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Article

Global economy picking up

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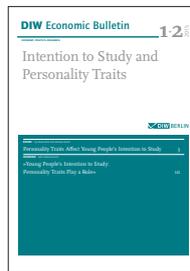
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NEXT ISSUE OF DIW ECONOMIC BULLETIN

Taxes

Global economy picking up

By Ferdinand Fichtner, Guido Baldi, Christian Dreger, Hella Engerer, Stefan Gebauer, Michael Hachula, and Malte Rieth

The world economy is gaining momentum after sluggish growth in the first half 2016 – which was primarily due to a weak expansion in the emerging markets – gave way to a slight acceleration. This trend is likely to continue, and will increasingly benefit the developed economies as well. The brightening labor market situation in advanced countries is leading to a higher level of consumer demand, which will remain a primary growth driver. As a result of the improved sales opportunities, the currently weak corporate investment activity should pick up again. The growth of global economic output is expected to amount to 3.3 percent this year, and is expected to be slightly higher in the coming two years. This development will be supported by fiscal policy, while monetary policy is likely to become more contractionary globally in the course of further U.S. interest rate hikes. There remain significant risks, however – especially in Europe, where political uncertainty is high due to the Brexit decision and the upcoming elections in key EU member states, among other factors.

After a weak first half of the year, global production accelerated markedly in the third quarter, particularly due to growth in the developed economies (figure: growth rates over time). Over the course of the forecast period, the expansion is likely to continue at its current pace, with U.S. economic growth especially strong. Although various political uncertainties are weighing on output in Europe, the euro area's recent economic growth rates are likely to persist. Production in Brazil and Russia will not decline any further, while in China, growth is expected to be slightly lower than it has been in recent quarters. Overall, the rise in global economic output is expected to amount to 3.3 percent this year, which is slightly higher than predicted in the fall forecast. In both of the coming years, the growth rate is expected to increase slightly (table).

After the global economy experienced weak growth in the winter of 2015–2016 due to a lower level of economic development in the emerging countries, a slight acceleration began in the second quarter, continuing into the third quarter and benefitting the developed economies. Given the improving labor market situation in these countries, consumer demand remains high and will continue to be one of the primary growth drivers. Due to rising global inflation and more favorable sales opportunities, the currently weak corporate investment activity is expected to pick up momentum.

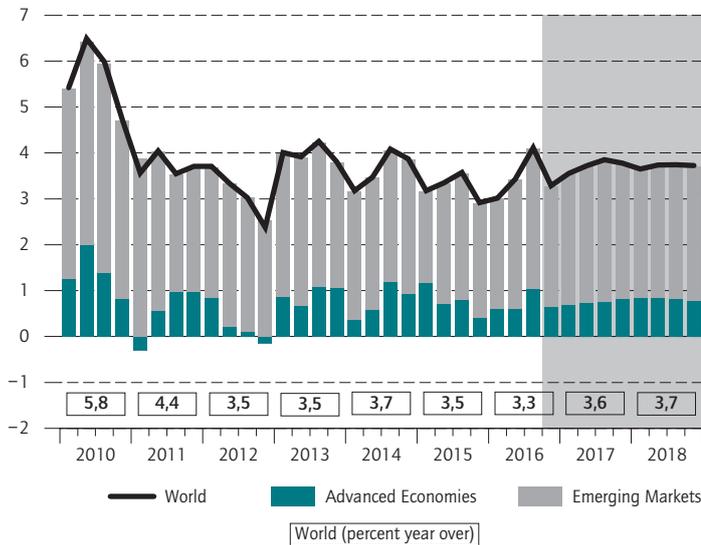
Growth rates in the emerging countries are likely to remain stable despite some destabilizing country-specific developments. For example, the Chinese economy's stronger domestic orientation and reduction in government support will be reflected in slightly lower growth rates in Southeast Asia. On the other hand, Brazil is likely to come out of recession as political uncertainty diminishes, and a slight economic recovery is expected for Russia, partly due to a more stable price of oil.

Global monetary policy is expected to be less expansionary, mostly because the economic situation in the U.S. has improved. During the forecast period, the Federal Reserve System will moderately increase interest rates against the backdrop of ongoing labor market recovery and rising in-

Figure 1

World real GDP growth

In percent



Source: National statistical offices; DIW winter projections 2016.

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The world economy increases the rate of expansion.

flation rates. Rising U.S. interest rates will also lead to a more restrictive monetary policy in the emerging countries. In contrast the central banks in Europe and Japan continue with their expansionary measures. Fiscal policy will be somewhat more expansive than it has been recently. Although China is cutting back on its economic stimulus programs, new measures are expected elsewhere – such as in the U.S., with its change in government.

There are a number of risks to the global economy. In Europe, political uncertainty remains high as a result of the Brexit decision, upcoming parliamentary elections in key member states, structural problems in the Italian banking sector, and a general tendency toward political disintegration. Furthermore, the new U.S. government may pose a risk to world trade through possible protectionist measures, and thus to the global expansion.

United States

U.S. GDP grew strongly in the third quarter: by an annualized 3.2 percent. Private consumer demand experienced a sharp increase as it did in the previous quarters, while corporate investment continued to stagnate. In addition, exports grew more rapidly than did imports

Table

Real GDP, consumer price inflation, and unemployment rates in the world economy

In percent

| | Gross Domestic Product | | | | Consumer Prices | | | | Unemployment Rate | | | |
|-----------------------|---------------------------|------|------|------|-----------------|------|------|------|-------------------|------|------|------|
| | Change over previous year | | | | | | | | | | | |
| | 2015 | 2016 | 2017 | 2018 | 2015 | 2016 | 2017 | 2018 | 2015 | 2016 | 2017 | 2018 |
| Euro area | 1.9 | 1.6 | 1.5 | 1.6 | 0.0 | 0.2 | 1.2 | 1.3 | 10.9 | 10.1 | 9.6 | 9.3 |
| without Germany | 2.1 | 1.5 | 1.5 | 1.6 | -0.1 | 0.1 | 1.1 | 1.3 | 13.8 | 12.8 | 12.2 | 11.9 |
| France | 1.2 | 1.2 | 1.3 | 1.5 | 0.1 | 0.2 | 1.2 | 1.4 | 10.4 | 10.1 | 9.8 | 9.7 |
| Italy | 3.2 | 3.2 | 2.2 | 2.1 | -0.5 | -0.4 | 1.2 | 1.4 | 22.1 | 19.6 | 17.9 | 17.0 |
| Spain | 0.6 | 0.8 | 1.0 | 1.2 | 0.1 | 0.1 | 1.0 | 1.0 | 11.9 | 11.4 | 10.9 | 10.9 |
| Netherlands | 2.0 | 1.9 | 1.8 | 1.9 | 0.2 | 0.2 | 1.0 | 1.1 | 6.9 | 6.2 | 6.2 | 6.0 |
| United Kingdom | 2.2 | 2.0 | 1.0 | 1.8 | 0.0 | 0.6 | 2.6 | 2.0 | 5.3 | 5.0 | 5.5 | 5.5 |
| USA | 2.6 | 1.6 | 2.4 | 2.6 | 0.1 | 1.2 | 1.9 | 2.0 | 5.3 | 4.9 | 4.5 | 4.4 |
| Japan | 0.6 | 0.7 | 0.5 | 0.5 | 0.8 | -0.3 | 0.1 | 0.4 | 3.4 | 3.2 | 3.2 | 3.2 |
| South Korea | 2.6 | 2.9 | 2.6 | 2.7 | 0.7 | 0.9 | 2.0 | 2.7 | 3.6 | 3.6 | 3.0 | 3.0 |
| Middle Eastern Europe | 3.7 | 3.0 | 3.4 | 3.5 | -0.4 | -0.3 | 1.1 | 1.6 | 7.3 | 6.3 | 5.8 | 5.4 |
| Turkey | 4.0 | 3.0 | 2.7 | 3.1 | 7.7 | 7.7 | 7.6 | 7.4 | 10.3 | 10.7 | 11.4 | 11.2 |
| Russia | -3.7 | -0.7 | 1.2 | 1.9 | 15.5 | 6.7 | 4.5 | 4.1 | 5.6 | 5.6 | 5.6 | 5.5 |
| China | 6.5 | 6.5 | 6.2 | 5.8 | -0.6 | 0.5 | 2.5 | 4.5 | 4.1 | 4.1 | 4.1 | 4.1 |
| India | 7.4 | 7.3 | 7.0 | 6.9 | 1.0 | 3.3 | 6.0 | 6.1 | | | | |
| Brazil | -3.9 | -3.1 | 0.4 | 1.5 | 9.0 | 8.5 | 5.7 | 5.7 | 8.3 | 11.2 | 12.4 | 10.6 |
| Mexico | 2.6 | 1.9 | 2.2 | 2.3 | 2.7 | 2.7 | 3.3 | 3.2 | 4.4 | 4.2 | 4.8 | 4.8 |
| Advanced Economies | 2.1 | 1.6 | 1.8 | 2.0 | 0.2 | 0.7 | 1.6 | 1.6 | 6.3 | 5.9 | 5.6 | 5.5 |
| Emerging Markets | 4.5 | 4.6 | 5.0 | 5.0 | 2.9 | 3.0 | 3.9 | 4.8 | 5.3 | 5.6 | 5.7 | 5.5 |
| World | 3.5 | 3.3 | 3.6 | 3.7 | 1.7 | 2.0 | 2.9 | 3.5 | 5.8 | 5.7 | 5.7 | 5.5 |

Source: National statistical offices; DIW winter projections 2016.

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as the global economy picked up; as well, a significant share of the strong export growth can be attributed to the exceptionally high soybean exports due to crop failures in South America.

Given the still-robust consumer demand as well as a renewed investment increases, the U.S. economy will expand considerably over the forecast period. The incoming government's fiscal policy is likely to have a stimulating effect in the short term. It is assumed here that tax cuts for households and businesses as well as an increase in infrastructure and defense expenditure will be implemented. The stimulating effect of these measures is expected to start materializing toward the end of 2017. Against this background, the labor market situation will continue to improve, as the unemployment rate has been steadily declining over the past few years and stood at 4.6 percent in November 2016. In the course of these developments, the slight rise in disposable income will intensify over the forecast period, supporting both private consumption and housing construction. In view of steady economic improvement and a somewhat higher inflation rate, the U.S. central bank is expected to raise its key interest rates in stages. All in all, the U.S. economy is expected to grow by 1.6 percent in 2016, 2.4 percent in 2017, and 2.6 percent in 2018.

China

Production in China rose by two percent in the third quarter, a development driven primarily by consumer demand as households' consumption expenditure increased to a slightly above-average level. Despite existing overcapacities in many industrial sectors, investment has picked up somewhat – but this can also be traced back to the higher expenditure on infrastructure programs and the growing demand for real estate.

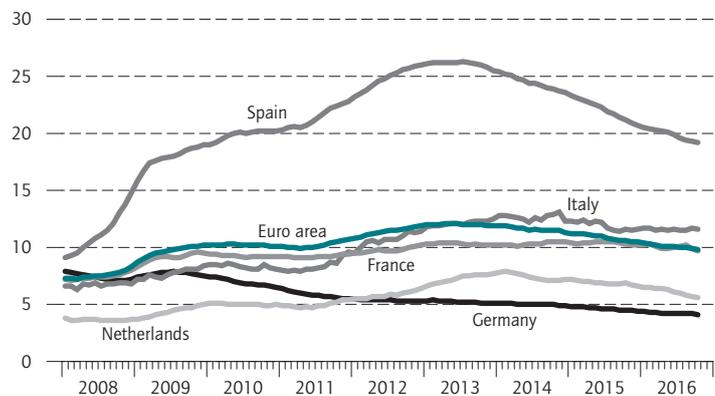
Early indicators suggest robust economic development, albeit with slightly lower growth rates than before. For example, purchasing managers' surveys for the manufacturing industry indicate an increase in business activity. While firms active in the domestic market are more likely to have a positive outlook and act accordingly, export businesses are likely to behave a bit more conservatively. The purchasing managers' indexes in the service sector remain well above the expansion threshold.

As the economy becomes more robust, industrialized countries should experience stable export growth later on in the forecast period. Investment growth will be hindered by the existing overcapacities, however. Finally, consumer spending will be boosted by significant wage growth. All in all, production will expand by 6.1 percent and 5.8 percent in 2017 and 2018, respectively, compared to 6.5 percent in the current year.

Figure 2

Comparison of unemployment rates in the euro area

In percent



Source: Eurostat.

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Euro-area unemployment rates are experiencing only a mild decline.

Euro area

Euro-area GDP rose by 0.3 percent in the third quarter, thus maintaining its moderate growth rate. An important contributor to this year's economic recovery was private consumption, which benefited from an increase in real disposable income due to low energy prices and steady employment growth. Although it is likely to remain an important growth driver over the forecast period, it will not become more dynamic. The decline in unemployment in many member states has recently been slow (Figure 2) and employment growth failed to pick up significant momentum. With moderate wage increases, slightly rising energy prices should also hinder households' purchasing power gains.

Despite the fact that financing conditions are favorable and capacity utilization is moving towards its pre-crisis level, investment is likely to exhibit only little growth in the coming quarters. This is primarily due to continuing corporate deleveraging in some of the member states as well as a high level of political uncertainty, largely emerging from the uncertain outlook of the Brexit negotiations but also due to the upcoming 2017 elections in key member states and the outcome of the constitutional referendum in Italy.¹

¹ In this forecast, it is assumed that the core political and fiscal conditions for Italy will not change under the transitional government or an entirely new government.

Exports are also likely to lose momentum in the coming year, partially due to the decline in demand for goods and services from the UK. Export growth rates are expected to pick up again later on in the forecast period, however, as the global economy continues to recover. At the same time, imports are likely to develop more robustly than exports, due to domestic demand; later, both exports and imports will develop at a similar rate.

Inflation became positive over the past few months and will continue to increase over the course of the forecast period, as it is assumed that energy prices will maintain their slightly upward trend. Inflation rates are nevertheless likely to remain below the ECB target until at least the end of 2018, since the output gap is closing only slowly and the reduction of unemployment is experiencing only a gradual reduction. Monetary policy is thus expected to remain expansionary. In this regard, the European Central Bank announced the extension of its asset purchase program until at least December 2017. In contrast, fiscal policy was more or less neutral this year – and this is expected to remain the case during the forecast period.

Overall, the GDP is expected to grow by 1.6 percent this year, 1.5 next year, and 1.6 in 2018.

United Kingdom

The UK's GDP rose unexpectedly strong by 0.5 percent in the third quarter, the first quarter after the Brexit referendum on June 23. As in previous quarters, private consumption served as a major economic stimulus, which was particularly reflected in an expansion in the service sector. While exports grew moderately, a drop in im-

ports led to a rise in the trade balance.² Weaker imports were likely caused by the sharp depreciation of the British pound that immediately followed the Brexit referendum. The import of intermediate products is likely to have been affected, as the decline in industrial production indicates.

During the forecast period, the depreciation of the British pound should lead to a marked increase in consumer prices, which would in turn slow down the growth of private consumption in the coming quarters. This is suggested by a persistent decline in consumer confidence that has been taking place since September. The weak private demand will likely have a negative impact on investment activity, which was expected to decline anyway in the coming quarters as a result of persisting Brexit negotiation-related uncertainty. Due to the low level of investment and the weak external value of the pound, imports should decline even more in the coming quarters, recovering only later on in the forecast period. This assumes that in the coming quarters, Brexit negotiations will conclude without UK-EU economic relations being severely restricted.

While the UK economy is expected to grow by 2.0 percent this year, growth in 2017 is expected to amount to only 1.0 percent. In 2018, when political uncertainties have tapered off somewhat, GDP is likely to pick up again, with a growth rate of 1.8 percent.

² In a press release from December 6, 2016, the Office for National Statistics announced that the trade data for the third quarter requires a revision, and this will adversely effect the balance of trade.

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Despite weaker job market, Germany's economic upswing continues

By Ferdinand Fichtner, Karl Brenke, Marius Clemens, Simon Junker, Claus Michelsen, Maximilian Podstawski, Thore Schlaak, and Kristina van Deuverden

In spite of persisting unfavorable external economic conditions, the German economy's upward trend continues, with a growth of 1.2 percent expected for the coming year – slightly less than the 1.8 percent growth rate of 2016, a difference primarily due to the fact that 2017 has fewer workdays. A growth rate of 1.6 percent is expected for 2018. Although employment growth has slowed down somewhat since this past summer, private consumption remains the German economy's primary growth driver – but given the higher inflation, this dynamic will lose momentum in the course of the coming quarters. Exports are picking up in the moderately recovering global economy, and this will be even more noticeable later on in the forecast period. Though investment activity will be somewhat stimulated by the improvement in foreign demand, it will remain rather modest.

The German economy's upward trend persists, with current economic activity slightly exceeding the efficient production capacities. Recently, however, the economic momentum has slowed down (table 1) and is expected to increase only slightly through the end of the year. Growth is expected to amount to 1.8 percent in 2016 and 1.2 percent in 2017 – a discrepancy that is primarily due to the fact that there will be fewer working days next year (table 2). The 2017 growth rate will thus be slightly higher than predicted in the fall forecast, in part because the dampening effects of the Brexit vote appear to be less noticeable, according to current indicators. A growth rate of 1.6 percent is expected for 2018.

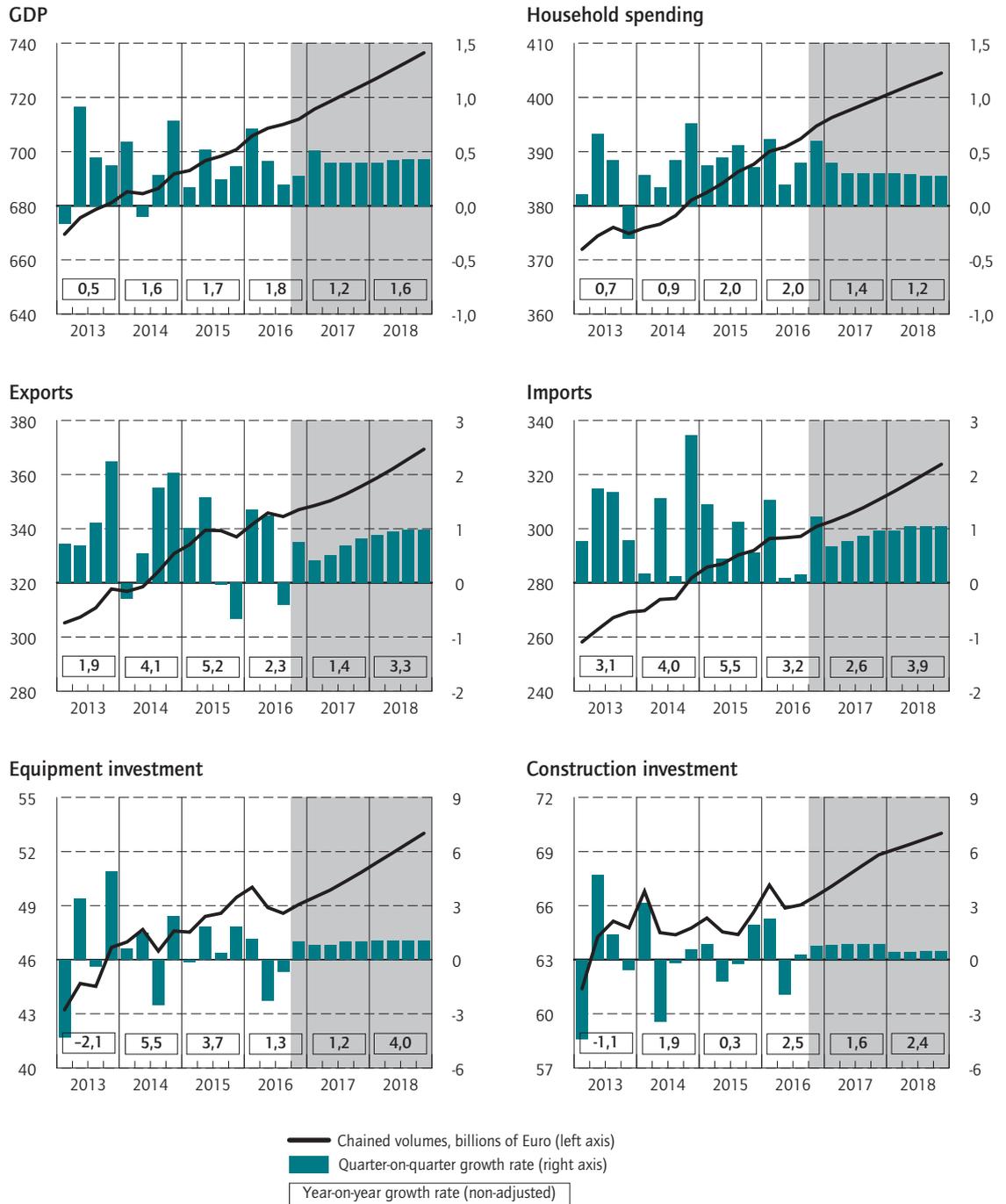
Private consumption will remain the primary growth driver during the forecast period, though it is likely to lose some momentum in the long run (figure 1). Employment growth continues, though it has plateaued somewhat since the summer, and its development over the forecast period is expected to be slower than in previous years. Because the labor force growth is declining as a result of shifting demographics, wages are experiencing sharper increases. The unemployment rate is expected to fall from 6.1 percent this year to 5.9 percent in 2017 and 5.8 percent in 2018. Real income development will be dampened by higher inflation; in fact, inflation is expected to be one percentage point higher – amounting to roughly 1.5 percent – in the next two years than in this year.

Imports should continue to rise, picking up again in the second half of 2017 as a result of rising exports. Imports are consistently developing more dynamically than exports, mainly due to the marked growth in consumption. These are likely to rise only slightly at first, as the weaker foreign demand resulting from the Brexit vote is having a temporary dampening effect. From the middle of 2017 onward, however, exports should benefit from the recovery in the global economy. The current account is likely to conclude 2016 with a surplus of nine percent in relation to the GDP; however, this is also partly due to the substantial drop in this year's oil prices compared

Figure 1

GDP and use of GDP

Adjusted for seasonal factors and working days



Sources: Federal Statistical Office; computations by DIW Berlin, forecasts as of Q4 2016.

Table 1

Constituents of GDP, quarter-on-quarter growth rates

Price, seasonally and working-day adjusted, in percent

| | 2016 | | | | 2017 | | | | 2018 | | | |
|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | I | II | III | IV | I | II | III | IV | I | II | III | IV |
| Private consumption | 0.6 | 0.2 | 0.4 | 0.6 | 0.4 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| Public consumption | 1.1 | 1.2 | 1.0 | -0.5 | 1.2 | 0.9 | 0.5 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 |
| Gross fixed capital formation | 1.6 | -1.6 | 0.0 | 0.8 | 0.8 | 0.8 | 0.9 | 0.8 | 0.7 | 0.7 | 0.7 | 0.7 |
| Investment in machinery and equipment | 1.1 | -2.3 | -0.6 | 1.0 | 0.8 | 0.8 | 1.0 | 1.0 | 1.1 | 1.1 | 1.1 | 1.1 |
| Construction investment | 2.3 | -1.9 | 0.3 | 0.7 | 0.8 | 0.9 | 0.9 | 0.8 | 0.4 | 0.4 | 0.4 | 0.4 |
| Other investment | 0.9 | 0.7 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 | 0.6 |
| Change in inventories ¹ | -0.2 | -0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Domestic uses | 0.7 | -0.1 | 0.5 | 0.4 | 0.6 | 0.5 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |
| Net Exports ¹ | 0.0 | 0.5 | -0.3 | -0.1 | -0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Exports | 1.4 | 1.2 | -0.4 | 0.8 | 0.4 | 0.5 | 0.7 | 0.8 | 0.9 | 0.9 | 1.0 | 1.0 |
| Imports | 1.5 | 0.1 | 0.2 | 1.2 | 0.7 | 0.8 | 0.9 | 1.0 | 1.0 | 1.0 | 1.1 | 1.1 |
| Gross Domestic Product | 0.7 | 0.4 | 0.2 | 0.3 | 0.5 | 0.4 |

¹ Use of GDP growth in percentage points.

Source: Federal Statistical Office; DIW Berlin, Forecast from 2016 Q4 onward.

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Table 2

Key economic indicators for the German economy

| | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|--------|--------|--------|--------|--------|--------|
| Real GDP ¹ (percent change over previous year) | 0.5 | 1.6 | 1.7 | 1.8 | 1.2 | 1.6 |
| Domestic employment (1,000 persons) | 42,328 | 42,662 | 43,057 | 43,497 | 43,740 | 44,016 |
| Unemployed (ILO concept) | 2,182 | 2,092 | 1,949 | 1,797 | 1,728 | 1,655 |
| Unemployed (BA concept) | 2,950 | 2,898 | 2,795 | 2,691 | 2,618 | 2,566 |
| Unemployment rate ² (ILO concept) | 5.2 | 5.0 | 4.6 | 4.2 | 4.0 | 3.8 |
| Unemployment rate ² (BA concept) | 6.9 | 6.7 | 6.4 | 6.1 | 5.9 | 5.8 |
| Consumer prices | 1.5 | 0.9 | 0.2 | 0.5 | 1.4 | 1.5 |
| Unit labor costs ³ | 1.8 | 1.7 | 1.5 | 1.4 | 1.7 | 1.7 |
| Government budget balance ⁴ | | | | | | |
| in billion EUR | -5.7 | 8.9 | 22.6 | 26.0 | 4.1 | -1.2 |
| in percent of GDP | -0.2 | 0.3 | 0.7 | 0.8 | 0.1 | 0.0 |
| Current account balance, in percent of GDP | 6.7 | 7.3 | 8.3 | 9.0 | 8.5 | 8.4 |

¹ Price-adjusted, chain-linked.² As a share of domestic labor force (ILO), resp. Civilian labor force (BA).³ Compensation of employees (national concept) per hour worked over real GDP.⁴ According to ESA 2010.

Sources: National and international institutions; computations by DIW Berlin; 2016–2018: DIW forecast.

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to last year's average (table 3). Over the next two years, the current account surplus is likely to be roughly half a percentage point lower.

Although business investment has been down throughout the second half of 2016, an upward trend is expected to materialize as a result of the rising exports and increasing capacity utilization in the manufacturing sector. Since the international environment will initially remain characterized by high uncertainty, business investment should experience only modest growth at first

and will only pick up somewhat later on in the forecast period, as the global economy recovers. Unlike business investment, the housing sector continues to show significant growth.

Overall, the German economy continues to develop more or less on its potential path. According to the methods used here, the potential will experience an annual average growth of 1.5 percent per year until 2025, despite the fact that the labor force is likely to shrink in the medium term due to Germany's aging population.

Public budgets will conclude 2016 with a surplus of 26 billion euros, but in 2017, the surplus will decrease significantly. This drop will be due to – among other special factors – the somewhat more subdued employment development that has been taking place since this past summer. In 2018, the public budget is actually expected to show a slight deficit as a result of financial developments in social security systems.¹

There are a number of risks for the forecast period. Political uncertainty remains high in Europe, partly as a result of the Brexit decision, upcoming parliamentary elections in major EU countries, structural challenges in the banking sector – especially in Italy – and a general tendency toward political disintegration. Furthermore, the new U.S. government may pose a risk to world trade through possible protectionist measures, which can have a particularly negative impact on Germany's open economy.

Consumer prices on the rise once again

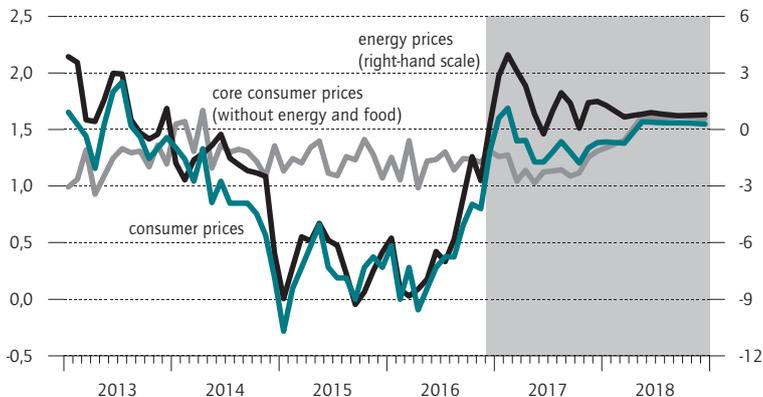
Consumer prices will increase only slightly more than before. Up to now, energy prices have been the primary determinant of the inflation rate: in the current and coming quarters, the high inflation rate is mostly a result of the fact that prices in the winter of 2015–2016 were very low. Added to this is the increase in the Renewable Ener-

¹ Kristina van Deuverden, "Öffentliche Finanzen bis 2025: Nur auf den ersten Blick günstig," DIW Wochenbericht 50 (2016).

Figure 2

Consumer price inflation

Percentage change over previous year



Sources: Destatis; DIW Berlin.

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Consumer prices are rising again.

Table 3

Assumptions underlying this forecast

| | | 2016 | 2017 | 2018 |
|-------------------------|---|------|------|------|
| ECB policy rate | Percent | 0.0 | 0.0 | 0.0 |
| Money market rate | three month EURIBOR in percent | -0.3 | -0.2 | -0.1 |
| Long-term interest rate | 10 year government bond yields, euro area | 0.7 | 1.0 | 1.1 |
| Long-term interest rate | 10 year government bond yields, Germany | 0.1 | 0.4 | 0.7 |
| Exchange rate | US-Dollar/Euro | 1.11 | 1.10 | 1.10 |
| Negotiated wages | Percent changes over previous year | 2.1 | 2.4 | 2.8 |
| Oil price | US-Dollar/Barrel | 44.4 | 47.6 | 49.5 |
| Oil price | Euro/Barrel | 39.9 | 43.4 | 45.2 |

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gy Sources Act (Erneuerbare-Energien-Gesetz, EEG) relocation charge that will be implemented at the beginning of 2017. In the subsequent quarters, energy price increases will be somewhat lower. On the annual average, energy prices will rise by 1.7 percent in the coming year and by 0.8 percent in the following year, after dropping by an expected 5.6 percent this year.

Despite the favorable economic environment, core inflation in the coming year is expected to amount to 1.2 percent – and thus slightly below the long-term average, since businesses are belatedly passing on to households the energy cost savings resulting from the long period of low energy prices that ended in spring 2016. In 2018, core inflation is expected to increase to 1.5 percent in the context of strong wage growth.

After a rate of 0.5 percent this year, inflation is expected to reach 1.4 percent in the coming year and 1.5 percent in the following year (figure 2).

Employment growth is losing momentum ...

Since this past summer, employment growth has slowed down somewhat. The potential labor force is also growing at a slower pace, not least due to the fact that Germany's migration gains are weakening in the population exchange with other EU countries. At the same time, more and more migrants related to last year's substantial asylum-seeker influx – which began to subside by the beginning of this year – are being granted asylum and thus obtaining residence and work permits and becoming increasingly active on the labor market. The number of registered unemployed has barely decreased – and without the expansion of labor market policy measures, it would have actually grown.

The moderate employment growth will continue in 2017. It is also becoming clear that as fewer refugees arrive, certain types of work in the social and education sectors will no longer be necessary. From fall 2017 onward, the number of employed persons is expected to increase somewhat more strongly as a result of heightened external demand. Employment growth is being accompanied by a more dynamic development of productivity, since industry is once again picking up some momentum.

Employment subject to social security contributions will continue to grow, while the number of self-employed workers will decline – albeit to a lesser extent. Mini-jobs have lost their attractiveness due to the introduction of the statutory minimum wage. Workers who would have otherwise taken on mini-jobs instead seek out other forms of work – which benefits social security-obligated employment overall.

Immigration has led to an expansion of the working-age population and thus a widening of the potential labor force. An increasing number of newcomers of working age will probably take part in labor market programs,² however, which is why the number of officially registered unemployed persons will decline somewhat in both 2017 and 2018.

Wages have recently regained powerful momentum – a consequence of already agreed-on wage increases, particularly in large sections of the industrial sector. This one-time effect is now becoming less significant. Furthermore, the impending increase in the statutory minimum wage will not lead to an overall increase in wages. Currently, the existing tariff agreements do not indicate an acceleration in wage increases – but given the favorable employment development, dependent employees' bargaining positions are likely to improve even more, with the result that the rate of wage increases will pick up from next spring onward. In addition, non-tariff wages are experiencing a powerful increase. Since working hours per employee are decreasing – due to calendar effects, as well – hourly wages will increase faster in 2017 and 2018 than the wages of each employee.

... and so is private consumption

Private consumption grew noticeably in recent quarters, primarily due to the intermittent increases in purchasing power resulting from the drop in energy prices. In mid-2016, the strong pension increases boosted household income; this is expected to fuel consumption in the current quarter as well. In the final quarter of 2016,

public consumption will decline as expenses related to the refugee influx subside, with monetary transfers now going straight to the migrants themselves, as many of them have since been granted asylum; this should stimulate private consumption throughout the winter half of the year. Such a scenario is also reflected in the persistent positive outlook among service providers, October's high retail turnover, and positive consumer sentiment. In the long run, however, private household consumption is likely to weaken: not only has employment growth lost momentum, but the rise in prices has and will continue to put a strain on households' purchasing power.

Wages will continue to develop dynamically between 2016 and 2018, although the weaker employment development will dampen their growth in the next two years. From 2018 onward, this will be counteracted by the somewhat higher wages resulting from increased scarcity in the labor market. Net wages are also increasing substantially overall, though slightly less dynamically than gross wages: wage taxes and social contributions are rising noticeably, above all with the increase in the cumulative social insurance contribution rate having a negative impact. Monetary social benefits will continue to expand noticeably; this is also due to the increase in additional transfers being given to recognized refugees. The increase in social benefits will be considerable in 2017, with another significant pension raise planned for the middle of the year – but the main contributor will be this year's pension increase, which will affect the comparison in the first half of 2017. All in all, private households' nominal disposable income will increase steadily over the three years of the forecast period, by roughly 2.5 percent annually. However, due to a higher inflation rate in the next two years – which is likely to grow from half a percent this year to one and a half percent each year – private consumption will experience a lower level of growth.

Investment in equipment remains subdued

After a strong start to 2016, investment in equipment and machinery was down in the summer half of the year, with both the public and private sectors buying fewer new machines, equipment, and vehicles. Corporate investment is also expected to have been temporarily impaired by the uncertainty surrounding the Brexit referendum and the temporarily gloomy global development prospects.

In the current and coming quarters, the continued moderate underlying dynamic will cause investment activity to pick up momentum, a situation that is indicated by the high level of domestic sales and orders received by producers of capital goods. In the final quarter of 2016, this will be due primarily to increased motor vehicle sales. Currently, there is little evidence of expansion investment

² Individuals taking part in labor market education and training, for example, are temporarily unavailable to the labor market and thus not counted as part of the potential labor force.

Table 4

Investment in construction

Constant prices, percentage changes

| | 2015 | 2014 | 2015 | 2016 | 2017 | 2018 |
|------------------------------|--------|----------------------|------|------|------|------|
| | Shares | Year-on-year changes | | | | |
| Residential construction | 60.4 | 2.9 | 1.5 | 3.6 | 2.2 | 3.1 |
| Non-residential construction | 39.6 | 0.4 | -1.4 | 0.6 | 0.6 | 1.2 |
| Commercial construction | 28.0 | -0.4 | -1.8 | -0.8 | -0.9 | 2.2 |
| Public construction | 11.61 | 2.4 | -0.4 | 4.0 | 4.1 | -1.1 |
| Total construction | 100.0 | 1.9 | 0.3 | 2.5 | 1.6 | 2.4 |

Sources: Federal Statistical Office; DIW Berlin.

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Residential construction drives the building sector.

in machinery and equipment: according to the order-capacity-index, there is still only a slight order backlog. According to the Ifo Business Survey, manufacturing capacities are being utilized only slightly more heavily than the long-term average. The more favorable export prospects, however, indicate a slight increase in investment; rising exports will expand capacity utilization and spur additional investment. In addition, corporate financing conditions are still quite favorable despite the slight increase in interest rates that recently took place; political uncertainty continues to have a negative impact, however.

Housing construction remains driving force in construction sector

After the major weather-related increase in building construction in the winter of 2015–2016, the construction industry lost significant momentum over the summer, with only residential construction retaining the dynamic. Housing construction companies' expectations and assessments are extremely positive, given the well-filled order books and increase in the order dynamic. Basic conditions also remain favorable. Residential property demand remains high – especially in large cities – as a result of the robust labor market and income prospects as well as the influx of immigrants. The slight increase in mortgage rates is actually expected to serve as a stimulus in the short term, leading to a faster implementation of the high number of recently approved construction projects. As a result, housing construction activity will experience powerful expansion in the coming year. In 2018, a lower availability of capacities – among other factors – will contribute to a slight slowdown.

On the other hand, the growth in commercial building construction is likely to remain subdued, increasing only gradually – this is suggested by the fact that the construction project approval process is stalling and there has been a decline in new orders. In construction compa-

nies as well, the business outlook is somewhat less positive than it was just a few months ago. At the same time, business expectations reflect an upward trend and suggest that construction activity will become more dynamic later on in the forecast period. This will also be supported by additional funding from the broadband network expansion program.

In contrast, impulses in public construction have gotten stronger in recent months – and in the current quarter as well, the full order books suggest that a sharp and renewed increase in construction spending is underway. Furthermore, considerably more fiscal resources will be available for new construction projects in the coming year, with expansion in construction activity likely to continue. This is due to both the improving cash flow situation as well as the provision of additional funds for promoting municipal investments. In 2018, however, it will probably no longer be possible to maintain this level (table 4).

Weaker foreign trade, initially

After a sharp increase in the first half of the year, exports declined slightly in the third quarter of 2016. This was primarily due to a lower demand for capital goods, which account for roughly half of all German goods exports. At the same time, exports to countries in the euro

Figure 3

Short-term foreign trade indicatorsOrders from abroad/from the euro area: Index 2010=100
Ifo export expectations/order books: net total

Source: Datastream; calculations of DIW Berlin.

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Orders from abroad have shown a clear upwards trend lately, while the Ifo export expectations fell in the past month.

area and Europe's non-EU countries increased, while deliveries to the remaining foreign markets – including, once again, the U.S. – declined. The export figures from October, along with the recent and significant upward trend in incoming orders from abroad (figure 3), suggest a rise in exports for the final quarter. Overall, however, the upward trend will initially be subdued, precisely because demand from Europe is likely to remain modest until mid-2017 due to the Brexit decision as well as political uncertainty in other EU countries. This is also suggested by the recent drop in the Ifo export expectations. Exports are then expected to pick up slowly again in accordance with foreign demand (figure 4) and grow at roughly the same pace in 2018.

Imports stagnated in the third quarter of 2016: services imports, especially those related to transport and insurance benefits, declined significantly. However, this was easily balanced out by the increase in imported goods: the demand for motor vehicles and parts as well as energy products were robust, while the weak export development stifled the growth of intermediate goods imports. In the fourth quarter, import growth is expected to pick up significant momentum, since the considerable expansion of private consumption is persisting and equipment investment is likely to increase again. In 2017 and 2018, imports are expected to develop more similarly to exports, albeit with a slightly higher expansion rate, partly because of the revitalization of equipment investment. All in all, foreign trade will dampen economic growth by almost two-tenths of a percentage point in 2016 and three-tenths of a percentage point in 2017. In 2018, it will make no contribution to economic growth.

Foreign trade prices rose in the third quarter for the first time in over a year, with increases in commodity prices – especially those of oil and gas, but also steel, among others – the primary contributor to this development. The increase in the price of intermediate goods was accompanied by a rise in export prices, and this development

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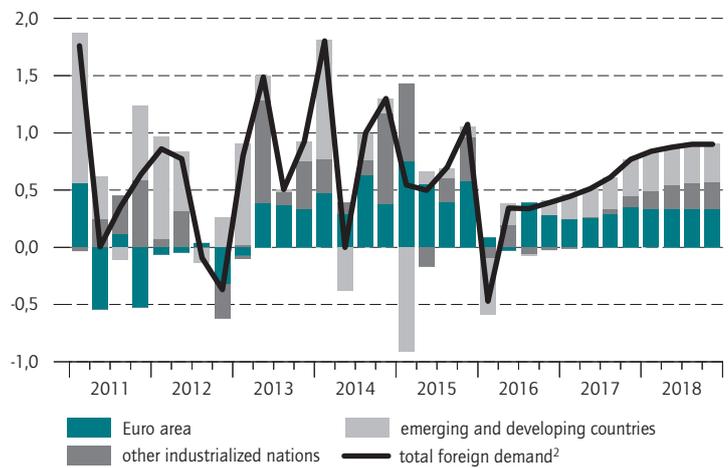
JEL: E32, E66, F01

Keywords: Business cycle forecast, economic outlook

Figure 4

Foreign demand¹

Contribution of various region of the world to growth



¹ Imports of the trade partners, weighted for exports.

² Change on previous quarter, in percent.

Source: Datastream; calculations of DIW Berlin.

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The Brexit decision is weighing on foreign demand until end-2017.

is expected to continue in the short term. Since both export and import prices have similar dynamics, the terms of trade should change only slightly. Although they are likely to rise substantially in 2016 – by 1.6 percent – this is mostly due to the strong gains at the beginning of the year; in 2017 and 2018, they should remain virtually unchanged. This year's noticeable terms-of-trade profit is contributing to the fact that the current account balance should increase to nine percent in relation to the GDP. In both of the coming years it will be only slightly lower – by just half a percentage point.

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SEVEN QUESTIONS TO FERDINAND FICHTNER

»Private consumption remains the main driver«

1. Mr. Fichtner, the German economy's growth rates have been quite favorable lately. What will next year look like? For 2017, we're expecting a marked slowdown in the growth rate for Germany. However, this is mostly due to a statistical effect: 2017 will have fewer workdays (and thus lower growth) due to the fact that more holidays will fall on weekdays than in 2016. On top of that, we are dealing with tremendous political and economic uncertainty.
2. What kind of growth rates are you expecting? We predict that the GDP will grow by around 1.8 percent in the current year and 1.2 percent next year. In 2018, the economy will pick up speed again with a growth rate of 1.6 percent.
3. Will private consumption continue to drive Germany's economic growth? Indeed, private consumption is the main driver for economic growth. It's stimulated by a favorable situation on the labor market and the fact that wages are increasing at a solid pace, which means that everyone's wallets are nice and full. This, coupled with solid export growth, will drive the economy in 2017.
4. What will consumer prices look like? Consumer prices should pick up significantly. The main reason is that the decline in energy prices will come to an end, so there won't be any more pressure on prices from that side. The inflation rate will pick up – from an average of 0.5 this year to 1.4 percent next year – primarily because energy prices are no longer declining. It is worth mentioning that the figure of 1.4 percent is an annual average, and thus hides the fact that inflation will increase substantially in the first half of 2017 – at some points, to nearly two percent – while it will be lower in the second half.
5. How are exports doing? Overall, the global environment is not bad for German exports. World economic growth is not spectacular, but the global economy is advancing at a consistent pace in the industrialized nations as well as the emerging countries. German exports will profit from this, even if they won't increase at the same pace as they did in previous years.
6. Will the improvement in exports lead to an increase in investment? We expect that the positive developments on the export front will increasingly spur investment. The financing conditions – especially the very low interest rates – remain extremely favorable for investors. Nevertheless, the investment dynamic is more subdued than it has been in previous phases of economic growth. The political uncertainty in the wake of the Brexit vote, the recent U.S. elections, and the latent crisis in the euro area are all at play here.
7. Will the election of Donald Trump as the next U.S. president have an impact on the economy? In the short term, the effects might actually be positive, because Trump has promised to implement an expansive fiscal policy with increased spending in infrastructure, among other things. As for the long-term prognosis, we did not factor the possible negative consequences of restricted trade relations into this forecast because the implementation of any such protectionist measures will take a long time.

Interview by Erich Wittenberg

NATIONAL ACCOUNTS DATA

The main national accounts data for the Federal Republic of Germany

Forecast for 2016 until 2018

| | 2016 | 2017 | 2018 | 2016 | | 2017 | | 2018 | |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | 1. half year | 2. half year | 1. half year | 2. half year | 1. half year | 2. half year |
| 1. Origin of GDP | | | | | | | | | |
| Percentage change over previous year | | | | | | | | | |
| Percentage change over previous year | 1.0 | 0.6 | 0.6 | 1.2 | 0.8 | 0.5 | 0.6 | 0.6 | 0.7 |
| Hours worked, per working day | -0.8 | 0.8 | 0.1 | -1.5 | 0.0 | -0.1 | 1.7 | -0.4 | 0.6 |
| Working days | 0.4 | -1.2 | -0.3 | 1.6 | -0.8 | 0.0 | -2.3 | -0.5 | -0.1 |
| Labour volume, calendar-monthly | 0.6 | 0.2 | 0.5 | 1.3 | 0.0 | 0.5 | -0.1 | -0.3 | 1.2 |
| Labour productivity ¹ | 1.1 | 1.0 | 1.2 | 0.9 | 1.3 | 0.9 | 1.2 | 1.7 | 0.6 |
| Gross domestic product, price adjusted | 1.8 | 1.2 | 1.6 | 2.3 | 1.3 | 1.3 | 1.1 | 1.5 | 1.8 |
| 2. Disposition of GDP in current prices | | | | | | | | | |
| a) Billion Euro | | | | | | | | | |
| Final consumption expenditure | 2,293.1 | 2,365.4 | 2,430.9 | 1,118.8 | 1,174.3 | 1,154.6 | 1,210.8 | 1,185.8 | 1,245.1 |
| Private consumption expenditure ² | 1,677.7 | 1,721.9 | 1,764.8 | 819.6 | 858.0 | 841.9 | 880.0 | 862.0 | 902.8 |
| Government consumption expenditure | 615.4 | 643.5 | 666.1 | 299.2 | 316.3 | 312.7 | 330.8 | 323.8 | 342.3 |
| Gross fixed capital formation (GFCF) | 625.3 | 645.7 | 674.6 | 302.8 | 322.5 | 310.9 | 334.8 | 325.2 | 349.4 |
| Machinery and equipment | 204.4 | 207.7 | 216.6 | 98.7 | 105.8 | 99.4 | 108.2 | 103.3 | 113.3 |
| Construction | 307.9 | 320.5 | 335.7 | 149.0 | 158.9 | 154.1 | 166.3 | 162.2 | 173.4 |
| GFCF in other products | 113.0 | 117.5 | 122.3 | 55.1 | 57.9 | 57.3 | 60.2 | 59.7 | 62.7 |
| Change in Stocks ³ | -30.0 | -30.1 | -30.7 | -5.7 | -24.4 | -3.9 | -26.2 | -5.5 | -25.2 |
| Domestic uses | 2,888.3 | 2,981.0 | 3,074.8 | 1,415.9 | 1,472.5 | 1,461.6 | 1,519.4 | 1,505.5 | 1,569.3 |
| Balance of exports and imports | 241.7 | 232.9 | 237.4 | 127.7 | 114.1 | 123.6 | 109.3 | 124.8 | 112.6 |
| Exports | 1,436.0 | 1,468.2 | 1,526.1 | 712.7 | 723.4 | 730.2 | 738.0 | 755.3 | 770.7 |
| Imports | 1,194.3 | 1,235.3 | 1,288.7 | 585.0 | 609.3 | 606.6 | 628.7 | 630.6 | 658.1 |
| Gross domestic product | 3,130.1 | 3,213.9 | 3,312.2 | 1,543.5 | 1,586.6 | 1,585.2 | 1,628.7 | 1,630.3 | 1,681.9 |
| b) Percentage change over previous year | | | | | | | | | |
| Final consumption expenditure | 3.3 | 3.2 | 2.8 | 3.7 | 3.0 | 3.2 | 3.1 | 2.7 | 2.8 |
| Private consumption expenditure [2] | 2.5 | 2.6 | 2.5 | 2.8 | 2.3 | 2.7 | 2.6 | 2.4 | 2.6 |
| Government consumption expenditure | 5.4 | 4.6 | 3.5 | 6.1 | 4.8 | 4.5 | 4.6 | 3.5 | 3.5 |
| Gross fixed capital formation (GFCF) | 3.6 | 3.3 | 4.5 | 5.1 | 2.1 | 2.7 | 3.8 | 4.6 | 4.4 |
| Machinery and equipment | 2.1 | 1.6 | 4.3 | 5.2 | -0.6 | 0.8 | 2.3 | 3.9 | 4.7 |
| Construction | 4.4 | 4.1 | 4.7 | 5.5 | 3.3 | 3.4 | 4.7 | 5.3 | 4.3 |
| GFCF in other products | 4.0 | 4.0 | 4.1 | 3.9 | 4.1 | 4.0 | 4.1 | 4.1 | 4.1 |
| Domestic uses | 3.0 | 3.2 | 3.1 | 3.6 | 2.5 | 3.2 | 3.2 | 3.0 | 3.3 |
| Exports | 1.2 | 2.2 | 3.9 | 1.7 | 0.7 | 2.5 | 2.0 | 3.4 | 4.4 |
| Imports | 0.4 | 3.4 | 4.3 | 0.5 | 0.4 | 3.7 | 3.2 | 4.0 | 4.7 |
| Gross domestic product | 3.2 | 2.7 | 3.1 | 3.9 | 2.5 | 2.7 | 2.7 | 2.8 | 3.3 |
| 3. Disposition of GDP, adjusted for prices | | | | | | | | | |
| a) Chain-linked estimated in billion euro | | | | | | | | | |
| Final consumption expenditure | 2,121.2 | 2,157.6 | 2,187.7 | 1,040.8 | 1,080.4 | 1,059.7 | 1,097.9 | 1,074.6 | 1,113.1 |
| Private consumption expenditure ² | 1,570.4 | 1,591.6 | 1,610.9 | 769.2 | 801.2 | 780.5 | 811.2 | 789.4 | 821.5 |
| Government consumption expenditure | 550.4 | 565.4 | 576.0 | 271.4 | 279.0 | 278.9 | 286.5 | 284.7 | 291.3 |
| Gross fixed capital formation (GFCF) | 566.9 | 576.1 | 592.8 | 274.8 | 292.1 | 277.9 | 298.2 | 286.1 | 306.7 |
| Machinery and equipment | 197.4 | 199.8 | 207.7 | 94.8 | 102.6 | 95.1 | 104.6 | 98.5 | 109.2 |
| Construction | 266.8 | 271.0 | 277.4 | 129.8 | 137.1 | 131.1 | 139.9 | 134.7 | 142.7 |
| GFCF in other products | 103.1 | 105.6 | 108.1 | 50.4 | 52.7 | 51.6 | 53.9 | 52.9 | 55.2 |
| Domestic uses | 2,651.9 | 2,696.8 | 2,743.4 | 1,310.5 | 1,341.4 | 1,332.9 | 1,363.9 | 1,354.7 | 1,388.7 |
| Exports | 1,384.3 | 1,403.9 | 1,450.5 | 687.9 | 696.5 | 699.4 | 704.5 | 719.3 | 731.2 |
| Imports | 1,193.8 | 1,224.4 | 1,271.5 | 586.9 | 606.9 | 602.3 | 622.1 | 623.4 | 648.1 |
| Gross domestic product | 2,841.6 | 2,876.6 | 2,923.7 | 1,410.8 | 1,430.8 | 1,429.6 | 1,447.0 | 1,450.6 | 1,473.1 |
| b) Percentage change over previous year | | | | | | | | | |
| Final consumption expenditure | 2.5 | 1.7 | 1.4 | 2.8 | 2.1 | 1.8 | 1.6 | 1.4 | 1.4 |
| Private consumption expenditure ² | 2.0 | 1.4 | 1.2 | 2.3 | 1.6 | 1.5 | 1.2 | 1.1 | 1.3 |
| Government consumption expenditure | 3.9 | 2.7 | 1.9 | 4.3 | 3.6 | 2.8 | 2.7 | 2.1 | 1.7 |
| Gross fixed capital formation (GFCF) | 2.1 | 1.6 | 2.9 | 3.7 | 0.7 | 1.1 | 2.1 | 2.9 | 2.8 |
| Machinery and equipment | 1.3 | 1.2 | 4.0 | 4.2 | -1.2 | 0.4 | 2.0 | 3.6 | 4.4 |
| Construction | 2.5 | 1.6 | 2.4 | 3.8 | 1.3 | 1.1 | 2.0 | 2.7 | 2.0 |
| GFCF in other products | 2.7 | 2.5 | 2.4 | 2.6 | 2.7 | 2.5 | 2.4 | 2.4 | 2.4 |
| Domestic uses | 2.1 | 1.7 | 1.7 | 2.7 | 1.5 | 1.7 | 1.7 | 1.6 | 1.8 |
| Exports | 2.3 | 1.4 | 3.3 | 3.0 | 1.7 | 1.7 | 1.2 | 2.8 | 3.8 |
| Imports | 3.2 | 2.6 | 3.9 | 4.1 | 2.3 | 2.6 | 2.5 | 3.5 | 4.2 |
| Gross domestic product | 1.8 | 1.2 | 1.6 | 2.3 | 1.3 | 1.3 | 1.1 | 1.5 | 1.8 |

NATIONAL ACCOUNTS DATA

continued: The main national accounts data for the Federal Republic of Germany

Forecast for 2016 until 2018

| | 2016 | 2017 | 2018 | 2016 | | 2017 | | 2018 | |
|---|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| | | | | 1. half year | 2. half year | 1. half year | 2. half year | 1. half year | 2. half year |
| 4. Price level of national expenditure (2010=100) | | | | | | | | | |
| Percentage change over previous year | | | | | | | | | |
| Private consumption expenditure ² | 0.6 | 1.3 | 1.3 | 0.5 | 0.7 | 1.2 | 1.3 | 1.2 | 1.3 |
| Government consumption expenditure | 1.4 | 1.8 | 1.6 | 1.7 | 1.2 | 1.7 | 1.9 | 1.4 | 1.8 |
| Gross fixed capital formation (GFCF) | 1.4 | 1.6 | 1.5 | 1.4 | 1.4 | 1.5 | 1.7 | 1.6 | 1.5 |
| Machinery and equipment | 0.8 | 0.3 | 0.3 | 1.0 | 0.6 | 0.4 | 0.3 | 0.3 | 0.3 |
| Construction | 1.9 | 2.5 | 2.3 | 1.7 | 2.0 | 2.3 | 2.6 | 2.5 | 2.2 |
| Exports | -1.1 | 0.8 | 0.6 | -1.2 | -0.9 | 0.8 | 0.9 | 0.6 | 0.6 |
| Imports | -2.7 | 0.8 | 0.5 | -3.5 | -1.9 | 1.0 | 0.7 | 0.4 | 0.5 |
| Gross domestic product | 1.4 | 1.4 | 1.4 | 1.6 | 1.2 | 1.4 | 1.5 | 1.4 | 1.4 |
| 5. Distribution of Income | | | | | | | | | |
| a) Billion Euro | | | | | | | | | |
| Primary income of private households ² | 2,184.8 | 2,240.0 | 2,303.6 | 1,076.1 | 1,108.6 | 1,102.7 | 1,137.3 | 1,133.0 | 1,170.4 |
| Employers' social contributions | 287.5 | 297.6 | 307.5 | 139.0 | 148.5 | 143.9 | 153.7 | 148.3 | 158.9 |
| Gross wages and salaries | 1,306.1 | 1,346.0 | 1,392.1 | 624.6 | 681.5 | 643.8 | 702.2 | 664.8 | 727.3 |
| Other primary income of private households ⁴ | 591.1 | 596.5 | 604.0 | 312.5 | 278.6 | 315.0 | 281.5 | 319.9 | 284.2 |
| Primary income of other institutional sectors | 459.0 | 475.8 | 496.8 | 216.9 | 242.1 | 225.1 | 250.8 | 233.1 | 263.9 |
| Net national income (primary income) | 2,643.8 | 2,715.9 | 2,800.4 | 1,293.0 | 1,350.7 | 1,327.8 | 1,388.1 | 1,366.1 | 1,434.3 |
| Consumption of fixed capital | 551.7 | 565.9 | 581.7 | 274.4 | 277.3 | 281.5 | 284.4 | 289.3 | 292.4 |
| Gross national income | 3,195.4 | 3,281.8 | 3,382.1 | 1,567.4 | 1,628.0 | 1,609.3 | 1,672.5 | 1,655.4 | 1,726.8 |
| <i>Memorandum item:</i> | | | | | | | | | |
| Net national income (factor costs) | 2,335.9 | 2,403.1 | 2,480.9 | 1,141.5 | 1,194.3 | 1,172.0 | 1,231.1 | 1,206.8 | 1,274.0 |
| Property and entrepreneurial income | 742.2 | 759.6 | 781.3 | 377.9 | 364.3 | 384.3 | 375.3 | 393.7 | 387.8 |
| Compensation of employees | 1,593.6 | 1,643.5 | 1,699.6 | 763.6 | 830.0 | 787.7 | 855.8 | 813.1 | 886.2 |
| b) Percentage change over previous year | | | | | | | | | |
| Primary income of private households ² | 3.2 | 2.5 | 2.8 | 3.6 | 2.8 | 2.5 | 2.6 | 2.7 | 2.9 |
| Employers' social contributions | 3.0 | 3.5 | 3.3 | 2.8 | 3.1 | 3.5 | 3.5 | 3.1 | 3.4 |
| Gross wages and salaries | 3.6 | 3.0 | 3.4 | 4.0 | 3.3 | 3.1 | 3.0 | 3.3 | 3.6 |
| Other primary income of private households ⁴ | 2.3 | 0.9 | 1.3 | 3.1 | 1.5 | 0.8 | 1.0 | 1.5 | 1.0 |
| Primary income of other institutional sectors | 3.0 | 3.7 | 4.4 | 7.8 | -1.0 | 3.8 | 3.6 | 3.6 | 5.3 |
| Net national income (primary income) | 3.1 | 2.7 | 3.1 | 4.3 | 2.1 | 2.7 | 2.8 | 2.9 | 3.3 |
| Consumption of fixed capital | 3.0 | 2.6 | 2.8 | 3.0 | 3.0 | 2.6 | 2.6 | 2.8 | 2.8 |
| Gross national income | 3.1 | 2.7 | 3.1 | 4.0 | 2.3 | 2.7 | 2.7 | 2.9 | 3.2 |
| <i>Memorandum item:</i> | | | | | | | | | |
| Net national income (factor costs) | 3.2 | 2.9 | 3.2 | 4.3 | 2.2 | 2.7 | 3.1 | 3.0 | 3.5 |
| Property and entrepreneurial income | 2.6 | 2.3 | 2.9 | 5.5 | -0.2 | 1.7 | 3.0 | 2.5 | 3.3 |
| Compensation of employees | 3.5 | 3.1 | 3.4 | 3.8 | 3.2 | 3.2 | 3.1 | 3.2 | 3.6 |
| 6. Income and Expenditure of Private Households | | | | | | | | | |
| a) Billion Euro | | | | | | | | | |
| Mass income | 1,288.1 | 1,331.4 | 1,373.4 | 622.6 | 665.5 | 644.2 | 687.3 | 663.0 | 710.4 |
| Net wages and salaries | 861.8 | 886.1 | 916.2 | 409.6 | 452.2 | 421.6 | 464.5 | 435.0 | 481.2 |
| Social benefits | 540.2 | 563.3 | 578.8 | 269.8 | 270.4 | 281.2 | 282.1 | 288.4 | 290.3 |
| less levies on social benefits | 114.0 | 117.9 | 121.6 | 56.9 | 57.1 | 58.6 | 59.3 | 60.4 | 61.1 |
| Other primary income ⁴ | 591.1 | 596.5 | 604.0 | 312.5 | 278.6 | 315.0 | 281.5 | 319.9 | 284.2 |
| Other transfers received (net) ⁵ | -71.6 | -73.9 | -76.3 | -36.3 | -35.3 | -37.2 | -36.6 | -38.5 | -37.8 |
| Disposable income | 1,807.6 | 1,854.1 | 1,901.1 | 898.8 | 908.8 | 922.0 | 932.1 | 944.4 | 956.7 |
| <i>Memorandum item:</i> | | | | | | | | | |
| Adjustment for the change in net equity of households in pension funds reserves | 48.5 | 48.9 | 49.2 | 24.0 | 24.5 | 24.2 | 24.7 | 24.3 | 24.9 |
| Private consumption expenditure | 1,677.7 | 1,721.9 | 1,764.8 | 819.6 | 858.0 | 841.9 | 880.0 | 862.0 | 902.8 |
| Saving | 178.4 | 181.0 | 185.6 | 103.1 | 75.3 | 104.2 | 76.8 | 106.8 | 78.8 |
| Saving ratio in percent ⁶ | 9.6 | 9.5 | 9.5 | 11.2 | 8.1 | 11.0 | 8.0 | 11.0 | 8.0 |
| b) Percentage change over previous year | | | | | | | | | |
| Mass income | 2.9 | 3.4 | 3.1 | 3.4 | 2.4 | 3.5 | 3.3 | 2.9 | 3.4 |
| Net wages and salaries | 3.0 | 2.8 | 3.4 | 4.0 | 2.1 | 2.9 | 2.7 | 3.2 | 3.6 |
| Social benefits | 2.7 | 4.3 | 2.8 | 2.5 | 2.9 | 4.2 | 4.3 | 2.6 | 2.9 |
| less levies on social benefits | 3.1 | 3.5 | 3.1 | 3.2 | 3.0 | 3.1 | 3.8 | 3.1 | 3.1 |
| Other primary income ⁴ | 2.3 | 0.9 | 1.3 | 3.1 | 1.5 | 0.8 | 1.0 | 1.5 | 1.0 |
| Disposable income | 2.5 | 2.6 | 2.5 | 2.9 | 2.1 | 2.6 | 2.6 | 2.4 | 2.6 |
| Private consumption expenditure | 2.5 | 2.6 | 2.5 | 2.8 | 2.3 | 2.7 | 2.6 | 2.4 | 2.6 |
| Saving | 1.8 | 1.5 | 2.5 | 3.4 | -0.3 | 1.1 | 2.0 | 2.4 | 2.6 |

NATIONAL ACCOUNTS DATA

continued: The Main National Accounts Data for the Federal Republic of Germany

Forecast for 2016 until 2018

| | 2016 | 2017 | 2018 | 2016 | | 2017 | | 2018 | |
|---|----------------|----------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | | | 1. half year | 2. half year | 1. half year | 2. half year | 1. half year | 2. half year |
| 7. Government Revenues and Expenditures | | | | | | | | | |
| a) Billion Euro | | | | | | | | | |
| Revenues | | | | | | | | | |
| Taxes | 731.6 | 740.9 | 763.1 | 365.7 | 365.9 | 375.5 | 365.4 | 387.1 | 375.9 |
| direct taxes | 397.8 | 399.3 | 414.1 | 200.1 | 197.7 | 205.4 | 193.8 | 213.3 | 200.8 |
| indirect taxes | 333.7 | 341.6 | 348.9 | 165.5 | 168.2 | 170.1 | 171.5 | 173.8 | 175.1 |
| Net social contributions | 520.7 | 539.4 | 558.1 | 253.3 | 267.4 | 262.6 | 276.8 | 271.3 | 286.8 |
| Property income | 19.0 | 19.7 | 19.8 | 10.7 | 8.3 | 11.4 | 8.3 | 11.4 | 8.3 |
| Other transfers | 21.8 | 22.0 | 22.3 | 9.2 | 12.5 | 9.3 | 12.7 | 9.5 | 12.8 |
| Capital transfers | 13.6 | 10.3 | 9.6 | 7.1 | 6.5 | 4.6 | 5.8 | 4.1 | 5.4 |
| Sales | 104.2 | 107.1 | 110.1 | 49.3 | 54.9 | 50.7 | 56.4 | 52.1 | 58.0 |
| Other subsidies | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total revenues | 1,411.0 | 1,439.6 | 1,483.0 | 695.3 | 715.7 | 714.2 | 725.4 | 735.6 | 747.4 |
| Expenditures | | | | | | | | | |
| Intermediate consumption | 149.7 | 154.9 | 158.1 | 69.2 | 80.5 | 71.4 | 83.5 | 72.9 | 85.1 |
| Compensation of employees | 235.8 | 242.7 | 247.6 | 113.3 | 122.4 | 116.7 | 126.1 | 119.0 | 128.6 |
| Social benefits in kind | 269.5 | 286.6 | 302.4 | 133.3 | 136.2 | 141.8 | 144.8 | 149.6 | 152.9 |
| Property income (interests) | 44.0 | 42.2 | 42.0 | 21.7 | 22.3 | 21.4 | 20.8 | 21.4 | 20.7 |
| Subsidies | 25.8 | 28.8 | 29.3 | 14.0 | 11.8 | 14.3 | 14.6 | 14.5 | 14.8 |
| Social benefits | 483.9 | 504.6 | 518.8 | 242.4 | 241.5 | 252.6 | 252.0 | 259.2 | 259.6 |
| Other transfers | 76.4 | 76.2 | 82.6 | 39.3 | 37.0 | 40.0 | 36.1 | 40.5 | 42.1 |
| Gross capital formation | 68.1 | 73.5 | 74.8 | 28.9 | 39.2 | 31.2 | 42.2 | 31.5 | 43.4 |
| Capital transfers | 32.9 | 30.9 | 29.5 | 15.4 | 17.5 | 13.1 | 17.8 | 12.8 | 16.7 |
| Acquisitions less disposals of non-financial non-produced assets | -1.2 | -5.0 | -1.2 | -0.5 | -0.6 | -4.4 | -0.6 | -0.6 | -0.6 |
| Other taxes on production | 0.2 | 0.2 | 0.2 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total expenditures | 1,384.9 | 1,435.5 | 1,484.2 | 677.0 | 707.9 | 698.1 | 737.4 | 720.9 | 763.3 |
| Balance | 26.0 | 4.1 | -1.2 | 18.3 | 7.8 | 16.1 | -12.0 | 14.7 | -15.9 |
| b) Percentage change over previous year | | | | | | | | | |
| Revenues | | | | | | | | | |
| Taxes | 4.5 | 1.3 | 3.0 | 5.0 | 4.1 | 2.7 | -0.2 | 3.1 | 2.9 |
| direct taxes | 6.8 | 0.4 | 3.7 | 6.2 | 7.4 | 2.6 | -1.9 | 3.8 | 3.6 |
| indirect taxes | 1.9 | 2.4 | 2.1 | 3.5 | 0.4 | 2.8 | 2.0 | 2.2 | 2.1 |
| Net social contributions | 4.0 | 3.6 | 3.5 | 4.3 | 3.6 | 3.7 | 3.5 | 3.3 | 3.6 |
| Property income | -13.1 | 3.7 | 0.4 | -14.5 | -11.3 | 6.9 | -0.5 | 0.4 | 0.6 |
| Other transfers | 11.8 | 1.2 | 1.2 | 2.5 | 19.7 | 1.4 | 1.0 | 1.4 | 1.0 |
| Capital transfers | 11.9 | -24.0 | -7.6 | 36.3 | -6.3 | -35.1 | -12.1 | -9.6 | -6.1 |
| Sales | 3.8 | 2.8 | 2.8 | 4.0 | 3.6 | 2.8 | 2.8 | 2.8 | 2.8 |
| Other subsidies | -8.9 | 0.0 | 0.0 | -10.3 | -7.8 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total revenues | 4.1 | 2.0 | 3.0 | 4.5 | 3.8 | 2.7 | 1.4 | 3.0 | 3.0 |
| Total revenues | | | | | | | | | |
| Intermediate consumption | 7.3 | 3.5 | 2.0 | 9.8 | 5.2 | 3.2 | 3.8 | 2.1 | 2.0 |
| Compensation of employees | 3.1 | 2.9 | 2.0 | 3.2 | 3.0 | 2.9 | 2.9 | 2.0 | 2.0 |
| Social benefits in kind | 6.8 | 6.4 | 5.5 | 7.0 | 6.6 | 6.4 | 6.3 | 5.5 | 5.6 |
| Property income (interests) | -7.0 | -4.1 | -0.3 | -10.2 | -3.7 | -1.5 | -6.6 | 0.0 | -0.6 |
| Subsidies | -6.1 | 11.7 | 1.8 | 1.2 | -13.5 | 2.0 | 23.2 | 1.8 | 1.7 |
| Social benefits | 2.7 | 4.3 | 2.8 | 2.8 | 2.7 | 4.2 | 4.3 | 2.6 | 3.0 |
| Other transfers ⁷ | 1.1 | -0.2 | 6.4 | -1.9 | 3.1 | 0.7 | -0.9 | 0.5 | 5.9 |
| Gross capital formation | 6.0 | 7.9 | 1.9 | 7.7 | 4.8 | 8.0 | 7.8 | 0.9 | 2.6 |
| Capital transfers ⁷ | 3.2 | -2.0 | -1.4 | 2.7 | 0.4 | -15.0 | 1.8 | -2.0 | -6.6 |
| Acquisitions less disposals of non-financial non-produced assets ⁷ | 0.7 | -3.9 | 3.8 | 0.6 | 0.1 | -3.9 | 0.0 | 3.8 | 0.0 |
| Other taxes on production ⁷ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total expenditures | 3.8 | 3.7 | 3.4 | 4.0 | 3.7 | 3.1 | 4.2 | 3.3 | 3.5 |

1 Gross domestic product (price-adjusted) per man-hour.

2 Including private organizations without pecuniary reward.

3 Including net increase in valuables.

4 Entrepreneurial income/operating surplus and received minus paid asset income.

5 Transfers, received minus paid.

6 Current saving as percentage of disposable income.

7 Absolute change over previous year in Billion EUR.

Sources: Federal Statistical Office (Fachserie 18: Volkswirtschaftliche Gesamtrechnungen); Forecast by DIW Berlin.