest fluctuations. Caps and floors limit interest fluctuations for BMW to a defined range. Funds raised on the capital market are adjusted by these instruments to meet specific business requirements in terms of currency, time to maturity and volume.

### **Controlling and risk limitation**

All derivative financial business is carried out under strict separation of the functions of trading, processing of settlements and controlling. The applicable organisational structures and procedures are precisely laid down in detailed guidelines. Systems and procedures are regularly reviewed internally and externally, and correspondingly modified.

In order to minimise risks arising from derivative business, transactions are carried out exclusively through banks of the highest credit standing. BMW closely studies the assessments of leading rating agencies, and respective maximum limits are set for individual business with any given partner.

### **Successful capital increase**

The capital measures decided upon at the Annual General Meeting in May 1998 were concluded with exceptional success. In the first step, bonus shares were issued at a ratio of 5:1, thereby increasing equity capital by DM 198 million. Thereupon, shareholders were offered subscription rights to new shares at a ratio of 12:1; this resulted in a further increase of DM 99 million in equity capital. The company thus acquired around DM 2 billion of fresh capital.

5.5 million new ordinary shares and 0.4 million new preference shares were issued through these capital measures. The number of BMW shares now totals 25.7 million, of which 23.9 million are ordinary shares and 1.8 million preference shares. Equity capital now totals DM 1,287 million.



The new shares carry a fifty percent dividend entitlement in the year under review, and will thus be separately traded on stock exchanges until the 1999 Annual General Meeting.

### **Setbacks on the stock exchange**

Developments on the international stock exchanges over the course of the year were extremely turbulent. The bull market prevailing since autumn 1997 continued until mid-July, followed by a downturn which led to a dramatic fall in stock quotations on some markets. These setbacks were triggered by the economic crisis in East Asia, and the severe currency and debt problems in Russia. They were intensified by indications of a weakening performance for the US economy.

These international factors were also responsible for the slump on the German stock market. Whereas the DAX had reached record levels in the first six months of the year – and an all-time high of 6100 points in July – it then fell victim to the developments on international markets. In October, it dropped below 3900 points – its level of November 1997. By year's end, the DAX had recovered to reach 5002 once again – an increase of almost 18% for 1998 as a whole.

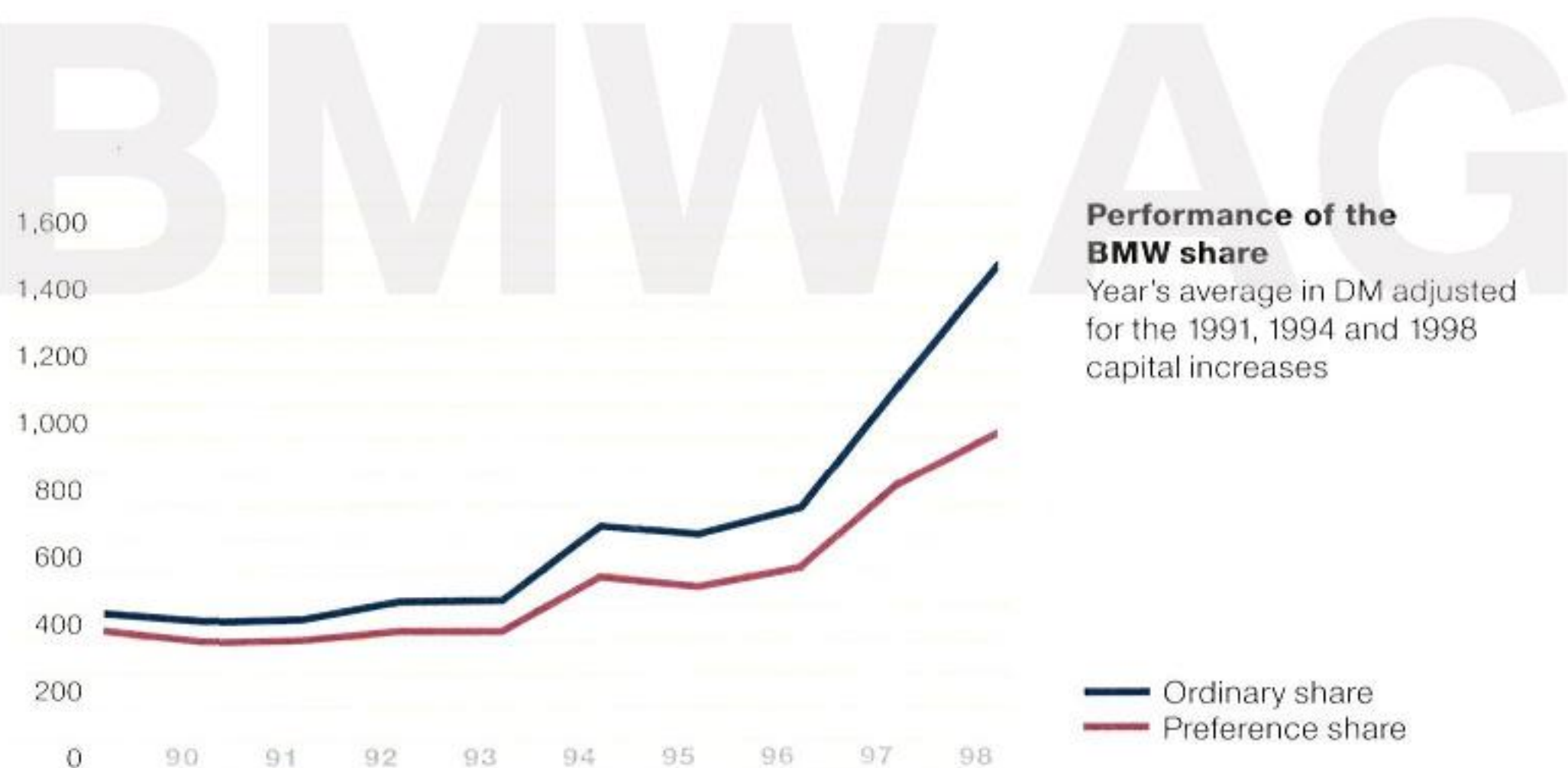
The BMW share prospered and suffered in accordance with the overall market. Viewed after adjustment, taking historical consideration of the two measures of capital increase, the ordinary BMW share reached an all-time high of DM 1,980 in July 1998. It was then caught up in the general stock-market decline, falling briefly below DM 1,000 before bottoming out at DM 910 in October – a value last recorded in November 1997. The share then recovered to DM 1,293, a clear gain on its level at the beginning of the year. The performance of the BMW ordinary share thus once again outclassed the DAX.



The value of the BMW preference share fluctuated in similar fashion. Peaking at DM 1,272 in June, it fell to DM 550 in October. By the end of the year, a recovery had brought it back up to a level 8% higher than at the end of 1997.

Over recent years, the BMW share has thus proved itself an attractive investment. Shareholders who acquired BMW shares in early 1989 have benefited from an average annual return over the last ten years of almost 17% – and 18% over the last five years. Federal loans and bonds have only yielded 6.5% and 5.4% respectively over the same period.

The proposed dividend of DM 20.00 for the BMW ordinary share and DM 21.00 for the BMW preference share will be increased by the 3/7 tax bonus for shareholders domiciled in Germany to DM 28.57 for the BMW ordinary share and DM 30 for the BMW preference share. The total dividend for distribution increased by 15% from DM 397 million for 1997 to DM 457 million for the year under review.



BMW preference shares were offered to employees of BMW and its German subsidiaries for the first time in 1989, as an instrument of voluntary capital formation. This opportunity was again available to staff in 1998, and almost 10,000 BMW employees acquired shares. This brought the company an additional DM 7 million in funds. Equity capital increased by DM 497,000.



## Finance

<b>BMW shares</b>	1994	1995	1996	1997	1998
<b>Ordinary share</b>					
Number of shares in thousands	18,409	18,409	18,409	18,409	23,932
Stock exchange quotation in DM <sup>1)</sup>					
Year end	604	579	850	1,072	1,293
High	725	660	854	1,227	1,980
Low	509	530	586	811	910
<b>Preference share</b>					
Number of shares in thousands	1,293	1,328	1,366	1,389	1,815
Stock exchange quotation in DM <sup>1)</sup>					
Year end	427	403	581	724	780
High	516	465	592	839	1,272
Low	357	372	404	565	550
<b>Key data per share in DM</b>					
Dividend					
Ordinary share	12.50 1.50 <sup>4)</sup>	13.50	15.00	20.00	20.00 <sup>2)3)</sup>
Preference share	13.50 1.50 <sup>4)</sup>	14.50	16.00	21.00	21.00 <sup>2)3)</sup>
Tax credit for shareholders resident in Germany					
Ordinary share	6.00	5.79	6.43	8.57	8.57 <sup>3)</sup>
Preference share	6.43	6.21	6.86	9.00	9.00 <sup>3)</sup>
DVFA/SG result <sup>5)6)</sup>	31.00	31.20	34.80	53.10	40.30
Cash flow <sup>5)</sup>	147	154	167	201	193
Shareholders' equity <sup>5)7)</sup>	314	325	359	403	484

<sup>1)</sup> Closing prices on the Frankfurt stock exchange; retrospectively adjusted for the 1998 issue of bonus shares at a ratio of 5:1 and for the 1998 capital increase at a ratio of 12:1

<sup>2)</sup> Proposal of the Board of Management

<sup>3)</sup> The most recent shares from the 1998 capital increase carry a 50-percent dividend entitlement and tax credit

<sup>4)</sup> Bonus

<sup>5)</sup> Retrospectively adjusted for the 1998 capital increase; weighting of shares according to dividend entitlement in the year of issue

<sup>6)</sup> Retrospectively adjusted in accordance with new DVFA/SG stipulations

<sup>7)</sup> Excluding unappropriated profit



**BMW Consolidated Financial Statements**

**BMW AG**



**BMW Consolidated Balance Sheet**  
as of December 31 1998

<b>Assets</b>	Notes	31.12.1998 DM million	31.12.1997 DM million
Intangible assets	(6)	258	325
Tangible assets		14,216	14,204
Financial assets	(7)	800	705
<b>Fixed assets</b>		<b>15,274</b>	<b>15,234</b>
Inventories	(8)	7,470	5,900
Leased products		11,532	11,962
Receivables from sales financing		13,042	9,283
Assets from sales financing	(9)	24,574	21,245
Trade receivables	(10)	3,963	4,091
Other receivables and miscellaneous assets	(10)	2,277	2,151
Marketable securities and notes	(11)	1,218	1,244
Liquid funds	(12)	3,784	2,458
<b>Current assets</b>		<b>43,286</b>	<b>37,089</b>
<b>Prepaid expenses and deferred taxes</b>	(13)	<b>1,364</b>	<b>957</b>
		<b>59,924</b>	<b>53,280</b>
<b>Shareholders' equity and liabilities</b>	Notes	31.12.1998 DM million	31.12.1997 DM million
Subscribed capital	(14)	1,287	990
Capital reserve	(14)	3,670	1,635
Revenue reserves	(15)	7,063	7,097
Unappropriated profit available for distribution		457	397
Minority interest	(16)	129	129
<b>Shareholders' equity</b>	(17)	<b>12,606</b>	<b>10,248</b>
<b>Registered profit-sharing certificates</b>		<b>75</b>	<b>76</b>
Pension provisions		2,726	2,415
Other provisions		10,322	10,321
<b>Provisions</b>	(18)	<b>13,048</b>	<b>12,736</b>
Bonds		2,254	1,959
Liabilities to banks		1,375	756
Trade payables		3,569	3,573
Other liabilities		4,752	4,627
<b>Liabilities</b>	(19)	<b>11,950</b>	<b>10,915</b>
Liabilities from sales financing		21,425	18,148
Deferred income from leasing financing		683	968
<b>Liabilities from sales financing</b>	(20)	<b>22,108</b>	<b>19,116</b>
<b>Deferred income</b>		<b>137</b>	<b>189</b>
		<b>59,924</b>	<b>53,280</b>



**BMW Consolidated Income Statement**  
for the financial year ended December 31 1998

	Notes	1998 DM million	1997 DM million
<b>Sales</b>	(21)	<b>63,134</b>	<b>60,137</b>
Production costs relevant to sales achieved		53,007	49,873
<b>Gross earnings from sales</b>		<b>10,127</b>	<b>10,264</b>
Sales and marketing costs		7,176	7,062
General administration costs		928	899
Other operating income	(22)	2,187	2,140
Other operating expenses	(23)	1,800	1,606
Net income from investments	(24)	20	61
Net interest income	(25)	318	237
Interest expenses from leasing financing	(26)	672	607
Result from ordinary business activities		2,076	2,528
Taxes on income	(27)	1,051	1,153
Other taxes		122	129
<b>Net income</b>	(28)	<b>903</b>	<b>1,246</b>



# Notes

## Development of consolidated fixed assets

	Acquisition and manufacturing costs						Depreciation/write-downs					Net book values		
	1.1.1998 DM million	Translation difference DM million	Additions DM million	Reclassi- fications DM million	Disposals DM million	31.12.1998 DM million		1.1.1998 DM million	Translation difference DM million	Current year DM million	Disposals DM million	31.12.1998 DM million	31.12.1998 DM million	31.12.1997 DM million
Intangible assets	1,400	- 14	54	2	66	1,376		1,075	- 10	118	65	1,118	258	325
Land, titles to land and buildings, including buildings on third-party land	8,834	- 220	364	198	189	8,987		3,218	- 63	291	78	3,368	5,619	5,616
Technical plant and machinery	26,398	- 599	2,010	640	2,192	26,257		20,807	- 425	2,714	2,148	20,948	5,309	5,591
Other plant, factory and office equipment	3,746	- 118	611	17	479	3,777		2,939	- 86	512	464	2,901	876	807
Advance payments and construction in progress	2,190	- 143	1,223	- 857	1	2,412		-	-	-	-	-	2,412	2,190
Tangible assets	41,168	- 1,080	4,208	- 2	2,861	41,433		26,964	- 574	3,517	2,690	27,217	14,216	14,204
Shares in subsidiaries	175	- 4	119	-	40	250		8	-	2	-	10	240	167
Loans to subsidiaries	4	-	-	-	1	3		-	-	-	-	-	3	4
Investments in associated companies	342	- 17	38	-	8	355		-	-	-	-	-	355	342
Investments in other companies	10	-	28	-	-	38		6	-	-	-	6	32	4
Long-term securities	22	-	1	-	-	23		-	-	-	-	-	23	22
Other long-term loans receivable	179	- 7	9	-	21	160		13	-	-	-	13	147	166
Financial assets	732	- 28	195	-	70	829		27	-	2	-	29	800	705
Fixed assets	43,300	- 1,122	4,457	-	2,997	43,638		28,066	- 584	3,637	2,755	28,364	15,274	15,234



The consolidated financial statements have been drawn up in accordance with the German Commercial Code (HGB) and with German Stock Corporation Law (AktG).

For greater ease of international comparison, the income statement has been prepared for the first time according to cost-of-sales accounting principles. The figures in respect of the previous year were adjusted correspondingly.

### **Consolidated companies (1)**

The consolidated companies are comprised of BMW AG and, in principle, of all subsidiaries in the Federal Republic of Germany and abroad. As in the previous year, a total of 18 subsidiaries in Germany and 117 foreign subsidiaries were included in the consolidation.

84 subsidiaries (75 in 1997) were dormant or generated negligible business volume in the year under review; these are not included in the consolidated financial statements, since they are not material to the Group's financial and earnings position. As in the previous year, five subsidiaries are not included in accordance with Section 296 Subsection 1 Article 2 of the HGB. They are accounted for using the equity method.

In addition, BMW Pensionskasse (Österreich) AG, Steyr, Austria, has not been consolidated because its assets are assigned for a specific purpose.

The non-inclusion of subsidiaries lowers total Group sales by 2.4%.

Three associated companies are accounted for using the equity method. 7 associated companies (9 in 1997) are not included in the consolidated financial statements because of their relative insignificance to the Group's financial and earnings position. These associated companies are stated at cost, less write-downs where applicable, under Investments in other companies.

A complete list of the Group's shareholdings is filed with the Commercial Register held at the Munich local court (reg. HRB 42243). The principal subsidiaries are listed on page 234.



The following companies are included in the consolidated financial statements for the first time: BMW Financial Services Holding GmbH, Munich, BMW Servizi Logistici s.r.l., Milan, Rover Group Belux S.A./N.V., Woluwe, Rover Financial Services (GB) Ltd., Hook, Rover Financiering B.V., Vianen, Rover Group Austria GmbH, Salzburg, and BMW FS Funding Corporation, Wilmington. Due to its continued low volume of business, Kontron Elektronik GmbH, Eching, left the consolidated group. The following companies are also no longer included in the consolidation: Land Rover Belgium S.A./N.V., Woluwe, Rover Belgium N.V., Woluwe, BL Cars Ireland Manufacturing Ltd., Dublin, Rover Ireland Sales Ltd., Dublin, BLM Finance S.A., Lausanne, and Land Rover-Leyland International Services S.A., Lausanne.

The effect on the financial and earnings position of the Group is not material.

## **Changes in the consolidated group (2)**

Investments in subsidiaries are consolidated using the net book value method. Under this method, the cost of the investments is set off against the Group's share of equity of the consolidated subsidiaries at the time of acquisition or initial consolidation. Any resulting positive differential amount in relation to the net assets acquired is set off against revenue reserves.

The same principles are applied in consolidating associated companies under the equity method. Intercompany receivables, liabilities, provisions, income and profits are eliminated.

## **Principles of consolidation (3)**



**Foreign currency translation (4)**

In the individual financial statements of BMW AG and its subsidiaries, receivables and liabilities are translated at the rate applicable on the transaction date. Provisions are made for unrealised exchange rate losses at the balance sheet date. Where foreign currency receivables and liabilities of non-German subsidiaries have been hedged by forward exchange contracts, they are valued at the appropriate hedging rate.

In the consolidated financial statements, fixed assets are translated at the closing rates of exchange, as are other assets and liabilities stated in foreign currencies. Income and expenses are translated at the average rate of exchange for the year. Exchange differences arising from the translation of shareholders' equity are offset directly through revenue reserves.

**Principles of accounting and valuation (5)**

For the sake of greater clarity, individual items in the consolidated balance sheet and the consolidated income statement have been combined; they are shown separately in the notes to the consolidated financial statements. Separate items have been added to the consolidated financial statements to show the effects of sales financing.

The individual financial statements of BMW AG and its subsidiaries in Germany and elsewhere have been prepared using uniform accounting principles. In order to ensure uniform valuation within the Group, the tax-allowable depreciation and special reserves which are included in the individual financial statements of the consolidated subsidiaries solely to comply with tax regulations are not included in the consolidated financial statements. Discrepancies in valuation principles by associated companies have not been adjusted where the amounts involved are negligible.

Purchased intangible assets are stated at cost and written down using the straight-line method.



Tangible fixed assets are carried at acquisition or manufacturing cost less depreciation. Office and factory buildings are depreciated using the straight-line method. Other depreciable tangible assets having a useful life of more than three years are depreciated using the declining balance method, switching to the straight-line method as soon as the latter results in higher depreciation.

Expenditure on low-value tangible assets is written off in full in the year of acquisition.

Office and factory buildings, including utility distribution systems permanently attached to buildings, are depreciated in 8 to 25 years, residential buildings in 25 to 50 years, technical plant and machinery in up to 10 years, other plant, factory and office equipment predominantly in 5 years. For machinery used in multiple-shift operations, depreciation rates are increased to account for the additional utilisation.

Investments in non-consolidated subsidiaries, associated and other companies are stated at the lower of cost or fair value. Long-term loans are valued at their current discounted net value.

Inventories of raw materials, supplies and goods for sale are stated at the lower of cost or market. Work in process and finished goods are carried only at their direct material and production cost. Inventories resulting from goods supplied by consolidated companies include an appropriate portion of performance-related production overheads. Write-downs are made to cover risks arising from slow-moving items or technical obsolescence.

Manufactured products included as assets of the Group's leasing companies are recorded at manufacturing cost as permitted for accounting purposes. All other leased products are valued at cost. If the net realisable value is lower, this value is used.



All risks identifiable on receivables and other assets are covered by appropriate write-downs. Receivables with current maturities which bear nominal or no interest are discounted. No changes have been made to valuations which are based on the compliance with regulations applying to financial institutions.

Marketable securities and notes are stated at the lower of cost or market at the balance sheet date.

Pension provisions are established in accordance with actuarial principles, using a rate of interest of 5%. The new system of scales drawn up by Professor Klaus Heubeck forms the basis of biometrical calculation (RT 98). Other provisions take account of all perceivable risks. Provisions are also made for deferred expenses.

Deferred taxes are calculated on timing differences arising from the different treatment of transactions for financial and tax reporting purposes. Deferred tax assets and liabilities thus calculated are netted. A net deferred tax asset balance arising from deferred taxation in the individual financial statements is not recorded. Deferred taxes arising from consolidation adjustments are stated in accordance with legal requirements.



## Consolidated Balance Sheet

Intangible assets include subsidies for tool costs, licenses, entry fees and software.

### Intangible assets (6)

The additions to shares in subsidiaries relate primarily to the acquisition of softlab SI (UK), Warwick, the new foundation of BMW Hams Hall Motoren GmbH, Munich, and BMW Milano, S.p.A., Milan, and capital increases at BMW Financial Services Iberica, E.F.C., S.A., Madrid, Bayerische Motoren Werke Thailand Co. Ltd., Bangkok, THEPSATRI Co. Ltd., Bangkok, and BMW Italia Renting S.p.A., Milan. Kontron Elektronik GmbH, Eching, is no longer part of the consolidation; it is carried at acquisition cost under shares in subsidiaries.

Disposals in shares in subsidiaries relate chiefly to the initial consolidation of Rover Financial Services (GB) Ltd., Hook.

Investments in associated companies relate to the sub-group of Bavaria Wirtschaftsagentur GmbH, Munich, Rover Finance Holdings Ltd., Redhill, and UGC Limited, Oxford. The disposal in investments in associated companies relates to the sale of shares in EL-MOS Elektronik in MOS-Technologie GmbH, Dortmund.

Additions to investments in other companies mainly relate to capital increases at TRITEC Motors Ltda., Campo Largo.

### Financial assets (7)



**Inventories  
(8)**

	31.12.1998 DM million	31.12.1997 DM million
Materials and supplies	832	657
Work in progress	908	1,032
Finished goods and goods for resale	6,295	4,868
Advance payments	149	135
	<b>8,184</b>	<b>6,692</b>
Advance payments received	714	792
	<b>7,470</b>	<b>5,900</b>

**Assets from sales  
financing  
(9)**

	31.12.1998 DM million	31.12.1997 DM million
Leased products	11,532	11,962
Receivables from sales financing		
Customer loan receivables	12,767	9,197
- thereof with a maturity of more than one year: DM 7,968 million (1997: DM 4,331 million) -		
Other receivables	275	86
- thereof with a maturity of more than one year: DM 94 million (1997: DM 6 million) -		
	<b>13,042</b>	<b>9,283</b>
	<b>24,574</b>	<b>21,245</b>

Leased products include additions totalling DM 9,781 million (DM 9,392 million in 1997) and depreciation totalling DM 5,740 million (DM 4,983 million in 1997). Disposals total DM 3,937 million (DM 2,100 million in 1997). The differential amount resulting from the translation of foreign currency accounts was DM -534 million (DM 732 million in 1997).



	31.12.1998 DM million	31.12.1997 DM million
Trade receivables	3,963	4,091
- thereof with a maturity of more than one year: DM 1 million (1997: DM 114 million) -		
Other receivables and miscellaneous assets		
Receivables from subsidiaries	1,074	777
- thereof with a maturity of more than one year: DM 226 million (1997: DM 192 million) -		
Receivables from associated and other companies in which an investment is held	163	92
- thereof with a maturity of more than one year: DM 0 million (1997: DM 0 million) -		
Miscellaneous assets	1,040	1,282
- thereof with a maturity of more than one year: DM 140 million (1997: DM 244 million) -		
	2,277	2,151
	<b>6,240</b>	<b>6,242</b>

## Receivables and miscellaneous assets (10)

Receivables from subsidiaries relate primarily to financial receivables. Miscellaneous assets chiefly include tax refund claims, deferred interest receivables, loans and shareholder rights.

	31.12.1998 DM million	31.12.1997 DM million
Other securities	1,205	1,231
Notes	13	13
	<b>1,218</b>	<b>1,244</b>

## Marketable securities and notes (11)

Other securities primarily include variable-interest securities and shares in investment funds.



**Liquid funds  
(12)**

Liquid funds relate to cash on hand, deposits at the Bundesbank, and cash in bank accounts.

**Prepaid expenses  
and deferred taxes  
(13)**

	31.12.1998 DM million	31.12.1997 DM million
Prepaid expenses	247	196
Deferred taxes	1,117	761
	<b>1,364</b>	<b>957</b>

**Subscribed capital  
and capital reserve  
(14)**

The subscribed capital of BMW AG amounts to DM 1,287 million and comprises 16,121,843 ordinary shares with a nominal value of DM 50 each, 225,000 ordinary shares with a nominal value of DM 100 each, 368,000 ordinary shares with a nominal value of DM 1,000 each, and 1,815,237 non-voting preference shares with a nominal value of DM 50 each. The preference shares bear an extra dividend of DM 1 per share. All shares are bearer shares.

In the year under review, the subscribed capital was increased from corporate funds by DM 198.0 million, and by an ordinary capital increase of DM 99.0 million.

The subscribed capital was furthermore increased by DM 0.5 million through the issue of 9,940 non-voting preference shares to employees. As a result, the remaining authorised capital of BMW AG, which permits non-voting preference shares with a nominal total value of DM 15.0 million to be issued up to May 1 1999, amounted to DM 8.1 million at the balance sheet date.

The premium of DM 2,035 million from this capital increase was transferred to the capital reserve.



Revenue reserves consist of legal reserves of DM 2 million, the other revenue reserves of BMW AG, and the reserves set up from the net results of consolidated companies.

## Revenue reserves (15)

Minority interest represents the share of third parties in the equity of consolidated subsidiaries.

## Minority interest (16)

It includes minority shareholders' interests in BMW Rolls-Royce GmbH, Oberursel.

Changes in shareholders' equity:	DM million
Balance as of December 31 1997	10,248
Dividend of BMW AG for 1997	- 397
Increase in subscribed capital from corporate funds	+ 198
Increase in subscribed capital from increase of share capital	+ 99
Transfer to capital reserves from increase in share capital	+ 2,035
Changes in revenue reserves	
- Bonus shares	- 198
- Transfer from net income	+ 446
- Set-off of differences resulting from capital consolidation	- 1
- Currency translation adjustment	- 281
	- 34
Unappropriated profit available for distribution	+ 457
Balance as of December 31 1998	<b>12,606</b>

## Shareholders' equity (17)

The set-off of differences resulting from the capital consolidation relates to the first-time consolidation of Rover Financial Services (GB) Ltd., Hook.

The currency translation adjustment includes the currency difference resulting from the translation of shareholders' equity.



**Provisions  
(18)**

	31.12.1998 DM million	31.12.1997 DM million
Pension provisions	2,726	2,415
Other provisions for:		
Taxes	985	1,022
Personnel expenses	1,433	1,114
Ongoing operations	5,971	6,357
Miscellaneous	1,933	1,828
	<u>10,322</u>	<u>10,321</u>
	<b>13,048</b>	<b>12,736</b>

Pension provisions primarily involve commitments to pay retirement pensions to employees of BMW AG. The pension commitments are fully covered by provisions. The new system of scales drawn up by Professor Klaus Heubeck (RT 98) was used to the full amount of DM 127 million.

The provisions for personnel expenses mainly cover profit-participation plans and bonuses, expenses for employee anniversary gifts, outstanding vacation entitlements, flexible work-time credits and severance awards.

The provisions for ongoing operations chiefly cover warranty obligations, outstanding invoices, sales bonuses and volume discounts, as well as the risk of losses on pending transactions.

Other provisions and accruals cover numerous perceivable specific risks and Group commitments for which the amounts involved are yet uncertain. They also include provisions for maintenance expenses required in the financial year but deferred until the following year. Additional provisions have been made for anticipated major repairs.



# Liabilities (19)

	31.12.1998		31.12.1997	
		thereof with a maturity of		
		up to	over	
	DM	1 year	5 years	DM
	million	million	million	million
Bonds	2,254	598	835	1,959
Liabilities to banks	1,375	1,009	179	756
Trade payables	3,569	3,569	-	3,573
Other liabilities				
Liabilities on bills accepted and drawn	122	122	-	108
Liabilities to subsidiaries	289	247	-	193
Liabilities to companies in which an investment is held	113	113	-	95
Liabilities to BMW employee welfare fund	71	-	71	69
Miscellaneous liabilities	4,157	3,614	102	4,162
- thereof for taxes	(455)	(455)	-	(458)
- thereof for social security	(204)	(204)	-	(199)
	4,752	4,096	173	4,627
	<b>11,950</b>	<b>9,272</b>	<b>1,187</b>	<b>10,915</b>

Liabilities due in between one and five years total DM 1,491 million.

Taken together with bonds stated under liabilities from sales financing, bonds total DM 8,502 million (DM 6,955 million in 1997).



**Liabilities from sales financing (20)**

	31.12.1998		31.12.1997	
		thereof with a maturity of up to 1 year	over 5 years	
	DM million	DM million	DM million	DM million
Liabilities from sales financing				
Bonds	6,248	1,541	1,160	4,996
Liabilities to banks	9,344	5,844	1,295	8,034
- thereof secured by real estate liens	(23)			(40)
Trade payables	2,411	2,411	-	1,606
Commercial paper	3,063	3,063	-	2,825
Other liabilities	359	278	20	687
	21,425	13,137	2,475	18,148
Deferred income from leasing financing	683			968
	<b>22,108</b>	<b>13,137</b>	<b>2,475</b>	<b>19,116</b>

The liabilities from sales financing serve to refinance leased products and receivables from sales financing. Liabilities due in between one and five years total DM 5,813 million.

Deferred income from leasing financing relates to amounts not yet due under current leasing contracts.

**Contingent liabilities**

	31.12.1998 DM million	31.12.1997 DM million
Guarantees	151	135
Discounted bills of exchange	8	-

DM 17 million of this item (DM 15 million in 1997) relates to contingent liabilities to subsidiaries.

Joint and several liability applies in the case of investments in general partnerships.



The net present value of future payment obligations under rental and leasing agreements, totalling DM 1,632 million, broken down by maturity dates, is as follows:

**Other financial obligations**

	31.12.1998 DM million
1999	385
2000 - 2003	691
after 2003	556

DM 99 million of this item relates to obligations to subsidiaries.

Purchasing commitments for capital investment projects amount to DM 1,253 million. There are no other financial obligations.

BMW AG



**Net sales  
(21)**

	1998 DM million	1997 DM million
Automobiles	42,055	42,627
Motorcycles	989	910
Leasing	10,780	7,465
Other sales	9,310	9,135
	<b>63,134</b>	<b>60,137</b>
<hr/>		
Federal Republic of Germany	18,133	15,834
United Kingdom	10,982	10,885
Rest of Europe	14,070	13,490
North America	12,542	10,570
Asia	4,326	5,741
Other markets	3,081	3,617
	<b>63,134</b>	<b>60,137</b>

Other sales primarily relate to sales of spare parts and accessories.

**Other operating  
income  
(22)**

Other operating income consists primarily of income from the release of provisions and accruals, income from currency exchange gains, and income from the release of write-downs on receivables.

**Other operating  
expenses  
(23)**

Other operating expenses include expenses for the additions to provisions, currency exchange losses and write-downs on receivables.



	1998 DM million	1997 DM million
Income from investments	9	2
- thereof from subsidiaries: DM 7 million (1997: DM 0 million) -		
Income from associated companies	68	60
Expenses from loss transfers	55	-
Depreciation on investments in subsidiaries	2	1
	<b>20</b>	<b>61</b>

### Net income from investments (24)

Income from associated companies includes the Group's share of the results of the sub-group Bavaria Wirtschaftsagentur GmbH, Munich, of Rover Finance Holdings Ltd., Redhill, and of UGC Limited, Oxford.

	1998 DM million	1997 DM million
Income from other securities and long-term loans	7	9
Other interest and similar income	2,107	1,807
- thereof from subsidiaries: DM 74 million (1997: DM 33 million) -		
Interest and similar expenses	1,794	1,574
- thereof to subsidiaries: DM 19 million (1997: DM 8 million) -		
Write-downs on long-term loans, marketable securities and notes	2	5
	<b>318</b>	<b>237</b>

### Net interest income (25)

Interest and similar expenses, together with the interest expenses from leasing financing, total DM 2,466 million (DM 2,181 million in 1997).



**Interest expenses  
from leasing  
financing  
(26)**

Interest expenses from financing business with leased products are offset by income which is derived from the leasing instalments, and stated under net sales.

**Taxes on income  
(27)**

Taxes on income include German corporation and municipal earned-income taxes as well as comparable foreign taxes relating to income. Such taxes are determined in accordance with the tax regulations applying to the respective companies. In addition, taxes on income include the deferred taxes resulting from timing differences between the commercial and tax balance sheets.

**Net income  
(28)**

	1998 DM million	1997 DM million
Net income	<b>903</b>	<b>1,246</b>
Appropriations of net income:		
Transfer to revenue reserves	446	849
	<u>446</u>	<u>849</u>
Unappropriated profit available for distribution	<b>457</b>	<b>397</b>



## Additional information

	1998 DM million	1997 DM million
Wages and salaries	9,617	9,024
Social security, pension and welfare costs	1,915	1,801
- thereof for pension plans: DM 562 million (1997: DM 491 million) -		
	<b>11,532</b>	<b>10,825</b>

Average number of employees per year:	1998	1997
Wage earners	72,114	70,614
Salaried employees	43,813	39,001
	<b>115,927</b>	<b>109,615</b>

## Personnel costs

BMW AG



**Total remuneration of the Board of Management and the Supervisory Board**

Subject to the approval of the proposed dividend at the Annual General Meeting of Shareholders, the remuneration of active members of the Board of Management for the 1998 business year amounts to DM 17.4 million (DM 17.5 million in 1997), and that of former members and their surviving dependants DM 3.0 million (DM 3.5 million in 1997). The total remuneration of the Supervisory Board for 1998 amounts to DM 2.5 million (DM 2.4 million in 1997).

The pension commitments to former members of the Board of Management and their surviving dependants are fully covered by an accrual of DM 32.0 million (DM 24.3 million in 1997).

The members of the Supervisory Board and the Board of Management are listed on pages 10 and 11.

Munich, March 1999

**Bayerische Motoren Werke**

Aktiengesellschaft

The Board of Management

**Auditors' note of confirmation**

The Consolidated Financial Statements, which we have audited in accordance with professional standards, comply with the German legal provisions. The Consolidated Financial Statements present, in compliance with required accounting principles, a true and fair view of the Group's assets, liabilities, financial position and net income. The Business Review of the Group is consistent with the Consolidated Financial Statements.

Munich, March 4 1999

**KPMG Deutsche Treuhand-Gesellschaft**

Aktiengesellschaft

Wirtschaftsprüfungsgesellschaft  
(Auditors)

Dr. Hoyos  
Auditor

Große-Brauckmann  
Auditor



## Balance Sheet and Income Statement of BMW AG

BMW AG

The Financial Statements of BMW AG, of which the Balance Sheet and the Income Statement are presented here, have been provided with the unrestricted confirmation of KPMG Deutsche Treuhand-Gesellschaft Wirtschaftsprüfungsgesellschaft (Auditors), Munich. The Financial Statements are published in the Federal Gazette and filed with the Commercial Register of the Munich local court. These Financial Statements are available from BMW AG, D-80788 Munich, Germany.



**Balance Sheet of BMW AG**  
as of December 31 1998

<b>Assets</b>	31.12.1998 DM million	31.12.1997 DM million
Intangible assets	289	72
Tangible assets	4,612	4,711
Financial assets	5,480	5,383
<b>Fixed assets</b>	<b>10,381</b>	<b>10,166</b>
Inventories	2,572	2,099
Trade receivables	835	784
Receivables from subsidiaries	5,473	4,080
Other receivables and miscellaneous assets	146	211
Marketable securities and notes	961	818
Liquid funds	1,254	799
<b>Current assets</b>	<b>11,241</b>	<b>8,791</b>
<b>Prepaid expenses</b>	<b>21</b>	<b>24</b>
	<b>21,643</b>	<b>18,981</b>
<b>Shareholders' equity and liabilities</b>	31.12.1998 DM million	31.12.1997 DM million
Subscribed capital	1,287	990
Capital reserve	3,670	1,635
Revenue reserves	3,842	3,928
Unappropriated profit available for distribution	457	397
<b>Shareholders' equity</b>	<b>9,256</b>	<b>6,950</b>
<b>Registered profit-sharing certificates</b>	<b>75</b>	<b>76</b>
Pension provisions	2,557	2,269
Other provisions	4,737	4,808
<b>Provisions</b>	<b>7,294</b>	<b>7,077</b>
Liabilities to banks	9	62
Trade payables	1,458	1,447
Liabilities to subsidiaries	1,585	1,716
Other liabilities	1,966	1,653
<b>Liabilities</b>	<b>5,018</b>	<b>4,878</b>
	<b>21,643</b>	<b>18,981</b>



**Income Statement of BMW AG**  
**for the financial year ended December 31 1998**

	1998 DM million	1997 DM million
<b>Sales</b>	<b>38,780</b>	<b>35,870</b>
Production costs relevant to sales achieved	34,667	31,541
<b>Gross earnings from sales</b>	<b>4,113</b>	<b>4,329</b>
Sales and marketing costs	2,438	2,360
General administration costs	549	538
Other operating income	846	914
Other operating expenses	1,092	1,063
Net income from investments	9	- 186
Net interest income	183	154
<b>Result from ordinary business activities</b>	<b>1,072</b>	<b>1,250</b>
Taxes on income	492	585
Other taxes	11	36
<b>Net income</b>	<b>569</b>	<b>629</b>
Transfer to revenue reserves	112	232
<b>Net income available for distribution</b>	<b>457</b>	<b>397</b>



## Subsidiaries of BMW AG

### Major subsidiaries of BMW AG as of December 31 1998

	Shareholders' equity <sup>1)</sup> Mio. DM	Income <sup>1)</sup> Mio. DM	Capital investment in %
Domestic			
BMW Finanz Verwaltungs GmbH, Munich	515	15	100
BMW Financial Services Holding GmbH, Munich	383	49	100
BMW Bank GmbH, Munich	341	24	100
BMW Rolls-Royce GmbH, Oberursel <sup>3)</sup>	261	0	50.5
BMW Maschinenfabrik Spandau GmbH, Berlin	126	21	100
BMW Ingenieur-Zentrum GmbH & Co., Munich	92	2	100
softlab GmbH für Systementwicklung und EDV-Anwendung, Munich	65	1	100
BMW Maschinenfabrik Spandau GmbH & Co. Anlagen und Betriebs oHG, Berlin	39	16	100
BMW Leasing GmbH, Munich <sup>4)</sup>	31	0	100
Rover Deutschland GmbH, Neuss <sup>3)</sup>	14	0	100
BMW Fahrzeugtechnik GmbH, Eisenach <sup>4)</sup>	2)	0	100
BMW INTEC Beteiligungs GmbH, Munich <sup>4)</sup>	2)	0	100
BMW M GmbH Gesellschaft für individuelle Automobile, Munich <sup>4)</sup>	2)	0	100
Foreign			
BMW Coordination Center N.V., Bornem	489	72	100
BMW (South Africa) (Pty) Ltd., Pretoria	271	41	100
BMW Finance N.V., The Hague	256	30	100
BMW Overseas Enterprises N.V., Willemstad	101	2	100
BMW Österreich Holding GmbH, Steyr	1,288	58	100
BMW Motoren GmbH, Steyr	270	117	100
BMW Austria Gesellschaft m.b.H., Salzburg	94	2)	100
BMW Holding B.V., The Hague	1,768	468	100
BMW (US) Holding Corporation, Wilmington, Del. <sup>5)</sup>	2,215	575	100
BMW Japan Corp., Tokyo	346	14	100
BMW France S.A., Bois d'Arcy	194	69	100
BMW Italia S.p.A., Milan	140	86	100
BMW Canada Inc., Whitby	138	29	100
BMW Australia Ltd., Melbourne, Victoria	116	27	100
BMW (Schweiz) AG, Dielsdorf	95	49	100
BMW Belgium S.A./N.V., Bornem	77	27	100
BMW Ibérica S.A., Madrid	63	26	100
BMW Nederland B.V., The Hague	50	11	100
BMW (UK) Holdings Ltd., Warwick	4,750	-1,198	100
Rover Group Ltd., Warwick	2,886	-1,420	100
BMW (GB) Ltd., Bracknell	619	403	100
BMW (UK) Capital plc., Warwick	83	8	100
Rover Italia S.p.A., Rome	52	22	100
Rover España S.A., Madrid	31	13	100
Rover France S.A., Argenteuil	23	2)	100
Rover Portugal Veiculos e Pecas Limitada, Lisbon	16	3	100
Rover Japan Ltd., Tokyo	6	- 67	100

<sup>1)</sup> The values correspond with the individual financial statements, prepared in accordance with the respective country's regulations, and do not show the companies' contribution to the consolidated financial statements. Equity and income of companies outside the Federal Republic of Germany are converted using the exchange rate on the balance sheet date.

<sup>2)</sup> Less than DM 500,000

<sup>3)</sup> Profit and loss transfer agreement with a subsidiary of BMW AG

<sup>4)</sup> Profit and loss transfer agreement with BMW AG

<sup>5)</sup> Consolidated including BMW's operative US companies



**The financial year**

Annual General Meeting  
of Shareholders  
Intermediate Report  
Letter to shareholders

May 18 1999  
end of July 1999  
end of January 2000

BMW AG



**BMW Group in figures**

		1989	1990	1991	1992	1993	1994 <sup>1)</sup>	1995	1996	1997	1998
Sales	DM million	26,515	27,178	29,839	31,241	29,016	42,125	46,144	52,265	60,137	63,134
Change	%	+ 8.4	+ 2.5	+ 9.8	+ 4.7	- 7.1	+ 45.2	+ 9.5	+ 13.3	+ 15.1	+ 5.0
Production – automobiles											
Group	units	511,476	519,660	553,230	598,145	532,960	948,683	1,098,582	1,143,558	1,194,704	1,204,000
BMW Automobiles	units	511,476	519,660	553,230	598,145	532,960	573,083	595,056	639,433	672,238	706,426
Rover Automobiles	units	–	–	–	–	–	375,600 <sup>2)</sup>	503,526	504,125	522,466	497,574
Deliveries to customers – automobiles											
Group	units	526,462	514,705	552,103	588,657	534,397	931,883	1,073,161	1,151,361	1,196,096	1,187,115
BMW Automobiles	units	526,462	514,705	552,103	588,657	534,397	573,953	590,072	644,107	675,076	699,378
Rover Automobiles	units	–	–	–	–	–	357,930 <sup>3)</sup>	483,089	507,254	521,020	487,737
Production – motorcycles <sup>4)</sup>	units	25,761	31,589	33,980	35,910	36,990	44,435	52,653	48,950	54,933	60,152
Deliveries to customers – motorcycles	units	28,134	31,310	32,092	34,800	35,150	46,667	50,246	50,465	54,014	60,308
Workforce at end of year		66,267	70,948	74,385	73,562	71,034	109,362	115,763	116,112	117,624	119,913
Investment	DM million	1,820	2,066	2,123	1,975	2,214	3,543	3,477	3,830	4,520	4,262
as % of sales	%	6.9	7.6	7.1	6.3	7.6	8.4	7.5	7.3	7.5	6.8
Depreciation	DM million	1,549	1,778	1,805	1,827	1,836	2,567	2,877	3,002	3,543	3,635
Cash flow	DM million	2,263	2,780	2,831	2,880	2,567	3,569	3,755	4,092	4,925	4,849
as % of investment	%	124.3	134.6	133.3	145.8	115.9	100.7	108.0	106.8	109.0	113.8
Fixed assets	DM million	6,369	6,707	6,748	6,834	7,151	11,748	11,905	13,429	15,234	15,274
Assets from sales financing	DM million	5,294	6,306	8,077	9,764	11,766	13,300	15,008	16,798	21,245	24,574
Other current assets and prepaid expenses	DM million	9,026	9,488	10,580	10,906	11,378	13,645	13,934	15,115	16,801	20,076
Subscribed capital	DM million	791	794	896	899	902	985	987	989	990	1,287
Reserves	DM million	4,343	4,812	5,174	5,502	5,787	6,538	6,820	7,657	8,732	10,733
Capital reserve	DM million	749	775	796	817	834	1,574	1,593	1,614	1,635	3,670
Revenue reserves	DM million	3,594	4,037	4,378	4,685	4,953	4,964	5,227	6,043	7,097	7,063
Shareholders' equity	DM million	5,371	5,860	6,392	6,718	7,025	7,922	8,200	9,067	10,248	12,606
as % of fixed assets	%	84.3	87.4	94.7	98.3	98.2	67.4	68.9	67.5	67.3	82.5
Dept/equity ratio											
Industrial business	%	30.0	31.2	30.9	30.7	30.3	24.8	25.1	25.0	25.3	28.7
Financial services	%	14.1	12.7	12.8	13.0	12.0	12.2	11.4	11.5	10.0	10.0
Long-term borrowings	DM million	4,413	4,524	5,563	6,672	7,956	9,012	10,780	11,764	15,201	13,767
Long-term capital	DM million	9,784	10,384	11,955	13,390	14,981	16,934	18,980	20,831	25,449	26,373
as % of fixed assets	%	153.6	154.8	177.2	195.9	209.5	144.1	159.4	155.1	167.1	172.7
Liabilities from sales financing	DM million	4,550	5,502	7,042	8,497	10,353	11,672	13,299	14,871	19,116	22,108
Balance sheet total	DM million	20,689	22,501	25,405	27,504	30,295	38,693	40,847	45,342	53,280	59,924
Personnel costs	DM million	4,700	5,313	5,823	6,387	6,245	8,425	8,846	9,844	10,825	11,532
per employee	DM	75,266	80,754	85,231	92,423	94,334	83,482	82,716	90,206	98,755	99,476
Result from ordinary business activities	DM million	1,561	1,664	1,752	1,477	832	1,357	1,367	1,660	2,528	2,076
Taxes	DM million	1,003	968	969	751	316	660	675	840	1,282	1,173
Net income	DM million	558	696	783	726	516	697	692	820	1,246	903
Net income of BMW AG available for distribution	DM million	193	199	225	226	226	277	267	297	397	457

<sup>1)</sup> incl. Rover Automobiles from March 18 1994

<sup>2)</sup> whole of 1994: 487,298

<sup>3)</sup> whole of 1994: 466,661

<sup>4)</sup> incl. F 650 assembly at Aprilia S.p.A. from 1993



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Further information on the BMW Group is available on  
the Internet under:  
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# BMW AG



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**Published by**

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