

Beckmann, Joscha et al.

**Article**

## German Economy Summer 2024: Recovery gets off to a slow start

Kiel Institute Economic Outlook, No. 115

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# KIEL INSTITUTE **ECONOMIC OUTLOOK**

## **German Economy** Summer 2024

Finalized June 14, 2024



**No. 115 (2024|Q2)**

*Joscha Beckmann, Jens Boysen-Hogrefe, Dominik Groll, Timo Hoffmann, Nils Jannsen, Stefan Kooths, Christian Schröder und Nils Sonnenberg*

## RECOVERY GETS OFF TO A SLOW START

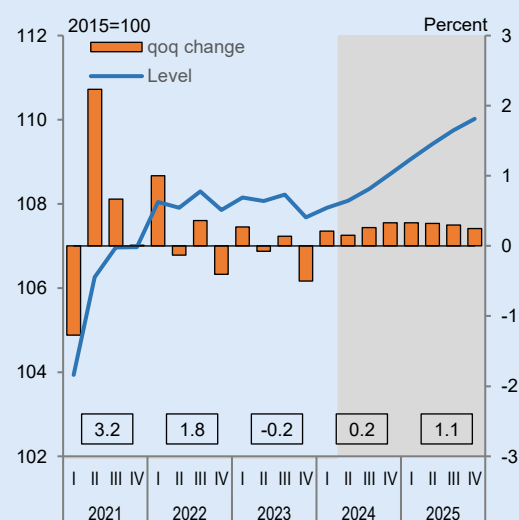
*Joscha Beckmann, Jens Boysen-Hogrefe, Dominik Groll, Timo Hoffmann, Nils Janssen, Stefan Kooths, Christian Schröder und Nils Sonnenberg*

The German economy is leaving the recession behind. According to leading indicators, GDP will continue to rise following the increase in the first quarter. As the year progresses, real disposable income and exports will stimulate economic activity. In addition, the effects of tighter monetary policy will gradually fade out. However, there are no signs of a strong economic momentum. Despite a moderate upward trend, business and consumer confidence remain at low levels. Moreover, structural impediments – not least demographic change – are increasingly limiting the scope for expansion. All in all, GDP we expect to grow by 0.2 percent in 2024 (spring forecast: 0.1 percent) and by 1.1 percent in 2025 (spring forecast: 1.2 percent). Although inflation has moderated noticeably and will reach 2.2 percent this year and 1.9 percent in 2025, core inflation will remain elevated for the time being. The labor market remains fairly robust, although employment will increase only slightly due to demographic change. The unemployment rate will remain broadly unchanged and will be 5.8 percent in 2025. The budget deficit will decline from 2.4 percent relative to GDP in 2023 to 1.2 percent in 2025. The debt level will remain at around 63 percent relative to GDP.

**GDP will show a moderate upward trend over the year.** Following the increase in the first quarter, leading indicators point to a further rise in GDP in the second quarter. Despite the setback in May, firms assess their business situation in the second quarter as better than in the first quarter, and industrial production in April was also somewhat higher than in the first quarter. Overall, we expect GDP to increase by 0.2 percent in the second quarter (Figure 1). GDP is expected to remain on an upward trend for the rest of the year. Dampening factors such as the restrictive monetary policy and the aftermath of the energy crisis will gradually fade out. With the moderate uptick in export markets, foreign sales will expand and increases in real disposable income will stimulate activity in consumption-related industries. However, there are no signs of strong economic momentum in the forecast period. The business and consumer climate as well as new orders remain at low levels. Moreover, the scope for expansion is diminishing as potential growth weakens ([Kiel Institute medium-run projection March 2024](#); [German language](#)).

**Gross value added and industrial production paint a different picture of the level of activity in the manufacturing industry.** Gross value added in the first quarter of the current year was almost 2 percent below the level of 2019, while industrial production was 8.6 percent lower. New orders in the manufacturing industry, meanwhile, fell by 6.8 percent in this period. Conceptually, there are several reasons for differences between gross value added and production, such as fluctuations in intermediate input ratios (as production reflects the value of output including intermediate inputs), different definitions of enterprises, or changes in the relevance of individual industries. Although production is a good indicator of short-term fluctuations in manufacturing activity, gross value added is probably a better indicator for longer-term comparisons. In fall 2023, the Federal Statistical Office included additional information

**Figure 1:**  
Gross domestic product



Quarterly data: Volumes, seasonally and calendar adjusted.  
Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

in the calculation of gross value added with the cost structure survey for 2021 and subsequently revised the level of gross value added upward substantially by about 4 percent, while industrial production was not subsequently revised (Figure 2). Accordingly, gross value added signals that activity in the manufacturing industry in 2023 was close to its pre-crisis level of 2019, rather than substantially below, as industrial production indicates. This implies that given the low level of new orders, gross value added would be considerably lower if the large stock of orders would not be supportive and that weak new orders will weigh on gross value added for the time being.

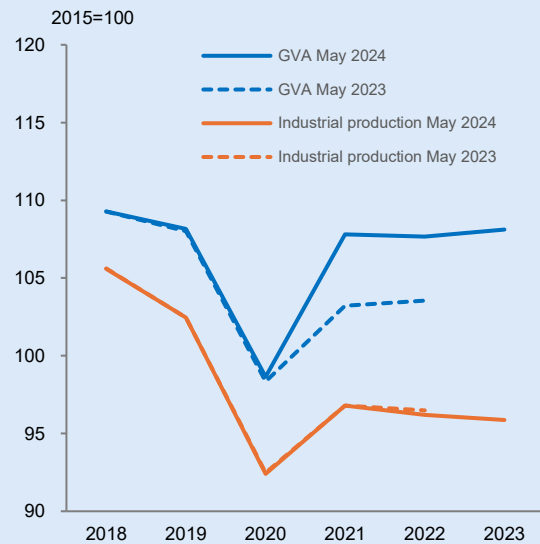
**German foreign trade began recovering in the first quarter of 2024.** Exports and imports rose sharply, with disruptions in the Red Sea likely only having had a minimal impact. Exports to the United States and China rose noticeably, as did exports from energy-intensive industries; consumer goods exports increased more strongly than those of capital and intermediate goods. Coupled with upward revisions of past data, exports have kept pace with global trade much better than was foreseeable a few months ago. Leading foreign trade indicators have brightened, and goods trade data for April indicated a substantial increase for the current quarter, which we estimate to be 0.8 percent for exports and 1.1 percent for imports. Overall, we expect exports to increase by 0.6 percent in the current year and 2.6 percent in 2025. For imports, we expect a decline of imports of 0.3 percent for the current year due to the low level at the beginning of the year, but an increase of 3.3 percent for the coming year. The terms of trade remained on an upward trend in the first quarter; for the current quarter, monthly trade prices for goods point to slight decrease. Overall, the terms of trade are now close to their long-term average again, and we do not anticipate any major changes for the forecast period.

Overall, we expect exports to increase by 0.6 percent in the current year and 2.6 percent in 2025. For imports, we expect a decline of imports of 0.3 percent for the current year due to the low level at the beginning of the year, but an increase of 3.3 percent for the coming year. The terms of trade remained on an upward trend in the first quarter; for the current quarter, monthly trade prices for goods point to slight decrease. Overall, the terms of trade are now close to their long-term average again, and we do not anticipate any major changes for the forecast period.

**Following the setback in the first quarter, private consumption will return to an expansionary path.** After rising since the second quarter of last year, private consumption fell by 0.4 percent in the first quarter. The fact that real disposable incomes are now rising noticeably again suggests that the first-quarter decline was only a temporary setback, and that private consumption will grow quite strongly over the forecast period. We expect real disposable income to increase by 1.7 percent this year, as net wages and salaries and monetary social benefits are set to rise sharply, while the upward pressure on consumer goods prices has eased considerably. Next year's increase will be lower, at 0.7 percent, partly because the inflation compensation bonus will no longer apply. Private consumption is likely to pick up noticeably already in the second quarter. Retail sales in April were above their first-quarter levels. Moreover, consumer sentiment has recently improved markedly (albeit from a low level), and retailers assessed their business situation in May as much more positive than in the first quarter. The European Football Championship (EURO) could also provide some tailwind for the second quarter. However, if households increase spending due to the EURO, they are likely to reduce spending in other areas, so we do not expect any significant impact on private consumption over the course of the year.<sup>1</sup> All in all, private consumption is expected to increase by 0.6 percent this year and by 1.2 percent in 2025.

**Poor financing conditions are weighing on investments in construction.** Investments in construction rose by 2.7 percent in the first quarter. However, following weather-related declines in the final

**Figure 2:**  
Revisions in gross value added in manufacturing and in industrial production



Annual data; seasonally-, calendar-, and price-adjusted. Gross value added (GVA) in manufacturing and industrial production.

Sources: Federal Statistical Office, calculations of the Kiel Institute.

<sup>1</sup> [Box 2 in the corresponding business cycle report in German language](#) provides an empirical assessment of the impact of hosting a football World Cup or a EURO on GDP and private consumption.

quarter of 2023, this likely reflects a catch-up effect. In the second quarter, rather weak leading indicators point to a decline in investments in construction by 1.3 percent. In the further course of the year, investments in construction are likely to expand slightly again. New orders in the main construction sector are still 18 percent below the level before the ECB tightened monetary policy but have now probably bottomed out. While incoming orders in civil engineering already rose in the first quarter, there are signs of a turnaround in residential investment, which is more sensitive to interest rates. The volume of new business for residential construction loans as well as building permits increased in the first quarter. Overall, investment in construction will fall by 0.4 percent in 2024. We expect investments in construction to increase by 0.4 percent in 2025.

**The investment environment for companies is only gradually improving while the expansion of military procurement is supporting investments in machinery, equipment, and vehicles.** Investments in machinery, equipment, and vehicles fell by 0.2 percent in the first quarter. The expiry of subsidies for electric vehicles in August last year probably contributed to this decline. The high order backlog, which had counteracted a decline in investment activity due to weak capacity utilization last year, is now likely to provide less support given that new domestic orders for capital goods has further weakened. In the second quarter, we expect investments in machinery, equipment, and vehicles to decrease by 0.2 percent. As the year progresses, private investments will expand only slightly, in line with the economic trend. The still elevated level of economic policy uncertainty also has a negative impact. Incoming orders are still on a downward trend. However, the propensity to invest has recently improved slightly. Business expectations of capital goods manufacturers are pointing upwards. Public investments in machinery, equipment, and vehicles will continue to expand substantially, driven by spending from the Bundeswehr special fund. All in all, investments in machinery, equipment, and vehicles will fall by 2.1 percent in 2024. For 2025, we expect an increase of 4.4 percent.

**Inflation has continued to fall since the beginning of the year.** Inflation fell below 3 percent at the turn of the year and has continued to fall since then, reaching 2.4 percent in May. Energy prices are expected to continue to fall, with a brief interruption in the second quarter. Overall, they will fall by 3.3 percent in 2024 and by 4 percent in 2025. Prices for food and industrial goods will largely stagnate. Prices at the upstream stages of production (producer prices, import prices) have been falling for some time. Accordingly, monthly price increases for food and industrial goods at the consumer price level have gradually leveled off, although they fluctuated strongly in the short term. The dampening effects on consumer prices are expected to gradually fade over the forecast period. Prices for services have risen sharply since the beginning of the year, pushing up the core rate. From January to May, seasonally adjusted prices for services rose by an annualized average of 5.5% per month. The year-on-year rate rose to 3.9 percent in May, from 3.4 percent in April. However, this increase can be explained by the introduction of subsidized train ticket (“Deutschlandticket”) in May 2023 and an Easter-effect on package holidays. Compared with food and industrial goods, services prices nonetheless continue to rise at a relatively high rate. This is probably due to a delayed adjustment to the general increase in the price level and cost structures. The recovery of the relative price positions suggests, in isolation, that price pressures in services will continue to be elevated for some time. Consumer prices excluding energy will continue to rise at relatively high rates in 2024 and 2025 (2.8 percent and 2.4 percent respectively). With the decline in energy prices in 2024 and 2025, the overall inflation rate will be 2.2 percent in 2024 and 1.9 percent in 2025 (Table 1).

**Negotiated wages and salaries are accelerating rapidly.** Since our spring forecast in March, collective bargaining agreements have been reached in important sectors, such as retail (after more than a year of negotiations), private transportation and construction. We assume that the wholesale and foreign trade sector will adopt the agreement from the retail sector soon; in the past, these two sectors have seen a high degree of synchronization in wage developments. As the most recent collective bargaining agreements were higher than we had previously assumed, we now anticipate an overall increase in negotiated wages and salaries of 6.9 percent for 2024 (spring forecast: 6 percent), compared to 4 percent last year. In addition to the agreements in the retail sector, the very high rate is influenced by the



agreement in the public sector of the federal states, where the maximum possible amount for the inflation compensation bonus of 3,000 Euro will be paid out within one year (2024); in most other sectors, the payment is spread over two years. For 2025, we anticipate an overall increase in negotiated wages and salaries of 3.6 percent (spring forecast: 3.3 percent). Although basic pay rates will once again rise substantially, the increase in overall earnings will be noticeably dampened by the discontinuation of inflation compensation bonuses, whose tax exemption ends at the end of this year.

**Effective earnings continue to rise strongly.** Effective earnings (gross wages and salaries per employee) rose by 6.2 percent last year, considerably faster than negotiated wages and salaries. This exceptionally high positive wage drift is likely partly due to the fact that pay rises were probably already implemented in the retail sector last year as a result of the protracted wage dispute. The German Retail Federation recommended a voluntary pay increase of 5.3 percent starting October 2023, which could be offset against a later collective agreement. In this respect, the wage increases now agreed to in the retail sector may have already been implemented to a considerable extent, which, by itself, will increase the wage drift in 2023 and reduce it in 2024. In addition, part of last year's wage drift is due to the minimum wage increase to 12 Euro in October 2022. For the current year, we expect a slightly weaker yet still strong increase in effective earnings of 5.6 percent before wage dynamics calm down in the coming year (+3.2 percent). The high increases in labor costs together with faltering labor productivity lead to a sharp rise in real unit labor costs, particularly this year. This will, however, merely represent a return of real unit labor costs to their long-term average after the big drop due to the surge in inflation.

**Unemployment continues to rise for the time being.** The number of people in employment has continued to rise moderately in recent months; the previously reported very strong increase in January is no longer evident following a revision of the official data. At the same time, the rise in unemployment has continued more or less steadily. In May, a seasonally adjusted 2.76 million persons (rate: 5.9 percent) were registered as unemployed. This implies that unemployment has increased by around 280,000 persons over the past two years, after adjustment for the effect of the registration of Ukrainian refugees. According to the IAB Labour Market Barometer, local employment agencies expect unemployment to continue to rise in the coming months. Leading indicators for employment have also changed little recently and point to a continued moderate increase in employment. Against this backdrop, we expect further increases in both employment and unemployment for the remainder of this year. Unemployment should then gradually begin to decline due to the recovery in economic activity. In contrast, the aging of the labor force, which we estimate will reach its peak during the forecast period, will stand in the way of stronger increases in employment. Estimates are, however, subject to considerable uncertainty, as age-specific participation rates and immigration are difficult to forecast. All in all, we expect the unemployment rate to average 5.9 percent in 2024 and 5.8 percent in 2025, after 5.7 percent in 2023 and 5.3 percent in 2022.

**The budget balance of the general government is expected to improve in 2024 and 2025.** In the current year, the discontinuation of subsidies for energy consumers has led to lower expenditures at the federal level. However, payments for social transfers in kind are likely to increase substantially in both years, as prices in this field were subdued in the years following the COVID-19 crisis and are now likely to adjust to overall price trends. We also expect government investments and interest payments to increase substantially. Overall, the shrinking deficit is attributed to flourishing revenues, supported by higher rates for social security and the discontinuation of VAT tax reliefs. Consequently, the deficit will decrease to 1.7 percent of GDP in 2024 and 1.2 percent in 2025, while government expenditure relative to GDP will continue to increase.

**Table 1:**

**Key indicators**

	2022	2023	2024	2025
Gross domestic product (GDP), price-adjusted	1.8	-0.2	0.2	1.1
Gross domestic product, deflator	5.3	6.5	2.9	1.4
Consumer prices	6.9	5.9	2.2	1.9
Labor productivity (per hour worked)	0.5	-0.6	-0.6	0.4
Employment (1000 persons)	45,596	45,932	46,055	46,121
Unemployment rate (percent)	5.3	5.7	5.9	5.8
<i>in relation to nominal GDP</i>				
Public sector net lending	-2.5	-2.4	-1.7	-1.2
Gross public debt	66.1	63.6	63.3	63.2
Current account balance	4.2	5.9	6.8	6.8

GDP, consumer prices, labor productivity: percentage change on previous year; unemployment rate: as defined by the Federal Employment Agency.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Federal Employment Agency, *Monthly Bulletin*; Federal Employment Agency, *Employment Statistics*; shaded: Kiel Institute forecast.

## Data annex

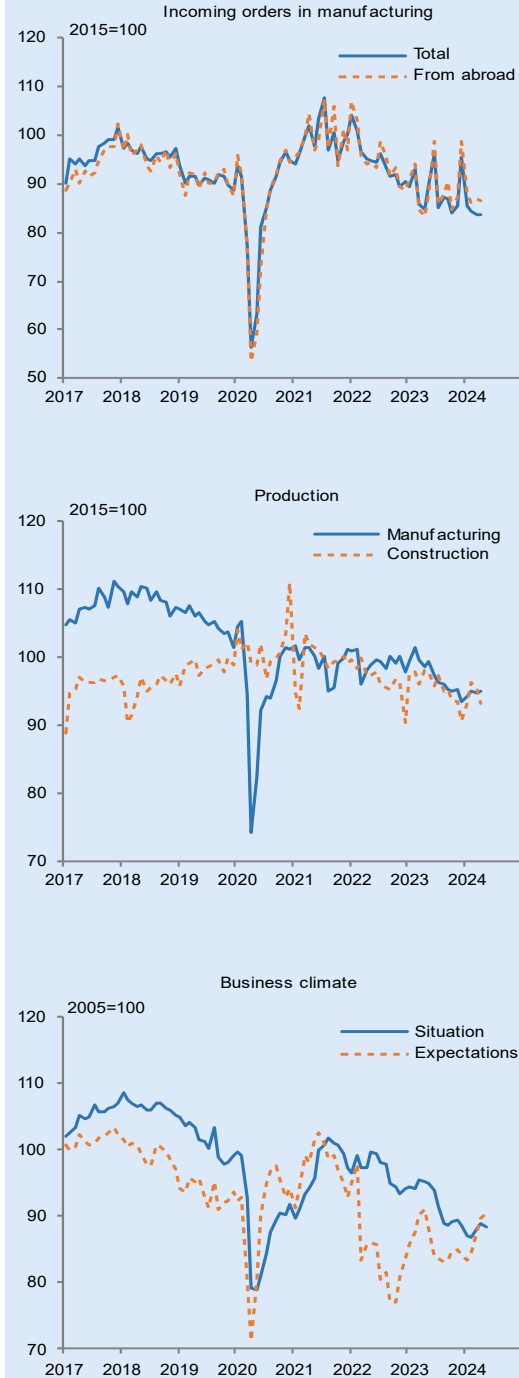
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# 1. Leading indicators

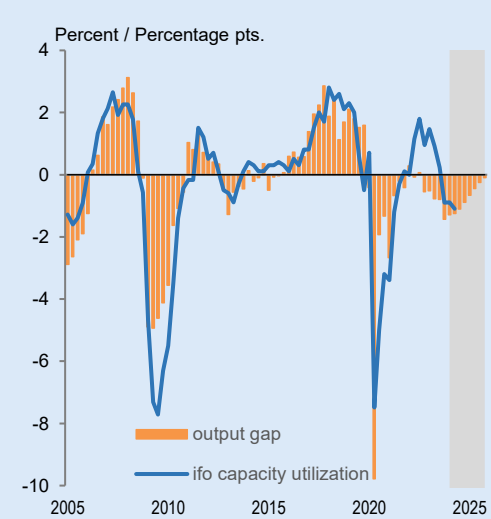
**Figure 1.1:**  
Leading indicators



Monthly data, seasonally adjusted.

Source: Deutsche Bundesbank, *Seasonally Adjusted Business Statistics*, ifo, *Konjunkturperspektiven*; Kiel Institute calculations.

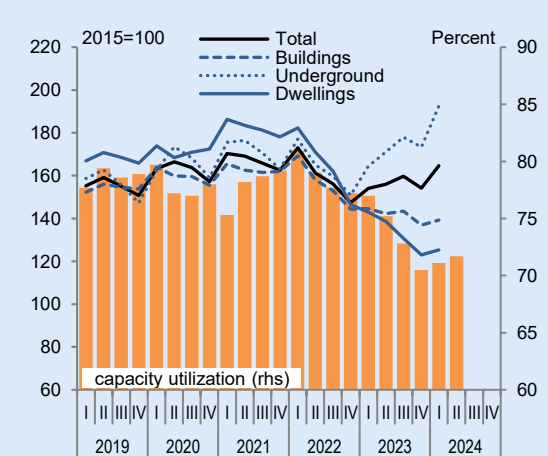
**Figure 1.2:**  
Capacity utilization



Quarterly data: GDP deviation from potential output, estimation of potential output from the medium-term projection spring 2024 (Boysen-Hogrefe et al. 2024), deviation of ifo capacity utilization indicator from the mean (2005 bis 2019).

Source: Federal Statistical Office, ifo institue - Leibniz Institute for Economic Research, Kiel Institute forecast.

**Figure 1.3:**  
Order stocks and capacity utilization in construction industry

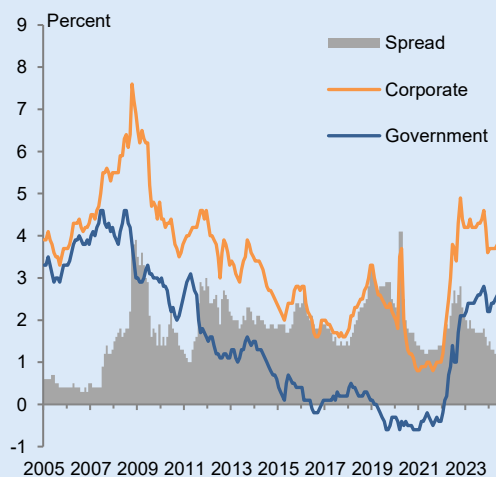


Quarterly data. Capacity utilization (deviation from normal level): seasonally adjusted; order stocks: price, seasonally and working-day adjusted.

Source: Federal Statistical Office, *GENESIS database*; ifo, *Konjunkturperspektiven*.

## 2. Monetary conditions and prices

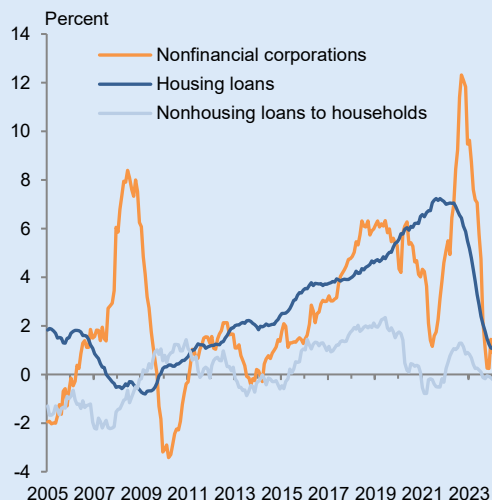
**Figure 2.1:**  
Bond yields



Monthly data. Yields.

Source: Deutsche Bundesbank, *Monthly Reports*; Kiel Institute calculations.

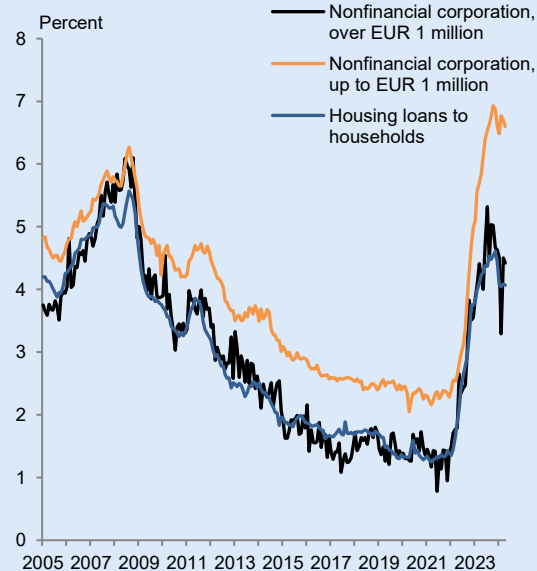
**Figure 2.3:**  
Credit growth



Change compared to one year ago; Monthly data.

Source: Deutsche Bundesbank, *Seasonally Adjusted Business Statistics*; Kiel Institute calculations.

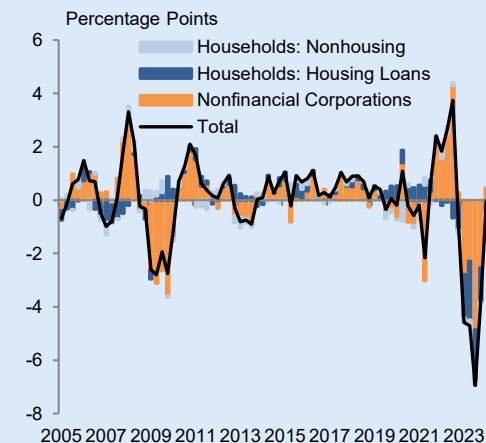
**Figure 2.2:**  
Loan interest rates



Monthly data; new business, 1–5 years, fixed.

Source: Deutsche Bundesbank, *MFI interest rate statistics*.

**Figure 2.4:**  
Credit impulse

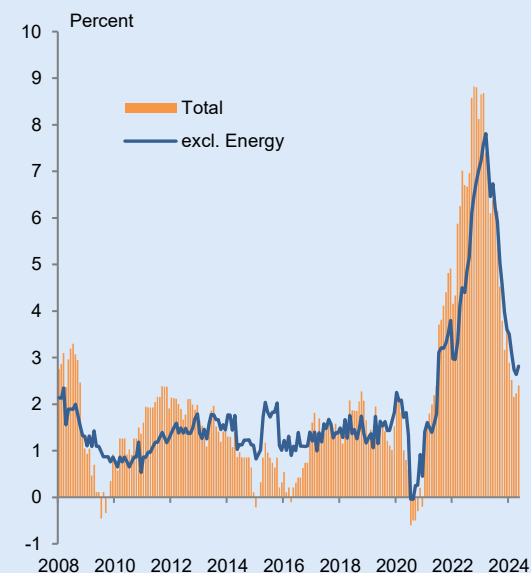


Quarterly data, most recent quarter based on first month; calculations follow Biggs et al. (2009), *Credit and economic recovery*, DNB Working Paper 218, De Nederlandsche Bank, Amsterdam.

The credit impulse is the change of the credit growth relative to the growth in GDP.

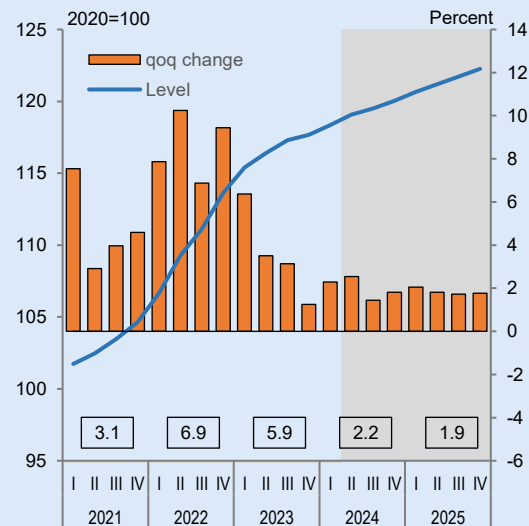
Source: Deutsche Bundesbank, *Seasonally Adjusted Business Statistics*; Kiel Institute calculations.

**Figure 2.5:**  
Consumer prices



Monthly data; year-on-year change.  
Source: Deutsche Bundesbank, *Time series databases*; Kiel Institute calculations.

**Figure 2.6:**  
Consumer price index



Quarterly data: seasonally adjusted; qoq change: annualized.  
Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 17, Series 7*; shaded: Kiel Institute forecast.

**Tabelle 2.1:**  
Projections and assumptions on the international environment 2023–2025

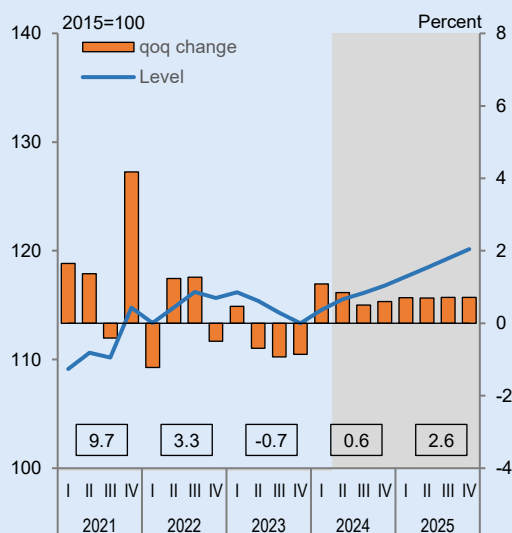
	2023				2024				2025			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
ECB key interest rate	3.00	3.50	4.00	4.00	4.00	3.75	3.50	3.25	3.00	2.50	2.50	2.50
Long-term interest rate	2.31	2.36	2.56	2.51	2.28	2.53	2.60	2.60	2.60	2.60	2.60	2.60
US-dollar/euro exchange rate	1.07	1.09	1.09	1.08	1.09	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Price competitiveness	90.6	91.3	91.8	91.3	91.5	91.0	90.6	90.3	90.1	90.0	90.0	90.0
Export markets	0.5	0.2	0.4	0.3	0.5	0.4	0.5	0.6	0.6	0.6	0.6	0.6
Oil price	81.2	78.5	86.6	83.8	83.0	82.6	80.0	78.8	77.8	76.9	76.1	75.3
Gas price	53.5	35.4	33.2	40.6	27.4	31.6	34.5	38.0	39.6	36.4	36.2	37.6
Electricity price	118.0	95.1	96.8	85.0	69.6	74.6	84.3	100.0	108.4	85.5	91.7	102.8

ECB key interest rate: deposit facility rate (end of quarter); long-term interest rate on 9–10 year bonds (quarter average) price competitiveness: against 60 trading partners, based on consumer price inflation; index: 1991:I = 100, increasing values indicate deterioration of price competitiveness; export markets: GDP growth in 41 countries, weighted with shares in German exports, change over previous quarter. Oil price: US-Dollar per barrel North Sea Brent. Gas price: Euro per MWh (TTF). Electricity price (Phelix, Baseload).

Source: ECB, *Monthly Bulletin*; Deutsche Bundesbank, *Monthly Bulletin*; IMF, *International Financial Statistics*, *LSEG Datastream*, *EEX*, *ENDEX*; Kiel Institute calculations; shaded: Kiel Institute forecast or assumption.

### 3. External trade

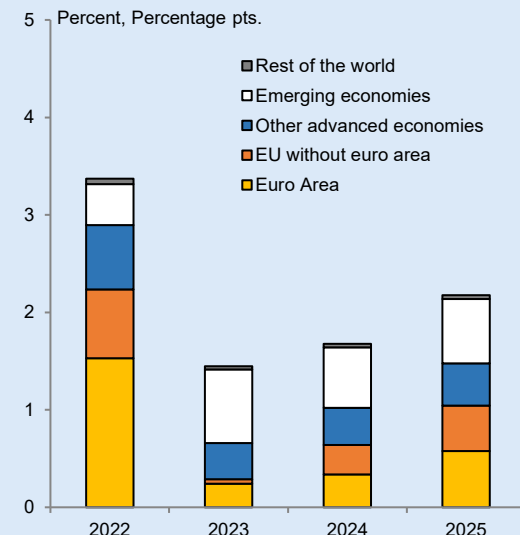
**Figure 3.1:**  
Exports



Quarterly data: Volumes, seasonally and calendar adjusted.  
Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

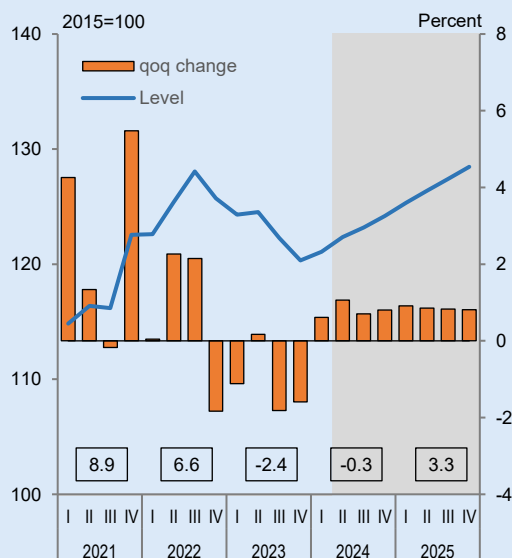
**Figure 3.3:**  
German export markets



Annual data, volumes; GDP growth in 59 countries, weighted with shares in German exports.

Source: Federal Statistical Office, *Fachserie 7 Series 1*; national sources; Kiel Institute calculations and forecast.

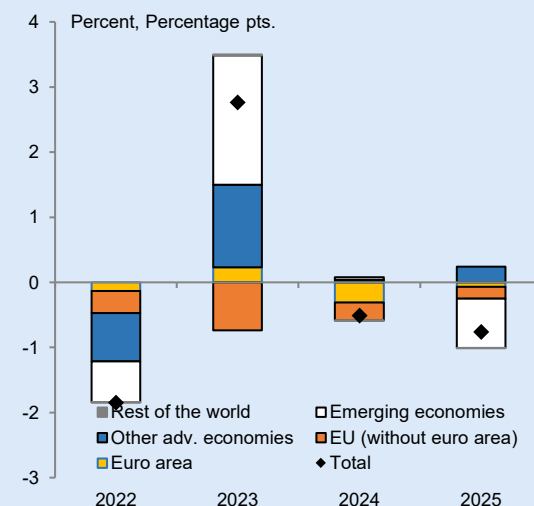
**Figure 3.2:**  
Imports



Quarterly data: Volumes, seasonally and calendar adjusted.  
Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

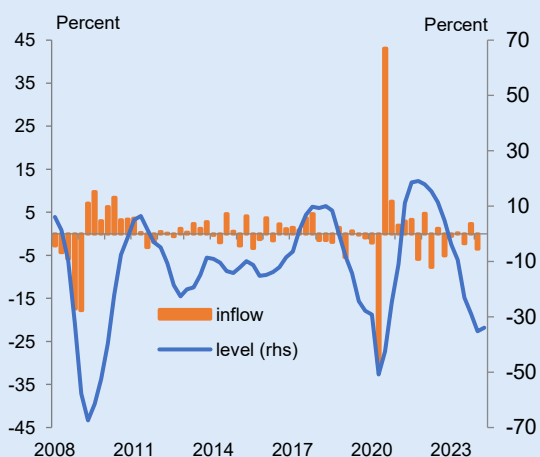
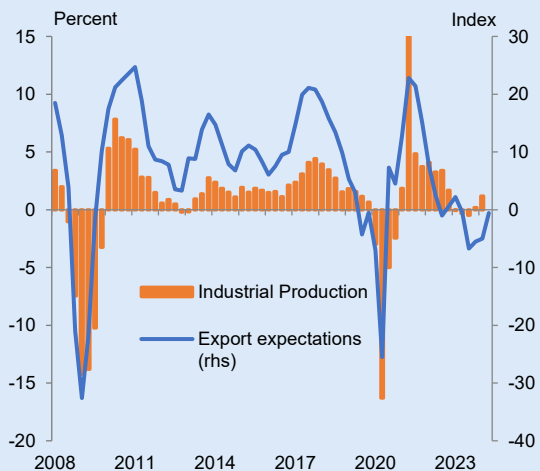
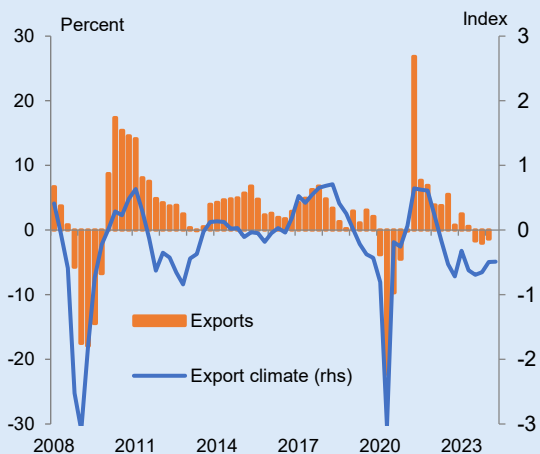
**Figure 3.4:**  
Price competitiveness



Annual data; vis-à-vis 55 countries based on consumer prices and exchange rates; weights according to Germany's price competitiveness indicator vis-à-vis 61 trading partners based on consumer price indices from the Deutsche Bundesbank. Increase reflects worsening of price competitiveness.

Source: Bundesbank, *Monthly Report 8.2020*; national sources; Kiel institute calculations and forecast.

**Figure 3.5:**  
**Export indicators**

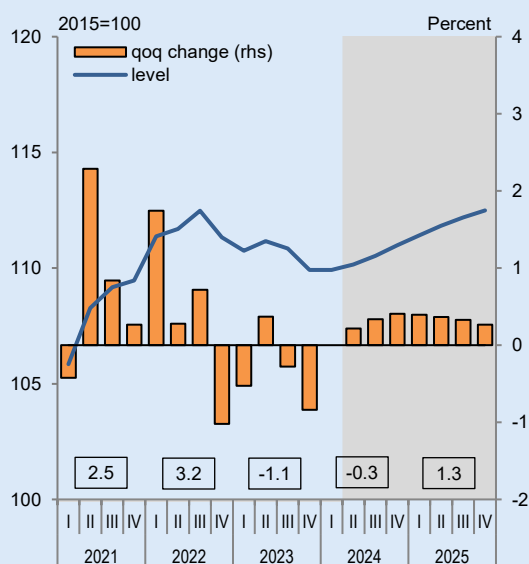


Quarterly data; exports, industrial production, volumes, change on previous year; order inflow: volumes, change on previous quarter; export expectations, foreign orders on hand: volumes; business expectations, industrial production: based on 42 countries weighted by shares of German exports.

Source: Deutsche Bundesbank; Thomson Reuters Datastream; ifo, *Konjunkturperspektiven*; Kiel Institute calculations.

## 4. Domestic expenditure

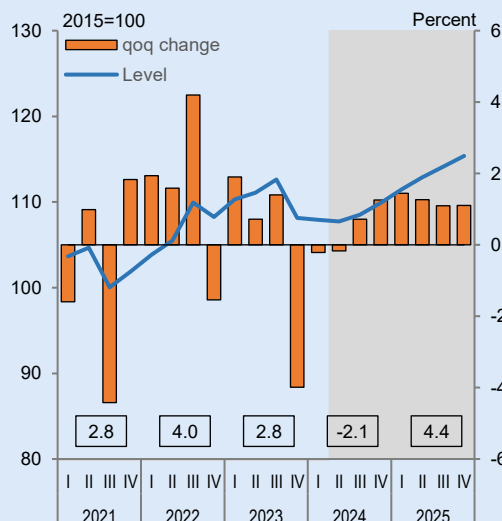
**Figure 4.1:**  
Domestic expenditure



Quarterly data: price, seasonally and calendar adjusted, qoqchange. Annual data: price adjusted, annual rate (boxes).

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

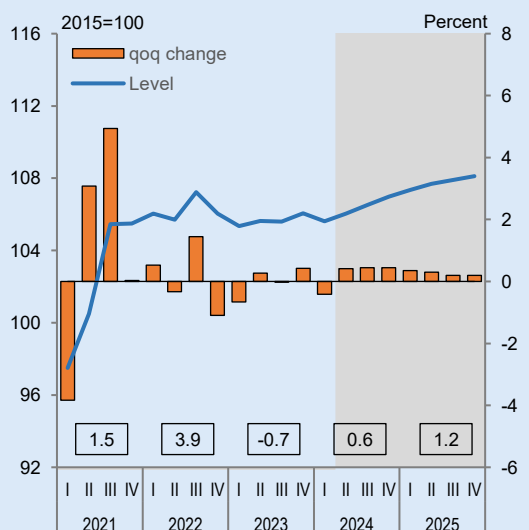
**Figure 4.3:**  
M&E investments



Quarterly data: Volumes, seasonally and calendar adjusted. Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

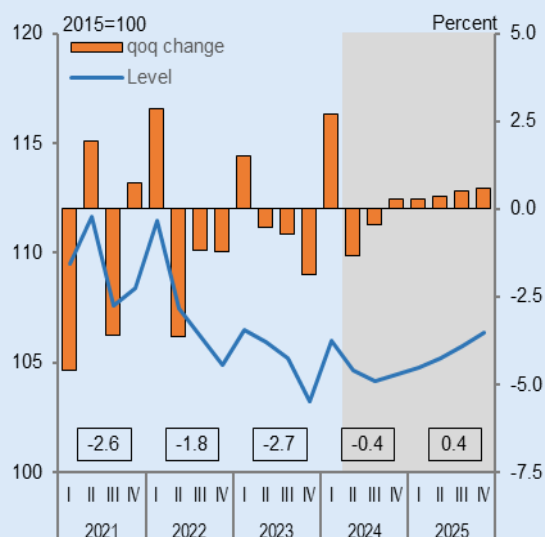
**Figure 4.2:**  
Private consumption



Quarterly data: Volumes, seasonally and calendar adjusted. Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.

**Figure 4.4:**  
Construction

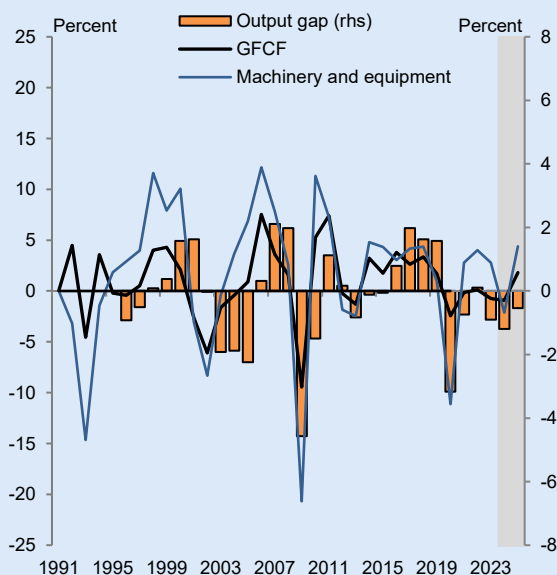


Quarterly data: Volumes, seasonally and calendar adjusted. Annual data (boxes): Volumes, change in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2 and 1.3*; shaded: Kiel Institute forecast.



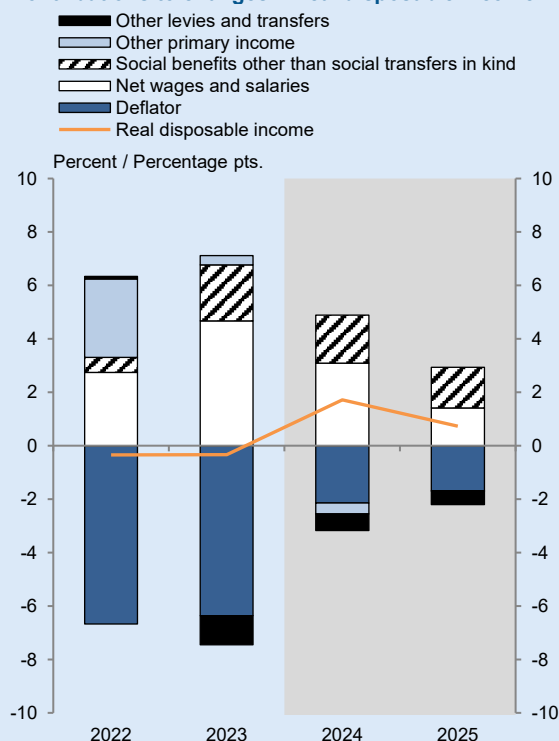
**Figure 4.5:**  
Investment cycles



Annual data; GFCF, machinery and equipment: volumes, change on previous year; output gap: in percent of potential output, estimation taken from medium-run projection.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Kiel Institute calculations; shaded: Kiel Institute forecast.

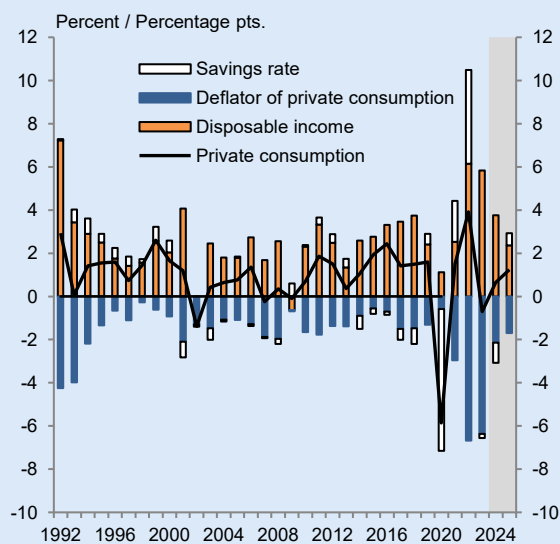
**Figure 4.7:**  
Contributions to changes in real disposable income



Annual data. Other levies and transfers: Levies on social benefits, taxes on consumption and other transfers received (net); Deflator: Deflator of private consumption.

Quelle: Federal Statistical Office, *Fachserie 18, Series 1.2*; Kiel Institute calculations; shaded: Kiel Institute forecast.

**Figure 4.6:**  
Decomposition of growth in private consumption



Annual data; disposable income including adjustment for the change in pension entitlements.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Kiel Institute calculations; shaded: Kiel Institute forecast.

**Table 4.1:**  
Gross fixed capital formation

	2022	2023	2024	2025
Total	0.1	-0.7	-0.9	1.8
Corporate investment	2.4	1.2	-2.4	2.7
Machinery and equipment	4.0	2.8	-2.1	4.4
Construction (non-dwellings)	-1.6	-2.6	-0.4	1.2
Other	-0.7	-0.6	-0.3	1.7
Dwellings	-2.2	-3.4	-1.5	0.3
Public (non-dwellings)	-0.1	0.8	4.9	-0.4
<i>Memorandum item:</i>				
Construction	-1.8	-2.7	-0.4	0.4

Volumes; change over previous year in percent.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; shaded: Kiel Institute forecast.

## 5. Industries

**Table 5.1:**  
**Gross value added for industries**

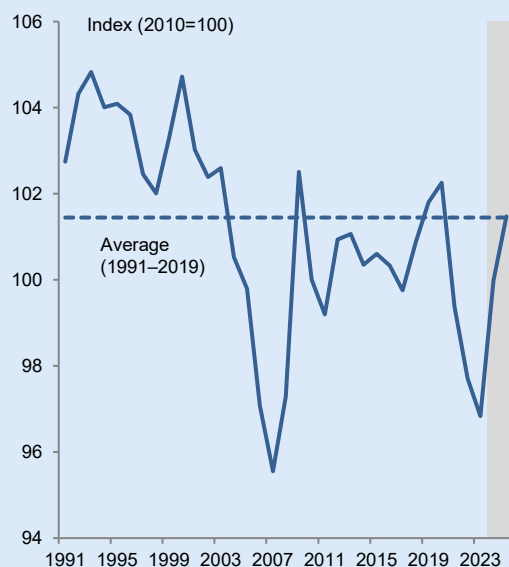
	2023				2024				2025			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
	Seasonally and calendar-adjusted, q-o-q change in percent											
Gross domestic product	0.3	-0.1	0.1	-0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
Gross value added	0.4	-0.1	0.1	-0.5	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2
Industry excl. construction	0.4	-0.6	-1.5	-0.7	-0.4	0.3	0.1	0.2	0.2	0.2	0.2	0.2
Manufacturing	0.7	0.0	-1.1	-1.7	0.2	0.4	0.1	0.2	0.3	0.3	0.3	0.2
Energy, Water etc.	-1.0	-4.3	-4.3	6.6	-4.6	-0.3	0.3	0.3	0.3	0.3	0.3	0.3
Construction	3.2	0.1	0.0	-2.0	2.5	-0.8	-0.4	0.3	0.3	0.4	0.5	0.5
Trade, transport, accommodation, food services	-0.8	0.0	1.3	-1.3	0.4	0.4	0.5	0.6	0.5	0.4	0.3	0.2
Information and communication	0.0	1.8	1.0	0.2	-0.9	0.5	1.0	1.0	1.0	1.0	1.0	1.0
Financial and insurance services	-2.7	-0.7	0.8	-0.9	-0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1
Real estate activities	0.9	0.3	0.8	-0.6	0.7	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Business services	-0.1	0.4	0.3	0.5	-0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3
Public services, education, health	1.2	-0.5	0.1	0.2	1.1	0.0	0.2	0.3	0.3	0.3	0.2	0.2
Other services	2.7	0.2	1.2	-0.4	0.9	0.3	0.5	0.5	0.5	0.4	0.2	0.2

Quarterly data, volumes.

Source: Federal Statistical Office, *Fachserie 18, Series 1.3*; shaded: Kiel Institute forecast.

## 6. Wages

**Figure 6.1:**  
Real unit labor costs



Yearly data; compensation of employees per hour (nominal) in relation to gross value added per hour (nominal).

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; shaded: Kiel Institute forecast.

**Table 6.1:**  
Wages and productivity

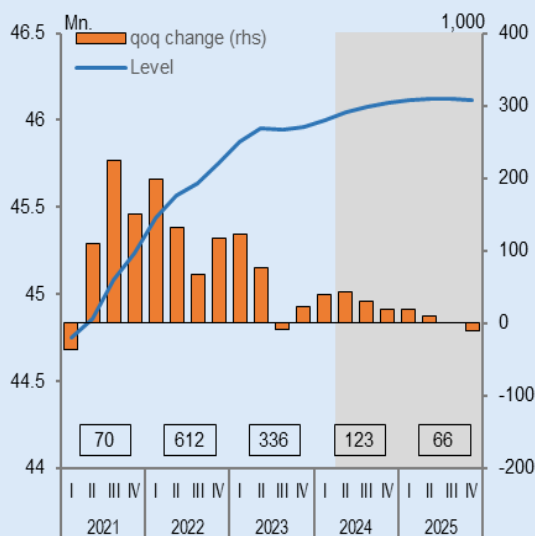
	2022	2023	2024	2025
<i>Per hour</i>				
Negotiated wages	2.6	4.0	6.8	3.6
Gross wages and salaries	4.4	6.3	4.9	2.7
Wage drift	1.8	2.3	-1.9	-0.9
Compensation of employees	4.1	6.0	4.6	3.3
Labor productivity	0.5	-0.6	-0.6	0.4
Unit labor costs	3.5	6.6	5.3	2.9
Unit labor costs (real)	-1.7	0.1	2.3	1.4
<i>Per capita</i>				
Negotiated wages	2.6	4.0	6.9	3.6
Gross wages and salaries	4.1	6.2	5.6	3.3
Wage drift	1.6	2.2	-1.3	-0.3
Compensation of employees	3.9	5.8	5.4	3.9
Labor productivity	0.4	-0.9	-0.1	1.0
Unit labor costs	3.4	6.8	5.5	2.9
Unit labor costs (real)	-1.8	0.2	2.5	1.4

Change over previous year in percent; wage drift: difference between change of negotiated wages and change of gross wages and salaries in percentage points; labor productivity: real GDP per hour or per capita; unit labor costs: compensation of employees (per hour or per capita) in relation to labor productivity; unit labor costs (real): unit labor costs deflated by GDP deflator.

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Deutsche Bundesbank, *Negotiated Pay Rate Statistics*; shaded: Kiel Institute forecast.

## 7. Employment

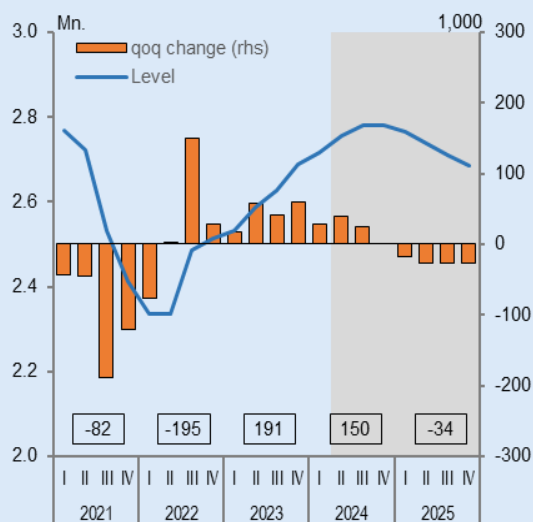
**Figure 7.1:**  
Employment



Quarterly data: seasonally adjusted.  
Annual data (boxes): yoy change in 1,000.

Source: Federal Statistical Office, *Fachserie 18, Series 1.3*; shaded: Kiel Institute forecast.

**Figure 7.2:**  
Unemployment



Quarterly data: seasonally adjusted.  
Annual data (boxes): yoy change in 1,000.

Source: Federal Statistical Office, *Fachserie 18, Series 1.3*; shaded: Kiel Institute forecast.

**Table 7.1:**  
Employment (1,000 persons)

	2021	2022	2023	2024	2025
Hours worked (domestic concept, mn. hours)	60,623	61,410	61,671	62,125	62,573
Persons in employment (domestic concept)	44,984	45,596	45,932	46,055	46,121
Self-employed	3,958	3,910	3,879	3,838	3,811
Employees (domestic concept)	41,027	41,687	42,053	42,217	42,310
Employees subject to social security contributions	33,897	34,507	34,790	34,945	35,069
Minijobs	4,101	4,125	4,198	4,218	4,188
Net commuting	116	140	147	145	145
Persons in employment (national concept)	44,869	45,457	45,786	45,910	45,975
Employees (national concept)	40,911	41,547	41,907	42,071	42,165
Unemployed persons (registered)	2,613	2,418	2,609	2,758	2,724
Unemployment rate (registered; percent)	5.7	5.3	5.7	5.9	5.8
Unemployment rate (ILO; percent)	3.3	2.9	2.8	3.0	3.0

Self-employed: including family workers; unemployed persons (registered): definition of the Federal Employment Agency (BA).

Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Federal Employment Agency, *Monthly Bulletin*; Federal Employment Agency, *Employment Statistics*; shaded: Kiel Institute forecast.

## 8. Public finances

Table 8.1

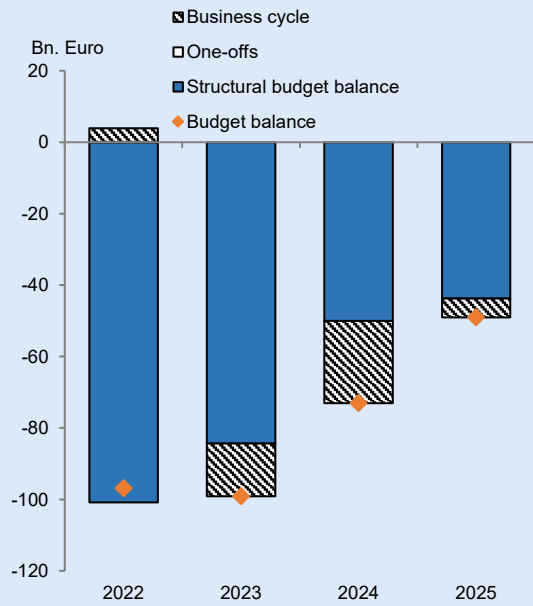
Revenues and expenditures of the general government (bn. Euro)

	2021	2022	2023	2024	2025
<b>Revenues</b>	<b>1,712.9</b>	<b>1,821.2</b>	<b>1,908.0</b>	<b>2,009.1</b>	<b>2,103.9</b>
→relative to GDP	47.3	47.0	46.3	47.3	48.2
Taxes	879.2	946.6	958.5	992.4	1,030.0
→relative to GDP	24.3	24.4	23.3	23.3	23.6
Social contributions	632.1	666.8	709.4	753.9	801.7
→relative to GDP	17.5	17.2	17.2	17.7	18.4
Other revenues	201.6	207.8	240.1	262.9	272.2
→relative to GDP	5.6	5.4	5.8	6.2	6.2
<b>Expenditures</b>	<b>1,842.6</b>	<b>1,918.1</b>	<b>2,007.1</b>	<b>2,082.1</b>	<b>2,154.2</b>
→relative to GDP	50.9	49.5	48.7	49.0	49.4
Compensation of employees	295.4	307.9	328.0	345.2	358.4
Intermediate consumption	226.6	238.4	259.0	275.3	280.6
Social transfers in kind	331.3	354.9	360.1	377.4	393.5
Gross capital formation	92.5	100.9	106.7	120.3	125.6
Capital transfers	21.1	26.5	36.2	44.1	45.8
Social benefits	609.8	619.1	662.7	701.9	733.6
Subsidies	109.2	70.0	66.4	42.2	39.9
Other current transfers	91.9	111.4	92.3	88.2	89.9
Other capital transfers and investment grants	65.7	89.7	96.1	88.0	87.5
Other expenditures	-1.3	-1.0	-0.7	-0.9	-0.9
<b>Net lending/ net borrowing</b>	<b>-129.7</b>	<b>-96.9</b>	<b>-99.1</b>	<b>-73.0</b>	<b>-50.3</b>
→relative to GDP	-3.6	-2.5	-2.4	-1.7	-1.2
<b>Revenues of central, state, and local governments</b>	<b>1,119.3</b>	<b>1,198.3</b>	<b>1,236.2</b>	<b>1,291.5</b>	<b>1,339.3</b>
Net of transfers from social security funds	1,112.6	1,187.5	1,230.9	1,287.7	1,336.1
Transfers from social security funds	6.6	10.8	5.3	3.7	3.2
<b>Expenditures of central, state, and local governments</b>	<b>1,251.6</b>	<b>1,303.5</b>	<b>1,344.1</b>	<b>1,364.7</b>	<b>1,393.9</b>
Net of transfers to social security funds	1,093.9	1,125.2	1,194.7	1,224.5	1,255.8
Transfers to social security funds	157.7	178.3	149.4	140.1	138.2
<b>Net lending/ net borrowing central, state, and local governments</b>	<b>-132.4</b>	<b>-105.2</b>	<b>-107.9</b>	<b>-73.2</b>	<b>-54.7</b>
<b>Revenues of social security funds</b>	<b>781.8</b>	<b>812.0</b>	<b>826.4</b>	<b>861.5</b>	<b>906.0</b>
Net of transfers from central, state, and local governments	624.1	633.7	677.1	721.3	767.8
<b>Expenditures of social security funds</b>	<b>779.2</b>	<b>803.7</b>	<b>817.6</b>	<b>861.3</b>	<b>901.7</b>
Net of transfers to central, state, and local governments	772.6	793.0	812.4	857.5	898.5
<b>Net lending/ net borrowing social security funds</b>	<b>2.6</b>	<b>8.3</b>	<b>8.8</b>	<b>0.2</b>	<b>4.4</b>

Sums may deviate due to rounding. Relative to GDP in per cent.

Source: Federal Statistical Office, *internal worksheet*; Kiel Institute calculations; shaded: Kiel Institute forecast.

**Figure 8.1:**  
**Structural budget balance**



Source: Europäische Kommission, AMECO; Kiel Institute calculations and forecast.



## 9. GDP and its components

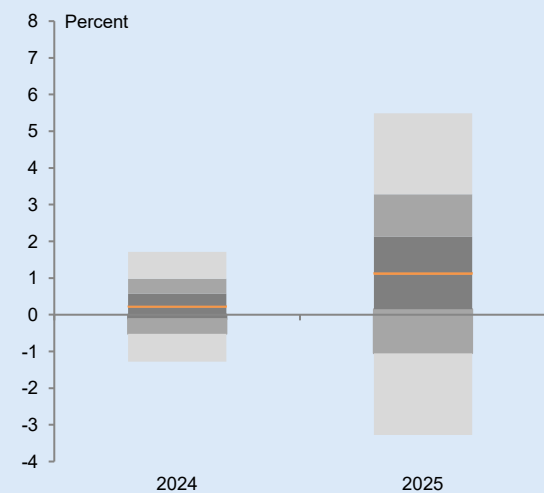
**Table 9.1:**  
Quarterly data

	2023				2024				2025			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Gross domestic product	0.3	-0.1	0.1	-0.5	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.2
Private consumption	-0.7	0.3	0.0	0.4	-0.4	0.4	0.4	0.4	0.4	0.3	0.2	0.2
Government consumption	-1.3	0.1	1.4	0.6	-0.4	0.5	0.2	0.2	0.3	0.2	0.1	0.2
Machinery and equipment	1.9	0.7	1.4	-4.0	-0.2	-0.2	0.7	1.3	1.4	1.3	1.1	1.1
Constructions	1.5	-0.5	-0.7	-1.9	2.7	-1.3	-0.4	0.3	0.3	0.4	0.5	0.6
Other investment	-1.6	0.0	0.3	0.7	-1.1	-0.1	0.3	0.4	0.5	0.5	0.5	0.5
Change in inventories	-0.1	0.2	-0.6	-0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic expenditure	-0.5	0.4	-0.3	-0.8	0.0	0.2	0.3	0.4	0.4	0.4	0.3	0.3
Exports	0.5	-0.7	-0.9	-0.9	1.1	0.8	0.5	0.6	0.7	0.7	0.7	0.7
Imports	-1.1	0.2	-1.8	-1.6	0.6	1.1	0.7	0.8	0.9	0.9	0.8	0.8
Net exports	0.8	-0.4	0.4	0.3	0.2	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0
Employment (domestic)	45,874	45,950	45,942	45,964	46,003	46,046	46,076	46,096	46,116	46,126	46,126	46,116
Unemployment (registered)	2,531	2,588	2,629	2,688	2,716	2,756	2,781	2,781	2,764	2,737	2,711	2,685

Volumes, seasonally and working-day adjusted. Change on previous quarter in percent; change in inventories, net exports: Lundberg component (contribution to GDP growth); employment, unemployment: seasonally adjusted, 1,000 persons; unemployment: as defined by the Federal Employment Agency (BA).

Source: Federal Statistical Office, *Fachserie 18, Series 1.3*; Federal Employment Agency, *Monthly Bulletin*; shaded: Kiel Institute forecast.

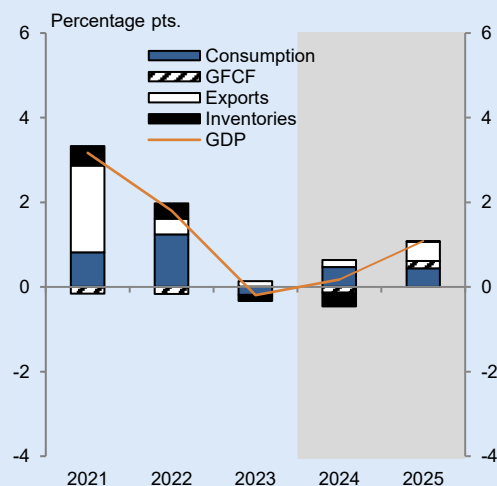
**Figure 9.1:**  
Forecast intervals for GDP growth



GDP: volumes, change over previous year. Point forecasts: orange lines. Forecast intervals grey shaded areas with confidence levels of 33, 66, and 95 percent. Confidence levels calculated based on historical forecast errors of the Kiel Institute in the second quarter 1994–2023.

Source: Kiel Institute calculations.

**Figure 9.2:**  
Import-adjusted expenditure-side contributions to GDP growth



Annual data; price-adjusted, growth contribution of each expenditure component adjusted by import content; import content is estimated based on input/output tables; see Kooths and Stolzenburg (2018).

Source: OECD, Input Output Database; Federal Statistical Office, *Fachserie 18, Series 1.2*; shaded: Kiel Institute forecast.

## 10. The German economy

**Table 10:**  
The German economy

	2022	2022	2023	2024	2025
	Bn. Euro	Change over previous year in percent			
<b>Use of gross domestic product, price-adjusted</b>					
GDP		1.8	-0.2	0.2	1.1
Private consumption expenditure		3.9	-0.7	0.6	1.2
Public consumption expenditure		1.6	-1.0	1.3	1.0
Total fixed investment		0.1	-0.7	-0.9	1.8
Machinery and equipment		4.0	2.8	-2.1	4.4
Construction		-1.8	-2.7	-0.4	0.4
Other equipment		-0.7	-0.6	-0.3	1.7
Changes in stocks		0.7	-0.3	-0.6	0.0
Domestic Demand		3.2	-1.1	-0.3	1.3
Exports		3.3	-0.7	0.6	2.6
Imports		6.6	-2.4	-0.3	3.3
Net exports		-1.2	0.8	0.4	-0.2
<b>Use of gross domestic product at current prices</b>					
GDP	3,876.8	7.2	6.3	3.1	2.6
Private consumption expenditure	1,979.3	10.9	5.6	2.8	2.9
Public consumption expenditure	850.9	6.8	4.8	4.6	3.2
Total fixed investment	856.2	11.1	5.5	0.7	2.6
Machinery and equipment	253.4	11.4	8.6	-0.4	6.3
Construction	463.5	14.0	4.9	1.1	0.4
Other equipment	139.3	2.1	1.9	1.6	3.1
Changes in stocks (€ bn.)		114.1	50.2	27.0	28.7
Domestic Demand	3,800.5	11.1	3.5	2.1	2.9
Exports	1,974.2	15.4	0.0	1.4	3.4
Imports	1,897.9	25.3	-5.9	-0.9	4.4
Net exports (€ bn.)		76.3	186.9	230.5	220.7
Gross national income	4,027.6	7.2	6.5	3.1	2.8
<b>Deflators</b>					
GDP		5.3	6.5	2.9	1.4
Private consumption expenditure		6.7	6.4	2.1	1.7
Public consumption expenditure		5.1	5.8	3.3	2.1
Investment in machinery and equipment		7.1	5.7	1.8	1.9
Investment in construction		16.1	7.8	1.5	-0.1
Investment in other equipment		2.9	2.5	1.9	1.3
Exports		11.7	0.6	0.8	0.8
Imports		17.5	-3.6	-0.6	1.0
<i>Addendum: Consumer prices</i>		6.9	5.9	2.2	1.9
<b>Income distribution</b>					
Net national income (factor costs)	2,890.9	4.4	6.6	2.5	3.0
Compensation of employees	2,023.6	5.5	6.7	5.7	4.1
in percent of national income		70.0	70.1	72.3	73.1
Property and entrepreneurial income	867.4	1.9	6.3	-5.2	0.1
Disposable income	2,164.5	6.3	6.0	3.9	2.4
Saving rate		11.1	11.3	12.2	11.6
Wages and salaries	1,661.8	5.8	7.1	5.9	3.7
Wage per hour		4.4	6.3	4.9	2.7
Unit labor costs		3.5	6.6	5.3	2.9
Productivity per hour		0.5	-0.6	-0.6	0.4
Unemployment (1,000)		2,418.1	2,608.7	2,758.5	2,724.3
Rate of unemployment (percent)		5.3	5.7	5.9	5.8
Total employment (1,000)		45,596.2	45,932.3	46,054.8	46,120.6
<b>Public sector budget balance</b>					
Public sector budget balance (€ bn.)		-96.9	-99.1	-73.0	-50.3
Public sector budget balance (in percent of GDP)		-2.5	-2.4	-1.7	-1.2
Public debts (in percent)		66.1	63.6	63.3	63.2

Change in stocks, net exports: Lundberg-component (contribution to GDP growth); employment, unemployment: as defined by the Federal Employment Agency (BA); public debts: in relation to GDP.

Source: Federal Statistical Office, Fachserie 18, Series 1.2; shaded: Kiel Institute forecast.

## 11. National accounts

National Accounts									
Forecast period: 2022 to 2024									
	2023	2024	2025	2023		2024		2025	
				H1	H2	H1	H2	H1	H2
<b>1. Production</b>									
Change over the same period of the preceding year in %									
Persons in employment	0.7	0.3	0.1	0.9	0.6	0.2	0.3	0.2	0.1
Hours worked	0.4	0.7	0.7	0.8	0.0	0.1	1.4	0.6	0.8
Hours worked by person in employment	-0.3	0.5	0.6	-0.1	-0.5	-0.2	1.1	0.4	0.7
Labor productivity <sup>1</sup>	-0.6	-0.6	0.4	-0.8	-0.5	-0.4	-0.7	0.2	0.6
<b>Gross domestic product, price-adjusted</b>	-0.2	0.2	1.1	0.1	-0.5	-0.3	0.6	0.8	1.3
<b>2. Use of gross domestic product at current prices</b>									
a) EUR bn.									
Consumption expenditure	2 982.0	3 081.2	3 174.0	1 449.1	1 532.9	1 503.5	1 577.7	1 552.0	1 622.0
Private households <sup>2</sup>	2 090.6	2 148.9	2 212.3	1 021.4	1 069.1	1 050.1	1 098.9	1 082.1	1 130.2
Government	891.5	932.3	961.7	427.7	463.8	453.5	478.8	469.9	491.8
Gross fixed capital formation	903.1	909.6	933.2	442.8	460.3	444.3	465.3	447.3	485.9
Machinery and equipment	275.1	274.0	291.4	132.5	142.6	130.7	143.3	137.2	154.1
Construction	486.0	491.4	493.2	243.1	242.9	245.8	245.6	240.3	252.8
Other products	141.9	144.2	148.7	67.1	74.8	67.8	76.4	69.7	79.0
Changes in inventories <sup>3</sup>	50.2	27.0	28.7	31.7	18.5	18.0	9.0	18.2	10.5
Domestic expenditure	3 935.3	4 017.8	4 136.0	1 923.6	2 011.7	1 965.8	2 052.0	2 017.5	2 118.5
Net exports	186.9	230.5	220.7	98.5	88.4	131.3	99.2	125.1	95.6
Exports	1 973.3	2 001.0	2 068.3	998.2	975.1	994.3	1 006.8	1 022.2	1 046.1
Imports	1 786.4	1 770.5	1 847.6	899.7	886.7	863.0	907.6	897.1	950.5
<b>Gross domestic product</b>	<b>4 122.2</b>	<b>4 248.3</b>	<b>4 356.6</b>	<b>2 022.1</b>	<b>2 100.1</b>	<b>2 097.1</b>	<b>2 151.2</b>	<b>2 142.5</b>	<b>2 214.1</b>
b) Change over the same period of the preceding year in %									
Consumption expenditure	5.4	3.3	3.0	5.9	4.8	3.8	2.9	3.2	2.8
Private households <sup>2</sup>	5.6	2.8	2.9	7.2	4.2	2.8	2.8	3.1	2.9
Government	4.8	4.6	3.2	3.1	6.3	6.0	3.2	3.6	2.7
Gross fixed capital formation	5.5	0.7	2.6	8.2	3.0	0.4	1.1	0.7	4.4
Machinery and equipment	8.6	-0.4	6.3	13.1	4.7	-1.4	0.5	5.0	7.6
Construction	4.9	1.1	0.4	7.5	2.4	1.1	1.1	-2.2	2.9
Other products	1.9	1.6	3.1	1.7	2.0	1.1	2.1	2.8	3.4
Domestic expenditure	3.5	2.1	2.9	4.8	2.4	2.2	2.0	2.6	3.2
Exports	0.0	1.4	3.4	4.1	-3.9	-0.4	3.3	2.8	3.9
Imports	-5.9	-0.9	4.4	-0.2	-11.0	-4.1	2.4	4.0	4.7
<b>Gross domestic product</b>	<b>6.3</b>	<b>3.1</b>	<b>2.6</b>	<b>6.8</b>	<b>5.9</b>	<b>3.7</b>	<b>2.4</b>	<b>2.2</b>	<b>2.9</b>
<b>3. Use of gross domestic product, price-adjusted (chain-linked, 2010=100)</b>									
a) EUR bn.									
Consumption expenditure	2 398.2	2 418.1	2 446.2	1 181.5	1 216.7	1 190.1	1 227.9	1 204.9	1 241.3
Private households <sup>2</sup>	1 693.2	1 704.0	1 725.1	834.3	858.9	836.7	867.3	847.4	877.6
Government	703.9	712.9	720.1	346.7	357.3	352.8	360.1	356.9	363.2
Gross fixed capital formation	656.9	650.7	662.6	322.5	334.3	317.3	333.4	319.2	343.4
Machinery and equipment	228.7	223.8	233.6	110.4	118.3	106.8	117.1	110.2	123.5
Construction	306.1	304.8	306.1	153.5	152.6	151.8	153.0	150.3	155.8
Other products	123.9	123.6	125.7	58.6	65.4	58.4	65.2	59.2	66.6
Domestic expenditure	3 094.2	3 086.1	3 127.3	1 529.6	1 564.6	1 514.5	1 571.6	1 531.8	1 595.5
Exports	1 629.5	1 639.9	1 682.0	824.9	804.6	817.1	822.8	833.6	848.3
Imports	1 461.6	1 457.6	1 506.0	731.4	730.2	712.8	744.7	733.4	772.6
<b>Gross domestic product</b>	<b>3 268.5</b>	<b>3 274.2</b>	<b>3 309.7</b>	<b>1 625.9</b>	<b>1 642.6</b>	<b>1 621.0</b>	<b>1 653.2</b>	<b>1 634.3</b>	<b>1 675.4</b>
b) Change over the same period of the preceding year in %									
Consumption expenditure	-0.8	0.8	1.2	-1.0	-0.6	0.7	0.9	1.2	1.1
Private households <sup>2</sup>	-0.7	0.6	1.2	-0.4	-1.0	0.3	1.0	1.3	1.2
Government	-1.0	1.3	1.0	-2.5	0.4	1.8	0.8	1.1	0.9
Gross fixed capital formation	-0.7	-0.9	1.8	-0.1	-1.3	-1.6	-0.3	0.6	3.0
Machinery and equipment	2.8	-2.1	4.4	5.8	0.1	-3.3	-1.0	3.2	5.5
Construction	-2.7	-0.4	0.4	-3.2	-2.2	-1.1	0.2	-1.0	1.8
Other products	-0.6	-0.3	1.7	-0.8	-0.4	-0.3	-0.3	1.3	2.1
Domestic expenditure	-1.1	-0.3	1.3	-0.6	-1.5	-1.0	0.4	1.1	1.5
Exports	-0.7	0.6	2.6	1.4	-2.7	-0.9	2.3	2.0	3.1
Imports	-2.4	-0.3	3.3	0.3	-4.9	-2.5	2.0	2.9	3.7
<b>Gross domestic product</b>	<b>-0.2</b>	<b>0.2</b>	<b>1.1</b>	<b>0.1</b>	<b>-0.5</b>	<b>-0.3</b>	<b>0.6</b>	<b>0.8</b>	<b>1.3</b>

National Accounts (cont.)									
Forecast period: 2022 to 2024									
	2023	2024	2025	2023		2024		2025	
				H1	H2	H1	H2	H1	H2
<b>4. Deflators (2010=100)</b>									
Change on the same period of the preceding year in %									
Private consumption <sup>2</sup>	6.4	2.1	1.7	7.6	5.3	2.5	1.8	1.7	1.6
Government consumption	5.8	3.3	2.1	5.7	5.9	4.2	2.4	2.5	1.8
Gross fixed capital formation	6.3	1.7	0.8	8.3	4.4	2.0	1.4	0.1	1.4
Machinery and equipment	5.7	1.8	1.9	6.9	4.6	2.0	1.5	1.7	2.0
Construction	7.8	1.5	-0.1	11.0	4.6	2.2	0.9	-1.2	1.1
Exports	0.6	0.8	0.8	2.7	-1.3	0.6	1.0	0.8	0.8
Imports	-3.6	-0.6	1.0	-0.4	-6.4	-1.6	0.3	1.0	1.0
<b>Gross domestic product</b>	<b>6.5</b>	<b>2.9</b>	<b>1.4</b>	<b>6.7</b>	<b>6.4</b>	<b>4.0</b>	<b>1.8</b>	<b>1.3</b>	<b>1.6</b>
<b>5. National income</b>									
a) EUR bn.									
Primary income of private households <sup>2</sup>	2 779.9	2 894.5	2 987.9	1 359.1	1 420.8	1 416.0	1 478.5	1 464.5	1 523.4
Employers social contributions	379.8	399.8	423.6	183.2	196.6	192.8	207.0	205.4	218.2
Gross wages and salaries	1 779.5	1 883.7	1 953.4	846.3	933.2	899.0	984.7	940.0	1 013.4
Other primary income <sup>4</sup>	620.5	611.0	610.9	329.5	291.0	324.1	286.9	319.0	291.9
Primary income of other sectors	660.2	663.0	680.8	308.4	351.9	316.3	346.6	317.6	363.3
<b>Net national income</b>	<b>3 440.2</b>	<b>3 557.5</b>	<b>3 668.7</b>	<b>1 667.5</b>	<b>1 772.6</b>	<b>1 732.3</b>	<b>1 825.2</b>	<b>1 782.0</b>	<b>1 886.7</b>
Consumption of fixed capital	847.6	863.3	874.1	422.1	425.5	432.3	431.0	434.5	439.6
<b>Gross national income</b>	<b>4 287.8</b>	<b>4 420.8</b>	<b>4 542.8</b>	<b>2 089.7</b>	<b>2 198.1</b>	<b>2 164.6</b>	<b>2 256.2</b>	<b>2 216.5</b>	<b>2 326.3</b>
memorandum item:									
Net national income (factor costs)	3 081.4	3 157.8	3 251.7	1 496.1	1 585.2	1 540.0	1 617.8	1 581.4	1 670.3
Property and entrepreneurial income	921.9	874.3	874.8	466.5	455.4	448.2	426.2	436.0	438.8
Compensation of employees	2 159.4	2 283.5	2 377.0	1 029.7	1 129.8	1 091.8	1 191.7	1 145.4	1 231.5
b) Change over the same period of the preceding year in %									
Primary income of private households <sup>2</sup>	5.4	4.1	3.2	5.4	5.5	4.2	4.1	3.4	3.0
Employers social contributions	5.0	5.3	5.9	4.9	5.0	5.3	5.3	6.5	5.4
Gross wages and salaries	7.1	5.9	3.7	7.3	6.9	6.2	5.5	4.6	2.9
... per employee	6.2	5.6	3.3	6.2	6.1	5.8	5.4	3.8	2.8
Other primary income <sup>4</sup>	1.2	-1.5	0.0	1.1	1.4	-1.6	-1.4	-1.6	1.7
Primary income of other sectors	9.6	0.4	2.7	10.0	9.3	2.6	-1.5	0.4	4.8
<b>Net national income</b>	<b>6.2</b>	<b>3.4</b>	<b>3.1</b>	<b>6.2</b>	<b>6.2</b>	<b>3.9</b>	<b>3.0</b>	<b>2.9</b>	<b>3.4</b>
Consumption of fixed capital	7.5	1.9	1.2	9.3	5.7	2.4	1.3	0.5	2.0
<b>Gross national income</b>	<b>6.5</b>	<b>3.1</b>	<b>2.8</b>	<b>6.8</b>	<b>6.1</b>	<b>3.6</b>	<b>2.6</b>	<b>2.4</b>	<b>3.1</b>
memorandum item:									
Net national income (factor costs)	6.6	2.5	3.0	7.6	5.6	2.9	2.1	2.7	3.2
Property and entrepreneurial income	6.3	-5.2	0.1	9.2	3.5	-3.9	-6.4	-2.7	3.0
Compensation of employees	6.7	5.7	4.1	6.9	6.5	6.0	5.5	4.9	3.3
<b>6. Disposable income of private households <sup>2</sup></b>									
a) EUR bn.									
Mass income	1 797.6	1 900.6	1 962.8	859.2	938.4	912.5	988.1	948.7	1 014.0
Net wages and salaries	1 219.9	1 290.9	1 324.4	573.7	646.2	611.2	679.6	633.7	690.7
Social benefits other than social transfers in kind	734.0	775.4	811.8	361.6	372.5	382.1	393.2	399.6	412.2
less: Levies on social benefits, taxes on consumption	156.4	165.6	173.4	76.1	80.3	80.9	84.7	84.6	88.8
Other primary income <sup>4</sup>	620.5	611.0	610.9	329.5	291.0	324.1	286.9	319.0	291.9
Other transfers received (net) <sup>5</sup>	-123.0	-128.1	-132.5	-55.9	-67.1	-58.7	-69.4	-61.0	-71.5
<b>Disposable income</b>	<b>2 295.0</b>	<b>2 383.5</b>	<b>2 441.2</b>	<b>1 132.8</b>	<b>1 162.3</b>	<b>1 177.9</b>	<b>1 205.6</b>	<b>1 206.7</b>	<b>1 234.4</b>
Change in pension entitlements	62.4	62.7	62.8	30.2	32.2	30.4	32.2	30.5	32.3
Consumption expenditure	2 090.6	2 148.9	2 212.3	1 021.4	1 069.1	1 050.1	1 098.9	1 082.1	1 130.2
Saving	266.9	297.3	291.7	141.6	125.3	158.3	139.0	155.2	136.5
Saving ratio (%) <sup>6</sup>	11.3	12.2	11.6	12.2	10.5	13.1	11.2	12.5	10.8
b) Change over the same period of the preceding year in %									
Mass income	8.2	5.7	3.3	8.6	7.9	6.2	5.3	4.0	2.6
Net wages and salaries	9.0	5.8	2.6	9.5	8.7	6.5	5.2	3.7	1.6
Social benefits other than social transfers in kind	6.6	5.6	4.7	6.7	6.5	5.7	5.6	4.6	4.8
less: Levies on social benefits, taxes on consumption	6.5	5.9	4.7	5.8	7.2	6.3	5.6	4.6	4.8
Other primary income <sup>4</sup>	1.2	-1.5	0.0	1.1	1.4	-1.6	-1.4	-1.6	1.7
<b>Disposable income</b>	<b>6.0</b>	<b>3.9</b>	<b>2.4</b>	<b>7.3</b>	<b>4.9</b>	<b>4.0</b>	<b>3.7</b>	<b>2.5</b>	<b>2.4</b>
Consumption expenditure	5.6	2.8	2.9	7.2	4.2	2.8	2.8	3.1	2.9
Saving	7.5	11.4	-1.9	6.1	9.2	11.8	11.0	-1.9	-1.8

National Accounts (cont.)									
Forecast period: 2022 to 2024									
	2023	2024	2025	2023		2024		2025	
				H1	H2	H1	H2	H1	H2
<b>7. Revenue and expenditure by general government <sup>7</sup></b>									
a) EUR bn.									
<b>Revenue</b>									
Taxes	958.5	992.4	1 030.0	465.4	493.1	478.6	513.7	497.2	532.8
Social contributions	709.4	753.9	801.7	342.0	367.4	364.2	389.6	389.4	412.3
Property income	30.9	35.2	36.3	15.8	15.1	18.1	17.0	18.8	17.5
Other current transfers	31.3	33.8	34.3	13.7	17.6	15.0	18.8	15.2	19.0
Capital transfers	20.0	21.9	22.0	8.8	11.2	9.5	12.4	9.6	12.4
Sales	157.6	171.9	179.5	72.4	85.2	80.5	91.4	84.0	95.5
Other subsidies	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
<b>Total</b>	<b>1 908.0</b>	<b>2 009.1</b>	<b>2 103.9</b>	<b>918.3</b>	<b>989.7</b>	<b>966.1</b>	<b>1 043.0</b>	<b>1 014.3</b>	<b>1 089.7</b>
<b>Expenditure</b>									
Intermediate consumption <sup>8</sup>	619.5	653.0	674.5	293.6	325.9	315.1	337.9	326.5	348.0
Compensation of employees	328.0	345.2	358.4	155.8	172.2	165.5	179.7	172.8	185.6
Property income (interest)	36.2	44.1	45.8	16.9	19.3	21.9	22.2	23.2	22.6
Subsidies	66.4	42.2	39.9	34.9	31.5	19.5	22.7	18.7	21.2
Social benefits	662.7	701.9	733.6	326.1	336.6	345.6	356.3	360.7	372.8
Other current transfers	92.3	88.2	89.9	44.3	48.0	42.2	46.1	42.9	46.9
Capital transfers	96.1	88.0	87.5	38.9	57.1	34.5	53.5	34.1	53.4
Gross capital formation	106.7	120.3	125.6	45.9	60.7	51.5	68.8	53.2	72.3
Net acquisitions of non-produced non-financial assets	-0.7	-0.9	-0.9	-0.2	-0.5	-0.4	-0.5	-0.4	-0.5
<b>Total</b>	<b>2 007.1</b>	<b>2 082.1</b>	<b>2 154.2</b>	<b>956.2</b>	<b>1 050.9</b>	<b>995.4</b>	<b>1 086.7</b>	<b>1 031.9</b>	<b>1 122.4</b>
<b>Net lending</b>	<b>-99.1</b>	<b>-73.0</b>	<b>-50.3</b>	<b>-37.9</b>	<b>-61.2</b>	<b>-29.3</b>	<b>-43.7</b>	<b>-17.6</b>	<b>-32.7</b>
b) Change over the same period of the preceding year in %									
<b>Revenue</b>									
Taxes	1.3	3.5	3.8	-0.5	2.9	2.8	4.2	3.9	3.7
Social contributions	6.4	6.3	6.3	6.3	6.5	6.5	6.0	6.9	5.8
Property income	75.5	13.6	3.3	73.3	77.8	14.5	12.6	3.9	2.7
Other current transfers	11.8	7.8	1.5	13.6	10.4	9.2	6.7	1.5	1.5
Capital transfers	6.3	9.4	0.4	-1.4	13.2	7.9	10.5	0.5	0.4
Sales	10.1	9.0	4.4	8.5	11.5	11.1	7.3	4.4	4.5
Other subsidies	2.1	-0.5	0.0	-2.4	5.6	-1.3	0.0	0.0	0.0
<b>Total</b>	<b>4.8</b>	<b>5.3</b>	<b>4.7</b>	<b>3.6</b>	<b>5.8</b>	<b>5.2</b>	<b>5.4</b>	<b>5.0</b>	<b>4.5</b>
<b>Expenditure</b>									
Intermediate consumption <sup>8</sup>	4.4	5.4	3.3	2.1	6.5	7.3	3.7	3.6	3.0
Compensation of employees	6.5	5.3	3.8	4.7	8.2	6.3	4.4	4.4	3.3
Property income (interest)	36.6	21.8	3.9	34.0	39.1	29.6	15.0	5.9	1.8
Subsidies	-5.0	-36.5	-5.4	22.1	-23.8	-44.1	-28.0	-4.1	-6.6
Social benefits	7.0	5.9	4.5	7.2	6.9	6.0	5.8	4.4	4.7
Other current transfers	-17.2	-4.4	1.8	1.4	-29.2	-4.8	-4.0	1.8	1.9
Capital transfers	7.1	-8.4	-0.5	66.3	-13.9	-11.5	-6.3	-1.0	-0.3
Gross capital formation	5.7	12.8	4.4	7.5	4.4	12.0	13.3	3.4	5.1
Net acquisitions of non-produced non-financial assets	-30.1	27.3	0.0	-63.3	14.5	90.7	0.0	0.0	0.0
<b>Total</b>	<b>4.6</b>	<b>3.7</b>	<b>3.5</b>	<b>7.3</b>	<b>2.3</b>	<b>4.1</b>	<b>3.4</b>	<b>3.7</b>	<b>3.3</b>
<sup>1</sup> Price-adjusted gross domestic product per hour worked. <sup>2</sup> Incl. nonprofit institutions serving households. <sup>3</sup> Incl. acquisitions less disposals of valuables. <sup>4</sup> Operating surplus/mixed income, net property income <sup>5</sup> Received less paid other current transfers. <sup>6</sup> Savings in percent of disposable income (incl. change in pension entitlements). <sup>7</sup> Central, regional, local and social security funds. <sup>8</sup> Incl. social transfers in kind and other production taxes.									
Source: Federal Statistical Office, <i>Fachserie 18: National Accounts</i> ; Kiel Institute calculations and forecasts.									