

German Industry—a Tower of Strength?

by Dorothea Lucke

By the summer of 2011, Germany industry was back at levels last achieved before the economic crisis, thanks to continuous growth in production since early 2009. The recovery was driven by strong domestic and foreign demand for German capital and intermediate goods. However, the Ifo Business Climate Index, which has contracted since July 2011, and fewer orders suggest that industrial production will decline by the end of 2011. The duration and intensity of the slowdown will depend not least on how quickly policy-makers take convincing measures to resolve the debt crisis in the eurozone and thus allay widespread uncertainty among investors and consumers.

Demand for industrial products increased in the first three quarters of 2011 by ten percent over the previous year. While the impetus at the beginning of the upturn came mainly from emerging countries, this year domestic demand and demand from other countries in the eurozone contributed almost as much to growth as demand from outside the eurozone. This surge in demand has allowed industry (mining and quarrying, manufacturing, energy supply) to increase production by ten percent (Tables 1 and 2, and Figure 1) in the same period.

As a result of the as yet unresolved debt crisis in the eurozone, DIW Berlin forecasts a period of stagnation for Germany and the eurozone in the winter months from 2011 to 2012. Assuming it will be possible to significantly reduce investors' uncertainty in early 2012, then gross domestic product in the eurozone will develop more dynamically again.¹ This scenario provides the framework for DIW Berlin's industry forecast (box).

Capital Goods: Peaked in Summer 2011

Investment activity this year was stimulated by low interest rates and positive prospects for global economic development. As a result, companies quickly caught up on demand for investment caused by the economic crisis. Domestic demand for capital goods² from Germany rose in the first three quarters by 15 percent over the previous year. Demand from the eurozone increased by twelve percent and demand from the non-eurozone increased by as much as 25 percent, so capacity utilization among capital goods producers in Germany increa-

¹ Fichtner, F. et al., „Herbstgrundlinien 2011,“ DIW Wochenbericht, no. 40(2011).

² As the manufacture of motor vehicles (Group 29.10 in the Classification of Economic Activities, Edition 2008 (WZ 2008)) is counted as capital good, although motor vehicles are consumer durables, since the changeover in 2005 the Federal Statistical Office publishes additionally the aggregate „Capital goods excluding 29.10.“ The figures listed refer to this aggregate.

Table 1

Production and New Orders in German Industry¹

In percent

	Structure ²	Production ³			Export ratio ⁴	New orders ⁵		
		Changes over the previous year				Overall	Domestic	Foreign
	2010	1st quarter of 2011	2nd quarter of 2011	3rd quarter of 2011	2010	Changes over the previous year		
						3rd quarter of 2011		
Mining and Quarrying, Manufacturing, Energy supply	100.0	11.9	8.2	8.2	-	-	-	-
Intermediate goods	37.2	13.2	8.5	8.3	43.4	3.7	4.7	2.5
Capital goods	37.5	18.4	13.2	14.1	59.8	5.7	8.0	4.3
Consumer goods	16.9	4.0	4.3	1.5	30.8	4.0	4.3	3.7
Energy	8.4	-2.3	-8.6	-6.9	-	-	-	-
Mining and Quarrying ⁶	1.1	-15.9	-5.2	-3.6	10.8	-	-	-
Mining of coal and lignite	0.1	1.4	1.7	1.8	-	-	-	-
Extraction of crude petroleum and natural gas	0.1	-1.9	6.0	6.7	-	-	-	-
Other mining and quarrying	0.4	14.7	4.7	2.8	34.1	-	-	-
Manufacturing	91.7	13.7	9.7	9.4	47.0	4.8	6.2	3.6
Food products and beverages	7.2	0.0	2.7	0.3	19.5	-	-	-
Tobacco products	0.2	3.6	-0.1	-11.4	18.3	-	-	-
Textiles	0.7	7.1	3.1	1.4	45.4	-4.6	-5.6	-3.3
Wearing Apparel	0.3	0.3	5.7	-1.2	40.2	6.5	7.3	5.3
Leather and related products	0.2	6.3	4.3	6.3	30.4	-	-	-
Wood and products of wood (excluding furniture)	1.2	7.2	0.8	-1.1	29.1	-	-	-
Paper and paper products	2.2	2.7	-0.5	-0.3	39.7	-1.9	0.2	-4.9
Printing and reproduction of recorded media	1.8	3.5	2.8	0.6	15.5	-	-	-
Coke and refined petroleum products	0.9	5.0	-3.2	-1.7	8.9	-	-	-
Chemicals and chemical products	6.6	7.8	3.2	-0.1	56.1	-2.2	-1.3	-2.9
Basic pharmaceutical products and pharmaceutical preparations	3.3	6.8	9.6	4.1	62.1	3.3	-1.8	6.7
Rubber and plastic products	4.6	10.8	6.4	4.6	39.8	-	-	-
Other non-metallic mineral products	2.6	20.0	6.8	3.9	31.5	-	-	-
Basic metals	4.2	11.6	9.8	7.5	37.5	0.8	0.8	0.7
Fabricated metal products	8.4	17.5	11.6	10.2	32.2	9.3	11.0	5.8
Electronic and electrical equipment ⁷	13.7	19.7	13.9	17.5	52.4	8.6	9.9	7.3
Machinery and equipment ⁸	14.9	20.3	16.1	14.7	61.4	9.0	14.6	5.6
Motor vehicles, trailers and semi-trailers	12.9	22.5	12.8	16.7	63.3	3.5	3.3	3.6
Other transport equipment	2.0	10.5	12.7	13.9	68.4	-25.9	-41.6	-20.9
Furniture	1.2	3.6	3.6	6.2	28.4	-	-	-
Energy supply	7.2	-3.2	-9.8	-39.3	-	-	-	-

1 Includes mining and quarrying, manufacturing, energy supply.

2 Proportion of gross value added at factor costs in the aggregate "mining and quarrying, manufacturing, energy supply". Deviations in totals are due to rounding up or down.

3 Production index, 2005 = 100, adjusted for working days.

4 Share of foreign sales to total sales of businesses in the corresponding sector.

5 Volume index, 2005 = 100.

6 Including mining and quarrying.

7 WZ 2008, 26, 27, and 20 percent of 32.50, 33.13, 33.14. As new orders are not recorded for WZ 2008, 32 and 33, new orders from WZ 2008, 26 and 27 serve to illustrate the increase in demand.

8 WZ 2008, 28 and 33.12. New orders are not recorded for 33.12 so data on new orders only includes WZ 2008, 28.

Sources: Federal Statistical Office, calculations by DIW Berlin.

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Production has grown strongest in capital goods industries.

Table 2

Production¹ and New Orders² in the Main Industrial Groupings and in Selected Industrial Sectors

Changes from the previous period in percent

	2010	3rd quarter of 2010	4th quarter of 2010	1st quarter of 2011	2nd quarter of 2011	3rd quarter of 2011
Production						
Mining and Quarrying, Manufacturing, Energy Supply	10.7	1.8	2.8	1.8	1.6	1.9
Intermediate goods	14.7	1.9	0.7	3.1	2.6	1.8
Capital goods	12.6	2.5	5.9	1.8	2.5	3.6
Consumer goods	2.9	1.6	0.2	1.2	1.2	-1.2
Energy	3.1	-1.7	2.9	-2.9	-6.9	0.0
Manufacturing	11.6	2.1	2.7	2.3	2.2	2.1
Food products and beverages	1.4	0.5	-0.4	0.7	1.7	-1.6
Chemicals and chemical products	17.2	0.6	-1.0	3.4	0.1	-2.4
Basic metals	20.4	-0.1	1.2	4.8	3.6	-2.3
Fabricated metal products	14.1	2.3	2.3	3.3	3.2	1.0
Electronic and electrical equipment ³	16.4	2.7	3.3	5.3	2.1	6.2
Machinery and equipment ⁴	9.6	5.3	6.0	1.5	2.7	4.3
Motor vehicles, trailers and semi-trailers	24.9	2.9	7.6	0.2	1.7	7.7
New domestic orders						
Intermediate goods	22.1	-1.0	-0.8	4.9	3.2	-2.2
Capital goods	6.1	0.9	5.1	2.4	6.0	-5.0
Consumer goods	-11.3	0.2	-0.9	1.0	3.5	1.0
Manufacturing	9.7	0.0	1.9	3.4	4.5	-3.3
Chemicals and chemical products	15.6	2.2	-0.1	2.1	0.1	-3.1
Basic metals	37.2	-5.4	1.0	2.9	-3.5	0.9
Fabricated metal products	13.4	-1.8	0.9	6.8	6.8	-3.2
Electronic and electrical equipment ⁵	21.8	-0.8	-2.0	4.9	10.0	-2.6
Machinery and equipment ⁶	-2.2	4.6	2.9	7.7	0.1	3.5
Motor vehicles, trailers and semi-trailers	21.1	0.7	2.3	1.8	-0.6	0.2
New foreign orders						
Intermediate goods	19.9	3.1	2.2	3.2	-3.0	0.5
Capital goods	16.7	3.5	5.1	0.6	5.0	-6.1
Consumer goods	5.7	-1.9	3.3	0.9	0.8	-1.1
Manufacturing	15.9	3.0	4.0	1.5	2.1	-3.8
Chemicals and chemical products	14.2	1.8	-0.5	2.9	-1.8	-3.1
Basic metals	16.2	0.5	0.6	5.1	-2.8	-1.0
Fabricated metal products	16.5	1.4	5.9	0.1	1.3	-1.2
Electronic and electrical equipment ⁵	18.1	1.9	9.5	-0.3	-3.2	1.9
Machinery and equipment ⁶	18.7	6.0	11.2	3.1	-0.8	-6.7
Motor vehicles, trailers and semi-trailers	31.0	2.4	1.1	3.0	-0.9	0.6

1 Production index 2005 = 100, adjusted for working days and seasons.

2 Volume index 2005 = 100, seasonally adjusted.

3 WZ 2008, 26, 27, and 20 percent of 32.50, 33.13, 33.14.

4 WZ 2008, 28 and 33.12.

5 WZ 2008, 26 and 27.

6 WZ 2008, 28.

Sources: Federal Statistical Office, calculations by DIW Berlin.

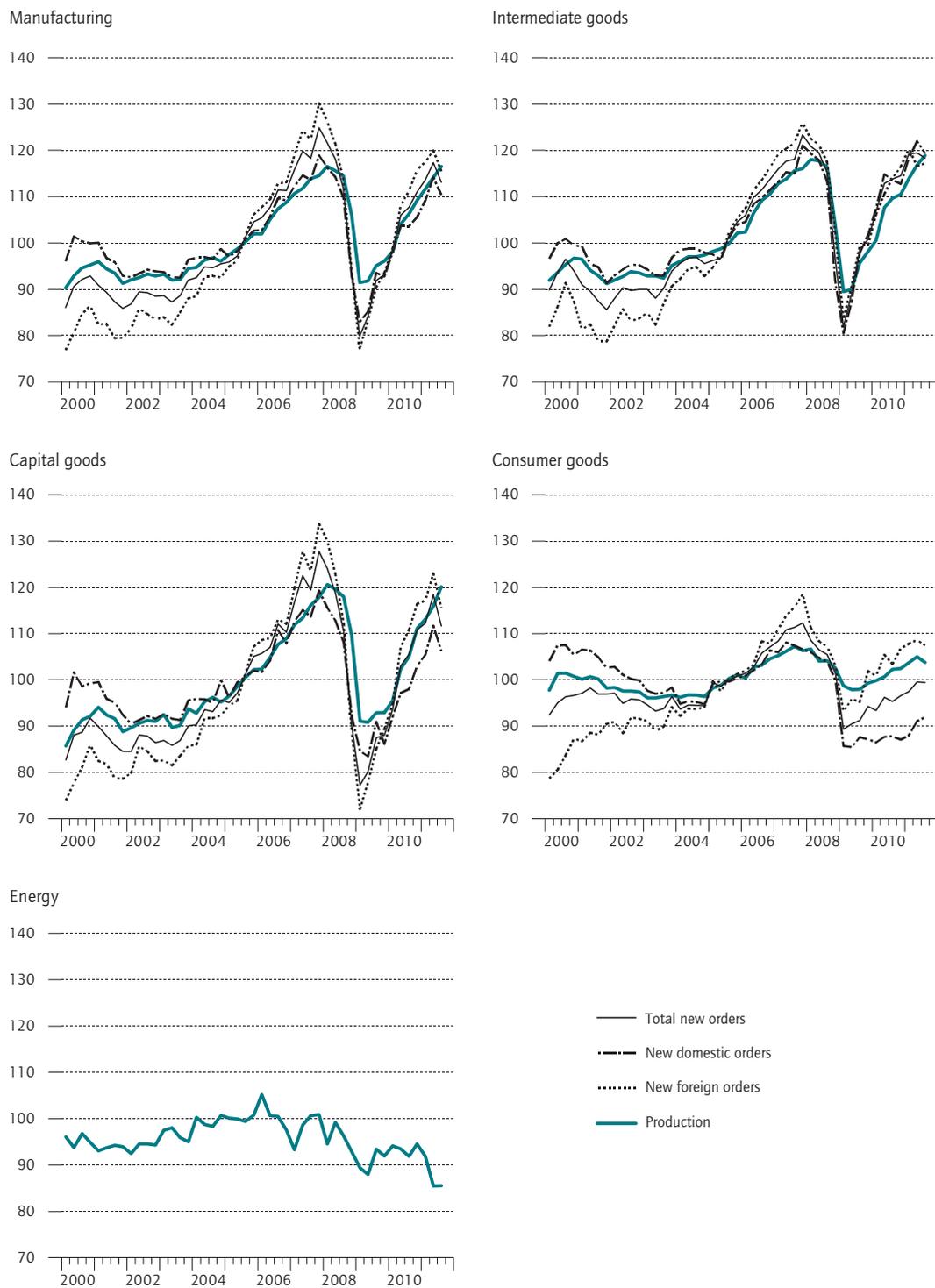
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New orders decreased significantly in summer 2011.

Figure 1

New Orders and Production, by Major Industrial Groupings

Index 2005 = 100, seasonally adjusted



Source: Federal Statistical Office.

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Industrial production has reached the same level it was at before the crisis.

sed beyond the long-term average.³ The situation is similar in the manufacturing sector as a whole.⁴ New orders have increased in many industries to a level that leaves companies considering investing in expansion. However, domestic and foreign mood indicators⁵ signal a significant deterioration in overall economic development for a number of months, probably leading to orders being cancelled. Companies will extend the processing time of order backlogs and delay expansion projects. It can therefore be assumed that domestic and foreign demand for German capital goods will decline significantly during the winter months.

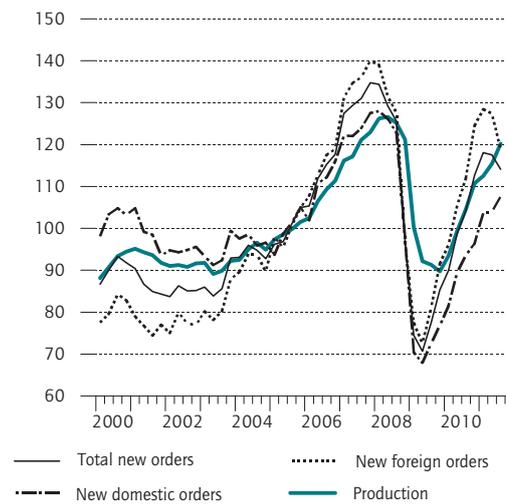
These developments are particularly evident in the manufacture of machinery and equipment, the largest capital goods sector (Figure 2). Due to an increase in demand of 20 percent in the first three quarters compared to the same period in the previous year, seasonally adjusted production figures increased strongly again in the third quarter; they are now 17 percent higher than in the previous year.

New orders of machinery and equipment from the non-eurozone have been declining for two quarters now, however, showing that the investment cycle had peaked there. In contrast, seasonally adjusted new domestic orders in the third quarter of 2011 rose compared to the previous quarter, albeit with declining monthly figures since their highest value in July. Due to the steadily deteriorating mood indicators, it can be assumed that weaker demand for machinery and equipment is not a

Figure 2

New Orders and Production in the Manufacture of Machinery and Equipment¹

Index 2005 = 100, seasonally adjusted



¹ WZ 2008, 28 and 33.12. New orders are only recorded for WZ 2008, 28. Source: Federal Statistical Office.

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short-term or random phenomenon, but more a sustained decline in demand.

Signals coming both from abroad and at home would suggest lower production of machinery and equipment at the end of the year and into the first quarter of 2012. After that, production should increase again. Compared to the previous year, an increase in production of almost 14 percent is expected in 2011, and 1.5 percent for the coming year (Table 3).

Manufacture of motor vehicles, trailers and semi-trailers includes the manufacture of cars and commercial vehicles, and related parts industries (Figure 3). While the entire industry is allocated to the main industrial grouping “capital goods”, only commercial vehicles are actually capital goods as such. One indicator of the development of the commercial vehicle sector is demand for and production of bodies for motor vehicles, trailers and semi-trailers (WZ 2008, 29.20). New orders received from the non-eurozone (the eurozone, domestic demand) in the first three quarters of this year were almost 70 percent (20 percent, 17 percent) up on the previous year. Demand peaked in the second quarter, while production continued to increase. Production is expected

Box

DIW Berlin's Industrial Conference

The industry forecast by DIW Berlin formed the basis for discussions at DIW Berlin's Industrial Conference held in Berlin on October 27 and 28, 2011. The conference brought experts from companies and associations together to compile with DIW Berlin a detailed economic picture of industry in Germany and other key countries. At this year's conference, association experts outlined a significantly more positive image of industrial activity in the coming year than DIW Berlin. The current very high degree of uncertainty about overall economic development prompted us to leave the two viewpoints side by side. In this report, DIW Berlin presents its industry forecast and explains its differences to the outlook proposed by association experts.

Table 3

Industrial Production in Germany¹

Changes over the previous year in percent

	2010	2011 ²	2012 ²
Mining and quarrying, manufacturing, energy supply	10,8	7,9	-0,2
Manufacturing	11,7	9,3	-0,1
Food products and beverages	1,5	0,6	1,0
Chemicals and chemical products	17,3	1,6	-1,5
Basic metals	20,7	8,1	0,5
Fabricated metal products	14,2	10,6	-1,7
Electronic and electrical equipment ³	16,5	15,0	-0,5
Machinery and equipment ⁴	10,2	13,7	1,5
Motor vehicles, trailers and semi-trailers	24,8	14,3	1,0
Energy supply	4,4	-8,6	-1,5

1 Adjusted for working days
 2 Forecast by DIW Berlin.
 3 WZ 2008, 26, 27, and 20 percent of 32.50, 33.13, and 33.14.
 4 WZ 2008, 28 and 33.12.
 Sources: Federal Statistical Office, calculations by DIW Berlin.

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In 2012, production will not exceed levels from the previous year.

to follow demand after a brief delay, so a decline in production is likely in the fourth quarter of 2011.

Domestic and foreign demand for cars, which is dependent on private consumption, increased sharply last year but has tailed off since the beginning of 2011. This is not surprising in view of weak consumer development in many key markets and consumers' uncertainty due to the debt crisis. This makes the sharp rise in production of motor vehicles and engines all the more astonishing. Production in the first three quarters of 2011 was a good 16 percent higher than in the same period last year. In the coming months, production is expected to be adjusted in line with demand, meaning a significant drop in production.

This development in the car and the truck division will also result in production constraints in the parts industry, and consequently, overall growth for the current year is still expected to be over 14 percent. Since the decline in production will last until at least spring, growth in the vehicle construction industry is only expected to be about one percent for the coming year.

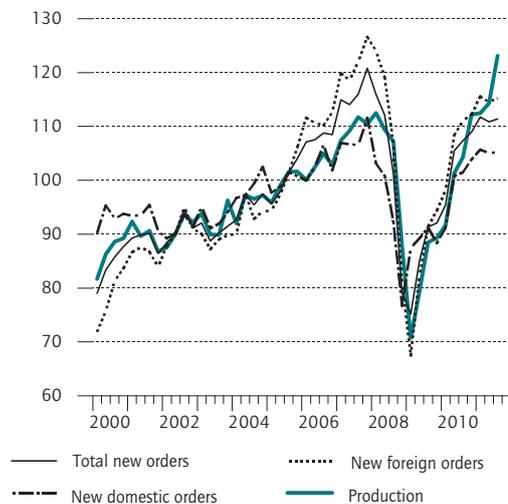
Intermediate Goods: Intermediate Goods Producers Come Up Against Flagging Investments

Intermediate goods produced in Germany are mostly used for capital goods both at home and abroad. Consequently, the demand for intermediates is substantially dependent on demand for capital goods—equipment and buildings. Demand for intermediate goods from abroad surpassed its peak in the first quarter of 2011. This suggests—as does the decline in foreign demand for capital goods from Germany—an end to the investment boom abroad. Domestic demand for intermediate goods in the third quarter of 2011 declined for the first time in line with domestic demand for capital goods. Towards the end of the year, demand for intermediate goods will fall further. This downward trend is reinforced by the fact that impulses from the construction industry, which has developed dynamically this year, are slowly tapering off. According to the trend of demand, production of intermediate goods will decline during the winter months, after which it should recover again.

The manufacture of basic metals (Figure 4) supplies, in particular, the automotive and construction industries, and also the manufacture of machinery and equipment and of tubes and pipes. In 2009, it benefited from the economic policies aimed at supporting its customer industries after the economic crisis, and last year also from the high demand for capital goods at home

Figure 3

New Orders and Production in the Manufacture of Motor Vehicles, Trailers and Semi-trailers
 Index 2005 = 100, seasonally adjusted



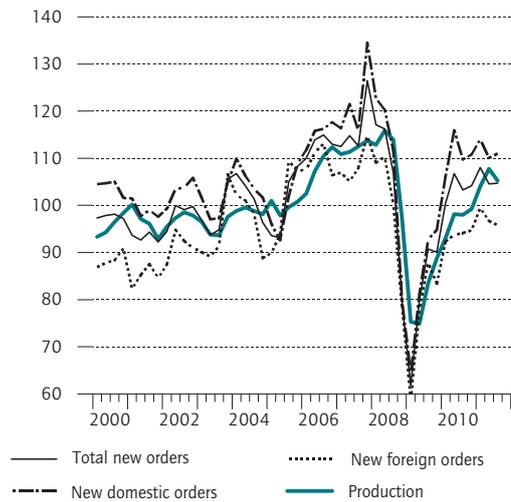
Source: Federal Statistical Office.

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Figure 4

New Orders and Production in the Manufacture of Basic Metals

Index 2005 = 100, seasonally adjusted



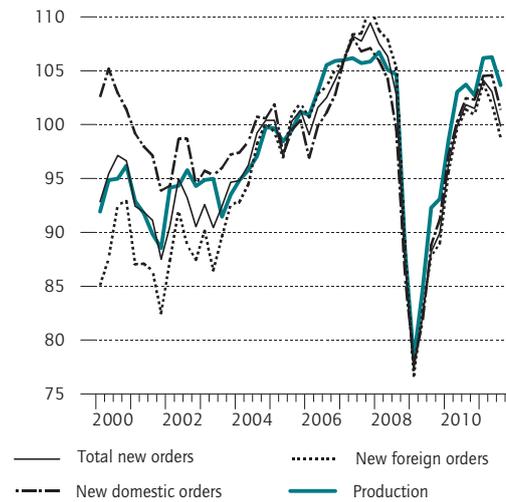
Source: Federal Statistical Office.

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Figure 5

New Orders and Production in the Manufacture of Chemicals and Chemical Products

Index 2005 = 100, seasonally adjusted



Source: Federal Statistical Office.

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and abroad. A rapid increase in demand has driven up the price of metals. In order to preempt further price increases, customer industries and distributors have filled their warehouses with metallic products. Due to the deterioration of their business prospects over the course of this year, they are now attempting to reduce these warehouse stocks. As a result, the trend of demand for basic metals in the first three quarters of 2011 (+2.5 percent) was weak compared to production in customer industries. Production will therefore be adjusted and restricted significantly in the last quarter of 2011. It will also still remain at a low level in the first quarter of 2012. With an improvement in economic conditions in the industry over the next year, manufacture of basic metals will also be revived. The annual average for 2011 will still represent production growth of 8.1 percent due to the high level at the beginning of the year; in 2012, it is more likely to be 0.5 percent.

New orders in the manufacture of chemicals and chemical products (Figure 5) have been declining since the second quarter of 2011, and companies have responded with production cuts. Since the chemical industry generally has a head start on the development of industry as a whole, this is a very clear indication that German industry reached the peak of its business cycle in the third

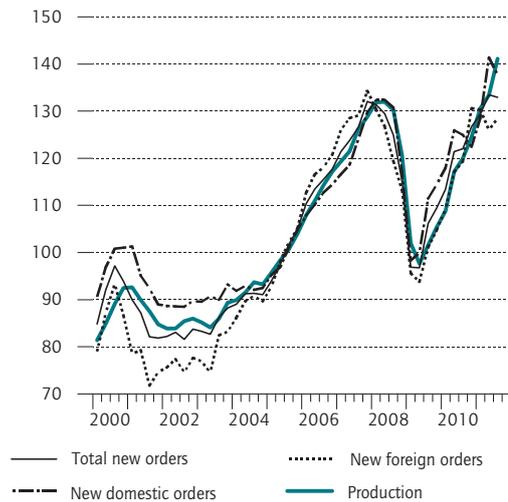
quarter. Equally, customer industries at home and abroad will restrict production in the fourth quarter, leading to a significant decline in production in the chemical industry. As a result, average growth for 2011 will be limited to 1.6 percent. While it is assumed that a recovery in the chemical industry will occur early next year, a decline in the annual average production for 2012 of 1.5 percent compared to 2011 is still expected.

The manufacture of electronic and electrical equipment (Figure 6) produces intermediate, capital, and consumer goods. The corresponding group of customers determines the economic development of the various sectors. Among intermediate goods, electronic components are significant because they are used in the entire capital goods industry and, as a result, demand for components reflects the situation in the capital goods industry. In the first three quarters of 2011, demand from the non-eurozone was seven percent below the same period last year. Domestic orders have risen by 45 percent, but they have also now reached their peak. Further evidence of the decline in this market comes from the decrease in prices of electronic components, which was stopped in 2010 due to high demand.

Figure 6

New Orders and Production in the Manufacture of Electronic and Electrical Equipment¹

Index 2005 = 100, seasonally adjusted



¹ WZ 2008, 26, 27, and 20 percent of 32.50, 33.13, and 33.14. New orders are only recorded for WZ 2008, 26 and 27. Sources: Federal Statistical Office, calculations by DIW Berlin.

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The production of electronic components rose in the first three quarters by 38 percent over the corresponding period last year, and, seasonally adjusted, it rose again in the third quarter, compared to the previous quarter. Given the now declining new orders and the expected development in customer industries, also the production of components will recede in the fourth quarter of 2011.

In the durable goods sector of the manufacture of electronic and electrical equipment, the manufacture of household appliances carries the greatest weight. Demand for household appliances from the eurozone (minus seven percent in the first three quarters compared to the same period last year) is characterized by weak consumption there. Strong domestic demand (almost six percent) and non-eurozone demand (just over eight percent) in the same period led to an increase in production up to current levels representing two percent over the previous year.

Overall, the manufacture of electronic and electrical equipment with its intermediate and capital goods sectors benefited greatly from brisk domestic investment activity. This year, it will achieve growth of 15 percent.

Due to the expected drop in production in the fourth quarter and the likelihood that it will not increase again until spring, the forecast for annual average production in 2012 is that it will decrease by half a percent.

Consumer Goods: Weak Development Due to Strong Dependence on Consumption in the Eurozone

The German consumer goods industry is more oriented to the eurozone than the capital and intermediate goods industries.⁶ Consequently, their development is mainly influenced by private consumption in the eurozone. In Germany, positive employment and income growth has supported consumption this year, although the debt crisis led to a reduction in income expectations and therefore to cuts in consumer spending throughout 2011. In the rest of the eurozone, the current and expected economic situation curbs demand for consumer goods. As a result, production in the consumer goods industry increased by only 3.5 percent in the first three quarters of this year compared to the same period last year. Since cost-cutting measures introduced by many governments in the eurozone will lead to a weakening of private consumption, rather poor development is expected for the fourth quarter of 2011 and for the coming year.

The manufacture of food products and beverages (Figure 7) is the largest sector within the consumer goods industry at 42 percent. In the first three quarters of 2011, real domestic sales increased again in this sector after years of declines. However price increases curbed this⁷ dynamism. Due to strong demand from the non-euro area (+20 percent in the first three quarters compared to the same period last year), there, manufacturers were able to impose hefty price increases of ten percent, whereas this was only possible to a lesser extent in the eurozone and even less successfully in Germany. In the third quarter, seasonally adjusted real sales in all three economic areas fell compared to the previous quarter and the annual average for 2011 will only be 0.6 percent above last year's level. Next year, growth is expected to reach approximately one percent.

⁶ It has an export ratio of about 30 percent, and of these exports around 60 percent go to the eurozone.

⁷ For example, producer prices for cereals in the first three quarters of 2011 increased by 65 percent over the same period last year.

Figure 7

Production in the Manufacture of Food Products and Beverages

Index 2005 = 100, seasonally adjusted



Source: Federal Statistical Office.

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the associations expect industrial production to grow by just over two percent next year. DIW Berlin’s industry forecast, however, predicts that the uncertainty of economic entities and the deterioration of business prospects due to the continuing debt crisis in the eurozone will lead to a stronger downward trend. Industrial production will only grow again when the mood improves and economic prospects brighten again early next year. The 2011 annual average of industrial output will be almost 8 percent higher than in 2010, and next year this level is unlikely to surpass the level from 2011.

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Energy: Assessment of Energy Production through Renewable Energies is Incomplete

In the main industrial grouping “energy”, energy supply is the most relevant sector at 86 percent. Its production index was severely affected by the shutdown of nuclear power plants in Germany after the Fukushima reactor accident in March 2011. Energy generation from industrial power plants and renewable energy systems is not included in this production index.⁸ Since their share in energy production is constantly increasing, the production index increasingly misrepresents actual domestic energy supply. Forecast declines in the production index of domestic energy supply of almost 8.6 percent this year and 1.5 percent next year are thus also likely to underestimate the development.

Outlook

The dynamic development of industrial production by the third quarter of 2011 is the result of strong domestic and foreign demand for German capital and intermediate goods. New orders, however, show that demand has already reached a peak and industrial activity is expected to slow towards the end of the year. Experts from

⁸ For example, photovoltaic systems for private households.



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