

Outlook for the German economy – macroeconomic projections for 2014 and 2015 and an outlook for 2016

The German economy made a very buoyant start to 2014. Although it is unlikely to maintain the high rate of growth seen in the first quarter, there is a good prospect of fairly strong economic growth over the forecast horizon. This is predicated on Germany's strengthened domestic economy as well as the ongoing improvement in the economic situation of the industrial countries and the gradual recovery of the euro area. Germany's domestic economy is reaping the rewards of low unemployment, strong immigration, households' and governments' comparatively strong financial situation, elevated consumer sentiment, low corporate leverage and balanced price-cost ratios as well as very favourable funding conditions. By contrast, a tighter labour market going forward, which will be aggravated by measures such as the option of drawing a full pension at 63, will weigh on economic growth.

Under these conditions, the German economy is likely to expand by almost 2% this year in calendar-adjusted terms, followed by a gradually declining pace of growth over the next two years; in terms of unadjusted data, this would translate into growth rates for gross domestic product (GDP) of 1.9% in 2014, 2.0% in 2015 and 1.8% in 2016, as calendar effects are fairly pronounced in some cases. As these rates of expansion significantly outstrip potential growth, aggregate capacity utilisation will rise noticeably. The increase in employment needed to lift economic output this much would have to be fed primarily from immigration, given that unemployment has largely been reduced to a frictional and structural core and labour market participation is already fairly high. The anticipated tensions on the labour market are likely to be accompanied by an acceleration of wage growth, with the new general minimum wage another contributory factor.

The steeper wage growth will be reflected in higher rates of inflation. As measured by the Harmonised Index of Consumer Prices (HICP), inflation could rise from 1.1% this year to 1.5% in 2015 and 1.9% in 2016. This forecast assumes unchanged exchange rates and easing crude oil prices. Excluding energy, the rate of price increase could climb to more than 2% in 2016.

On the demand side, the main risks relate to the external environment. Heightened geopolitical tensions or a renewed flare-up of the crises in the euro area would dampen GDP growth not only through the external trade channel, but also by affecting confidence. On the supply side, there is considerable uncertainty as to the scale of future migration flows, the reserves that could still be mobilised on the domestic labour market as well as the effects of the minimum wage and the option of retiring on a full pension at 63. If supply-side conditions prove more favourable than assumed here, GDP growth is likely to be stronger and wage pressure weaker. In a scenario in which shortages increase more rapidly, wages and prices, at least, would rise more quickly and real economic growth could fall short of the path outlined here.

■ Current situation

German economy remains in remarkably good shape

The German economy was in remarkably good shape in the second quarter of 2014. According to surveys conducted by the Ifo Institute and the Association of German Chambers of Commerce and Industry (DIHK), the vast majority of enterprises view their economic situation as good or at least satisfactory, and consumers look to the future with a great deal of confidence according to the consumer research institution, *Gesellschaft für Konsumforschung* (GfK). One factor is that aggregate capacity utilisation is good and employment is rising further from an already high level, thanks in part to strong immigration.

Strong economic growth in 2013 Q4/2014 Q1

The German economy grew strongly in the fourth quarter of 2013/first quarter of 2014. On top of the stronger economic momentum anticipated in the December forecast, the winter was mild, which is likely to have contributed 0.3 percentage point to economic growth in

the first quarter.¹ While GDP growth in the final quarter of 2013 was, on the supply side, almost entirely driven by the manufacturing sector, the construction and services industries took centre stage into 2014. On the demand side, exports were consequently predominant initially, before giving way to domestic demand in the first quarter, which was accompanied by perceptibly higher imports.

Exports had risen sharply in the last quarter of 2013, attaining a much higher level than in the previous quarters; by and large, the heightened level was maintained at the beginning of 2014. The increase in exports anticipated in the sentiment indicators back in the third quarter of 2013 is probably a key reason why business investment picked up in the final months of 2013 and first part of 2014 and now appears to have moved off the low that had been brought about in part by uncertainty.

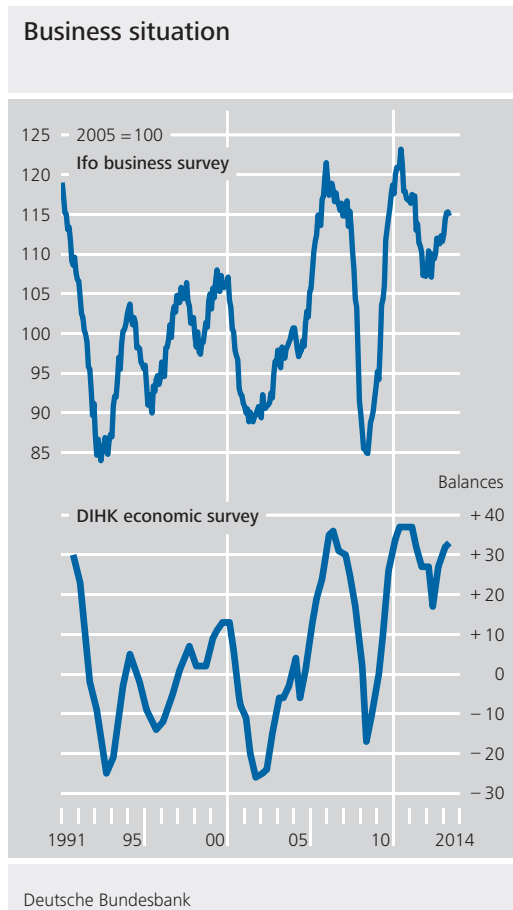
Exports and business investment pick up

Growth in private consumption moved largely in step with real disposable incomes over the winter months, but remained lacklustre, dashing hopes raised by the extremely upbeat consumer sentiment. Residential construction investment, by contrast, rose more sharply than expected. The exceptionally favourable weather conditions, particularly in the first two months of the year, allowed a slight reduction in the demand overhang for construction services brought about by the high levels of capacity utilisation.

Private consumption lacks anticipated momentum, sharp rise in residential construction investment

On the labour market, the economic upswing made itself felt more rapidly and more comprehensively than anticipated in the December projection. The sharp growth in employment owed something to the continued large influx of workers from abroad. Net immigration considerably exceeded previous projections again last year, at 437,000 persons.

Perceptible improvement on the labour market



¹ See Deutsche Bundesbank, The impact of weather conditions on gross domestic product in the latter part of 2013 and early part of 2014, Monthly Report, May 2014.

Growth in wage costs in line with expectations

Growth in wage costs, as measured by compensation of employees, was largely in line with expectations in the final quarter of 2013/ first quarter of 2014, although the scheduled reduction in the contribution rate to the statutory pension insurance scheme was shelved to finance additional benefits. Growth in wage costs was dampened by a surprisingly pronounced negative wage drift. In wholesale and retail trade, transport, and hotels and restaurants especially, actual earnings fell well short of the increase in negotiated pay rates. One factor could have been that retail enterprises had, in part, anticipated the delayed pay settlement of December 2013 when setting remuneration, which meant that back payments at the beginning of 2014 were lower than projected.

Inflation weaker than expected

Consumer price inflation has flattened slightly more than forecast in the last projection. This was in very large part due to one-off seasonal factors and an altered external environment. The mild winter weather dampened energy and food prices. Energy and industrial goods prices were also depressed by the appreciation of the euro. In addition, the levy to promote renewable energy drove up prices less than assumed. Services prices, by contrast, rose in line with expectations.

■ Major assumptions

Assumptions-based forecast

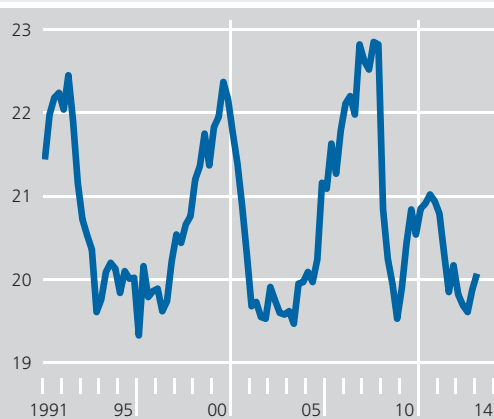
This projection is based on assumptions made by the Eurosystem's experts concerning global trade, exchange rates, commodity prices and interest rates. The assumptions are based on information available as at 15 May 2014. The assumptions regarding economic developments in the euro area are derived from projections by the national central banks of the euro-area countries.

Global growth and world trade strengthening perceptibly

Global economic growth, which had strengthened during 2013 on the back of improving industrial activity, lost some of its momentum going into 2014. Nonetheless, global economic growth is expected to pick up again in the

Corporate sector investment rate

Gross fixed capital formation as a percentage of gross value added, price and seasonally adjusted



Sources: Federal Statistical Office and Bundesbank calculations.
 Deutsche Bundesbank

course of the year. These hopes rest mainly on the industrial countries: as progress has been made in consolidating public finances and private sector balance sheets and the general stance of monetary policy remains expansionary, demand is likely to pick up perceptibly, which should, given spare capacity, translate into greater economic growth. In a host of emerging market economies, by contrast, structural bottlenecks are hampering economic growth. Moreover, financial and macroeconomic imbalances are taking their toll, which means that emerging markets' contribution to global growth will probably be distinctly lower than its average for the past decade. Overall, global growth in 2014 could be stronger than last year, at 3¼%, based on purchasing power parity, but the expectations awakened in the December projection would not quite be met – in part because the year got off to a weak start. A slight increase to 3¾% is expected for both 2015 and 2016. The weak start to the year is also one of the reasons why growth in global trade, at +4% in 2014, is likely to be fairly muted and slower than predicted in the December projection. A significantly stronger expansion is not expected until the two subsequent years, when growth rates are projected to exceed 5%. The expansion in German enterprises' sales markets is likely to fall slightly short

Major assumptions of the projection

Item	2013	2014	2015	2016
Exchange rates of the euro				
US dollar/euro Effective ¹	1.33 101.7	1.38 104.2	1.38 104.4	1.38 104.4
Interest rates				
Three-month EURIBOR	0.2	0.3	0.3	0.4
Yield on government bonds outstanding ²	1.6	1.5	1.8	2.1
Commodity prices				
Crude oil ³	108.8	107.2	102.2	98.2
Other commodities ^{4, 5}	- 5.2	0.3	1.7	4.6
German exporters' sales markets ^{5, 6}	1.8	3.5	4.9	5.4

¹ Compared with the 20 most important trading partners of the euro area (EER20 group of currencies); 1999 Q1 = 100. ² Yield on German government bonds outstanding with a residual maturity of over nine and up to ten years. ³ US dollars per barrel of Brent crude oil. ⁴ In US dollars. ⁵ Year-on-year percentage change. ⁶ Working-day-adjusted.

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of the increase in global trade given the greater importance of the euro area.

Recovery process in the euro area ongoing

The recovery process in the euro area that started in the second quarter of 2013 continued over the winter months, albeit still at a very subdued pace. Although the economic upturn is expected to accelerate over the forecast horizon, aggregate capacity utilisation is still not likely to have returned to normal levels in 2016. The stronger global growth is expected to provide key catalysts for the euro area, with exports to non-euro-area countries likely to benefit from the ongoing adjustment of cost structures in some member states and the resulting improvement in competitiveness. In the current year, export growth will, however, still be dented by the lingering effects of the euro appreciation. The anticipated success in exports should also motivate increased fixed capital formation. Another factor that should be considered here is that the negative effects currently emanating from capacity underutilisation, the need to consolidate balance sheets and the restricted availability of bank loans in some countries are likely to fade only gradually. In addition, the labour market will only recover at a slow pace, meaning that high unemployment in a number of euro-area partner countries will continue to depress private consumption. However, consumption will be boosted by

the decline in energy prices assumed in the projection. Moreover, the fiscal consolidation pressure is unlikely to weigh on demand as much as in previous years. Overall, the euro area is expected to generate GDP growth of 1.0% in the current year. For 2015 and 2016, rates of 1.7% and 1.8% respectively are anticipated. Excluding Germany, this equates to growth of 0.7% this year, 1.6% in 2015 and 1.8% in 2016.

The gradual recovery of the euro-area economy and the return of confidence have further lifted the euro. In the period that is relevant to the derivation of the exchange rate assumptions, the single currency traded at US\$1.38, 3% higher than predicted in the December projection. The euro also firmed against the yen and the renminbi. In relation to the 20 currencies most important in terms of foreign trade, the euro appreciated 2%.

Appreciation of the euro

At the beginning of this year, crude oil prices initially declined substantially as oil production in Libya was expected to return to normal. With the escalation of the conflict in Ukraine and the concomitant supply-side risks, prices spiked higher again temporarily. Later, political turmoil again curtailed the oil supply from Libya, even prompting the International Energy Agency to warn of supply shortages for the second half of 2014. Nonetheless, the forward prices from which the assumptions for crude oil prices are derived pointed downwards across all delivery periods at the time the projection assumptions were laid down. This projection therefore assumes a downward trajectory for crude oil prices. In US dollar terms, it is slightly higher than in the December projection, but the appreciation of the single currency means that in euro terms it is virtually unchanged. Given global economic growth, other commodity prices should pick up again perceptibly overall after moving sideways this year. Prices for food, beverages and tobacco moved sharply higher in the first months of the year, but might come back down some of the way going forward.

Assumption of falling crude oil prices and rising prices for other commodities

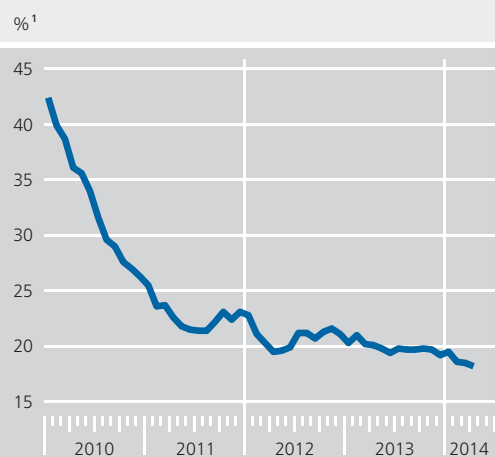
Interest rates and funding conditions still very favourable

Continued low rates of consumer price inflation and the announcement by the Governing Council of the ECB that it would maintain a high degree of monetary accommodation for an extended period and ease its monetary policy stance further, if need be, have further dampened expectations surrounding the outlook for short-term interest rates. Yields on nine to ten-year government bonds also fell short of the assumptions made in the last projection. Consequently, only a very muted increase in interest rates on bank loans in Germany is assumed. The other financing conditions, which are described as extremely favourable in Ifo and DIHK surveys, are also unlikely to deteriorate to any significant degree.²

Economic policy measures stifling growth potential

The macroeconomic forecast only incorporates government measures that have either already been approved by parliament or have, at least, been defined in sufficient detail and are likely to be implemented. Looking at the labour market, these include the general statutory minimum wage and the "pension at 63": from July 2014, those who have contributed to the pension system for 45 years will be able to draw a full state pension from the age of 63. This measure is expected to reduce the potential labour force by around 165,000 persons, or 0.4%, by 2016. The German government is further planning to introduce a general minimum wage of €8.50 per hour from 1 January 2015. According to Bundesbank estimates based on the Socio-Economic Panel (SOEP) and additional information from other sources, the minimum wage could raise the aggregate wage bill by more than ½%, the majority in 2015. Although the minimum wage will increase wages mainly for what are referred to as "mini jobs", low-skilled jobs subject to social security contributions will also be affected. Given that wage costs in this area will rise fairly noticeably in some cases, the minimum wage is likely to reduce employment prospects for the low-skilled and slightly raise the structural unemployment rate in the medium term.

Credit constraints in trade and industry



Source: Ifo business survey. ¹ Share of firms indicating that credit access is restrictive.
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Looked at in isolation, the fiscal policy measures included in the projection cause a significant deterioration in the general government fiscal balance for 2014 and 2015 (by a total of ¾% of GDP for 2015 as compared to 2013). On the revenue side, a reduction in the contribution rate to the statutory pension insurance scheme is assumed for 2015, as the pension reserve ceiling would otherwise be exceeded. It is further assumed that the health insurance institutions will, on average, lower their contribution rates when their finances are reformed in 2015 and raise them again from 2016 as reserves dwindle.³ In terms of income tax, the higher basic income tax allowance from 2014 and the gradual transition to downstream taxation of pensions throughout the forecast period especially will cause revenue shortfalls. Government spending will rise significantly from mid-2014 as benefits paid under the statutory pension insurance scheme⁴ are expanded. In healthcare and long-term care, the projection takes account of higher costs, in particular because discount agreements for

Fiscal policy measures expansionary overall

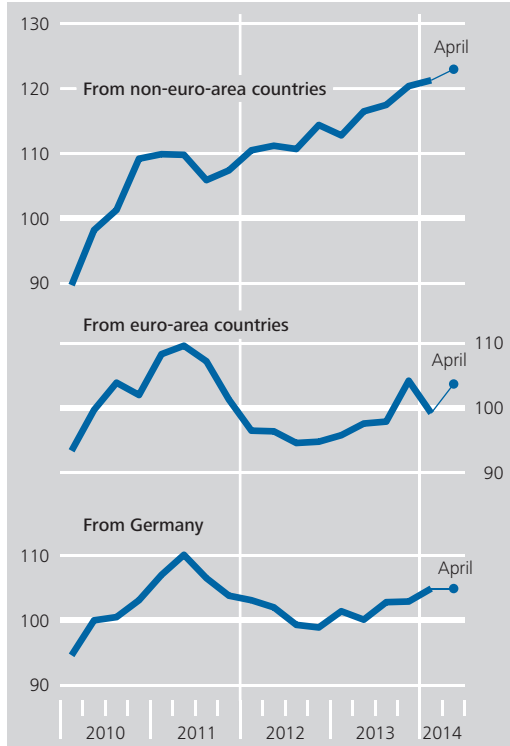
² The forecast assumes that the comprehensive assessment of bank balance sheets by the Eurosystem will not have any negative repercussions for the credit supply.

³ This will affect only members' contributions.

⁴ In certain cases, the pensions paid for times spent bringing up children ("mothers' pensions") and upon early retirement ("pension at 63") will be raised as will pensions for those newly retiring on disability benefits in general.

Orders received by industry

Volume, 2010 = 100, seasonally adjusted, quarterly, log scale



Source of the unadjusted figures: Federal Statistical Office.
 Deutsche Bundesbank

pharmaceuticals will expire this year and reimbursement rates under the public long-term care insurance scheme will be adjusted for inflation next year.⁵ The additional budget funds that the German Cabinet approved in March 2014 – mainly for transport infrastructure, childcare, education and research – will cause central government budget spending to rise year for year in the forecast period. As some of this additional spending is designed to ease the burden on state and local governments, it causes a smaller deterioration in the general government fiscal balance.

■ Economic outlook⁶

After recording sharp growth at the start of the year, the German economy is likely to initially expand at a distinctly slower pace. The exceptionally mild winter weather pushed activity levels, in the construction sector in particular, in the first quarter way over the seasonal norm.

Temporary marked slow-down in economic growth

This thus results in a reverse rate effect in the second quarter in seasonally adjusted terms.⁷ Furthermore, the manufacturing sector appears to have lost some momentum of late. This is suggested, *inter alia*, by the fact that new orders received by the industrial sector in the first quarter stagnated at the Q4 level. However, industrial output in the second quarter may be better than indicated by the new order figures for the first quarter. Output has yet to feel the full impact of the accelerated volume of new orders over the course of 2013, probably due to the trend towards production smoothing. Furthermore, according to Ifo data, short-term production expectations for the manufacturing industry are still expansionary and, according to Ifo and DIHK surveys, the medium-term business expectations are predominantly positive, which suggests a rebound in new orders. Economic growth in Germany is thus expected to again be higher in the third quarter, especially seeing as demand for construction work is still lively and consumers are optimistic. However, it is unlikely to quite match the average pace of expansion seen in the first half of the year.

In the medium term, too, there is a good prospect of fairly strong economic growth. This is predicated on Germany's strengthened domestic economy as well as the anticipated improvement in the economic situation of the industrial

Outlook promising in medium term, ...

⁵ The planned reform of long-term care – inasmuch as it goes beyond these adjustments – was not included, as no Cabinet decision had yet been made as this forecast was produced. Under the current draft legislation, contributions to long-term care insurance would rise by 0.3 percentage point from 2015, and increased spending and transfers to special reserves are planned. The plans would slightly improve the fiscal balance as compared to the present forecast from 2015, as the additional revenue from contributions is, in part, to be used to create reserves and to cover the inflation-related rise in reimbursement rates that are already included in the projection.

⁶ This projection for Germany was completed on 22 May 2014. It was incorporated into the projection for the euro area published by the European Central Bank on 5 June 2014. This is the last projection compiled on the basis of ESA 1995. On 1 September 2014, the Federal Statistical Office will publish the backcast national accounts figures based on the definitions contained in ESA 2010.

⁷ See Deutsche Bundesbank, The impact of weather conditions on gross domestic product in the latter part of 2013 and early part of 2014, op cit.

countries and the expected gradual recovery of the euro area. Germany's domestic economy is reaping the benefits of low unemployment, strong immigration, households' and governments' comparatively strong financial position, low corporate leverage and balanced price-cost ratios as well as very favourable funding conditions. Given this outlook, external demand, investment and consumption should increase distinctly.

... but increasing shortages on labour market curbing potential growth

By contrast, a tighter labour market going forward will weigh on economic growth. While the unfavourable demographic trend is currently being more than offset by increased immigration, measures such as the minimum wage and, above all, the option of long-term contribution payers drawing a full pension at 63 are restricting the potential labour input and, in the medium term, fixed capital formation, too, because factors of production are complementary in the long term. This can be seen in the growth estimate for aggregate potential output which, at 1.2% on average over the forecast horizon, is lower than in the December projection.

Slowdown in economic growth, pick-up in capacity utilisation

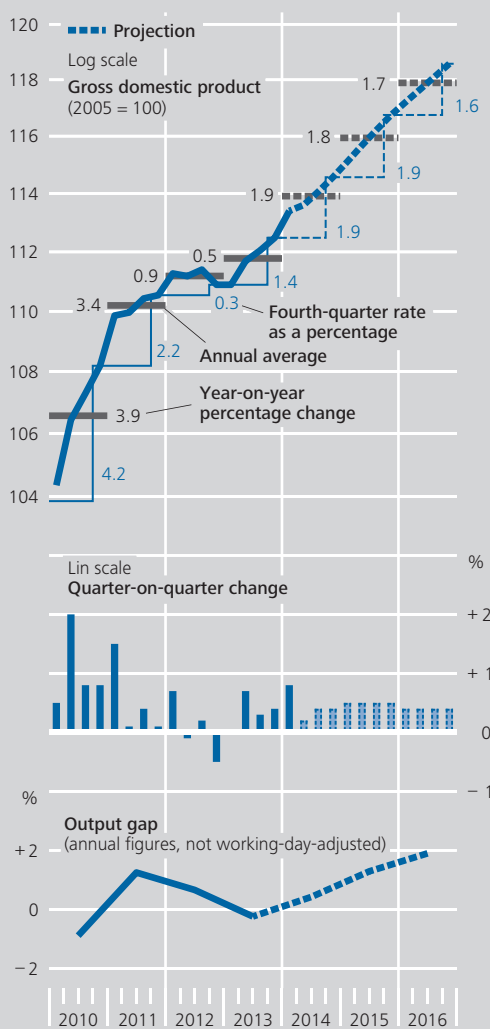
Under these conditions, the German economy is likely to expand by almost 2% this year in calendar-adjusted terms, while the pace of growth is set to gradually decline over the next two years. The year-on-year rates would shrink from 1.9% in 2014 to 1.6% in 2016. Nevertheless, economic growth would still significantly outstrip potential growth meaning that, starting from normal utilisation, aggregate capacity utilisation would rise noticeably. At the end of the forecast horizon, normal capacity utilisation would be exceeded by almost 2%. In terms of unadjusted data, this pattern would translate into GDP growth rates of 1.9% in 2014, 2.0% in 2015 and 1.8% in 2016, as calendar effects are fairly strong in some cases.

Slight upward revision of GDP forecast for 2014

Growth expectations for 2014 have thus been raised slightly (by 0.2 percentage point) compared to the December projection. As there have been no major changes to the overall set-

Aggregate output and output gap

Price, seasonally and working-day-adjusted



Sources: Federal Statistical Office and Bundesbank calculations. 2014 to 2016 Bundesbank projections. Deutsche Bundesbank

Technical components of the GDP growth projection

As a percentage or in percentage points

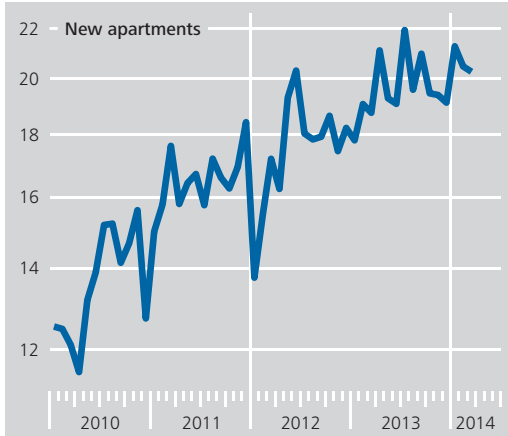
Item	2013	2014	2015	2016
Statistical carry-over at the end of the previous year ¹	-0.3	0.6	0.6	0.7
Fourth-quarter rate ²	1.4	1.9	1.9	1.6
Average annual GDP growth, working-day-adjusted	0.5	1.9	1.8	1.7
Calendar effect ³	-0.1	0.0	0.2	0.1
Average annual GDP growth ⁴	0.4	1.9	2.0	1.8

Sources: Federal Statistical Office; 2014 to 2016 Bundesbank projections. **1** Seasonally and working-day-adjusted index level in the fourth quarter of the previous year in relation to the working-day-adjusted quarterly average of the previous year. **2** Annual rate of change in the fourth quarter, seasonally and working-day-adjusted. **3** As a percentage of GDP. **4** Discrepancies in the totals are due to rounding.

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Housing construction permits

Thousands, seasonally adjusted, log scale



Source of the unadjusted figures: Federal Statistical Office.
 Deutsche Bundesbank

ting, this is attributable to the favourable weather conditions at the beginning of the year which enabled the demand overhang for construction services to be reduced slightly. As the demand for residential construction is continuing to rise sharply, hardly any negative compensatory effects are expected over the course of the year. Furthermore, investment in machinery and equipment got off to a livelier start in 2014 than expected. The employment trend is also more favourable. The GDP growth forecast for 2015 remains unchanged at 2.0%.

Rebound in exports

After a very sluggish rise in the first quarter of 2014, exports ought to return to their distinctly upward underlying trend. This is indicated by industrial firms' continued optimistic export expectations reported by Ifo and the DIHK. Given stronger global expansion and a pick-up in the euro area, exports could increase by 4% in 2014. This would mean that export growth would again exceed sales market growth by a small margin after clearly lagging behind in 2013. However, at 5¼% (4½% after calendar adjustment), growth in exports may slightly lag behind growth in sales markets in the following year. This is likely to remain the case in 2016. On the one hand, the accelerated rise in domestic manufacturing costs is likely to weigh on the competitiveness of German exports, especially in the euro area. On the other hand,

firms are likely to become increasingly aware of the shortage of skilled workers that is becoming evident in a number of sectors and factor this in to their investment decisions. The greater availability of qualified workers in major sales markets could be a further reason for expanding on-site production, especially for export-oriented industrial firms.⁸

Given the upbeat sales outlook, increasing aggregate capacity utilisation and exceptionally favourable funding conditions, business investment is set to continue on the path of recovery. Increased expenditure on machinery, equipment and commercial properties is likely to stem primarily from replacement and modernisation projects. In addition, firms are increasingly likely to invest in capacity expansion and to resume postponed projects, especially this year. However, the gloomy medium to long-term outlook for the labour supply, which is marked by demographic change, limits the scope for expanding domestic production capacity and, as a result, growth in investment is likely to be weaker than in previous upturns.

Business investment again up distinctly

The current situation on the property markets is characterised by high and rising demand for housing on the back of a sustained improvement in employment and wage prospects and the attendant strong influx of immigrants. This situation is additionally boosted by the exceptionally favourable funding conditions. While new construction has taken off considerably over the past few years, the expansion of housing stock in those German urban centres that are particularly popular is nevertheless still failing to meet demand. This can be seen in a sharp rise in property prices.⁹ The number of new permits for housing construction rose by approximately 12% in 2013, pointing to a further sharp increase in investment in new buildings. Overall, investment in residential construction, including the less dynamic renova-

Residential construction shaped by investment in new buildings

⁸ This is also evidenced by the results of a DIHK survey on industrial firms' foreign direct investment.

⁹ See Deutsche Bundesbank, House prices in 2013 in Germany, Monthly Report, February 2014, pp 64-66.

tion measures, could go up by just over 5% in 2014. This expansion is set to continue over the entire forecast horizon (albeit with slowing growth rates) due to the past delays in investment and consistently favourable demand-side conditions.

Considerable increase in government investment

Government investment is expected to record considerable growth over the forecast horizon. First, the government has made concrete plans to top up investment in transport infrastructure. Second, the relatively good financial position of many state and local governments and the many identified cases of postponed investment can be interpreted as a sign that government investment will rise distinctly.

Gross fixed capital formation: strong contribution to economic growth

Overall, gross fixed capital formation is likely to climb by 4¾% in both 2014 and 2015 and, after two years of weak growth, make a significant contribution to economic growth in Germany. However, in 2016 this expansion may slow somewhat given the level attained at this point.

Growth in private consumption somewhat stronger than in disposable income

Private consumption is also likely to provide a positive stimulus. After starting the year at a high level, consumer confidence (as measured by the GfK) has improved even further. This is due to households' extremely high propensity to purchase as they are benefiting from the good situation on the labour market and expect to share in the improved economic performance via rising real income. According to the present projection, households' disposable income is expected to increase by 1½% in 2014 in price-adjusted terms. On the one hand, labour income and employment are rising; on the other hand, consumer price inflation is still weak. In the wake of the introduction of a general statutory minimum wage, an expansion in benefits and an expected lowering of the contribution rate to the statutory pension insurance scheme as well as the expected temporary cut in the contributions to the statutory health insurance institutions, real disposable income might even climb by just under 2% in 2015, despite rising inflation. The saving ratio

Key figures of the macroeconomic projection

Year-on-year percentage change

Item	2013	2014	2015
GDP (real)	0.4	1.9	2.0
GDP (real, working-day-adjusted)	0.5	1.9	1.8
Components of real GDP			
Private consumption	0.9	1.4	2.0
<i>Memo item</i> Saving ratio	10.0	10.0	9.9
Government consumption	0.4	1.7	1.7
Gross fixed capital formation	-0.8	4.8	4.7
Business investment ¹	-2.1	4.8	5.1
Private investment in residential construction	0.5	5.1	4.2
Government investment	2.5	3.6	4.4
Exports	0.9	3.9	5.2
Imports	1.5	5.2	6.2
<i>Memo item</i> Current account balance ²	7.5	7.4	7.2
Contributions to GDP growth ³			
Domestic final demand	0.5	2.0	2.3
Changes in inventories	0.1	0.3	-0.1
Exports	0.5	2.0	2.6
Imports	-0.7	-2.3	-2.8
Labour market			
Total number of hours worked ⁴	0.1	1.0	0.5
Persons employed ⁴	0.6	0.8	0.4
Unemployed persons ⁵	3.0	2.8	2.8
Unemployment rate ⁶	6.9	6.6	6.4
Wages and wage costs			
Negotiated pay rates ⁷	2.4	3.2	2.9
Gross wages and salaries per employee	2.2	2.8	3.4
Compensation per employee	2.0	2.7	3.2
Real GDP per person employed	-0.1	1.1	1.6
Unit labour costs ⁸	2.1	1.6	1.6
<i>Memo item</i> GDP deflator	2.2	1.5	1.8
Consumer prices ⁹			
Excluding energy	1.6	1.3	1.8
Energy component	1.8	-1.0	-0.8

Sources: Federal Statistical Office; Federal Employment Agency; 2014 to 2015 Bundesbank projections. **1** Private non-residential fixed capital formation. **2** As a percentage of nominal GDP. **3** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **4** Domestic concept. **5** In millions of persons (Federal Employment Agency definition). **6** As a percentage of the civilian labour force. **7** Monthly basis (pursuant to the negotiated wage index of the Deutsche Bundesbank). **8** Ratio of domestic compensation per employee to real GDP per person employed. **9** Harmonised Index of Consumer Prices (HICP).

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might diminish again slightly, as in previous years, thus enabling private consumption to rise by even more than disposable income.

Government consumption is also expected to rise markedly. Growth in healthcare and long-term care is forecast to remain strong. Furthermore, the forecast envisages spending on personnel and tangible goods purchases to grow broadly in line with GDP. The additional funds that central government has earmarked for childcare and education also play a role here.

Clear growth in government consumption

With exports and domestic final demand set to experience strong growth, imports are ex-

Growth in imports still strong

pected to follow suit over the forecast horizon. The continued intensification of the international division of labour is also expected to further drive up the import content of exports and of other expenditure components. The good start to the year means that imports might increase by 5¼% in 2014 and possibly accelerate to 6¼% in 2015. Owing to their improved competitive position, European manufacturers are expected to reap greater benefits from the pick-up in demand in Germany than manufacturers from outside the euro area.

Stronger domestic component of growth, but continued reliance on external sector

All in all, the forecast paints the picture of a cyclical upturn which is driven to a larger degree than in the past by the domestic economy. Viewed from the traditional perspective, domestic final demand would even be the sole factor driving the cyclical stimulus during the forecast horizon (in arithmetical terms, its contribution to growth, at 2 percentage points in 2014 and 2¼ percentage points in 2015, exceeds expected economic growth), while – after netting – a negative figure is recorded for exports and imports. However, it must be noted that imports' negative contribution to growth ought to be attributed to the various expenditure components in line with the import intensity and not only netted with exports.¹⁰ Once the breakdown has been adjusted accordingly, it can be approximated that two-thirds of GDP growth during the forecast horizon is attributable to Germany and one-third to other countries. Taking this analysis one step further and factoring in the economic causal relationships between the variables, rising exports account for an even larger percentage of GDP growth. Without the additional income from exports, there is no footing for consumption and investment growth. Successful export business is key for the domestic economy to flourish in Germany, a country which is highly integrated in the global economy.

Slight decline in current account surplus

On the back of sharp import growth, the German current account surplus is likely to retreat somewhat from the record level of 7½% of GDP reached in 2013 as a result, *inter alia*, of

weak investment. For 2015, it is expected to drop to 7¼%. The trade account surplus could dip below 6%. Any further decline is hampered by the anticipated continued improvement in the terms of trade. Furthermore, given the continual increase in external assets, inflows to investment income are also expected to rise.

■ Labour market

In recent years, aggregate employment growth has been driven increasingly by sharply rising net immigration. In contrast to the persistently low wages in central and eastern European countries owing to the convergence gaps in the real economy, and to the crisis-related widespread restrictions in employment prospects in the countries of southern Europe, Germany is a relatively receptive labour market that is experiencing an ever-increasing labour shortage on account of demographic developments. This creates potential for a continued strong net influx of workers from abroad, although it is likely that those faced with low migration costs will have already mobilised and that the immigration will not be entirely of a long-term nature. While net immigration in 2014 is once again expected to be of a similarly large magnitude to that recorded in 2013 on account of labour market restrictions being lifted completely for Romanians and Bulgarians at the beginning of the year, labour market-driven immigration is likely to recede somewhat in 2015 and 2016. Nonetheless, the influx should still suffice to compensate for the demographic decline in the labour supply. By contrast, under the current circumstances, there is likely to be very little scope for an ongoing increase in domestic labour force participation, particularly as the option of drawing a full pension at 63 can be expected to reduce participation among the over-60 age group, which had risen sharply over the last fifteen years.

Increasing demographic burden on labour supply eased by immigration

¹⁰ See H C Kranendonk and J P Verbruggen (2008), Decomposition of GDP growth in some European countries and the United States, *De Economist* 156(3), pp 295-306.

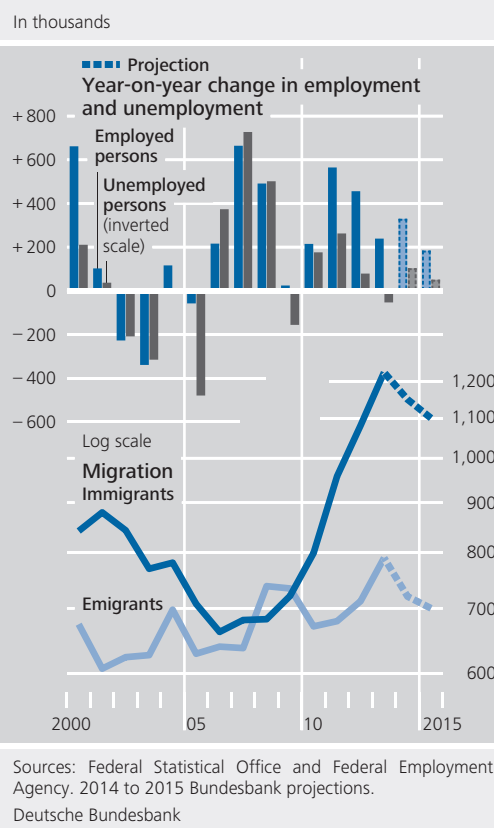
Strong demand for labour hampered by minimum wage only in some areas

Given the upbeat prospect for domestic and foreign sales in goods and services, demand for labour looks set to remain strong. However, the wage increases triggered by the general minimum wage will probably place a burden on demand for labour in low-income jobs and reduce employment opportunities for low-skilled workers, with those employed in “mini jobs” particularly hard hit. In many cases, the average number of working hours might be reduced in order to stay below the monthly income threshold of €450 that qualifies for preferential treatment in terms of social security contributions. Thus, despite the noticeable constraint placed on the number of hours worked in this sector, the number of persons working in low-income, part-time jobs will probably not fall by much. These restrictions might even, to a certain extent, prompt workers to switch to jobs which are subject to social security contributions. However, there is also concern that this could provoke a shift towards other atypical forms of employment or drive previously regular activities into the shadow economy.

Overall continued rise in employment and a limited decline in unemployment

Employment is expected to continue to climb overall, with the rather sharp pace of growth predicted for 2014 set to diminish in subsequent years on account of supply-side shortages and political measures. The fall in unemployment is likely to lose momentum in the course of 2014 and remain modest across the entire forecast horizon. In the statutory insurance system, unemployment will not be far off its frictional lower limit. At the same time, the reduction in structural unemployment brought about by previous labour market reforms is likely, for the most part, to have come to a halt, particularly as new reforms are more likely to hinder the reduction of this kind of unemployment. Overall, the unemployment rate as defined by the Federal Employment Agency could diminish from 6.9% in 2013 to 6.6% in 2014 and to 6.4% in 2015. When calculated in line with international conventions, unemployment could shrink from 5.3% in 2013 to 5.1% in both

Employment, unemployment and migration



2014 and 2015, before plotting another slight decline in 2016.

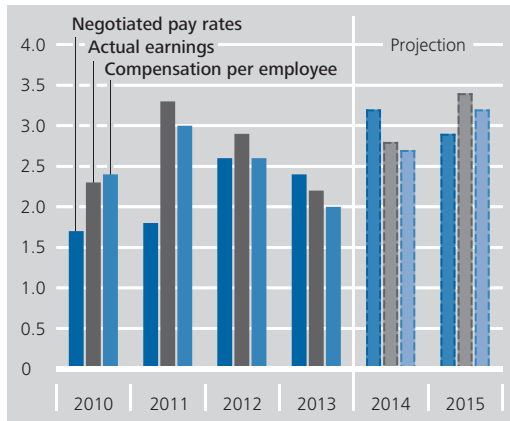
Labour costs and prices

In view of the good economic situation, the anticipated tensions on the labour market as well as political measures, wage growth can generally be expected to pick up pace, making it felt more in terms of wage drift than negotiated wage agreements. Trade unions will continue to refrain from demanding excessive general wage increases as doing so might put manufacturing jobs that must face up to the international competition, but are nonetheless well-paid, at risk. In a similar vein, many of the pay agreements negotiated so far this year include an extended validity period and wage adjustments in two increments, the first of which is quite a substantial pay rise (of around 3%) while the second is rather more modest

Accelerated growth in negotiated wages

Negotiated pay rates, actual earnings and compensation of employees

Year-on-year percentage change, monthly basis



Deutsche Bundesbank

(around 2½%).¹¹ The ongoing negotiations are in line with previous wage agreements, with demands averaging 5½% per year and experience suggesting that around half of that figure will be agreed upon. As defined in the Bundesbank's negotiated pay rate statistics, this would represent an increase of just over 3% in negotiated rates of pay for 2014 and slightly less in 2015. This is a marked acceleration when compared with the increase of just under 2½% in 2013. However, the rise owes something to the delayed wage agreement in the retail sector in December 2013.

Wage drift driven by minimum wage and economic activity

The new general legal minimum wage, which was recently approved, will only be included directly in the Bundesbank's negotiated pay rate statistics in exceptional cases. This is because the Bundesbank's statistics are usually based on an agreed pay rate which presupposes completing vocational training and having several years of professional experience, whereas the minimum wage predominantly affects segments with lower qualification requirements. However, the introduction of the minimum wage is likely to fuel a noticeable increase in actual earnings in 2015. Both the improving economic situation and the option of drawing a pension at 63, which constrains the labour supply, are likely to contribute to the expected positive wage drift. Immigration, by

contrast, will have the opposite effect. Employment costs could be eased by reducing contribution rates to the statutory pension insurance scheme, with the result that compensation (per employee) would increase at a slightly slower pace than actual earnings in 2015. Capacity utilisation could send employment costs on a steeper trajectory in 2016.

The stronger upward movement in wages is likely to push up the underlying trend in domestically generated inflation. However, the rise in the GDP deflator in 2014 should ease perceptibly at first, compared with the high rate in 2013, which was driven by significant improvements in the terms of trade. The more favourable import prices are being gradually passed through to the final purchasers, narrowing margins again. Aside from these short-term fluctuations, the current projection suggests that the wage share will remain largely unchanged.

Domestic inflation rising, wage share stable

The increased upward pressure on consumer prices, which stems from the domestic economy, will initially be masked by other effects. In light of the improved weather conditions, food price inflation is even set to decrease significantly compared with the two previous years. The appreciation of the euro will initially continue to have an effect on prices for industrial goods (excluding energy). Only services prices and housing rents are already picking up perceptibly. Looking ahead, the accelerated increase in prices should gradually spread, with the domestic component continuing to overshadow the external component in the forecast outlined here. The new general minimum wage will also be a contributing factor here. Excluding energy, consumer price inflation could increase from 1.3% in 2014 to 2.2% in 2016.

Subdued increase in goods prices, sharper rise in services prices

¹¹ To forecast the increase in negotiated wages, all the agreements concluded in previous years are analysed and extrapolated at the end of their validity periods, taking into account the macroeconomic framework and sector-specific features.

Falling energy prices

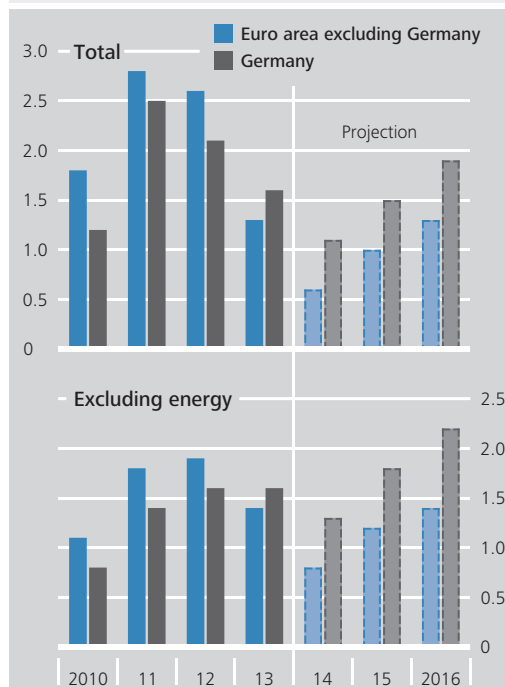
The forecast for energy prices is mainly dictated by assumptions for crude oil prices and exchange rates, which indicate that prices for mineral oil products will follow a downward path. Shrinking gas and heat energy prices are also to be expected in such a market environment. With regard to electricity, the additional expenses caused by growing levies to promote renewable energy should be much lower than in the past and should be partly offset by lower purchase prices for energy supply companies. Thus, following a decline of 1.0% in 2014, energy prices for households could fall by a further 0.8% in 2015 and possibly ease again slightly in 2016.

Consumer price inflation gradually picking up

Under these conditions, HICP inflation for German consumers would amount to 1.1% in 2014, 1.5% in 2015 and 1.9% in 2016. Despite what remains a rather subdued overall tendency in Germany, these figures would be distinctly higher than the average rate of inflation in other euro-area countries.

Price projection (HICP)

Year-on-year percentage change



Sources: Federal Statistical Office, Eurostat and Bundesbank calculations. 2014 to 2016 Bundesbank projections (for Germany) and calculations based on Eurosystem projections (for the euro area excluding Germany).
 Deutsche Bundesbank

Public finances

Expansionary fiscal measures compensated by good conditions for public finances

In 2013, general government again recorded a small surplus (following the revision by the Federal Statistical Office in May: +0.2% of GDP). Public finances continued to reap the benefits of low interest rates and low unemployment. In light of the weak upturn in economic output on an annual average, the surplus was somewhat higher after cyclical adjustment.¹² Public finances will benefit from cyclical factors in the forecast period.¹³ The structural deterioration in the budget on account of the expansionary fiscal measures until 2015 will be largely masked by these cyclical factors as well as by a further decrease in the interest burden. The close-to-neutral fiscal stance charted for 2016 onwards means that factors providing ongoing relief will prevail; besides economic activity, these notably include the shrinking interest expenditure ratio and fiscal drag¹⁴. This would improve the general government budget and generate a

marked, albeit largely cyclically induced, surplus.

The expectation that the financial balance will change only slightly in 2014 and 2015 is based on various, in some cases countervailing, developments. Although fiscal drag will drive revenue higher, this will be counterbalanced by losses brought about by the aforementioned cut in income taxes and contributions to the statutory pension and health insurance schemes. Moreover, revenue from profit-related taxes in 2014 might rise from the high level

Very little change to general government budget for 2014 and 2015, ...

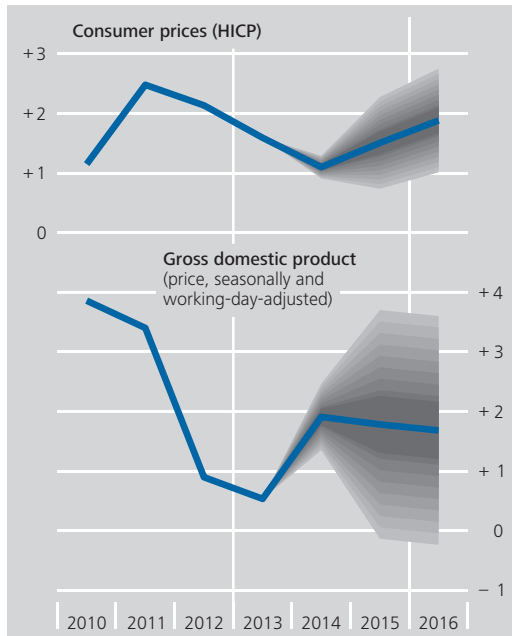
¹² Cyclical adjustment is based here on the Eurosystem's disaggregated framework. See Deutsche Bundesbank, A disaggregated framework for analysing public finances: Germany's fiscal track record between 2000 and 2005, Monthly Report, March 2006, pp 61-76.

¹³ Based on the underlying projection, cyclical factors will once again have a neutral impact on the fiscal balance in 2014 before turning increasingly positive thereafter.

¹⁴ In this context, the term "fiscal drag" encompasses not only the positive revenue effects of bracket creep in income taxation, but also the negative impact of specific excise duties being largely independent of prices.

Baseline and uncertainty margins of the projection*

Year-on-year percentage change



Sources: Federal Statistical Office. 2014 to 2016 Bundesbank projections. * Uncertainty margins calculated on the basis of the mean absolute forecast error. The width of the band that is distributed symmetrically around the most probable value equals double the mean absolute forecast error.

Deutsche Bundesbank

already reached, albeit at a much slower pace than nominal GDP. Overall, the revenue ratio is likely to diminish slightly. The expenditure ratio will be depressed by cyclically accelerated GDP growth in the denominator, shrinking unemployment and a further relief in the debt servicing burden (owing to diminishing average remuneration and the decreasing debt ratio). By contrast, the cyclically adjusted primary expenditure ratio might even rise somewhat. This is the outcome of increased expenditure brought about by the recent pension legislation, higher spending on healthcare and long-term care and a boost to central government funds for transport infrastructure, childcare, education and research. Overall, the favourable economic situation and the decreasing interest burden mask a marked deterioration in the cyclically adjusted primary balance.

... with budgetary burdens masked by favourable economic activity and a decreasing interest burden

From the current perspective, central, state and local government budgets are set to improve gradually overall. Besides the favourable eco-

nomical situation, this owes something to the relief brought about by fiscal drag and the debt servicing burden. By contrast, social security funds' budgets are likely to deteriorate on balance and slip into the red as of 2015. Although they, too, benefit from economic activity, the pension and health insurance schemes' large reserves are likely to be quickly depleted on account of stronger growth in spending combined with temporary cuts in contribution rates. The additional pension benefits will only be partially discernible in the financial balance as these will also be financed – *ceteris paribus* – through higher contribution rates and lower general pension adjustments.

Improvement at various levels of government, reduction of social security reserves

Given the relatively good fiscal positions of central, state and local government as well as GDP growth in the denominator, the forecast envisages a considerable decline in the debt ratio. As things currently stand, this comes on top of continued portfolio reduction at government-owned bad banks. Compared with this, the further (debt-increasing) capital transfers to the ESM and to EFSF assistance loans¹⁵ still envisaged for 2014 are relatively small. Overall, the debt ratio could fall to below 70% by 2016. However, despite the sustained favourable conditions for government budgets, the 60% threshold is still likely to be exceeded by far.

Rapid reduction of debt ratio but 60% threshold still clearly exceeded

Risk assessment

Past experience shows that economic forecasts are fraught with considerable uncertainty. This applies in equal measure to the Bundesbank's projections, as explained in the box on pages 15-18. Therefore, point forecasts are augmented by uncertainty intervals founded on past forecast errors. Additionally, a risk profile is sketched, which includes variants regarding conditioning assumptions.

Risk assessment and forecast error

¹⁵ ESM: European Stability Mechanism, EFSF: European Financial Stability Facility.

How informative are the point forecasts in the Bundesbank's macroeconomic projections?

Point forecasts of major macroeconomic variables are a key part of the Bundesbank's macroeconomic projections which, along with the projections of the other Eurosystem central banks, are incorporated into the euro-area forecasts published by the European Central Bank. The general public often focuses on the point forecasts for the annual rates of change of gross domestic product (GDP) and consumer price inflation as measured by the HICP.

The quality of a forecast is mostly judged by its accuracy both with regard to how much it differs from the realised values and in relation to competing projections. One measure of this is, for example, the mean absolute error (MAE) of the forecasts. Moreover, a forecasting method is usually regarded as informative only if it produces smaller errors, on average, than would be the case when simply extrapolating the historical mean.¹

Such a mean value forecast thus represents a "natural" barrier. A forecast which fails to overcome this barrier, thus producing larger errors than the mean value, shows either that the methodology used is inadequate or that the target variable can be forecast only with great difficulty from a given horizon onwards. Shocks – which, by their very nature, cannot be predicted – are one reason for this.

Even if forecasts for certain variables or horizons are not deemed to be informative in the strict sense, there should at least be no systematic upward or downward bias. The errors should therefore offset each other over time and be nearly zero on average. The errors themselves are defined as

the difference between the projected and realised values. Owing to the provisional nature of the initially published figures and subsequent revisions due to an improved information base, particularly for GDP, the data available one year later are used as realised values for the following analysis.²

Given that, starting with the present outlook, the published forecast horizon is being extended by one year for the Eurosystem staff projections (in this case, up to 2016),³ the questions raised in the introduction concerning accuracy, informativeness and degree of bias are pertinent for such a wide forecasting horizon.

The charts on the following page show the MAE and the mean error (bias) of real GDP and consumer prices for each current year (forecasting horizon $h=0$) and the two following years ($h=1$, $h=2$) with the projections being finalised in autumn (third week of November) and spring (third week of May) for the period from 1999 to 2013. As a benchmark, the forecast by Consensus Eco-

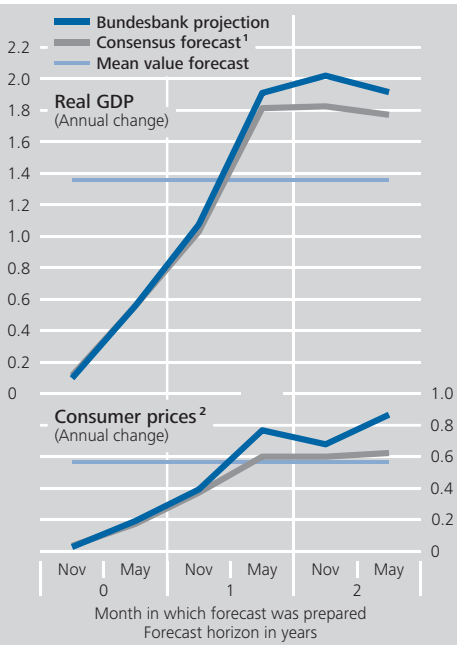
¹ In a formal sense, a forecast is informative if the variance of the forecast error is smaller than the variance of the variable to be forecast. See M P Clements and D F Hendry (1998), *Forecasting Economic Time Series*, pp 84-87. Implicit in this definition is the ex post mean value (in this case, over the period from 1999 to 2013), which was not yet known at the time when the forecast was prepared (in the autumn of 2007, for example). The present descriptive analysis is based on this definition. In principle, however, the ex ante mean value should serve as a reference value for statistical significance analyses. Nevertheless, in this case, too, the chosen reference period should be of sufficient length to limit the impact of "extreme values" such as the severe recession in 2009.

² This convention may also be found in European Central Bank, *An Assessment of Eurosystem Staff Macroeconomic Projections for the Euro Area*, Monthly Bulletin, May 2013, pp 71-83.

³ See European Central Bank, *March 2014 ECB Staff Macroeconomic Projections for the Euro Area*, Monthly Bulletin, March 2014, pp 87-98.

Mean absolute forecast error (1999 to 2013)

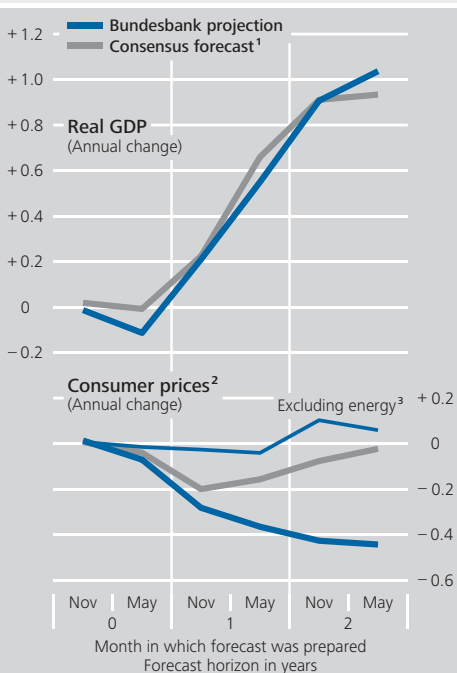
Percentage points



1 Forecast prepared in October and April for a horizon of two years. **2** Bundesbank: HICP, consensus: CPI.
 Deutsche Bundesbank

Mean forecast error (1999 to 2013)

Percentage points



1 Forecast prepared in October and April for a horizon of two years. **2** Bundesbank: HICP, consensus: CPI. **3** 2000 to 2013.
 Deutsche Bundesbank

nomics is used, which is produced by averaging various individual projections by re-search institutions and other professional forecasters.⁴ Such combined forecasts are generally accurate as the risk of major forecast errors is reduced.⁵ The MAE of the Consensus forecast therefore sets an ambitious benchmark.

In comparison with Consensus, it is evident that the Bundesbank projections – measured by the MAE – perform well for the current year and, with certain qualifications, for the following year as well. The MAE is on a par with that of Consensus Economics.⁶ From the spring projection for the following year, however, the MAE of the Bundesbank’s projections is some 10% to 20% above that of the Consensus forecast; the informativeness of both institutions’ forecasts also diminishes significantly. The MAE is above that of the mean value forecast. This applies, in particular, to the projection of GDP, but to a lesser extent to the inflation forecast as well. As regards the size of the errors, it should be noted that the crisis and upturn years of 2009 and 2010 accounted for a considerable proportion of almost 30% of the MAE.

Furthermore, an analysis of the forecast errors shows that only the projections for the current year are to be classified as unbiased. The estimations for one year and two years ahead are, by contrast, too optimistic: there is a tendency to overestimate real GDP growth and to underestimate the

4 See <http://www.consensus-economics.com> and R Batchelor (2001), How Useful are the Forecasts of Intergovernmental Agencies? The IMF and the OECD versus the Consensus, Applied Economics 33, pp 225-235.

5 See A Timmermann (2006), Forecast Combinations, in: G Elliot, C Granger and A Timmerman (eds), Handbook of Economic Forecasting, Vol 1, pp 135-196.

6 The Bundesbank projects consumer prices using the HICP, the Consensus forecast uses the CPI.

rise in consumer prices.⁷ Only the Consensus forecast of prices appears to be more or less unbiased for a horizon of two years.

Upon closer inspection of the underlying time period from 1999 to 2013, the Bundesbank's one-year and two-year ahead projections of real GDP can be classified as cautiously optimistic. Growth rates of under 1.2% were mostly overestimated, especially in the period from 2001 to 2005 and in the recession year of 2009, while higher rates were systematically underestimated. By comparison, consumer prices were invariably underestimated, except for the projections for 2009 which were prepared in 2007 and 2008. For 2002, 2003 and 2013 the projections were, however, remarkably accurate across all horizons.

For longer forecasting horizons, the Bundesbank's projections – as mentioned earlier – fall somewhat short of those prepared by Consensus Economics. Nevertheless, a fair comparison for such horizons is possible only with some qualification. In the Bundesbank's projection, path dependency plays a key role, for example. Today's forecast for tomorrow also influences today's forecast for the day after tomorrow. This means that errors are, to some degree, transferred from one forecasting horizon to another. This is true only to a certain extent for the Consensus forecast, since its path dependency is partly neutralised by averaging a large number of individual forecasts.

Furthermore, external assumptions have a major impact on the projection outcome. The projections of the Eurosystem national central banks are conditioned on uniform, jointly defined assumptions about interest rates, exchange rates, sales market growth, foreign competitors' prices and oil prices.⁸ The chart at the bottom of the previous page shows that the Bundesbank's projec-

tions for the HICP excluding energy are largely unbiased across all forecasting horizons. The tendency to understate inflation in the Bundesbank's projections can therefore be attributed mostly to the jointly defined oil price assumptions within the Eurosystem. The projections excluding the energy component are also more informative than the overall index. Only the MAE of the last projected year is above that of the mean value forecast.⁹

In order to examine the impact of the external assumptions in greater depth, all the Bundesbank's projections from 2006 onwards were recalculated using the "correct" assumptions, ie the subsequently realised values of the conditioning variables. To do this, corresponding shocks were inserted in the Bundesbank's macroeconomic model and their effects on the projection published at that particular point in time were determined.¹⁰ From this, it is then possible to identify how far the most important conditioning variables influenced the forecast errors between 2006 and 2013. In each case, there remains an error which – according to the model calculations – cannot be attributed to the assumptions. This breakdown into potential causes is shown

⁷ The ECB and the OECD come in various studies to the same conclusion. See European Central Bank, *An Assessment of Eurosystem Staff Macroeconomic Projections for the Euro Area*, loc cit; and N Pain, C Lewis, T-T Dang, Y Jin and P Richardson (2014), *OECD Forecasts During and After the Financial Crisis: A Post Mortem*, OECD Economics Department Working Papers, No 1108.

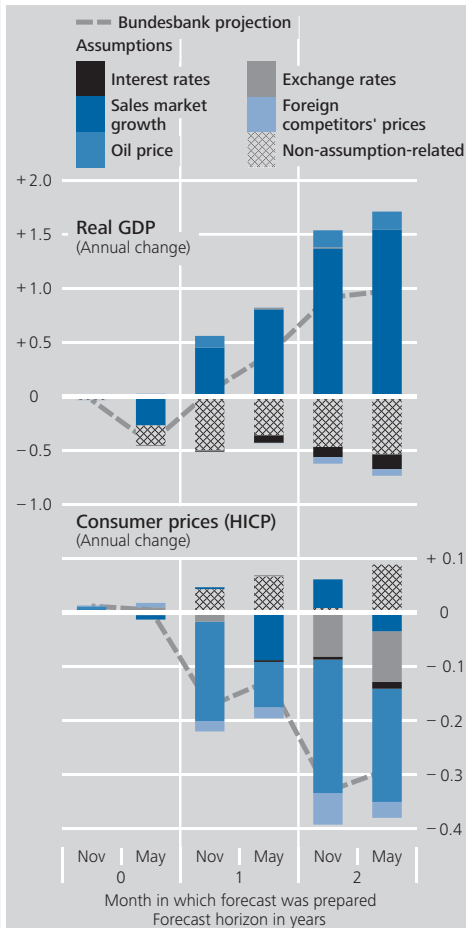
⁸ For further information on the methods used and the preparation of the (technical) assumptions, see European Central Bank, *A Guide to Eurosystem Staff Macroeconomic Projection Exercises*, June 2001; as well as the European Central Bank's *Monthly Bulletin on the macroeconomic projections*, published every March, June, September and December.

⁹ Not included in the upper chart on the previous page. HICP ex energy: MAE (May, h=2) = 0.6, MAE (mean value forecast) = 0.4.

¹⁰ The macroeconomic model has been used since 2006 as a key instrument for generating the projection baseline and for accompanying simulations.

Factors contributing to mean forecast error (2006 to 2013)*

Percentage points



* Derived from simulations using the Bundesbank's macro-econometric model.
 Deutsche Bundesbank

in the chart above. For real GDP, the assumption about sales market growth (and thus about global economic activity) drives the forecast errors most strongly; in the case of consumer prices, it is, as expected, the price of oil. Interest rate assumptions have a relatively minor impact. It is striking that the assumption-related errors are lessened by the non-assumption-related residual. However, it is only for a horizon of two quarters or longer that the conditioning assumptions determine the projection to a greater extent. A factor in this instance is that the forecasts of purely statistical models play a larger part over short horizons.¹¹

All things considered, the question as to the informativeness of the Bundesbank's projections for the current year and, in the autumn projection, for the following year can indeed meet with a positive response: applying the strict definition used here, the point forecasts are informative and they are competitive. Longer horizons, as is also the case for other institutions, suffer from larger forecast errors and biases with a tendency to overestimate real GDP and to underestimate consumer price inflation. Model simulations point to a marked impact exerted by the jointly defined assumptions in the Euro-system, especially with regard to the inflation forecasts. Against this backdrop, the longer horizon used from this round of projections onwards is designed mainly to model macroeconomic developments in a setting where earlier disruptions are receding and new disruptions are absent.

¹¹ See Deutsche Bundesbank, Forecasting models in short-term business cycle analysis – a workshop report, Monthly Report, September 2013, pp 69-83.

*External risks to
economic
growth*

The present projection assumes that global economic growth will firm and that the euro area will recover gradually. Compared with this baseline scenario, risks are predominantly on the downside. The threat of geopolitical tensions has risen perceptibly in recent months and, if the situation flares up, uncertainty is likely to spread more quickly once again and put the upturn in investment at risk. Additionally, there is still a residual risk of financial markets triggering abrupt adjustment processes in emerging market economies. And lastly, the nascent recovery process in the euro area is fragile and needs to be bolstered further by economic policy reform measures. Thus, the assumptions underlying the projection for sales market growth and the path for exports derived therefrom should be seen as optimistic.

*Domestic risks
to economic
growth*

Opportunities and risks for economic growth in the domestic economy chiefly concern the labour market. The present projection assumes that the reserves in the domestic labour market are largely exhausted, that the latest political measures diminish potential labour input and

that immigration will gradually recede. If the supply-side conditions prove more favourable than assumed here, GDP growth is likely to be stronger and wage pressure weaker. In a scenario in which shortages increase more rapidly, for instance because immigration decreases at a faster pace, wages, at least, would rise more quickly and real economic growth could fall short of the path outlined here.

A distinction also needs to be drawn between external and domestic risks for the price projection. This first raises the question whether the decline in crude oil prices derived from forward prices is consistent with a scenario of increasing global economic growth. Moreover, the appreciation of the euro in recent months has increased the likelihood of a rebound. Thus, the German HICP rate is predominantly faced with upside risks from the external setting. The degree to which price inflation is being driven domestically is dictated primarily by the extent of shortages in the labour market. The corresponding uncertainties also shape the risk profile of the inflation forecast.

*Price projection
risks*