



# BMW AG





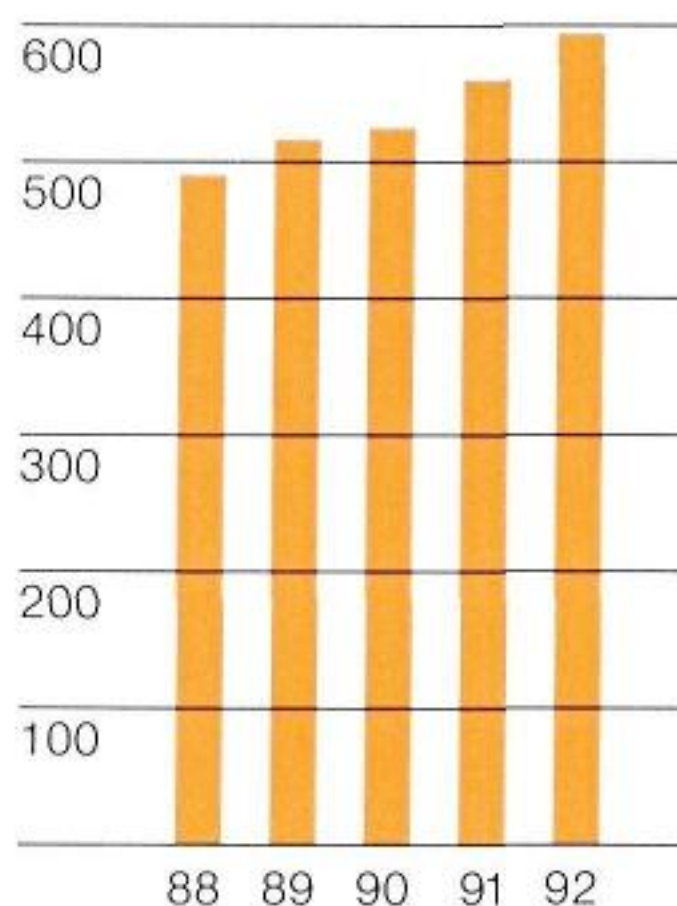
# BMW Year to Year Comparison

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

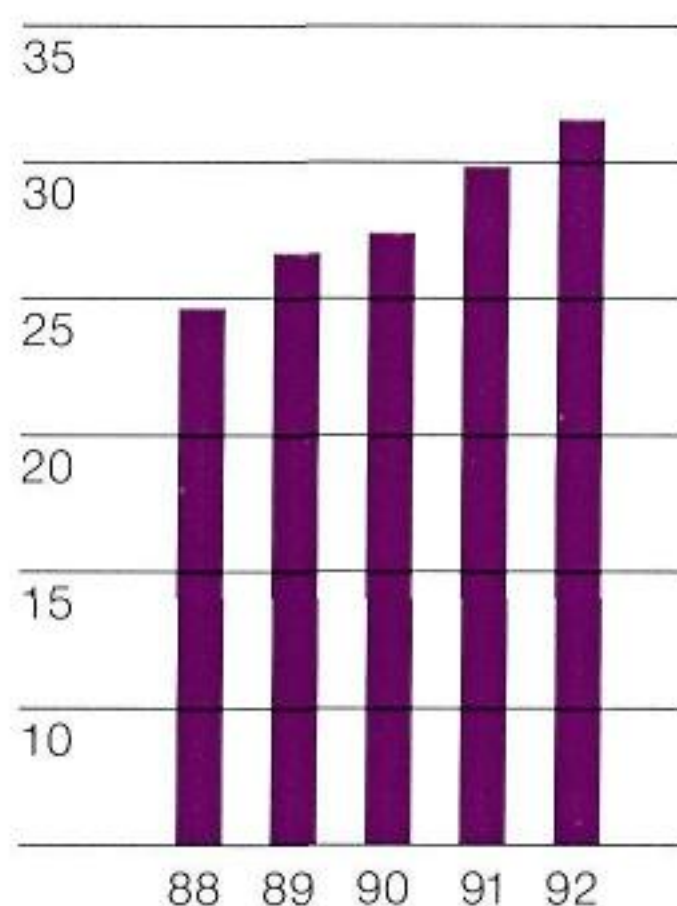
		1992	1991	Change in %
<b>BMW Group</b>				
Production				
Automobiles	units	598,145	553,230	+ 8.1
Motorcycles	units	35,910	33,980	+ 5.7
Unit sales				
Automobiles	units	594,895	552,660	+ 7.6
Motorcycles	units	35,675	32,187	+ 10.8
Sales	DM million	31,241	29,839	+ 4.7
Workforce at end of year		73,562	74,385	- 1.1
Investment	DM million	1,975	2,123	- 7.0
Depreciation	DM million	1,827	1,805	+ 1.2
Cash flow	DM million	2,880	2,831	+ 1.7
Year's net income	DM million	726	783	- 7.3
<b>BMW AG</b>				
Dividends	DM million	226 <sup>1)</sup>	225	+ 0.4
per ordinary share of DM 50 nominal value	DM	12.50 <sup>1)</sup>	12.50	
per preference share of DM 50 nominal value	DM	13.50 <sup>1)</sup>	13.50	
per preference share of DM 50 nominal value (entitled to dividend payment from July 1st)	DM	6.75 <sup>1)</sup>	6.75	

<sup>1)</sup> proposal of the management

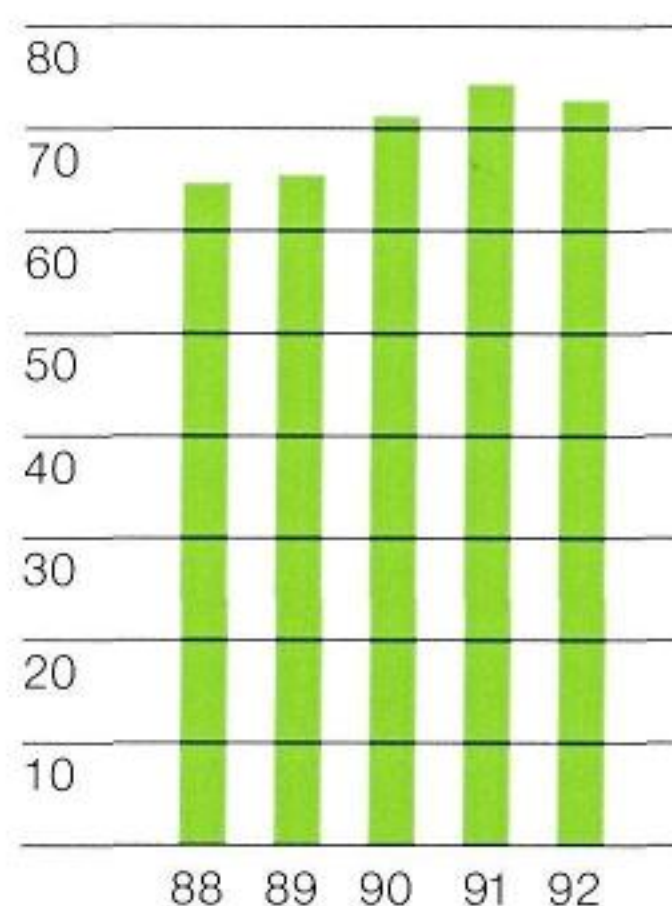
**Automobile Production**  
in thousands



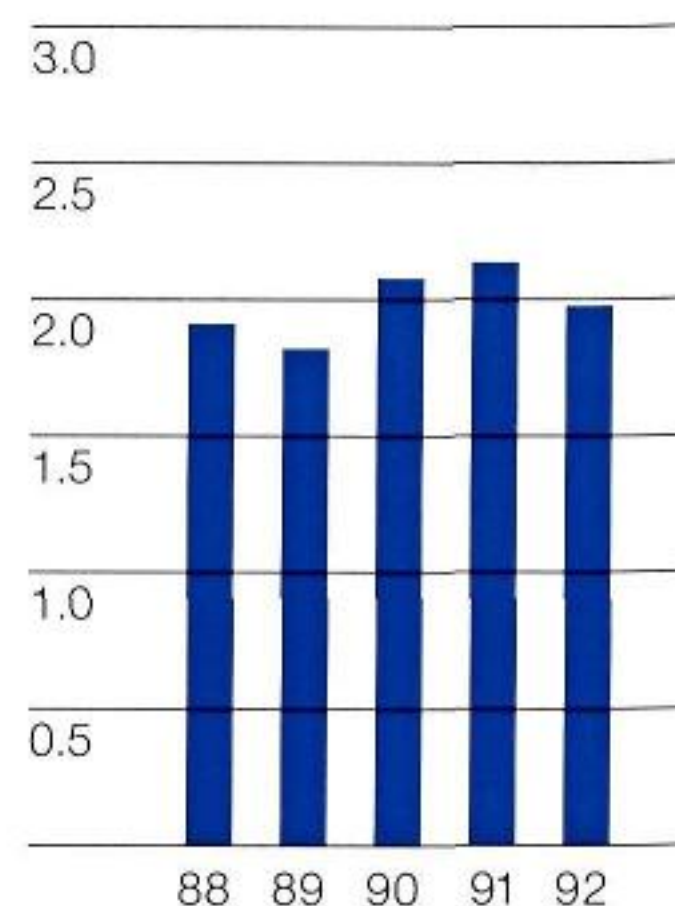
**Sales**  
in DM billion



**Workforce**  
in thousands



**Investment**  
in DM billion



Bayerische Motoren Werke  
Aktiengesellschaft, Munich

1992 Annual Report

BMW AG





#### Front and back cover

BMW cars have always displayed a style of their own. The language of forms can be followed from the classic BMW 327 coupe of the late 1930s to the current 8 Series coupé.



#### The new Convertible

The third version of the 3 Series has been introduced.

#### Cooperative traffic system

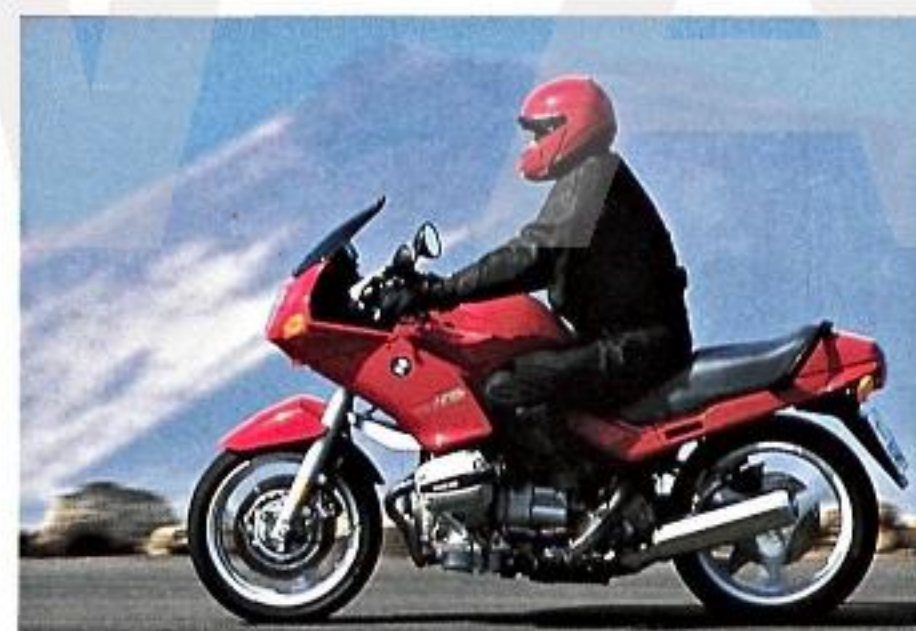
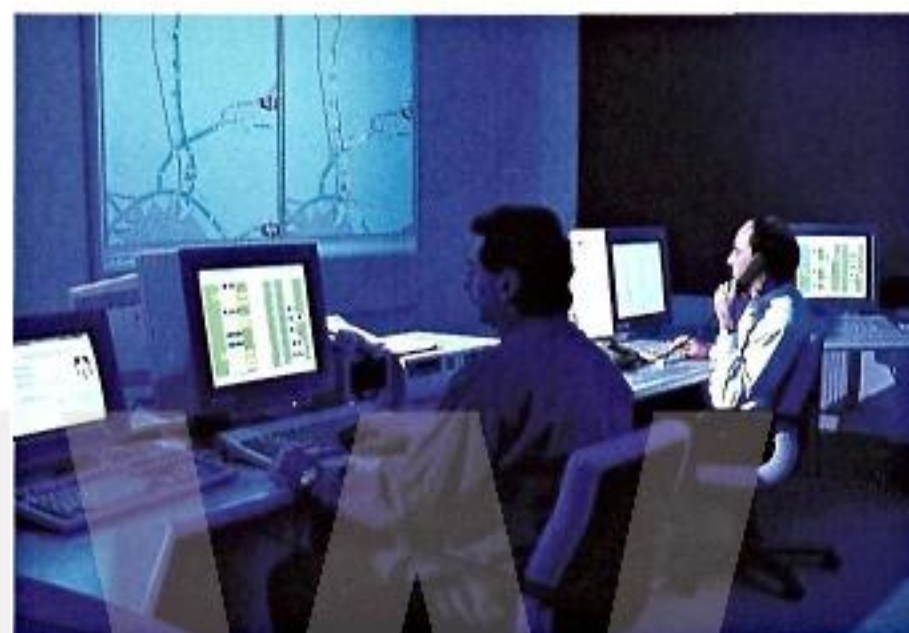
A BMW initiative proves a success in field tests.

#### BMW Rolls-Royce aircraft engines

First large order for the BR700 family of engines.

#### The new generation of motorcycles

High-quality technology for a concept that has been successful for 70 years.



#### Design report

Four personalities talk about function and form. BMW presents its car design.

#### Ceremonial ground-breaking in South Carolina

A BMW plant in the United States strengthens the Company's competitiveness.



#### Increased efficiency

With flexible management and organization structures, BMW has prepared for changing markets.





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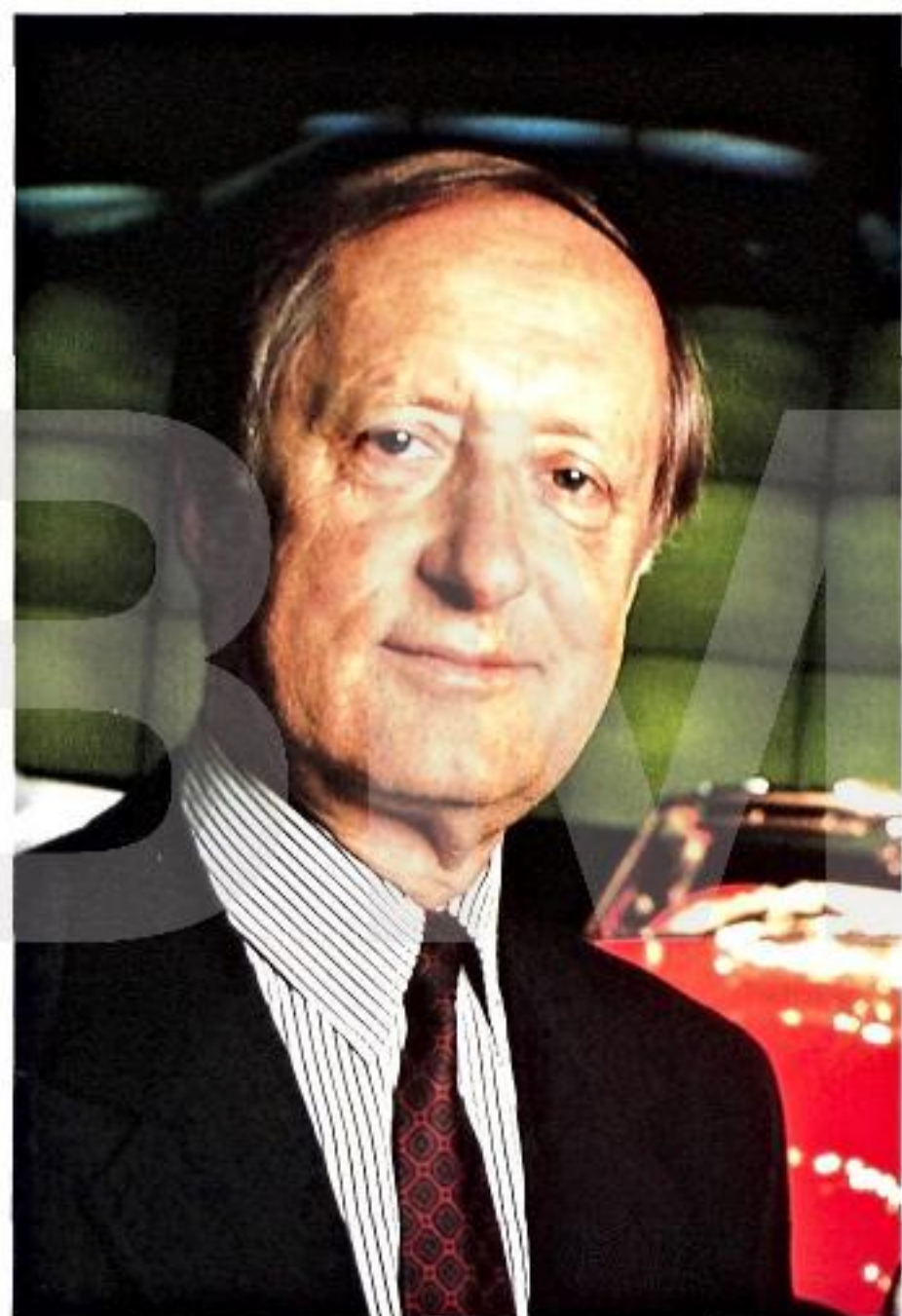
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Last year marked a turning point. We had to bid farewell to almost a decade of steady growth in the German automobile industry. At the same time, we had to stop talking in generalizations and, thus, in over-simplifications, of our sector of industry. It is no longer possible to generalize about "the industry" or individual regions. The picture is now far more complex.

It was always superficial to talk about "the" American, "the" Japanese or "the" European car industry. Averages are always associated with inaccuracy. Nevertheless, by 1992, it became clear that this particular industry was at last developing in different directions. Today, we find successful and less successful manufacturers and suppliers in every country, in every region.



The quest for panaceas, which in any case was doomed to failure, has ended. Strategies that proved successful in one country, or for one company, cannot be imposed upon another. Individual companies still have to analyse carefully these strategies for themselves. They must then decide whether such strategies can help them achieve their goals. Unquestioning adoption can be dangerous.

In this situation, each company must define, and then hold to, its own way. Constancy, in planning and in the pursuit of goals, is just as important as flexibility in daily business, which allows for rapidly-changing competitive conditions.

With the decision to establish a production plant in the United States, BMW is, once again, making its own path. The new production plant will strengthen decisively the link of



the marque and Company with the important American market. This in turn will safeguard permanently the Company's international competitiveness. It is an essential step that will enable the Company to tap future market opportunities and create conditions for the Company's long-term global success.

A common interest throughout the Company, in the thoughts and deeds of all its employees, has become more important than ever. We should not expect outside help. There are no examples to follow. A vain search for precedents would divert us from our chosen path.

Visions are indispensable. These are targets from which a company can take its long-term bearings and which may not be sacrificed to short-term goals.

Every company must define its own way. The terrain ahead is unknown. We alone can tread out our own path.



Eberhard v. Kuenheim





The Supervisory Board regularly reviewed the Company's business throughout the business year. At its joint meetings with the Board of Management, and on the basis of the latter's written and verbal reports, the Supervisory Board has studied closely the Company's situation, the course of business and the intended business policy, and discussed these matters with the Board of Management.

Discussions also focussed on potential business and investments in the new federal states, and on plans to establish a plant in the United States. The Supervisory Board was particularly interested in the long-term development of business.

The Annual Financial Statements for the 1992 Business Year, the Books of Account and the Economic Review have been examined by KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Munich, which has provided its unrestricted confirmatory audit certificate. The Supervisory Board agrees to the result of this audit.

At its meeting on March 18th 1993, the Supervisory Board examined and approved the Annual Financial Statements and the Economic Review, prepared by the Board of Management. The Annual Financial Statements are thereby adopted.

The proposal of the Board of Management for the allocation of profits has been examined by the Supervisory Board which supports the proposal. According to the final result of the Supervisory Board's review, there are no objections to be raised.

The Consolidated Financial Statements and the Economic Review of the BMW Group included in the Economic Review, which have been provided with the unrestricted confirmatory audit certificate of KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Munich, as well as the report of the auditor of the Consolidated Financial Statements, have been duly submitted to the Supervisory Board.

Mr. Cornelis J. van der Klugt and Mr. Nikolaus Held retired from the Supervisory Board with the close of the Annual General Meeting on May 12th 1992. The Supervisory Board expressed its thanks to Mr. van der Klugt and Mr. Held for their services on the Supervisory Board. From the close of the Annual General Meeting on May 12th 1992, Mr. Arthur L. Kelly was newly appointed to the Supervisory Board by resolution of the Annual General Meeting, and Mr. Hans-Günther Niklas was appointed by decision of the Munich Local Court.

At its meeting on September 10th 1992, the Supervisory Board appointed Mr. Helmut Niederhofer a Member of the Board of Management and from February 1st 1993 Director of Industrial Relations. At this meeting the Supervisory Board also appointed Dr. h. c. Horst Teltschik a Member of the Board of Management from January 1st 1993.

Dr. Helmut Schäfer retired from the Board of Management as of January 31st 1993. The Supervisory Board expressed its thanks to Dr. Schäfer for his services to the Company.

Munich, March 18th 1993

A handwritten signature in blue ink, appearing to read 'Hans Graf von der Goltz'.

The Supervisory Board  
Hans Graf von der Goltz  
Chairman



## Supervisory Board

Hans Graf von der Goltz  
Bad Homburg v.d.H.  
Chairman  
Businessman

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

Eberhard von Heusinger  
Bad Homburg v.d.H.  
Deputy Chairman  
Lawyer

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

Johanna Quandt  
Bad Homburg v.d.H.  
Deputy Chairwoman  
Member of the Supervisory Board  
of Altana Industrie-Aktien und  
Anlagen AG

Dr.-Ing. E. h. Klaus Barthelt  
Erlangen  
Former Member of the Board of  
Management of Siemens AG

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

Helmuth Baumgärtner\*, Dingolfing  
Member of the Works Council,  
Dingolfing plant

Klaus Bernhardt\*, Frankfurt/Main  
Trade union secretary

Nikolaus Held\*, Regensburg  
Member of the Works Council,  
Regensburg plant  
(until May 12th 1992)

Dr. Hartmut Kämpfer\*, Berlin  
Head of the Motorcycle Business

Arthur L. Kelly  
Chicago, Illinois, USA  
Managing Partner of  
KEL Enterprises Ltd.  
(from May 12th 1992)

Cornelis J. van der Klugt  
Eindhoven, Netherlands  
Former Chairman of the Board of  
Management of N.V. Philips'  
Gloeilampenfabrieken  
(until May 12th 1992)

Dr. Wolfgang Leeb, Munich  
Member of the Supervisory Board  
of Dresden Bank AG

Dr. h. c. André Leysen  
Mortsel, Belgium  
Chairman of the Supervisory  
Board of Gevaert N.V.

Rudolf Lukes\*, Munich  
Trade union secretary

Alois Mathe\*, Munich  
Deputy Chairman of the  
Works Council, Munich plant

Dr. Hans Meinhardt, Wiesbaden  
Chairman of the Board of  
Management of Linde AG

Hans-Günther Niklas\*, Regensburg  
Chairman of the Works Council,  
Regensburg plant  
(from May 12th 1992)

Dr. Dr.-Ing. E. h. Dr. phil. h. c. Kurt Werner  
Darmstadt  
Chairman of the Supervisory  
Board of Maschinenfabrik Goebel  
GmbH

Dr. Kurt Wessing, Düsseldorf  
Lawyer

Klaus Zwickel\*, Frankfurt/Main  
Second Chairman of the Board of  
Management of IG Metall

## Board of Management

Dr.-Ing. E. h. Dr.-Ing. E. h.  
Eberhard v. Kuenheim  
Chairman

Dr. Robert Büchelhofer

Volker Doppelfeld

Helmut Niederhofer  
(from September 10th 1992)

Bernd Pischetsrieder

Dr.-Ing. Wolfgang Reitzle

Dr. Helmut Schäfer  
(until January 31st 1993)

Dr. h. c. Horst Teltschik  
(from January 1st 1993)

General Counsel:

Dr. Hagen Lüderitz



The introduction of wide-ranging measures, enacted early, again enabled BMW to occupy a special position in 1992. The volume of business expanded, in contrast to the general trend in the car industry. Sales both of BMW cars and motorcycles reached new levels. As in previous years, the financial and income position continued to develop well. A new car plant is being constructed in the United States.

**Automobile industry influenced by the economic downturn**

In 1992, the development of the world economy was generally disappointing. Admittedly, signs of growing recovery appeared in some countries, but the international economy failed to make a strong start. Meanwhile, demand also remained weak in Germany.

In the course of 1992, the effects of the weak world economy became increasingly evident in the automobile industry. Nearly all manufacturers announced decreases in employment and earnings.

**Market position expanded further**

With an attractive range of cars and motorcycles, flexible production systems and an efficient sales organization, the steady upward trend of previous years continued at BMW. The Company's size, structure and independence again proved successful in international competition. In the top market segment, BMW was the marque of car in greatest demand.

BMW Rolls-Royce GmbH received its first large order for the future family of aircraft engines BR700. All the development aims set for 1992 were achieved.

In the field of financial services, the activities of the BMW Group have, once again, developed satisfactorily.

Measures to increase productivity were advanced in order to maintain, in the long term, the Company's earning power despite the more unfavourable economic environment.

**BMW car sales rose markedly again**

While the world market stagnated, sales of BMW cars rose by 7.6% to 595,000 units. After the increase in deliveries in Germany in the previous year, higher growth rates were recorded for exports in the year under review.

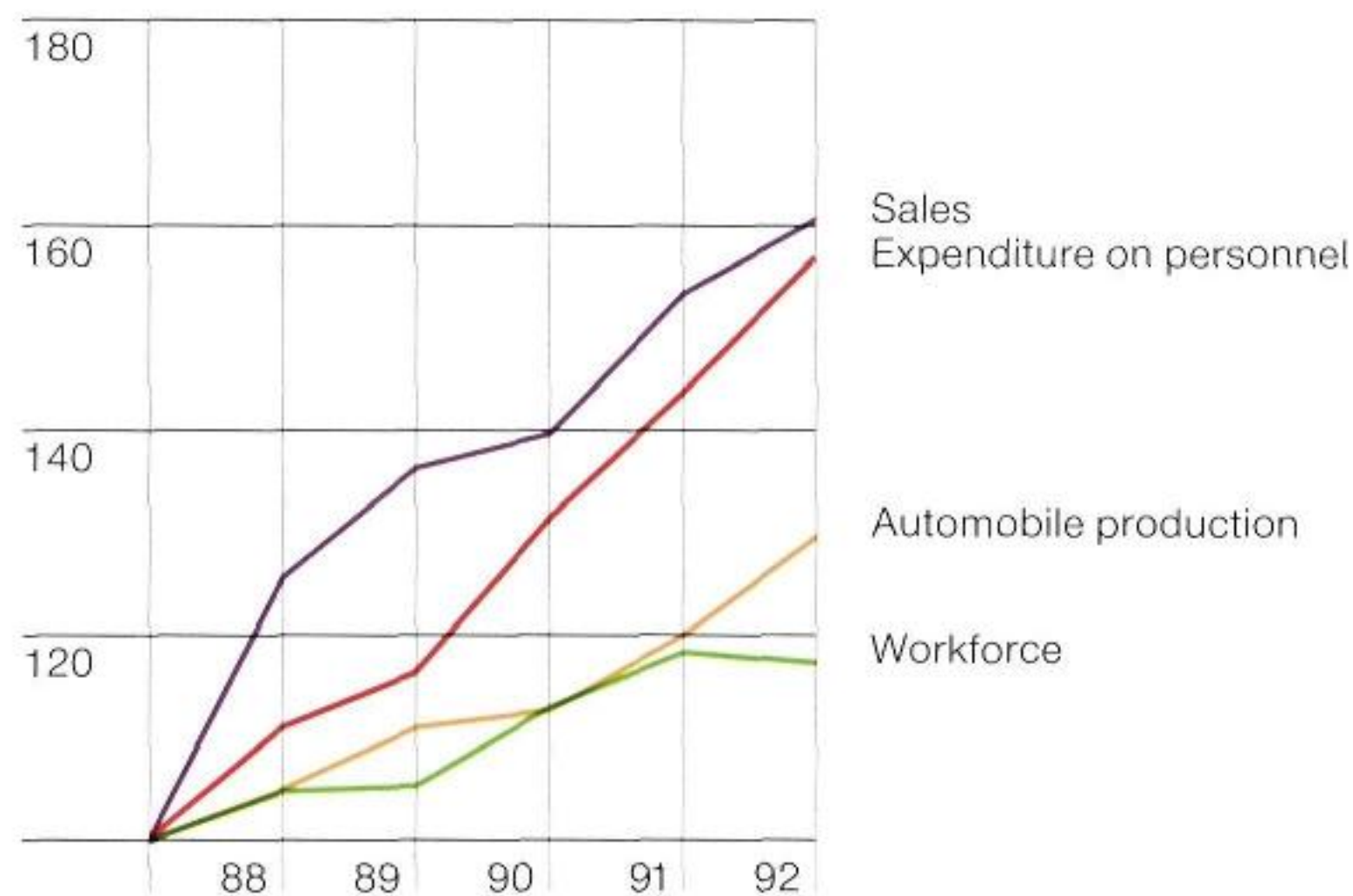
Demand was further stimulated by the new versions of the 3 and 5 Series cars, available from the beginning of 1992. For example, almost 100,000 new 3 Series coupés were produced in the year of introduction. In the 5 Series, about 20% of the cars produced were fitted with the new BMW diesel engine, and about 20% were touring versions. The new 7 Series models with 8-cylinder engines were very well received in both domestic and export markets.

In Western Europe, registrations of new BMW cars rose by 7% to 440,000 units. While the overall German market declined, BMW registrations increased by 6% over the previous year's high figure to about 245,000 units. However, this level is unlikely to be reached again in the immediate future.

In Great Britain, the largest European market for BMW cars outside Germany, the Company increased its car sales in a particularly unfavourable economic environment. High growth rates were achieved in Italy and Spain. However, the devaluations of the pound sterling, lire and peseta have greatly hindered the development of business in these countries, not only for BMW but for other manufacturers.

In the USA, sales rose by 23% to 65,700 units. In Japan, they decreased to 28,500 units as a result of extremely weak demand in the top market segment. Nevertheless, BMW remained one of the leading foreign car marques in the year under review.





**Sales, Expenditure on Personnel, Automobile Production and Workforce of the BMW Group**

Index: 1987 = 100

### **New models in all BMW Series, airbag fitted as standard**

New versions, equipment and fittings were added to the broad range of BMW cars from autumn 1992.

The M3, developed by BMW Motorsport GmbH, joined the 3 Series. A new Convertible was also developed on the basis of the 3 Series. These cars combine sheer driving pleasure with high standards of safety and serviceability.

In the 5 Series, BMW introduced cars with new 8-cylinder engines; the 3-litre 530i and the 4-litre 540i. The saloon and touring BMW will be available as 525td versions from spring 1993. 5 Series cars can also be fitted with the proven 1.8-litre 4-cylinder petrol-driven engine.

The 840Ci and 850CSi extend the range of large BMW coupés.

The 2.0- and 2.5-litre 6-cylinder engines, and the engine of the M3, were fitted with variable camshaft timing. This makes for better fuel consumption and increased engine torque.

From autumn 1992, beginning in Germany, all BMW cars were fitted, as standard, with an airbag for the driver; 7 and 8 Series cars were also fitted with an airbag for the front passenger. The range of standard safety fittings included, as in the past, belt tensioners, side impact protection and an anti-lock braking system.

At the beginning of 1993, the motorcycle business introduced a completely revised generation of BMW motorcycles with flat twin engines.

### **Group sales increased to more than 30 billion DM**

In 1992, the sales of the BMW Group increased by 4.7% to 31.2 billion DM. The sales of BMW AG rose by 8.2% to DM 26.5 billion.

As in the previous year, expenditure on materials accounted for about 57% of the Company's total value of production.

Group expenditure on wages, salaries, pension plans and social security contributions increased by 9.7% to DM 6.4 billion. Thus, the share of expenditure on personnel in the total value of production rose to 19.5%.

Depreciation again amounted to about DM 1.8 billion as a result of the level of investment that BMW already achieved several years ago.

### **Purchasing volume increased to more than DM 18 billion**

In 1992, BMW purchased materials, supplies, energy and capital goods worth more than DM 18 billion.

Stocks of raw materials and supplies, work in process and finished products for the car and motorcycle business were kept at low levels.

In 1992, world prices for the most important raw materials continued to decline as a result of the weak economies in the major industrial regions. The continuing metal exports from the Community of Independent States, large sales from the strategic reserve of the United States, and the rapid reduction of consumers' stocks all combined to increase the downward pressure on raw material prices. Some dropped to historic lows.

### **Level of investment still high, cash flow increased**

Investments continued on schedule. In 1992, they amounted to DM 2 billion and were, once again, financed completely from the cash flow. These funds, generated from internal financing, increased to DM 2.9 billion.

In the last five years, BMW has invested about DM 10 billion in the extension and modernization of production plants, manufacturing preparations for new cars and sub-assemblies, and the development of the sales organization.

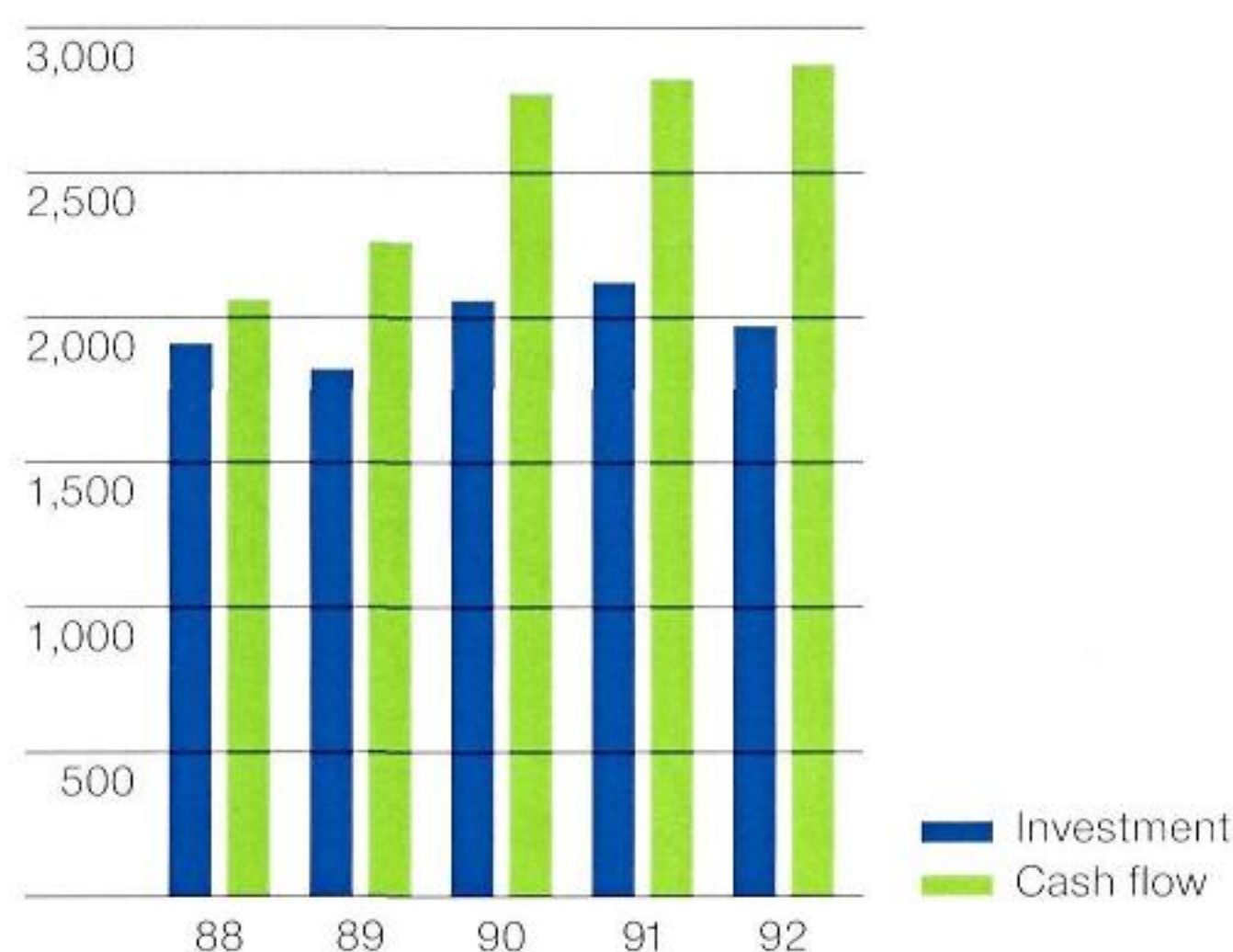
In the year under review, investments concentrated on the new federal states with the development of the BMW plant in Eisenach, sales outlets, and the establishment of a new plant for BMW Rolls-Royce GmbH in Dahlewitz near Berlin.

### **Fewer employees in the companies of the BMW Group**

73,562 people were employed in the companies of the BMW Group at the end of 1992; about 800 fewer than in the previous year. The workforce of BMW AG had decreased, at the end of the year, by almost 1,900 to 59,756, despite the fact that additional employees were required to increase output at the Regensburg plant and develop the sales outlets in northern and eastern Germany.

Agreements on early retirement were reached with a further 1,100 employees. These agreements will not come into effect until 1993, and later, owing to statutory provisions.





**Investment and Cash Flow  
of the BMW Group**  
in DM million

In the BMW Group, the decline in personnel was not as marked because the employees of softlab GmbH für Systementwicklung und EDV-Anwendung in Munich and BMW Sverige AB in Stockholm were included for the first time.

#### **Once again, proposed dividend of DM 12.50**

Despite the additional burdens due to the economic environment, the year's net income of DM 726 million almost achieved the previous year's high level.

The Board of Management and the Supervisory Board propose to the Annual General Meeting that the net income available for distribution, amounting to DM 226 million, be used to pay a dividend of DM 12.50 per ordinary share and DM 13.50 per preference share with a nominal value of DM 50 with entitlement to full dividend payment for the 1992 business year (DM 843.8 million in ordinary shares and DM 52.3 million in preference shares), and that a dividend of DM 6.75 per preference share with a nominal value of DM 50 be paid on the subscribed capital with entitlement to half the dividend payment for the 1992 business year (DM 2.8 million in new employees' preference shares).

#### **Standards set with progressive technology**

BMW cars and motorcycles stand for progressive technology and individual design. They also offer a maximum of safety. The technologies used by BMW to reduce environmental impact set new standards.

In production, BMW uses methods and materials with a minimal impact on the environment. With initiatives to develop transfrontier recycling structures that apply to different industries, the Company also provides for the reprocessing of scrapped cars. In addition, BMW uses logistics concepts to ease the burden of traffic and the Company is committed to cooperative traffic systems.

#### **Research and Engineering Centre extended**

The further development of the Research and Engineering Centre in Munich continued on schedule. The office building of the fourth phase of construction was completed in the year under review.

Meanwhile, more than 5,000 engineers, technicians and employees from very different fields work on the development of new products at the BMW Research and Engineering Centre. The preliminary work for another computer centre is well advanced. It will further accelerate the flow of information from mid-1993.

Largely independent development units at subsidiaries and associated companies complement the central divisions at the Research and Engineering Centre. In 1992 expenditure on research and development again increased in the entire Company.





The Convertible of the new BMW 3 Series.





5, 7 and 8 Series cars with 8-cylinder engines in front of the Research and Engineering Centre in Munich.

### New car plant in the United States

With the decision to build a new car plant at Spartanburg in South Carolina, BMW has taken a particularly important step towards safeguarding, in the long term, the Company's success on the North American market. With this investment, the Company will be firmly anchored in the economy of the United States and, at the same time, will be more independent of the cost structures prevailing in Central Europe.

On September 30th 1992 the first sod was turned. From 1995, the new plant will produce up to 400 BMW cars a day. These will be both for the North American and other world markets.

### Development in the 1st quarter of 1993

In the first few months of 1993, business was influenced by the marked deterioration of the economic climate. The high value of the D-mark, combined with very weak demand in Europe and in Germany in particular, affected output, sales and revenue at BMW. Nevertheless, BMW was affected less severely than the car industry as a whole.

### Outlook

In the industrial nations, the economy is expected to recover only gradually during 1993. The United States will play the leading role. However, if the value of the dollar remains low, other countries will not benefit, until later, from an upturn in the United States.

In Germany, the entire economy will continue to feel the strain of the restructuring process in the new federal states. Tax rates have recently reached new heights, adversely affecting in particular sales of consumer durables. This will also affect the development of the car industry.

In 1993, worldwide demand for cars is not generally expected to reach the previous year's level. Recovery in the United States will contrast with weaker demand in Japan and Europe, and in the German market in particular.

Since the order backlogs of the German car industry have already decreased substantially and demand is weak, business is expected to decline in the first half of 1993. After years of steady growth, BMW is also prepared for a lower level of sales in 1993.

The entire Company is so flexibly structured, it is poised to take advantage of market opportunities. Furthermore, BMW currently has the widest and most attractive range of cars and motorcycles in its history.

BMW's good position among its international competitors is the joint achievement of its employees, dealers and business partners throughout the world. BMW would like to express its thanks for such invaluable cooperation.



### January

1992 began with the introduction, on the world markets, of the new 3 Series coupés. About 100,000 of these cars were produced by year's end.

BMW Motorsport GmbH presented the M5 with a more powerful engine.

Visitors to the Greater Los Angeles Auto Show '92 were the first to see the BMW E2, a study of an electric-powered car, designed specifically for American traffic conditions.

25 years ago, BMW AG took over the plants of Hans Glas GmbH in Landshut and Dingolfing. Since then, the workforce of both plants has grown from some 3,500 to 20,000 employees. Today, instead of the Goggomobil, the plants produce some 200,000 BMW cars a year, as well as parts and components.

### February

The components plant at the BMW group of plants in Dingolfing was named "Factory of the Year" by the journal "Automobil-Produktion". It was the first time this award was presented to a German plant.

### March

The new models of the 7 Series with 8-cylinder engines were presented at the Salon International de l'Automobile in Geneva. 5 and 8 Series cars will also be available with these engines at a later date.

After only twelve months of construction the BMW plant in Eisenach began to produce large pressing tools.

At CeBIT '92, Axicon presented its range of products for mobile telecommunications in the D network.

### April

BMW helped to sponsor the 3rd Munich Biennale, an International Festival of New Music Theatre. At this festival BMW awarded music theatre prizes worth a total of DM 100,000.

The 3 Series saloon received the prestigious Car Design Award which is presented each year by the region of Piedmont and the city of Turin.

BMW South Africa developed a sales organization for BMW products in other African countries.

### May

The commercial paper programme of BMW AG was increased to 1.5 billion DM. The papers were given a maximum rating by Standard & Poor's.

BMW Motorsport GmbH celebrated its 20th anniversary.

### June

BMW announced the construction of an automobile plant near Spartanburg, South Carolina, in the United States.

Shortly afterwards, the contract of settlement was signed in the presence of US President George Bush.

For the first time, twelve BMW Art Cars were exhibited together at "documenta IX" in Kassel.

The motorcycle business agreed with manufacturers from Italy and Austria to develop and construct a 1-cylinder BMW motorcycle.

### July

With the BMW Mobil-Card, employees in Munich can use all local public transport at reduced fares.

The 850CSi coupé was introduced, fitted with a revised 12-cylinder engine. This is a more sporting version of the existing 850Ci.

### August

Twenty years after their opening, the BMW headquarters (the "four-cylinder") and the BMW Museum, in the north of Munich, still attract visitors from all over the world. In 1992, they totalled around 250,000.

### September

From the new model year, beginning with Germany, all BMW cars were fitted with an airbag for the driver; 7 and 8 Series cars were also fitted with an airbag for the front passenger.

BMW Rolls-Royce received its first large order for the new BR700 aero engine family.

A newly-developed 2-cylinder flat twin engine had its world premiere at the International Bicycle and Motorcycle Show in Cologne. It will be fitted in the new generation of BMW motorcycles from the beginning of 1993.

In the United States, BMW received the Best Recycling Innovation Award for the high proportion of recyclable materials used in the 3 Series car.

### October

The two-millionth engine came off the assembly lines in the tenth year of the BMW engine plant at Steyr, Austria.

In Japan, the 3 Series coupé received the Good Design Award.

### November

The new M3 was the first series-produced car to be fitted with an engine with infinitely variable control of the inlet camshaft.

### December

At the end of the year, the organizational unit responsible for buildings and plant at BMW AG was turned into a subsidiary, the Betek Bau- und Energietechnik GmbH.

In 1992, BMW was the marque in greatest demand in the top segment of the world automobile market.



The cash flow rose to DM 2.9 billion, covering 146% of investments. The Group still has extremely sound balance sheet ratios. Net income of DM 726 million for the year shows the Company's earning power in a difficult economic environment. Greater use was made of the international financial markets.

#### Scope of business rose further

In 1992, sales of the BMW Group rose to DM 31.2 billion, 4.7% more than in the previous year. These figures include sales from the leasing business which increased by 21.3% to DM 2.9 billion. The growth of sales revenue worldwide was not as strong as the increase in unit sales, mainly because of shifts in the model mix and losses in the value of major trading currencies.

The total value of production increased by 6.8%, and thus more strongly than sales. This was due to the growth in the leasing business which led to a corresponding increase in inventories of leased products.

Expenditure on materials accounted for about 57% of the total value of production, as in the previous year.

Expenditure on personnel rose by 9.7%; more than the increase in the total value of production. This growth was due primarily to the inclusion, for the first time, of expenditure on personnel for the workforce of softlab GmbH für Systementwicklung und EDV-Anwendung and BMW Sverige AB, rises in collectively agreed wages, and measures to streamline the personnel structure.

Depreciation of DM 1.8 billion remained at the high level of the previous year.

Interest income rose by 16.8% as a result of higher liquidity and the increase in customer and dealer financing.

Expenditure on interest from the financing of the leasing business increased because of the higher level of refinancing due to the increased number of leased products. Account is taken of the corresponding interest income in the leasing instalments shown in the sales.

Despite the difficult economic environment, the Group's net income of DM 726 million for the year almost achieved the previous year's high level.

#### Balance sheet structure still sound

The balance sheet total of the BMW Group grew by 8.3% to DM 27.5 billion. Growth is due primarily to the increase in sales financing.

The main items of sales financing are shown separately in the financial statements. Assets from sales financing, amounting to DM 9.8 billion, are balanced by liabilities from sales financing, amounting to DM 8.5 billion. Sales financing accounts for a 35.5% share of the Group's total assets. The assets of industrial business amount to DM 17.7 billion, corresponding to 64.5% of the group balance sheet total.

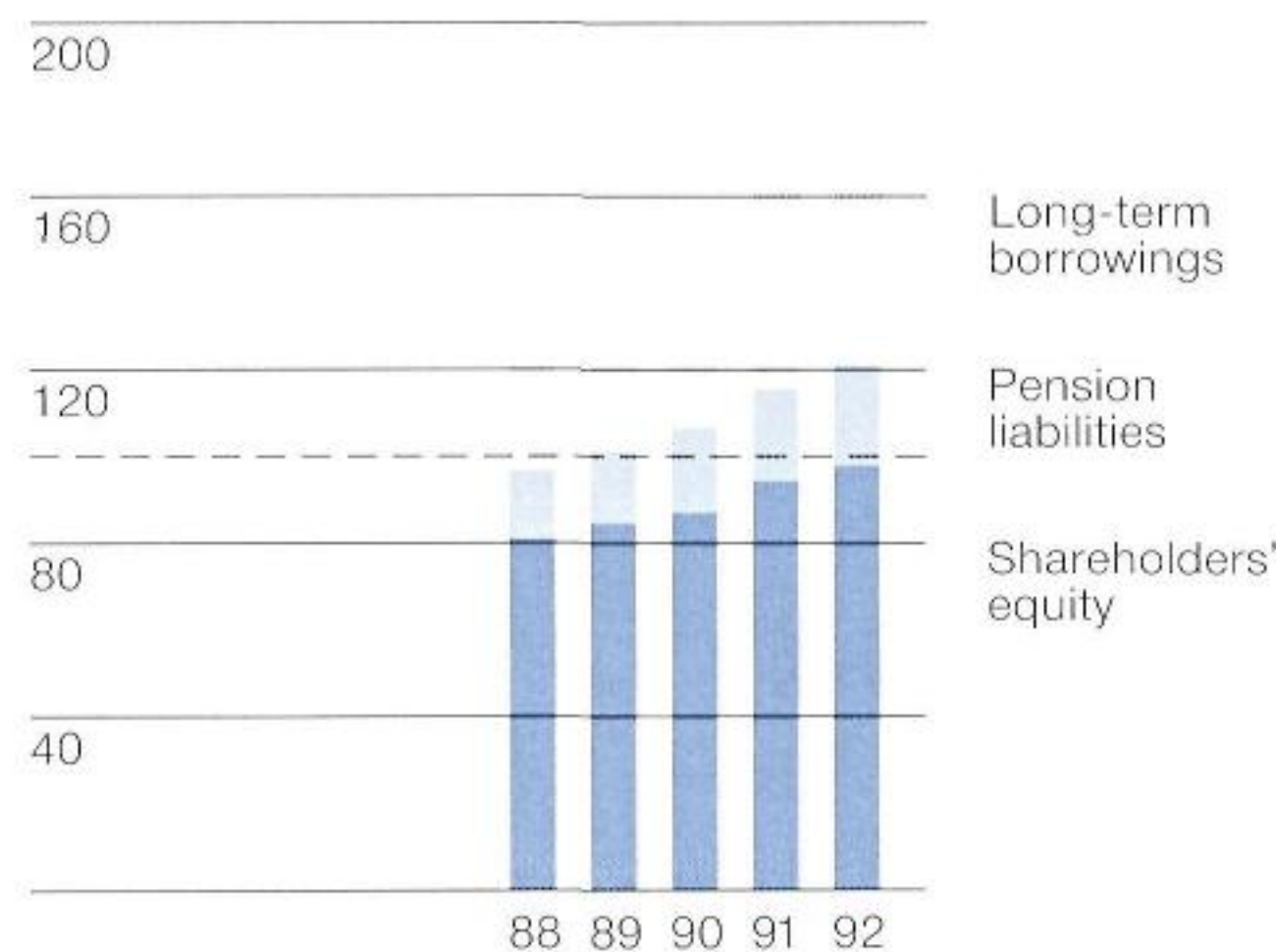
If shareholders' equity is assigned to these group activities, own funds cover about 31% of industrial business and 13% of sales financing.

The Group's inventories increased by 4.7%. Their share of the Group's balance sheet total decreased to 11.4%; the lowest in the automobile industry.

Liquid funds rose to DM 4.6 billion, corresponding to a 16.7% share of the balance sheet total. More than half of these funds are invested in fixed-interest securities.

The subscribed capital and capital reserve increased with the issue of new preference shares to employees by DM 24 million, and the profit reserves by DM 307 million. This increase was mainly the result of transfers from the year's net income, reduced by the offsetting of goodwill and currency differences arising from the conversion of items in financial statements prepared in foreign currencies.





**Ratio of Shareholders' Equity to Fixed Assets of the BMW Group**  
in %

DM 1.6 billion of the shareholders' equity comes from capital contributions, DM 5.1 billion was earned in the Group. Shareholders' equity covers 98.3% of fixed assets. Shareholders' equity and long-term borrowings cover 195.9% of fixed assets. They also cover inventories, trade receivables and other receivables and miscellaneous assets.

Provisions increased by DM 468 million, amounting to DM 7.3 billion. Sales financing accounts for DM 8.5 billion and industrial business for about DM 4.9 billion of the liabilities.

#### Cash flow increased further

As in previous years, the cash flow of DM 2.9 billion, generated in the business year, financed completely investment in fixed and financial assets.

#### Group Statement of Sources and Application of Funds

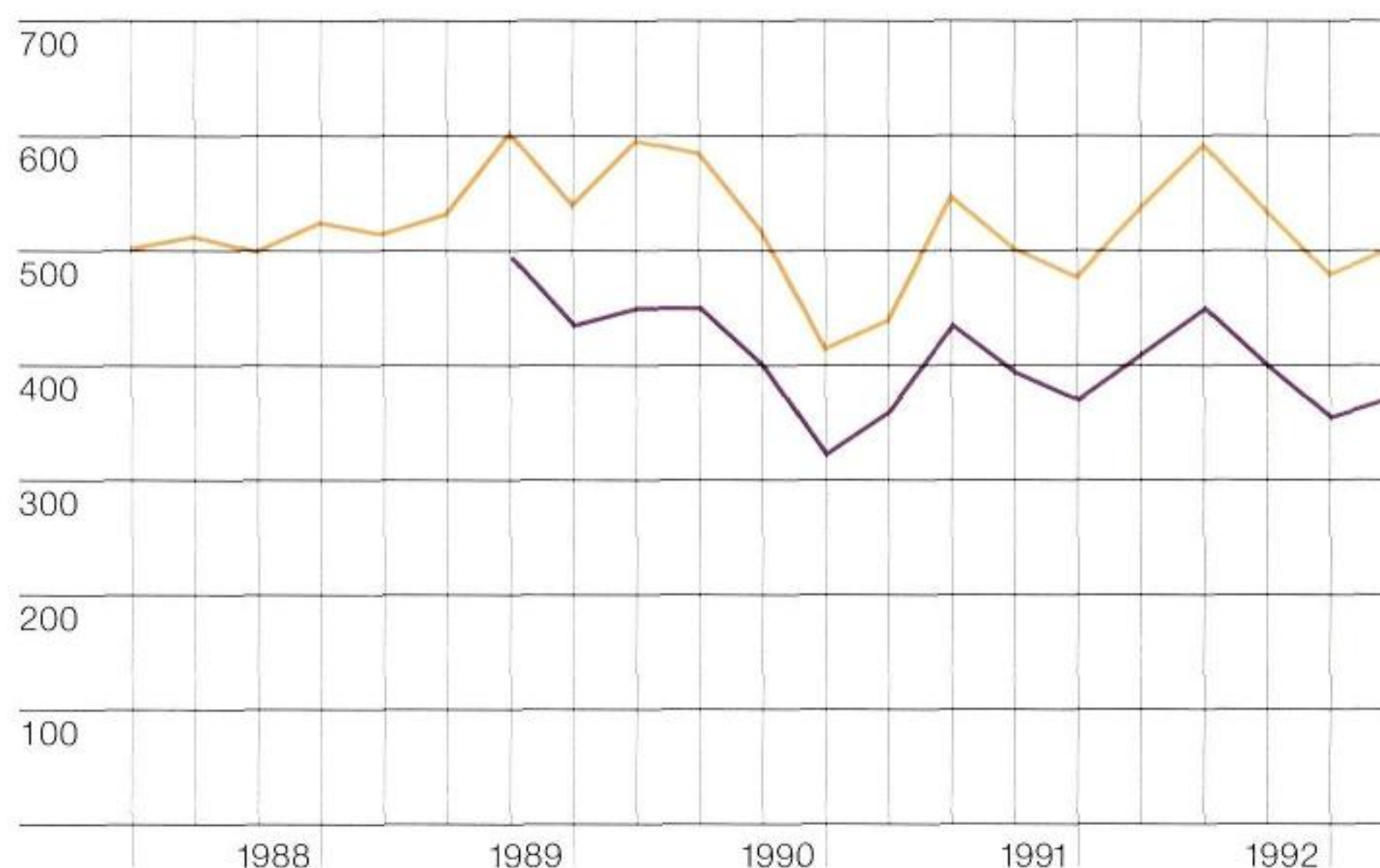
in DM million

1992

Year's net income	726
Depreciation and retirement of intangible assets and tangible fixed assets	+ 1,875
Increase in old age pension provisions	+ 279
<b>Internally generated financing (cash flow)</b>	<b>+ 2,880</b>
Increase in capital contributions	+ 24
Increase in liabilities from sales financing	+ 929
Decrease in bank dues	- 238
Increase in other liabilities	+ 80
<b>External financing</b>	<b>+ 795</b>
Additions to intangible assets and tangible fixed assets	- 1,975
Decrease in financial assets	+ 14
Increase in assets from sales financing	- 1,687
Increase in inventories	- 142
Increase in trade receivables	- 72
Change in other balance sheet items	+ 403
<b>Application of funds</b>	<b>- 3,459</b>
<b>Change in liquidity</b>	<b>+ 216</b>

Development of liquidity	31.12.1992	31.12.1991	Change
Marketable securities and notes	2,408	2,293	+ 115
Liquid funds	2,187	2,086	+ 101
	<b>4,595</b>	<b>4,379</b>	<b>+ 216</b>





#### Performance of the BMW Share

Quarterly average in DM

— Ordinary share  
— Preference share

#### Group financing in a changed economic environment

In 1992, the different currency and interest rate trends on the world's financial markets largely determined the Company's financial operations. Major European currencies were revalued or left the European Monetary System. The Bundesbank's high-interest policy, intended to check domestic inflation, also resulted in high interest levels for Germany's European partners.

In the United States, initial hopes of a broad upturn have not materialized. The exchange rate of the US dollar, and short- and long-term interest rates reached new lows. In Japan, the far-reaching structural crisis in the entire financial system was also evident from further substantial losses in share prices on the stock exchange. The Bank of Japan cut interest rates several times in order to stimulate the persistently weak level of economic activity.

Even in this more difficult economic situation, BMW was able, in 1992, to make use of the international financial markets to finance the BMW Group at comparatively favourable conditions.

In Germany, the market for short-term commercial papers, first opened in 1991, developed into an attractive source of financing for medium-sized and large companies. BMW made use of this market. In spring 1992, the commercial paper programme of BMW AG was increased by DM 1 billion to DM 1.5 billion.

More BMW long-term bonds were launched on the Euromarket in the year under review. Thus, BMW Australia Finance Ltd., Melbourne, issued a five-year bond for 100 million Australian dollars on the European market.

BMW Finance N.V., The Hague, followed in June with a seven-year bond for 150 billion Italian lire and in December with an eight-year bond for 150 million Swiss francs. The funds raised serve primarily to refinance the leased products and receivables from sales financing.

Long-term management of interest and currency exposure reduced the influence of short-term upheavals on the earnings of the BMW Group.

Liquid funds again remained high during the year under review.

Financial instruments were used increasingly to hedge currency and interest rate risks. Thus, for example, the high interest rates for the investment of liquid funds in 1992 were fixed with long maturities in the year under review. When raising capital, the low interest rates for currencies, such as the US dollar, were established on a long-term basis.





Share of BMW AG with a nominal value of DM 50.

### BMW share influenced by market trends

In the first few months of the year, share prices rose because of the high expectations of economic growth in the industrial nations. By mid-year, the DAX (German share index) had recorded an increase of about 15%.

In the first half of the year, the BMW ordinary share rose from DM 480 to the year's high of DM 615. During this period, the BMW preference share increased in value from DM 366 to DM 465. When the economy did not perform as expected, share prices dropped on the stock exchanges. BMW shares were also affected.

In October, BMW shares fell to their year's low of DM 447 for the ordinary share and DM 336 for the preference share. Activity on the stock exchange revived when the Bundesbank lowered the key lending rates in September. In the last few months of the year, the share prices rose again to the level recorded at the beginning of the year.

### Attractive dividend

In addition to the cash dividend proposed by the Board of Management and the Supervisory Board, amounting to 12.50 DM (25%) for ordinary shares and 13.50 DM (27%) for preference shares, shareholders subject to German taxes are entitled to receive 9/16 of the cash dividend as corporation tax credit. Thus, for shareholders resident in Germany the dividend on ordinary shares increases to 19.53 DM and on preference shares to 21.09 DM; each for shares with a nominal value of 50 DM.

BMW Shares	1988	1989	1990	1991	1992
<b>Ordinary share</b>					
Number of shares in thousands	15,000	15,000	15,000	16,875	16,875
Stock exchange quotation in DM					
Year end	524	563	387	473	466
High	553	639	658	592	615
Low	440	485	377	359	447
<b>Preference share<sup>1)</sup></b>					
Number of shares in thousands	—	812	874	1047	1103
Stock exchange quotation in DM					
Year end	—	457	325	370	342
High	—	512	485	463	465
Low	—	398	290	300	336
<b>Key data per share in DM</b>					
Dividend					
Ordinary share	12.50	12.50	12.50	12.50	12.50
Preference share <sup>2)</sup>	—	13.50	13.50	13.50	13.50
Tax credit for shareholders resident in Germany					
Ordinary share	7.03	7.03	7.03	7.03	7.03
Preference share <sup>2)</sup>	—	7.59	7.59	7.59	7.59
Year's net income <sup>3)</sup>	26.96	32.20	39.04	43.77	40.45
Cash flow <sup>3)</sup>	122	131	156	158	160
Shareholders' equity <sup>3) 4)</sup>	281	299	318	345	362

1) First issue: 1989

2) In year of issue: dividend and tax credit half each

3) In terms of average number of shares outstanding (average value of respective and previous year), 1988 – 1990 values adjusted due to capital adjustment in a ratio of 8 to 1

4) Excluding net income available for distribution



The equipment in BMW automobiles and motorcycles draws on the latest technological and scientific findings for the greatest possible benefit of the customer. Thus, the Company has contributed decisively to the introduction of progressive technology in vehicle construction. The new models, engines, equipment and fittings continue to set new standards.

#### **The new 3 Series Convertible upholds a tradition**

A four-seat Convertible with typical BMW contours was developed on the basis of the 3 Series coupé. With this Convertible, the Company is building on the success of the previous model, the introduction of which in 1986 led to a renaissance for convertibles. The new model will be delivered to dealers from spring 1993.

All the elements of the BMW safety concept were applied in the new car. These include, as standard, an airbag for the driver, an anti-lock braking system, belt tensioners and side impact protection. The stability of the bodywork was improved, compared with the previous model, and the frame of the windscreen was specially reinforced.

The new Convertibles surpass even the strictest safety standards in BMW's export markets.

The car is available with an additional safety roll bar, as an option. This comprises two bars, concealed behind the rear head rests, which spring up automatically in certain accident situations.

The new Convertible has the renowned safe and balanced chassis of the 3 Series saloon. A hard top made of aluminium, painted the same colour as the car, is available as an optional fitting.

#### **New technology for 6-cylinder engines, premiere in the M3**

The 6-cylinder 2.0- and 2.5-litre petrol-driven engines were thoroughly revised in the year under review. As a result, the flexibility of the engines was improved. This is particularly important in routine driving. More than 85% of the maximum torque is now available in the broad speed range between 2,500 and 6,300 rpm.

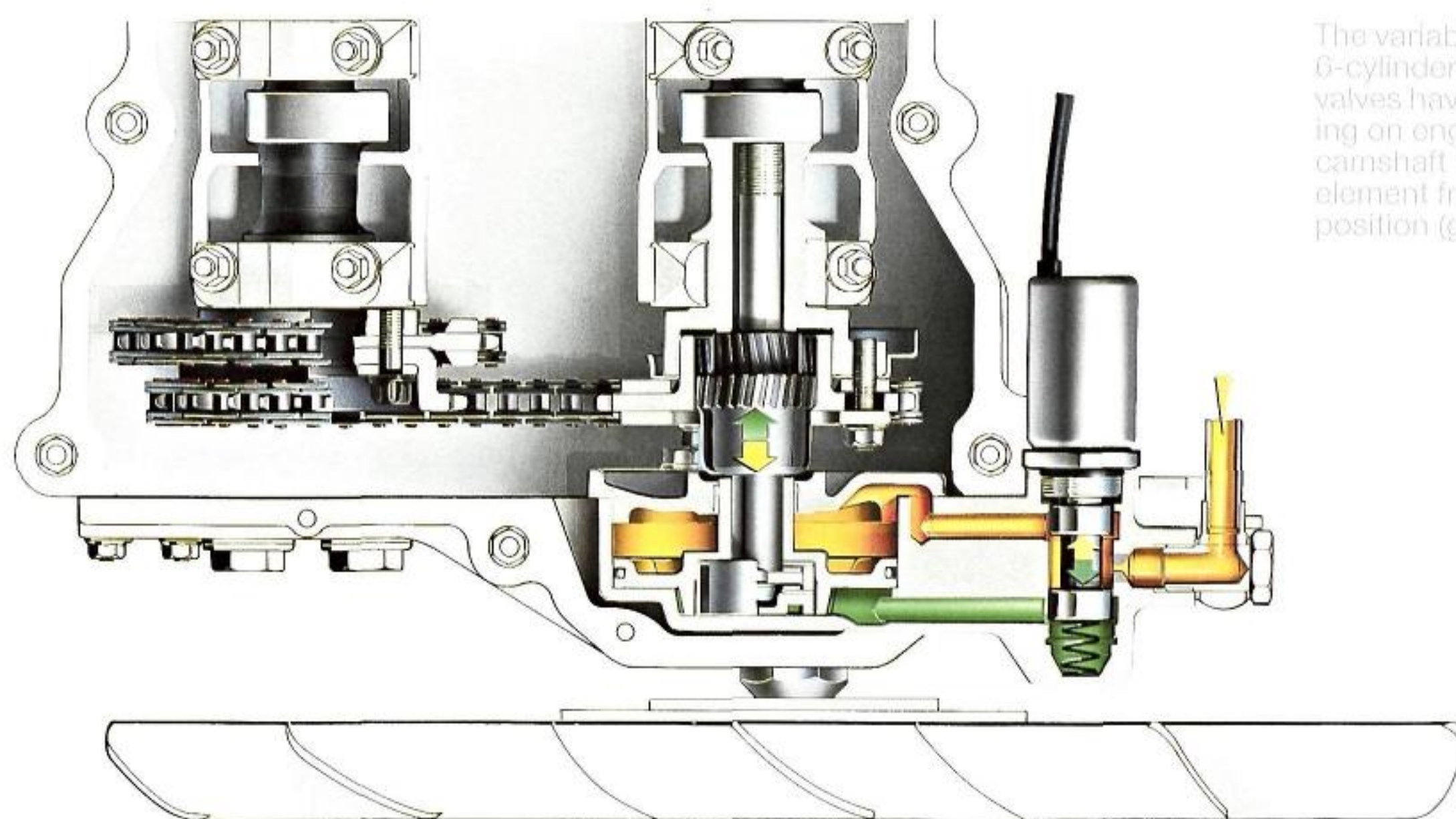
Average fuel consumption according to DIN (German standard) improved by 7%, and pollutants in exhaust emissions were reduced. As with the new 8-cylinder engines, the revised 6-cylinder engines also can run on low-quality unleaded petrol.

This progress was achieved primarily with newly-developed valve control. The inlet and outlet valve timing varies according to engine speed and power. In addition, numerous components and control systems were optimized. For example, lighter connecting rods, pistons and valve mechanisms reduce unwanted inertial force and friction losses in the engines. Digital Motor Electronics were given new functions, such as anti-knock control for the individual cylinders. This ensures the best possible engine performance under all conditions and loads.

The 3-litre, 6-cylinder engine of the new BMW M3 was the world's first series-produced engine to be fitted with an infinitely variable camshaft to control the opening times of the inlet valves. This system's efficiency and precision enable the engine to achieve specific performance and torque values hitherto unknown in induction engines in series-produced cars.

With a top power of 210 kW (286 bhp) and a maximum torque of





The variable camshaft timing of the BMW 6-cylinder engines. The inlet and outlet valves have variable opening times depending on engine speed and power. The inlet camshaft is turned by a hydraulic control element from the basic (yellow) to early position (green).

320 Nm (232 ft lbs), the M3 has the power of a sports car. Nevertheless, it is still comfortable and easy to drive in normal road conditions.

With a good nine litres per 100 km (31.4 mpg), average fuel consumption (according to DIN) of the new M3 is that of a normal medium-sized car. Exhaust emissions are far lower than the currently permitted maximum values.

#### **New drive and dynamics systems for greater safety and comfort**

The 5 and 7 Series cars with a 4-litre, 8-cylinder engine, were fitted with a newly-developed five-gear automatic transmission from autumn 1992. Its electronic and hydraulic control undoubtedly makes it the most efficient automatic transmission currently available for series-produced cars.

The engine power can be optimally used due to five gear speeds, a choice of four shift programmes and an electronically controlled clutch to reduce slip losses. Handling is better, fuel consumption is more economical and exhaust emissions and noise levels are lower than with normal units. The new transmission systems also offer gear-shift comfort and extensive diagnostic and safety functions.

For the top models, the 750i and 850Ci, BMW offers an automatic transmission with completely new possibilities of active driver support. This system takes account of individual driving styles, specific road situations, and environmental conditions. For example, when driving downhill, in city traffic, or with a trailer, the best transmission programmes are selected automatically. Thus, user comfort, economic efficiency and driving safety were all improved.

Dynamic Stability Control (DSC) is another completely new system to improve driving safety, available at present only in the 850CSi. In addition to the previously used systems to stabilize longitudinal movements, DSC provides additional safety reserves under side forces. As a result, even under hard cornering, the car remains absolutely stable due to automatic engine power control.

#### **The new BMW motorcycles with flat twin engines: Modern technology for a classic concept**

At the end of 1992, after seventy years of steady development, BMW produced a new generation of motorcycles with flat twin engines. The characteristic design with flat twin engine, opposed cylinders and shaft drive was maintained because of its technical advantages. It represents BMW's special tradition in motorcycle construction.

The new 2-cylinder flat twin engines, with 1,110 cc and 4-valve technology, have an output of 66 kW (90 bhp) at 7,250 rpm, and a maximum torque of 95 Nm (69 ft lbs) at 5,500 rpm. As in previous models, the cylinders are air-cooled. The valves are actuated by a newly-developed valve gear.

Electronic control ensures optimum engine operation. This is essential for the installation of a controlled three-way catalytic converter. The new drive-train is very smooth due to lighter pistons and extremely precise piston rods of sintered metal. It meets all the currently foreseeable requirements concerning exhaust emissions and noise levels.

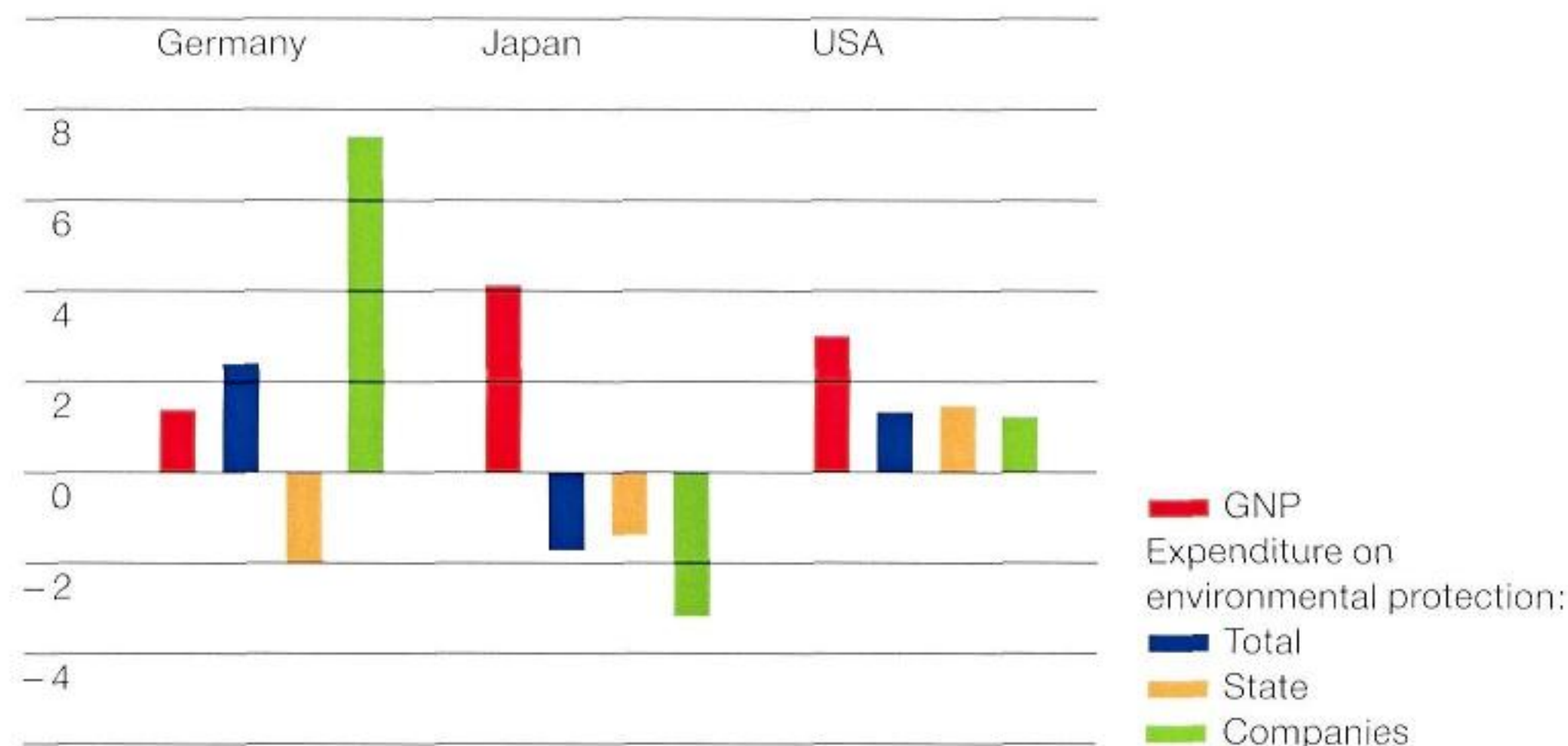
With the newly-developed front wheel suspension, the BMW Telelever, the telescopic fork serves only to guide the wheel and steer. A central

spring strut provides suspension and damping. With this construction, the motorcycle does not suffer extreme front-wheel dip under braking. High longitudinal rigidity is also achieved. This provides ideal conditions for the new anti-lock braking system, known as ABS II in German. Thus, once again, BMW sets new standards for motorcycling safety.

Another innovation is the individual adjustment of bench, handlebar and windshield to suit the driver's size and riding style. The potential for recycling scrapped motorcycles was improved by limiting the number of plastics used to a few coded types. BMW dispensed entirely with chlorofluorocarbons (CFCs) and heavy metals.

The new models combine reliability and easy maintenance, so typical of BMW motorcycles with flat twin engines, with a high degree of riding safety and technologies offering low environmental impact. Their performance and dynamic appearance have aroused great interest among BMW dealers and in the international motorcycle press.





#### Gross National Product and Expenditure on Environmental Protection 1980 - 1990

Average annual change in %

#### Development of the BR700 family of aero engines progressed on schedule

The aims set for 1992 for the development of the BR700 family of engines were fully achieved. This was largely due to the excellent cooperation of the British and German development engineers in Bristol, Derby, Munich and Oberursel. The aerodynamic design of the high-pressure compressor and high-pressure turbine was completed, and the first test components made.

Different versions, developing between 10,000 and 22,000 pounds thrust, can be derived from the basic engine. First tests of the combustion chamber were successful. Testing of the basic engine is scheduled for summer 1993.

Development focuses on economical fuel consumption and low levels of exhaust emissions and noise. The levels are already far lower than those currently permitted or expected in the future – by as much as 45% in the case of nitrogen monoxide.

#### Involvement in German and international research projects

BMW engineers are working on forward-looking solutions to problems of traffic and motor vehicle technology in the European research projects PROMETHEUS and DRIVE, in research cooperation projects of the German and European automobile industry, the Research Association for Automobile Technology and the Joint Research Committee.

Highly efficient and safe traffic technologies are being developed within the framework of PROMETHEUS. These are complemented primarily by infrastructure-supported systems which are being elaborated in the DRIVE project and are being tested extensively in the field.

The first results of the pilot tests are already available. BMW is working with the suppliers of the communications industry on the development, for series production, of new car radios and navigational equipment for installation in BMW cars from the mid-1990s.

In Germany, BMW is one of the participants in a large-scale test with electric-powered cars on the Baltic island of Rügen.

By making knowledge available, BMW helps to create the technical and organizational bases for future traffic systems. As a result, the Company receives additional indications for future developments.

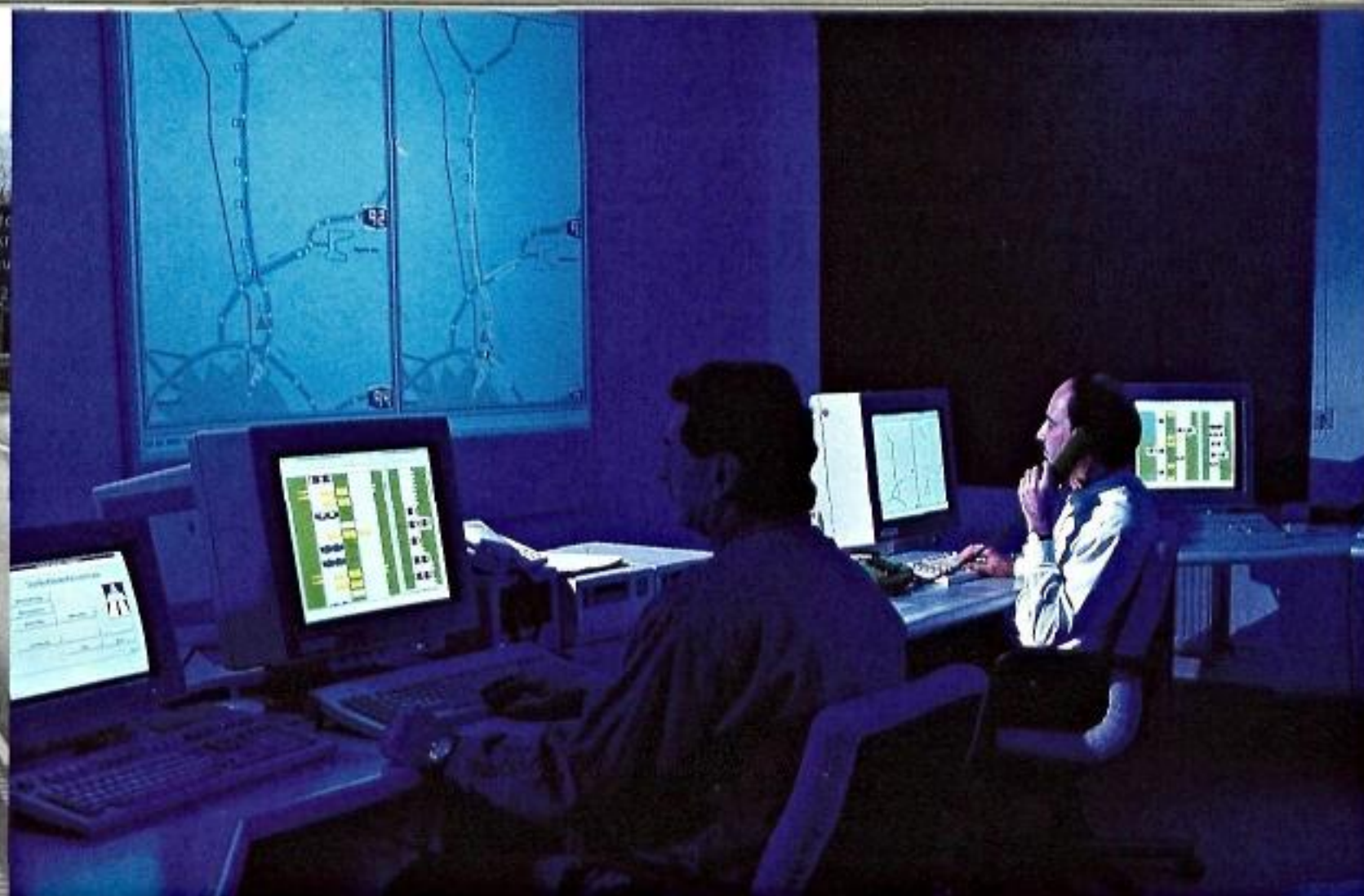
Special attention is paid to the development of materials and production technologies with which future cars can be made, and which will offer greater economy and less environmental impact. Composite fibre materials, sintered metals and structures of aluminium, as well as new production technologies, such as welding with lasers, are just a few of the possibilities.

In the field of propulsion technology, BMW concentrates primarily on the improvement of both petrol- and diesel-powered engines. Intensive research is also being carried out on other concepts for engines and alternative drive systems. Progressive technologies, such as electric- and hydrogen-powered propulsion, are being developed in long-term projects.





Since spring 1992, the flow of traffic on the A9 motorway to the north of Munich is recorded automatically and steadied by overhead signs.



The new traffic guidance centre monitors what is happening on the roads and switches on warning signs and recommended detours, when necessary.

Research is also being carried out on absorption cooling techniques for air-conditioning systems. These use little energy and work with coolants that do not affect the climate. Such research is therefore in the interest of environmental protection. Traffic safety is also being advanced by the development of new lighting technologies.

In addition, BMW is involved in research programmes to develop efficient work structures and optimize processing sequences. These include the processing of digital data in CAD systems and the improvement of logistical and development operations. This work is of special relevance to cooperation between car manufacturers and suppliers.

#### **Traffic guidance systems in field test**

In spring 1992 the first stage of the Cooperative Traffic System, initiated by BMW for the north of Munich, went into operation. Since then, a traffic guidance system has steadied the flow of traffic on the A9 motorway outside Munich, guiding drivers to routes with less traffic, when and if necessary.

The number of accidents decreased by one-quarter despite the growing volume of traffic. The length and duration of the traffic hold-ups was also greatly reduced. More installations of this kind are planned for the west and south of Munich.

The concept is complemented by COMPANION, a warning and information system developed by BMW. Drivers are warned by the light signals of new roadside beacons of traffic hold-ups, roadworks, fog, ice and similar hazards ahead. In a further stage of development, data will be exchanged between cars and roadside communications systems. This could perma-

nently improve safety on some 20,000 kilometres of European roads with high traffic density. At the end of 1992, the decision was made to build a demonstration system on a section of motorway to the north of Munich.

BMW had already presented the "Blue Zone" for Munich at the end of 1991. This aimed to increase the efficiency and reduce the environmental impact of traffic in inner cities. The individual components of the system were improved in the year under review, and examined to see if they were suitable for application to other cities of similar structure. The public greatly approved of the concept. However, local authorities must first create the administrative conditions for its practical application.

#### **Establishment of a recycling network for scrapped cars in Germany**

Since 1991 scrapped BMW cars have been dismantled by independent recycling firms and the components and materials then reprocessed or re-used at suppliers, in other sectors of industry, or at BMW. These firms are commissioned by BMW and work according to its specifications. The number of these firms increased in the year under review.

However, BMW's aim to establish a nationwide network of recycling plants is still being impeded, in Germany, by the lack of appropriate laws. The Regulations on Scrapped Cars announced by the Federal Ministry for the Environment for 1992, had only been drafted by August. The new regulations are expected to be market-oriented. BMW assumes that the residual value of a scrapped car will be freely negotiable between the car's last owner and the recycling firm. This would provide the incentive to sell

cars in as good a condition as possible for recycling.

#### **BMW recycling plants at home and abroad, cooperation with Renault**

In 1992, the first recycling plants for scrapped BMW cars were opened in Switzerland and Austria, France, Great Britain and the United States. The Company's initiative to develop recycling structures for the specific countries was honoured, in the United States, with the award of the National Recycling Coalition (NRC) for the Best Recycling Innovation of 1992.

In October, BMW and Renault agreed to cooperate closely in the field of car recycling. Cooperation includes the establishment of joint recycling structures and the reciprocal use of recycled materials. In addition, the two car manufacturers exchange experiences on the selection of materials and designs suitable for recycling.

The German manufacturers' concept for the comprehensive recycling of scrapped cars has been adopted meanwhile by the entire European automobile industry. BMW represents the German manufacturers in the "End of life vehicles" working group at the European Commission in Brussels. Its aim is to elaborate uniform European legislation on the recycling of vehicles by the mid-1990s.



In 1992, BMW plants worked more flexibly and economically. Quality levels continued to become more consistent. The introduction of organizational units increased productivity. The division of labour with suppliers became increasingly important in the development process. Progressive transport systems eased the burden of traffic on roads and environment.

**BMW car plants characterized by quality and efficiency**

In 1992, work sequences were improved at the BMW plants with the aim of increasing flexibility and economic efficiency. Despite the marked rise in output, new models and equipment, quality levels continued to achieve greater consistency. This was due to the high qualifications of the workforce and the use of new techniques. A total of 598,000 cars was produced; about 8% more than the previous year.

At the Munich plant a flexible system of working hours had been introduced in 1991; a four-day week for employees permitting more economical use of the plant. This system has proved highly successful. Nevertheless, demand for BMW cars was so high that additional shifts had to be worked. 3 Series cars are manufactured in Munich and Regensburg.

The Munich plant had to cope with preparations for producing the revised 6-cylinder engines, 8-cylinder engines, and the new high-performance engines for M3, M5 and 850CSi cars.

As part of its wide-ranging measures to protect the environment, BMW was the first car manufacturer to introduce a new technique for the re-use of paint residues in the filler spray lines.

The BMW plant in Dingolfing manufactures all models of the 5, 7 and 8 Series, the touring versions of the 3 Series, and parts and components for the other plants. This broad range of products makes particularly high demands on the flexibility of the production system.

The capacities of the BMW car plant in Regensburg were fully utilized for the first time in the year under review. The planned quantity of new

3 Series coupés was produced on schedule. The Wackersdorf plant, to the north of Regensburg, was converted for the production of the new 3 Series Convertible.

**Component-producing plants strengthened by the formation of organizational units**

Responsibility for results was decentralized and, consequently, productivity increased, due to the formation of organizational units. For example, the foundry and plastics production at the Landshut plant were reorganized into units with their own fields of responsibility. Major progress was also achieved in production technology.

The plastic suction units made at Landshut received the first prize of the Society of Plastic Engineers for 1992's most innovative plastic application. At the foundry, a sand preparation plant was set up for the re-use of more than 10,000 tons of core sand a year.

In 1992, the Landshut plant developed its position as supplier for BMW's car plants. It also concluded its first supply contracts with non-BMW firms.

At the BMW motorcycle plant in Berlin output increased by 6% to some 36,000 units due to special shift working and higher productivity. At the same time, the production of parts for the new 3 Series car rose markedly. Preparations were made for the production of the new generation of motorcycles with flat twin engines.

The engine plant at Steyr, Austria, and the plant for large tools at Eisenach, Thuringia, are run as group companies. The BMW company in South Africa operates its own car plant, supplying both the domestic market and other African countries.





Automated flows of materials, consignments without packaging in circulating containers, and express delivery, characterize

the supply systems in Europe. Substantial investments were required at the BMW Central Stock of Parts in Dingolfing.



### **Division of labour with suppliers extended**

Once again, the technical development of BMW cars and motorcycles resulted in the increased division of labour between the Company and its suppliers in the year under review. The Company concentrates primarily on those stages of development and production which determine the character of BMW products. The suppliers are assuming additional tasks in the development and planning of the components they manufacture.

BMW is interested in cooperation with more systems suppliers who assume total responsibility for complete systems. When choosing these suppliers, past products and services, capabilities in research and development and logistics are taken into account. Thus, the suppliers' share of the production ranges for BMW cars and motorcycles will continue to grow.

Suppliers can be involved, at a very early stage, in the development process because of the project-oriented working methods used at the BMW Research and Engineering Centre. Simultaneous engineering has also improved efficiency in development, design and production planning.

Computer programs were developed so that suppliers could analyse and develop functions and sequences at their own companies. Special BMW working groups also support them on the spot.

Business relations between BMW and its suppliers are based on stable, trusting cooperation with regular information on project contents, planning and decision-making processes.

### **Fourth International Suppliers' Symposium in the United States**

The fourth BMW Suppliers' Symposium was held in South Carolina at the beginning of November 1992. The participants, from the United States, Canada, Mexico, Brazil, and from Europe, showed great interest in the requirements and opportunities of cooperation with BMW.

BMW's purchasing volume in the countries of the future North American Free Trade Area (NAFTA) will greatly expand with supplies for the new plant in South Carolina and increased deliveries for production in Germany. BMW will take full advantage of the new industrial location by cooperating closely with suppliers in North America.

### **New transport systems ease the burden of traffic on roads and environment**

In 1992, BMW again developed, and introduced, trendsetting systems for freight transport. For years, most cars, motorcycles, parts and production materials have been transported long distances by rail. In close cooperation with suppliers and other manufacturers, the Company established more transport links, ensuring that rail wagons and containers do not make return journeys empty.

In 1991, BMW and Ford had already started the first shuttle train for cars in Europe. With the opening of the BMW dispatch centre in Munich to other manufacturers, BMW is making a major contribution to the increased use of rail transport for car deliveries.

In addition, new, more efficient and environment-friendly means of transport went into operation. For the first time, for example, BMW used closed double-deck wagons for transporting cars without the preservative wax coating. The all-car train service to Northern Italy was stepped up in 1992, relieving road traffic to the tune of 20 million ton kilometres (tkm) in the year under review.

In Europe, the cross-frontier supply of parts was optimized due to the new supraregional supply centres. The shift of parts consignments from road to rail, for long distances, reduced the burden of freight traffic on the road by 2 million tkm.

As part of the BMW programme to avoid packaging, containers for lorries and trains were equipped to carry Genuine BMW Parts and Accessories without packaging.



Rising labour costs are placing a strain on German industry's competitiveness. At BMW, 1992 was characterized by personnel adjustment and structural change. Company education and training, and programmes for young executives, were extended, new family-friendly arrangements were introduced.

**Personnel adjustment and structural change**

In 1992, the measures to increase productivity were continued throughout the Company. After hiring some 30,000 new employees in the ten previous years, 1992 saw the BMW workforce decline for the first time since 1974. Nevertheless, output and sales increased again.

At BMW AG, the number of employees decreased by 1,861 to 59,756 people. Normal job fluctuation and the end of limited contracts of employment contributed to this development. Agreements on early retirement were made with an increased number of older staff.

In addition to the decrease in the workforce, management and organizational structures were improved in the Company (see page 74). In some cases this had a major impact on the employees' working methods and environment. Their capabilities and sense of responsibility are encouraged more in the new production groups. In the production divisions, flexibility has increased and work quality improved.

The new work structures were prepared by comprehensive staff training, upgrading and further education, and the employment of new staff in previous years. Thus, the share of skilled workers in production has risen from about 40% to more than 50% within five years.

The above-average qualifications of the workforce are still the most important argument in favour of Germany as an industrial location.

**Company education and training schemes are becoming increasingly important**

In 1992, BMW spent more than DM 200 million on the training, upgrading and further education of its employees, and for the technical and sales training of employees of the dealer organization. Investment in employees' qualifications is just as important for the Company as investment in plant and machinery.

Once again, company training focussed on initial vocational training. At the end of 1992 some 2,800 young people were being trained in 27 different skills. Their number decreased slightly compared with the previous year because young people, born in Germany in years with low birthrates, are now reaching employable age.

Employees' upgrading schemes not only impart specialized knowledge but also involve the practice of new skills. These schemes paid special attention to quality, customer orientation and new work structures in the year under review.

Further education aims primarily at the development of employees' personalities. It takes place outside regular working hours.

As the working week becomes shorter, and employees increasingly have to develop their knowledge and skills, more company education and training will take place outside working hours.



Germany							
France							
Italy							
Great Britain							
Spain							
USA							
Japan							
	1,500	1,600	1,700	1,800	1,900	2,000	2,100

**Standard Yearly Working Time in the Metal-working Industry**  
(1991) in hours

### Programmes for young executives

With programmes to promote trainees and students from technical colleges and universities, BMW offers young people guidelines, at an early stage, for training and employment. Thus, the Company develops a valuable reservoir of potential future employees. In 1992, some 1,500 trainees gained their first work experience at BMW.

Although the economy is declining, the Company is looking for qualified applicants to enter initial vocational training, participate in further-reaching promotion programmes, and safeguard the workforce's high standard.

### Reorganization of the Company's proposal scheme proves successful

The scheme constantly to improve products and manufacturing processes was extended as new work structures were introduced. As a result, employees' experience can be put to better use and their creativity further developed.

Proposals for improvements outside an employee's particular field of work are collected, and acknowledged, by the Company's proposal scheme. Faster, decentralized evaluation of the proposals led to a far higher implementation rate. In future, employees and working groups will also be rewarded for improvements within their group's field of activity. This is known as the "action bonus".

### The impact of the collective agreements

On April 1st 1992, a new collective agreement came into force for the German metal industry for a term of 21 months. Wages and salaries were raised by 5.4%. From April 1st 1993 they will rise by a further 3%.

In addition, from April 1st 1993 the regular working week will be cut to 36 hours with full payment of wages and salaries. This collective agreement, made in 1990, results in a further 2.8% rise in labour costs. Therefore, for the full term of the agreement, wages and salaries will rise by an average of about 6%.

During the year under review it became increasingly obvious that the collective agreements of 1990 and 1992 were making excessive demands on large parts of German industry. Even before this, German labour costs were already higher than those of any other industrial nation. The decline of the German economy and the recent devaluations of major trading currencies against the D-mark have further checked the business prospects of German manufacturers. Further job cuts are therefore unavoidable.

### Balance between family and work

Various types of part-time work and the so-called "family-break" give BMW employees the opportunity to coordinate their family and working life.

BMW has introduced the Family Break Programme for parents wishing to devote more time to their children than the statutory period for parental leave, before returning to work at the Company. This break can last up to 10 years. During this period, employees are given the opportunity to keep their knowledge and skills up-to-date

through upgrading and holiday replacements. Thus, they are prepared for possible resumption of employment.

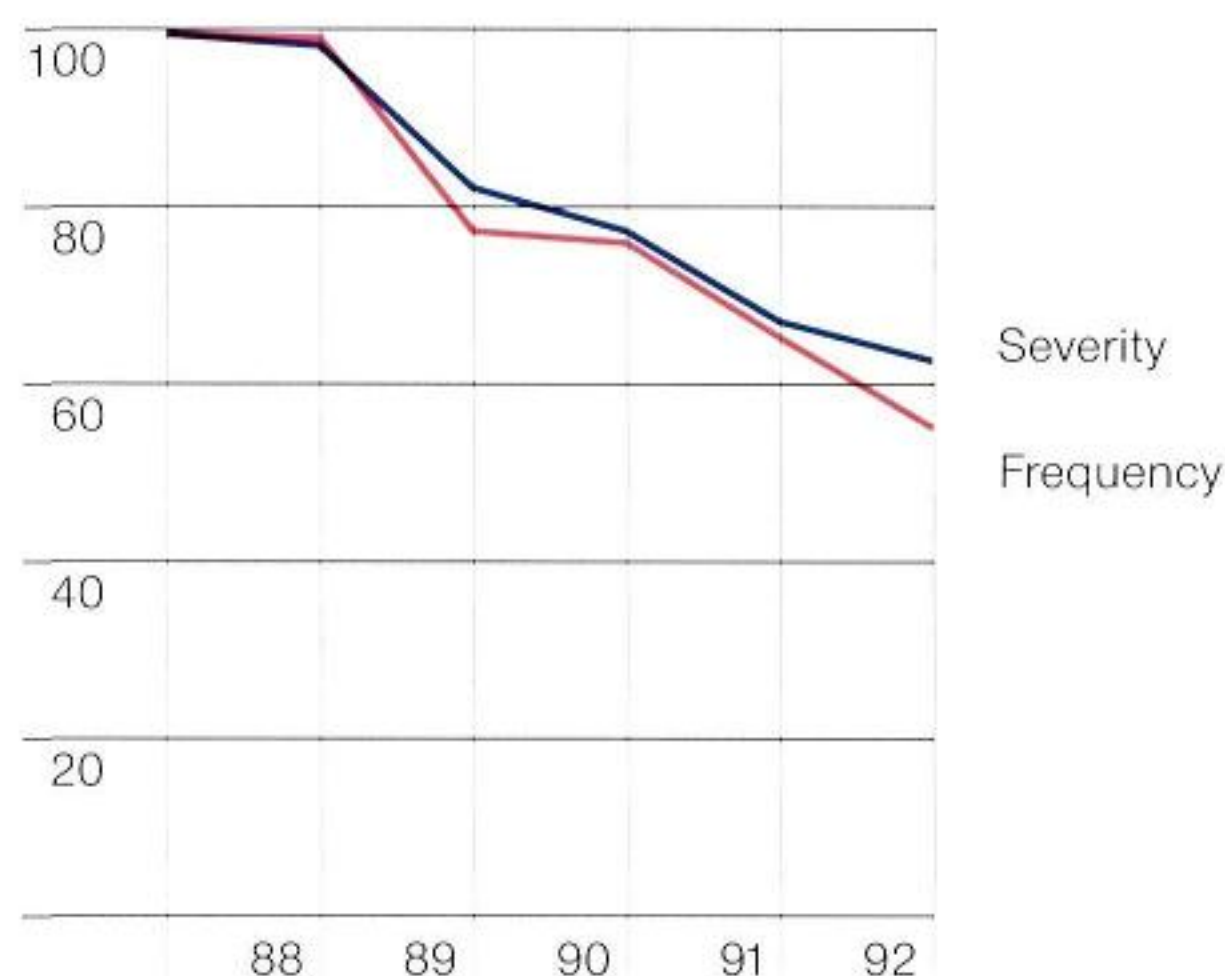
To provide additional help, the BMW Children's Office was set up in the year under review. It informs employees about child-care centres, and contacts suitable facilities and people. Other companies have now followed BMW's initiative.

From 1992, employees can take unpaid leave, once only, for up to twelve months to look after family members in need of care.

### BMW Mobil-Card well received

From mid-1992 BMW offered employees the BMW Mobil-Card. With this annual card, employees can use all Munich public transport to and from work, and during their free time, at reduced fares. So far, almost 5,000 employees have purchased a BMW Mobil-Card. It would be more widely used if local public transport had fewer drawbacks.





#### Accident Frequency and Severity at BMW Plants

Index: 1987 = 100

Workforce at End of Year	1992	1991
BMW Group	73,562	74,385
Foreign subsidiaries	10,008	9,580
Domestic subsidiaries	3,798	3,188
BMW AG	59,756	61,617
Head office and Munich plant	25,063	26,198
Dingolfing plant	17,281	18,718
Regensburg plant (incl. Wackersdorf plant)	7,393	7,317
Landshut plant	3,082	3,089
Motorcycle division (incl. parts manufacture)	2,069	2,115
BMW retail outlets	4,868	4,180

#### Absenteeism still declining

Industrial safety has improved substantially at all BMW plants in the last few years. This trend continued in 1992. It was achieved by a large number of individual measures and the increased involvement of employees in the organization of work sequences.

The sickness rate decreased compared with the previous year to 5.5%. This may be the lowest percentage in the German car industry, but it is still far higher than in other countries.

#### Advantages of a company health insurance scheme for employees

The decision of the Company and its employees to establish their own health insurance scheme enables members to enjoy economical, comprehensive health insurance. In contrast to the general development of contributions, the contribution rate to the BMW health insurance scheme largely remained stable. It was 10.2% at the beginning of 1993.

From 1994, revenue sharing will be introduced among the health insurance schemes as part of the latest reform of Germany's health system. Admittedly, this will place a burden on the economic efficiency of the BMW

health insurance scheme, but it will not impair the quality of the services offered.

#### Expenditure on personnel and additional benefits

Expenditure of the BMW Group on personnel was DM 6.4 billion in the year under review; that of BMW AG, DM 5.3 billion. The 5.4% rise in collectively-agreed wages and salaries in the Federal Republic of Germany, and expenditure and provisions for measures to streamline the structure of personnel, largely contributed to the increase of about DM 400 million at BMW AG.

Additional expenditure on personnel rose noticeably due to structural measures. It accounted for as much as 96% of basic expenditure on personnel, compared with 92% in the previous year.

In addition to monthly wages and salaries, employees received additional cash payments which go beyond the collectively-agreed amounts. These are linked to company profits or used for the financial savings plan. The payments for annual bonuses and financial savings plans amounted to almost DM 500 million in 1992.





Employees from different group companies present their training programmes for marketing, customer and parts services at the international BMW Trainer Forum. The

exchange of experiences contributes to a uniform and high level of knowledge in the BMW sales organization.

Employees also received collectively-agreed holiday pay totalling DM 204 million. As in previous years, for those employees who had worked at BMW for some time, these additional cash payments equalled more than two additional monthly salaries.

Company social benefits for 8,200 retired employees and surviving dependents amounted to about DM 36 million in 1992.

Property ownership was again encouraged by the extension of low-interest loans in the year under review. At the end of 1992, BMW was helping employees in the purchase of some 3,400 properties with loans totalling DM 63 million.

The individual establishment of financial savings at company level, offered by BMW since 1974, was continued in 1992. As in previous years, employees were able to purchase, on favourable conditions, up to three BMW non-voting preference shares. The capital approved for this by the 1989 Annual General Meeting amounted to a nominal DM 15 million, of which a total of 12.2 million was used by the end of 1992. Demand declined slightly because of the higher purchase price compared with the previous year. Some 19,300 employees took advantage of this offer to participate directly in the Company's profits.

#### Structure of Expenditure on Personnel of BMW AG

	1992 DM million	% <sup>1)</sup>	1991 DM million	% <sup>1)</sup>
<b>Basic expenditure on personnel</b>	<b>2,773</b>	<b>100</b>	<b>2,614</b>	<b>100</b>
<b>Additional expenditure on personnel</b>	<b>2,658</b>	<b>96</b>	<b>2,415</b>	<b>92</b>
<b>Paid time off</b>	<b>770</b>	<b>28</b>	<b>760</b>	<b>29</b>
Public holidays	127		149	
Holiday	429		398	
Sickness	135		133	
Other time off	79		80	
<b>Additional cash payments</b>	<b>928</b>	<b>34</b>	<b>732</b>	<b>28</b>
Annual bonuses	461		432	
Holiday pay	204		187	
Other direct payments	225		71	
Financial savings plan	38		42	
<b>Social expenditure</b>	<b>636</b>	<b>23</b>	<b>612</b>	<b>23</b>
Social security contributions	606		583	
Contributions to the employers' liability insurance association	30		29	
<b>Old age pensions and benefits</b>	<b>163</b>	<b>6</b>	<b>151</b>	<b>6</b>
<b>Social services and facilities<sup>2)</sup></b>	<b>108</b>	<b>4</b>	<b>106</b>	<b>4</b>
<b>Expenditure on education and training incl. continued payment of wages and salaries<sup>2) 3)</sup></b>	<b>151</b>	<b>5</b>	<b>148</b>	<b>6</b>
<b>Amounts included twice</b>	<b>- 98</b>	<b>- 4</b>	<b>- 94</b>	<b>- 4</b>
<b>Basic and additional expenditure on personnel</b>	<b>5,431</b>	<b>196</b>	<b>5,029</b>	<b>192</b>
thereof other personnel-related expenditure	87		86	
<b>Expenditure on personnel acc. to statement of income</b>	<b>5,344</b>		<b>4,943</b>	

1) of basic expenditure

2) incl. imputed depreciation for income-tax purposes and other imputed costs of materials

3) excl. expenditure for the dealer organization



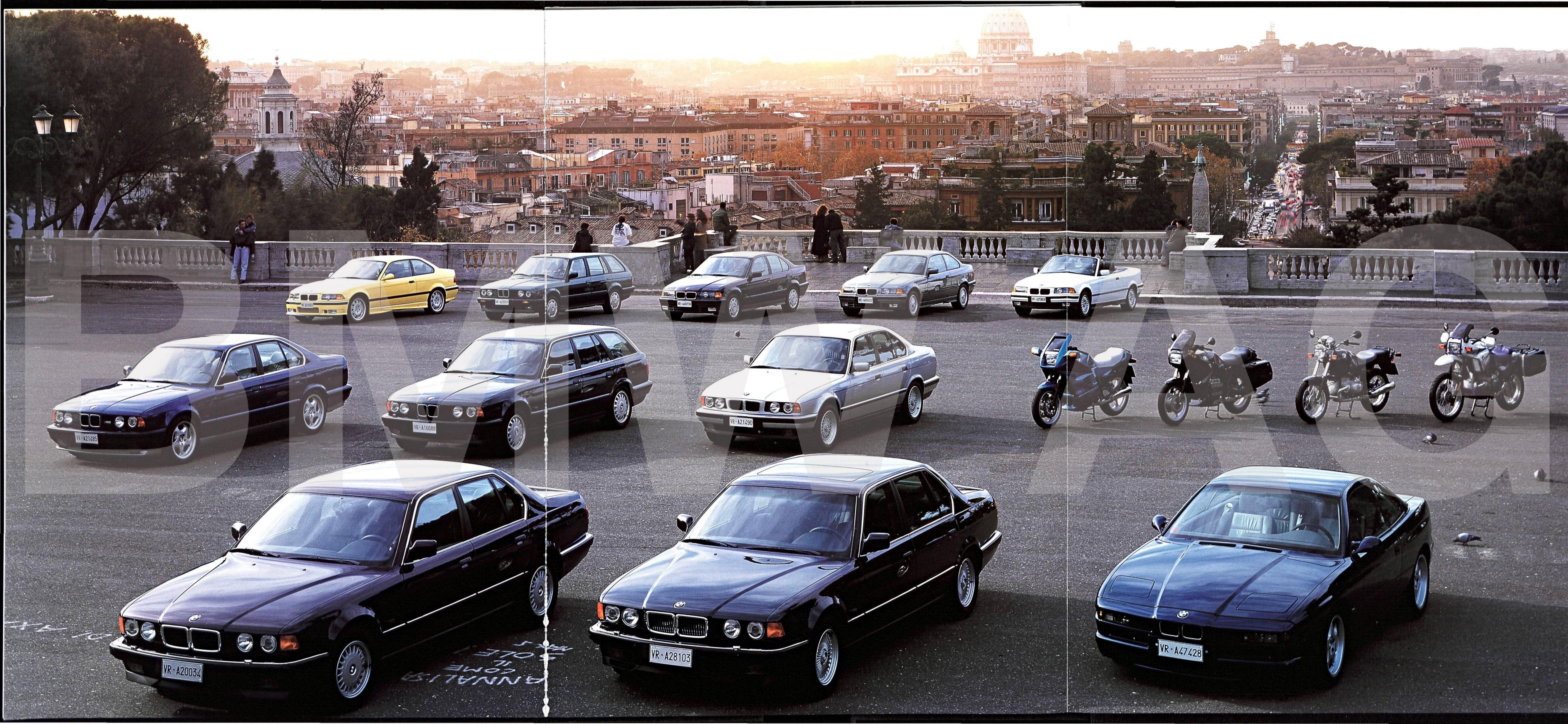


## Automobile and Motorcycle Range

BMW cars and motorcycles on Monte Pincio near the Villa Borghese in Rome.

1 <b>316i</b> 1596 cc 73 kW (100 bhp)	<b>518i</b> 1796 cc 83 kW (113 bhp)	<b>730i</b> 2986 cc 138 kW (188 bhp)
<b>318i</b> 1796 cc 83 kW (113 bhp)	<b>520i</b> 1991 cc 110 kW (150 bhp)	<b>730i</b> 2997 cc 160 kW (218 bhp)
<b>318is coupé</b> 1796 cc 103 kW (140 bhp)	<b>525td</b> 2498 cc 85 kW (115 bhp)	9 <b>740i</b> 3982 cc 210 kW (286 bhp)
<b>320i</b> 1991 cc 110 kW (150 bhp)	<b>525tds</b> 2498 cc 105 kW (143 bhp)	<b>740iL</b> 3982 cc 210 kW (286 bhp)
2 <b>320i coupé</b> 1991 cc 110 kW (150 bhp)	<b>525i</b> 2494 cc 141 kW (192 bhp)	<b>750i</b> 4988 cc 220 kW (300 bhp)
<b>325td</b> 2498 cc 85 kW (115 bhp)	<b>525iX</b> 2494 cc 141 kW (192 bhp)	10 <b>750iL</b> 4988 cc 220 kW (300 bhp)
<b>325i</b> 2494 cc 141 kW (192 bhp)	6 <b>530i</b> 2997 cc 160 kW (218 bhp)	<b>840Ci</b> 3982 cc 210 kW (286 bhp)
<b>325i coupé</b> 2494 cc 141 kW (192 bhp)	<b>540i</b> 3982 cc 210 kW (286 bhp)	<b>850Ci</b> 4988 cc 220 kW (300 bhp)
3 <b>M3</b> 2990 cc 210 kW (286 bhp)	7 <b>M5</b> 3795 cc 250 kW (340 bhp)	11 <b>850CSi</b> 5576 cc 280 kW (380 bhp)
<b>316i touring</b> 1596 cc 73 kW (100 bhp)	<b>518i touring</b> 1796 cc 83 kW (113 bhp)	
4 <b>318i touring</b> 1796 cc 83 kW (113 bhp)	<b>520i touring</b> 1991 cc 110 kW (150 bhp)	<b>R 65*</b> 650 cc 20 kW (27 bhp)
<b>318i Convertible</b> 1796 cc 83 kW (113 bhp)	<b>525td touring</b> 2498 cc 85 kW (115 bhp)	<b>R 80, R 80 RT, R 80 GS, R 80 R</b> 798 cc 37 kW (50 bhp)
5 <b>325i Convertible</b> 2494 cc 141 kW (192 bhp)	<b>525tds touring</b> 2498 cc 105 kW (143 bhp)	12 <b>R 100 GS, R 100 GS Paris-Dakar</b> 980 cc 44 kW (60 bhp)
	<b>525i touring</b> 2494 cc 141 kW (192 bhp)	13 <b>R 100 R, R 100 RT</b> 980 cc 44 kW (60 bhp)
	8 <b>525iX touring</b> 2494 cc 141 kW (192 bhp)	<b>R 1100 RS</b> 1085 cc 66 kW (90 bhp)
	<b>530i touring</b> 2997 cc 160 kW (218 bhp)	14 <b>K 75, K 75 S, K 75 RT</b> 740 cc 55 kW (75 bhp)
	<b>M5 touring</b> 3795 cc 250 kW (340 bhp)	<b>K 1</b> 987 cc 74 kW (100 bhp)
		15 <b>K 1100 RS, K 1100 LT</b> 1092 cc 74 kW (100 bhp)







With the exception of North America, the world economy hardly recovered in 1992. There were unexpected obstacles on the way to European economic and monetary union, and upheavals in the EMS. Japan felt the effects of overheated growth. In Germany, politicians and trade unions did not adapt early enough to the reduced scope for income redistribution.

#### **Weak world economy persists**

The world economy hardly recovered in 1992. Only in North America did the economy gain strength, while economic activity in Europe and Japan became less dynamic. World trade expanded by only 4.5%.

The major industrial regions had to cope primarily with internal difficulties. In Western Europe, for example, unexpectedly large obstacles occurred on the way to economic and monetary union shortly before completion of the single European market. In the United States, the continuing high level of private and public-sector debt limited economic growth. In Japan, the negative effects of overheated growth in the second half of the 1980s became apparent.

The drifting apart of the large economic regions, but also national interests within the European Community prevented, once again, the conclusion of the Uruguay round of GATT (General Agreement on Tariffs and Trade). Thus, the threat continues of the world economy relapsing into protectionism. Economic and political disintegration in Central, Eastern and Southeast Europe also contributed to the uncertainty.

Differences in international interest rates, and the failure, for years, to adapt currency parities to economic developments for political reasons, led to severe upheavals in the European Monetary System in the autumn. These brought new challenges to German industry, which was already weakened by a low dollar and unfavourable conditions as an industrial location.

#### **Change in America**

The United States overcame the recession in the course of 1992. Investments and exports expanded first, while consumer demand did not pick up until the end of the year. As a result, recovery in the United States had little impact on other countries.

The election of a new president will also affect economic policy in the United States. According to his programme, the state should intervene more actively again in economic affairs. It also contains protectionist components to help domestic companies.

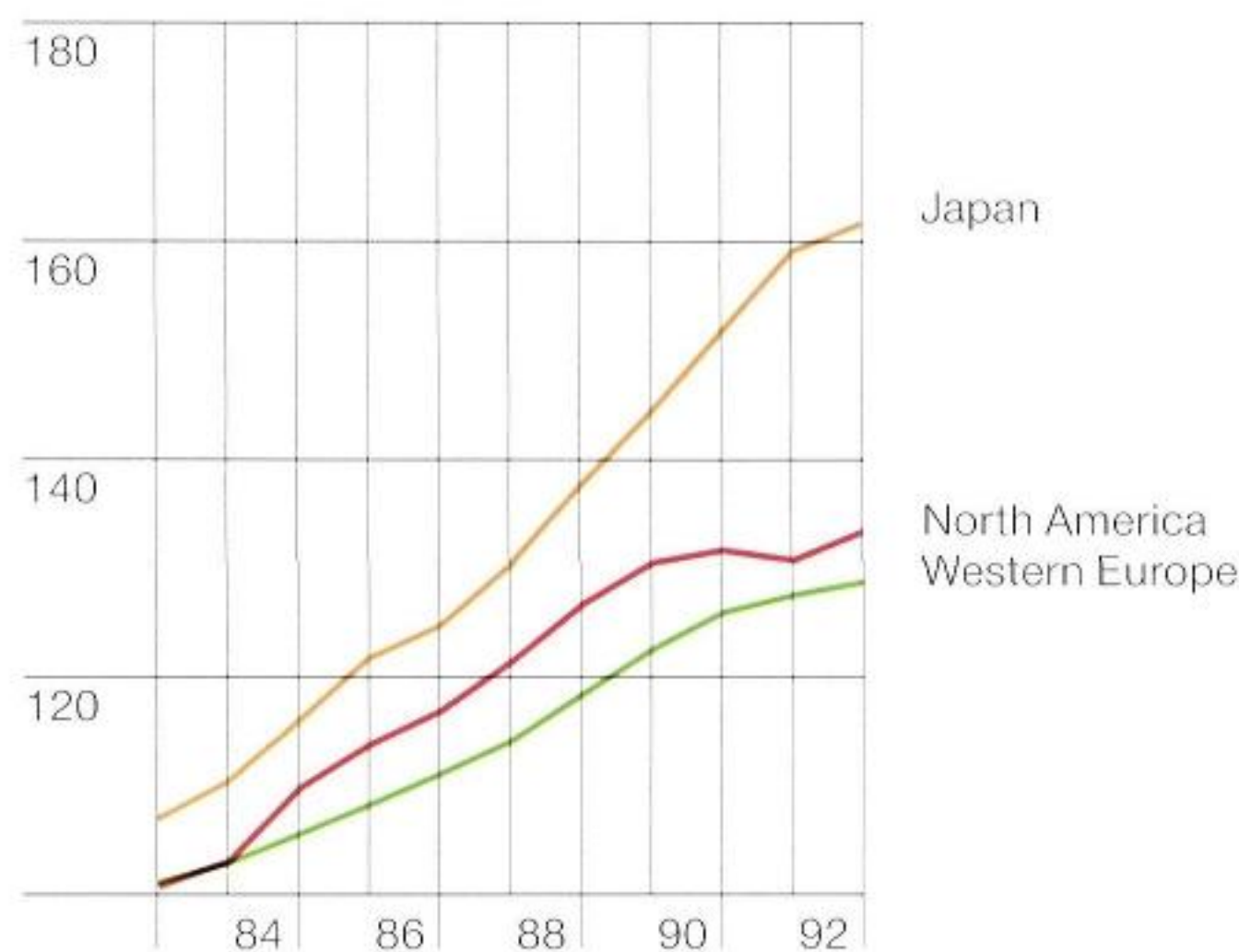
A free trade area in North America (NAFTA) should create the conditions for the greater economic integration of Canada and Mexico with the United States. The danger increased of the emergence of trading blocs within the world economy. Thus, it is all the more important to safeguard free trade, as a matter of principle, by concluding the present round of GATT.

#### **Stagnation in Japan**

In Japan, economic activity remained weak. Since this affected sales of imported goods in particular, Japan's trade surplus rose by 37% to DM 107 billion.

Japanese companies were faced with an avalanche of costs as a result of the investment boom of the 1980s. High levels of depreciation placed a burden on income, and money borrowed earlier on favourable terms now had to be refinanced with expensive capital. This forced companies to cut output by more than 6%. The banking industry is also affected since many loans are now deemed irretrievable.





#### Gross Domestic Product

Index: 1980 = 100

In 1992, the Japanese gross domestic product exceeded the previous year's by only 1.5%. A programme, announced by the Japanese government, to promote economic growth with DM 120 billion largely provides assistance for the banking and property sectors. So far, the programme has not made a noticeable impact on the country's economy.

#### Economic weakness in Europe

In Europe, economic development continued to be subdued. The recession in Great Britain and Northern Europe did not end, as had been expected. In fact, it deepened. Most of the other economies more or less stagnated.

High real interest rates checked economic development in Europe, and monetary tensions finally led to the crises in the international monetary system.

In reunified Germany, the Bundesbank raised the key interest rates to a record level by mid-year in order to limit the risks of inflation. This strengthened the value of the D-mark. Thus, the dollar fell, at times, to less than DM 1.40 in the year under review. Some partner countries in the European Monetary System were forced, at times, to offer far higher interest rates than Germany in order to defend their exchange rates.

Although the Bundesbank and the central banks of the countries concerned tried to stabilize the exchange rates with massive support buying, the system broke down in September. The exchange rate of the Spanish peseta was re-set, and the pound sterling and the Italian lire left the exchange rate mechanism of the EMS until further notice. These currencies lost up to 20% of their value.

1992's currency turbulences showed that the way to economic and monetary union, which was started by the Maastricht agreements, is far more difficult than the creation of a single European market.

In the second half of the eighties, the programme for the single market revived the idea of Europe and for years gave rise to great expectations on the European continent. In contrast, the plans for political union and a common currency met with great restraint.

For most member countries, the transition to a single European currency, as planned in the Maastricht Treaty, will involve major adjustments and burdens at first. In order to satisfy the criteria for membership in the currency union, public-sector budgets must be consolidated and price increases curbed. This also applies to Germany.

The Treaty also opens the way for an industrial policy for the various sectors. This could involve risks for the free market system.

#### Germany: Dispute over income redistribution during economic downturn

Western Germany was shielded, at first, from the weak world economy because of the special economic conditions following unification. However, in 1992, the downturn finally reached Germany.

The industrial sector, which is particularly exposed to international competition, was affected by a dramatic drop in demand. Rising costs and the appreciation of the D-mark showed the limits of German industry's potential.

Since industry still had large order backlogs at the beginning of the year, the decline in output lagged behind the setback in demand. This made both politicians and public fail, for a long time, to see the economic situation in the right light.

For large parts of the year, economic, financial and social policies were determined by disputes over income redistribution. The pending economic difficulties, and the dimensions of economic development in eastern Germany, were underestimated for too long. Only towards the end of the year did trade unions and politicians show greater willingness to tackle the tasks together and to reconsider demands.



### Outlook for 1993

Starting from the United States, the world economy is expected to continue to recover modestly in 1993. The economic upturn could reach Japan sooner than Europe because Japanese monetary and financial policy already supported the economy in the year under review. In Europe, relaxation of monetary policy began only hesitantly. Furthermore, European governments have insufficient scope to stimulate economic activity with either increased public-sector spending or tax reductions.

In Germany, the prospects are considered slight for an economic turnaround during the course of 1993. Decreasing order backlogs and capacity utilization in industry will put a considerable strain on economic development. The general deterioration in conditions in Germany as an industrial location, and reduced competitiveness due to the appreciation of the D-mark within the European Monetary System, stand in the way of rapid recovery.

Finally, the development of the new federal states will continue to place a considerable burden on companies and consumers. In 1993 declining real incomes, and tax increases already planned for the following years, mean that recovery of demand will, at best, be weak.

### Environmental requirements increase for the car

As more cars are equipped with controlled catalytic converters, traffic-related air pollution has decreased already in many cities. The introduction of traffic guidance systems on test routes has also contributed to both reduced exhaust emissions and noise.

In order to achieve the desired air quality, particularly in built-up areas, emissions by industry, public enterprises and private households must be further reduced. BMW advocates further progress in car technology and traffic guidance systems. However, the resultant car prices and running costs should not be beyond the reach of the average motorist.

Legislation on exhaust emissions is expected to become stricter on the world's major car markets, making the use of new technologies necessary. From 1998, for example, some of the cars sold in the United States must run entirely without direct exhaust emissions.

Since mobility is one of the fundamental prerequisites for life and work in developed societies, demand for transport is expected to continue to grow.

Therefore, in addition to the development of the car, it is important to eliminate bottlenecks in the transport infrastructure and to apply, as quickly as possible, the findings from research and field tests in efficient traffic guidance systems. Different transport systems should be linked, and jointly controlled, in order to satisfy foreseeable transport demand, while, at the same time, making diminishing demands on energy and on land for new roads and rail lines.

### Traffic infrastructure fallen behind requirements

Passenger and freight transport is predominantly by road. Since the 1970s the distances covered by road have increased by almost one-third, while real investments in roads and bridges have decreased by 25%.

Although revenues from car and mineral oil taxes in Germany are more than twice as high as government spending on roads, there are currently neither the funds to develop the road network to keep pace with requirements, nor substantially to improve rail services.

BMW began five years ago to test cooperative transport systems in pilot projects.

### Further initiatives to safeguard mobility

Experience gained in the field of efficient traffic guidance is also used to optimize rush-hour traffic at BMW locations. For example, the commuting patterns of BMW employees in Munich were determined in a representative study in 1992.

As a result of this study, encouragement was given to car-sharing schemes, works buses and the use of public transport. The BMW Mobil-Card was introduced in July 1992. With this card, employees can use Munich public transport at reduced fares.

Some 140,000 journeys to and from work were "saved" by BMW employees solely because of the system of flexible working hours at the Munich plant.



## Companies of the BMW Group

The companies shown here, representing the Group's different fields of business, are predominantly wholly-owned BMW companies. BMW holds a 50.5% share of the capital of BMW Rolls-Royce GmbH. The Company has a minority interest in Loewe Opta GmbH.

From the beginning of 1993 the former organizational unit responsible for buildings and energy technology at BMW AG will be run as a company subsidiary, Betek Bau- und Energietechnik GmbH.

### Automobiles and Motorcycles

#### **BMW AG Munich**

Munich plant  
Dingolfing plant  
Regensburg plant  
Wackersdorf plant  
Landshut plant  
Berlin plant

#### **BMW Fahrzeugtechnik GmbH Eisenach**

#### **BMW Motoren Ges.m.b.H. Steyr, Austria**

#### **BMW Motorrad GmbH + Co. Munich**

#### **BMW Motorsport GmbH Munich**

#### **BMW Technik GmbH Munich**

#### **BMW Austria Ges.m.b.H. Salzburg**

#### **BMW Belgium S.A./N.V. Bornem**

#### **BMW France S.A. Bois d'Arcy**

#### **BMW (GB) Ltd. Bracknell**

#### **BMW Ibérica S.A. Madrid**

#### **BMW Italia S.p.A. Palazzolo di Sono**

#### **BMW Nederland B.V. The Hague**

#### **BMW (Schweiz) AG Dielsdorf**

#### **BMW Sverige AB Stockholm**

#### **BMW Australia Ltd. Melbourne**

#### **BMW Canada Inc. Whitby**

#### **BMW Japan Corp. Tokyo**

#### **BMW New Zealand Ltd. Auckland**

#### **BMW of North America Inc. Woodcliff Lake**

#### **BMW (South Africa) (Pty) Ltd. Pretoria**

### Aeronautical Engineering

#### **BMW Rolls-Royce GmbH Oberursel**

### Electronics

#### **Kontron Elektronik GmbH Eching**

#### **Loewe Opta GmbH Kronach**

### Financial Services

#### **BMW Bank GmbH Munich**

#### **BMW Leasing GmbH Munich**

#### **Financial service companies in 9 foreign markets**

### Other Services

#### **Axicon Mobilfunkdienste GmbH Munich**

#### **Bavaria Insurance Co. Ltd. Dublin**

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

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

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



While the world car market stagnated, although at a high level, special influences in Europe resulted, once again, in high unit sales. The output of German manufacturers rose to 4.8 million cars. The sale of 595,000 BMW cars was a new record.

**The automobile market: Stagnation at a high level**

In 1992, the automobile industry produced about 35 million cars world-wide, thus maintaining the previous year's high level. While more cars were manufactured primarily in the European Community, South Korea and Latin America, output in Japan and Eastern Europe continued to decline.

With the exception of Germany, Japan and Canada, registrations of new cars increased in all major markets.

**Europe: Special influences result, once again, in high unit sales**

In Western Europe, the 13.5 million new car registrations were as high as the two previous years. Among the large markets, only Germany recorded a decline in car sales.

With a share of 38%, German makes maintained their leading position in the European car market. French manufacturers kept their position on the domestic market, but lost shares in other European countries. In contrast, some of the setbacks of Italian marques on their domestic market were offset by higher exports.

The devaluation of the Italian lire, by up to 20%, against the currencies of important trading partners, greatly improved the competitive position of the Italian car industry from autumn 1992.

Japanese manufacturers lost market shares in Western Europe in the year under review; their share declining from 12.3% to 11.8%. Of the 1.6 million Japanese cars sold in Western Europe, as many as 270,000 came from plants in Great Britain. There, manufacture doubled within a year. South Korean manufacturers are now represented in all European countries.

However, their market share was only 0.7% in the year under review.

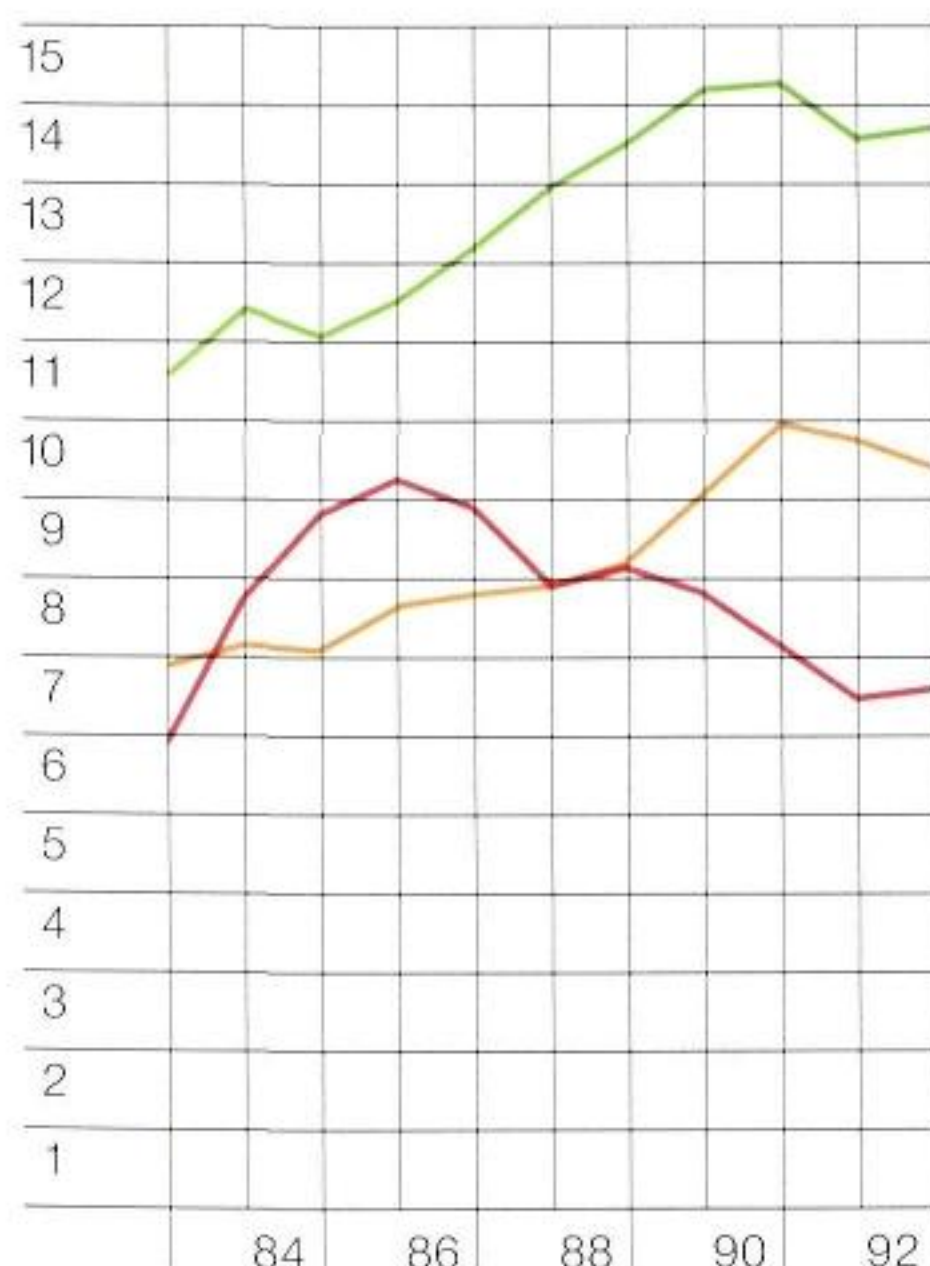
Demand for diesel-engined cars continued to rise; their share increasing to almost 17% Europe-wide. However, sales varied greatly from one country to another, depending on differing taxes. France remained the largest market for diesel-engined cars; their share being 39%. The strongest growth was registered in Austria and Great Britain where the proportion of diesel-engined cars rose by about four percentage points each to 26.2% and 12.6% respectively.

With 13.7 million units, car output in Western Europe was slightly higher than in the previous year and thus corresponded with the 1992 level of registrations. With the exception of Italy, car output increased in all major producer countries. In Great Britain, the growth was due exclusively to the Japanese car makers.

In the countries of the former eastern bloc, and in former Yugoslavia, automobile business was influenced by economic upheavals, political disintegration and civil war. As a result, sales of BMW cars in these countries decreased by almost one-quarter to 3,600 units.

In Western Europe, registrations of new BMW cars rose by 7% to 440,000 units to take the leading position in their segment.





**Automobile Production**

### Automobile production in Germany achieves a new record

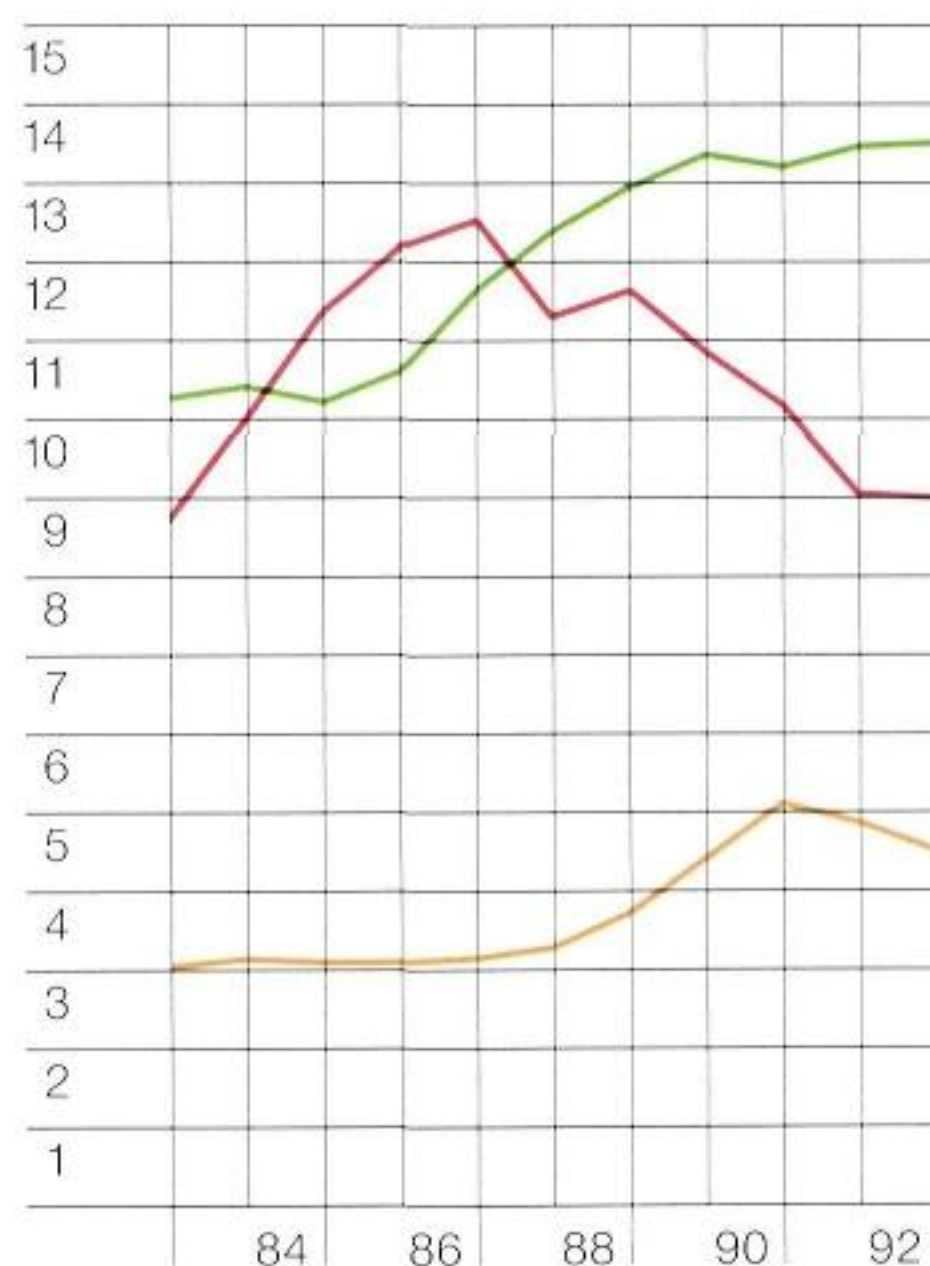
With 4.8 million units, automobile production achieved a new record in Germany in 1992. In the eastern part of the country, new plants started to produce cars in small quantities. The production of German cars abroad fell by 6% to 1.5 million units. Exports of cars made in Germany rose by 17% to 2.57 million units, with the export quota increasing to 53%.

Some 3.9 million new cars were registered in Germany; 6% fewer than in 1991, but far more than had been expected after that exceptional year.

While sales in eastern Germany continued to rise by 6% to almost 780,000 units, they decreased by almost 300,000 units in the old federal states. This decline was due primarily to the economic downturn and large stocks of used cars.

In western Germany, newly-registered petrol-driven cars were nearly all equipped with a controlled catalytic converter. More than half the cars now in use have this technology. Demand was also particularly strong for estate cars; their share rising to 16.5% of total registrations.

In western Germany, the number of cars in use increased by one million to 32.3 million units. In the new federal states, some 6.8 million cars were registered at the end of 1992. Thus, as many as 435 out of 1,000 inhabitants had their own car. The equivalent figure in western Germany was almost 500.



**Automobile Registrations**

In the whole of Germany, sales of foreign marques declined by 9% to 1.3 million new cars; corresponding to about one-third of the total market. Once again, every second newly-registered car was imported in the new federal states. Demand in that part of the country is predominantly for smaller cars.

In Germany, registrations of new BMW cars increased by 6% to 245,000 units. Thus, BMW was one of the few manufacturers to continue to achieve growth in a declining total market. In eastern Germany, BMW sales increased by 87% to 17,500 new cars.

### BMW commitment in the new federal states

The market and industry of the new federal states are now fully integrated into the Company's activities. Within three years of the opening of the frontiers in autumn 1989, BMW has completed major investment projects, established a variety of business relations and, with appropriate measures, supported the development of free market structures. Together with its sales partners, the Company is planning to invest more than DM 1 billion in the region by 1996.

Within a short time, BMW had developed an extensive sales organization, comprising about 140 independent dealers at the end of 1992. BMW also opened its own sales outlets in Chemnitz, Dresden and Leipzig, and also a branch of the Berlin sales outlet in the eastern part of the city. Some 5,000 people are employed in the customer service and sale of BMW products in the five new federal states.

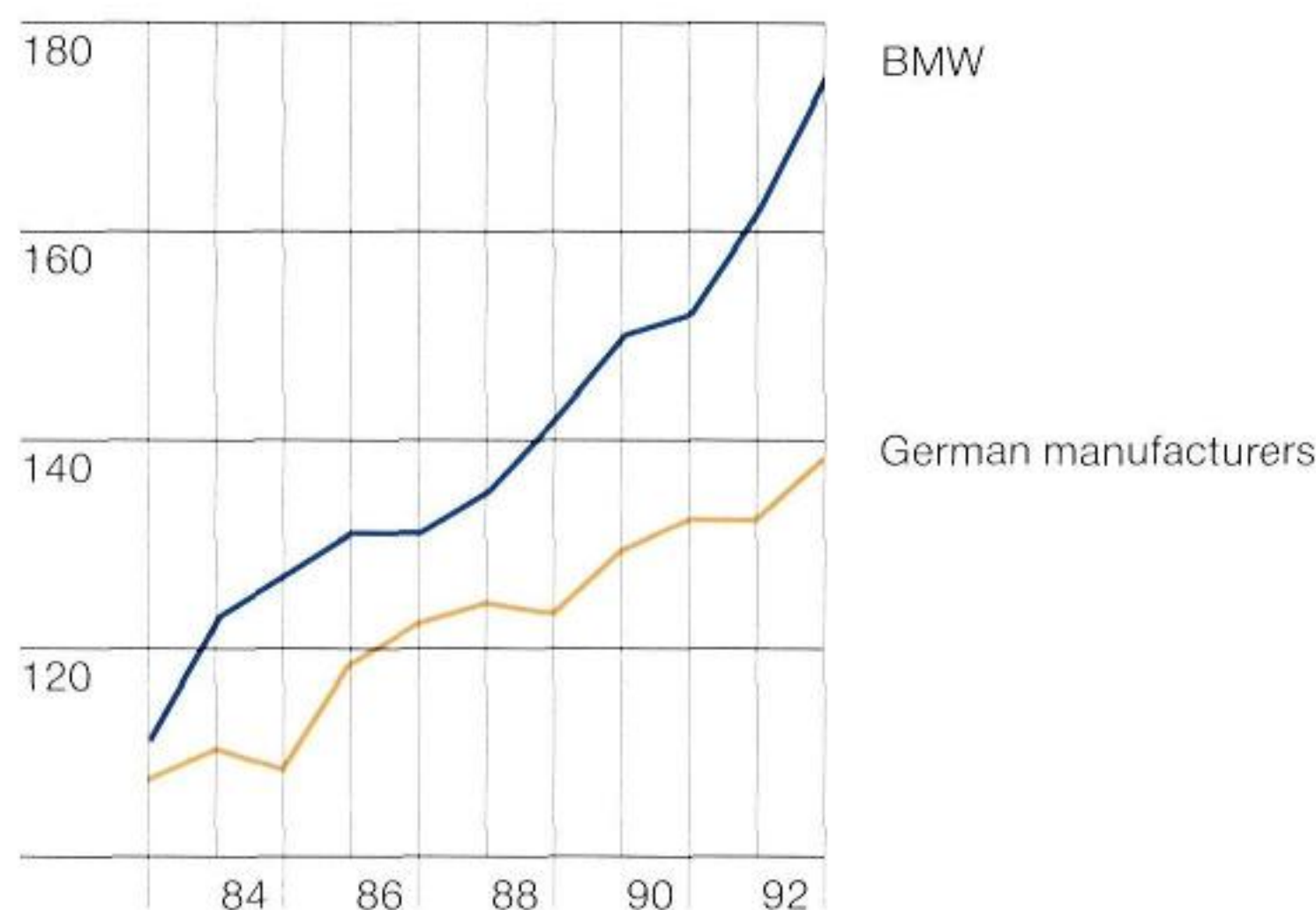
The largest single investment of some DM 120 million was in the construction of a pressing tool plant in Eisenach, Thuringia. This has now been completed. The construction of a development centre and production plant for BMW Rolls-Royce GmbH in Dahlewitz near Berlin is progressing on schedule.

At an early date, BMW made efforts to establish business relations with suppliers through a special purchasing office. Long-term contacts were made at the 1991 BMW Suppliers' Meeting in Leipzig. Through cooperation with BMW, many medium-sized businesses already receive important know-how for the development of their competitive position.

BMW is also one of the participants in an initiative by west German industry to double its purchasing volume in the new federal states by 1995. In the year under review, BMW AG purchased goods and services there for DM 170 million. It aims to spend as much as DM 500 million in 1993.

In more than twenty company talks, BMW provided an opportunity for businesses, authorities and associations of a region to exchange information. In addition, training facilities were supported with sub-assemblies and teaching materials.





**Automobile Production**  
**BMW and German Manufacturers**  
Index: 1980 = 100

### US car market bottomed out

While the economy grew modestly, car sales held level, in the United States, at 8.2 million units. American manufacturers increased their sales slightly; their market share rising to 62%. Their output also increased slightly to 4.3 million units.

The sales of Japanese manufacturers also remained unchanged on the US market at 2.6 million units. While imports from Japan decreased by 3%, sales of Japanese cars made in North American plants increased by 3% to 1.2 million units.

In the United States, total car output rose by 3% to 5.6 million units. The US share of world car production stayed at 16%, compared with about 25% in the mid-1980s.

Sales of German cars generally persisted at a low level; their share of the total market remaining at 2.7%. Only manufacturers in the top market segment recorded some marked increases. BMW achieved the highest growth compared with its European competitors, with sales rising by 23% to 65,700 units.

### Continuing weak demand in Japan

In Japan, registrations of new cars decreased by 9% to 4.45 million in 1992; 650,000 fewer cars than in the record year of 1990.

Sales of imported cars declined by 8% to some 180,000 units; their market share still being only 4%. 58% of all imported cars were German, and 13% came from the North American plants of Japanese manufacturers.

BMW recorded a decline in registrations to some 28,500 units, in keeping with the trend in the entire competitive field.

Car output in Japan was cut by 4% to 9.4 million units, mainly because of flagging domestic demand. Exports also declined slightly because foreign markets were supplied increasingly by Japanese assembly plants established in those markets. When including the manufacture of Japanese cars in North America and Northern Europe, the worldwide output of Japanese cars hardly decreased in 1992.

### Middle East, Southeast Asia, South America and black Africa

In the Middle East the car market consolidated after the upheavals of the previous year. Sales of BMW cars increased by 13% to 39,000 units.

In Southeast Asia demand rose markedly after settling in the previous year. In Thailand, lower customs duties and the opening of the market to imports of complete cars contributed to particularly marked growth of the top market segment. High increase rates were also recorded in Taiwan. Vietnam and Cambodia were opened up for marketing. In this region, BMW sold a total of some 19,000 cars, 36% more than in the previous year.

The further opening of the markets of South America enabled BMW to develop its sales organization. For example, new importers were appointed in Venezuela and Honduras. With 3,600 units, BMW almost doubled its car sales in South America.

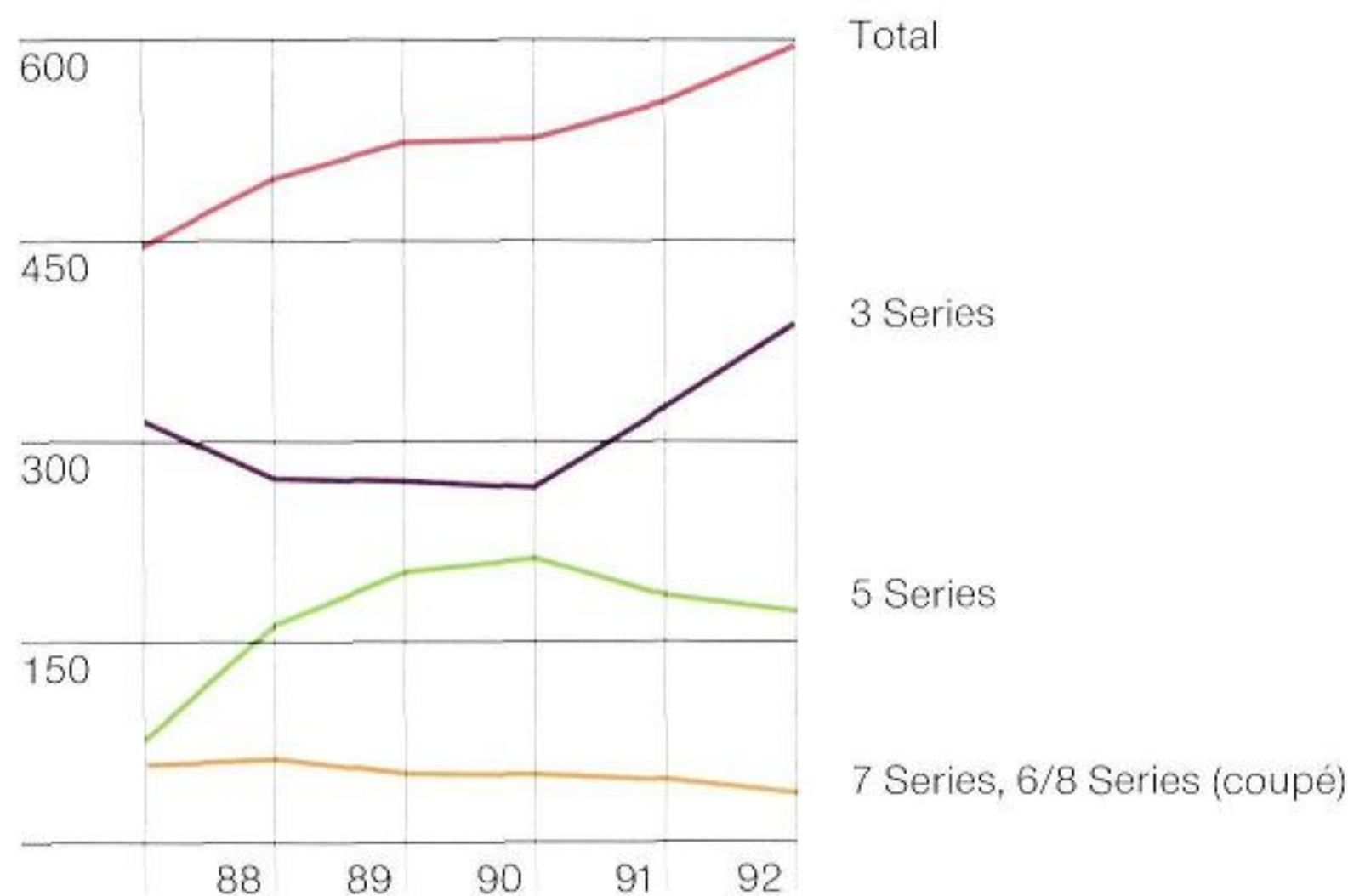
In black Africa, demand for expensive cars remained very low because of the desolate economic situation. BMW sold about 1,000 cars on the entire continent excluding South Africa.

### Outlook for 1993

Worldwide, the automobile business remained weak at the beginning of the new year. In Europe, decreases in purchases were sometimes in double figures. However, this was mainly due to the unusually high figures from previous years which were used as a basis for comparison.

In Germany, the weak development of the economy and discussion about higher taxes and charges greatly weakened the car business. Proposed charges for car drivers range from so-called CO<sub>2</sub> taxes on the purchase and running of cars, through motorway licences, to higher mineral oil taxes. There are also plans to reduce write-off facilities and abolish the prior-tax deduction for company cars. Automobile manufacturers may also be obliged to take back scrapped cars free of charge. If all these proposals were to materialize, they would threaten the very existence of the car industry in Germany, even beyond the current phase of economic weakness.





**Automobile Sales of the BMW Group**  
in thousand units

Since the world economy is unlikely to recover noticeably in 1993, the car markets in Western Europe and Japan are expected to remain static. The recovery process seems to be continuing only in the United States. This is due to a better overall economic environment, the decisive economic policy of the new president and increasing replacement demand on the car market.

#### **BMW car sales at a new record level**

In 1992, sales of BMW cars rose worldwide by some 8% to 595,000 units. The Company's world market share increased to 1.7%. In the top market segment, every tenth newly-registered car was a BMW.

Sales of 3 Series cars rose by about 20% to 385,000 units. This was due largely to the new 3 Series coupés which were introduced to the markets from January 1992. Sales also increased of the four-door saloons of this model. They were available in all markets throughout the year.

The new BMW M3, presented in November, has already aroused great admiration because of its combination of sporting elegance and excellent handling. The new 325i Convertible was presented to the public at the Salon International de l'Automobile in Geneva in March of the new year.

Demand for 5 Series cars was still strong, with sales of 173,000 units continuing to be high. The attractiveness of the medium-sized BMW was further enhanced by new diesel, touring and four-wheel drive versions. Some 70,000 customers purchased these models. Since the autumn, cars of the 5 Series are also available with the new 8-cylinder engines.

BMW offers a particularly wide range of medium-sized cars, including the 518i with 4-cylinder engine, available in additional markets since the beginning of 1993. Customers can choose between two body and drive versions, 4-, 6- and 8-cylinder petrol-driven engines, and two diesel-powered engines. With about 20%, the share of diesel-engined 5 Series cars was almost twice as high as in the previous year.

In 1992, the form and technology of the 7 Series again safeguarded BMW's competitive position in the top car segment. Additional stimulus came from the new models with 8-cylinder engines. With some 15,000 units, they accounted for almost half the 7 Series cars sold in the whole of 1992.

Despite far more difficult market conditions, deliveries of the BMW 7 Series decreased only slightly to 32,000 cars. In six years, some 280,000 of these cars have been produced; the same number as of its predecessor during its entire ten-year cycle.

Two models were added to the range of 8 Series BMWs: the 840Ci with an 8-cylinder and the 850CSi with a higher-performance 12-cylinder engine. As a decidedly sporting luxury coupé, the 850CSi will continue the tradition of "Grand Tourisme" cars.



The markets of the European Community are supplied with Genuine BMW Parts and Accessories through BMW's own parts supply centres. The new supply regions permit efficient logistics, even across national frontiers.

### **BMW sales organization geared to customers**

The sale of BMW products is supported by medium-sized businesses that represent BMW in the markets and ensure the marque's uniform image. In addition to the further development of the infrastructure worldwide, the BMW sales organization was fully geared to individual customer service in 1992. This process includes all divisions of the Company and the dealerships.

The Company is represented by 16 of its own marketing companies in the world's major car markets. These sold more than 90% of all new BMW cars. The development of the individual markets is described on pages 44 to 46.

In some 100 other countries, independent importers sell and service BMW cars. In order to make the most of new sales opportunities in Eastern Europe, BMW appointed further sales partners in the Czech Republic and in Slovakia, Estonia and Latvia, Croatia and Bulgaria.

In the Community of Independent States, a new service company was set up in Moscow, and in St. Petersburg BMW is represented by a new partner. New importers were also found in Georgia, Kazakhstan, the Ukraine and in Belorussia. Since the expertise required to service expensive cars is virtually non-existent in these countries, and partners do not generally have the necessary capital resources, BMW has had to provide money, training, equipment and facilities for the development of an efficient sales and customer service organization.

In Thailand, Malaysia, Indonesia and Uruguay, BMW cars were again assembled by importers in 1992. The component kits supplied from Germany are completed, as far as possible, by locally-purchased components.

The South African car market is also largely closed due to import restrictions. BMW has had its own car plant and other production plants there for twenty years. They supply cars and components for the South African and other African markets. BMW (South Africa) (Pty) Ltd. also supplies parts and particularly high-quality leather for the other plants of the BMW system of linked production plants.

The foreign companies form important links between the BMW Group and the respective national suppliers. The negative effects of fluctuating exchange rates can be eased by making purchases in different currency regions. Besides, in many countries this is a precondition for the sale of BMW cars to authorities and companies.





■ BMW Central  
Stock of Parts

■ New and extended  
parts supply centres

■ National parts  
supply centres

— Supply boundaries  
— National frontiers

### Streamlining the sales organization in Europe

The creation of a single European market permits more efficient structures for the sale of BMW products in Europe. At the beginning of 1992, sales activities were integrated for Germany, the Netherlands, Belgium, Luxemburg, Switzerland and Austria. Flatter organization resulted in greater efficiency due to shorter decision-making processes and a more rapid exchange of information.

Internationally coordinated logistical systems ensure that some 100,000 items of the range of Genuine BMW Parts and Accessories can be supplied quickly and economically to BMW dealers and customers throughout the world.

The easing of cross-frontier deliveries enabled the Company to streamline distribution channels. Thus, in the year under review, the Netherlands were supplied from Belgium, south-west Germany received parts from Strasbourg, and Norway from the supply centre of the Swedish BMW company in Malmö.

With the exception of a few peripheral regions, an express system can supply dealers in Europe with any Genuine BMW Part from the Central Stock of Parts in Dingolfing within 24 hours.

In 1992, BMW gradually introduced a computer-assisted parts information system for the dealer organization. This system replaces the usual microfilm catalogues and enables dealers to advise customers more quickly and accurately on purchases of parts and accessories.

### At the customer's service

More than one-quarter of a million people talk each day with employees of the BMW sales organization.

The dealers offer comprehensive services, from the purchase, equipment and running of cars and motorcycles, to their financing and insurance. There are also mobile telephone and other services, depending on the market.

Training programmes were improved for individual and comprehensive customer services. Employees are familiarized both with the vehicle technology and services offered by the Group. In addition to the training centres of the BMW companies in Germany, there are also training establishments in the Middle and Far East, in Central and South America. Employees in Eastern Europe are trained in Moscow and Munich.

In order to carry out maintenance and repair work at BMW businesses even more economically in future, a new car diagnosis and information system was developed in cooperation with leading manufacturers. This will be used by all BMW dealers in future.

The development of the sales information systems aimed to further accelerate the exchange of data between dealers, importers, sales companies and the central divisions of the Company. Thus, even customer requests made at short notice can be met more satisfactorily.

BMW dealers again made substantial investments to improve conditions for long-term sales opportunities and intensive customer service.

### BMW Motorsport GmbH, Munich

BMW Motorsport GmbH was established 20 years ago to demonstrate the high performance potential of BMW cars and engines in motor sport. Today, it still takes part in international touring car races with cars based on existing models. Meanwhile, however, the development and production of the high-performance cars of the BMW M Series are the major part of the business. In the division known as "BMW Individual", cars are made and equipped in accordance with the customer's individual wishes. At the end of 1992, BMW Motorsport GmbH employed some 500 people.

BMW M5 cars and the new M5 touring car have particularly expensive equipment and fittings. A lot of the work on these cars is by hand. The development of the new M3 car and the 850CSi was completed in the year under review. Production of both cars has started.

Competition versions of the previous M3 again won German and international championships in its last year of production. This car became the most successful touring car in motor sport. It can still be used by private drivers until 1995. BMW Motorsport GmbH has developed several competition versions, based on the new 3 Series, for international touring car events. The encouragement of private racing drivers continues to be important in the BMW Sports Cup.

In BMW's driver training courses, experienced instructors show drivers how to drive circumspectly and safely. Demand for these courses continued to grow in 1992.





## Europe

### Belgium

In Belgium, the car market was supported by a slight upward economic trend. The abolition of the luxury tax on cars and the reduction of value added tax resulted in a marked increase in registrations in the spring. However, from mid-year demand was checked by a new registration fee and increased taxes on diesel fuel. The traditionally high proportion of diesel-engined cars continued to grow. Demand was particularly strong for the new BMW diesel models. BMW Belgium S.A./N.V. also recorded double-digit growth rates for some petrol-engined cars.

Total market	466,200	+ 1%
BMW	14,400	+ 12%

### Netherlands

The Dutch economy was weak in 1992. Demand for cars has been low for five years. However, there were structural shifts. Many customers opted for small cars. With the 5 Series car, BMW Nederland B.V. was able to avoid this trend as the new touring and diesel-engined versions of the medium-sized car were extremely well received. The introduction of a registration fee at the beginning of the new year boosted registrations in December 1992. Nevertheless, BMW was unable to achieve the high result of the previous year.

Total market	492,100	0%
BMW	11,400	- 5%

### Germany

In Germany, the exceptional level of economic activity, triggered by the unification process, cooled noticeably in 1992. In addition, continuing discussion of increased charges and taxes reduced willingness to buy cars. Registrations decreased from an unusually high level. The top market segment declined by 9%. BMW was the only European manufacturer in this segment to record a further increase in sales. For the first time, not only the saloons but also the coupés of the BMW 3 Series were fully available. Deliveries of 5 and 7 Series cars continued to be high. Demand was also strong for 5 Series touring and diesel-engined cars.

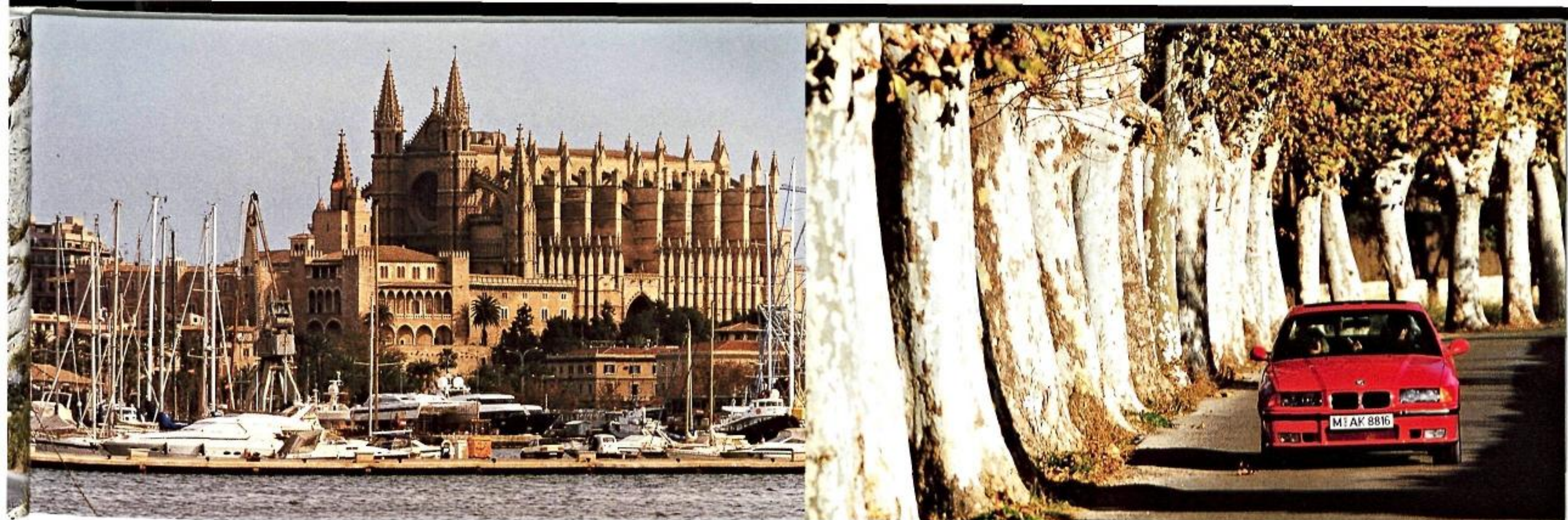
Total market	3,930,000	- 6%
BMW	245,000	+ 6%

### Austria

In 1992, registrations of new cars achieved a new record in Austria, reflecting the country's healthy economy. German manufacturers increased their market share to 50%. At the beginning of the year, a new consumption-related registration fee was introduced, benefitting suppliers of smaller cars. BMW Austria Ges.m.b.H. nevertheless achieved its best sales result since the company was established in 1978. The strongest sales stimuli came from the models of the new 3 Series. The touring and diesel-engined cars of the 5 Series were also well received by customers.

Total market	320,100	+ 5%
BMW	11,900	+ 11%





Presentation of the new BMW M3 to the press: Some 300 motoring journalists from all over the world learnt about the qualities of the sports car, developed by BMW

Motorsport GmbH, on Mallorca. This Mediterranean island provided ideal conditions, even in November 1992.

### France

By international comparison, the French economy developed above the average in 1992. Demand for cars kept pace with economic development. Growth was due primarily to new models from German large-series manufacturers. Tax benefits for cars with a catalytic converter and a capacity of less than 2 litres were phased out at the end of the year, resulting in a shift in demand, towards the end of the year, to smaller cars. The traditionally large market for diesel-engined cars continued to grow. BMW France S.A. more than doubled sales of diesel-run cars. Other models also developed satisfactorily.

Total market	2,105,700	+ 4%
BMW	31,500	+ 8%

### Sweden

In Sweden, a declining gross national product, high interest rates and decreasing consumer spending again hampered car sales in 1992. The total market fell to a level last recorded at the end of the 1950s. The setback was not as severe for domestic manufacturers as for European and overseas suppliers. BMW Sverige AB was also among those affected. Nevertheless, it was able to reduce some of the stocks of cars taken over from the former importer. In December, sales gave rise to hopes of stabilization. They were just above the previous year's level.

Total market	154,200	- 18%
BMW	2,000	- 14%

### Great Britain

The downturn of the British economy continued in 1992. However, first signs suggest that the economy has bottomed out. After declining by a total of 30% in the two previous years, the car market remained virtually unchanged at a low level. The abolition of a 10% car tax supported the market. The trend to smaller cars continued. Thus, the top market segment declined again. BMW (GB) Ltd. was largely able to avoid the general market weakness. The increase of the BMW market share to 2.6% was due to the success of the 3 Series and continuing high demand for medium-sized and large BMWs.

Total market	1,593,600	0%
BMW	40,700	+ 5%

### Switzerland

In Switzerland, rising unemployment and high interest rates again curbed consumers' inclination to make purchases, particularly of more expensive products. The negative outcome of the referendum on joining the European Economic Area resulted in further uncertainty. For the first time for six years, fewer than 300,000 new cars were registered. Nearly all suppliers were affected by this decline, including BMW (Schweiz) AG. While sales of the 5 Series rose by 18% due to the introduction of the four-wheel, touring and 8-cylinder versions, those of 3 and 7 Series cars fell below the previous year's figures.

Total market	288,100	- 8%
BMW	10,500	- 12%

### Italy

In Italy, economic development was carried by the strong demand of private households. In contrast, the car market grew only modestly, although it was still Europe's second-largest. Purchasers were disconcerted by Italy's departure from the EMS and the re-introduction of a special tax on diesel fuel, both of which impeded further growth of the car market. Italian manufacturers lost market shares. BMW Italia S.p.A. won over numerous customers with the new 3 Series. Special enthusiasm was shown for the sporting, elegant design of the coupés. In just two years, BMW registrations in Italy rose by about one-third.

Total market	2,374,300	+ 1%
BMW	38,000	+ 15%

### Spain

In 1992, the Spanish economy remained weak and public-sector budgets continued to be consolidated. The marked recovery of the car market was due to special influences. For example, car tax was lowered from 33% to 28%. Towards the end of the year, registrations were brought forward because of the pending tax increase for leased cars. This development benefitted suppliers in the top market segment in particular. BMW Ibérica S.A. recorded the highest growth rate. In just two years, BMW increased sales of new cars by more than 50%. The market share was 19%.

Total market	927,500	+ 10%
BMW	17,400	+ 26%





BMW cars with expensive equipment and fittings are very much in demand in Hong Kong. BMW sold 2,000 new cars in 1992, its best result for years in this difficult market.

## Overseas

### Australia

After a strong decline, car registrations increased slightly in Australia. In the segment for expensive imported cars, growth of almost one-third was due primarily to numerous new models. The new 3 Series BMW played a considerable role, with sales of larger BMW cars also developing satisfactorily. With the renewed increase in sales, BMW Australia Ltd. continued to develop its leading position among European manufacturers. The new marketing centre was opened in Melbourne in February 1992.

### Japan

In Japan, growth slowed in most industries, with some even showing recessionary trends. The electronics, steel and car industries were under special strain. The government adopted a comprehensive economic programme in order to support the economy and the weak stock and property markets. The decline of the car market accelerated in 1992, affecting European manufacturers in particular. BMW Japan Corp. could not avoid this development. BMW achieved growth with 3 Series cars, but sales of 5 and 7 Series cars declined in keeping with the trend in the top market segment.

### Canada

Canada's economy remained under considerable strain, although great hopes were pinned on the upturn of the US economy. First signs of recovery were already apparent. The car market nevertheless recorded a marked decline which also affected the top segment in the 2nd half of the year. Importers of European cars were particularly affected. The new models of the BMW 3 Series stimulated demand. As a result, BMW Canada Inc. improved on its previous year's result.

Total market	402,500	+ 4%
BMW	4,800	+ 13%

Total market	4,454,000	- 9%
BMW	28,500	- 16%

Total market	794,200	- 9%
BMW	4,500	+ 5%

### New Zealand

In New Zealand, economic development improved noticeably in 1992. The structure of the car market has already shifted towards more expensive cars. While the total market declined again, the top market segment increased by 15%. BMW New Zealand Ltd. sold more cars than all its European competitors together. This is the success of the entire range of BMW cars.

### South Africa

There are still no signs of the South African economy bottoming out. The country is going through its severest economic crisis this century. The car industry was additionally strained by politically motivated strikes. BMW (South Africa) (Pty) Ltd. was able to avoid this development in 1992. On the one hand, the Rosslyn car plant is located outside the strike regions, and on the other hand, the new 3 Series car was successfully introduced in the market. BMW's market share rose to 8.6%. In the segment for expensive cars it achieved a share of 35%. BMW (South Africa) also delivers cars to other African countries.

### USA

The economy of the United States began to grow from the 2nd half of 1992. The car market followed the overall economic trend only hesitantly. Once more, car buyers turned increasingly to American marques. Nevertheless, the year was satisfactory for BMW of North America Inc., with sales growing by about one-quarter. In addition to high demand for the new 3 Series, 5 and 7 Series cars also did far better than in the previous year. The construction of a BMW car plant began in South Carolina in the autumn.

Total market	53,000	- 5%
BMW	520	+ 12%

Total market	182,900	- 7%
BMW	15,700	+ 2%

Total market	8,211,200	0%
BMW	65,700	+ 23%





BMW Z13: Concept study of a small saloon with central front seat for the driver. The frame is made entirely of recyclable aluminium.

### **BMW Fahrzeugtechnik GmbH, Eisenach**

The new plant for large pressing tools, at Eisenach in Thuringia, was opened on March 10th 1992. It is one of the first new factories in the new federal states to have started work since unification.

BMW invested DM 120 million in the first stage of construction which is now completed. Numerous companies from Thuringia were involved in both the construction work and the equipment of the plant with machinery. Nearly all the employees come from the Eisenach area. Tool makers, machine fitters and other skilled employees were trained for their tasks at the Bavarian BMW plants from 1990.

Within a short time, productivity at the new plant exceeded expectations due to the careful training and commitment of the employees. Single or multiple shifts are worked, depending on requirements.

BMW Fahrzeugtechnik GmbH produces tools for the other BMW plants and for non-BMW customers. The company received its first non-BMW orders from machine manufacturers and car-industry suppliers. The new tools are tested, and small series of parts are produced, in the company's own pressed parts plant.

The investments of BMW and other companies have revived economic activity throughout the Eisenach region, which has a long tradition of metal-working. In addition, BMW supports cultural and social life in Eisenach, as it does at all other BMW locations.

### **BMW Motoren Gesellschaft m.b.H., Steyr**

The BMW engine plant at Steyr produces all BMW diesel engines, the 4-cylinder petrol engines and some of the 6-cylinder petrol engines. Since production began ten years ago, some two million engines have come off the assembly lines. Almost 380,000 engines were produced in 1992; 15% of them being diesel sub-assemblies. The development centre for diesel engines is also located at Steyr.

So far, BMW has invested DM 1.6 billion in the engine plant. In the next few years, the structures of the plant will be developed, new technologies introduced and the production of future engines prepared with an extension and modernization programme amounting to DM 500 million.

The company also attends to the sale of all BMW engines and purchases of the BMW Group in Austria. For example, 4-cylinder petrol engines were delivered to the Italian car manufacturer Bertone in the year under review. In Austria, the BMW Group made purchases worth DM 2.4 billion. At the end of 1992, the company had about 2,100 employees.

With sales of DM 2.6 billion, the BMW companies in Austria, comprising the engine plant at Steyr, the marketing company BMW Austria Ges.m.b.H. and the BMW Austria Bank Ges.m.b.H. in Salzburg, are among the ten largest companies in Austria. The Austrian trade surplus generated by BMW business amounted to about DM 700 million.

### **BMW Technik GmbH, Munich**

BMW Technik GmbH carried out special development tasks in car and transport technology and in the broader environment of the car business. New processes and products are derived, at an early stage, from technological, economic and social developments, and presented as examples.

The 110 or so employees come from very different fields. The company is specially equipped for the design, engineering, prototype construction and testing of cars and components.

In 1992, after the Z1 roadster and the cars for electric propulsion, the E1 and E2, BMW Technik GmbH developed a study of a particularly compact saloon with a centre rear engine. It is geared primarily to demanding drivers who seldom carry passengers and who want to combine comfort, safety and good road performance with particularly economical fuel consumption and small dimensions. The car, named the Z13, was presented at the Geneva Salon International de l'Automobile in March 1993.

Together with BMW Motorrad GmbH, the company developed the concept motorcycle, named the C1, to demonstrate new perspectives for riding safety and comfort. In 1992, the technology of electrically-driven cars was advanced. Work focussed on electric propulsion, safety and lightweight construction.



The motorcycle market continued to recover in 1992. BMW sold more motorcycles than ever before. In Germany, the R100R is the motorcycle in greatest demand in its segment. BMW also continued its 70-year tradition with a newly-developed generation of motorcycles with flat twin engines.

**Demand for motorcycles continues to rise**

In 1992, demand for new motorcycles increased slightly in the western industrial nations to 870,000 units. Sales of machines of more than 500 cc continued to rise, while demand decreased in the smaller motorcycle segment.

The growing popularity of classic motorcycles without fairing also points to a change in user habits.

Safe and responsible motorcycling is increasingly gaining ground.

With a 20% increase in registrations to more than 150,000 units, Germany remained the world's second-largest motorcycle market. Sales also rose slightly in the United States, in Japan and France, but decreased markedly in some other major markets.

**Group sales of BMW motorcycles achieve new record**

Demand was generally brisk, group sales of new BMW motorcycles increasing by 11% to 35,700 units; the highest level ever. For the first time, BMW's world market share rose above 4%. Worldwide, in the segment for large machines of more than 750 cc, every tenth new motorcycle sold was a BMW.

In Germany, 13,800 new BMW motorcycles were registered; 24% more than in the previous year. The R100R was the motorcycle in greatest demand in its segment. The largest export markets for BMW motorcycles remained the United States, France, Italy and Spain.

With an output of almost 36,000 machines, the capacities of the Berlin motorcycle plant were fully utilized in 1992. With flexible working hours, manufacture was adapted better to meet seasonal fluctuations in demand.

The increase in BMW sales is due primarily to the market success of a new motorcycle with a flat twin engine and classic contours, the R100R, and a sporting touring machine, the large K1100LT.

Together, these machines accounted for 43% of the BMW motorcycles sold. In autumn, the R80R and K1100RS models were added to the range.

In 1992, sales generated by BMW motorcycles and accessories increased by 6% to DM 580 million. When including the manufacture of car parts at the Berlin plant, the motorcycle business employed some 2,100 people at the end of the year.

**Priority for safety and environmental protection, new generation of motorcycles with flat twin engines introduced**

The motorcycle markets are also influenced increasingly by demands for reduced exhaust emissions and lower noise levels, more economical fuel consumption and maximum safety.

BMW adjusted, in good time, to this trend and was the first manufacturer to develop a controlled three-way catalytic converter for motorcycles and to offer it in the K100 models. In Germany, two-thirds of the buyers of these 4-cylinder motorcycles opt for this technology.

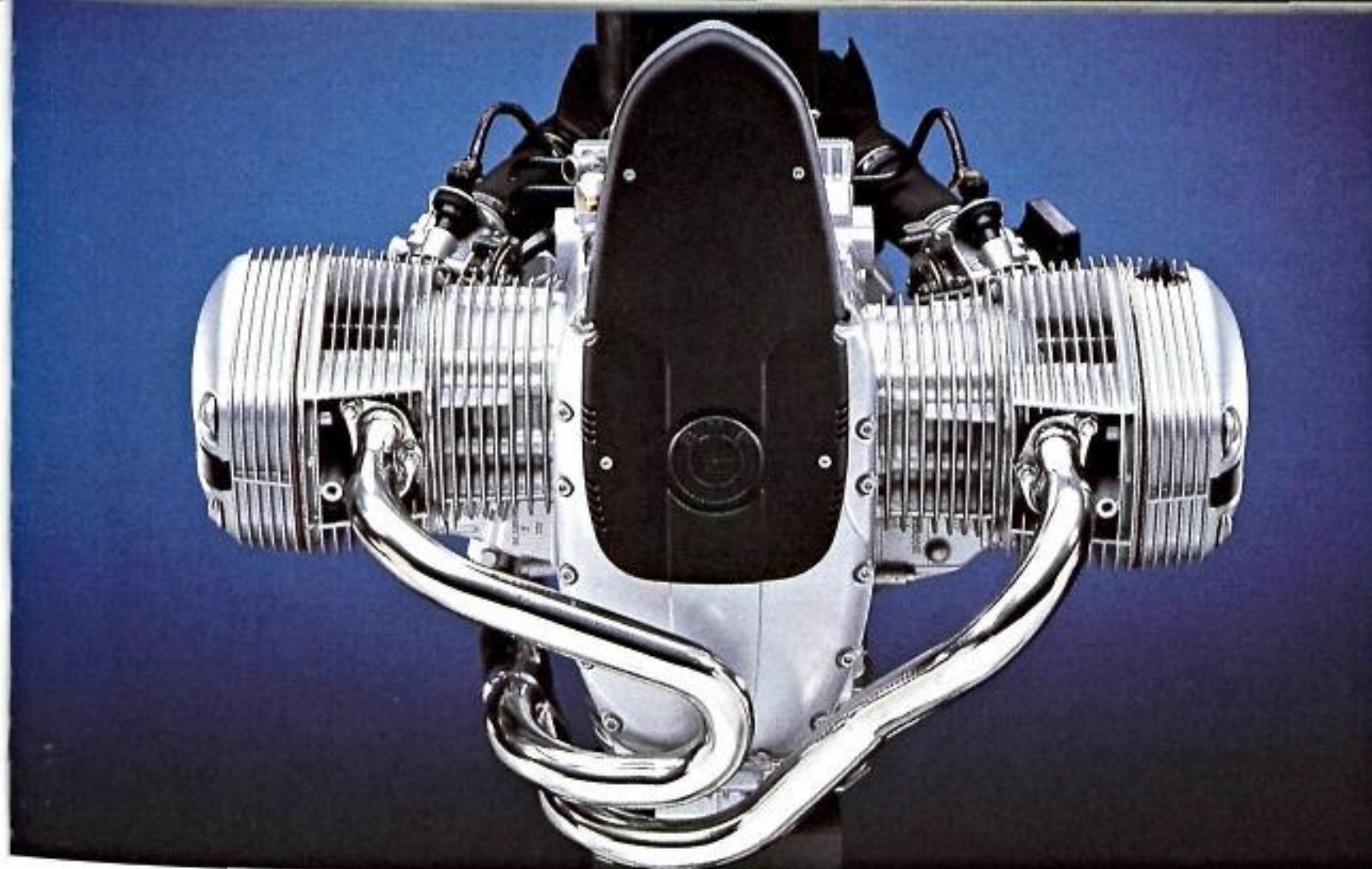
BMW offers uncontrolled catalytic converters for K75 motorcycles. In the usual motorcycles with flat twin engines, pollutants can also be reduced markedly by means of exhaust gas recirculation.

At the beginning of 1993, BMW presented a newly-developed generation of motorcycles with flat twin engines. These machines can be fitted with a controlled catalytic converter and an improved anti-lock braking system. BMW set new motorcycle standards with the introduction of an anti-lock braking system in 1988.

The first model of the new range, the R1100RS, will be delivered to customers from spring 1993. The new generation of motorcycles will further consolidate BMW's position in the motorcycle markets.

There are signs of a steady, slightly upward trend in overall demand in the traditional motorcycle markets. Additional sales opportunities will develop, in the long term, in Central and Eastern Europe, and in South America.





The new generation of BMW motorcycles with flat twin engines: A real riding experience combined with environmentally compatible technology and maximum safety standards.

BMW AG





Activities outside the car and motorcycle business continued to make progress in 1992. For example, BMW Rolls-Royce received its first large order, and Axicon began operations in the digital mobile telephone network. softlab was incorporated into the BMW Group. The leasing and lending business increased.

#### **BMW Rolls-Royce GmbH, Oberursel**

In September 1992, the company, in existence since mid-1990, received its first large order for the new family of aero engines with the designation BR700. Initially, this is for the delivery of 200 engine systems, worth a total of about DM 1 billion, to the Gulfstream Aerospace Corporation in Savannah, Georgia, in the United States.

The first engines will be delivered at the end of 1996 and used in the G V executive aircraft, which has been newly developed by Gulfstream. With these engines, the aircraft will have a very long range, for example, non-stop from New York to Tokyo.

In March 1993, the company concluded an agreement with the Canadian aircraft manufacturer Canadair for the equipment of a future aircraft with BMW Rolls-Royce engines.

The development of the new family of engines, developing between 10,000 and 22,000 pounds thrust, progressed according to plan. In spring 1992, work began on the construction of a development and assembly centre at Dahlewitz near Berlin. 1,000 new jobs are being created, with investments amounting to DM 400 million. From 1996, BR710 engines with 10,000 pounds thrust will be put into production there.

At the Oberursel plant, the company makes components for other engine manufacturers. Parts are delivered to Rolls-Royce plc. for the existing ranges of large engines. The experience gained is integrated into the production of the new BR700 engines.

In addition, BMW Rolls-Royce develops and builds small gas turbines and carries out maintenance and repair work. At the end of 1992, the company had some 1,000 employees.

#### **Kontron Elektronik GmbH, Eching**

The company develops, produces and sells products and services relating to control systems for industry, measuring technology, graphics, network systems technology, image and material analysis.

Several promising products were introduced to the market in the year under review. These include the particularly sturdy industrial computer KOI, the colour scanner ScanCom 50 for applications in the graphics industry, and new electronic components.

In order to survive, in the long term, the fierce competition in the electronics market with its short product cycles, the company concentrates on fields of activity in which it has specific skills and experience. The entire company continued to be restructured with this aim in mind. By the end of 1992, Kontron employed some 600 people.

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

softlab produces and sells CASE systems (Computer Aided Software Engineering) for the computer-aided development of computer programs, and carries out major DP projects (Data Processing). With more than 20 years of successful activity, the company has achieved a leading position in this field. It has belonged to the BMW Group since the end of August 1992.

softlab is represented by its own subsidiaries in the major European markets and in the United States. There are signs of brisk demand for the Maestro II program, introduced in the year under review. The company also has a good competitive position for large projects in communications and information processing for companies from industry and trade, and





Combustion chamber and fan of the BMW 700 family of aircraft engines by BMW Rolls Royce. The final systems will be delivered in 1995.

for banks, insurance companies and the public sector.

1992 was determined by the company's increasing internationalism. Investments were used mainly to develop the business activities of the individual subsidiaries abroad, particularly in the United States. By the end of 1992, the softlab group employed some 850 people.

#### **Axicon Mobilfunkdienste GmbH, Munich**

Since the opening of the new digital networks D1 and D2 in Germany in July 1992, Axicon sells products and comprehensive services for this new telecommunications market, in addition to the previous range for the C network. Apart from user equipment, services include the transmission of conversations and data, as well as reservation and secretarial services.

1992 was marked by the preparation of the BMW dealers for the new line of business and the launching of business activities in the D networks.

Customers gain access to the network through Axicon's D network card. The company charges participants directly for its services. Mobile telephones and accessories are offered through the BMW authorized dealers who are important sales partners for the company, as they are also for equipment for the C network.

Axicon was the first supplier in Germany to introduce a system of charges for mobile telephone services which suits different groups of customers. This attractive system met with a very positive response in the market and served as example for the organization of charges in the D network.

The additional services have also set new standards. For example, Axicon customers can ring a number worldwide to gain information, and to book flights, hotels, restaurants and seats at events.

The company cooperates with other partners in order to extend its clientele beyond the drivers of BMW cars. Within the automobile industry, these are Adam Opel AG and Dr. Ing. h. c. F. Porsche AG, in consumer electronics Loewe Opta GmbH, and in the mail-order business Baur Versand. Thus, from mid-1993 Axicon will have not only some 800 BMW dealers, but also 1,000 other sales partners to ensure a nationwide, comprehensive service for all its customers. By the end of 1992, Axicon Mobilfunkdienste GmbH employed about 100 people.

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

The company arranges insurance worldwide for the BMW Group, its employees and customers, as well as for other corporate clients. It helps BMW companies to determine insurance risks and prevent losses, and advises them on all associated tasks.

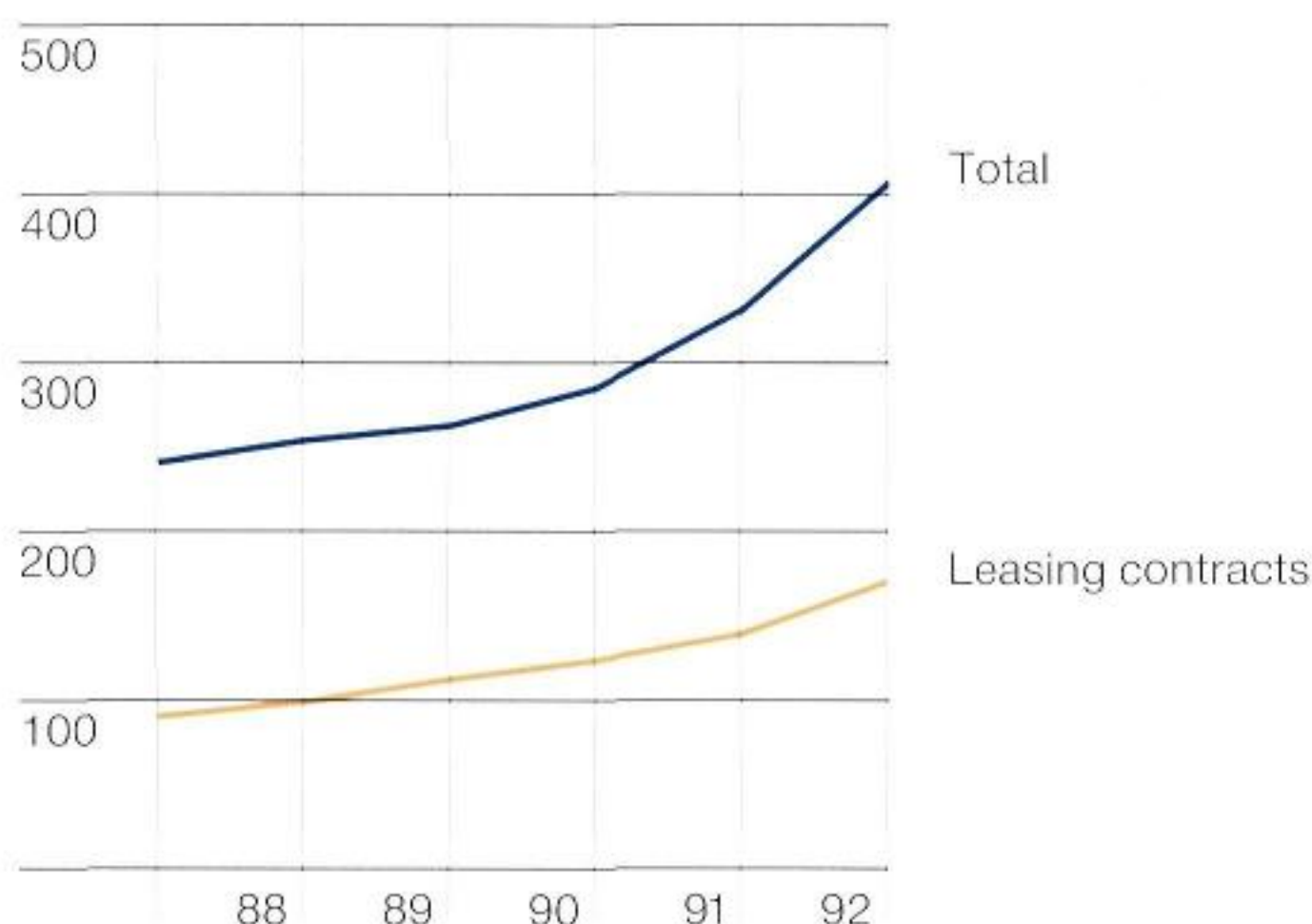
The Bavaria Wirtschaftsagentur also arranges insurance for the Company's car and motorcycle business. This is offered to customers by the financial services business.

Bavaria Insurance Co. Ltd. and BL Reinsurance Co. Ltd., both based in Dublin, Ireland, provide insurance and reinsurance, particularly for the risks of the BMW Group. Bavaria Insurance Brokers, established in Dublin in 1992, arranges international insurance and provides related services. The Bavaria Wirtschaftsagentur GmbH holds almost a 100% interest in these three companies.

Bavaria-Lloyd Reisebüro GmbH, Munich, in which the Bavaria Wirtschaftsagentur holds a 51% interest, organizes business trips and events for the BMW Group. It offers these services and tourist programmes to non-BMW clients.

In 1992, the Bavaria Wirtschaftsagentur and its subsidiaries again developed extremely satisfactorily. They employed a total of some 90 people.





**Total Contracts of  
BMW Financial Services**  
in thousand units

### Financial services expand

The scope of the financial services of the BMW Group continued to expand in the year under review. Within five years the number of leased products and loans to customers and dealers have more than doubled. Total assets from sales financing amounted to DM 9.8 billion; their share of the balance sheet total of the BMW Group increased to 35.5%.

Despite high growth rates, this field of business also has sound financial structures. Own funds cover 13% of sales financing business, a far higher percentage than is required by law. Refinancing is arranged primarily through the international capital market.

Financial services are managed as an independent organizational unit within the BMW Group, with its own responsibility for marketing and results. This unit also has the task of consolidating the market position of BMW cars and motorcycles by providing attractive services.

1992 saw the worldwide development of the network of financial services. For example, the financing companies in the Netherlands, Great Britain and Japan, previously run jointly with local partners, became wholly-owned BMW companies. On January 1st 1993, these were followed by BMW Financial Services Inc. in the United States. Thus, BMW has its own companies offering financial services in ten countries.

Joint companies and business relations with local banks exist in four more markets. In France, the interest held in the BMW financial and leasing companies was raised from 51% to 66%.

BMW enjoys specific advantages over rival leasing companies with international operations because of the close cooperation between financing and sales companies within the BMW Group. The individual wishes of customers and car dealers can be satisfied flexibly by a single company, even across frontiers.

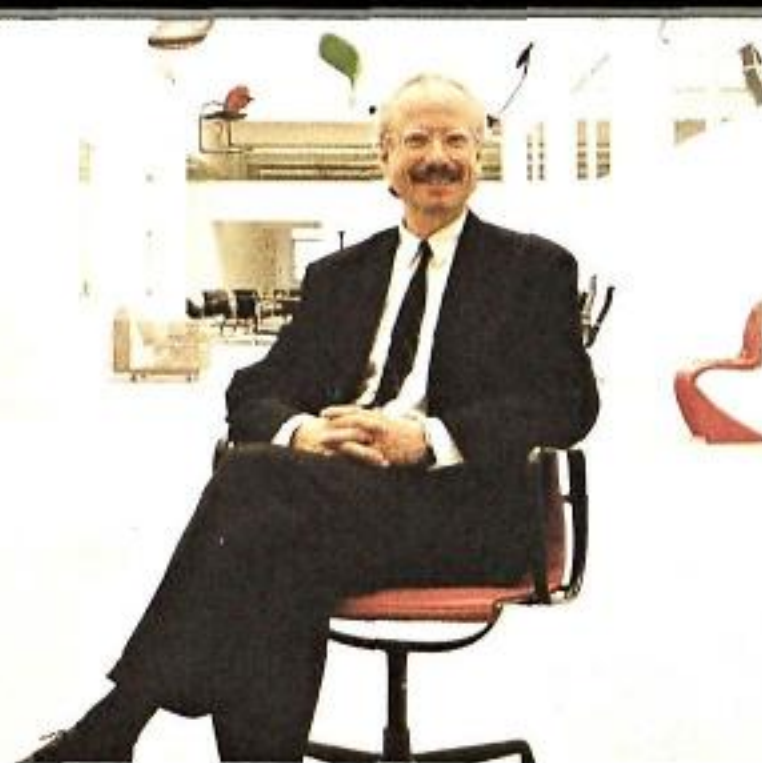
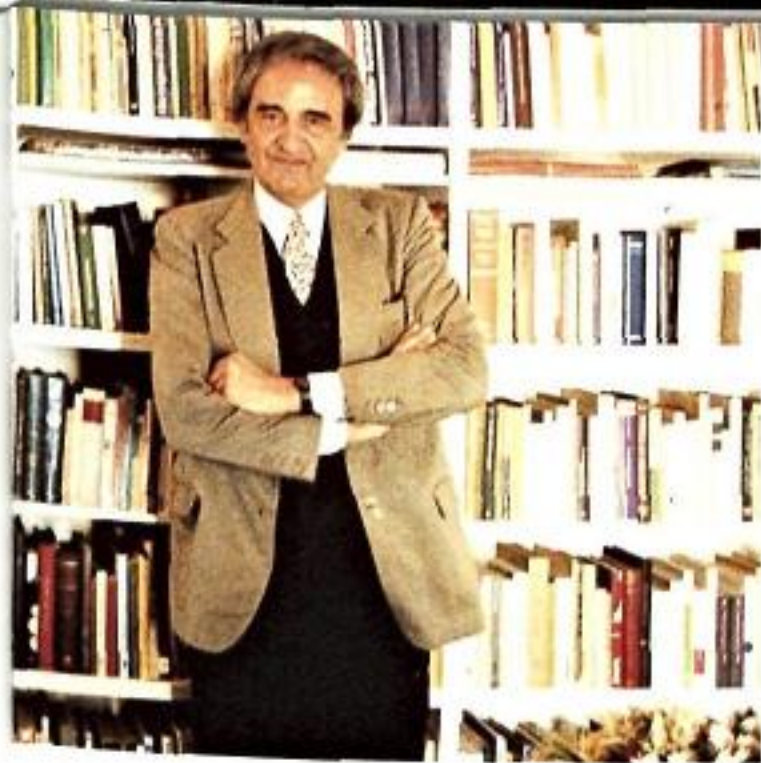
### Number of new financing contracts rose by 13%

In 1992, 344,000 leasing and loan contracts were concluded for financing new and used cars and motorcycles; an increase of 13%. Customer financing and dealers' stocks accounted for half the new contracts each. The total number of contracts rose by 23% to 406,000. The financing volume amounted to DM 10.5 billion, compared with DM 9 billion in the previous year.

With 180,000 new contracts, Germany remained BMW's largest market for financial services in 1992. In the seven other European markets with BMW financing companies, new business rose to 87,000 contracts, and in the United States, Japan, South Africa and Australia a total of some 77,000 new contracts was concluded.

By the end of 1992, BMW's financial services employed about 450 people worldwide.



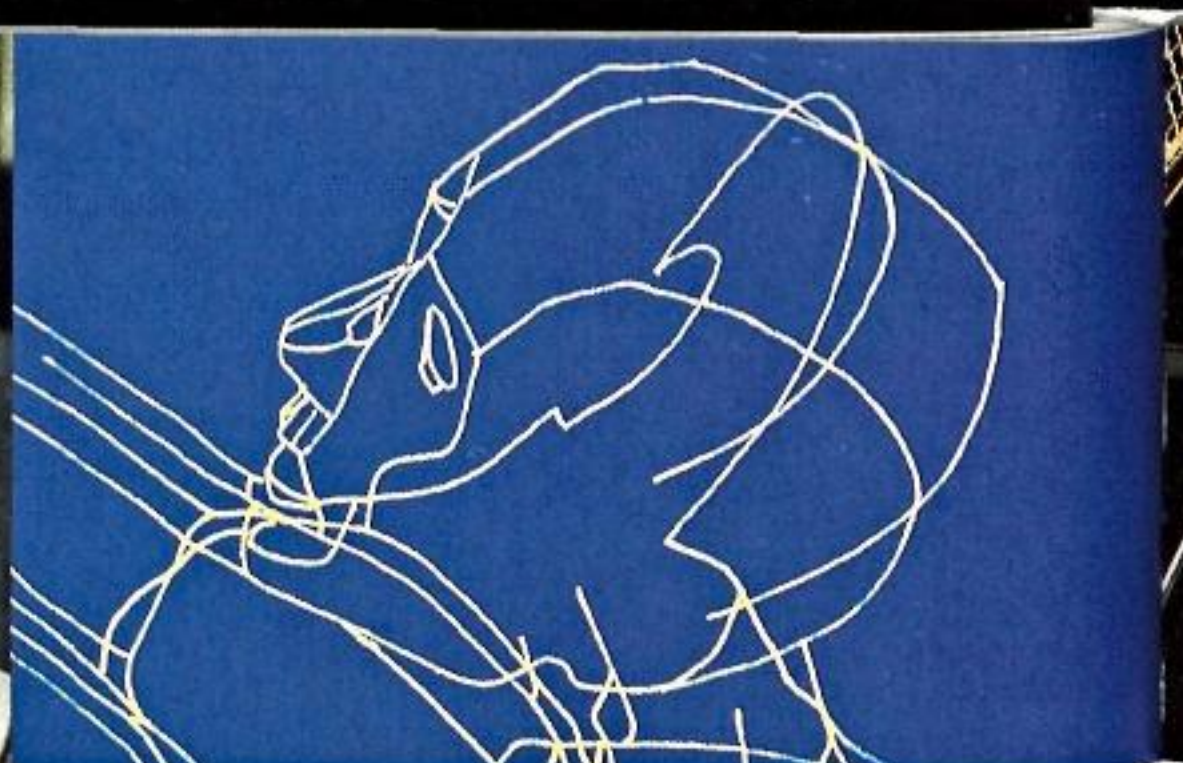
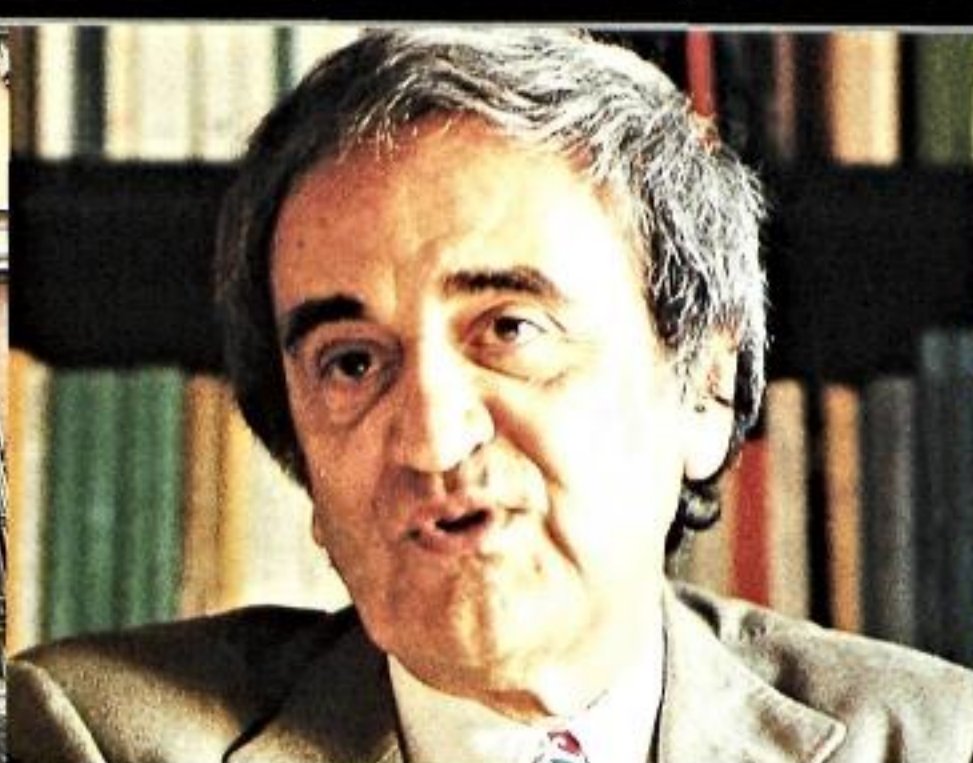


### Design as a Way of Life

Civilization lives by manufactured products. They are designed for man. The designer is called upon, and undertakes, to determine the practical and emotional needs of the user. Design gives function its form. If the design is a success, the objects are unique. Four personalities from the old and new world talk about design from their different points of view, and BMW elaborates its understanding of design.

# BMW AG



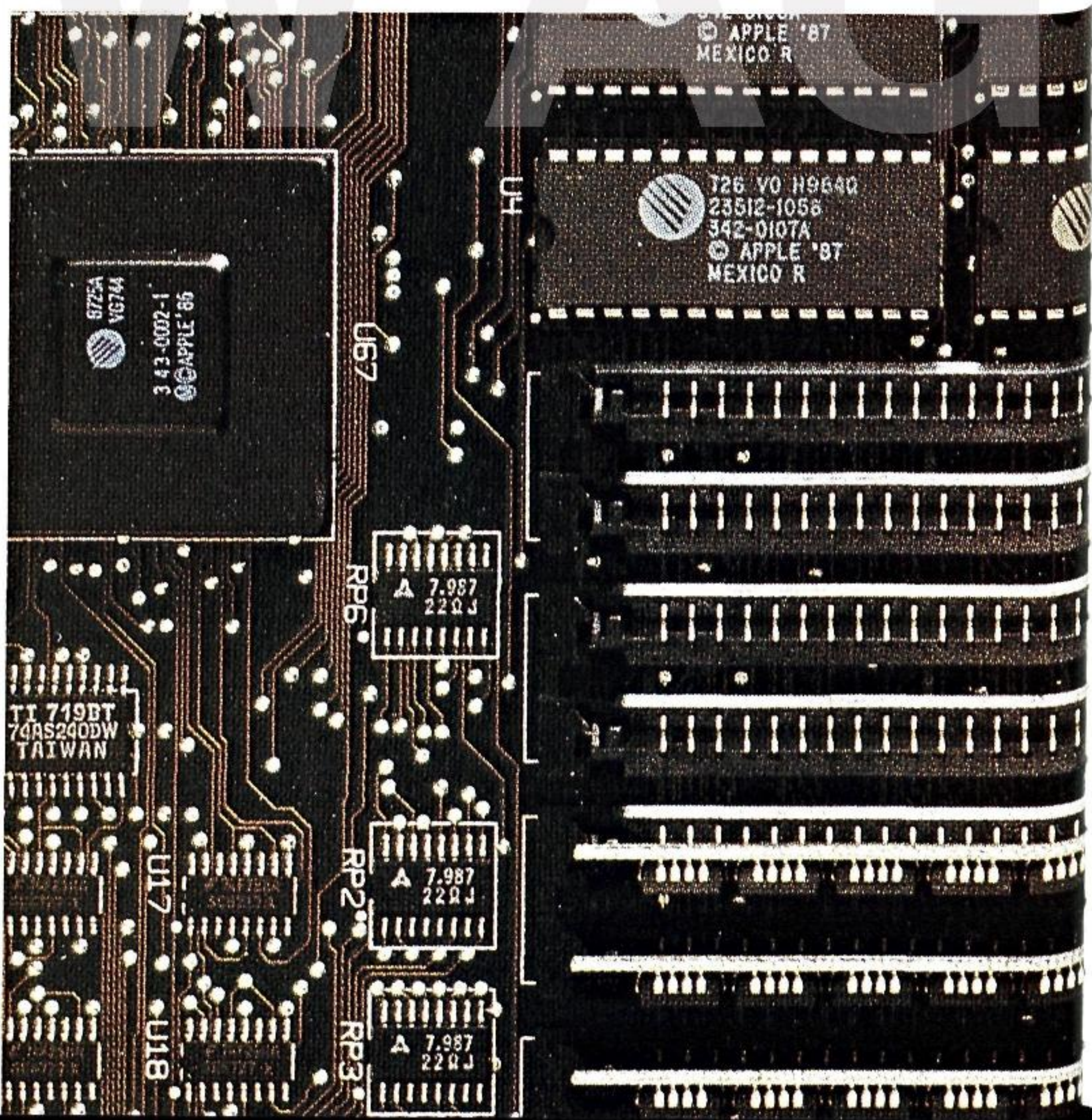
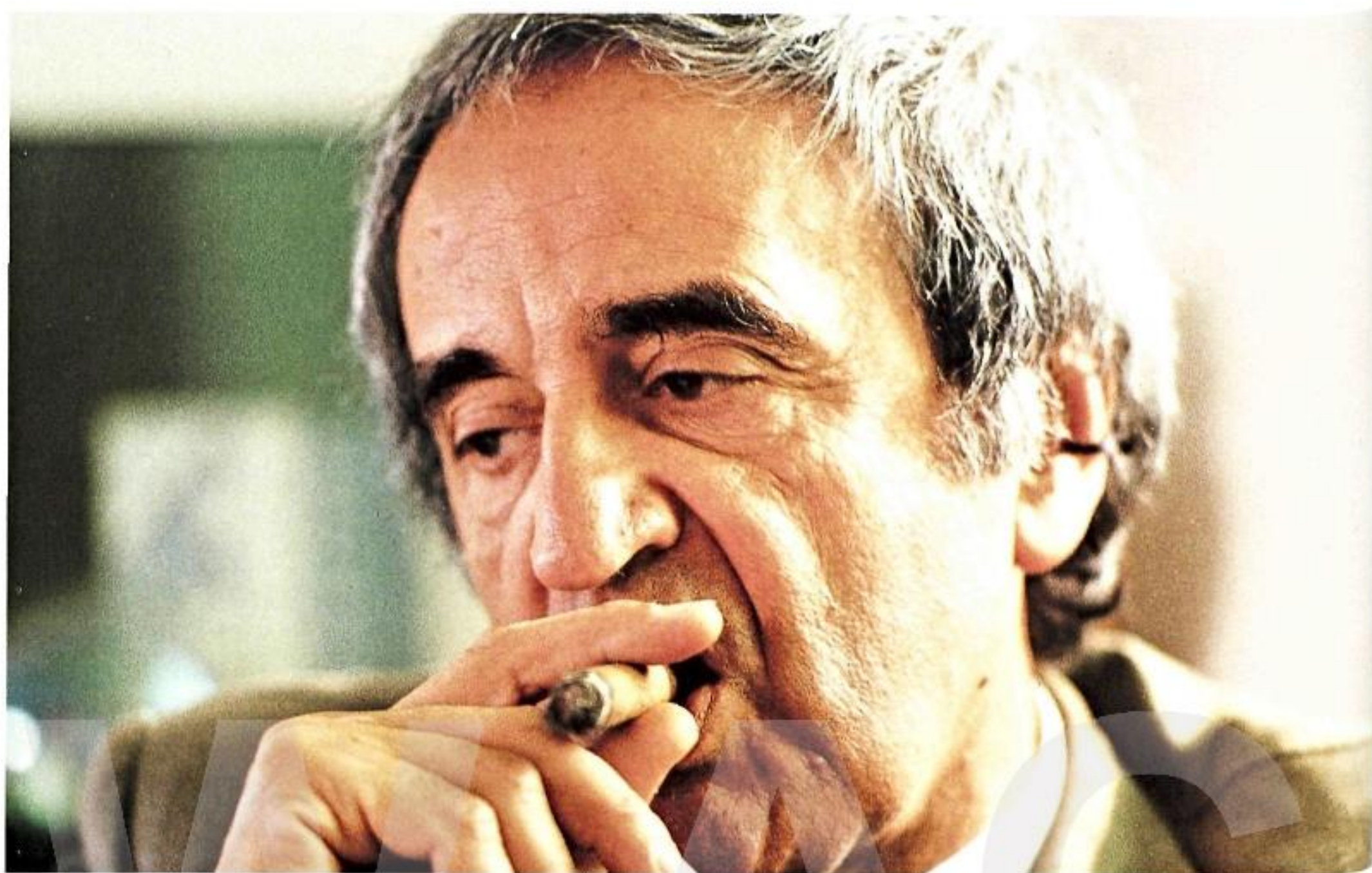


## Tomás Maldonado Milan

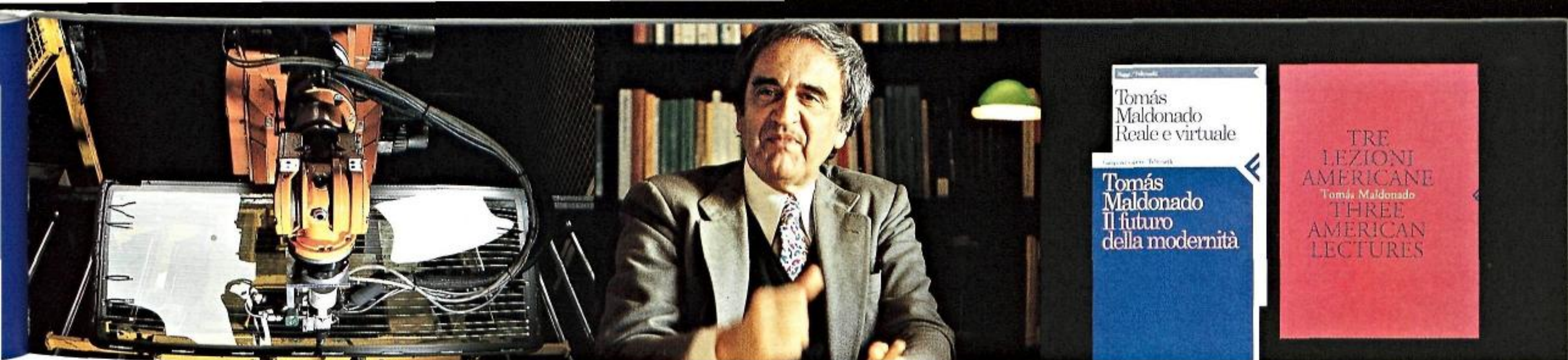
Tomás Maldonado, born in Buenos Aires in 1922. 1954–1967 lecturer at the Hochschule für Gestaltung (College of Design) in Ulm, 1967–1969 President of the International Council of Societies of Industrial Design (ICSID), 1976–1981 editor of the journal *Casabella* (Milan). From 1967 he taught at several colleges and universities, such as the Royal College of Art (London), Princeton, Bologna, and Harvard. Since 1981, Professor of Environmental Design at the Faculty of Architecture, Technical University of Milan. In addition to his publishing activities, Tomás Maldonado works as a designer and industrial consultant.

Professor Tomás Maldonado is a design theorist who sees his thoughts on design in direct relation to the environment. His ideas date back to the time he spent as teacher and rector at the world-famous Hochschule für Gestaltung in Ulm. They have continued to develop clearly in his later teaching and publications: "In the 1950s people began to take note of the emergence of a 'new landscape in art and science'. That environment started to take shape thanks to the artistic contribution of the avant-garde and of scientific discoveries. It certainly presented a sharp contrast to the intellectual landscape in which we had been used to seeing ourselves for centuries. However, the 'new landscape' which, rightly, amazed us at the time, is now being ousted by another 'new landscape'. This has not so much to do with the avant-garde as with the growth of technologies which are changing dramatically the objects that surround us in our civilization. I am thinking, in particular, of microelectronics and software technology."

These new phenomena are important approaches for Tomás Maldonado's studies on the perception of the world. He begins by examining what happens in today's product world. What impact do new products have on our environment and on our daily







life, on communications and our perception of outer reality?

"To quote just one example, one of the most obvious changes in the field of electronics is miniaturization. This does not mean simply the reduction of an object's size and the change of its specific functions."

Tomás Maldonado points out that the emergence of an innovative product triggers a process of ramification,

material objects are increased by non-material processes and services. But are we justified in thinking that in the 21st century we could be interacting only with an intangible reality of fading, illusory images? Such a scenario may fascinate science fiction writers, but it is not particularly realistic."

It is more realistic to come to grips with so-called "virtual reality", one of the most fascinating developments in

a new kind. I mean the skills of learning how to learn and go on learning. This is necessary because of the very dynamic structure of the world in which we live, and the unusual speed



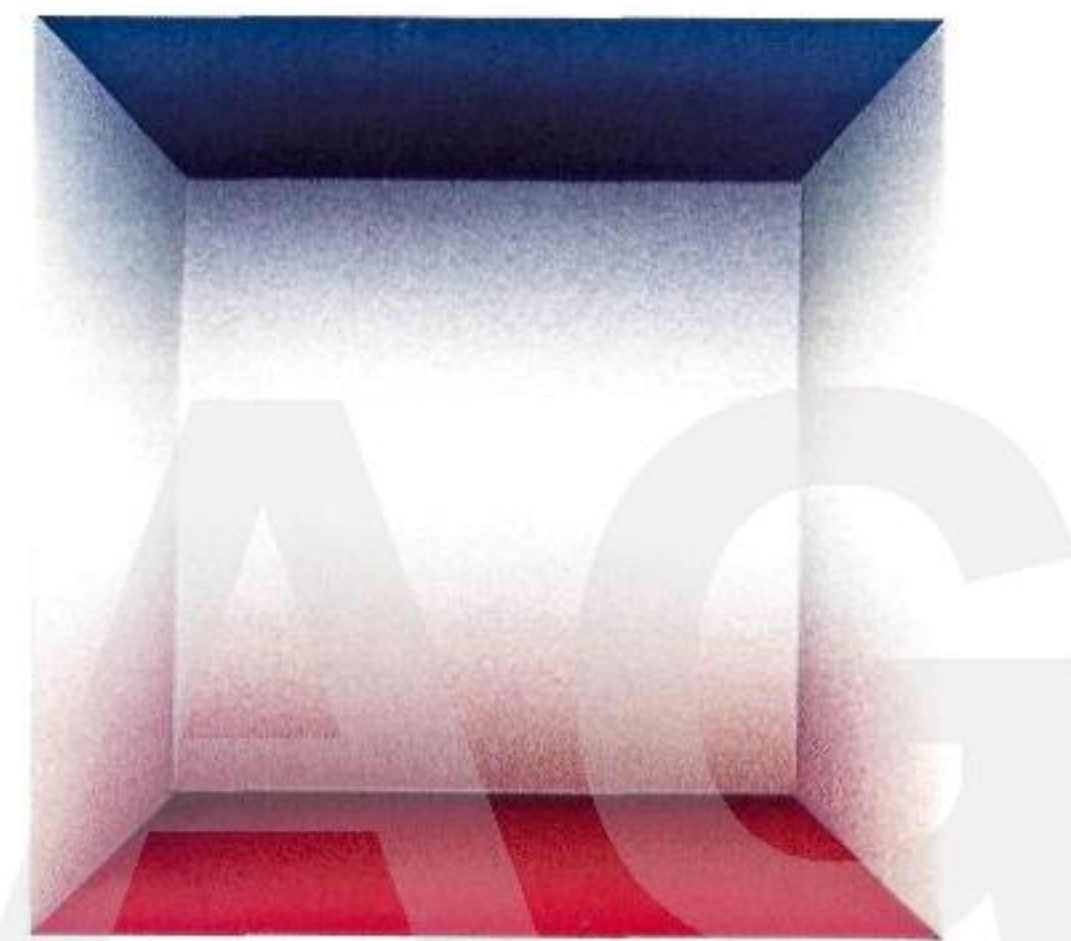
multiplication and diversification.

"Where we used to have a single product, we now have an entire 'range'. I don't just mean segmentation of the product range due to different versions, but all the new products and services which have developed directly or indirectly as a result of the innovative product."

Recently, however, Tomás Maldonado has also recorded phenomena which could counteract the present trend towards the multiplication of new products. "There's a new phenomenon: Even if they differ in performance, products which have the same type of function can be combined in a single system. This prospect and the parallel development of decisive technologies have led some people to speak of the progressive reduction of the world's materiality, of the de-materialization of society as a whole, as

the field of computer-produced images and shaping techniques. "The virtual realities certainly disrupt our relationship with the three-dimensional world, and increasingly reduce our possibilities of experience in the physical world. However, we cannot forget that these constructed images are produced on the basis of our past and present experience of this world and universe. They are excellent shaping devices – perhaps the most sophisticated ever created – but it would be wrong to believe they are objects which can interact independently with reality. We are not dealing with robots.

By tackling such questions, we shall be able to judge the extent to which the designing and planning of products can be of lasting value. In this respect, previous skills and know-how do not suffice. It is now equally decisive to acquire skills and know-how of



of change in the field of science and technology, which, as everyone knows, greatly influences production and consumption alike."





## Lella Vignelli New York

Lella Vignelli, born in Udine (Italy), degree in architecture from the University of Venice. From 1959 at Skidmore, Owings and Merrill, Chicago, as interior designer. In 1960, with her husband Massimo Vignelli, establishment of an office of design and architecture in Milan.

1971, establishment of Vignelli Associates. Lella Vignelli is responsible for product and interior design. Numerous international awards and publications, exhibitions, for example, in New York, Washington, Milan, Moscow and Leningrad.

Lella Vignelli is Italian. For years she has developed European design in New York. Her target groups are not only a wide-ranging American elite, but also Europeans, who feel international and think internationally.

She works in a typical New York building. The offices on the 14th floor offer a panorama of the skyline of Manhattan and the Hudson River. The offices are a true expression of the Vignelli Associates' mission. Spaciousness and clear forms, combined with carefully selected details, radiate peace and simplicity.

Lella and Massimo Vignelli have worked in the United States since 1985. "New York is our city", and New York bears their mark. They designed the sign system for the New York subway, and the well-known shopping bags for Bloomingdale's and for Saks Fifth Avenue. Their broad range of work includes books, magazines, calendars, posters, packaging, furniture, lamps, jewellery, glass, corporate identity programmes, exhibitions and complete interiors.

In New York the Vignellis found the conditions they needed to put their ideas of design into practice on an international plane. Variety is a deliberate component of their programme. "We don't just make design, we live it. That is why we don't specialize. The success of design as a way of life depends on its overall harmony, and that is what we offer."

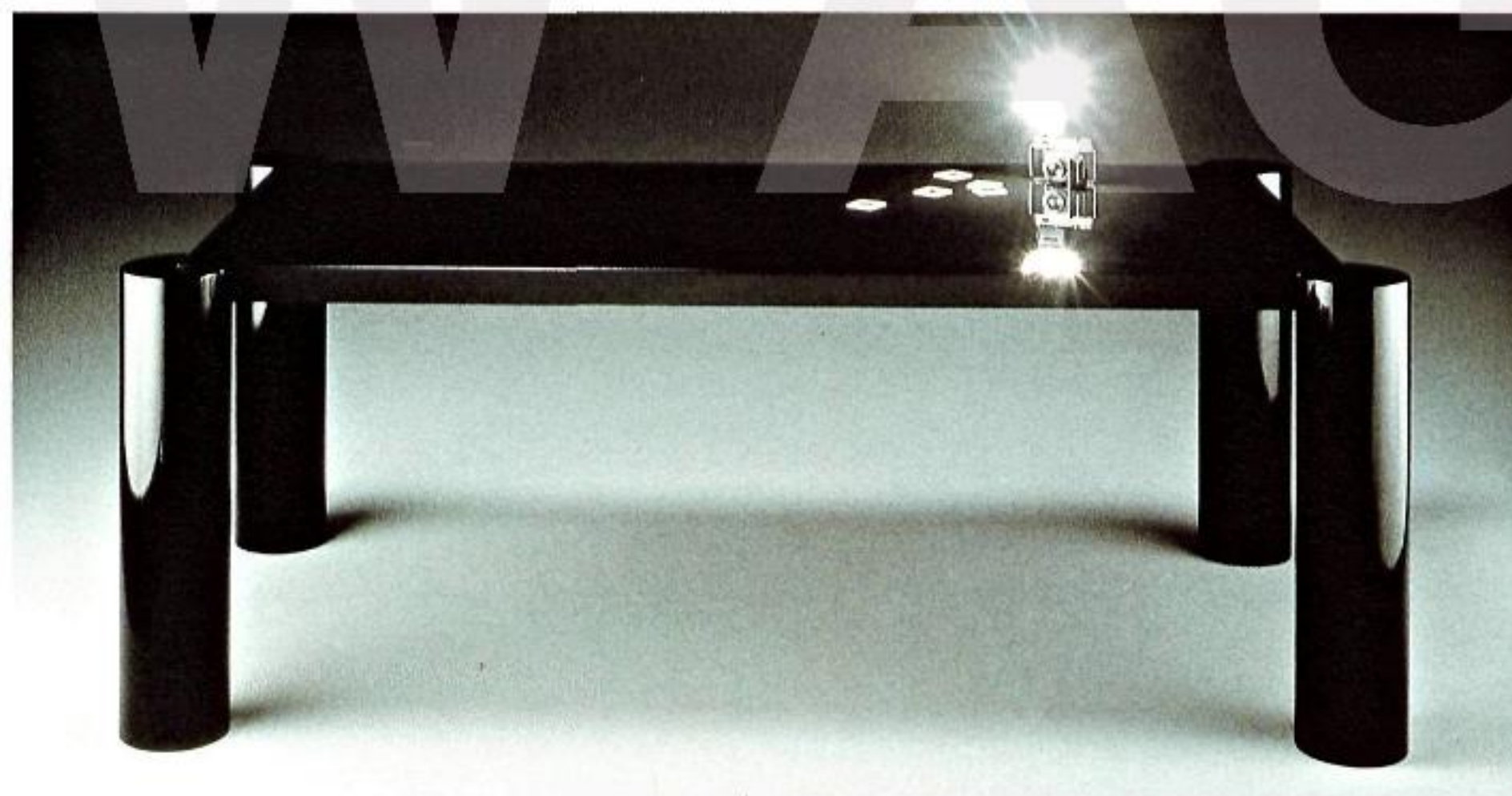
Does Lella Vignelli see striking differences between European and American design? "Yes, certainly. In Europe, design is an integral part of product development. Manufacturing technologies, distribution channels and markets all play an important role. Thus, good European design is always developed in its totality. This explains why it looks as if it has been made in a single casting. Here, in the United States, design is understood more as pure form. An object's visible outer form is rarely developed integrally with the content."

Lella Vignelli also sees national differences in European design. "The

say, from the Middle Ages into the 20th century, and into European culture which is so completely different, has interrupted its natural course of development. Japan's imaginative tradition can rarely be integrated into consumer goods intended to satisfy western demand and, therefore, is rarely reflected in Japanese design.

The Japanese would have to find a new approach in order to penetrate western markets with their own designs."

Why are the Vignellis so successful in America? Their Italian/European origins certainly play a role, as does their typically European trait of constantly



Italians are particularly creative in every field – from fashion to unusual furniture. Germany is different again. There, design is geared largely to use. It is strongly influenced by the traditional, specifically German, highly-developed engineering culture. Priority is given to quality and function. An object's outer form is the logical consequence of its inner qualities."

From international experience, and from her work in the field of design theory, Lella Vignelli also has an exact idea of Japanese achievements. "There is no doubt that Japanese art has influenced modern aesthetics in general. However, the huge leap, let us

refining the products. "Rationality and reduction are part of our European culture. That is why we aren't fashionable, but we aren't unmodern either. This is the only way we can remain individual. We concentrate on essentials and condense forms to primary shapes. Because we aren't fashionable, our work is considered classic and therefore timeless."

"As far as I can see," says Lella Vignelli, "in the 1990s, people will attribute increasing importance to genuineness and lasting value. This also applies to products."



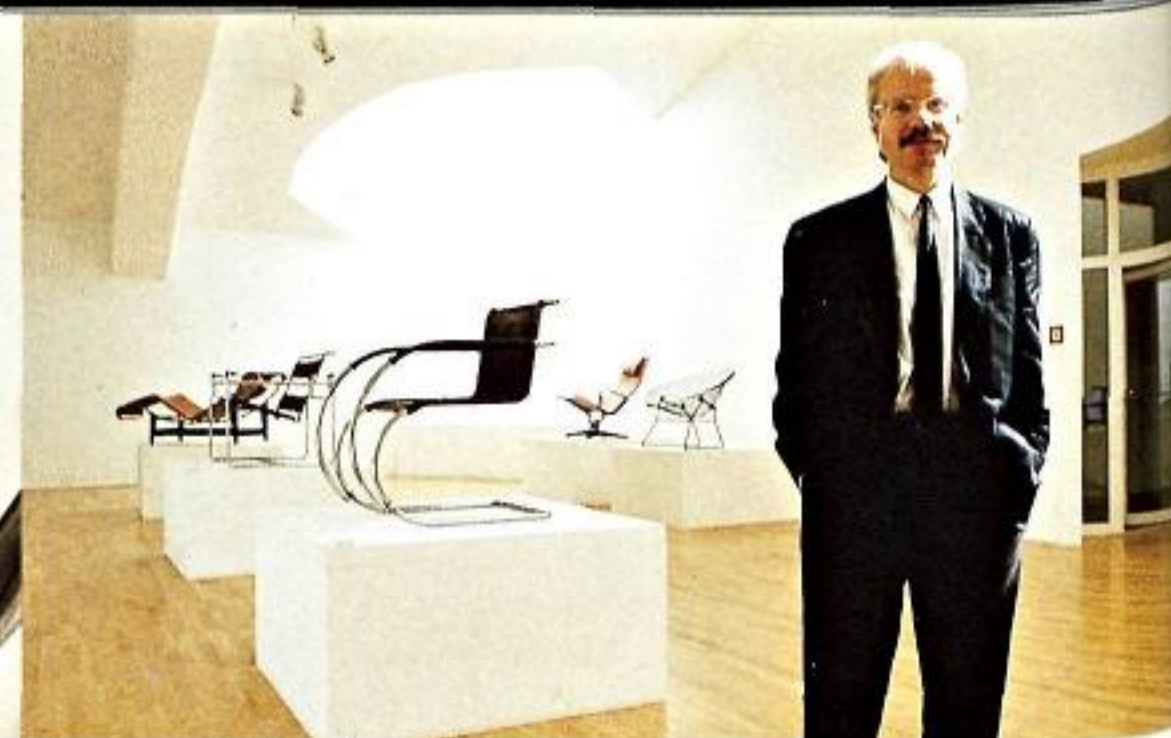
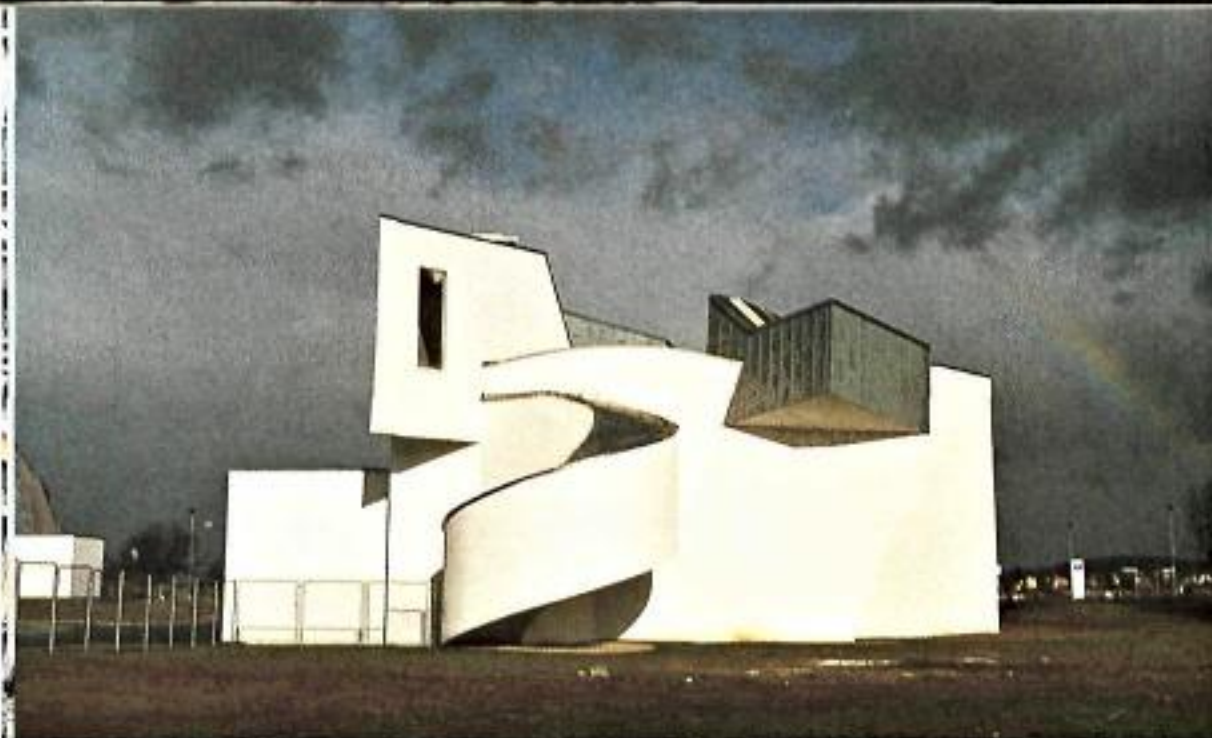


She designed her office, and most of the things in it, herself. The atmosphere she has created for her surroundings confirms her theory.

"Form and function must form a single unit in order to be credible. As representatives of European traditions, we are used to a certain kind of harmony in life. No wonder, our environment reflects this. The individual standard you set for your life and work is extremely important."







## Rolf Fehlbaum Basle

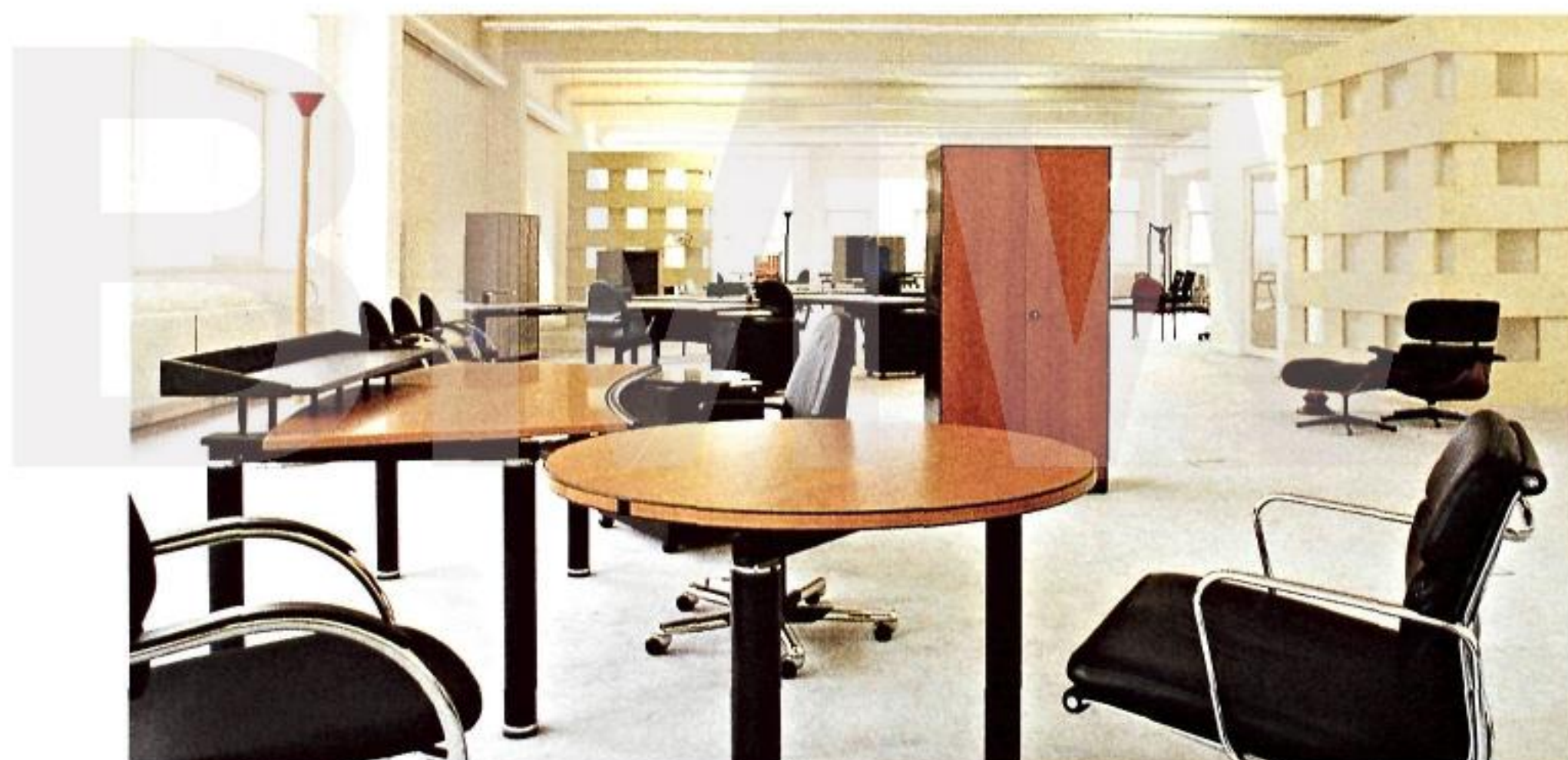
Rolf Fehlbaum, born in Basle in 1941. Studied social sciences, Lic. rer. pol., Dr. phil., doctoral thesis on Saint Simon's Utopian Socialism. Co-founder of an art publishing house. Editor at a film company. Lecturer at architects' further training courses. From 1977 manager of the international furniture company Vitra. From 1983 assembled a collection of furniture, particularly chairs. Rolf Fehlbaum is

technicality, corresponding with our product concept. Our idea, laid down in an overall plan, was that all future Vitra architecture should make a high-tech impression. We broke with our own line of thinking with the museum by Frank O. Gehry. The examination of contemporary architecture continued with the fire station by Zaha Hadid and the conference building by Tadao Ando. We are constructing the latest

and functions again. "Design is a process that intelligently coordinates contradictory demands and results in a balanced solution. The additional value of a product, which is achieved by outstanding design, does not cost anything. Design is never luxury." Today's design must satisfy economic, technical, symbolic, ergonomic and ecological requirements. "When strong designers and competent manufacturers get together", says Rolf Fehlbaum, "the result is often amazingly simple and elementary."

Ecological thinking does not necessarily result in completely different kinds of products. However, it changes the design equation. The minimization of waste was always part of the design ethic. Now we can apply new findings to achieve this aim. The choice of materials depends on their durability and recyclability. Designers aim to use as few different materials as possible. Design solutions which permit the simple dismantling of the product at the end of its service life also change the language of forms. "It used to be important to assemble a product in a short time. Today, it is just as important to be able to dismantle it easily. Questions, such as whether a product can be repaired, are of relevance again. Manufacturers and designers are having to change their attitudes."

Rolf Fehlbaum points out that these findings are not new. "Thirty years ago pioneers such as Ray and Charles Eames designed products that followed very similar criteria and are, therefore, still relevant today. Their design was based on the idea of minimizing materials and idealizing clarity and transparency. Eames' idea is a strong contrast to the throwaway mentality. The famous aluminium chair is not only timelessly beautiful but, from today's point of view, an extraordinarily ecological product." Today's designers think a great deal about "de-materialization". The question is how to achieve a specific result with



the initiator of the Vitra Design Museum which opened in 1989.

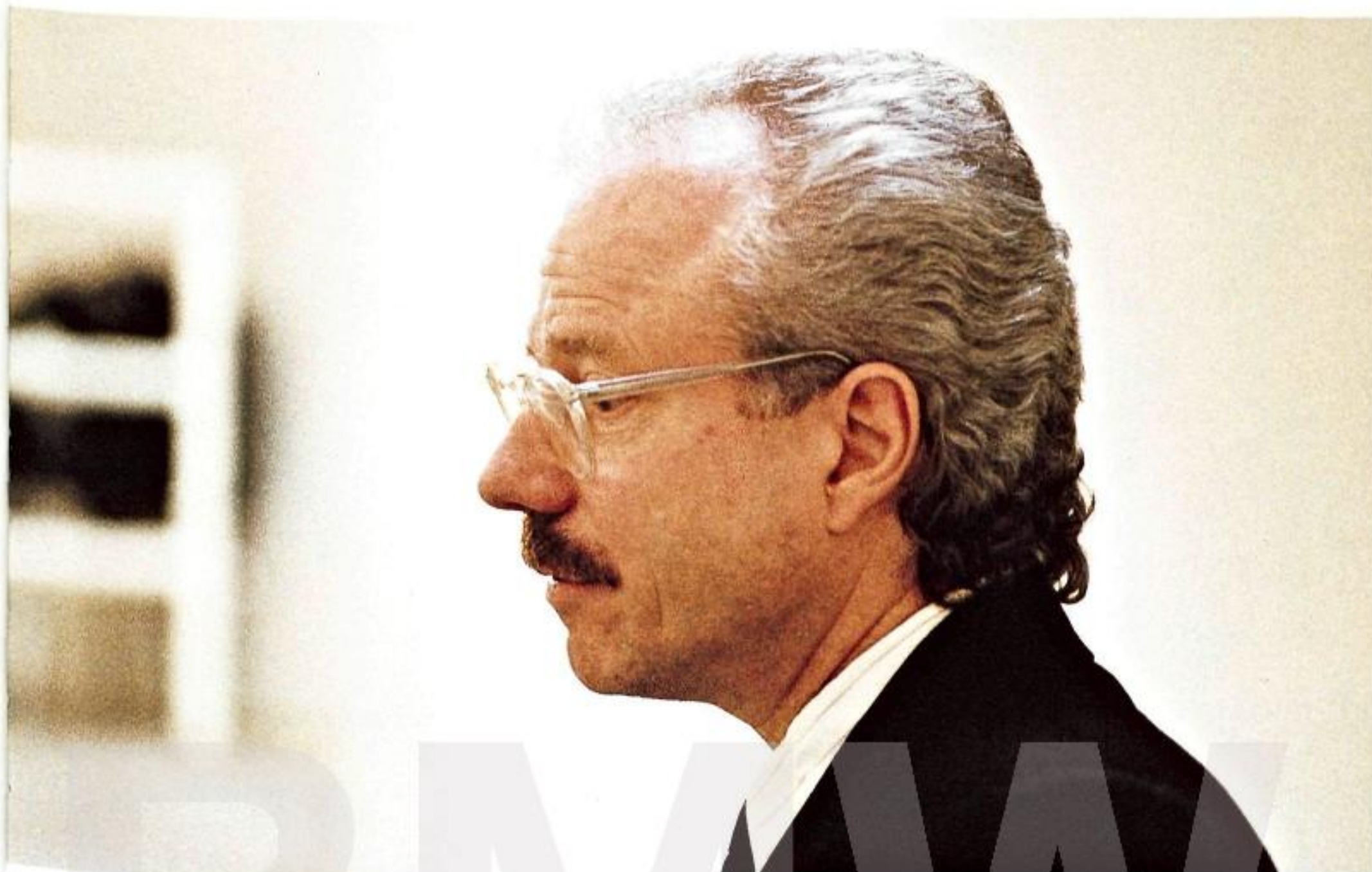
Several changes have taken place at Vitra in the last few years. Ecological awareness deepened, the assimilation of design experience in the 1980s resulted in new insights, and the examination of contemporary architecture continued as new buildings were constructed.

"Our architecture in Weil expresses liberality, complexity and internationalism. We do not want a uniform display of corporate attitudes or even corporate power, as used to be the norm. We aimed to create a unique, multi-layered, vital place", Rolf Fehlbaum explained. The factory building by Nicholas Grimshaw (1980) was the first of an unusual group of buildings on the Vitra grounds at Weil. "Our architecture should express precision and

factory building with Alvaro Siza. He sees the exciting co-existence of Hadid, Grimshaw and Gehry on the western side of our grounds with great tranquility and subtlety. Like any company, we are building because we need more space. With our choice of architects, we are trying to make the Vitra grounds something special." As a company, Vitra is committed to pluralism and experimentation not only in its architecture, but also in design.

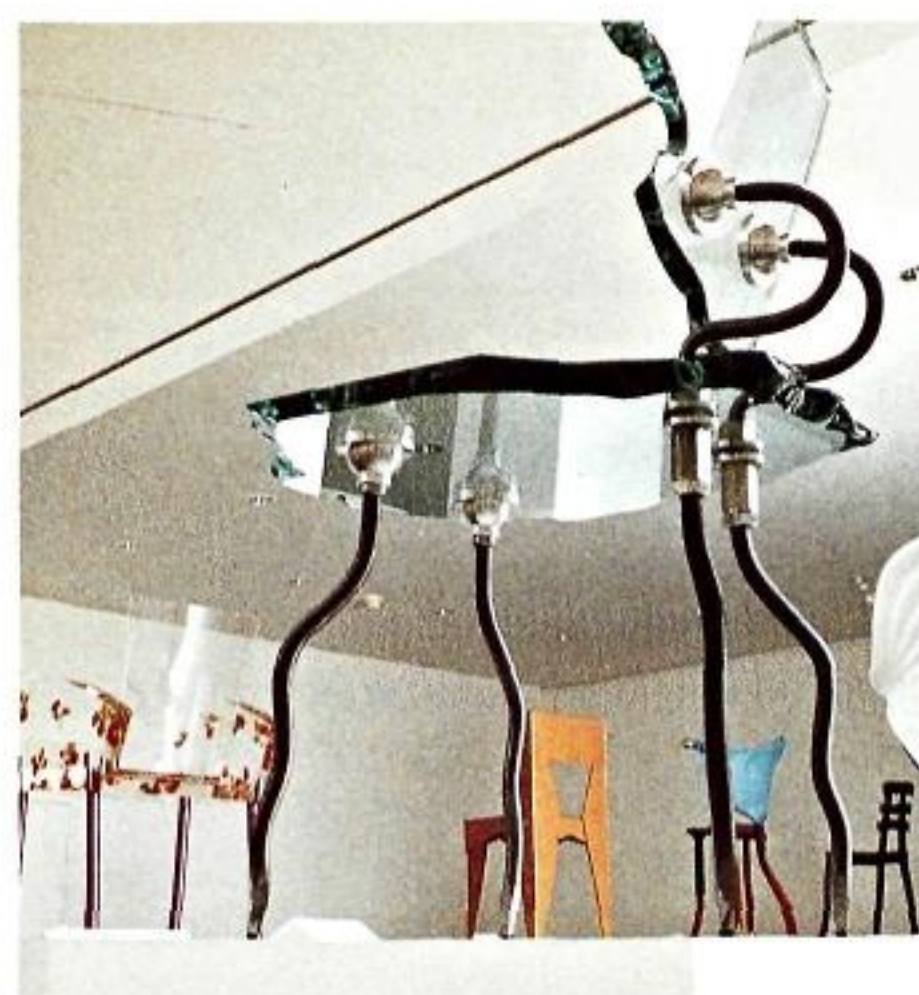
The transition from the design euphoria of the 1980s to forms that display a new sobriety, is not yet complete, but the new direction is beginning to be apparent. Rolf Fehlbaum sees these changes as a reaction to the design explosion of the last decade, as annoyance at an excess of design, and criticism of waste and too much conspicuousness. The new trends are more geared to contents



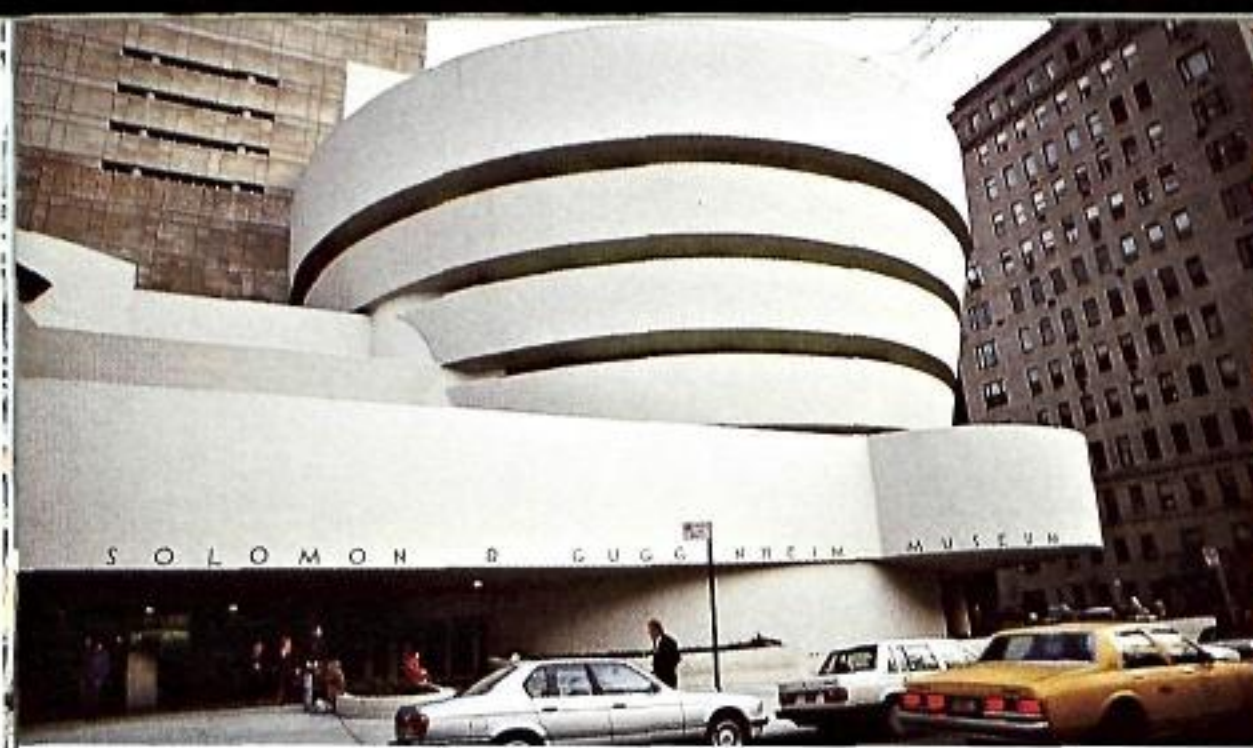


as low an impact on the environment as possible. "Our subject is not the chair, but sitting, not the car, but mobility. The aim is not to dispense with comfort, but to establish a new material culture which results in objects and products with less impact on the environment."

At Vitra, new trends should not result in a new uniformity. The design trend of the 1980s put an end to this false uniformity. "There is no such thing as Vitra style. We create different products with different designers. Our strength lies in variety, liveliness and inspiration. We do not want to impose the Vitra identity on the user of our products, but to provide him with instruments with which he can express his own identity."



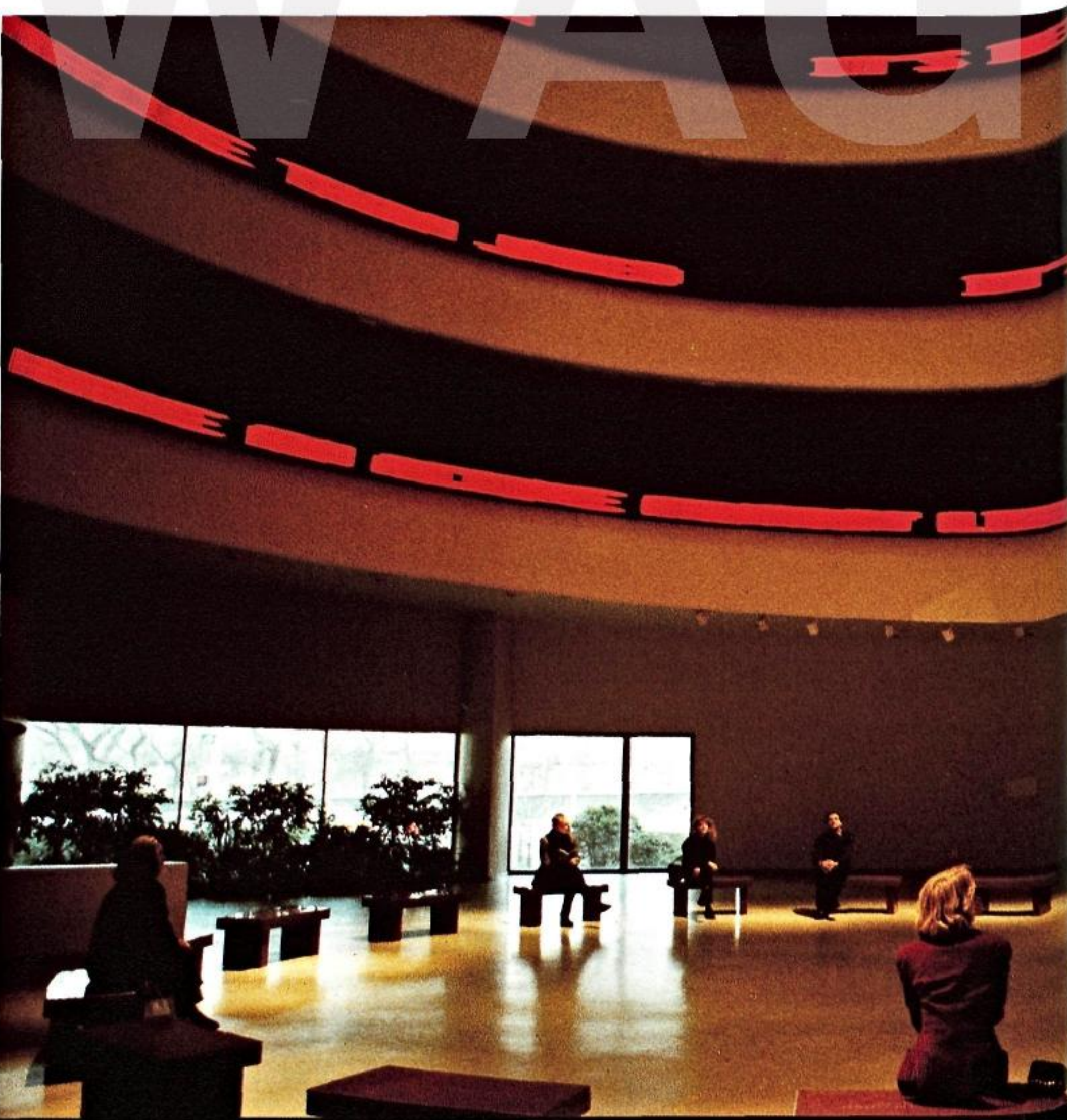
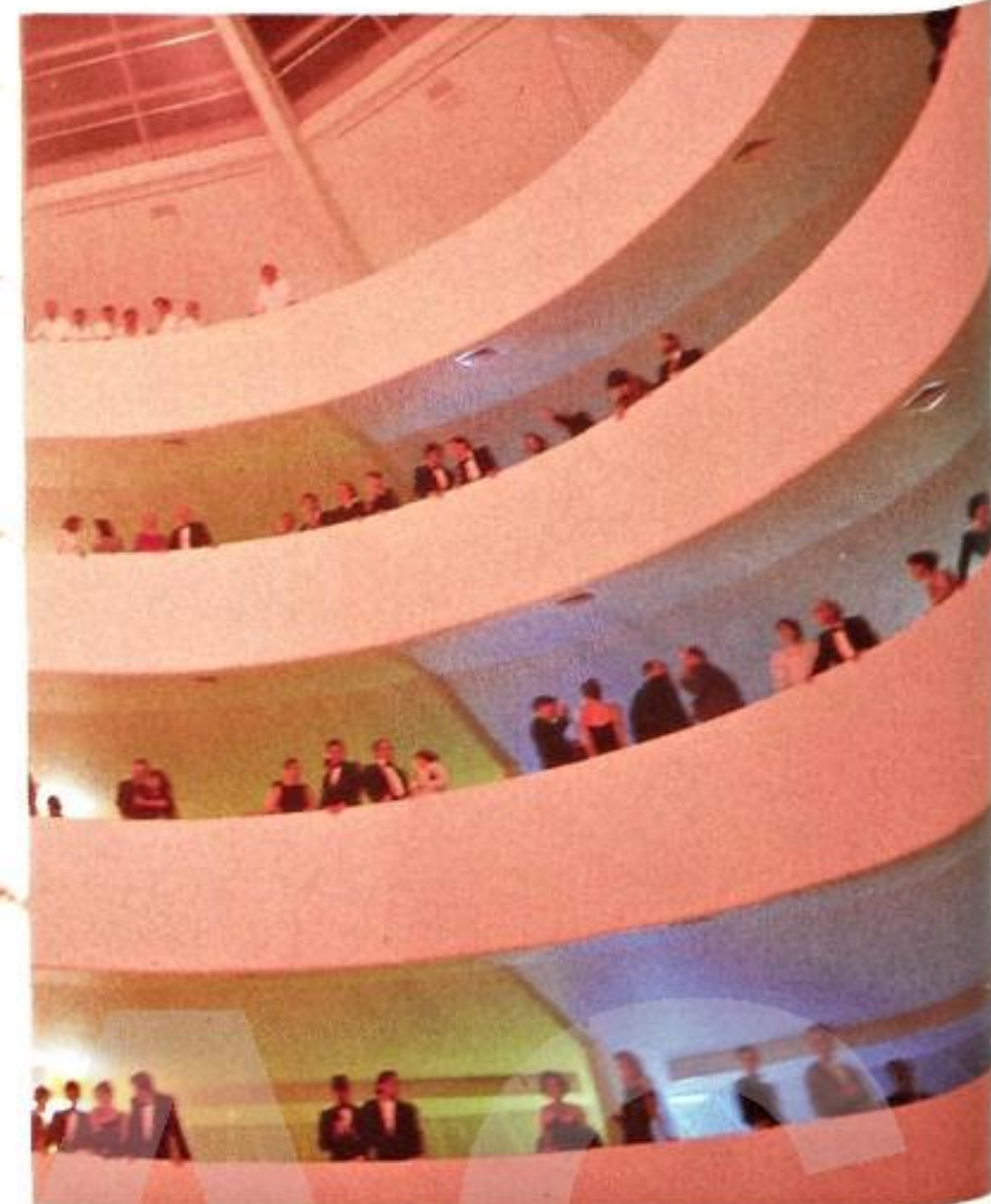
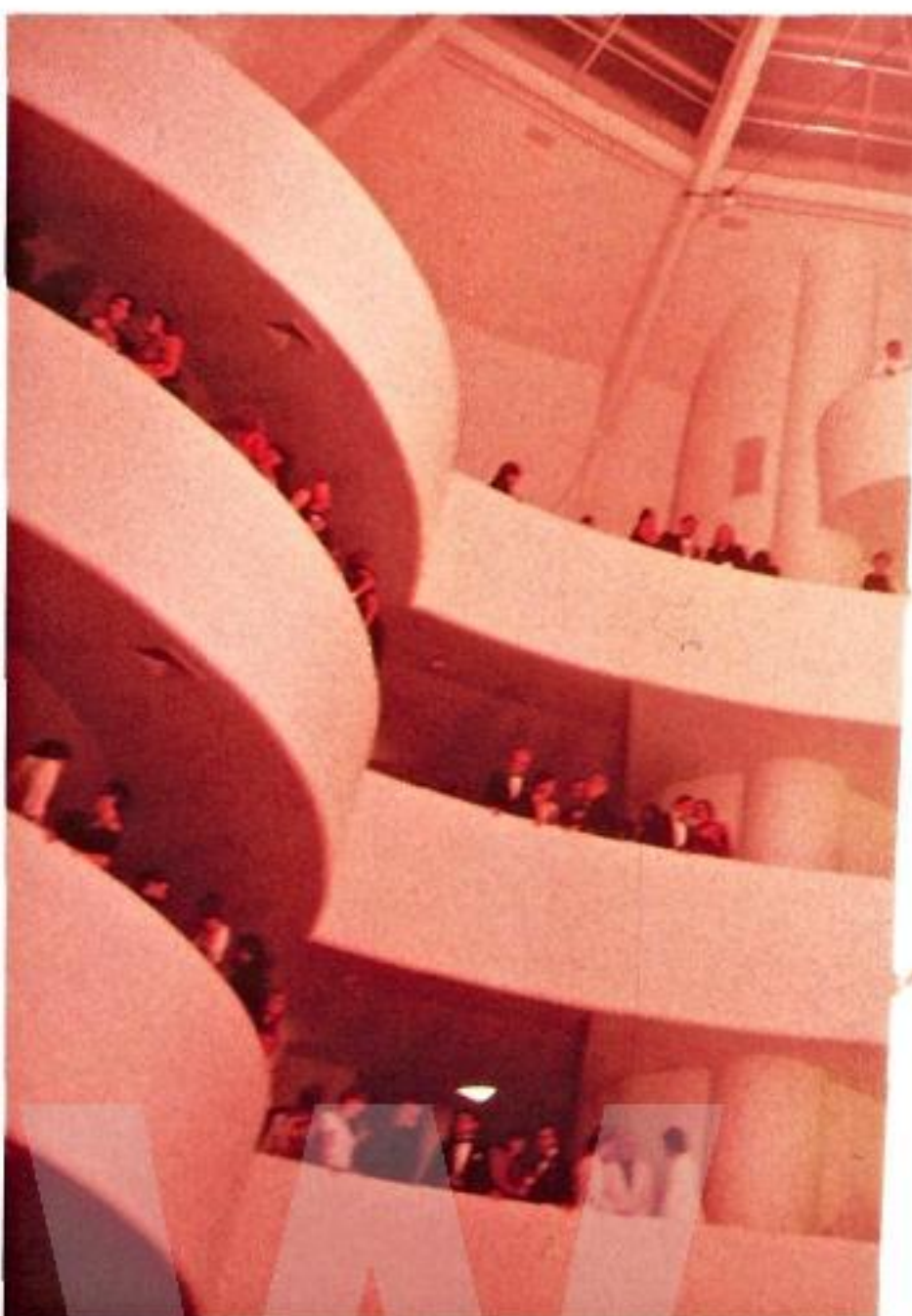




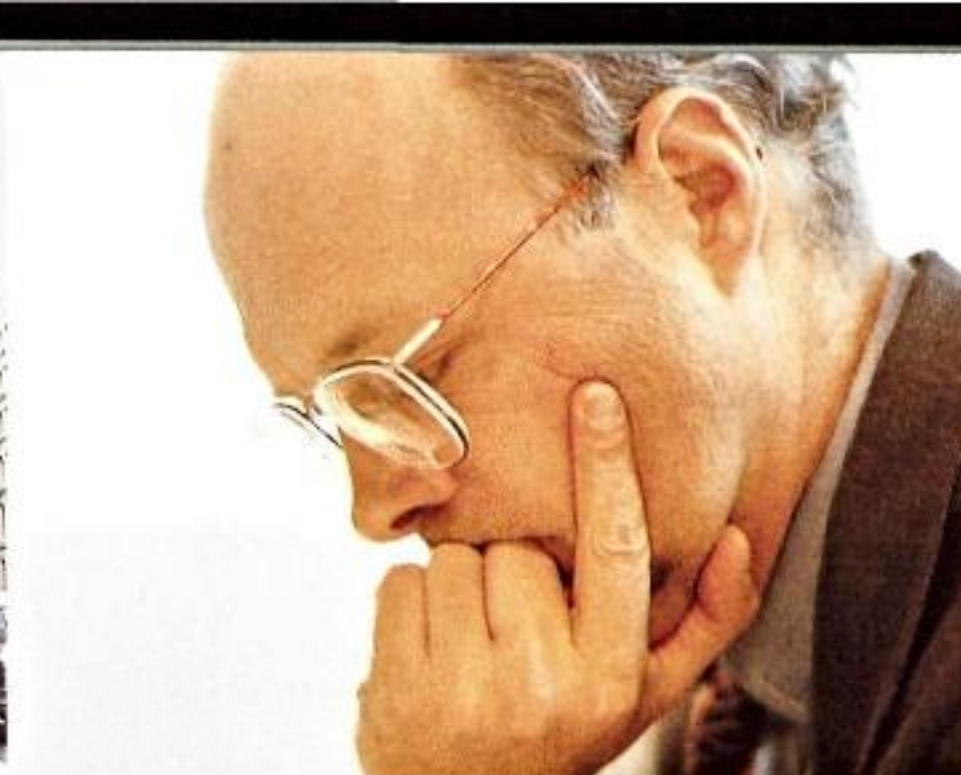
## Thomas Krens New York

Thomas Krens, born in New York in 1946. Studied art history at Williams College in Williamstown, Massachusetts, and at the State University of New York at Albany. Master's degree in art. Then studied at Yale, Master's degree in public and private management. 1972–1980 Assistant Professor of Art in the Williams College Art Department. 1990 appointed Director of Williams College Museum of Art. Since 1988 Director and Trustee of the Solomon R. Guggenheim Foundation and director of the Guggenheim museums in New York and Venice. Thomas Krens is an American art historian with the international outlook of a sophisticated manager. The “products” he deals with are 20th century works of art from numerous countries worldwide. His market is global, his base is the Guggenheim Museum in New York.

He understands the laws of supply and demand, and he understands 20th century art-historic phenomenology. He is familiar with the challenges of international markets, complete with their opportunities and risks. First, the question of supply: “Look at the facts. The Guggenheim collection consists of more than 6,000 works of art. It is therefore one of the largest, most representative and most valuable collections of 20th century art in the world. We have three exhibition locations: the Solomon R. Guggenheim Museum on Fifth Avenue and the new Guggenheim Museum SoHo in New York, and the Peggy Guggenheim Collection on the Grand Canal in Venice. In 1996, we will open the Guggenheim Museum in Bilbao, in Spain. Nevertheless, we are never able to exhibit more than about three percent of our collection at any one time. As director of this institution, I am forced to ask the obvious question: How can we maximize the museum's existing potential?”







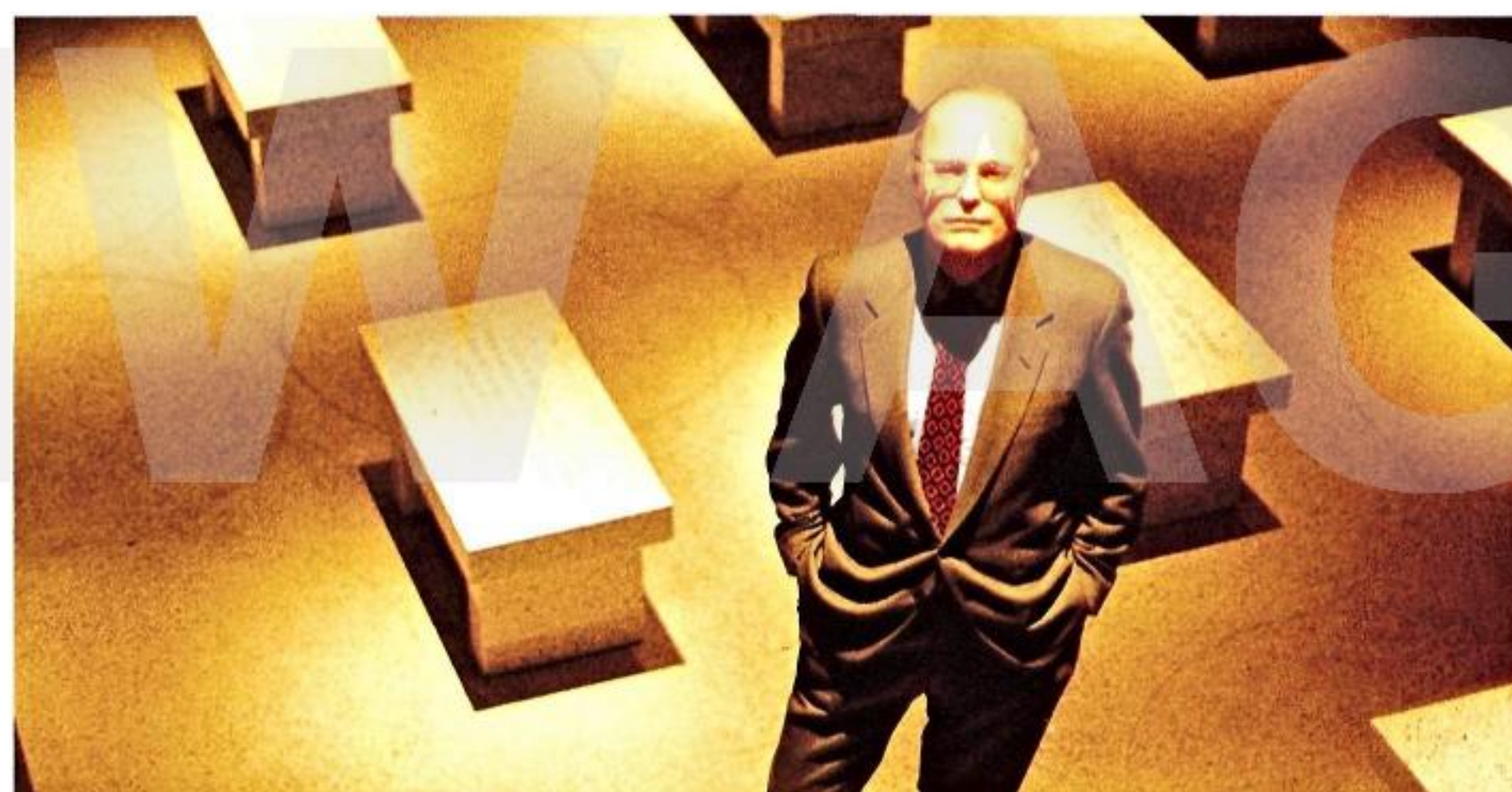
Second, Thomas Krens' views on demand: "On the one hand, the status of culture has been growing dramatically for decades. An increasing number of people feel the need to discover the cultural history of our century. On the other hand, the public has become highly discerning. The engagement of visual culture has expanded enormously as a result of numerous new museums and the popularity of spe-

are carrying on this tradition by working with some of the finest architects practicing today, such as Frank Gehry, Hans Hollein, and Arata Isozaki."

The architectural design of a museum performs the function of providing the physical space for collecting, protecting, and displaying the artifacts of 20th century culture. But the architecture also performs the larger role of communicating a point of

ideal, but rather that national character can be expressed in an international context.

The Guggenheim in the future will be defined by three elements: its international collections, its architecture, and its international staff. "People like Carmen Giménez from Spain, Germano Celant from Italy, and Mark Rosenthal and Diane Waldman from the United States guarantee the



cial exhibitions. In reality, I find myself competing for audiences with motor-racing, golf tournaments, and other leisure-time activities."

According to Thomas Krens, the Guggenheim is in a unique position to be successful in the future. "We are the only museum in the world with a base on two continents, and soon we will be located in three countries. One of the Guggenheim's chief assets is its international recognition and reputation. That is a function, in large part, of the architecture of the Frank Lloyd Wright building, which represents design and quality of the highest order. We have to take advantage of the situation. We

view, of suggesting that the institution represents the best in advance thinking, a perspective that is future-oriented. "We are, in the early 1990s, at a crossroads in human development. The changes that are taking place in Europe, and in Germany in particular, are a function of an international point of view that transcends traditional nationalistic tendencies. This is something really new. The seeds of a universal design idea, that were planted in the early part of the century by the Constructivist and Bauhaus movements, are bearing fruit, as we approach a new century, in ways that could hardly have been imagined even a decade ago. In many ways, the architecture of the Guggenheim – present and future – is a symbol of this kind of thinking."

Thomas Krens says this does not mean that the national character is to be subordinate to an international

museum's unique position as the 'American museum with a European face.'

We want to expand on that concept, to emphasize elegant design in all aspects of our operations, and finally come to be known as the international museum with a perspective on the future."





## BMW Design Team Munich

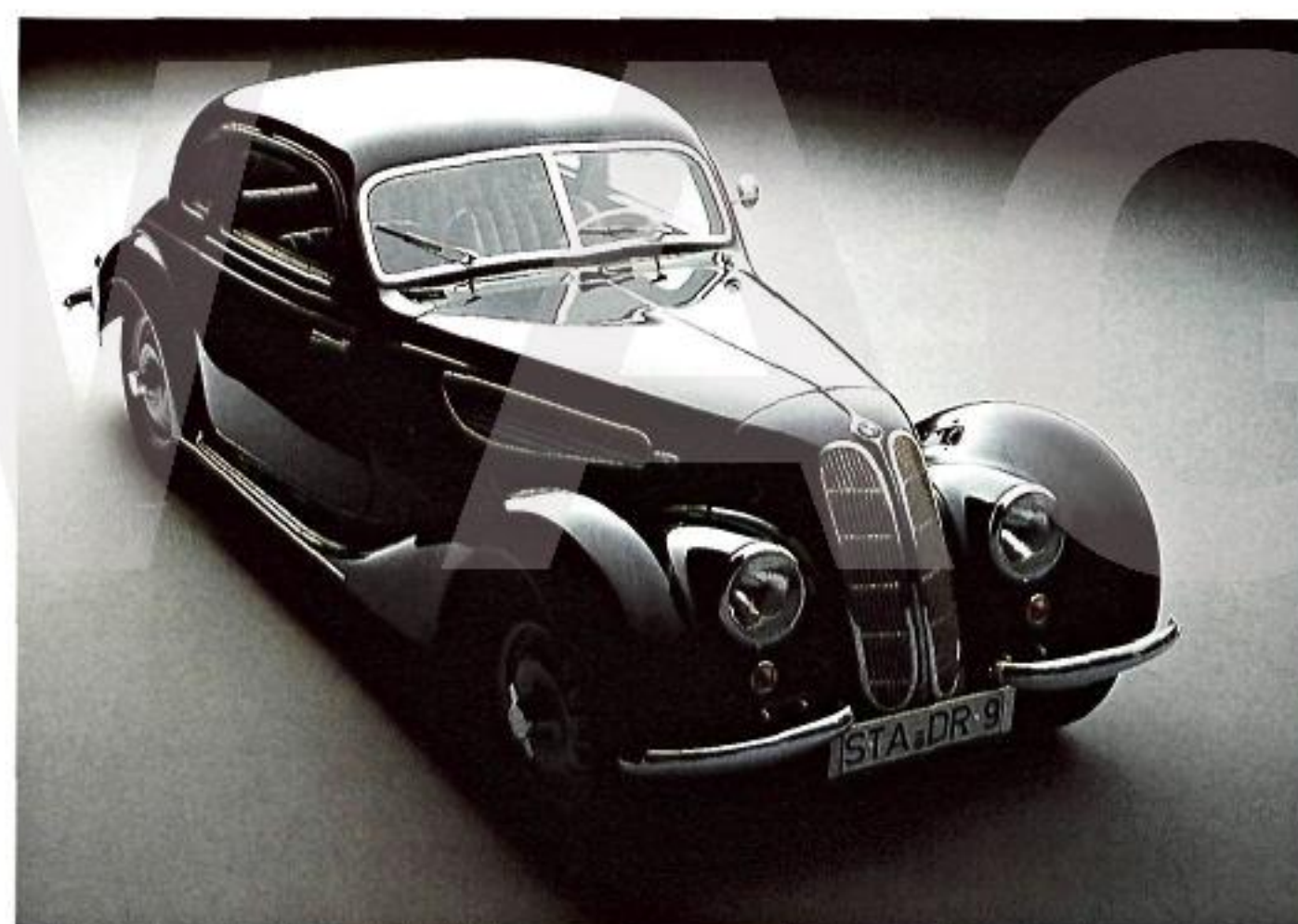
The BMW Design Team for cars works in Munich in the ultramodern Research and Engineering Centre of BMW AG. The team of some 150 employees – designers, modellers and studio engineers – is a manageable and, therefore, efficient size. The designers, in particular, form an international team which is nevertheless inspired by the "genius loci". All series-produced cars have long been BMW designs which

one another, while others conflict with one another. The combination of these factors demonstrates that the famous formula "form follows function" does not result in sober uniformity. Nature provides us with endless examples of expediently useful forms. According to our understanding of design, harmony of form and function should be "logically beautiful". Rationality must be joined by intuition

in order to represent the special characteristics of the marque of BMW.

We include, among these characteristics, "fascinating beauty" in an unobtrusive, discreet appearance which is subordinate to a person's individuality.

Another characteristic which is essential to the marque's very being is "sheer driving pleasure" in a combination of excellent performance,



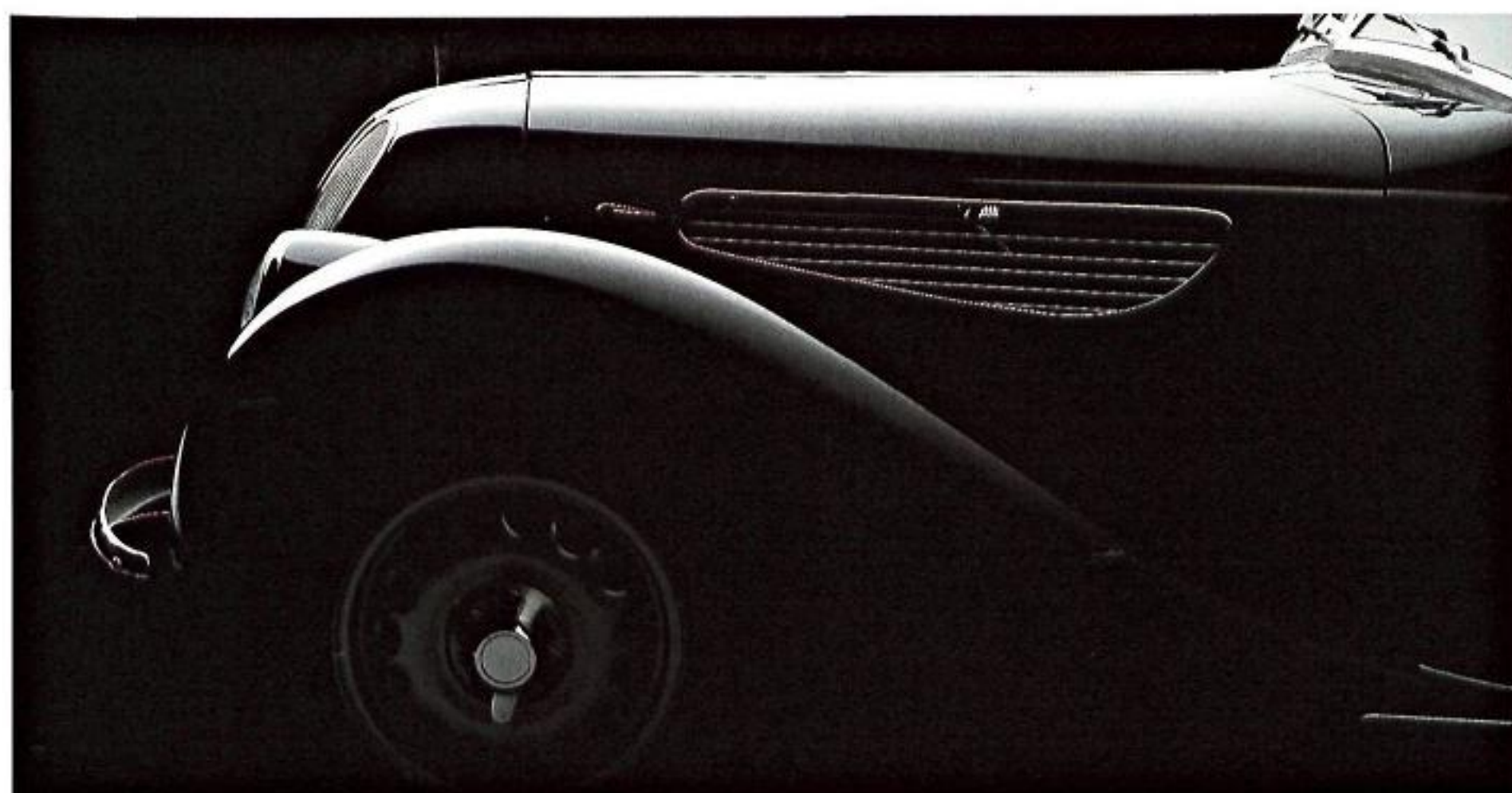
have won numerous prizes. The BMW 7 Series and the new 3 Series saloons both received the Car Design Award of Turin and Piedmont, doubtlessly the most important design prize of its kind.

BMW cars have always had an unmistakable individualistic style which makes them stand out. As a result, the public has a clear image of the marque with its long tradition. Harmony is of fundamental importance; the clarity of form being in keeping with the clarity of engineering. Technology and design must interact to satisfy man's needs.

Specific aims are set for design, just as they are for technology. Basically, as a consumer durable, the car must have a sensible, functionally correct design. A balance must be struck between a large number of different demands, many of which depend on

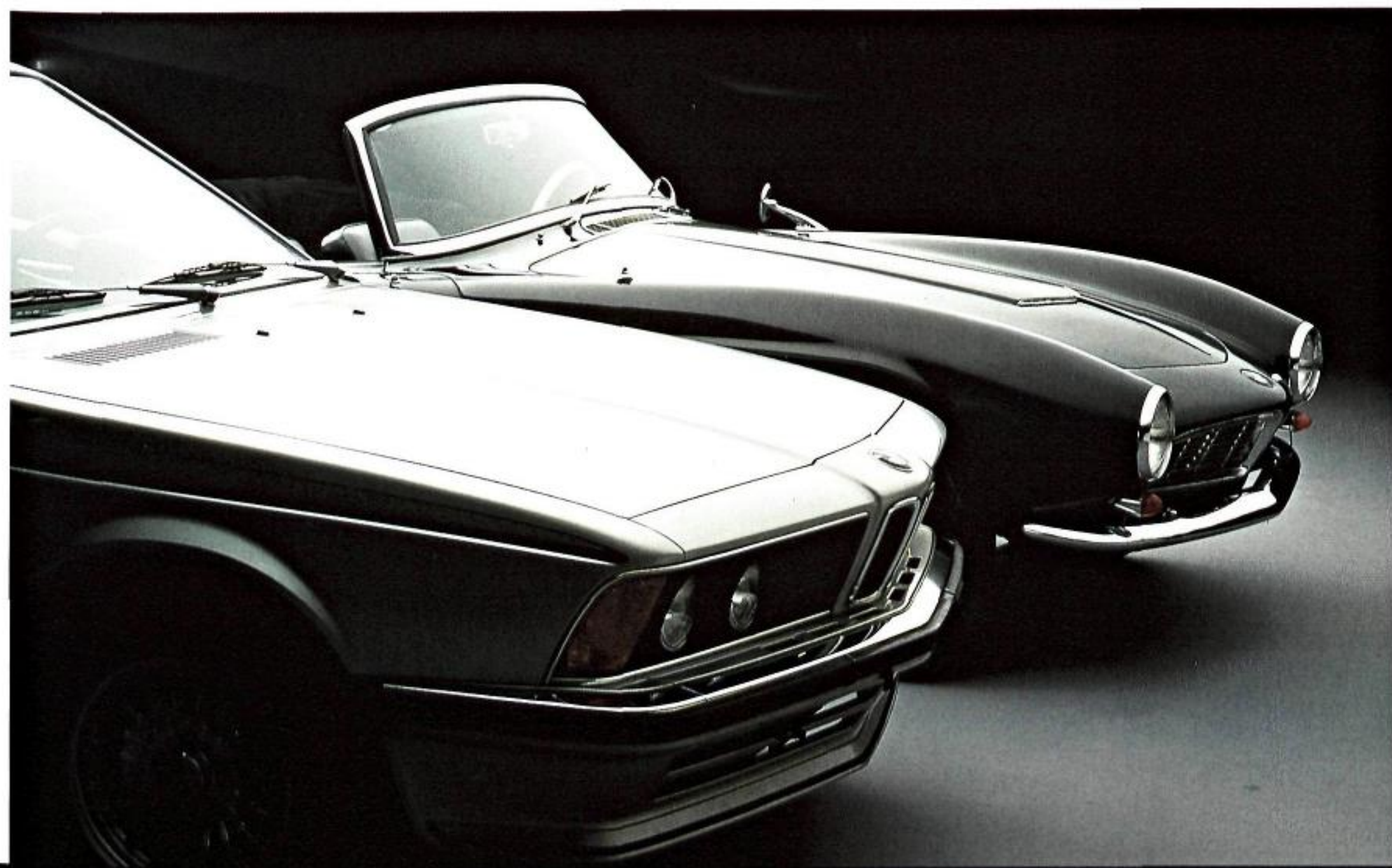
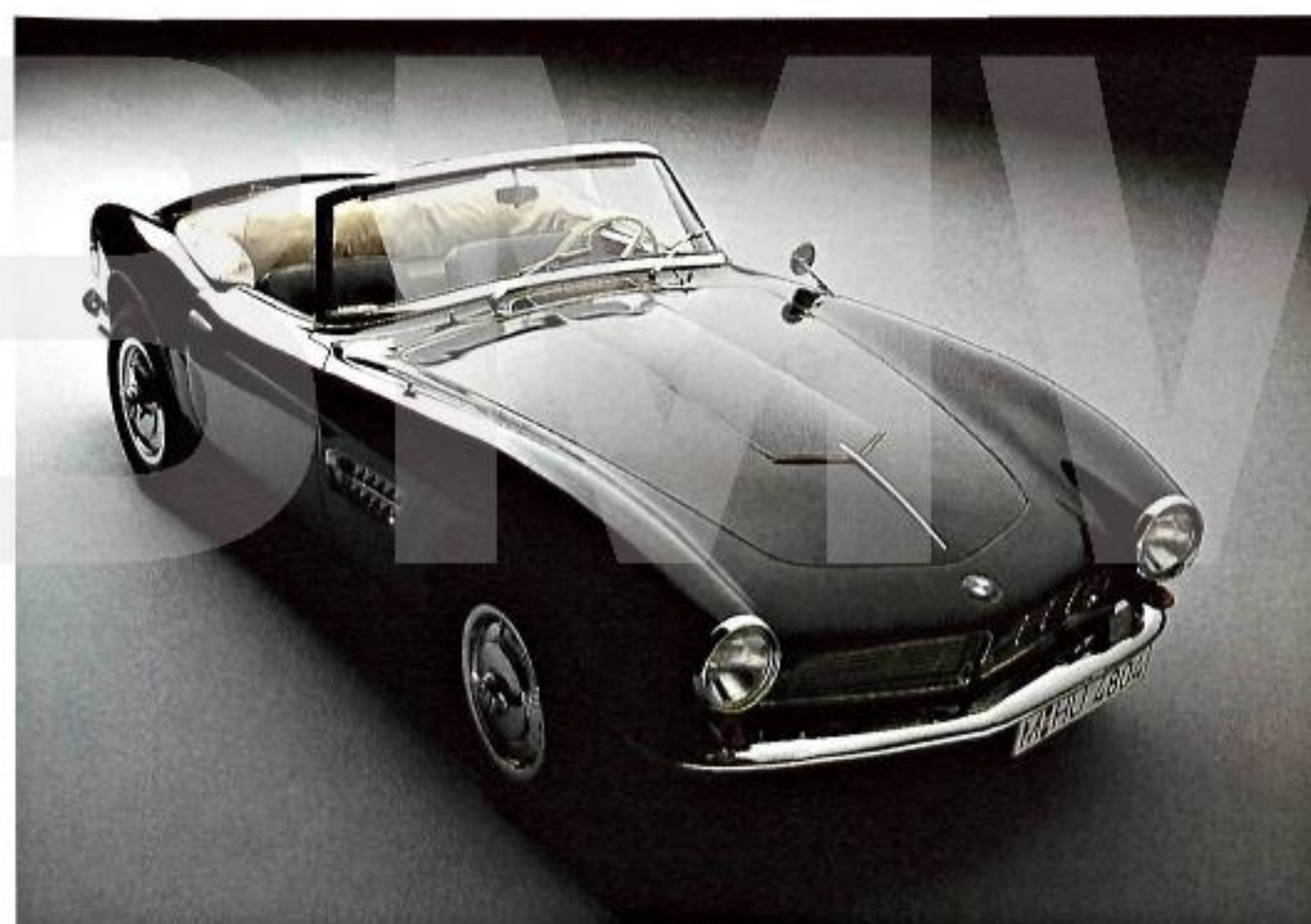






sporting competitiveness, and powerful yet effortless mobility.

A review of the long history of BMW car design reveals continuity. The essential characteristics were apparent from the start, and have continued to apply despite the many changes in technology and Zeitgeist. This explains the feeling of belonging together; the clear relationship of the various models. A comparison shows both a common







and individual language of forms as an expression of a particular stylistic intention.

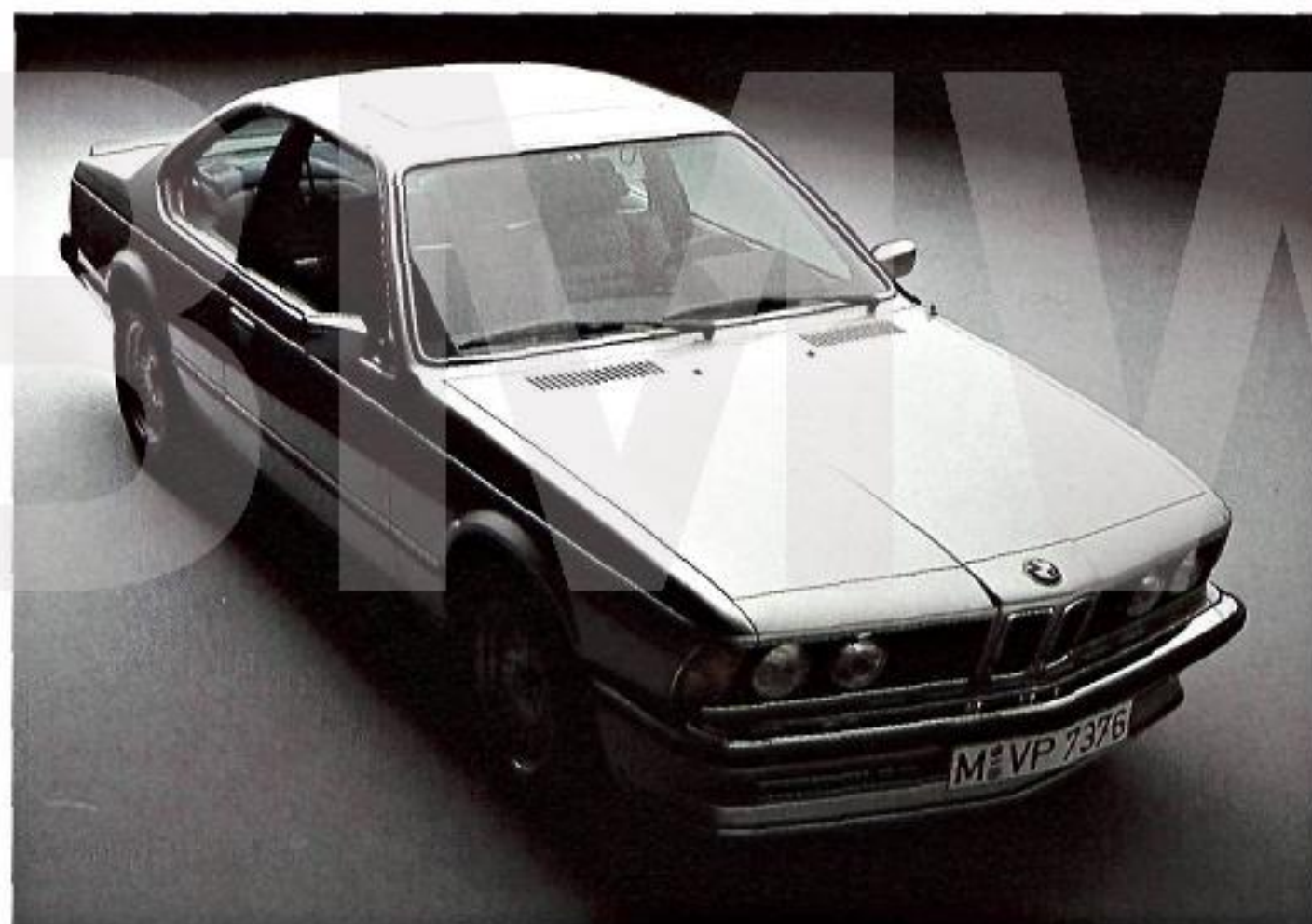
The style's evolution over the years was always the logical development of what already existed, of what had been found good and right. The same will apply to future design work. Existing designs will be developed to create new ones that follow in the BMW tradition.

parts. This principle applies analogously to technical design. The condensation to essentials, dispensing with short-lived fashion gimmicks, results in a design of lasting validity. This is exactly what we admire about our old-timers.

When designing car interiors, man is "the measure of all things". Anthropometric considerations, ergonomic rules, experience of perception psy-

chology have to be taken into account from the start, while annoying formalism and nonsensical ornamentation must be excluded.

The design of the cockpit in BMW cars has long been acknowledged as exemplary. Here too, new developments are based on the existing, valid overall concept. At the same time, the latest technical innovations have to be integrated in a user-friendly way.



Every new design calls into question the designs that have been "handed down", that give the marque its distinctive appearance. All the well-known formal details have to be examined to see whether they are to be maintained, modified, or given up and replaced by something new.

An abundance of subtle yet fundamentally decisive stylistic means contribute even more strongly to the characteristic design than the individual details of form. These are the proportions as a whole and of the individual parts; the special contours of the body; the way the different surfaces meet, or how lines begin, are drawn, and taper out along the car – and more besides.

If a design is to be successful, both the details and the overall form must mature, and constantly be reconsidered, until there is harmony between the form as a whole and its individual

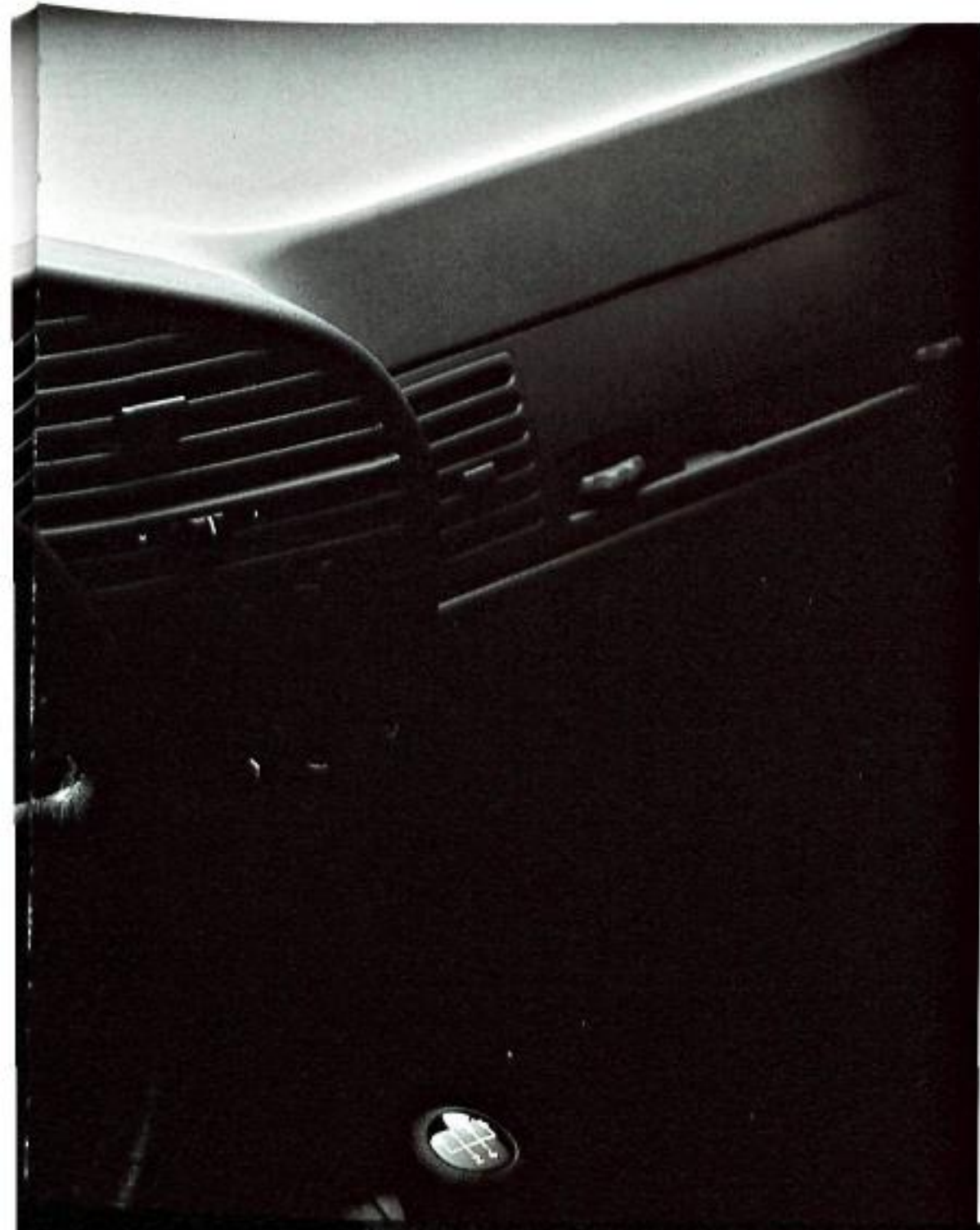
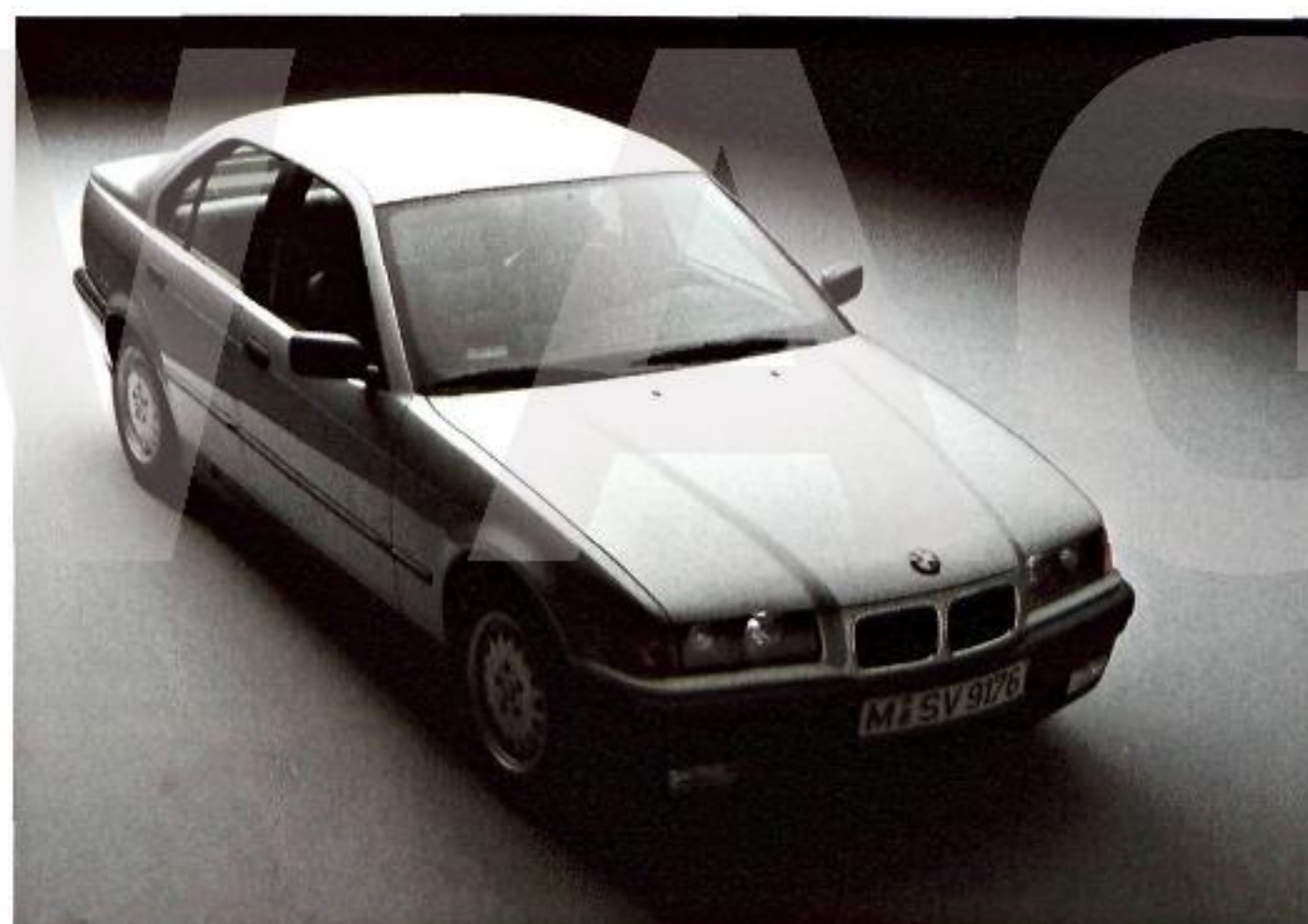






almost Mediterranean joie de vivre and a clear sense of form.

The worldwide acceptance of BMW cars is also due to their design quality which stands out from the global average design and attempted imitations. Our task will continue to be the preservation of those characteristics which make BMW a unique and fascinating marque.



Basically, design is geared to the user's physical and emotional needs. It must also take account of growing ecological awareness in the choice, use and recycling potential of the materials.

No one can fail to notice the "omnipresence" of the car. Years of production of successful models in large quantities oblige designers to assume responsibility for the harmonious integration of an aesthetically convincing product into the environment, whether this be natural or urban. Thus, design makes a major contribution to contemporary culture.

BMW design demonstrates a clearly defined point of view as regards its cultural context. Seen against a European background, BMW design is not only distinctly German, but also typical of Munich, a city whose southern location and cultural and historical development have endowed it with an







With the establishment of its own sales company in the mid-1970s, BMW took a particularly important step towards becoming a world marque. The construction of its own car plant in South Carolina anchors the Company more strongly on the American continent. Today, "Made by BMW" stands equally for European engineering skills and design culture, and for efficient production facilities.

**US investment strengthens BMW's position in the world market**

BMW of North America has sold BMW products in the United States since 1975. The Company thus tapped a highly-developed market which now has some 250 million people. At that time BMW had already an individual range of compact, high-performance quality cars for the top market segment.

Success and experience in the United States were essential prerequisites for the Company's further expansion in the world markets. In direct competition with all the leading car makers, BMW has constantly developed its international competitiveness.

The radical changes in the American automobile market, and far fiercer price competition, make it increasingly difficult to maintain the position achieved in the US market from the industrial base of Germany. It is no longer possible to absorb the effects of the low exchange rate of the dollar, and the extremely high increase in production costs, merely by stepping up productivity in Germany. Therefore, BMW decided to build an automobile plant in the United States. The decision in favour of Spartanburg, South Carolina, was announced mid-1992.

This investment will strengthen decisively the Company's links with the market, society and culture of North America. Cost structures can be better adapted to competitive conditions. Thus, future sales opportunities can also be safeguarded.

**The American car market: The pacesetter for mass motorization**

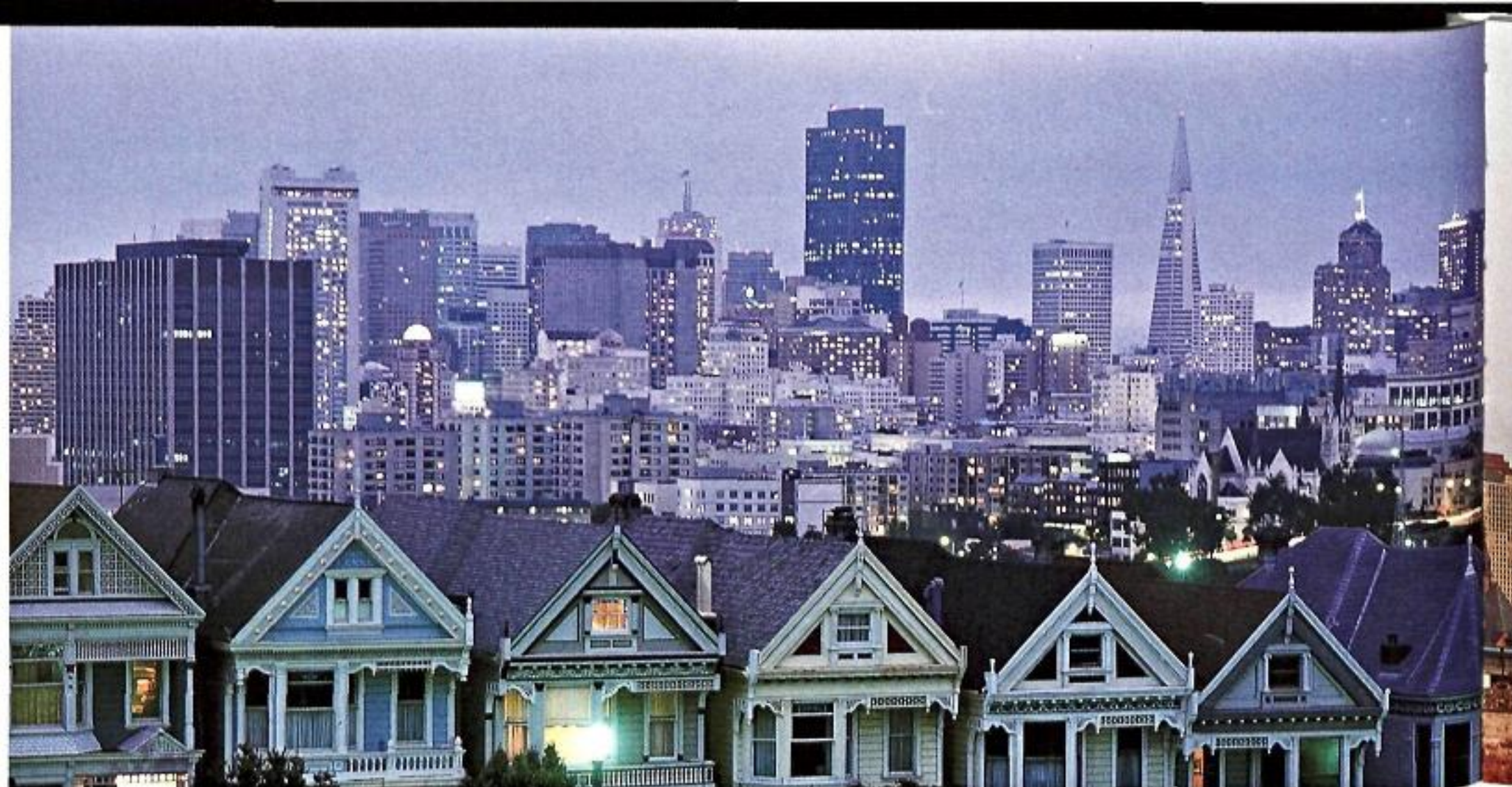
The car was invented in Germany, but mass motorization first took off in the United States. With a distance of more than 4,500 kilometres (the best part of 3,000 miles) between New York and San Francisco, and half the population living in the country, the car was destined to meet the American need for mobility at the turn of the century.

In 1909, Henry Ford, with his Model T, had the right range. With the invention of the assembly line, he succeeded in turning the car – once a luxury for a few – into a consumer article for many. In the years following the second world war, the car became indispensable for commuting between home in the suburbs and work in the city centres. Individual mobility also became increasingly important for travelling long distances in the United States.

By 1949 car output had doubled, compared with the pre-war level, to 5.1 million units, and it was to double once again by the time it peaked in 1973.

Since then, registrations average 10 million new cars a year in the United States. However, the market share of the traditional American manufacturers declined from 85 % to slightly more than 60 %.





**The American automobile industry: Characterized by the domestic market**

Traditionally, the United States has been an open market. However, comprehensive regulations for vehicle safety and exhaust emission control have been in effect since the 1970s.

The first foreign cars came from Great Britain at the beginning of the 1950s. In the 1960s Volkswagen, in particular, and other European manufacturers accounted for rising imports. In total, they increased to more than one million units a year.

In those days it was easy to describe the American automobile industry: General Motors, Ford and Chrysler, the Big Three, and American Motors evolved from a large number of companies and makes existing at various times in the 20th century.

At the height of the automobile cycle of the 1970s, the American automotive industry was one of the largest private employers in the United States, with more than 1.2 million employees.

The domestic market was so large that the manufacturers were not dependent on exports. Fewer than 100,000 cars or only 1% of annual output left the North American continent. As a result, the model range and production methods were geared exclusively to the requirements of the domestic market.

**Structural change due to new competitors**

At the beginning of the 1970s, Japanese manufacturers began to gain a foothold in the American market with small and economical automobiles. Despite numerous cooperative projects with the new competitors, jobs at the US manufacturers were soon at risk. Therefore, in 1981 the federal government reached an agreement with Japan which initially limited imports of Japanese cars to the United States to 1.68 million units a year.

However, the import restrictions did not prevent a deep-seated structural crisis in the American car industry. In their new production plants in the United States, known as transplants, Japanese manufacturers achieved a level of productivity and quality which, at first, was far higher than at the existing plants of US manufacturers. As a result, price competition also became fiercer in the top segment of the car market.

The changes in market and competitive conditions have left deep scars on the three major domestic manufacturers. Some fields of production, and even entire plants had to close, the number of employees halved.

However, the inevitable change has markedly increased the competitiveness of the American car manufacturers and suppliers. Today, modern factories are turning out up-to-date and economical cars with American brand names.

**BMW of North America: BMW's most important sales company**

In 1975, its first year of business, BMW of North America Inc. sold about 14,000 cars through 285 authorized dealers in the United States. Today, some 350 independent dealers have direct contacts with customers throughout the country. In 1992, they sold 65,700 cars under far more difficult conditions.

The company has its headquarters at Woodcliff Lake in New Jersey, a small town about 50 kilometres north of New York city. The dealer organization is served by four regional offices, each with their own training facilities. After arriving by sea, BMW cars are prepared for delivery to the customers at the company's own vehicle preparation centres.

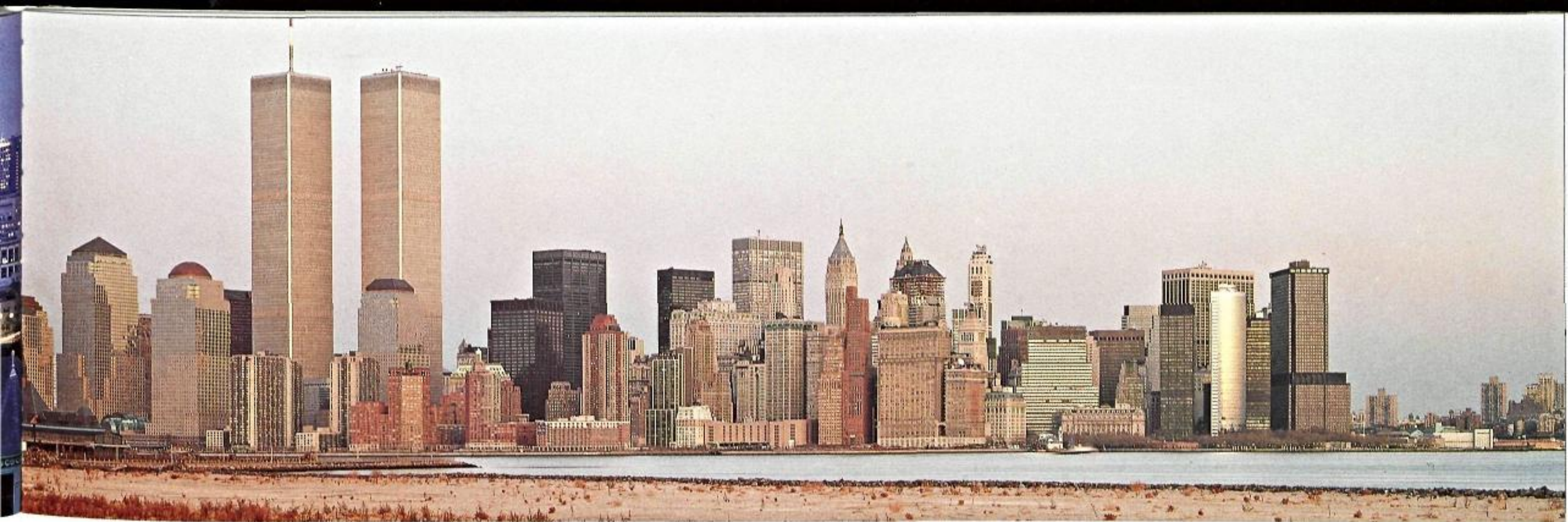
Parts centres in New Jersey and California supply Genuine BMW Parts and Accessories. They provide the authorized dealers with parts and accessories for the current model range. Parts for earlier models are supplied directly from the BMW Central Stock of Parts in Dingolfing.

**BMW in the US market: The challenge is accepted**

In the United States, BMW offers cars in the luxury performance segment. In 1992, this comprised some 1.1 million new cars. This market has changed considerably since demand last peaked in 1986.

Since then, the American car market has been on the decline. Rising budget deficits and external imbalances, particularly due to the car business with Japan, put a strain on the American economy. The US dollar lost about half its value against the D-mark.





From coast to coast: More than 4,500 kilometres or six hours' flight lie between San Francisco and New York. Some 350

BMW dealers provide the service for 850,000 or so BMW cars and motorcycles throughout the country.

This development accelerated the change in the behaviour of purchasers who now turned increasingly to economical models or postponed their purchases. At the same time, new competitors tried to penetrate the top market segment.

Furthermore, a special tax was introduced in January 1991: Customers have to pay a ten percent luxury tax on the amount of the car price exceeding 30,000 US dollars. More than 90% of these taxes are paid by the purchasers of European and particularly of German cars.

As a result, European manufacturers in the top segment sold only 260,000 automobiles last year, 50% fewer than in the mid-1980s.

BMW faced the changing market conditions by developing and improving its sales and dealer organization, and by considerably enlarging and upgrading the range of models offered for sale in the United States. In addition, the structure of the company has been changed to enable it to meet the demands of customers and dealers more quickly and precisely.

In 1992 these measures brought a turnaround in the business trend. After declining for several years, BMW sales grew by 23% to 65,700 units.

### **Initiatives to improve environmental protection**

In addition to the sale of BMW cars and motorcycles, BMW has also begun taking steps towards reprocessing scrapped cars. In 1992, the Company opened three recycling plants. At these facilities, the dismantling and recycling techniques developed during pilot projects at the Landshut plant will be transferred to the American market.

In the United States, this initiative is seen as a particularly successful example of trendsetting environmental protection. In September, this initiative was honoured by the National Recycling Coalition Inc. with the "1992 Best Recycling Innovation Award".

BMW runs its own exhaust emissions laboratory in Los Angeles. Comprehensive vehicle tests are also indispensable because of the climatic conditions and specific driving habits in the United States.

In order to prepare for the planned tightening of the laws on exhaust emissions, BMW presented a study of an electric-powered car, the E2. This vehicle was designed specifically for American driving habits and conditions. Its technology is being tested jointly with an American development partner, Unique Mobility Inc. of Denver, Colorado.

Furthermore, BMW holds an interest in Designworks Inc. in California, a company in the field of automobile and industrial design. Thus, BMW is able, at an early stage, to assimilate trends in automobile technology and design in the United States.

### **New BMW car plant under construction**

With the decision to build its own car plant, BMW has taken the next step towards strengthening its market position in the United States. As a result of long-standing cooperation with American suppliers, BMW is in an excellent position to be able to purchase high-quality components at economical prices for production at the new US plant.

During its search for a new industrial base, BMW examined about 250 possible locations over a period of three years. The main criteria were the availability of suitable employees and a favourable infrastructure in order to integrate the new plant into the BMW system of linked plants.

Ultimately, Spartanburg, South Carolina satisfied the requirements best. There, in autumn 1992, BMW began the construction of its own plant. It will supply both the US and more than 100 other world markets with BMW cars.

The new plant is scheduled to produce up to 400 cars a day, beginning in late 1995. Numerous suppliers are expected to settle in the plant's vicinity.

With a new plant and the widest model range in the top market segment, the Company is prepared for the future challenges of the US market. The changes in economy and society, that began in 1992, offer new opportunities for the sale of BMW cars and motorcycles which, in a special way, combine tradition with trendsetting technology and great advantages for the customer.



## New BMW Plant in South Carolina

Ultimately, South Carolina, in the south east of the United States, offered the best location for the construction of a new BMW car plant. Thanks to the commitment of government and authorities, and with the support of the population, a suitable property was found, within a short time, near Spartanburg, in the northwest of the state.

On September 30th 1992, the first sod was turned by Governor Carroll A. Campbell and Eberhard v. Kuenheim BMW dealers, who came in 7 Series cars fitted with the new 8-cylinder engine, were welcomed by the people of South Carolina.

The large photograph shows Boone Hall Plantation, a former cotton plantation in the style of the region.





The age of vehicle construction began for BMW 70 years ago with a motorcycle with a flat twin engine. Since then, BMW motorcycles have made history on the world's roads and racetracks. The marque is renowned for its elegant design, sturdy construction and reliability. At the beginning of 1993, a new generation of these motorcycles was presented to the public.

**From a means of transport to sheer riding pleasure**

At the beginning of the 1920s, with the beginning of the great pioneer flights, the motorcycle, in particular, fulfilled the popular wish for mobility in Europe. Since then, BMW has contributed to the development of the motorcycle with its own concepts and technologies. The motorcycle has developed from a basic means of transport in its early years to a many-sided vehicle for everyday use and leisure-time.

Since motorcycles do not take up much space and have low emissions, they have gained a special significance in large cities. This is likely to increase in future traffic systems.

So far, BMW has manufactured more than one million motorcycles and delivered them all over the world. About 650,000 had flat twin engines. Every second BMW machine ever made is still in operation.

**An aeronautical engineer developed the first BMW motorcycle**

After the Company was founded in 1916, BMW first made a name for itself with aircraft engines. Soon afterwards, Germany was forbidden by the Treaty of Versailles from manufacturing aircraft and aircraft engines. Thus, BMW turned to another technical product: the motorcycle.

Max Friz, the company's aeronautical engineer, designed a motorcycle whose basic concept still determines the character of BMW motorcycles with flat twin engines to this day. He was the first to install the flat twin engine that already existed, the M2 B15, in a closed double tube frame, at right angles to the direction of travel.

As a result, the cylinders were optimally air-cooled, and major components were easily accessible. In addition,

the engine power can be transmitted from the crankshaft in the direction of travel via gearbox and cardan shaft without power-reducing deflection to the rear wheel. The low centre of gravity gives the motorcycle excellent road-holding.

The BMW motorcycle had its premiere at the Paris Salon in 1923. The machine presented, the R 32, weighed 120 kg and, with its 8.5 bhp, could travel at 95 kph. The simple structure, sensible arrangement and organic form aroused even greater enthusiasm than the technical data.

There was so much competition in Germany, Great Britain and Italy that the company had to achieve racing victories in order to score a market success.

**Convincing performance of BMW motorcycles on the world's race-tracks**

Series development, trials and racing went hand in hand during the first decades of motorization. For example Rudolf Schleicher, a leading BMW engineer, gained the first victory with a BMW motorcycle in February 1924 in the ADAC winter race in Garmisch-Partenkirchen.

Instead of the side control used previously, Schleicher had developed, for the race, one of the first aluminium cylinder heads with overhead valves. This so-called OHV principle has become established in engine construction. Another milestone in motorcycle development was the first hydraulically damped front fork for the BMW R12 in 1935.





70 years lie between the first BMW motorcycle, the R32 (above), and the R1100RS (above right), the first model of a newly-developed generation of motorcycles.

With technical innovations of this kind, Schorsch Meier achieved one of the great BMW racing successes in 1939. He was the first foreigner to win the legendary Tourist Trophy on the Isle of Man, beating the hitherto dominant British works riders, on a super-charged BMW machine of 500 cc. Two years earlier Ernst Henne had already ridden a BMW motorcycle fitted with a fairing at a speed of 279.5 kph on the motorway from Frankfurt to Darmstadt. This was to be the world record for 14 years.

#### **New start: With motorcycles again**

During reconstruction at the beginning of the 1950s, motorcycles formed the company's core business, as they had done 30 years earlier. In 1951, as many as 25,000 machines were produced. In 1955, with the first fully-sprung running gear for the R50, BMW again set new standards for riding safety and comfort.

In racing, BMW motorcycles were particularly successful in sidecar events. For example, from 1954 BMW RS machines won the world championships 20 times in succession in this discipline, a success that has not been repeated in motor sport to this day.

#### **BMW continued to stand for big machines even after the markets changed**

The motorcycle markets underwent fundamental change in the 1960s. The car had long become the most important means of transport. The young generation, in the United States in particular, began to discover the motorcycle as an expression of personal freedom. Japanese manufacturers crowded onto the world market with a large number of different motorcycle concepts.

This development peaked in 1981 when 1.65 million new motorcycles were sold worldwide. 90% of them were Japanese. A large part of the traditional European motorcycle industry, and British manufacturers in particular, had disappeared from the market.

Even in difficult times, BMW motorcycles had held their ground because of their individual character and high quality. Since introduction of the /5 Series in 1969 all BMW motorcycles have been produced in Berlin. Motorcycle development and marketing remained in Munich.

With the first full fairing for series-production developed in a wind tunnel, the R100RS of 1976 became the synonym for motorcycles that harmoniously combine sporting with touring requirements. In 1980, with the R80G/S, BMW established a completely new market segment, that of large Enduro motorcycles. These machines, suitable for both cross-country and on-road touring, still account for a considerable proportion of the BMW motorcycles with flat twin engines.

In long-distance rallies, BMW Enduro machines impressively proved their superiority. The sporting highlights were four victories between 1981 and 1985 in the motorcycle classification of the Paris-Dakar Rally, the most challenging race of its kind.

With this new concept, and the models of the K Series with modern 3- and 4-cylinder in-line engines, introduced from 1983, BMW consolidated its sales of motorcycles in the 1980s at an average of 30,000 a year. During the same period, the world market declined by half to about 800,000 units.

#### **Motorcycling renaissance**

Demand for motorcycles began to pick up again at the beginning of the 1990s. Increasing numbers of people who rode motorcycles in their youth are now riding again. More women are also discovering the experience of motorcycling.

With new technologies, BMW has contributed substantially to improving the safety and environmental compatibility of motorcycling. For example, BMW was the first manufacturer to offer motorcycles with an electronically controlled anti-lock braking system and a controlled catalytic converter.

In the last few years, the growing wish for a real riding experience, and changed attitudes to motorcycling, have boosted demand for classic machines.

#### **The new generation of BMW motorcycles with flat twin engines: Same principle, but newly-developed**

At the beginning of 1993, the first model of a new generation of BMW motorcycles with flat twin engines was presented: the R1100RS. The new motorcycle is based on the technical concept which has been a success for 70 years. Thus, the well-known advantages, such as reliability, service-friendliness and retention of value still apply.

At the same time, the new motorcycle with a flat twin engine represents the state of the art as regards its drive and running gear. With this model, one of the oldest and most successful concepts in motorcycling construction has set off into a promising future.



The dynamic character of the car markets forces companies to act increasingly quickly. At BMW, the Company's development was always linked with internal change. In 1992, the Company further improved its flexibility by continuing to develop different forms of organization and the structure of management.



Engineers, technicians and skilled workers from different fields work together, in development teams, at the BMW Research and Engineering Centre. With short distances and overlapping working methods, development and preparations for the production of important sub-assemblies can be arranged extremely efficiently by the specialists and management staff concerned. Group discussions are particularly important when taking fundamental decisions.

#### **Adjustment of the Company's structure: A never-ending task**

BMW's development is characterized by its ability to adjust quickly to changing conditions. In addition, the Company has initiated, and enforced, important developments in automobile construction and in its economic and social environment.

In the early 1980s, BMW had begun already to reverse the process of increasing division of labour in the divisions of the Company and to streamline the management structure. Instead of making improvements only to sequences in certain fields, the Company aimed to organize efficiently the development, production and marketing processes in their totality.

Extensive fields of responsibility were established. Project teams with overlapping functions guarantee the close cooperation of all concerned.

In the course of the further development of organization, the Company's entire output, including its internal services, was exposed increasingly to outside competition.

#### **Quantum leap by BMW Research and Engineering Centre**

BMW began early to create the organizational conditions and facilities for project-related cooperation in the Company. The BMW Research and Engineering Centre in Munich represents a milestone on this road.

When designing the Centre, the scope and type of cooperation of all employees involved in development, production planning and purchasing, were, for the first time, taken into account. The first development groups began work there in 1986. Today, more than 5,000 employees work at the Centre.

Workplaces are no longer arranged according to traditional functions but according to projects. Development and planning procedures which used to be carried out consecutively in different divisions, are now parallel to one another and, therefore, are quicker and more efficient.

Short distances between the employees of a working group, and between offices, laboratories and workshops, encourage cooperation. Components can be made from drawings at short notice and then tested on vehicles.

#### **Integration of functions in production**

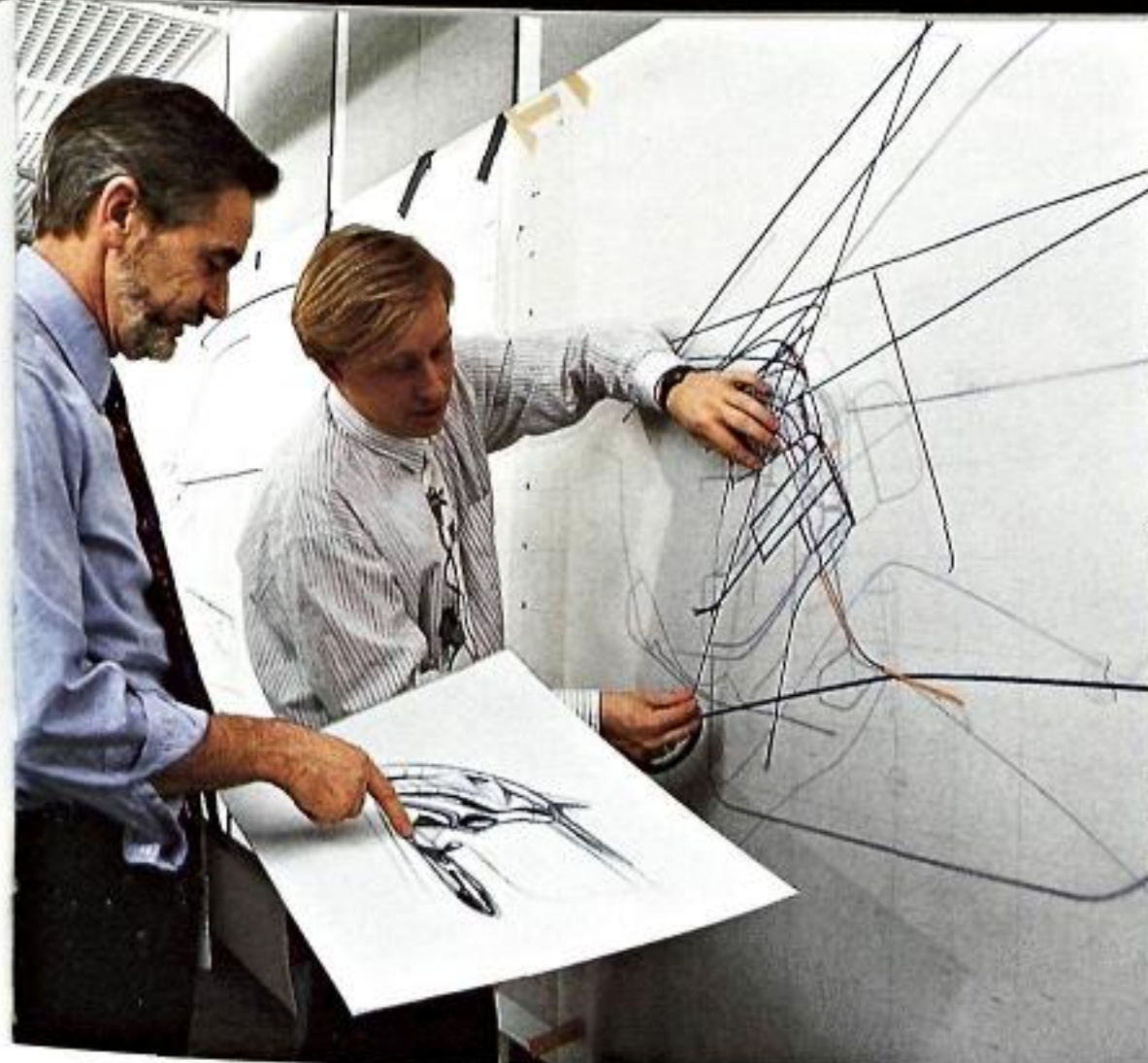
In the mid-1980s, BMW began to abolish the division of labour that hitherto had prevailed in the plants. Maintenance, material supply and quality control tasks were assigned to production groups.

Groups of up to 80 employees under a master craftsman were replaced by manageable production teams of 20 to 30 employees who carry out all the work in clearly defined stages of production.

More independence and responsibility in all divisions reduced hierarchies at the plants. Today, instead of six, there are only three management layers between the plant manager and the shop floor.

The introduction of new forms of work was accompanied, from the start, by BMW's so-called "Lernstatt" programme. Employees discuss, in small groups, sequences and working conditions within their field of production, and initiate improvements. The decentralized organization of the Company's proposal scheme supports efforts to include employees more in the organization of work sequences. It also ensures that valid proposals are put into practice as soon as possible.





The development of an instrument panel: Once the form has been established in the styling unit, the technical details are determined for construction and installation.



### Group work makes progress

In another stage of development, employees organize the sequences and distribution of tasks in their own division. This greatly increased the employees' scope of work.

In 1992, this form of group work was tested by 3,500 employees in 22 pilot projects. This method of work is to be applied wherever economically efficient.

This happens in stages because the employees have to be prepared, with intensive further training, for the extended scope of work and the new type of cooperation.

At the BMW engine plant in Steyr, production switched entirely to group work at the beginning of 1992. At the same time, a programme for the continuous improvement of work sequences began there. Such programmes have also been introduced at other plants. As a result, the productivity of the highly efficient production lines at Steyr was increased by up to 20%.

### Company divisions exposed increasingly to competition

At the end of the 1980s, some parts of the Company were amalgamated in cost and profit centres in order to improve the cost structure. Wherever expedient, the large structures at different locations, that have evolved with the Company's growth, are grouped into largely independent organizational units and made responsible for their own results.

At the end of 1992, eight such fields were arranged in organizational units. They included engine production, tool construction, the foundry and plastics processing. The products and services of these units compete with those of other suppliers. At the same time, they can offer their services to non-BMW customers. The organizational unit responsible for buildings and energy technology will be run as Betek Bau- und Energietechnik GmbH from January 1993.

### Optimization of the scope and scale of production, new quality of relations with suppliers

In the course of structural change, the Company's output is constantly assessed and, where necessary, replaced by outside purchases. This development is reflected by the steady reduction of the scope and scale of production at BMW. However, production ranges and components of special importance for the competitive position of BMW products are increasingly developed and produced by the Company.

As internal structures change, co-operation with suppliers is also being arranged more efficiently. They increasingly prepare and produce entire components, and guarantee their function, quality and timely delivery.

System suppliers are integrated, at an early stage, into the Company's development, planning and production processes. The efficiency of the entire value-added chain is thus greatly enhanced.

The parallel development of products and production facilities, in accordance with the principles of simultaneous engineering, is becoming increasingly important. Numerous projects are carried out in this way with the manufacturers of plant and machinery. Since 1991 suppliers' employees can also take part in special events of the BMW training programme.





Teamwork: from the clay model to the development of the assembly stages in sample construction.

### **Regional sales structure**

Comprehensive programmes were also carried out to increase efficiency in other areas of the Company. For example, marketing in Europe, America and Southeast Asia was organized supranationally in order to make better use of the larger economic areas that are emerging.

In Europe, a network of car and parts centres has developed in the last few years in order to supply markets rapidly across former national frontiers. BMW began early to create the conditions that enable it to take full advantage of the single European market.

Cooperation with the BMW authorized dealers was also reorganized. Every BMW dealer received a special partner to contact on matters of overriding importance to the Company.

By streamlining the sales organization, the Company dispensed with two layers of management in Germany in the year under review. Since then, there are now only three levels between the management of the sales division at BMW AG and the German dealers.

### **Personal mobility encouraged**

Since the markets are exposed to increasingly rapid change, employees are, more frequently, having to take the initiative and assume responsibility in order to make flexible use of market opportunities and satisfy customer wishes quickly and fully. The ability to take up new developments in the market and the social environment, and to integrate them into the Company, is becoming increasingly important.

Each year BMW invests some DM 200 million in the initial training, upgrading and further education of employees; both of the Company and of the dealer organization. Upgrading and further education include new methods of work to improve development, production and marketing processes. The programmes also prepare employees and management for changes in the social environment and for efficient cooperation.

### **Flexible BMW management structure**

BMW has improved the management structure, in several stages, in order to encourage initiative, orientation to results, and individual responsibility, and to be able to employ staff in line with the Company's dynamic development.

As a result of reorganization in 1992, it was possible to employ executive staff extremely flexibly at different levels. This also facilitates the formation and improvement of project work.

In future, BMW will direct all its efforts to promoting the knowledge and skills of its employees and to using them in the Company. Only the commitment of all employees, and their ability to develop contemporary attractive products and services, will ensure the Company's future market success. Structural changes in the working environment and organization, and the Company's intensive work in the field of training and education serve this very purpose.



BMW AG



## Consolidated Balance Sheet

at December 31st 1992  
in DM million

Assets	Notes	31.12.1992 DM million	31.12.1991 DM million
Intangible assets	( 1)	196	33
Tangible fixed assets		6,469	6,532
Financial assets	( 2)	169	183
<b>Fixed Assets</b>		<b>6,834</b>	<b>6,748</b>
Inventories	( 3)	3,140	2,998
Leased products		4,233	3,414
Receivables from sales financing		5,531	4,663
Assets from sales financing	( 4)	9,764	8,077
Trade receivables	( 5)	1,832	1,760
Other receivables and miscellaneous assets	( 5)	988	1,043
Marketable securities and notes	( 6)	2,408	2,293
Liquid funds	( 7)	2,187	2,086
<b>Current Assets</b>		<b>20,319</b>	<b>18,257</b>
<b>Prepaid Expenses and Deferred Taxes</b>	( 8)	<b>351</b>	<b>400</b>
		<b>27,504</b>	<b>25,405</b>
<b>Shareholders' Equity and Liabilities</b>	Notes	31.12.1992 DM million	31.12.1991 DM million
Subscribed capital	( 9)	899	896
Capital reserve	( 9)	817	796
Profit reserves	(10)	4,685	4,378
Net income available for distribution		226	225
Investment of other shareholders	(11)	91	97
<b>Shareholders' Equity</b>	(12)	<b>6,718</b>	<b>6,392</b>
<b>Registered Dividend Right Certificates</b>		<b>101</b>	<b>103</b>
Pension fund provisions		1,599	1,442
Other provisions		5,671	5,360
<b>Provisions</b>	(13)	<b>7,270</b>	<b>6,802</b>
Bonds		1,670	1,424
Due to banks		538	1,022
Trade payables		1,579	1,633
Other liabilities		1,033	896
<b>Liabilities</b>	(14)	<b>4,820</b>	<b>4,975</b>
Liabilities from sales financing		6,692	5,763
Deferred income from leasing financing		1,805	1,279
<b>Liabilities from Sales Financing</b>	(15)	<b>8,497</b>	<b>7,042</b>
<b>Deferred Income</b>		<b>98</b>	<b>91</b>
		<b>27,504</b>	<b>25,405</b>



# Consolidated Statement of Income

for the 1992 business year  
in DM million

	Notes	1992 DM million	1991 DM million
<b>Net Sales</b>	(16)	<b>31,241</b>	<b>29,839</b>
Increase in product inventories and other company-produced additions to tangible fixed assets	(17)	1,430	738
<b>Total Value of Production</b>		<b>32,671</b>	<b>30,577</b>
Other operating income	(18)	1,269	1,169
Expenditure on materials	(19)	18,542	17,427
Expenditure on personnel	(20)	6,387	5,823
Depreciation on intangible assets and on fixed assets	(21)	1,827	1,805
Other operating expenditure	(22)	5,787	5,028
Income from investment in subsidiaries and associated companies	(23)	4	5
Interest income	(24)	382	327
Interest expenditure from leasing financing	(25)	306	243
Income from normal business		1,477	1,752
Taxes on income and profits	(26)	608	781
Other taxes		143	188
<b>Year's Net Income</b>	(27)	<b>726</b>	<b>783</b>



## Acquisition and Manufacturing Cost

	1.1.1992 <sup>1)</sup> DM million	Additions <sup>1)</sup> DM million	Transfers DM million	Retirements DM million	31.12.1992 DM million
<b>Intangible Assets</b>	<b>122</b>	<b>267</b>	<b>-</b>	<b>12</b>	<b>377</b>
Real estate, equivalent rights and buildings, including buildings on land not owned	4,524	220	51	43	4,752
Technical plants and machinery	12,077	802	125	227	12,777
Other plants, fixtures, furniture and office equipment	1,807	317	16	185	1,955
Advance payments and construction in progress	262	369	- 192	18	421
<b>Fixed assets</b>	<b>18,670</b>	<b>1,708</b>	<b>-</b>	<b>473</b>	<b>19,905</b>
Investment in subsidiaries	71	13	-	48	36
Loans to subsidiaries	-	43	-	-	43
Investment in associated companies	38	7	-	25	20
Investment	46	1	-	-	47
Loans to companies in which an interest is held	24	6	-	12	18
Marketable securities in financial assets	7	3	-	-	10
Other loans	19	7	-	8	18
<b>Financial Assets</b>	<b>205</b>	<b>80</b>	<b>-</b>	<b>93</b>	<b>192</b>
<b>Intangible, Tangible Fixed and Financial Assets</b>	<b>18,997</b>	<b>2,055</b>	<b>-</b>	<b>578</b>	<b>20,474</b>

<sup>1)</sup> including amounts carried forward of  
companies consolidated for the first time



# Depreciation

# Book Values

1.1.1992 <sup>1)</sup> DM million	Current year DM million	Transfers DM million	Retirements DM million	31.12.1992 DM million	31.12.1992 DM million	31.12.1991 DM million
89	104	-	12	181	196	33
1,610	130	14	17	1,737	3,015	2,914
9,221	1,272	- 14	227	10,252	2,525	2,856
1,307	321	-	181	1,447	508	500
-	-	-	-	-	421	262
12,138	1,723	-	425	13,436	6,469	6,532
-	-	-	-	-	36	71
-	-	-	-	-	43	-
-	-	-	-	-	20	38
20	-	-	-	20	27	26
-	-	-	-	-	18	24
-	-	-	-	-	10	7
2	1	-	-	3	15	17
22	1	-	-	23	169	183
12,249	1,828	-	437	13,640	6,834	6,748



**Consolidated Companies**

The consolidated companies comprise BMW AG, 17 subsidiaries in the Federal Republic and 32 subsidiaries abroad.

For the first time, softlab GmbH für Systementwicklung und EDV-Anwendung, Munich, and BMW Sverige AB, Stockholm, are included in the consolidated financial statements. Five subsidiaries are no longer included among the consolidated companies.

Two subsidiaries in the Federal Republic and two subsidiaries abroad are not included in accordance with Section 296 Para. 1 No. 2 HGB (Commercial Code). They are valued using the equity method. Ten subsidiaries in the Federal Republic and 45 subsidiaries abroad are not included because of their small significance to the Group's financial and income position. The non-inclusion of these subsidiaries makes a difference to group sales of about 1%.

12 associated companies are not included in the consolidated financial statements because of their small significance to the Group's financial and income position. These associated companies are shown under investments at acquisition cost, less depreciation where applicable.

A list of the investments held by the BMW Group is deposited with the Commercial Register of the Munich Local Court (HRB 42243).

**Principles of Consolidation**

The capital is consolidated according to the book value method by offsetting the acquisition cost with the group share in the shareholders' equity of the consolidated subsidiaries at the time of purchase or initial consolidation. The resultant difference on the assets side is offset against profit reserves.

The same principles of consolidation are applied for the associated companies that are valued according to the equity method.

Receivables, liabilities, provisions, expenditure, income and earnings between group companies are eliminated.

**Currency Conversion**

Receivables and liabilities denominated in a foreign currency are valued

at the buying rate in the individual financial statements of BMW AG and the subsidiaries. Exchange losses on the balance sheet date are taken into account. If the exchange rate for receivables and liabilities denominated in a foreign currency at subsidiaries abroad is covered by forward exchange contracts, valuation is at the respective covered rate.

The intangible, tangible fixed and financial assets arising from the financial statements of subsidiaries, prepared in foreign currencies, are valued with historical exchange rates in the consolidated financial statements. Other balance sheet items are converted into D-marks at the exchange rate on the balance sheet date.

Like the intangible, tangible fixed and financial assets, depreciation and write-ups are converted at historical exchange rates, the other expenditure and income items at the year's average exchange rate. The year's income is converted at the exchange rate on the balance sheet date.

Currency differences arising from the conversion of balance sheet items are offset against the shareholders' equity without affecting net income. If they result from the use of different exchange rates in the statement of income, they are shown in other operating expenditure.

**Principles of Balance Sheet Preparation and Valuation**

For the sake of clarity, individual items have been grouped together in the consolidated balance sheet and are shown separately in the notes. Separate items are added to the consolidated financial statements to show the effects of sales financing.

The financial statements of BMW AG and the subsidiaries in the Federal Republic of Germany and abroad are drawn up in accordance with uniform principles of balance sheet preparation and valuation. In order to ensure uniform valuation in the Group, tax depreciation and special reserves in the individual financial statements of the consolidated companies, based only on tax provisions, are not shown in the consolidated financial statements. In the financial statements of associated companies,



those valuations are maintained that deviate only slightly from the uniform principles for the Group.

Intangible assets acquired against payment are valued at their acquisition cost. They are depreciated predominantly by the straight-line method.

Fixed assets are valued at their acquisition or manufacturing cost less depreciation. Office and factory buildings are depreciated using the straight-line method. Other fixed assets subject to wear, with a useful life of more than three years, are depreciated by the declining balance method. The declining balance is replaced by the straight-line method as soon as this leads to higher depreciation.

Additions to assets of minor value are fully written off in the year of acquisition.

Factory and office buildings, and distribution facilities which are part of the buildings, are depreciated in 8 to 25 years, residential buildings in up to 50 years, technical plants and machinery in up to 10 years, other plants, fixtures, furniture and office equipment predominantly in 5 years. For machinery used in multiple-shift operations depreciation rates are increased to take account of the additional utilization.

Investment in subsidiaries and associated companies that are not consolidated is shown at its acquisition cost or lower current value. Loans are shown at their discounted net present value.

Raw materials, supplies and merchandise are valued by taking account of the lower of cost or market value. Work in process and finished products are valued at their direct material and production cost. The inventories bought from consolidated companies include production-related shares of production overheads. Write-downs are made to cover risks arising from prolonged storage or technical obsolescence of inventories.

Own products shown on the assets side at leasing companies in the Federal Republic are valued at the manufacturing cost permitted in commercial balance sheets. In order to determine the lower value to be used, they are depreciated by the declining

balance method in the following years. All other leased products are valued at acquisition cost and are depreciated by the declining balance method. This is replaced by the straight-line method as soon as this leads to higher depreciation.

All risks identifiable on receivables and other assets are provided for by appropriate write-offs. Non-interest-bearing or low-interest-bearing receivables with a term exceeding one year are shown at their discounted value.

Marketable securities and notes are valued at their acquisition cost or lower values on the balance sheet date.

Pension provisions are calculated with the going-concern value according to actuarial principles with an interest rate of 5%. The other provisions are made to take account of all identifiable risks. Provisions are also made for expenditure.

Deferred taxes are calculated for timing differences between the commercial balance sheet result and the taxable income of the consolidated companies. Prepaid deferred taxes are set off against accrued deferred tax expenses. An active balance from prepaid deferred taxes of the individual financial statements is not shown. Deferred taxes arising from consolidation are shown in accordance with the legal requirements.

AG



**(1) Intangible Assets**

Additions to intangible assets relate primarily to grants of BMW AG for tool costs in the year under review.

**(2) Financial Assets**

Retirements from investment in subsidiaries result primarily from inclusion, for the first time, of BMW Sverige AB, Stockholm in the consolidated financial statements. The increase in lendings to subsidiaries is due to the change in the consolidated companies.

The share in the subgroup of the Bavaria Wirtschaftsagentur GmbH, Munich, is shown under investment in associated companies. The retirement relates to softlab GmbH für Systementwicklung und EDV-Anwendung, Munich, which was included, for the first time, among the consolidated companies in the year under review.

**(3) Inventories**

	31.12.1992 DM million	31.12.1991 DM million
Raw materials and supplies	514	478
Work in process	459	468
Finished products and merchandise	2,303	2,141
Advance payments	32	11
	3,308	3,098
Advance payments received	168	100
	<b>3,140</b>	<b>2,998</b>

**(4) Assets from Sales Financing**

	31.12.1992 DM million	31.12.1991 DM million
Leased products	4,233	3,414
Receivables from sales financing		
Customer loan receivables	5,065	4,431
– thereof with a remaining term of more than one year: DM 1,467 million (DM 1,988 million in 1991) –		
Other receivables	466	232
– thereof with a remaining term of more than one year: DM 16 million (DM 17 million in 1991) –		
	5,531	4,663
	<b>9,764</b>	<b>8,077</b>



**(5) Receivables and  
Miscellaneous Assets**

	31.12.1992 DM million	31.12.1991 DM million
Trade receivables	1,832	1,760
– thereof with a remaining term of more than one year: DM 8 million (DM 28 million in 1991) –		
Other receivables and miscellaneous assets		
Receivables from subsidiaries	277	224
– thereof with a remaining term of more than one year: DM 75 million (DM 26 million in 1991) –		
Receivables from companies in which an interest is held	33	31
– thereof with a remaining term of more than one year: DM 25 million (DM 27 million in 1991) –		
Miscellaneous assets	678	788
– thereof with a remaining term of more than one year: DM 110 million (DM 108 million in 1991) –		
	988	1,043
	<b>2,820</b>	<b>2,803</b>

Miscellaneous assets include, in particular, tax refund claims, loans, deferred interest claims and shareholder rights.

**(6) Marketable Securities and Notes**

	31.12.1992 DM million	31.12.1991 DM million
Other securities	2,238	1,979
Notes	170	314
	<b>2,408</b>	<b>2,293</b>

Other securities are primarily fixed-interest marketable securities and shares in investment funds.

**(7) Liquid Funds**

These are cash at banks, cash on hand and deposits with the Bundesbank and in postal giro accounts.

**(8) Prepaid Expenses and  
Deferred Taxes**

	31.12.1992 DM million	31.12.1991 DM million
Prepaid expenses	57	65
Deferred taxes	294	335
	<b>351</b>	<b>400</b>



**(9) Subscribed Capital and Capital Reserve**

The subscribed capital of BMW AG, amounting to DM 899 million, comprises 9,065,000 ordinary shares with a nominal value of DM 50, 225,000 ordinary shares with a nominal value of DM 100, 368,000 ordinary shares with a nominal value of DM 1,000 and 1,102,961 non-voting preference shares with a nominal value of DM 50. The preference shares participate and bear an extra dividend of DM 1 per preference share. All shares are bearer shares.

The subscribed capital increased as a result of the issue of non-voting preference shares to employees, amounting to DM 3 million. Thus, the authorized capital of BMW AG, permitting the issue of non-voting preference shares for a nominal amount of DM 15 million until July 1st 1994, still amounted to DM 3 million on the balance sheet date.

The premium from this capital increase, transferred to the capital reserve, amounted to DM 21 million.

**(10) Profit Reserves**

The profit reserves contain the legal reserves of DM 2 million, the other profit reserves of BMW AG and the

reserves formed from the income of the consolidated companies.

**(11) Investment of Other Shareholders**

This item includes third-party investment in the shareholders' equity of the subsidiaries included. It contains

primarily minority investment in BMW Rolls-Royce GmbH, Oberursel.

**(12) Shareholders' Equity**

DM million

## Development of shareholders' equity:

Balance on December 31st 1991	6,392
Dividend of BMW AG for 1991	- 225
Increase in subscribed capital from the authorized capital	+ 3
Transfer to capital reserve from the capital increase for preference shares	+ 21
Change in profit reserves	
- Transfer from the year's net income	+ 494
- Offsetting of goodwill	- 168
- Other changes	- 19
	+ 307
Net income available for distribution	+ 226
Change in investment of other shareholders	- 6
- thereof from the year's net income: DM 6 million -	
Balance on December 31st 1992	6,718

The offsetting of goodwill relates primarily to the full consolidation, for the first time, of softlab GmbH für Systementwicklung und EDV-Anwendung, Munich, and BMW Sverige AB, Stockholm, and to the additional purchase of shares in BMW Finance S.N.C., Paris, BMW Finance (GB) Ltd., Bracknell, and BMW Japan Finance Corp., Tokyo.

Other changes in the profit reserves include the conversion of financial statements in foreign currency denominations and the changes arising from the consolidation of capital.



**(13) Provisions**

	31.12.1992 DM million	31.12.1991 DM million
Pension fund provisions	1,599	1,442
Provisions for taxes	733	813
Other provisions	4,938	4,547
	<b>7,270</b>	<b>6,802</b>

The pension fund provisions are related mainly to future rights of employees of BMW AG to old age pension payments. The pension liabilities are covered entirely by provisions. The other provisions include in particular product warranty world-wide, risks arising from litigation proceedings and guarantees, obligations

arising in the personnel and social sector, and risks arising from forward loss contracts. Provisions have also been made for maintenance work that has been scheduled in the business year and has to be carried out in the following year, for large-scale repairs and other expenditures.

**(14) Liabilities**

	31.12.1992			31.12.1991
	DM million	thereof up to 1 year DM million	remaining term over 5 years DM million	DM million
Bonds	1,670	44	944	1,424
Due to banks	538	314	102	1,022
Trade payables	1,579	1,579	–	1,633
Other liabilities				
Advance payments received for orders	27	27	–	25
Liabilities from the acceptance of bills and the issue of promissory notes	68	68	–	63
Liabilities to subsidiaries	154	152	2	72
Liabilities to the BMW Benevolent Fund	64	–	64	61
Miscellaneous liabilities	720	641	34	675
– thereof for taxes	(165)	(165)	–	(245)
– thereof for social security	(59)	(59)	–	(47)
	1,033	888	100	896
	<b>4,820</b>	<b>2,825</b>	<b>1,146</b>	<b>4,975</b>



**(15) Liabilities from Sales Financing**

	31.12.1992			31.12.1991
	thereof remaining term			
	up to			over
	1 year			5 years
	DM	DM	DM	DM
	million	million	million	million
Liabilities from sales financing				
Bonds	490	–	–	303
Due to banks	5,445	3,003	74	4,715
– thereof secured by mortgages	(170)			(110)
Trade payables	70	70	–	83
Commercial papers	570	570	–	522
Other liabilities	117	72	–	140
	6,692	3,715	74	5,763
Deferred income from leasing financing	1,805			1,279
	<b>8,497</b>	<b>3,715</b>	<b>74</b>	<b>7,042</b>

The liabilities from sales financing serve to refinance the leased products and the receivables from sales financing.

Deferred income from leasing financing comprises payments from ongoing leasing contracts that are not yet due.

**Liability**

	31.12.1992	31.12.1991
	DM million	DM million
Guarantees	4	2
Warranties	1	94

**Other Financial Obligations**

According to maturity dates, the cash value of the obligations arising from rent and leasing contracts, amounting to DM 1,466 million, is as follows:

	31.12.1992
	DM million
1993	261
1994 to 1997	626
after 1997	579

DM 17 million thereof are liabilities to subsidiaries.

The order liability for investments amounts to DM 1,239 million.

Further financial obligations amount to DM 113 million.



# Notes

## The Consolidated Statement of Income

### (16) Net Sales

	1992 DM million	1991 DM million
Automobiles	22,918	22,554
Motorcycles	457	429
Leasing	2,884	2,378
Other sales	4,982	4,478
	<b>31,241</b>	<b>29,839</b>
Federal Republic of Germany	13,077	12,955
Europe excluding the Federal Republic of Germany	10,047	8,985
North America, Asia, Africa, Australia and other markets	8,117	7,899
	<b>31,241</b>	<b>29,839</b>

Other sales are primarily from the sale of spare parts and accessories.

### (17) Increase in Product Inventories and Other Company-produced Additions to Tangible Fixed Assets

	1992 DM million	1991 DM million
Increase in product inventories	1,330	634
Other company-produced additions to tangible fixed assets	100	104
	<b>1,430</b>	<b>738</b>

The increase in product inventories results primarily from additions to leased products.

### (18) Other Operating Income

Other operating income comprises the release of provisions, exchange

gains, tax refunds and investment grants received.

### (19) Expenditure on Materials

	1992 DM million	1991 DM million
Expenditure on raw materials, supplies and merchandise purchased	18,011	16,788
Expenditure on services purchased	531	639
	<b>18,542</b>	<b>17,427</b>

Expenditure on raw materials, supplies and purchased goods rose because of increased production and a larger share of models with more expensive materials, compared with the previous year.

Expenditure on purchased goods includes depreciation on leased products, valued at acquisition cost, amounting to DM 1,529 million (DM 1,628 million in 1991).



**(20) Expenditure on Personnel**

	1992 DM million	1991 DM million
Wages and salaries	5,401	4,943
Social security contributions, cost of pension plans and related benefits	986	880
– thereof for pension plans: DM 219 million (DM 186 million in 1991) –		
	<b>6,387</b>	<b>5,823</b>
Workforce on yearly average:	1992	1991
Wage earners	42,682	42,771
Salaried employees	26,424	25,549
	<b>69,106</b>	<b>68,320</b>

**(21) Depreciation on Intangible  
Assets and on Fixed Assets**

Depreciation on intangible assets and on fixed assets covers scheduled commercial balance sheet depreciation.

**(22) Other Operating Expenditure**

Other operating expenditure includes primarily expenses for administration and distribution, warranties, advertis-

ing, outgoing freight, maintenance and repairs, rents and insurance premiums.

**(23) Income from Investment in  
Subsidiaries and  
Associated Companies**

	1992 DM million	1991 DM million
Income from investment	2	1
– thereof from subsidiaries: DM 1 million –		
Gains from profit and loss transfer agreements	1	–
Gains from associated companies	7	9
Expenditure on loss transfers	6	5
	<b>4</b>	<b>5</b>

Gains from associated companies include the equity result of the sub-group Bavaria Wirtschaftsagentur GmbH, Munich.



**(24) Interest Income**

	1992 DM million	1991 DM million
Income from other marketable securities and loans of the financial assets	1	1
Other interest and similar income	964	890
– thereof from subsidiaries: DM 18 million (DM 13 million in 1991) –		
Interest and similar expenditure	578	548
– thereof to subsidiaries: DM 29 million (DM 3 million in 1991) –		
Depreciation on loans and on marketable securities and notes of the current assets	5	16
	<b>382</b>	<b>327</b>

Interest and similar expenditure,  
together with interest expenditure  
from leasing financing, amounted to  
DM 884 million (DM 791 million in 1991).

**(25) Interest Expenditure from  
Leasing Financing**

Interest expenditure from the finan-  
cing of the leasing business is offset by  
corresponding gains which are con-

tained in the leasing instalments and  
shown in the net sales.

**(26) Taxes on Income and Profits**

Taxes on profits are corporation  
income and trade earnings tax in  
Germany and comparable earnings-  
linked taxes abroad. They are calcu-  
lated according to the tax laws that

apply to the individual companies.  
This item also includes deferred taxes  
to take account of timing differences  
arising from consolidation.

**(27) Year's Net Income**

	1992 DM million	1991 DM million
Year's net income	<b>726</b>	<b>783</b>
Allocation of the year's net income:		
Profit due to other shareholders	8	37
Losses attributable to other shareholders	2	8
Transfer to profit reserves	494	529
	<b>500</b>	<b>558</b>
Net income available for distribution	<b>226</b>	<b>225</b>



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**Total Remuneration of the Supervisory Board and of the Board of Management**

Subject to the approval of the proposed dividend at the Annual General Meeting, the remuneration of serving members of the Board of Management for the 1992 business year amounts to DM 13.6 million and that of former members of the Board of Management and their surviving dependents to DM 1.7 million. Total remuneration of the Supervisory Board for 1992 amounted to DM 1.5 million.

Reserves of DM 14.7 million have been made for all pension liabilities to former members of the Board of Management and their surviving dependents.

The members of the Supervisory Board and of the Board of Management are listed on page 9.

Munich, March 1993

**Bayerische Motoren Werke**  
Aktiengesellschaft

The Board of Management

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**Auditors' Certificate**

The Consolidated Financial Statements, which we have audited in accordance with professional standards, comply with the German legal provisions. With due regard to the generally accepted accounting principles, the Consolidated Financial Statements give a true and fair view of the Group's assets, liabilities, financial position and profit or loss. The Economic Review of the Group is consistent with the Consolidated Financial Statements.

Munich, March 5th 1993

**KPMG Deutsche Treuhand-Gesellschaft**  
Aktiengesellschaft  
Wirtschaftsprüfungsgesellschaft

Schnicke                      Kilgert  
Wirtschaftsprüfer      Wirtschaftsprüfer  
(independent auditors)



Balance Sheet and  
Statement of Income  
of BMW AG

BMW AG

The Financial Statements of BMW AG, of which the balance sheet and the statement of income, in particular, are given here, have been provided with the unrestricted confirmatory audit certificate of KPMG Deutsche Treuhand-Gesellschaft AG Wirtschaftsprüfungsgesellschaft, are published in the Federal Gazette and deposited with the Commercial Register of the Munich Local Court. They are available from BMW AG, P.O.B. 400240, D-8000 Munich 40.



# Balance Sheet of BMW AG

at December 31st 1992  
in DM million

Assets	31.12.1992 DM million	31.12.1991 DM million
Intangible assets	183	—
Tangible fixed assets	3,828	4,034
Financial assets	962	962
<b>Fixed Assets</b>	<b>4,973</b>	<b>4,996</b>
Inventories	1,663	1,471
Trade receivables	754	573
Receivables from subsidiaries	2,396	1,738
Other receivables and miscellaneous assets	280	519
Marketable securities and notes	1,612	1,543
Liquid funds	443	517
<b>Current Assets</b>	<b>7,148</b>	<b>6,361</b>
<b>Prepaid Expenses</b>	<b>5</b>	<b>7</b>
	<b>12,126</b>	<b>11,364</b>
<b>Shareholders' Equity and Liabilities</b>	<b>31.12.1992 DM million</b>	<b>31.12.1991 DM million</b>
Subscribed capital	899	896
Capital reserve	817	796
Profit reserves	2,668	2,443
Net income available for distribution	226	225
<b>Shareholders' Equity</b>	<b>4,610</b>	<b>4,360</b>
<b>Registered Dividend Right Certificates</b>	<b>101</b>	<b>103</b>
Pension fund provisions	1,485	1,356
Other provisions	3,657	3,488
<b>Provisions</b>	<b>5,142</b>	<b>4,844</b>
Due to banks	155	111
Trade payables	1,163	1,211
Liabilities to subsidiaries	379	371
Other liabilities	576	364
<b>Liabilities</b>	<b>2,273</b>	<b>2,057</b>
	<b>12,126</b>	<b>11,364</b>



# Statement of Income of BMW AG

for the 1992 business year  
in DM million

	1992 DM million	1991 DM million
<b>Net Sales</b>	<b>26,472</b>	<b>24,477</b>
Change in product inventories and other company-produced additions to tangible fixed assets	175	217
<b>Total Value of Production</b>	<b>26,647</b>	<b>24,694</b>
Other operating income	616	678
Expenditure on materials	16,619	15,133
Expenditure on personnel	5,344	4,943
Depreciation on intangible assets and on fixed assets	1,432	1,396
Other operating expenditure	3,605	3,482
Income from investment in subsidiaries and associated companies	147	200
Interest income	171	158
Income from normal business	581	776
Taxes on income and profits	31	228
Other taxes	99	99
<b>Year's Net Income</b>	<b>451</b>	<b>449</b>
Transfer to profit reserves	225	224
<b>Net Income Available for Distribution</b>	<b>226</b>	<b>225</b>



**Subsidiaries and Associated  
Companies of BMW AG**

**Major subsidiaries and associated  
companies of BMW AG at December 31st 1992**

	Shareholders' equity DM million	Income DM million	Capital investment in %
<b>Domestic</b>			
BMW Rolls-Royce GmbH, Oberursel <sup>2)</sup>	201	0	50.5
BMW Bank GmbH, Munich	172	9	100
BMW Maschinenfabrik Spandau GmbH, Berlin	95	5	100
softlab GmbH für Systementwicklung und EDV-Anwendung, Munich	60	1	100
KONTRON GmbH, Eching <sup>2)</sup>	42	0	100
BMW Maschinenfabrik Spandau GmbH + Co. Anlagen und Betriebs OHG, Berlin	34	17	100
BMW Leasing GmbH, Munich <sup>3)</sup>	31	0	100
BMW Ingenieur-Zentrum GmbH + Co., Munich	1	0	100
BMW Motorrad GmbH + Co., Munich	1)	2	100
BMW Fahrzeugtechnik GmbH, Eisenach <sup>3)</sup>	1)	0	100
BMW INTEC Beteiligungs GmbH, Munich <sup>3)</sup>	1)	0	100
BMW Motorsport GmbH, Munich <sup>3)</sup>	1)	0	100
KONTRON Elektronik GmbH, Eching <sup>2)</sup>	1)	0	100
<b>Foreign</b>			
BMW Motoren Gesellschaft m.b.H., Steyr, Austria	685	139	100
BMW Coordination Center N.V., Bornem, Belgium	437	60	100
BMW France S.A., Bois d'Arcy, France	258	74	100
BMW (South Africa) (Pty) Ltd., Pretoria, South Africa	99	37	100
BMW Finance N.V., The Hague, Netherlands	93	33	100
BMW Overseas Enterprises N.V., Willemstad, Curaçao	82	5	100
BMW Austria Gesellschaft m.b.H., Salzburg, Austria <sup>2)</sup>	28	0	100
BMW Holding AG, Dielsdorf, Switzerland	22	1)	100
BMW (Schweiz) AG, Dielsdorf, Switzerland	75	10	100
BMW Holding B.V., The Hague, Netherlands	457	421	100
BMW (GB) Ltd., Bracknell, Great Britain	448	76	100
BMW Japan Corp., Tokyo, Japan	423	10	100
BMW (US) Holding Corporation, Wilmington, Del., USA <sup>4)</sup>	359	- 46	100
BMW Italia S.p.A., Palazzolo di Sona (Verona), Italy	92	48	100
BMW Australia Ltd., Melbourne, Victoria, Australia	77	1	100
BMW Belgium S.A./N.V., Bornem, Belgium	76	30	100
BMW Ibérica S.A., Madrid, Spain	71	52	100
BMW Nederland B.V., The Hague, Netherlands	51	22	100
BMW Canada Inc., Whitby, Canada	37	4	100
BMW Sverige AB, Stockholm, Sweden	10	1)	100
BMW New Zealand Ltd., Auckland, New Zealand	8	1)	100

1) Less than 500 thousand DM

2) Profit and loss transfer agreement with a subsidiary of BMW AG

3) Profit and loss transfer agreement with BMW AG

4) Consolidated with BMW's operative US companies.



## Agenda of the Annual General Meeting

Agenda of the 73rd Annual General Meeting to be held on Thursday, May 13th 1993 at 10am in the Philharmonie in the "Gasteig", Rosenheimer Strasse 5, 8000 Munich 80.

**1.** Presentation of the Annual Accounts at December 31st 1992, the Economic Review and the Report of the Supervisory Board, as well as the Consolidated Financial Statements at December 31st 1992 and the Economic Review of the BMW Group included in the Economic Review.

**2.** Resolution on the allocation of profits.

Board of Management and Supervisory Board propose using the balance sheet surplus for the 1992 business year, amounting to DM 225,446,753.25,

to pay a dividend of DM 12.50 per share with a nominal value of DM 50 on the subscribed capital with entitlement to full dividend payment for the 1992 business year (DM 843,750,000 in ordinary shares), i.e. DM 210,937,500 and

to pay a dividend of DM 13.50 per preference share with a nominal value of DM 50 on the subscribed capital with entitlement to full dividend payment for the 1992 business year (DM 52,327,900 in preference shares), i.e. DM 14,128,533, and

to pay a dividend of DM 6.75 per preference share with a nominal value of DM 50 on the subscribed capital with entitlement to half the dividend payment for the 1992 business year (DM 2,820,150 in preference shares), i.e. DM 380,720.25.

**3.** Resolution on the formal approval of the actions of the members of the Board of Management.

Board of Management and Supervisory Board propose approving the actions of the members of the Board of Management for the 1992 business year.

**4.** Resolution on the formal approval of the actions of the members of the Supervisory Board.

Board of Management and Supervisory Board propose approving the actions of the members of the Supervisory Board for the 1992 business year.

**5.** Election to the Supervisory Board

The Supervisory Board is composed in accordance with Clauses 96 Para. 1 and 101 Para. 1 of the German Corporation Law and Clause 7 Para. 1 No. 3 of the German Law on Co-determination. The General Meeting is not bound to accept the proposals for election.

Mr. Eberhard von Heusinger has resigned from office with effect from the close of the General Meeting on May 13th 1993.

The Supervisory Board proposes the election of Dr.-Ing. E.h. Dr.-Ing. E.h. Eberhard v. Kuenheim, Diplomingenieur (graduate engineer), Chairman of the Board of Management of Bayerische Motoren Werke Aktiengesellschaft (until the close of the General Meeting on May 13th 1993), Munich, as shareholders' member of the Supervisory Board for the remaining period of office of Mr. von Heusinger, i.e. until the close of the 1994 General Meeting.

**6.** Choice of auditors for the 1993 business year.

The Supervisory Board proposes the appointment of KPMG Deutsche Treuhand-Gesellschaft Aktiengesellschaft Wirtschaftsprüfungsgesellschaft, Munich, as auditors for the 1993 business year.



Production	
Automobiles	units
Motorcycles	units
Unit Sales	
Automobiles	units
Motorcycles	units
Sales	DM million
Change	%
Workforce at end of year	
Investment	DM million
in % of sales	%
Depreciation	DM million
Cash flow	DM million
in % of investment	%
Fixed assets	DM million
Assets from sales financing	DM million
in % of balance sheet total	%
Other current assets and prepaid expenses	DM million
Subscribed capital	DM million
Reserves	DM million
Capital reserve	DM million
Profit reserves	DM million
Shareholders' equity	DM million
in % of balance sheet total	%
in % of fixed assets	%
Debt/equity ratio	
Industrial business	%
Sales financing	%
Long-term borrowings	DM million
Long-term capital	DM million
in % of fixed assets	%
Liabilities from sales financing	DM million
Balance sheet total	DM million
Total value of production	DM million
per employee	DM
Expenditure on materials	DM million
Expenditure on personnel	DM million
per employee	DM
Income from normal business	DM million
in % of total value of production	%
Taxes	DM million
Year's net income	DM million
Net income of BMW AG available for distribution	DM million



1988	1989	1990	1991	1992
484,121	511,476	519,660	553,230	598,145
23,817	25,761	31,589	33,980	35,910
495,787	523,021	525,866	552,660	594,895
26,779	26,805	29,701	32,187	35,675
24,467	26,515	27,178	29,839	31,241
+25.7	+8.4	+2.5	+9.8	+4.7
65,812	66,267	70,948	74,385	73,562
1,911	1,820	2,066	2,123	1,975
7.8	6.9	7.6	7.1	6.3
1,489	1,549	1,778	1,805	1,827
2,062	2,263	2,780	2,831	2,880
107.9	124.3	134.6	133.3	145.8
6,080	6,369	6,707	6,748	6,834
4,464	5,294	6,306	8,077	9,764
22.2	25.6	28.0	31.8	35.5
9,601	9,026	9,488	10,580	10,906
750	791	794	896	899
3,908	4,343	4,812	5,174	5,502
590	749	775	796	817
3,318	3,594	4,037	4,378	4,685
4,926	5,371	5,860	6,392	6,718
24.5	26.0	26.0	25.2	24.4
81.0	84.3	87.4	94.7	98.3
30.3	30.0	31.2	30.9	30.7
3.9	14.1	12.7	12.8	13.0
3,888	4,413	4,524	5,563	6,672
8,814	9,784	10,384	11,955	13,390
145.0	153.6	154.8	177.2	195.9
4,288	4,550	5,502	7,042	8,497
20,145	20,689	22,501	25,405	27,504
24,945	26,640	27,640	30,577	32,671
400,298	426,615	420,112	447,556	472,766
14,524	15,280	15,749	17,427	18,542
4,499	4,700	5,313	5,823	6,387
72,197	75,266	80,754	85,231	92,423
1,203	1,561	1,664	1,752	1,477
4.8	5.9	6.0	5.7	4.5
748	1,003	968	969	751
455	558	696	783	726
188	193	199	225	226



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