



German Economy

Spring 2016

Kiel Institute Economic Outlook No. 17 (2016|Q1)

Uncertainty weighs on growth only temporarily

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The German economy remains robust in a difficult international climate. In the current year, we expect GDP to increase by 2 per cent. That represents a reduction of 0.2 percentage points from our earlier forecast, mainly due to a slowdown in exports caused by sluggish growth in foreign markets during the winter half-year period. However, we still expect the economy to perform better than in 2015 and to expand very strongly overall. Most of this growth will be due to domestic factors. Consumer spending will increase at a very high rate throughout the forecast period, driven by rising incomes due to the sustained strength of the labor market. Boosted further by low oil prices and government transfers, consumer spending is expected to grow this year at a rate not seen for more than 15 years. Investment is likely to improve and become the second pillar of the recovery. Construction investment in particular is projected to increase more rapidly than in the previous year, thanks to exceptionally favorable conditions. In the course of 2016, we expect the global economy to gradually emerge from a period of weakness and provide better opportunities for German exporters. Looking ahead to 2017, we expect to see a further acceleration in the economy (2.2 percent increase in GDP). One reason for this optimism is the likely continued buoyancy of the domestic economy, driven in part by the continued high level of monetary stimulus as well as an improvement in exports as the global economy recovers.

- The economic recovery is back on track after the recent brief blip, which was largely caused by temporary external factors. While we have slightly reduced our forecast for GDP growth for the current year to 2 percent—mainly due to the impact of weak export markets on German manufacturers during the winter half-year period—we expect economic activity in Germany to stay buoyant. A number of positive domestic factors will ensure that the German economy remains robust even in troubled international waters.
- Concerns regarding the stability of the global economy, together with the general increase in uncertainty, have led to a dampening of expectations among businesses. Viewed in isolation, this weaker sentiment might signal a significant slowdown in the economy during the first half of the year. However, most businesses continue to have a positive view of their current situation. In addition, the companies most affected by the more pessimistic mood have mainly been export-heavy manufacturers. According to surveys conducted by the Association of German Chambers of Industry and Commerce (DIHK), the level of optimism in the service sector is higher than at any time since German reunification. On top of that, the positive outlook for consumer spending has recently been reflected in a strong rise in retail sales. Given this backdrop and that industrial production significantly increased in January, we expect GDP to grow by 0.6 percent during the current quarter.
- We expect an increase in government spending of around EUR 17 billion (approx. 0.5 percent of GDP) during the current year in response to the influx of refugees. The boost for GDP may well be lower, though, assuming that some of the spending is merely reallocated from elsewhere. All in all, we expect this expenditure to produce a noticeable increase in GDP growth during the current

year. It will not, however, have a defining impact on the German economy's performance. In the coming year, we expect this spending to increase at a much lower rate, i.e., by less than EUR 5 billion (less than 0.2 percent of GDP).

- The recent decline in oil prices has not changed the outlook for the German economy significantly. Much of that slump was due to low demand for crude oil in a weaker global economic environment. While oil-importing economies, such as Germany, have greater purchasing power when oil prices are low, this advantage is likely to be offset by poorer sales prospects in global markets. As such, the prospects for GDP growth during the current year will remain largely unaffected by the fall in the price of oil. The effect on consumer spending is likely to be positive, while exports will weaken slightly.
- The German economy is largely being supported by domestic factors. This is reflected in real household incomes, which—along with consumer spending—are expected to increase during the current year at a rate not seen for more than 15 years. In addition to high and sustained growth in gross wages and salaries due to the strength of the labor market, there are a number of special factors that will come into play in the course of the current year. Monetary welfare benefits will increase at a faster pace, mainly due to the rise in pensions. In addition, we expect only a very small rise in consumer prices in 2016, thanks to low oil prices. In 2017, however, growth in real incomes will slow significantly, but nonetheless remain strong. Based on the assumption that savings will increase on the back of significant gains in real household incomes during the current year and then fall again next year, we expect growth in consumer spending to be 2.2 percent in 2016 and to be only somewhat lower in 2017 (2.1 percent). Investment is expected to increase at a much faster rate during the current year. This applies in particular to the construction sector, which has recently picked up again after a pronounced period of weakness in the second and third quarter of last year. Given the extremely positive conditions for housing construction (very low mortgage interest rates plus a stable outlook for incomes), commercial buildings (favorable outlook in the service sector and increasing capacity utilization in manufacturing), and public buildings (better municipal finances and additional investment due to the refugee influx), we expect to see very high rates of investment in construction throughout the forecast period. Investment in machinery and equipment is likely to increase somewhat during the current year due to greater capacity utilization and the gradual improvement in global export prospects. The projected growth rate in the current year is likely to be smaller than in 2015, which was marked by a very high statistical carry-over effect as well as extremely high growth in the first quarter.
- Exports are likely to grow much more slowly during the current year than in 2015, at a rate of 3.4 percent, mainly due to the decline during the winter half-year period. The main reasons for that decline include the slight downturn in key export markets as well as increased uncertainty in financial markets—which has clearly had a negative effect on German exports. When these negative factors subside, we can expect a significant increase in the rate of expansion. Based on our assessment, exports will grow during the current year by almost 6 percent. Since the rate of increase in imports is expected to slow only slightly in the current year due to the strength of the domestic economy, the net export component will make a negative contribution of 0.6 percentage points to GDP growth; in the coming year, net exports are expected to have a neutral effect.
- Employment will continue to rise appreciably. The temporary lull in the rise in employment numbers at the beginning of last year—mainly due to the loss of “mini-jobs” after the introduction of the minimum wage—should now have run its course. During the forecast period, the influx of

refugees will gradually start to have a noticeable impact on the labor market. However, there will be a considerable delay in this process due to the present restrictions for refugees entering the labor market, lengthy asylum procedures, and the participation in integration courses. The unemployment rate (as defined by the Federal Employment Agency) is likely to reach a new record low since German reunification of 6.2 percent in the current year. Despite the general increase in employment, we expect unemployment levels to rise slightly in 2017 as more refugees enter the labor market but only gradually find employment.

- Risks around the outlook for the German economy have recently increased again. The downside risks for 2016 and 2017 are mainly due to uncertainty in the global economy. There is still some concern regarding the strength of emerging economies and the world economy as a whole. Recently, there have also been increasing doubts about the political stability of the European Union. In addition, there is growing evidence that we are reaching the limits of current monetary policy and that it may be extremely difficult to reverse the current high level of monetary expansion. This confluence of issues, together with the continued high level of geopolitical risk, may result in repeated setbacks for the German economy, e.g., through a slowdown in exports or an increase in uncertainty that could, among other things, have an adverse effect on investment. The upside risks for the German economy, which are less marked than the downside issues, include the prospect of the domestic economy picking up at a faster rate than expected in what is a very expansionary monetary environment. In our forecast, we have assumed that investment will increase at a slightly lower rate than has been the case in previous upturns—in part due to the fact that the most recent upturns have often been accompanied by setbacks.

Table 1:
Key indicators, 2014–2017

	2014	2015	2016	2017
Gross domestic product (GDP), price-adjusted	1.6	1.7	2.0	2.2
Gross domestic product, deflator	1.7	2.1	1.9	1.8
Consumer prices	0.9	0.3	0.5	1.8
Labor productivity (per hour worked)	0.4	0.6	0.7	1.3
Employment (1,000 persons)	42,703	43,031	43,516	43,936
Unemployment rate (percent)	6.7	6.4	6.2	6.3
<i>In relation to nominal GDP</i>				
Public sector net lending	0.3	0.6	-0.0	0.1
Gross public debt	74.9	71.2	68.6	65.6
Current account balance	7.4	8.3	8.4	8.2

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

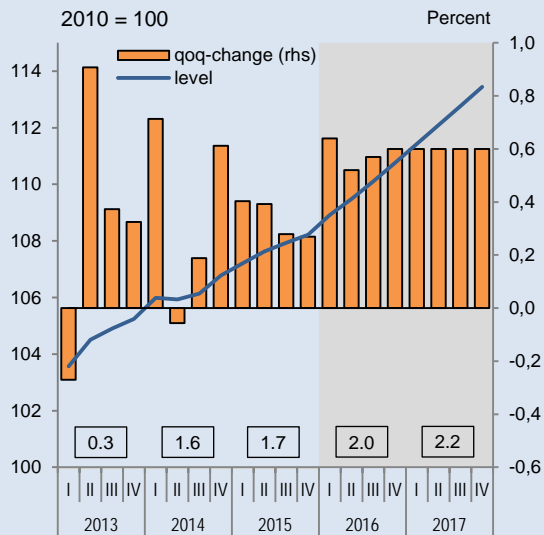
Source: Federal Statistical Office, *Fachserie 18, Series 1.2*; Federal Employment Agency, *Monthly Bulletin*; Federal Employment Agency, *Employment Statistics*; shaded: IfW forecast.

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1. Economic activity and leading indicators

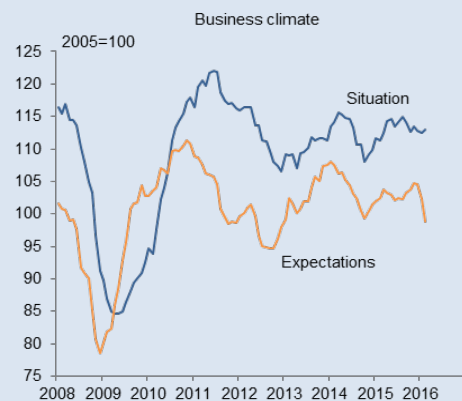
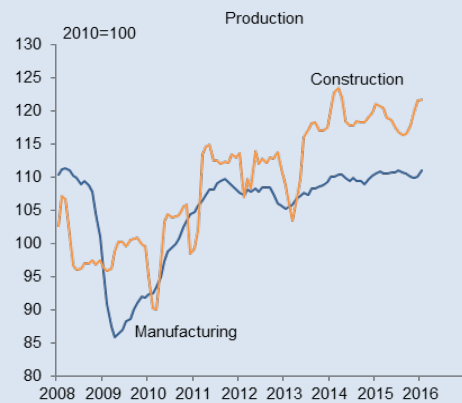
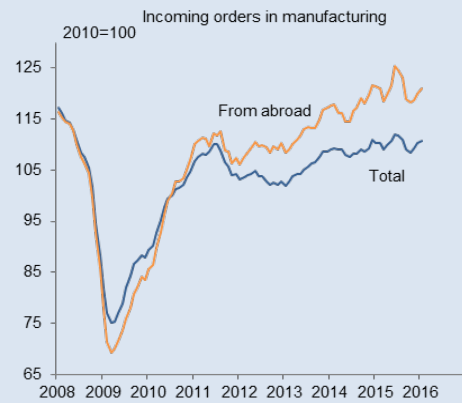
Figure 1.1:
Gross domestic product, 2013–2017



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

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

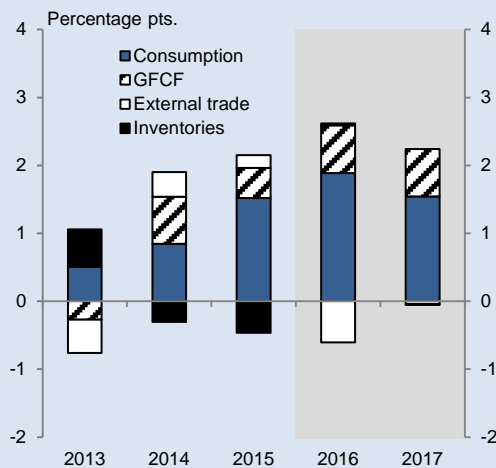
Figure 1.2:
Leading indicators, 2008–2016



Monthly data, seasonally adjusted; incoming orders in manufacturing and production: 3-month moving average.

Source: Deutsche Bundesbank, *Saisonbereinigte Wirtschaftszahlen*; ifo, *Konjunkturperspektiven*; own calculations.

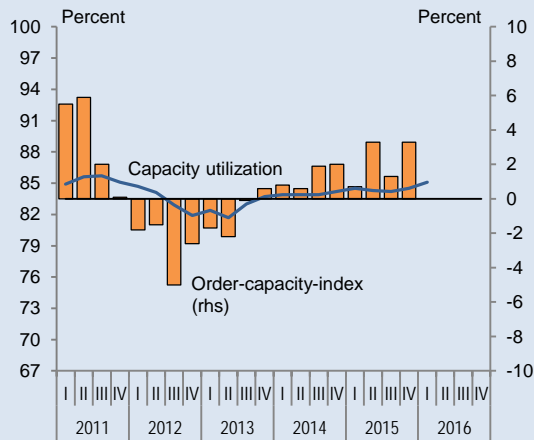
Figure 1.3:
Expenditure-side components to GDP growth, 2013–2017



Annual data; price-adjusted, Lundberg components.

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

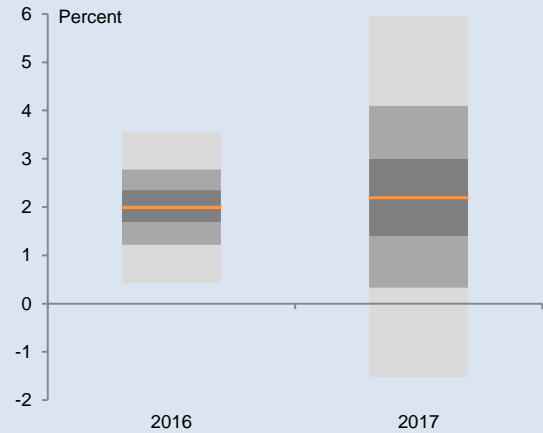
Figure 1.4:
Capacity utilization, 2011–2016



Quarterly data, seasonally adjusted; capacity utilization in manufacturing (axes cross at normal capacity utilization).

Source: EU Commission, *Business Survey*; Deutsche Bundesbank, *Monthly Report*.

Figure 1.5:
Forecast intervals for GDP growth, 2016 and 2017



GDP: volumes, change over previous year. Point forecasts: orange lines. Forecast intervals gray 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 first quarter 1994–2015.

Source: Own calculations.

Table 1.1:
Quarterly data, 2015–2017

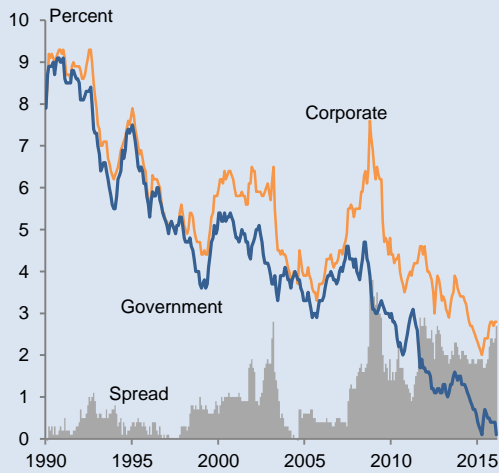
	2015				2016				2017			
	I	II	III	IV	I	II	III	IV	I	II	III	IV
Gross domestic product	0.4	0.4	0.3	0.3	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.6
Private consumption	0.4	0.1	0.6	0.3	0.6	0.6	0.6	0.5	0.5	0.5	0.6	0.6
Government consumption	0.5	0.7	0.5	1.0	1.1	0.9	0.8	0.6	0.5	0.5	0.5	0.4
Machinery and equipment	1.9	0.6	0.2	1.0	0.7	0.9	1.1	1.3	1.5	1.3	1.1	0.9
Constructions	1.4	-1.8	-0.2	2.2	1.4	0.6	0.8	0.9	1.0	0.9	0.9	0.9
Other investment	0.8	0.7	0.6	0.7	0.5	0.7	0.8	0.8	0.8	0.7	0.7	0.6
Change in inventories	0.0	-0.3	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic expenditure	0.6	-0.2	0.6	0.8	0.9	0.6	0.6	0.7	0.6	0.6	0.6	0.6
Exports	1.5	1.8	0.3	-0.6	0.8	1.4	1.7	1.7	1.6	1.5	1.4	1.5
Imports	2.2	0.6	1.1	0.5	1.5	1.8	2.0	2.0	1.8	1.7	1.6	1.6
Net exports	-0.2	0.6	-0.3	-0.5	-0.2	-0.1	0.0	0.0	0.0	0.0	0.0	0.0
Employment (domestic)	42,858	42,971	43,082	43,213	43,365	43,465	43,565	43,665	43,770	43,880	43,990	44,100
Unemployment (registered)	2,820	2,793	2,793	2,768	2,722	2,702	2,711	2,742	2,771	2,793	2,811	2,827

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: IfW forecast.

2. Monetary conditions and prices

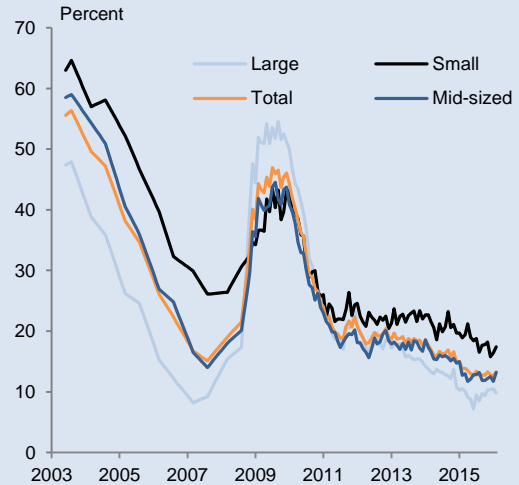
Figure 2.1:
Bond yields, 1990–2015



Monthly data, corporate bonds: maturing within 3 years; government bonds: maturing within 5 years.

Source: Deutsche Bundesbank, *Monthly Reports*; own calculations.

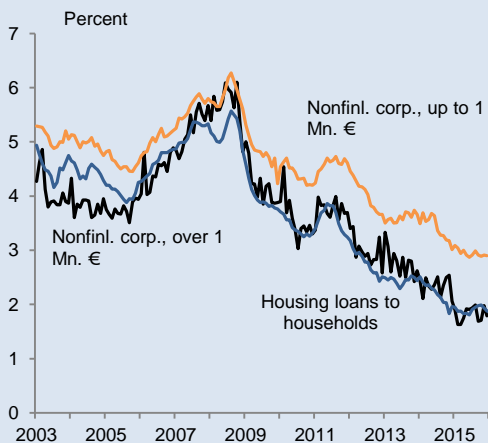
Figure 2.2:
Credit constraints by firm size, 2003–2015



Monthly data since November 2008; share of firms assessing that credit access is restrictive.

Source: Ifo, *Credit Constraint Indicator*.

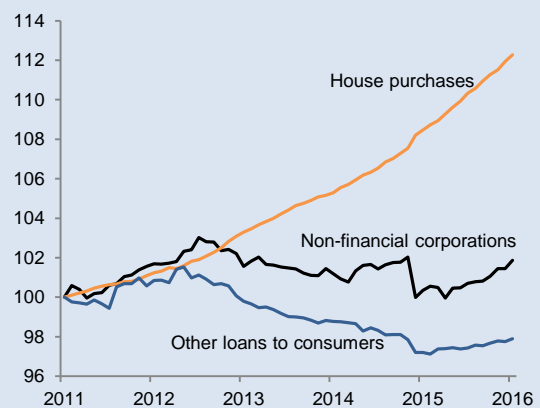
Figure 2.3:
Loan interest rates, 2003–2015



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

Source: Deutsche Bundesbank.

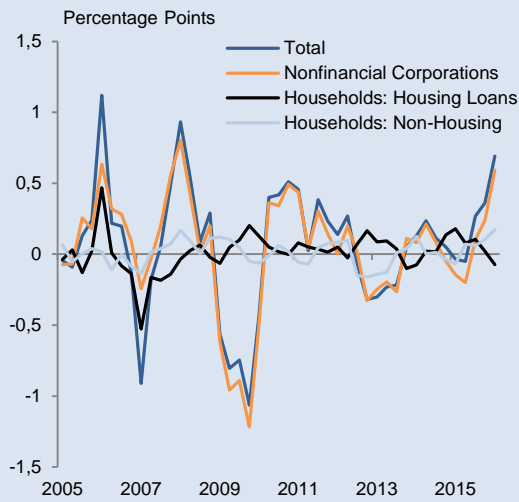
Figure 2.4:
Sum of loans, 2011–2016



Index: Jan 2011=100; Monthly data.

Source: Datastream.

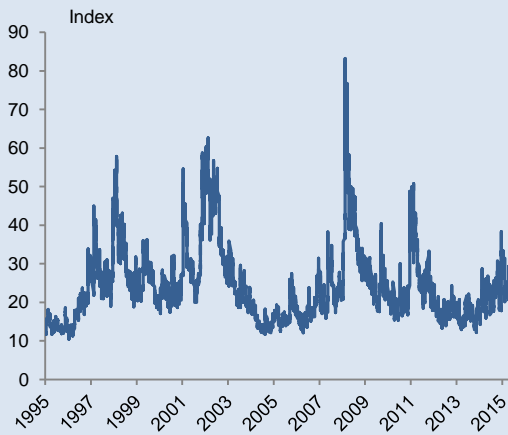
Figure 2.5:
Credit impulse, 2005–2015



Quarterly data, most recent quarter based on first month; calculations follow Biggs et al. (2009)

Source: Datastream.

Figure 2.6:
VDAX, 1995–2015



Daily data.

Source: Deutsche Börse.

Table 2.1:
Projections and assumptions on the international environment, 2014–2017

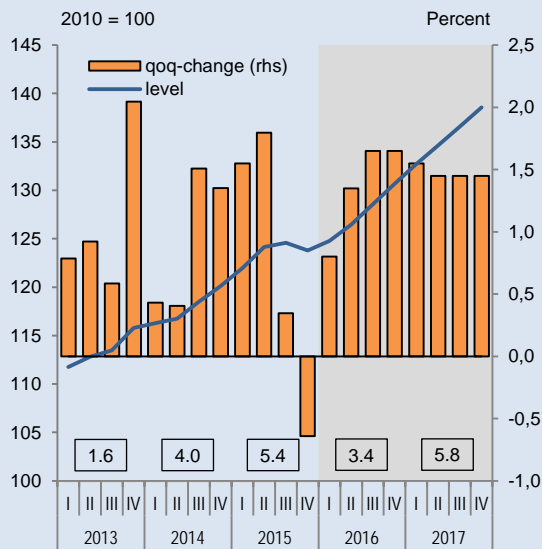
	2014				2015				2016				2017			
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III	IV
ECB key interest rate	0.25	0.23	0.10	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Long-term interest rate	1.7	1.4	1.1	0.8	0.4	0.5	0.5	0.5	0.2	0.2	0.2	0.3	0.3	0.4	0.4	0.5
US-dollar/euro exchange rate	1.37	1.37	1.33	1.25	1.13	1.10	1.12	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09	1.09
Price competitiveness	87.1	87.2	86.1	85.5	83.1	82.5	83.3	83.4	84.9	84.5	84.2	84.1	84.0	84.1	84.2	84.4
Export markets	0.3	0.4	0.6	0.6	0.6	0.5	0.5	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.7	0.7
Oil price	107.9	109.8	102.1	76.0	54.1	62.1	49.9	44.6	34.5	38.0	39.0	40.0	41.0	44.0	47.0	50.0

ECB key interest rate: main refinancing operations; long-term interest rate on 9–10 year bonds; price competitiveness: against 36 trading partners, based on the deflators of total sales, 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.

Source: ECB, *Monthly Bulletin*; Deutsche Bundesbank, *Monthly Bulletin*; IMF, *International Financial Statistics*; own calculations; shaded: IfW forecast or assumption.

3. External trade

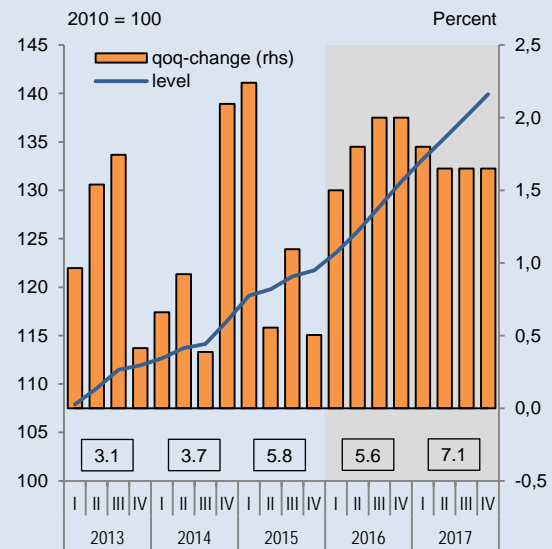
Figure 3.1:
Exports, 2013–2017



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

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

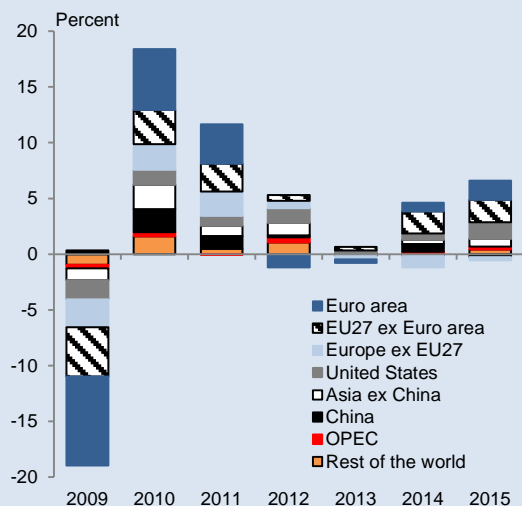
Figure 3.2:
Imports, 2013–2017



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

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

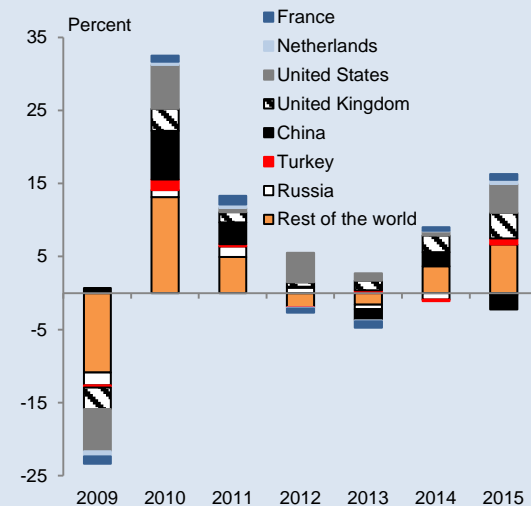
Figure 3.3:
Contributions to growth of total exports, by countries and country groups, 2009–2015



Yearly data; nominal exports in goods by countries or country groups; growth rates, weighted by the share in total exports of the respective country or country group.

Source: Bundesbank; Federal Statistic Office (Destatis); own calculations.

Figure 3.4:
Contributions to growth of total nominal passenger cars exports, by countries, 2009–2015



Yearly data; nominal exports in passenger cars (excluding buses) by countries; growth rates, weighted by the share in total passenger cars exports of the respective country.

Source: Federal Statistics Office, GENESIS-Online data base; own calculations.

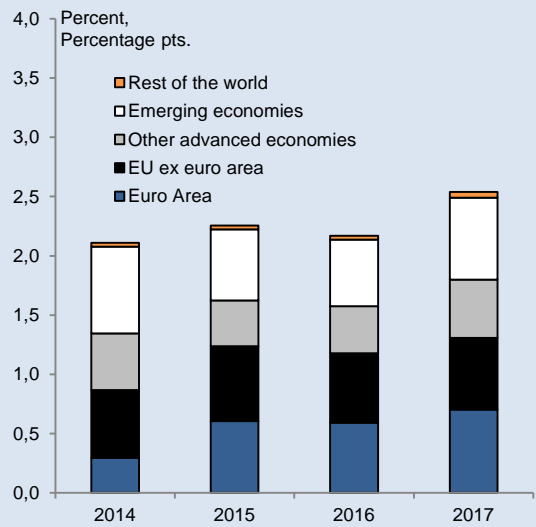
Figure 3.5:
Export indicators, 2001–2015



Quarterly data; Exports, industrial production, order inflow: volumes, change on previous year; Export expectations, Foreign orders on hand: volumes; Business expectations, industrial production: Based on 41 countries weighted by shares of German exports.

Source: Deutsche Bundesbank, *Saisonbereinigte Wirtschaftszahlen* (ongoing volumes); Thomson Financial Datastream; ifo, *Konjunkturperspektiven* (ongoing volumes); own calculations.

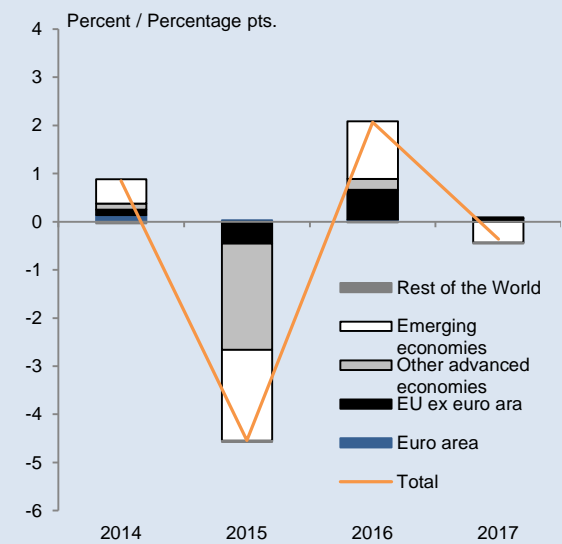
Figure 3.6:
German Export Markets, 2014–2017



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

Source: Federal Statistical Office; national sources; 2016–2017: IFW forecast.

Figure 3.7:
Germany's price competitiveness, 2014–2017

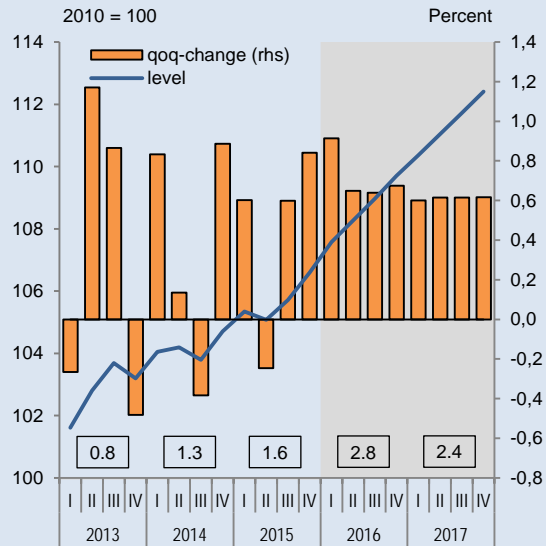


Annual data; against 56 countries based on consumer prices; weights according to Germany's price competitiveness indicator against 56 trading partners based on consumer price indices of the Deutsche Bundesbank.

Source: Deutsche Bundesbank; national sources; 2016–2017: IFW forecast.

4. Domestic expenditure

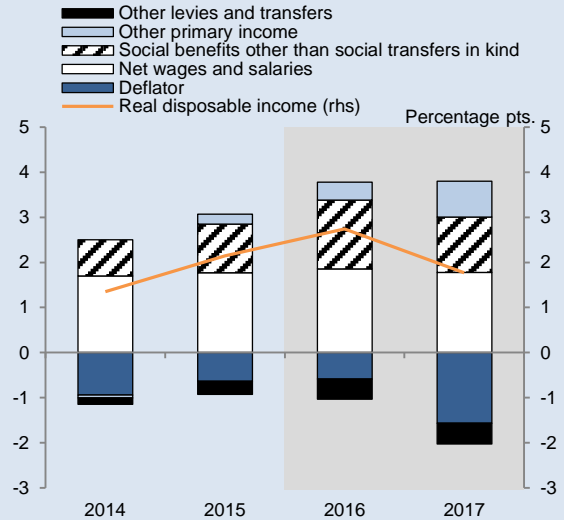
Figure 4.1:
Domestic expenditure, 2013–2017



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

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

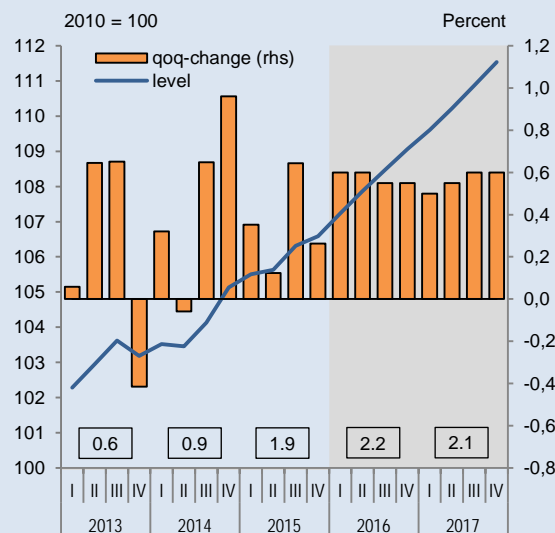
Figure 4.2:
Contributions to changes in real disposable income, 2014–2017



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*, Reihe 1.2; own calculations; shaded: IFW forecast.

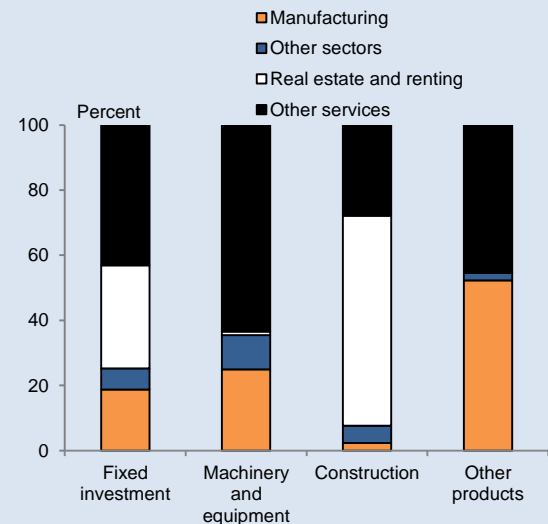
Figure 4.3:
Private consumption, 2013–2017



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

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

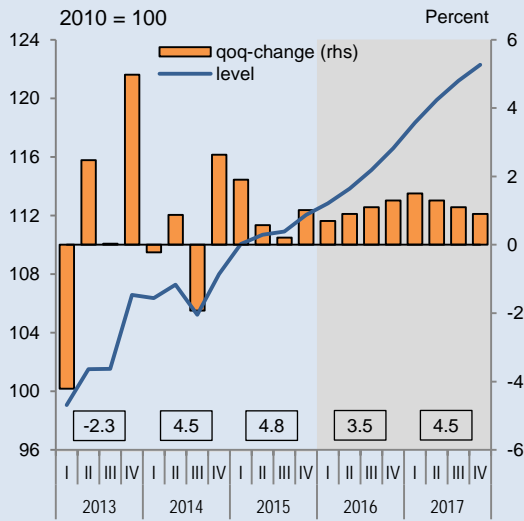
Figure 4.4:
Investment by economic sector 2014



Yearly data; Share of total investment 2014; Other sectors: Agriculture and forestry, fisheries, mining, energy supply, water supply and disposal etc.

Source: Federal Statistical Office, *Worksheet Investment*; own calculations.

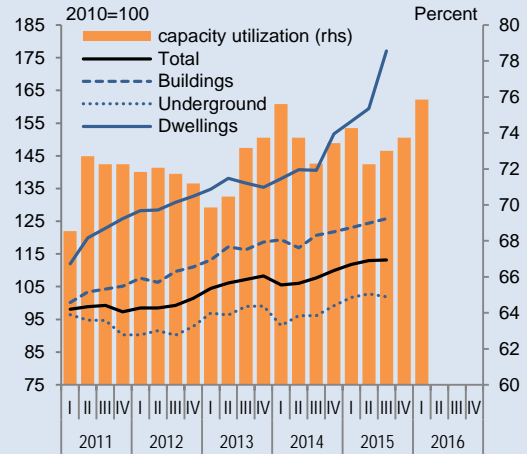
Figure 4.5:
M&E Investments, 2013–2017



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

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

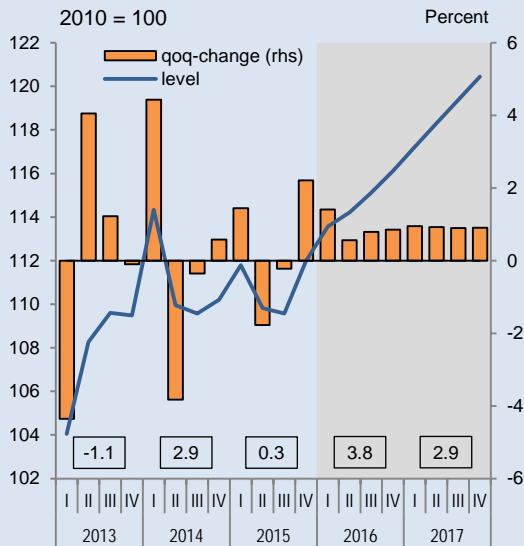
Figure 4.6:
Order stocks and capacity utilization in construction industry, 2011–2016



Quarterly data. Capacity utilization: seasonally adjusted (2016-Q1: January/February); order stocks: price, seasonally and working-day adjusted.

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

Figure 4.7:
Constructions, 2013–2017



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

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

Table 4.1:
Gross fixed capital formation, 2014–2017

	2014	2015	2016	2017
Total	3.5	2.2	3.5	3.5
Corporate investment	3.7	2.9	3.1	3.5
Machinery and equipment	4.5	4.8	3.5	4.5
Construction (non-dwellings)	2.3	-1.4	2.9	1.9
Other	3.1	2.7	2.7	3.0
Dwellings	3.3	1.6	4.2	3.8
Public (nondwellings)	2.7	-1.6	4.0	0.8
<i>Memorandum item:</i>				
Construction	2.9	0.3	3.8	2.9

Volumes; change over previous year in percent.

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

5. Industries

Table 5.1:
Gross value added for industries 2015–2016

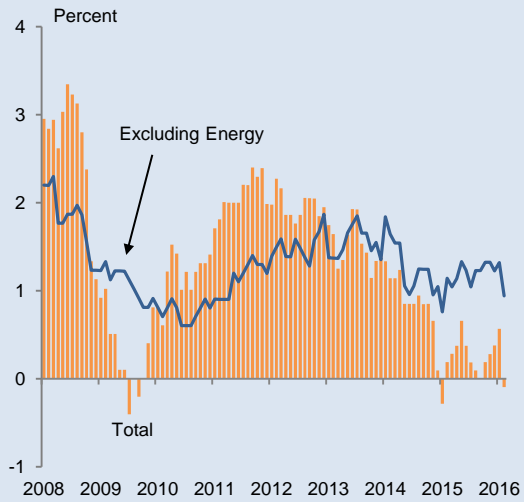
	2015		2016			
	III	IV	I	II	III	IV
	<i>Seasonally and calendar adjusted, quarter-on-quarter change in percent</i>					
Gross domestic product	0.3	0.3	0.6	0.5	0.6	0.6
Gross value added	0.2	0.0	0.6	0.5	0.6	0.6
Industry excluding construction	0.4	-1.5	0.9	0.6	0.7	0.8
Manufacturing	0.2	-1.3	0.9	0.6	0.7	0.8
Construction	-0.6	2.3	1.0	0.9	0.9	0.9
Trade, transport, accommodation, and food services	0.0	0.0	0.5	0.7	0.7	0.7
Information and communication	1.0	0.9	1.1	1.0	1.0	1.0
Financial and insurance services	-0.9	1.2	-0.1	-0.2	-0.2	-0.2
Real estate activities	0.6	0.2	0.3	0.3	0.4	0.4
Business services	0.6	0.9	0.7	0.7	0.7	0.7
Public services, education, health	-0.2	0.1	0.4	0.4	0.5	0.5
Other services	0.2	0.1	0.2	0.2	0.2	0.1

Quarterly data, volumes.

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

6. Consumer prices

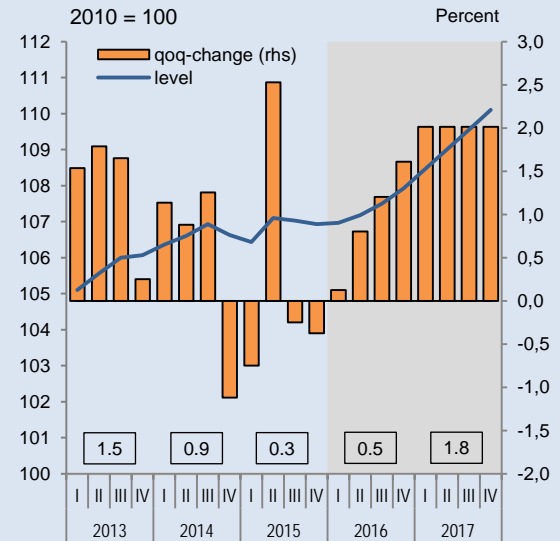
Figure 6.1:
Consumer prices, 2008–2016



Monthly data; year-on-year change.

Source: Deutsche Bundesbank, *Seasonally adjusted business statistics*; own calculations.

Figure 6.2:
Consumer price index, 2013–2017

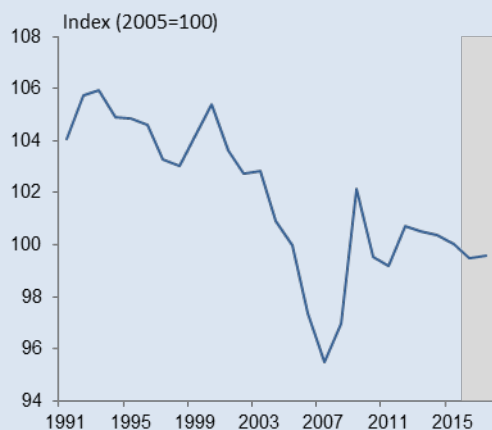


Quarterly data, seasonally adjusted, qoq-change, annualized. Annual data: price adjusted, annual rate (boxes).

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

7. Wages

Figure 7.1:
Real unit labor costs, 1991–2017



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

Source: Federal Employment Agency, *Fachserie 18, Series 1.2*; shaded: forecast.

Table 7.1:
Wages and productivity, 2014–2017

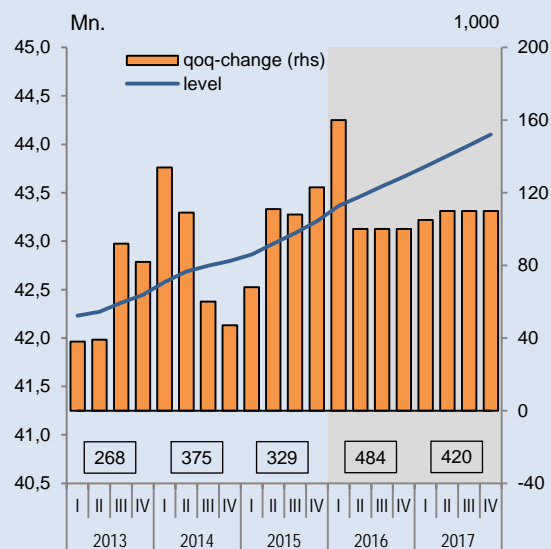
	2014	2015	2016	2017
<i>Per hour</i>				
Negotiated wages	3.0	2.4	2.6	2.9
Gross wages and salaries	2.1	2.4	2.3	3.3
Wage drift	-0.9	0.1	-0.3	0.4
Compensation of employees	2.0	2.3	2.1	3.1
Labor productivity	0.4	0.6	0.7	1.3
Unit labor costs	1.6	1.7	1.5	1.7
Unit labor costs (real)	-0.1	-0.3	-0.4	-0.1
<i>Per capita</i>				
Negotiated wages	2.9	2.3	2.6	2.9
Gross wages and salaries	2.7	2.9	2.2	3.1
Wage drift	-0.2	0.6	-0.4	0.2
Compensation of employees	2.6	2.7	2.0	2.9
Labor productivity	0.7	0.9	0.9	1.2
Unit labor costs	1.9	1.8	1.3	1.7
Unit labor costs (real)	0.2	-0.2	-0.6	-0.1

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: IfW forecast.

8. Employment

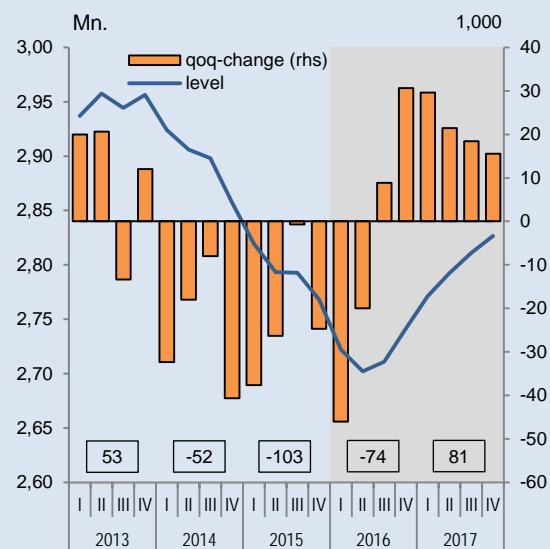
Figure 8.1:
Employment, 2013–2017



Quarterly data, seasonally adjusted, qoq-change. Annual data: annual rate (boxes).

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

Figure 8.2:
Unemployment, 2013–2017



Quarterly data, seasonally adjusted, qoq-change. Annual data: annual rate (boxes).

Source: Federal Employment Agency, *Monthly Bulletin*; shaded: IFW forecast.

Table 8.1:
Employment, 2013–2017 (1,000 persons)

	2013	2014	2015	2016	2017
Hours worked (domestic concept, mn. hours)	57,639	58,349	58,999	59,735	60,278
Persons in employment (domestic concept)	42,328	42,703	43,031	43,516	43,936
Self-employed	4,459	4,398	4,299	4,245	4,205
Employees (domestic concept)	37,869	38,305	38,732	39,271	39,731
Employees subject to social security contributions	29,729	30,219	30,849	31,444	31,904
Minijobs	5,018	5,027	4,845	4,806	4,806
Net commuting	59	64	68	66	66
Persons in employment (national concept)	42,269	42,639	42,963	43,450	43,870
Employees (national concept)	37,810	38,242	38,664	39,205	39,665
Unemployed persons (registered)	2,949	2,896	2,793	2,720	2,802
Unemployment rate (registered; percent)	6.9	6.7	6.4	6.2	6.3
Unemployment rate (ILO; percent)	4.9	4.7	4.4	4.0	3.7

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: IFW forecast.

9. Public finances

Table 9.1:
Revenues and expenditures of the general government, 2013–2017 (bn. euro)

	2013	2014	2015	2016	2017
Revenues	1,252.5	1,299.6	1,350.0	1,390.3	1,445.8
➤ relative to GDP	44.4	44.6	44.6	44.2	44.2
Taxes	637.4	659.6	690.9	710.8	742.1
➤ relative to GDP	22.6	22.6	22.8	22.6	22.7
Social contributions	464.9	481.9	501.2	519.0	542.3
➤ relative to GDP	16.5	16.5	16.6	16.5	16.6
Other revenues	150.1	158.1	157.9	160.6	161.4
➤ relative to GDP	5.3	5.4	5.2	5.1	4.9
Expenditures	1,255.6	1,290.7	1,330.6	1,391.3	1,441.6
➤ relative to GDP	44.5	44.3	44.0	44.2	44.1
Compensation of employees	218.6	224.6	230.7	238.2	245.0
Intermediate consumption	135.0	138.6	143.7	151.6	157.1
Social transfers in kind	227.1	240.1	252.3	268.6	281.3
Gross capital formation	63.5	63.2	65.9	67.0	70.4
Capital transfers	56.0	51.5	48.5	45.7	44.5
Social benefits	438.6	451.0	469.3	496.3	518.6
Subsidies	24.4	25.5	26.8	27.5	28.2
Other current transfers	63.0	61.6	65.1	63.3	67.4
Other capital transfers and investment grants	30.6	35.9	30.0	34.5	34.0
Other expenditures	-1.3	-1.3	-2.0	-1.5	-5.1
Net lending/net borrowing	-3.1	8.9	19.4	-1.0	4.2
➤ relative to GDP	-0.1	0.3	0.6	-0.0	0.1
Revenues of central, state, and local governments	814.7	845.1	876.1	899.1	931.9
Net of transfers from social security funds	813.6	844.0	875.0	898.1	930.9
Transfers from social security funds	1.0	1.1	1.1	1.1	1.1
Expenditures of central, state, and local governments	823.1	839.5	861.5	905.4	935.5
Net of transfers to social security funds	722.3	737.7	757.3	796.7	822.7
Transfers to social security funds	100.8	101.8	104.2	108.7	112.7
Net lending/net borrowing central, state, and local government	-8.5	5.6	14.6	-6.3	-3.6
Revenues of social security funds	539.7	557.4	579.1	601.0	627.7
Net of transfers from central, state, and local governments	438.9	455.7	475.0	492.3	515.0
Expenditures of social security funds	534.3	554.1	574.3	595.7	620.0
Net of transfers to central, state, and local governments	533.3	553.0	573.3	594.7	618.9
Net lending/net borrowing social security funds	5.3	3.4	4.8	5.3	7.8

Sums may deviate due to rounding.

Source: Federal Statistical Office, *internal worksheet*; shaded: IfW forecast.

10. The German Economy, 2014–2017

	2015	2014	2015	2016	2017
	€ bill.	Change over previous year in percent			
GDP (constant prices)		1.6	1.7	2.0	2.2
Private consumption expenditure		0.9	1.9	2.2	2.1
Public consumption expenditure		1.7	2.4	3.5	2.2
Total fixed investment		3.5	2.2	3.5	3.5
Machinery and equipment		4.5	4.8	3.5	4.5
Construction		2.9	0.3	3.8	2.9
Other equipment		3.1	2.7	2.7	3.0
Changes in stocks		-0.3	-0.5	0.0	0.0
Domestic Demand		1.3	1.6	2.8	2.4
Exports		4.0	5.4	3.4	5.8
Imports		3.7	5.8	5.6	7.1
Net exports		0.4	0.2	-0.6	0.0
GDP (current prices)	3,025.9	3.4	3.8	4.0	4.1
Private consumption expenditure	1,633.4	1.9	2.6	2.8	3.7
Public consumption expenditure	586.7	4.1	4.0	5.3	4.0
Total fixed investment	606.2	5.0	3.6	5.1	5.6
Machinery and equipment	200.1	4.7	5.4	4.0	5.2
Construction	297.7	5.2	2.0	6.0	6.1
Other equipment	108.5	4.8	4.7	4.7	5.1
Changes in stocks (€bill.)		-22.0	-36.5	-36.5	-37.6
Domestic Demand	2,789.8	2.6	2.6	3.9	4.2
Exports	1,419.6	3.9	6.5	2.5	6.9
Imports	1,183.5	2.1	4.1	1.9	7.8
Net exports (€bill.)		196.4	236.1	248.5	255.2
Gross national income	3,091.5	3.5	3.7	4.0	4.0
Deflator of GDP		1.7	2.1	1.9	1.8
Private consumption expenditure		0.9	0.6	0.6	1.6
Public consumption expenditure		2.3	1.6	1.7	1.7
Investment in machinery and equipment		0.2	0.6	0.5	0.7
Investment in construction		2.3	1.7	2.1	3.1
Investment in other equipment		1.6	2.0	2.0	2.0
Exports		-0.1	1.0	-0.9	1.0
Imports		-1.6	-1.6	-3.5	0.6
<i>Addendum: Consumer prices</i>		0.9	0.3	0.5	1.8
Income distribution					
National income	2,260.6	3.8	3.9	4.4	4.4
Employment income	1,543.1	3.8	3.9	3.5	4.1
in percent of national income		68.3	68.3	67.7	67.5
Entrepreneurial and property income	717.5	3.8	3.9	6.4	4.9
Disposable income of private households	1,757.7	2.3	2.8	3.3	3.3
Savings rate		9.5	9.7	10.1	9.7
Wages and salaries	1,262.7	3.9	4.0	3.6	4.3
Wage per hour		2.1	2.4	2.3	3.3
Unit labor costs		1.6	1.7	1.4	1.8
Productivity per hour		0.4	0.6	0.7	1.3
Unemployment (1000)		2,896	2,793	2,720	2,802
Rate of unemployment (percent)		6.7	6.4	6.2	6.3
Total employment (1000)		42,703	43,031	43,516	43,936
Public sector budget balance (€bill.)		8.9	19.4	-1.0	4.2
Public sector budget balance (in percent of GDP)		0.3	0.6	-0.0	0.1
Government debt (in percent of GDP)		74.9	71.2	68.6	65.6

Change in stocks, net exports: contribution to GDP growth.

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

11. National accounts

Forecast period: 2016 to 2017

	2015	2016	2017	2016		2017	
				H1	H2	H1	H2

1. Production

Change over the same period of the preceding year in %

Persons in employment	0,8	1,1	1,0	1,2	1,1	0,9	1,0
Hours worked	1,1	1,2	0,9	1,9	0,6	0,7	1,1
Hours worked by person in employment	0,3	0,1	- 0,1	0,7	- 0,4	- 0,2	0,1
Labor productivity ¹	0,6	0,7	1,3	0,3	1,2	1,5	1,0
Gross domestic product, price-adjusted	1,7	2,0	2,2	2,2	1,9	2,3	2,1

2. Use of gross domestic product at current prices

a) EUR bn.

Consumption expenditure	2 220,1	2 297,1	2 383,2	1 119,2	1 177,9	1 159,0	1 224,3
Private households ²	1 633,4	1 679,5	1 741,2	819,8	859,7	847,4	893,8
Government	586,7	617,5	642,0	299,3	318,2	311,6	330,5
Gross fixed capital formation	606,2	637,1	673,0	304,3	332,8	322,2	350,7
Machinery and equipment	200,1	208,1	219,0	98,4	109,7	104,1	114,8
Construction	297,7	315,4	334,6	150,7	164,7	160,1	174,6
Other products	108,5	113,6	119,4	55,1	58,4	58,0	61,3
Changes in inventories ³	- 36,5	- 36,5	- 37,6	- 6,4	- 30,1	- 5,7	- 31,8
Domestic expenditure	2 789,8	2 897,7	3 018,6	1 417,1	1 480,6	1 475,4	1 543,2
Net exports	236,1	248,5	255,2	127,0	121,5	132,2	123,0
Exports	1 419,6	1 454,5	1 555,0	711,1	743,4	762,5	792,5
Imports	1 183,5	1 206,0	1 299,8	584,1	621,9	630,2	669,6
Gross domestic product	3 025,9	3 146,2	3 273,8	1 544,1	1 602,1	1 607,7	1 666,1

b) Change over the same period of the preceding year in %

Consumption expenditure	3,0	3,5	3,8	3,6	3,4	3,6	3,9
Private households ²	2,6	2,8	3,7	2,9	2,8	3,4	4,0
Government	4,0	5,3	4,0	5,5	5,0	4,1	3,8
Gross fixed capital formation	3,6	5,1	5,6	5,2	5,1	5,9	5,4
Machinery and equipment	5,4	4,0	5,2	4,4	3,7	5,8	4,7
Construction	2,0	6,0	6,1	5,9	6,1	6,2	6,0
Other products	4,7	4,7	5,1	4,6	4,8	5,2	5,0
Domestic expenditure	2,6	3,9	4,2	3,9	3,8	4,1	4,2
Exports	6,5	2,5	6,9	1,8	3,1	7,2	6,6
Imports	4,1	1,9	7,8	0,9	2,9	7,9	7,7
Gross domestic product	3,8	4,0	4,1	4,1	3,8	4,1	4,0

3. Use of gross domestic product, price-adjusted (chain-linked, 2010=100)

a) EUR bn.

Consumption expenditure	2 061,6	2 114,6	2 159,2	1 035,8	1 078,9	1 057,8	1 101,5
Private households ²	1 532,5	1 566,6	1 599,1	766,0	800,6	781,1	818,0
Government	529,1	547,8	559,9	269,6	278,2	276,4	283,5
Gross fixed capital formation	558,4	578,0	598,0	276,7	301,3	287,1	310,9
Machinery and equipment	195,9	202,8	211,8	95,4	107,4	100,2	111,6
Construction	263,3	273,4	281,4	131,5	141,9	135,6	145,8
Other products	99,6	102,2	105,3	49,9	52,4	51,4	53,9
Domestic expenditure	2 586,4	2 659,7	2 724,0	1 310,1	1 349,7	1 343,2	1 380,8
Exports	1 350,9	1 396,7	1 478,0	683,5	713,3	727,2	750,8
Imports	1 153,5	1 218,5	1 305,3	589,1	629,4	635,2	670,1
Gross domestic product	2 782,5	2 838,4	2 900,3	1 404,1	1 434,2	1 436,2	1 464,1

b) Change over the same period of the preceding year in %

Consumption expenditure	2,0	2,6	2,1	2,7	2,5	2,1	2,1
Private households ²	1,9	2,2	2,1	2,4	2,1	2,0	2,2
Government	2,4	3,5	2,2	3,5	3,6	2,5	1,9
Gross fixed capital formation	2,2	3,5	3,5	3,8	3,3	3,7	3,2
Machinery and equipment	4,8	3,5	4,5	3,9	3,2	5,0	4,0
Construction	0,3	3,8	2,9	4,1	3,6	3,1	2,8
Other products	2,7	2,7	3,0	2,5	2,8	3,2	2,9
Domestic expenditure	1,6	2,8	2,4	2,9	2,8	2,5	2,3
Exports	5,4	3,4	5,8	2,9	3,9	6,4	5,3
Imports	5,8	5,6	7,1	4,8	6,4	7,8	6,5
Gross domestic product	1,7	2,0	2,2	2,2	1,9	2,3	2,1

National Accounts (cont.)

Forecast period: 2016 to 2017

	2015	2016	2017	2016		2017	
				H1	H2	H1	H2

4. Deflators (2010=100)

Change on the same period of the preceding year in %

Private consumption ²	0,6	0,6	1,6	0,5	0,6	1,4	1,8
Government consumption	1,6	1,7	1,7	2,0	1,4	1,5	1,9
Gross fixed capital formation	1,4	1,5	2,1	1,3	1,7	2,1	2,1
Machinery and equipment	0,6	0,5	0,7	0,5	0,5	0,7	0,7
Construction	1,7	2,1	3,1	1,7	2,4	3,0	3,1
Exports	1,0	- 0,9	1,0	- 1,0	- 0,8	0,8	1,3
Imports	- 1,6	- 3,5	0,6	- 3,8	- 3,3	0,1	1,1
Gross domestic product	2,1	1,9	1,8	1,9	1,9	1,8	1,9

5. National income

a) EUR bn.

Primary income of private households ²	2 116,6	2 176,8	2 257,4	1 072,6	1 104,2	1 106,4	1 151,0
Employers social contributions	280,4	288,1	298,3	139,9	148,1	144,2	154,1
Gross wages and salaries	1 262,7	1 308,3	1 364,2	627,1	681,2	649,0	715,2
Other primary income ⁴	573,5	580,4	594,9	305,6	274,8	313,2	281,7
Primary income of other sectors	443,8	491,7	524,5	222,6	269,2	244,9	279,6
Net national income	2 560,3	2 668,5	2 782,0	1 295,2	1 373,3	1 351,3	1 430,6
Consumption of fixed capital	531,2	545,2	561,0	271,1	274,2	278,9	282,1
Gross national income	3 091,5	3 213,8	3 343,0	1 566,3	1 647,5	1 630,3	1 712,7
memorandum item:							
Net national income (factor costs)	2 260,6	2 359,7	2 463,3	1 144,3	1 215,4	1 195,7	1 267,6
Property and entrepreneurial income	717,5	763,3	800,8	377,3	386,1	402,5	398,2
Compensation of employees	1 543,1	1 596,4	1 662,5	767,0	829,3	793,2	869,3

b) Change over the same period of the preceding year in %

Primary income of private households ²	3,0	2,8	3,7	3,1	2,6	3,1	4,2
Employers social contributions	3,2	2,7	3,6	3,2	2,3	3,0	4,0
Gross wages and salaries	4,0	3,6	4,3	4,3	3,0	3,5	5,0
... per employee	2,9	2,2	3,1	2,8	1,7	2,3	3,8
Other primary income ⁴	0,7	1,2	2,5	0,7	1,7	2,5	2,5
Primary income of other sectors	8,3	10,8	6,7	11,3	10,4	10,1	3,9
Net national income	3,9	4,2	4,3	4,4	4,0	4,3	4,2
Consumption of fixed capital	2,6	2,7	2,9	2,6	2,8	2,9	2,9
Gross national income	3,7	4,0	4,0	4,1	3,8	4,1	4,0
memorandum item:							
Net national income (factor costs)	3,9	4,4	4,4	4,6	4,2	4,5	4,3
Property and entrepreneurial income	3,9	6,4	4,9	5,6	7,1	6,7	3,2
Compensation of employees	3,9	3,5	4,1	4,1	2,9	3,4	4,8

6. Disposable income of private households²

a) EUR bn.

Mass income	1 263,4	1 318,3	1 369,0	636,5	681,8	658,0	711,0
Net wages and salaries	838,4	871,0	903,3	413,6	457,3	424,7	478,5
Social benefits other than social transfers in kind	523,9	550,8	573,1	274,4	276,4	287,0	286,1
less: Levies on social benefits, taxes on consumption	98,9	103,5	107,4	51,5	52,0	53,7	53,6
Other primary income ⁴	573,5	580,4	594,9	305,6	274,8	313,2	281,7
Other transfers received (net) ⁵	- 79,2	- 82,5	- 86,9	- 40,3	- 42,2	- 42,4	- 44,6
Disposable income	1 757,7	1 816,2	1 876,9	901,8	914,4	928,8	948,1
Change in pension entitlements	50,5	51,4	52,4	25,4	26,0	25,9	26,5
Consumption expenditure	1 633,4	1 679,5	1 741,2	819,8	859,7	847,4	893,8
Saving	174,8	188,1	188,1	107,4	80,7	107,3	80,8
Saving ratio (%) ⁶	9,7	10,1	9,7	11,6	8,6	11,2	8,3

b) Change over the same period of the preceding year in %

Mass income	3,7	4,3	3,8	4,9	3,8	3,4	4,3
Net wages and salaries	3,7	3,9	3,7	4,9	3,0	2,7	4,6
Social benefits other than social transfers in kind	3,6	5,1	4,0	4,9	5,4	4,6	3,5
less: Levies on social benefits, taxes on consumption	3,3	4,6	3,7	4,4	4,9	4,3	3,2
Other primary income ⁴	0,7	1,2	2,5	0,7	1,7	2,5	2,5
Disposable income	2,8	3,3	3,3	3,5	3,2	3,0	3,7
Consumption expenditure	2,6	2,8	3,7	2,9	2,8	3,4	4,0
Saving	4,3	7,6	0,0	7,8	7,4	0,0	0,0

National Accounts (cont.)

Forecast period: 2016 to 2017

	2015	2016	2017	2016		2017	
				H1	H2	H1	H2

7. Revenue and expenditure by general government ⁷

a) EUR bn.

Revenue							
Taxes	690,9	710,8	742,1	354,0	356,7	369,6	372,5
Social contributions	501,2	519,0	542,3	252,6	266,4	262,7	279,6
Property income	23,3	23,2	21,7	13,3	9,9	11,8	9,9
Other current transfers	19,0	19,0	19,0	8,9	10,1	8,9	10,1
Capital transfers	11,9	12,1	12,4	5,3	6,8	5,5	6,9
Sales	103,5	106,0	108,1	49,9	56,1	50,9	57,2
Other subsidies	0,2	0,2	0,2	0,1	0,1	0,1	0,1
Total	1 350,0	1 390,3	1 445,8	684,2	706,1	709,5	736,4
Expenditure							
Intermediate consumption ⁸	396,1	420,2	438,5	201,6	218,6	210,7	227,7
Compensation of employees	230,7	238,2	245,0	114,5	123,7	117,8	127,2
Property income (interest)	48,5	45,7	44,5	23,1	22,7	22,5	22,1
Subsidies	26,8	27,5	28,2	13,5	14,0	13,9	14,3
Social benefits	469,3	496,3	518,6	247,2	249,2	259,8	258,8
Other current transfers	65,1	63,3	67,4	36,2	27,1	38,5	28,9
Capital transfers	30,0	34,5	34,0	13,1	21,5	12,9	21,1
Gross capital formation	65,9	67,0	70,4	28,8	38,2	30,3	40,2
Net acquisitions of non-produced non-financial assets	- 2,0	- 1,5	- 5,1	- 0,7	- 0,8	- 2,5	- 2,6
Total	1 330,6	1 391,3	1 441,6	677,2	714,1	703,9	737,7
Net lending	19,4	- 1,0	4,2	7,0	- 7,9	5,6	- 1,3

b) Change over the same period of the preceding year in %

Revenue							
Taxes	4,7	2,9	4,4	3,0	2,8	4,4	4,4
Social contributions	4,0	3,6	4,5	4,0	3,1	4,0	5,0
Property income	- 6,8	- 0,5	- 6,5	- 0,3	- 0,8	- 11,3	0,0
Other current transfers	- 0,5	0,0	0,0	0,0	0,0	0,0	0,0
Capital transfers	- 2,5	2,1	2,2	2,5	1,8	2,6	1,8
Sales	2,0	2,4	2,0	2,4	2,4	2,0	2,0
Other subsidies	- 18,9	0,0	0,0	0,0	0,0	0,0	0,0
Total	3,9	3,0	4,0	3,2	2,8	3,7	4,3
Expenditure							
Intermediate consumption ⁸	4,6	6,1	4,4	6,4	5,8	4,6	4,2
Compensation of employees	2,7	3,3	2,8	3,4	3,1	2,8	2,8
Property income (interest)	- 5,7	- 5,8	- 2,6	- 5,7	- 5,8	- 2,6	- 2,6
Subsidies	5,2	2,5	2,5	2,5	2,5	2,5	2,5
Social benefits	4,1	5,8	4,5	5,5	6,1	5,1	3,9
Other current transfers	5,7	- 2,9	6,6	- 2,5	- 3,3	6,6	6,5
Capital transfers	- 16,4	15,0	- 1,5	9,9	18,4	- 1,3	- 1,7
Gross capital formation	4,2	1,6	5,2	3,1	0,6	5,1	5,3
Net acquisitions of non-produced non-financial assets	46,8	- 25,4	244,9	- 43,1	0,0	272,7	222,2
Total	3,1	4,6	3,6	4,5	4,6	3,9	3,3

¹ Price-adjusted gross domestic product per hour worked.² Incl. non-profit institutions serving households.³ Incl. acquisitions less disposals of valuables.⁴ Operating surplus/mixed income, net property income⁵ Received less paid other current transfers.⁶ Savings in percent of disposable income (incl. change in pension entitlements).⁷ Central, regional, local and social security funds.⁸ Incl. social transfers in kind and other production taxes.Source: Federal Statistical Office, *Fachserie 18: National Accounts*; own calculations.