

## Outlook for the German economy – macroeconomic projections for 2016 and 2017

*The German economy is currently growing primarily on the back of lively domestic demand. The main drivers are the favourable labour market situation and substantial increases in households' real disposable income. Foreign trade, by contrast, is currently being hampered by frail demand from the emerging market economies, and this is making itself felt on industrial investment. With export markets outside the euro area expected to rebound and economic growth within the euro area gaining a little more traction, the healthy underlying state of the German economy should stand out even more clearly over the next two years.*

*In this setting, growth of 1.7% in Germany's real gross domestic product (GDP) this year could be followed by a rise of 1.8% in 2016 and 1.7% in 2017. The anticipated upturn in growth is masked by calendar effects. Adjusted for working-day variations, growth rates would stand at 1.7% in 2016 and 1.9% in 2017, following 1.5% this year. The expected rise in GDP thus significantly outstrips the estimated potential growth rate, which has been lifted slightly to 1.3% per annum for the next two years on account of the influx of refugees. Aggregate capacity utilisation can therefore be expected to climb distinctly and build up a widening gap over normal utilisation levels. Despite the expansionary effect which migration is having on the labour supply, the labour market will experience shortages to a growing extent, driving up wage increases. Germany's general government budget is expected to post a higher surplus still in the current year and record a more or less balanced fiscal outcome in 2016 and 2017 as mounting expenditure, inter alia on account of the influx of refugees, will clearly offset favourable cyclical factors and the lighter interest payment burden.*

*Against this backdrop, consumer price inflation will accelerate as the dampening effect of crude oil prices on inflation gradually peters out. This should more visibly reflect the feed-through of rising domestic cost pressures in the price level. As measured by the Harmonised Index of Consumer Prices (HICP), inflation could rise from 0.2% this year to 1.1% next year and 2.0% in 2017. Excluding energy, HICP inflation should climb from 1.1% in 2015 to 2.0% in 2017.*

*Compared with the June 2015 projection, expectations for economic growth have now been raised slightly for 2017, while the expectations for inflation have been pared back over the entire forecast horizon, notably in 2016. The adjustment to expected price developments largely reflects the renewed downturn in crude oil prices, which had not been expected in June. Downside risks to economic growth would arise if the current sluggish dynamics in a number of emerging market economies (EMEs) were to worsen. In addition, the scale of the expected refugee influx and the attendant macroeconomic and fiscal implications are subject to major uncertainty.*

## ■ Current situation

*German economy on slightly flatter growth path in Q2 and Q3*

The pace of expansion of the German economy decelerated somewhat in the second and third quarters of 2015. After posting strong growth in the fourth quarter of 2014 and the first three months of 2015, real GDP rose by 0.8% in seasonally and calendar-adjusted terms, just short of the rate projected in the June projection.<sup>1</sup>

*Private consumption still robust*

The German economy is currently growing primarily on the back of robust domestic demand. In the second and third quarters private consumption continued the robust growth trend that has been in evidence since mid-2014, though with slightly weaker momentum. Positive impulses were provided mainly by higher income levels in the wake of stronger employment growth and a marked rise in earnings, combined with the increases in purchasing power brought about by the lower crude oil prices.

Business investment, by contrast, which had increased steeply in the latter part of 2014 and in early 2015, declined distinctly. One factor in this may have been that industrial output remained on the flat trajectory that it has been locked into for some time now. Industrial firms are comfortably processing their stock of orders with their existing production capacities at normal utilisation levels. Added to this, the recent fall-off in new orders has given them little reason to expand their production capacities. The industrial investment ratio was not far off its long-run average despite its recent setback.<sup>2</sup>

*Business investment down*

The underlying upward trend in Germany's residential real estate market remains intact. While housing investment was only slightly up on the winter level, it should be noted that investment in the fourth quarter of 2014 and the first quarter of 2015 had been bolstered by exceptionally mild weather conditions.

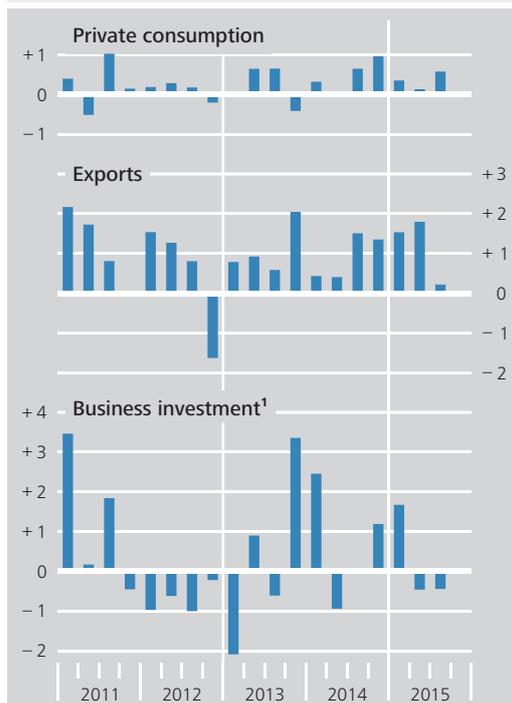
*Housing construction investment stable*

Export growth remained buoyant into the second quarter, with deliveries of goods and services to euro-area and non-euro-area countries alike growing at an extremely brisk pace, even though the export markets outside the euro area have been slackening since the beginning of the year. German exporters could not fully maintain their substantial gains in market share outside the euro area, which were probably aided by the euro's depreciation. Exports lost much of their momentum in the third quarter. Foreign trade is missing the stimulus from non-euro-area markets, especially from EMEs in the Far East. As for imports, the downturn in business investment meant that import growth was not only a little flatter than hitherto but that it also fell short of the figure assumed in the June projection.

*Exports and imports less dynamic than hitherto*

### Major demand components

Quarter-on-quarter percentage change, price, seasonally and calendar-adjusted



Source: Federal Statistical Office. <sup>1</sup> Private non-residential fixed capital formation.  
 Deutsche Bundesbank

<sup>1</sup> See Deutsche Bundesbank, Outlook for the German economy – macroeconomic projections for 2015 and 2016 and an outlook for 2017, Monthly Report, June 2015, pp 13-29.

<sup>2</sup> Note also that the national accounts data released in August 2015 revised business investment upwards, in particular in the fourth quarter of 2014 and the first quarter of 2015.

*Employment rising sharply; unemployment stable*

Employment rose by 215,000 persons in the second and third quarters, which was fractionally higher than the figure assumed in the June projection. The buoyant employment situation probably owed much to migrants from other EU countries, who mostly assimilate well into the labour market. Seasonally adjusted unemployment, on the other hand, barely declined any further.

*Growth in wage costs slightly higher than expected*

Year-on-year growth in wage costs in the second and third quarters, measured in terms of compensation per employee, averaged 3.0% and was thus slightly higher than expected. This was due to wage drift, which was up somewhat in spring due to slightly higher bonuses paid by industry. The effect of the introduction of the general minimum wage on actual earnings observed hitherto is broadly consistent with the assessments presented in earlier projections.<sup>3</sup>

*Renewed drop in crude oil price pushing down inflation rate*

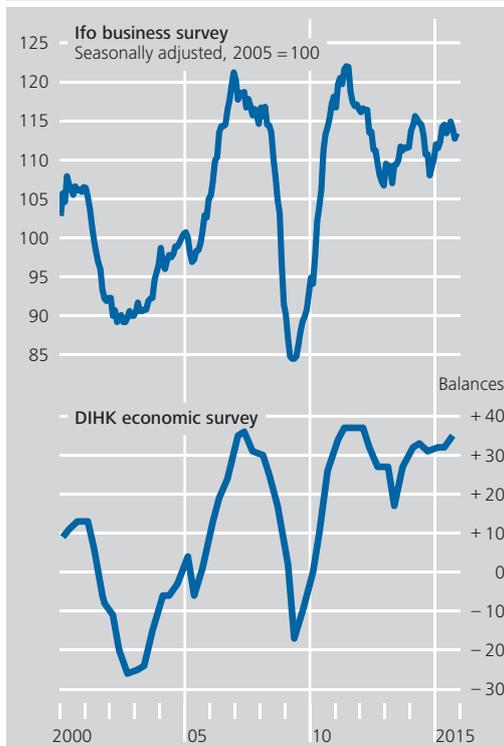
Price pressures since the beginning of the second quarter have eased rather than climbing markedly, as had been anticipated in June. The June projection had forecast an annual HICP rate for October of 0.9%, compared with the actual outturn of just 0.2%. This quite large forecasting error was mainly attributable to the renewed downturn in crude oil prices, although price inflation for services similarly fell short of expectations, with the increase in rents proving to be surprisingly small.<sup>4</sup> On the other hand, the price increase for goods, notably for food, had been underestimated in June. The non-energy HICP inflation measure therefore matched the expected rate of 1.4%.

## ■ Major assumptions

*Assumptions-based forecast*

This projection is based on assumptions made by the Eurosystem's experts concerning the global economy, exchange rates, commodity prices and interest rates. The assumptions are based on information available as at 12 November 2015. The assumptions regarding economic activity in the euro area are derived from

### Business situation



Sources: Ifo business survey and DIHK economic survey.  
 Deutsche Bundesbank

projections made by the national central banks of the euro-area countries.

Global economic growth has not accelerated during the course of the year as fast as the June projection had assumed. Activity in the industrial countries was robust, broadly matching the expectations, but in a number of emerging market economies it failed to meet the June projection. Structural problems as well as macroeconomic and financial imbalances are continuing to hamper the growth prospects of various EMEs. The low commodity prices are compounding these problems for a number of

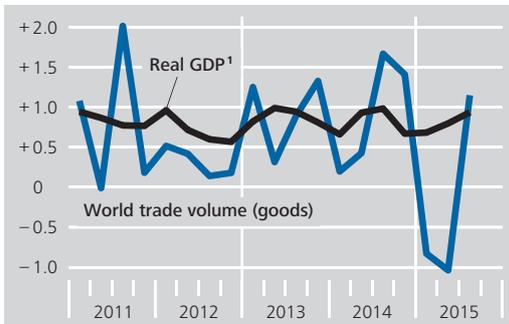
*Global growth marginally stronger but still moderate*

<sup>3</sup> See also Deutsche Bundesbank, Initial indications of how the minimum wage is affecting the increase in earnings, Monthly Report, August 2015, pp 55-56.

<sup>4</sup> Rents for existing lettings predominate in the consumer price index. They normally adjust to rents for new lettings with a substantial time-lag and are less volatile. Since rent levels for new lettings have been rising strongly for a number of years now, the consumer price component "rents" had been expected to accelerate further.

### Global economic output and world trade

Seasonally adjusted, quarter-on-quarter percentage change



Sources: Bundesbank calculations on the basis of national statistics and Centraal Planbureau. <sup>1</sup> Aggregate of selected industrial nations and emerging market economies, which, together, represent four-fifths of global economic output. Weighting on the basis of purchasing power parities.

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commodity-extracting EME countries.<sup>5</sup> The rate of expansion in the world economy (excluding the euro area) is expected to accelerate moderately in 2016 and 2017, and global growth (weighted by purchasing power parities) could advance from 3% this year to 3½% in 2016 and 4% one year later. Growth rates would thus remain at a moderate level.

*Global trade somewhat more dynamic following decline in first half-year*

The volume of global trade actually contracted in the first six months of the year. It fell well short of the assumptions made in the June projection and is difficult to reconcile with the reported global growth figures. Recessions and the depreciation of domestic currencies in a number of major EMEs triggered a sharp drop in imports, which also receded in several industrial countries. While the latter should be a short-lived phenomenon, the recovery of import demand in several EMEs might turn out to be more hesitant. This has prompted further sharp downward revisions to the assumptions for international trade (excluding the euro area). Following on from just +½% in the current year, growth rates for the next two years are projected to be no more than 3% and 3¾%, well short of the average of 4½% *per annum* observed since 2010.

Expectations of an abundant supply of crude oil in tandem with subdued global industrial

activity as well as weaker demand dynamics in some EMEs have contributed to a renewed marked decline in crude oil prices since the June projection. While the futures prices from which the assumptions for crude oil prices are derived still point upwards, crude oil prices in this projection are one-quarter (for 2016) and one-fifth (for 2017) lower than what had been assumed in the June projection. The prices of other commodities have likewise fallen again considerably. It might take commodity prices until 2017 to rebound given the expected moderate pace of expansion of the global economy.

*Following further slide, crude oil and other commodity prices likely to rebound a little towards end of forecast period*

With policy rates remaining low, the Eurosystem continued the expanded asset purchase programme (EAPP) that it launched in March 2015. The ECB Governing Council also recalled that the programme provides sufficient flexibility should the anchoring of medium to long-term inflation expectations and the objective of returning the rate of HICP inflation back to a level below, but close to, 2% in the medium term be jeopardised. Despite the robust development of domestic demand in the euro area, the ECB Governing Council announced in October that it would re-examine the degree of monetary policy accommodation at its December meeting. The prospects of a sustained high supply of liquidity and a further drop in the deposit rate again slightly dampened market expectations of future interest rate movements. The technical assumptions derived from these expectations regarding the trajectories of short-term interest rates and yields on nine to ten-year government bonds are thus still lower than the assumptions that underlay the June projection. In line with this, the interest rates for bank loans in Germany assumed in this projection also remain at a very low level. According to the Ifo Credit Constraint Indicator and an economic survey conducted in autumn by the German Chamber of Industry and Commerce

*Expansionary monetary policy depressing interest rates, financing terms still extremely favourable*

<sup>5</sup> See Deutsche Bundesbank, The slowdown in global economic growth and the decline in commodity prices, Monthly Report, November 2015, pp 16-17.

(DIHK), access to credit in Germany is likewise still very favourable.

*Monetary policy also keeping euro exchange rate low*

Against the backdrop of clear signals of an imminent policy rate rise by the US Federal Reserve and the announcements made by the ECB Governing Council in October, which bolstered expectations of a further loosening of monetary policy in the euro area, the euro recently depreciated further against the US dollar. In the period used for deriving the exchange rate assumptions, the single currency traded at US\$1.09, which was 3 cents lower than the assumptions in the June projection.<sup>6</sup> The slight downward drift continued after this projection was concluded.

*Recovery process in the euro area ongoing*

The economic recovery in the euro area has continued over the year to date. Significant growth stimuli have emanated from domestic demand. In particular, private consumption spending has continued to benefit from employment growth and the additional scope for expenditure resulting from persistently low energy prices. The demand backlog for consumer durables has also provided a stimulus in a number of countries. This demand had been curbed in the past few years on account of a weak income trend and heightened labour market risk.<sup>7</sup> More favourable financing conditions and the easier access to credit are encouraging firms to step up their investment. Much like in Germany, euro-area exports rose distinctly in the first half of the year, despite declining world trade. Exporters probably benefited from increased competitiveness, due partly to the euro's depreciation, and from strong demand from a number of industrial countries. Trade within the euro area also picked up considerably, boosted by the increased stimulation of demand.<sup>8</sup> Exports are likely to rise fairly steeply in the next two years, too, with exports to countries outside the euro area expected to benefit less from the euro's low exchange rate and more from the recovery in world trade. Following calendar-adjusted GDP growth of 1.5% in the current year, the growth rates expected for the euro area

### Major assumptions of the projection

Item	2014	2015	2016	2017
Exchange rates of the euro				
US dollar/euro Effective <sup>1</sup>	1.33	1.11	1.09	1.09
101.8	92.3	91.7	91.7	
Interest rates				
Three-month Euribor	0.2	0.0	-0.2	-0.1
Yield on government bonds outstanding <sup>2</sup>	1.2	0.5	0.8	1.0
Commodity prices				
Crude oil <sup>3</sup>	99.4	54.3	52.2	57.5
Other commodities <sup>4, 5</sup>	-8.6	-18.7	-5.2	4.1
German exporters' sales markets <sup>5, 6</sup>	3.6	1.8	3.4	4.3

<sup>1</sup> Compared with the currencies of the 19 most important trading partners of the euro area (EER-19 group of currencies); 1999 Q1 = 100. <sup>2</sup> Yield on German government bonds outstanding with a residual maturity of over nine and up to ten years. <sup>3</sup> US dollars per barrel of Brent crude oil. <sup>4</sup> In US dollars. <sup>5</sup> Year-on-year percentage change. <sup>6</sup> Working day-adjusted.

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(excluding Germany) for 2016 and 2017 are slightly lower than those given in the June projection, at 1.7% and 1.9%; this is because of lower external stimuli owing to the downward revision to the assumptions for world trade. This means that average aggregate capacity utilisation of the other euro-area countries will not yet be back to normal levels by the end of the forecast period.

The fiscal policy measures in Germany considered in this projection will worsen the general government fiscal balance up to 2017 by ½% of GDP compared with 2015 (primarily in 2016).<sup>9</sup> Changes in taxes and levies will have practically no effect on balance. On the one hand, the statutory health insurance institutions are expected to progressively raise their respective additional contribution rates on average. Moreover, the contribution rate for

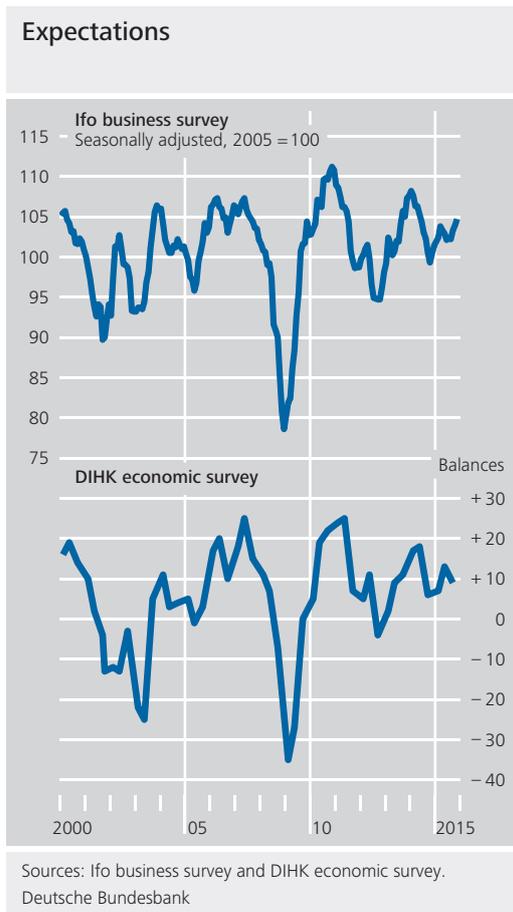
*Expansionary fiscal policy measures*

<sup>6</sup> The assumptions concerning the effective euro exchange rate (against 19 currencies that are important for the euro area's foreign trade) are largely unchanged compared with June.

<sup>7</sup> Although the high influx of refugees is also giving rise to extra government spending in a number of other countries besides Germany, the additional demand effects are likely to be small for the euro area as a whole.

<sup>8</sup> See Deutsche Bundesbank, Recent developments in the exports of euro-area countries, Monthly Report, November 2015, pp 21 to 24.

<sup>9</sup> This projection only incorporates measures which have been adopted or adequately specified and are likely to be implemented.



the public long-term care insurance scheme is set to be increased by a further 0.2 percentage point in 2017. On the other hand, taxes are being lowered, notably through a rightward shift in the income tax schedule and a further increase in the basic income tax allowance at the start of 2016. On the expenditure side, a renewed expansion of benefits under the second reform of long-term care in 2017 as well as additional healthcare spending and the increase in the housing allowance will push up social benefits. Added to this is higher spending on infrastructure, education, research and social housing construction. The measures included here need to be supplemented by distinctly higher spending in connection with the influx of refugees.<sup>10</sup>

## ■ Economic outlook<sup>11</sup>

In the fourth quarter of 2015 and first quarter of 2016, the expansion of aggregate output in

Germany is unlikely to markedly exceed the pace of growth in the preceding two quarters, but probably will not remain below that rate either. Industrial output could continue to suffer into the first quarter of 2016 from the recent weak order intake, even though sentiment in manufacturing has already rebounded from its slowdown in the second and third quarters of 2015, according to the Ifo Institute's surveys. The services sectors are expected to carry on growing robustly.

*Still no pick-up in economic growth in 2015 Q4 and 2016 Q1 due to weak industrial activity*

The German economy could gain additional momentum over the course of 2016 if exports, as assumed, recover from their sluggishness in the second half of 2015 and business investment also subsequently revives as capacity utilisation rises. A key prerequisite for this is that world trade expands at a faster pace. However, the quite steep growth in Germany will continue to be largely driven by domestic demand and, in particular, by private consumption, which is reaping the benefits of low unemployment, distinct increases in real wages and rising government transfers. The influx of refugees is playing an important role in both government monetary transfers and in the comparatively large increase in government consumption expenditure.

*In 2016 and 2017, private consumption should ensure solid basic pace, exports and investment will give growing dynamic*

Under these conditions, fourth-quarter growth in seasonally and calendar-adjusted real GDP could be lifted to 2.0% over the course of 2016 and may almost maintain this pace in 2017 with growth of 1.8%.<sup>12</sup> In terms of annual averages, this results in GDP growth, adjusted for seasonal and calendar effects, of 1.7% in 2016 and of 1.9% for 2017, after 1.5% in 2015. The shift from a positive calendar effect in 2016 to a distinctly negative effect in 2017 stemming

*Ongoing robust growth ...*

<sup>10</sup> This is discussed in more detail in the box on pp 24-28.

<sup>11</sup> This projection for Germany was finalised on 19 November 2015 and incorporated into the projection for the euro area published by the ECB on 3 December 2015.

<sup>12</sup> These annual rates measure the year-on-year percentage changes in seasonally and calendar-adjusted GDP in the respective fourth quarter. The fourth-quarter rate focuses on the economic profile over the course of a year, whereas the average rate incorporates the positive and negative carry-overs from the previous year.

from the different number of working days has the result that the unadjusted annual average growth rates paint a somewhat different picture (+1.8% for 2016 and +1.7% for 2017, after +1.7% in 2015). For 2016, the same level of GDP growth is thus expected as in the June projection, whereas a slightly higher increase is now anticipated for 2017.

*... will push capacity utilisation above normal levels*

Overall, the German economy would expand significantly faster than potential output in the next two years. At 1.3% per year over the projection period, the expansion of potential output is now estimated to be marginally higher than it was in June, owing to the impact of the influx of refugees on the labour force potential (including a certain crowding-out effect on other net migration) and the indirect effects on productivity growth and fixed capital formation. The output gap, which is already slightly positive this year, would continue to widen, and the German economy's production capacities would see considerably higher utilisation in 2017 than the long-run average.

*Exports to pick up again*

Besides robust domestic activity, a key precondition for the expected strengthening of the growth process in 2016 is a marked acceleration of exports. However, the weak performance of late is likely to be only gradually overcome. This is suggested by the declining number of orders received from abroad in the third quarter and the worsened export expectations of industrial enterprises revealed by the DIHK's autumn survey. Given the assumption of stronger growth in international sales markets, however, exports should pick up again over the course of 2016 and largely maintain this higher pace in 2017. Even though the boost provided by the euro's depreciation has probably largely run its course, German exporters could, after a certain dip, potentially slightly expand the market share they gained up to mid-2015 in trade with non-euro-area countries, while slight reductions in market share are probable in trade with other euro-area countries owing to German firms' deteriorating price competitiveness.

## Aggregate output and output gap

Price, seasonally and calendar-adjusted



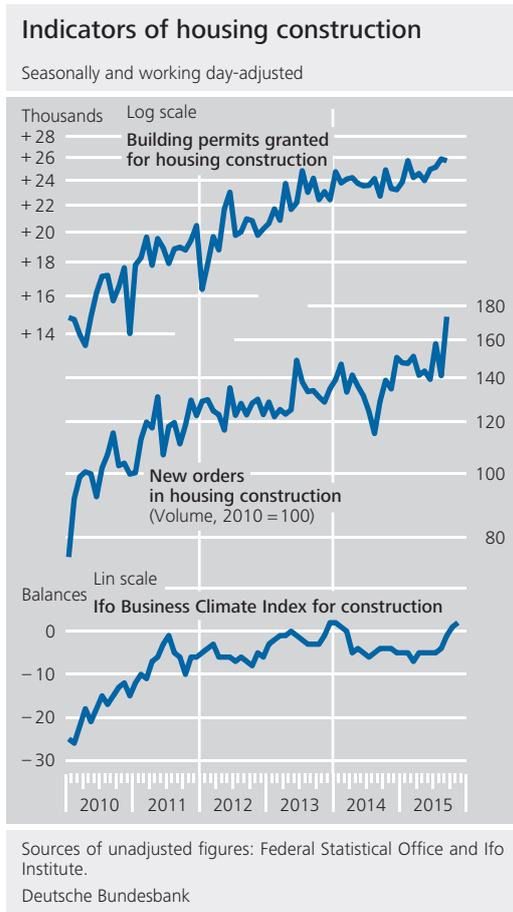
Sources: Federal Statistical Office and Bundesbank calculations. 2015 to 2017 Bundesbank projections. <sup>1</sup> Deviation of GDP from estimated potential output. Deutsche Bundesbank

## Technical components of the GDP growth projection

As a percentage or in percentage points

Item	2014	2015	2016	2017
Statistical carry-over at the end of the previous year <sup>1</sup>	0.7	0.5	0.5	0.8
Fourth-quarter rate <sup>2</sup>	1.5	1.4	2.0	1.8
Average annual GDP growth rate, calendar-adjusted	1.6	1.5	1.7	1.9
Calendar effect <sup>3</sup>	0.0	0.2	0.1	-0.2
Average annual GDP growth rate <sup>4</sup>	1.6	1.7	1.8	1.7

Sources: Federal Statistical Office; 2015 to 2017 Bundesbank projections. <sup>1</sup> Seasonally and calendar-adjusted index level in the fourth quarter of the previous year in relation to the calendar-adjusted quarterly average of the previous year. <sup>2</sup> Annual rate of change in the fourth quarter, seasonally and calendar-adjusted. <sup>3</sup> As a percentage of GDP. <sup>4</sup> Discrepancies in the totals are due to rounding. Deutsche Bundesbank



*Business investment pick-up only in the course of 2016*

Business investment is also likely to remain slack in the fourth quarter of 2015 and first quarter of 2016. A crucial factor in this is the subdued outlook for industry, where utilisation of production capacities is merely normal, meaning there has so far been no need for investment in capacity expansion. The healthy financial position of enterprises and the ongoing extremely favourable financing conditions are likely to be used primarily for replacement and modernisation projects in the first instance. In the course of 2016, however, investment is expected to revive if robust domestic activity is augmented by additional stimuli from foreign demand and the degree of aggregate capacity utilisation climbs into significantly positive territory.

*Housing investment set to accelerate again from existing high level*

Housing investment is likely to pick up again more strongly in the projection period. Building permits and new orders in housing construction have risen considerably of late, pointing to robust demand in this area. What is more,

financing terms remain favourable, and the high immigration level is still providing momentum. However, the expected population profile of this inflow of immigrants contrasts sharply with the previous pattern given the increasing share of refugees, which makes it more difficult to assess the impact on the housing markets.<sup>13</sup>

Notwithstanding the investment packages agreed by the Federal Government and the comparatively good fiscal situation of many state and local governments, growth in government investment will probably be no more than muted this year. Government construction investment is, however, expected to rise perceptibly in the next two years as there are plans to ramp up infrastructure investment. Moreover, higher growth in government investment in machinery and equipment is in the pipeline once the current delays in military procurements are resolved.<sup>14</sup>

*Higher government investment*

Overall, gross fixed capital formation should make an increasing contribution to economic growth over the next two years. While the increase in fixed capital formation is likely to remain modest next year, fixed investment is likely to pick up again noticeably in 2017 on the back of stronger private investment.

*Gross fixed capital formation to make increasing contribution to economic growth*

Private consumption will remain the driving force behind the buoyant domestic demand over the projection horizon. This is due mainly to the continuing upbeat labour market situation, which is marked by sharply rising employment and low unemployment as well as perceptible wage growth. Moreover, the growth in real disposable incomes as a result of these favourable fundamentals is being amplified by exceptional factors. While the introduction of the minimum wage and the sharp drop in energy prices provided stimulus this year, the additional government monetary transfers in connection with the influx of refugees will pro-

*Private consumption driving domestic demand, ...*

<sup>13</sup> For details, see the box on pp 24-28.

<sup>14</sup> Military procurements are booked as government investment in machinery and equipment when they are delivered, which can lead to fairly large fluctuations.

vide a catalyst in 2016 especially, as will income tax cuts, for instance. In addition, the oil price has fallen even lower and will continue to significantly dampen average consumer price inflation next year.

*... but could lose momentum in 2017*

With consumer price inflation picking up again and smaller supportive fiscal effects, real disposable household income is likely to grow at a slightly slower rate in 2017, at 1½%, than in 2015 and 2016. The saving ratio could decline a little next year compared with 2015 when the additional purchasing power gains brought about by lower energy prices are gradually translated *in toto* into higher consumer spending. In terms of real private consumption, this results in growth rates of 2¼% in 2016 and 1½% in 2017, following +2% this year.

*Considerable growth in government consumption*

Government consumption has risen perceptibly this year, and growth looks likely to remain relatively strong over the next two years. This is due to additional healthcare spending as well as the second reform of long-term care in 2017. In addition, payroll spending for child day-care and education is to be stepped up both in general and also as a result of refugee migration. Moreover, the growing number of asylum applications will necessitate higher social transfers in kind.

*Strong rise in imports*

With final demand set to expand overall, imports, too, should rise strongly over the forecast period. Moreover, the import share in important expenditure components should increase further with the continuing international division of labour, although recently revised national accounts data suggest that this trend is slightly flatter than previously assumed. After rising by 6% in 2015, imports could increase by almost 5% and 5½% respectively in the two coming years. European manufacturers, due to their improved competitive position vis-à-vis non-euro-area providers, also as a result of the depreciation of the euro, should benefit more from the revival of demand in Germany.

## Key figures of the macroeconomic projection

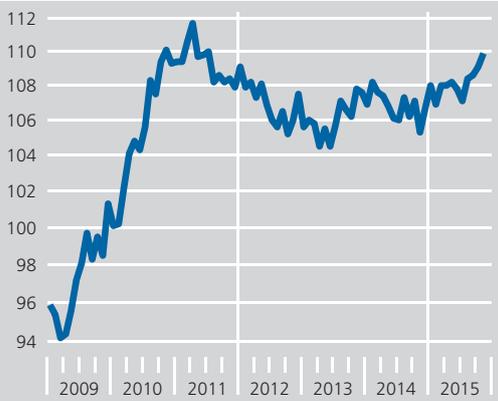
Year-on-year percentage change

Item	2014	2015	2016	2017
GDP (real)	1.6	1.7	1.8	1.7
GDP (real, calendar-adjusted)	1.6	1.5	1.7	1.9
Components of real GDP				
Private consumption	0.9	2.0	2.3	1.6
<i>Memo item</i> Saving ratio	9.5	9.6	9.4	9.4
Government consumption	1.7	2.4	2.4	1.9
Gross fixed capital formation	3.5	2.2	2.4	3.7
Business investment <sup>1</sup>	4.6	2.3	1.5	3.6
Private investment in housing construction	3.3	2.5	2.6	3.0
Exports	4.0	5.6	3.4	3.8
Imports	3.7	5.9	4.9	5.5
<i>Memo item</i> Current account balance <sup>2</sup>	7.3	8.5	8.2	7.7
Contributions to GDP growth <sup>3</sup>				
Domestic final demand	1.5	2.0	2.2	2.0
Changes in inventories	-0.3	-0.6	-0.1	0.1
Exports	1.8	2.6	1.6	1.8
Imports	-1.5	-2.3	-1.9	-2.2
Labour market				
Total number of hours worked <sup>4</sup>	1.2	1.1	1.0	0.7
Employed persons <sup>4</sup>	0.9	0.8	0.9	0.7
Unemployed persons <sup>5</sup>	2.9	2.8	2.8	2.9
Unemployment rate <sup>6</sup>	6.7	6.4	6.4	6.5
Wages and wage costs				
Negotiated pay rates <sup>7</sup>	2.9	2.4	2.4	2.7
Gross wages and salaries per employee	2.7	2.9	2.7	3.0
Compensation per employee	2.6	2.8	2.7	3.2
Real GDP per employed person	0.7	0.9	0.9	1.0
Unit labour costs <sup>8</sup>	1.9	1.9	1.8	2.2
<i>Memo item</i> GDP deflator	1.7	2.1	1.8	2.0
Consumer prices <sup>9</sup>				
Excluding energy	1.2	1.1	1.6	2.0
Energy component	-2.0	-6.9	-2.9	2.5

Sources: Federal Statistical Office; Federal Employment Agency; 2015 to 2017 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 Bundesbank's negotiated wage index). **8** Ratio of domestic compensation per employee to real GDP per employed person. **9** Harmonised Index of Consumer Prices (HICP).

### Ifo employment barometer for Germany

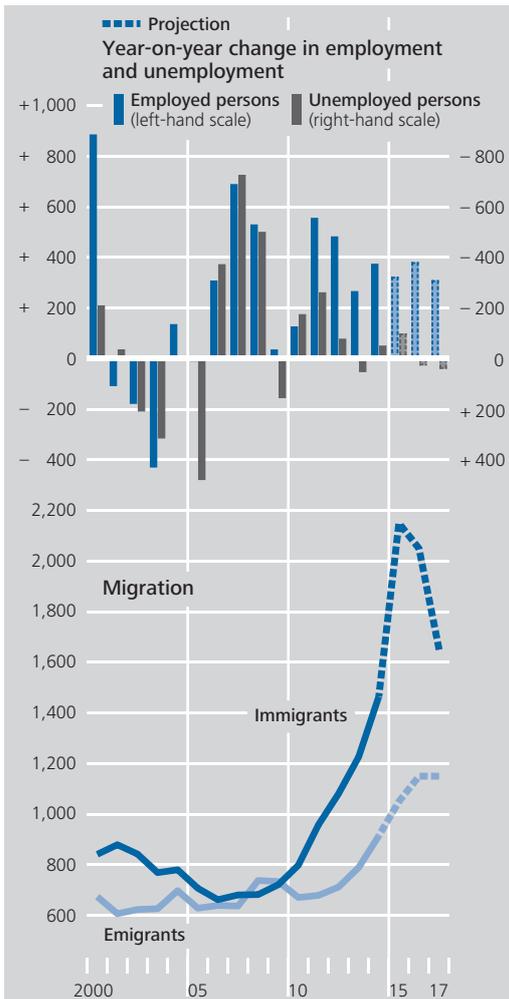
2005 = 100, seasonally adjusted, log scale



Source: Ifo business survey.  
 Deutsche Bundesbank

### Employment, unemployment and migration

Thousands



Sources: Federal Statistical Office and Federal Employment Agency. 2015 to 2017 Bundesbank projections.  
 Deutsche Bundesbank

Germany's trade surplus rose sharply this year. This was driven by strong price effects resulting from continued low crude oil prices as well as developments in exports, which benefited, amongst other things, from the depreciating euro and product range effects. The current account balance is thus also at an especially high level. In the two subsequent years, however, the surplus is likely to shrink somewhat amid rising domestic demand and strong import growth. In addition, import prices should pick up again perceptibly over the projection period. Nonetheless, the surplus is unlikely to fall below 7% of GDP. This is partly because the primary income balance is expected to remain well in positive territory given Germany's large international investment position.

*Slight fall in current account surplus*

### Labour market

The positive labour market development of the past few years should continue during the forecast period due to the overall favourable economic outlook. For the next few months, leading indicators point towards ongoing high demand for labour, especially in several services sectors. The Ifo employment barometer suggests that trade and industry is planning to create a considerable number of new jobs. This is borne out by the record level reached by the Federal Employment Agency's BA-X job index. The enterprises questioned by the Association of German Chambers of Commerce and Industry as part of its autumn survey are only slightly less optimistic. Jobs subject to social security contributions are likely to remain the main driver of employment growth over the projection horizon.

*Ongoing buoyant labour market*

That the continuing high demand for labour has, to date, not caused more severe labour market shortages is due to the steady influx of workers from other EU member states. This year again, a fairly large number of people have migrated to Germany on balance, especially from countries recently granted extended labour mobility within the EU (Romania, Bul-

*Dampening effect of economic immigration on labour market shortages receding*

garia and Croatia). Overall, however, the influx from the east European EU countries, too, now appears to have peaked. This projection assumes that net immigration of non-refugees will drop from around 400,000 in 2015 to approximately 275,000 in 2016 and just under 200,000 in 2017.

*Labour market integration of recognised refugees takes time*

Moreover, the influx of refugees will also be felt in terms of labour supply. However, it will probably be quite some time before refugees are integrated into the labour market in any significant number (for the underlying assumptions on the influx of refugees and its economic and fiscal implications up until 2017, see the box on pages 24 to 28). The effects on the labour market will consequently probably remain limited over the forecast horizon. The introduction of a general statutory minimum wage at the beginning of 2015 will make it even more difficult for refugees, whose qualifications are probably often not in line with labour demand and who lack language skills, to find work. A considerable number of refugees are likely to be insufficiently productive, particularly when they first enter Germany, to make it attractive for potential employers to take them on at wages at or above the minimum wage.<sup>15</sup> As a consequence, many recognised refugees will probably initially be unemployed even though there currently appears to be a comparatively large demand for unskilled workers in some services industries. This could mask an underlying slight decline in unemployment, with the jobless total potentially even rising somewhat over the next two years.

*Growing shortages on the labour market*

Demographic factors imply that the labour supply of the native population will increasingly contract over the projection horizon. In addition, the low level of unemployment (excluding refugees) reached by then will be difficult to reduce further under the prevailing economic and socio-political conditions. Consequently, labour market shortages look increasingly likely. Nor is refugee immigration likely to substantially ease these shortages over the forecast period. Employment growth could

therefore slow somewhat especially towards the end of the projection horizon, despite the robust state of the economy. This might be partly offset by a slightly stronger increase in productivity as capacity utilisation grows, and by slightly longer working hours.

## ■ Labour costs and prices

When estimating increases in negotiated wages, all past pay agreements are taken into consideration and extrapolated beyond their contractual term, taking into account the overall economic situation and industry-specific features. The 2015 pay settlements were predominantly moderate, with average wage increases of 2½% a year. The very moderate wage agreements in the services industries of late and potentially diminished trade union influence as fewer workers are covered by collective bargaining suggest that negotiated wages in these industries are likely to display a flatter growth trajectory. With strong economic growth and increasing shortages on the labour market, the rise in negotiated wages is nonetheless likely to intensify towards the end of the projection horizon. Overall, negotiated pay, as defined in the Bundesbank's negotiated pay rate statistics, will increase by not quite 2½% both this year and next and by around 2¾% in 2017. This represents a slight downward revision for 2016 and 2017 as compared with the June projection.

*Pay agreements show restraint of late*

The general statutory minimum wage of €8.50 an hour, which came into force at the beginning of the year, triggered a pronounced reversal in the wage drift from negative to positive.<sup>16</sup>

*Positive wage drift in the forecast period*

<sup>15</sup> See M Battisti and G Felbermayr (2015), *Migranten im deutschen Arbeitsmarkt: Löhne, Arbeitslosigkeit, Erwerbsquoten*, ifo Schnelldienst 20/2015, pp 39-47.

<sup>16</sup> Only in exceptional cases, does the general minimum wage have a direct impact on the Bundesbank's negotiated pay rate statistics. This is because the Bundesbank's statistics are usually based on an agreed basic pay rate, which presupposes completed vocational training and several years of professional experience, whereas the minimum wage predominantly applies to segments with lower qualification requirements.

## The current influx of refugees – projected impact on the labour market and public finances

The first thing to note when considering the current influx of refugees to Germany is that they are fleeing from great hardship in their home countries. But the current wave of immigration will naturally also impact on the German economy, not least the labour market and public finances. This analysis outlines the assumptions made in the projection in respect of migration and the expected economic repercussions. The aim is to make it easier to interpret the estimates while taking account of the particularly high degree of uncertainty surrounding the future levels and structure of refugee migration and its impact on employment and wages as well as on economic growth and government budgets.

The available information is mostly sparse, necessitating many assumptions which are subject to major uncertainty. Besides gauging the likely scale of refugee migration, the future speed of processing applications for asylum, the share of successful applications and the average duration of stay after rejection of unsuccessful applicants in Germany, these assumptions relate to numerous other factors, including aspects that are key to ensuring the successful integration into the labour market of those allowed to stay. Several of these parameters can be influenced by modifying the institutional and legal framework. This analysis, however, is based on the legislative *status quo* and thus does not anticipate, say, possible additional measures aimed at improving the integration of refugees or the establishment of a system geared to distributing asylum seekers more evenly among the individual EU member states.

By the end of October 2015, Germany's Federal Office for Migration and Refugees (*Bundesamt für Migration und Flüchtlinge* or BAMF) had registered 331,000 initial applications for asylum so far this year. However, there is currently a huge backlog

of applications still waiting to be processed. Consequently, a more reliable indicator might be the number of refugees recorded by BAMF's EASY database, although it was not actually designed to register refugees but rather to organise the distribution of asylum seekers among the various federal states. Up to the end of October, EASY had logged 758,000 applicants, although this figure probably overstates the actual number of individuals applying for asylum in Germany owing to multiple recording or registrations of migrants in transit.

This projection assumes that gross immigration of asylum seekers will total 900,000 in 2015 (see following table). For 2016 as a whole, a further 900,000 refugees are expected. This projection, which includes family members<sup>1</sup> who may later join persons granted asylum, would indicate a major decline relative to the average monthly influx seen in the second half of this year. In 2017, this figure is expected to drop to 600,000. Net immigration of asylum seekers, ie inflows minus outflows<sup>2</sup> could total over 1½ million between 2015 and 2017. To this total must be added other net immigration. In the past few years, this has mainly taken the form of economic migrants from other EU countries. This kind of migration is expected to contract sharply over the projection period as net immigration from eastern and southern Europe appears to have already peaked. The macro-economic projection further assumes that

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<sup>1</sup> In line with the "Geneva" Convention relating to the Status of Refugees, the Residence Act (*Aufenthaltsgesetz*) generally only permits close family members (ie spouses and children) to subsequently join persons eligible for asylum status and refugees.

<sup>2</sup> These outflows comprise not just asylum seekers whose applications have been rejected but also recognised refugees exiting the country. Such an exit may be voluntary but it may also occur upon the expiry of their limited residence status as a recognised refugee where the situation in their home country has improved sufficiently.

the new refugees will crowd out other kinds of immigrant to a small degree as they have similar work skills, meaning that economic migrants will have worse job prospects in the German labour market. In order to isolate the direct impact of the influx of refugees, this crowding-out effect will not be considered here.

The scale of refugee migration, the share of migrants recognised as refugees and the length of time taken to process applications vary greatly depending on the applicant's country of origin. For instance, the share of asylum seekers arriving from Syria, who have almost always been granted protection in the recent past, has increased significantly in the course of 2015, while the share of migrants from west Balkan countries, who have virtually no chance of becoming residents, has declined. Accordingly, the proportion of those receiving protection in Germany will rise considerably in the short term. The current projection assumes that the average recognition rate in 2015 will be just over half of the total number of applicants, with this figure rising to close to two-thirds in 2016 and 2017, compared with just under one-third in 2014. According to BAMF figures, the average amount of time needed to process an asylum application in 2014 was just over eleven months.<sup>3</sup> Despite the current backlog in registering applications, it is anticipated that the drive to accelerate the procedure will reduce the average time span between entering the country and receiving a decision on their status to nine months, commencing in 2016.<sup>4</sup>

Aside from an individual's prospects of becoming a resident, other key factors affecting the impact of refugee migration on the labour market include age structure, language skills and qualifications. According to the available reports, asylum seekers tend to be relatively young. The projection assumes that three-quarters of the refugees are of working age between 15 and 65 and that the bulk of the remainder are children.<sup>5</sup>

### Projected influx of refugees and its impact on the labour market between 2015 and 2017\*

(Thousands)

Item	2015	2016	2017
Influx of asylum seekers (gross)	900	900	600
Annual average number of asylum seekers	570	850	690
Net immigration due to asylum	700	620	310
Year-on-year change			
Recognised refugees	+ 240	+ 610	+ 450
... of working age	+ 180	+ 460	+ 350
Labour force (including employed asylum seekers)	+ 120	+ 230	+ 170
Employed persons (including asylum seekers)	+ 60	+ 100	+ 100
Unemployed persons	+ 60	+ 130	+ 70

\* The net immigration figure and its impact on the labour market also includes asylum seekers who arrived between 2012 and 2014.

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The low average age of applicants and the unlikelihood of their having obtained a training certificate in their home country mean that refugees' (verifiable) vocational qualifications are likely to be significantly inferior to those offered by Germans or other migrants.<sup>6</sup> Much the same presu-

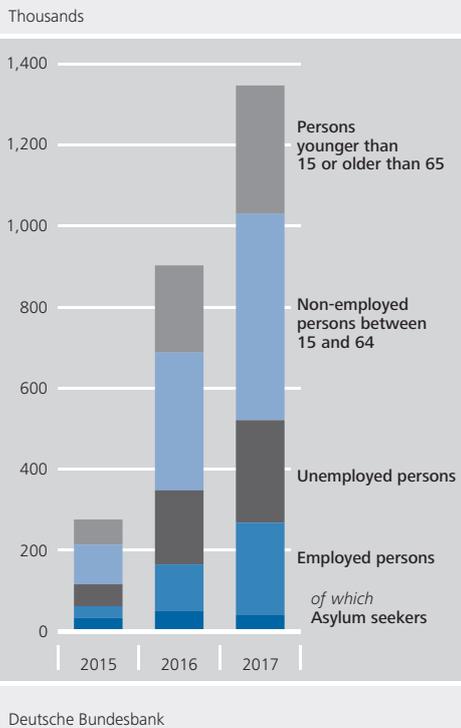
<sup>3</sup> See BAMF (2015), Das Bundesamt in Zahlen 2014. Asylum, Migration und Integration. On page 54 of this publication it says that the average amount of time needed to complete the asylum procedure was 11.3 months (arithmetic mean) and that the median figure (when the procedure is half-way complete) equalled seven months.

<sup>4</sup> Moreover, account is taken of the fact that rejected asylum applicants often do not leave the country right away.

<sup>5</sup> According to BAMF, around 26% of first-time asylum applicants registered between January and October 2015 were younger than 16, with a further 55% aged between 16 and 35. Less than 1 per cent were older than 65. See BAMF (2015), Aktuelle Zahlen zu Asyl, October 2015, p 7.

<sup>6</sup> No reliable data on refugees' vocational training are available at present. Among employed and unemployed persons subject to social security contributions and originating from war-torn countries – a category that does not per se refer to former refugees – 71% had no evidence of vocational training, 8% had some training certificate and a further 8% had academic qualifications in June 2015. See German Institute for Employment Research (IAB) (2015), Flüchtlinge und andere Migranten am deutschen Arbeitsmarkt: Der Stand im September 2015, Aktuelle Berichte 14/2015, p 13.

### Integration of recognised refugees and employed asylum seekers into the labour market



ably applies to their school-leaving qualifications.<sup>7</sup> However, qualifications can be gained in Germany, which the broadly young intake of refugees should find fairly easy. This scenario presents the German education system with a major challenge.

Once recognised, refugees gain unrestricted access to the labour market for as long as their residence permit is valid.<sup>8</sup> Nevertheless, for the time being, the share of non-employed persons will probably remain comparatively high as many newcomers will first need to acquire German language skills and other qualifications. Accordingly, the projection assumes a labour force participation of initially just under 50%. This is well below the average for the general population, roughly three-quarters of which is in the workforce. In addition to the lengthy asylum procedure, this is a further reason why the inflow of refugees will probably impact only gradually on the labour market. Based on the aforementioned assumptions, the aggregate labour supply will grow by

around 520,000 persons (1¼%) in cumulative terms during the reporting period (see adjacent chart).

The results of empirical studies suggest that this additional pool of labour will initially push up unemployment owing to low or irrelevant skills as well as cultural and linguistic barriers, with refugees only gradually gaining a foothold in the labour market.<sup>9</sup> For instance, according to the IAB, the level of unemployment among foreigners from war-torn and crisis-stricken countries, many of whom are likely to have entered Germany only recently, stands at around 40%.<sup>10</sup> Despite the currently favourable labour market situation, the projection assumes an unemployment rate of 70% in the first

<sup>7</sup> An unrepresentative BAMF survey of refugees arriving in 2015, together with statistics supplied by the Federal Employment Agency on employed and unemployed persons subject to social security contributions and originating from war-torn countries, suggests that the share of asylum seekers possessing a certificate of aptitude for higher education, a lower or intermediate secondary school leaving certificate or more basic or no qualifications is one-third for each category. See IAB (2015) op cit, p 4f.

<sup>8</sup> By contrast, asylum seekers, ie individuals whose application has not yet been evaluated, may not commence employment until at least three month after submitting their application. Moreover, for the following 12 months they may only do so subject to a priority test conducted by the Federal Employment Agency. However, their participation in the labour market will be modest, not least as their uncertain residence status is likely to limit their job prospects to mainly casual or low-paid part-time work. Therefore, the assumed employment rate among this group of persons is barely more than one-twentieth.

<sup>9</sup> The results of empirical studies are based on correlations observed in the past and therefore cannot be directly applied to today's situation because key factors such as legal provisions, labour market situation and migration structure have since changed. This is all the more the case for studies focusing on other countries. For information on the integration of immigrants into the labour market see, for instance, M Benton, S Fratzke and M Sumption (2014), Moving up or standing still? Access to middle-skilled work for newly arrived migrants in the European Union, Migration Policy Institute (MPI) and International Labour Office (ILO); N Granato, (2014), A work in progress: prospects for upward mobility among new immigrants in Germany, MPI and ILO; Bundesamt für Migration (2014), Erwerbsbeteiligung von anerkannten Flüchtlingen und vorläufig Aufgenommenen auf dem Schweizer Arbeitsmarkt.

<sup>10</sup> See IAB (2015) op cit, p 7.

12 months following recognition as a refugee, falling to a still sizeable 40% in the third year. This produces an employment rate of around 15% in the first year following the granting of refugee status, rising to roughly one-third after three years.<sup>11</sup> The total number of persons in work could rise by about ½% by 2017 on account of refugee migration, in which case the unemployment rate will be ½ percentage point higher than it would have been if this influx had not occurred. German citizens are unlikely to be crowded out of the labour market as foreign newcomers possess different skills than native workers.<sup>12</sup> Nevertheless, some Germans with limited qualifications or immigrants already residing in Germany could find themselves disadvantaged.<sup>13</sup>

The fact that the average skillset is likely to be relatively limited, coupled with linguistic and cultural barriers, will doubtless also impact on the earnings of working refugees. IAB figures indicate that, in the past, recognised refugees' average gross monthly earnings were clearly below those recorded for other groups of migrants, both in the first year following immigration and even 15 years later.<sup>14</sup> Compared with native workers, this pay gap was even greater.<sup>15</sup> In line with past observations, the projection assumes that most refugees taking up gainful employment will initially be engaged in low-paid work.<sup>16</sup> This will slightly depress the annual aggregate rise in earnings per employee over the projection period.

Furthermore, given the major uncertainty attached to many factors, it is hard to gauge the impact of developments on public finances at present. With respect to the effects on government budgets in a given year, apart from the annual average number of refugees that need to be provided for, the *per capita* expenditure entailed is also of significance. For the duration of the asylum procedure and in the interim period between receiving a rejection and exiting the country, asylum seekers receive cash and non-cash benefits to cover their basic

needs (including healthcare and accommodation) pursuant to the Act on Benefits Granted to Asylum Seekers (*Asylbewerberleistungsgesetz*). In addition, the government incurs expenditure on administration, integration (*inter alia* for language courses) or repatriation measures, where applicable. Once an applicant has been granted asylum, the standard provisions apply, eg social welfare legislation. This leads to comparatively high transfers, mostly unemployment welfare benefit (II) and accommodation costs that will persist for quite some time. On top of this, there are other costs, notably for childcare, education and training as well as assistance in finding work. Own income that would reduce transfers and increase tax and social contributions is likely to be very modest initially.

Overall, the scenarios presented here result in a year-on-year increase in government expenditure (compared with 2014) equiva-

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<sup>11</sup> The stated shares are based on IAB (2015), which assumes that the employment rate among refugees will gradually become aligned with that of the native population over a period of almost 15 years.

<sup>12</sup> See M Manacorda, A Manning and J Wadsworth (2012), The impact of immigration on the structure of wages: theory and evidence from Britain. *Journal of the European Economic Association* 10(1):pp 120-151. G Ottaviano and G Peri (2012), Rethinking the effect of immigration on wages, *Journal of the European Economic Association*, 10(1): pp 152-197.

<sup>13</sup> But these groups might also rise up the job ladder to occupy more skilled positions. See M Foged and G Peri (2015), Immigrants' effect on native workers: new analysis on longitudinal data. IZA Discussion Paper 8961.

<sup>14</sup> See IAB (2015) op cit, p 10.

<sup>15</sup> See M Wahlberg (2008), Differences in wage distributions between natives, non-refugees, and refugees, University of Gothenburg, Working Paper in Economics, p 316. For a comparison between migrants and native workers, see *inter alia* M Battisti and G Felbermayr (2015), Migranten im deutschen Arbeitsmarkt: Löhne, Arbeitslose, Erwerbsquoten, ifo Schnelldienst 20/2015; F Lehmer and J Ludsteck (2013), Lohnanpassung von Ausländern am deutschen Arbeitsmarkt: Das Herkunftsland ist von hoher Bedeutung. IAB-Kurzbericht, 01/2013.

<sup>16</sup> Enterprises primarily envisage job opportunities for refugees as assistants and trainees. See M Battisti, G Felbermayr and P Poutvaara (2015), Arbeitsmarktchancen von Flüchtlingen in Deutschland: Ergebnisse einer Unternehmensbefragung, ifo Schnelldienst 22/2015.

lent to ¼% of GDP in 2015, rising to ½% next year and just under ¾% in 2017. Initially, government consumption will predominate. When the wave of refugees subsequently ebbs, as is presumed, and benefits for those granted the right of residence become the main cost factor, monetary transfers to households will gain in importance.<sup>17</sup>

The additional government spending on refugees will push up aggregate demand as the projection assumes that the effects of this supplementary government expenditure on the budget will not be offset by savings or tax increases elsewhere. Including second-round effects, this demand shock is likely to have a similar impact to that of a stimulus package and *per se* will raise German GDP by about ¼% in 2015. By 2017, this effect could cumulate to just under ¾% compared with a baseline scenario without rising refugee migration.<sup>18</sup> In addition, the high number of refugees will increase the demand for housing, and even after taking account of the crowding-out effect of the refugee influx on other immigration, it will probably stimulate higher investment in housing construction. That said, this projection assumes that, in the short term, housing needs will be met by providing emergency accommodation, later supplemented by using vacant properties. A noticeable demand effect on the private housing market will only emerge later and could be limited on balance.

Refugee migration could raise the German economy's potential output by just under ½% towards the end of the projection horizon compared with the baseline scenario without such refugee migration. Deducting the small crowding-out effect on other migrants, the effect still amounts to just over ¼%. The primary effect generated by a significant growth contribution of the factor labour due to the enlarged labour force is dampened by lower productivity growth and a slight rise in structural unemployment owing to the refugees' lower skill level.

Added to this are secondary effects that stem from more dynamic fixed capital formation.

All in all, the main initial macroeconomic implication of refugee migration is the demand effect that it will generate. However, the boost to GDP stemming from (initially not counter-financed) additional government spending will only be temporary and will reverse once the negative effect on public finance is offset. The supply effects and the long-term impact on public finances will largely hinge on how quickly and effectively refugees are integrated into the labour market. In the short run, the effects are likely to be comparatively modest due to the presumed low initial participation rate and high unemployment among these refugees, and their integration will remain a major challenge for some time to come.

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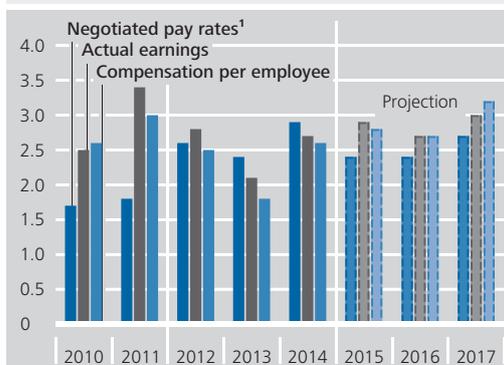
<sup>17</sup> For a more detailed assessment of fiscal policy, see Deutsche Bundesbank, Public Finances, Monthly Report, November 2015, pp 58-70.

<sup>18</sup> The demand effect is reduced to the extent that increasing supply constraints prevent additional demand from taking full effect. This demand effect would also be smaller if refugees repatriate part of their cash benefits. Conversely, it would increase if, in addition to received state benefits, they use their own savings to purchase consumer goods in Germany.

In addition, industry bonus payments were slightly higher this year than last. Although the surge in wage costs caused by the introduction of the general minimum wage will drop out next year, the tighter labour market for skilled and highly skilled workers and a further improvement in the overall economic situation is likely to help wage drift remain positive. Overall, gross wages and salaries are therefore expected to record similar rates of growth per employee, at 2¾% and 3% respectively, in 2016 and 2017 as this year. In terms of labour costs (measured as compensation per employee), the increase in the contribution rate for the public long-term care insurance scheme in 2017 will weigh on employers, which means that the increase in payroll costs will be somewhat stronger still using this definition. Assuming that economic output per employed person rises by 1% a year, unit labour costs will increase by around 2% a year over the projection horizon.

### Negotiated pay rates, actual earnings and compensation of employees

Year-on-year percentage change, monthly basis



Sources: Federal Statistical Office. 2015 to 2017 Bundesbank projections. <sup>1</sup> Pursuant to the Bundesbank's negotiated wage index.

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*Rising domestic inflation*

Domestically generated inflation as measured by the GDP deflator is likely to increase from 1.8% in 2016 to 2.0% in 2017. Enterprises have been able to keep their profit margins stable this year, despite the minimum wage-related cost surge. Lower commodity prices and the euro's depreciation are likely to have played a role in this. Even if these factors providing relief tail off next year in line with the assumption, margins in the projection period are likely to remain largely unchanged.

*Marked rise in consumer prices ...*

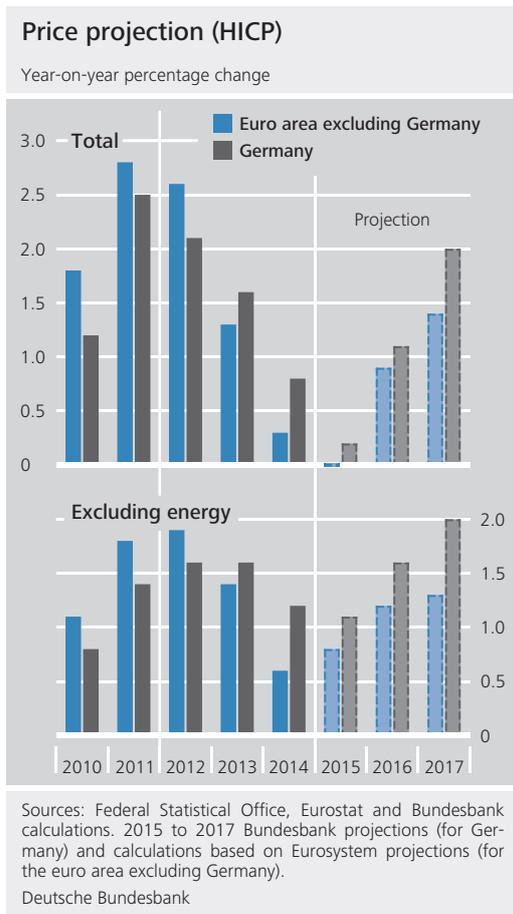
Consumer price inflation is likely to increase markedly over the projection horizon. While the dampening effect of the renewed decline in crude oil prices will peter out, domestic price pressures will become increasingly important. Overall, consumer price inflation (as measured by the annual HICP rate) could rise from 0.2% in the current year to 1.1% in 2016 and 2.0% in 2017. This is likely to result in a continuing considerable inflation spread compared with the other euro-area countries.

The projected path of consumer prices is largely determined by the expected development of energy prices, which, in turn, depends heavily on the price movements of mineral oil products. The latter usually react promptly to changes in crude oil prices (in euro terms), and will therefore increase again during 2016 according to the upward crude oil price assumption. However, given that the retail prices of mineral oil products have fallen steeply in the second half of 2015, their annual average rate for 2016, and thus also the corresponding rate for energy, will be negative overall (around -3%), although less notably than in 2015 (just above -7%). The prices of mineral oil products are not likely to exceed the prior-year figure again until 2017; the same applies to energy prices overall (+2½%). In this context, it is assumed that electricity prices for households will increase moderately in 2016 und 2017, and that natural gas prices for households, which have become largely decoupled from the development of crude oil prices in recent years, will fall slightly in 2016 and increase marginally in 2017.

*... owing to energy price rebound ...*

Other goods and services are likely to record a larger price increase in the projection period. Food prices will probably follow the slightly rising curve of energy and food commodity prices in the medium term. Industrial goods (exclud-

*... and larger rise in prices of other goods and services*



ing energy) are also likely to become more expensive, although the euro's depreciation will continue to have some impact initially. Towards the end of the projection period, these price pressures should then be shaped by above-average aggregate capacity utilisation and robust wage growth. The latter will probably also push up the price of services.<sup>17</sup> The rise in rents is likely to increasingly reflect the impact of the growth in rents for new lettings. Overall, price inflation, excluding energy, could climb from 1.1% in the current year to 1.6% in 2016 and 2.0% in 2017.

## Public finances

Under this projection, the general conditions for German public finances will remain favourable overall, although additional expenditure will occur, particularly owing to refugee migration (see the box on pages 24 to 28).<sup>18</sup> While the budget surplus is likely to increase in 2015

*Rising budget surplus in 2015, but hardly any structural change*

compared with 2014, this is attributable to temporary factors. Thus the fiscal outturn for 2014 (0.3% of GDP) was temporarily depressed by court rulings,<sup>19</sup> and the cyclical impact on government budgets is improving slightly.<sup>20</sup> However, in structural terms, the fiscal balance in 2015 is unlikely to change very much, and – as in 2014 – a moderate surplus of around ½% of GDP is likely.

Next year, however, the surplus will contract, and the government budget could post a more or less balanced result. Although economic activity is likely to continue to improve and interest expenditure should fall somewhat further, the structural primary balance (ie excluding interest expenditure) will deteriorate markedly, as things currently stand. The revenue ratio will be pushed down slightly by cuts in taxes and social contributions. Concurrently, primary expenditure should somewhat outpace the expansion of nominal GDP as a result of envisaged additional spending on infrastructure, education and research as well as social welfare. In the underlying scenario, however, expenditure in connection with refugee migration, in particular, is set to increase markedly. In 2017, the budget could remain more or less balanced. On the one hand, further slight relief provided by economic activity and lower inter-

*Broadly balanced government budget in 2016 and 2017*

<sup>17</sup> The envisaged infrastructure levy will probably no longer be introduced during the course of the projection period. For this reason, the expected rise in the HICP which had been forecast in the June projection has per se been revised downwards by approximately 0.1 percentage point for 2017.

<sup>18</sup> Besides these uncertainties and those described below, there are risks regarding the impact of measures announced by HSH Nordbank not included in the baseline scenario due to inadequate specification, and the associated potential implications for the deficits and debt of the federal states affected.

<sup>19</sup> As a result of court rulings, tax refunds in the amount of 0.3% of GDP are expected, which are reported as capital transfers in the national accounts in 2014 (at the time of the court ruling). Although revenue from the recent auctions of mobile phone frequencies (0.2% of GDP) was provisionally recorded in full in the national accounts in the second quarter of 2015, it will probably be spread over several years in future outturns.

<sup>20</sup> Cyclical adjustment is based on the Eurosystem's disaggregated framework, which is geared to the trends in key macroeconomic budget reference variables. The cyclical impact on the balance thus calculated is neutral for 2015 and will become increasingly positive up to 2017.

est payments is anticipated. On the other hand, expenditure on refugee migration could increase. Moreover, the reform of the public long-term care insurance scheme, among other things, will push up budget costs. In structural terms, the surplus from this year will decline in 2016 and could turn into a small deficit in 2017.

*Debt ratio falling*

Under these conditions, the debt ratio would diminish rapidly, but, at 65% in 2017, would still exceed the 60% ceiling (end-2014: 74.9%). Given the prospect of a broadly balanced government budget as of 2016, the decline will be chiefly due to nominal GDP growth in the ratio's denominator. Furthermore, the liabilities of government-owned bad banks should be reduced further.

## ■ Risk assessment

*Crude oil price shifts*

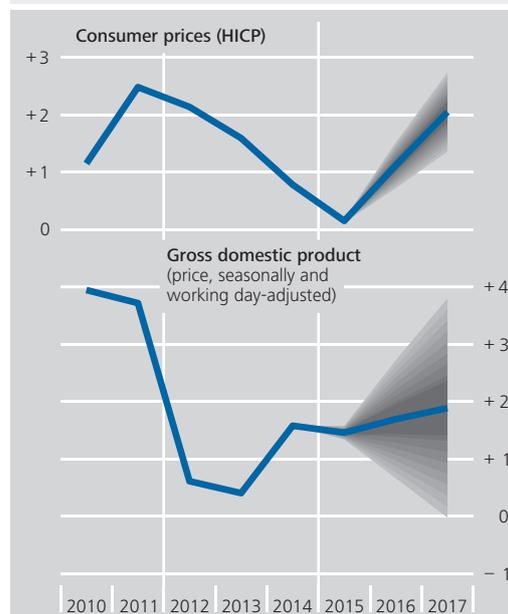
Substantial price shifts have been observed in the crude oil market recently. Over the projection period, too, price developments might fluctuate strongly, both upwards and downwards, from the underlying assumptions. This would have a major impact, as in the past, on the inflation rate and possibly also on economic growth.

*Risks to economic growth*

The risks to economic growth appear to be broadly balanced. This projection is based on the assumption that world trade will regain momentum, and that the economic recovery in the euro area will strengthen further. On the one hand, the development of world trade could remain below these expectations if the slowdown in some emerging market economies, in particular China and the commodity-exporting economies, proves to be persistent or even becomes more severe. There is also a certain risk that German exporters might not be able to broadly maintain their strong market share gains from the first half of 2015, contrary to the assumption. On the other hand, the projected development of world trade following the downward revision compared with the June projection is now considered rather cau-

### Baseline and uncertainty margins of the projection\*

Year-on-year percentage change



Sources: Federal Statistical Office and Bundesbank calculations. 2015 to 2017 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.

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tious, meaning that a more favourable development also appears conceivable. Moreover, economic activity could be impaired by protracted terrorist dangers and the related countermeasures. Weaker export growth would impact negatively on Germany's export-oriented industry and, in particular, on business investment, although the pick-up assumed here could also occur earlier and be more pronounced in the event of stronger exports. Additional risks could potentially ensue from the Volkswagen diesel emissions scandal.

As already mentioned several times, the influx of refugees and the attendant economic implications are subject to major uncertainty. Deviations from the scenario assumed here would chiefly affect government budgets, private consumption, housing construction investment and the labour market.

*Uncertainty surrounding high refugee migration*

The risks to price developments are more or less balanced. Upside risks could result from

*Price projection risks*

further depreciation of the euro and higher crude oil prices. Conversely, a further decline in crude oil prices would dampen consumer price inflation less than in 2015, given that the lower

the crude oil price level, the smaller the impact of crude oil price fluctuations (of equal magnitude on a percentage basis) due to the mineral oil tax being charged as a volume-based tax.