Strong growth, limited inflation

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Stagnation of domestic demand in H2 2017 – arguably only a breather. Growth reached 0.6% qoq in Q4 2017, accompanied by sentiment indicators at record highs and supported by strong order intake (3.5% qoq and 1.9% qoq excl. big tickets). In the second half of 2017, however, final domestic demand nearly stagnated, following a spectacular H1. Likewise, sentiment indicators in February as well as hard data for January disappointed. Current assessment and expectations with regard to exports have also deteriorated somewhat since the end of 2017, probably in reaction to the sharp appreciation of the euro. We take this as confirmation of our expectation that growth momentum is past its peak, but – given the still-favourable economic environment – consider a substantial slow-down of the German economy as unlikely.

Inflation in Germany: Expecting a normalisation for now. The economic boom and considerable wage rises agreed in the current wage negotiations will drive core inflation up, from currently just below 1 ½% towards 2%. Headline inflation looks set to accelerate less, as the uptrend of both food and energy price is likely to slow compared to 2017, not least due to the euro appreciation. However, as global capacities are getting scarcer and the world is leaving its demographic “sweet spot” behind, the disinflationary trends of the last few years might become a thing of the past. Overall, upside risks to our inflation forecast clearly prevail.

Coalition treaty – myopic policy approach. On March 14, nearly six months after the federal election and following two attempts of coalition formation – one in vain – the Bundestag will re-elect Angela Merkel as Chancellor of a renewed grand coalition. While the predominant feeling is relief that Germany now has a “decent“ government the new Groko’s political programme does hardly give occasion to cheer. The new government’s European course lacks consistency and its fiscal policy is characterised by a spending bias which seems to rely on lasting robust growth and buoyant tax receipts without providing the necessary framework conditions. Instead of consistently strengthening the market forces, the Groko aims to further increase governmental control of the business sector and society at the expense of individual freedom.

Strong growth, limited inflation

Economic forecasts

	Real GDP (% growth)			Consumer Prices* (% growth)			Current Account (% of GDP)			Fiscal Balance (% of GDP)		
	2017F	2018F	2019F	2017F	2018F	2019F	2017F	2018F	2019F	2017F	2018F	2019F
Euroland	2.5	2.4	1.7	1.5	1.4	1.5	3.5	2.7	2.1	-1.1	-0.9	-1.0
Germany	2.2	2.3	1.8	1.8	1.6	1.8	7.2	6.5	6.5	1.1	0.8	0.5
France	2.0	2.0	1.6	1.2	1.3	1.4	-1.2	-0.6	-0.6	-2.9	-2.7	-2.9
Italy	1.5	1.4	1.0	1.3	1.0	1.5	2.9	2.8	2.6	-2.1	-1.9	-1.8
Spain	3.1	3.0	2.3	2.0	1.5	1.6	1.7	1.7	1.6	-3.1	-2.2	-1.6
Netherlands	3.1	2.5	2.4	1.3	1.6	1.9	10.2	10.2	10.1	1.1	0.5	0.4
Belgium	1.7	2.2	1.7	2.2	1.6	1.7	-1.0	-0.7	-1.0	-1.8	-1.5	-1.5
Austria	3.0	2.5	2.3	2.2	2.0	1.7	2.2	2.5	2.8	-0.9	-0.7	-0.5
Finland	3.0	2.6	2.1	0.8	1.2	1.6	0.7	0.0	0.5	-1.2	-1.0	-0.8
Greece	1.2	3.0	2.2	1.1	0.7	1.1	-0.8	-0.5	0.0	-1.6	0.0	1.0
Portugal	2.7	2.0	1.5	1.6	1.2	1.5	0.6	0.0	0.0	-1.4	-1.2	-1.2
Ireland	4.1	4.0	3.2	0.3	1.0	1.2	3.8	3.5	3.0	0.1	0.1	-0.4
UK	1.7	1.3	1.5	2.7	2.5	2.2	-4.5	-4.0	-3.5	-2.5	-2.1	-1.4
Denmark	2.1	2.0	1.9	1.1	1.6	1.6	7.5	7.5	7.0	-1.0	-0.5	-0.5
Norway	1.8	2.2	2.0	1.9	1.9	1.8	6.0	6.0	5.5	3.5	4.0	5.0
Sweden	2.7	2.7	2.5	1.8	2.0	2.2	5.0	4.5	4.0	1.3	1.0	0.5
Switzerland	1.0	2.1	1.8	0.5	0.3	0.7	10.5	10.6	11.0	0.3	0.3	0.2
Czech Republic	4.4	3.4	3.1	2.5	2.3	2.2	0.6	0.4	1.0	1.0	0.8	1.1
Hungary	4.0	3.5	3.1	2.3	2.6	3.0	4.2	3.4	2.9	-2.0	-2.4	-2.3
Poland	4.6	3.8	3.5	2.0	2.3	2.8	-1.3	-1.4	-1.2	-2.1	-2.4	-2.8
United States	2.3	2.9	2.7	2.1	2.3	2.2	-2.9	-3.2	-3.5	-3.6	-2.7	-3.2
Japan	1.7	1.1	0.7	0.5	0.7	0.8	4.0	4.1	4.0	-2.7	-2.2	-1.9
China	6.9	6.3	6.3	1.6	2.7	2.4	1.2	0.8	0.6	-3.7	-4.0	-4.0
World	3.8	3.9	3.9	2.9	3.3	3.0						

*Consumer price data for European countries based on harmonized price indices except for Germany. This can lead to discrepancies compared to other DB publications.
Sources: National Authorities, Deutsche Bank

Forecasts: German GDP growth by components, % qoq, annual data % yoy

					2018				2019			
	2016	2017F	2018F	2019F	Q1F	Q2F	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Real GDP	1.9	2.2	2.3	1.8	0.6	0.6	0.5	0.5	0.4	0.4	0.4	0.4
Private consumption	2.1	1.9	1.4	1.5	0.4	0.6	0.5	0.5	0.3	0.4	0.3	0.2
Gov't expenditure	3.7	1.6	1.3	1.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Fixed investment	3.1	3.2	2.8	3.5	1.1	1.0	1.0	0.8	1.0	0.9	0.9	0.8
Investment in M&E	2.2	4.0	4.3	3.1	1.0	1.0	1.0	0.5	1.0	0.7	0.7	0.5
Construction	2.7	2.6	2.9	4.9	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Inventories, pp	-0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Exports	2.6	4.7	6.2	4.5	1.2	1.2	1.2	1.2	1.1	1.0	1.0	1.2
Imports	3.9	5.1	6.1	5.1	1.3	1.4	1.4	1.4	1.2	1.2	1.1	1.2
Net exports, pp	-0.3	0.1	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Consumer prices*	0.5	1.8	1.6	1.8								
Unemployment rate, %	6.1	5.7	5.3	5.3								
Industrial production**	1.4	3.0	2.5	1.5								
Budget balance, % GDP	0.8	1.1	0.8	0.5								
Public debt, % GDP	68.1	64.4	60.9	58.1								
Balance on current account, % GDP	8.4	7.2	6.5	6.5								
Balance on current account, EUR bn	262.6	232.0	212	214								

*Inflation data for Germany based on national definition. This can lead to discrepancies to other DB publications. **Manufacturing (NACE C)
Sources: Federal Statistical Office, German Bundesbank, Federal Employment Agency, Deutsche Bank Research

Stagnation of domestic demand in H2 2017 – arguably only a breather

— Growth reached 0.6% qoq in Q4 2017, accompanied by sentiment indicators at record highs and supported by strong order intake (3.5% qoq and 1.9% qoq excl. big tickets). In the second half of 2017, however, final domestic demand nearly stagnated, following a spectacular H1. Likewise, sentiment indicators in February as well as hard data for January disappointed.

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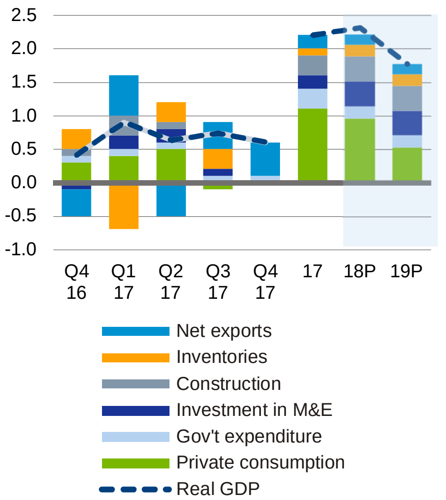
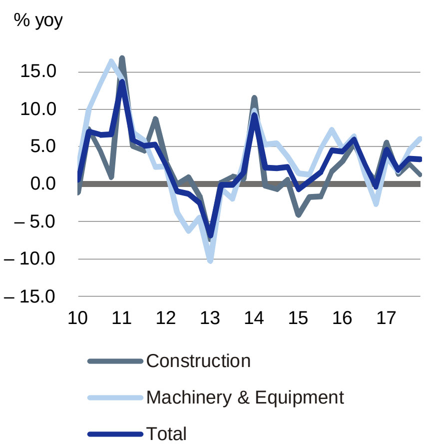
Foreign trade major growth contributor in Q4 2017 1

Contribution to real GDP growth, qoq, yoy, pp



Sources: Federal Statistical Office, Deutsche Bank Research

Investment 2



Source: Federal Statistical Office

Q4 2017 GDP details – foreign trade the key driver

Slowing only moderately compared to Q3, German growth in the final quarter of 2017 was robust at 0.6% qoq. This was slightly above our expectations of 0.5%. Moreover, the Federal Statistical Office reported that the result for the third quarter was revised to 0.7% (0.8%) qoq.

The key driver of Q4 growth was foreign trade, which contributed 0.5 percentage points to growth. Led by strong global growth, the 2.7% qoq rise in exports was astounding, marking the strongest quarter-over-quarter increase over the past 7 years. The euro's appreciation of roughly 10% against the USD (annual comparison), on the other hand, was not yet leaving its negative imprint. At 2.0% qoq, imports also edged up visibly, with intermediate and consumer goods being the main contributors, driven by strong dynamic momentum. Government final consumption expenditure increased by 0.5% qoq and contributed the remaining 0.1 percentage points to quarterly growth of 0.6%. Household consumer expenditure remained stable at the previous quarter's high level. Whilst real retail sales inched up, thanks to strong online and mail-order shopping, the consumers exercised restraint with respect to information and communication technology. Gross fixed capital formation was flat on the previous quarter. Whilst investment in machinery and equipment was up by 0.7% qoq, investment in construction again declined slightly by 0.4% qoq.

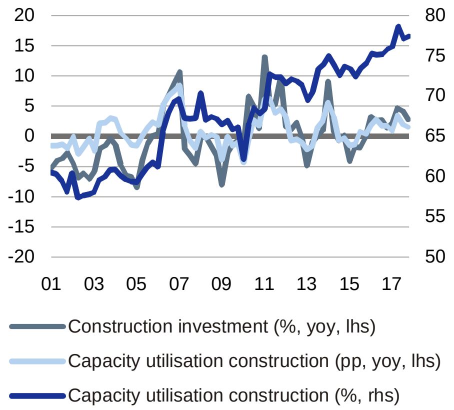
Two quarters without private consumption and construction growth

A glance at the detailed quarterly results reveals a picture that seems to contradict the overall economic environment. Despite continued strong payroll gains and higher negotiated wages in 2017, private consumer expenditure in the second half of the year was nearly unchanged. The development of construction investments in the second half of 2017 also gives cause for concern, as they had already declined by 0.3% qoq in real terms in Q3.

Solid investment in machinery and equipment, weak construction investment

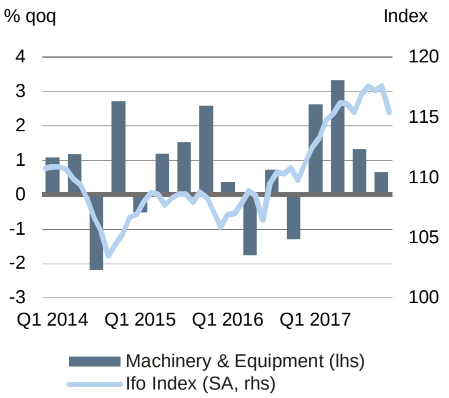
At 0.7%, the fourth quarterly increase in machinery and equipment investment was somewhat disappointing in the final quarter of 2017, given the persistent favourable economic environment and extremely high German capacity

Construction investment: capacity bottlenecks 3



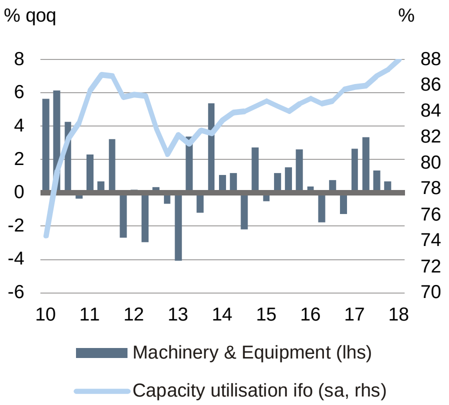
Sources: ifo, Federal Statistical Office, Deutsche Bank Research

Sentiment & investment 4



Sources: ifo, Deutsche Bundesbank, Deutsche Bank Research

Capacity utilisation and M&E 5



Sources: ifo, Federal Statistical Office, Deutsche Bank Research

utilisation of currently 87%. On the year, however, investment was up by an impressive 6%, and the annual increase compared with 2016 was a real 4%, which is in line with upbeat current assessment and business expectations in the manufacturing sector. In addition to calculating data for the fourth quarter, the Federal Statistical Office also announced revisions of 1.3% qoq for the third quarter (1.5%) and 2.6% qoq for the first quarter (2.3%), which may be seen as an indication of the statistical difficulties related to an adequate measurement of dynamics. Slipping by 0.4% qoq, construction investment declined for the second quarter in a row in Q4 and was up by only 1.3% compared with the same quarter a year earlier. In the year as a whole, investment increased by a real 2.7% relative to 2016. The weakness of construction investment in the second half of 2017 was accompanied by a 1% decline in construction output in Q4. In December, construction activity was particularly lacklustre. Possibly, the weakness reflects the capacity and supply bottlenecks in the industry, as suggested by high capacity utilisation of 77% in Q4 and the further uptick to 80.4% in February (utilisation of construction machinery at an all-time high of 82.6%). With construction capacity running at elevated levels, labour capacities are also stretched. According to a special survey by the ifo Institute, 74% of the construction companies polled stated in October that they were working overtime. At the end of the year, many employees could have taken compensatory time off for extra hours worked, which may have had a dampening effect on construction activity in Q4. Moreover, anecdotal evidence points to two bottlenecks obstructing the construction sector that have not yet been entirely removed. Firstly, due to the generally favourable weather conditions this winter, buffer stocks at construction material manufacturers were low. In the face of persistent demand, particularly in the densely populated areas, delivery times ought to have been long, hampering construction activity. Secondly, this probably also caused short-term capacity constraints at the transport companies and hence further interruptions in the supply chain. Moreover, the logistics sector is also suffering from regional labour shortages.

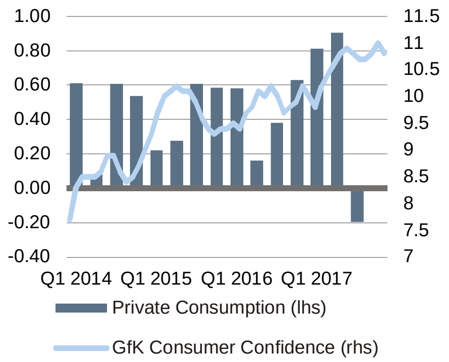
Capacity bottlenecks in construction industry lead to delays and higher prices

At bottom, the construction sector in the second half of 2017 was an example of the short-term constraining effects that can materialise when the economy is running at full steam. Another non-negligible factor is the knock-on effect on prices. Recent PMI surveys for the construction industry pointed to strong price momentum. Thus, wholesale price inflation at the beginning of the year hit a seven-year high, and sales prices also picked up sharply in the face of high demand, at a rate last observed in 2011. Strong order intake of 12.2% qoq in Q4 and enough orders on hand to keep production running for on average 3.5 months at present point to more dynamic construction investment in the quarter ahead. Another factor corroborating our expectation is that, according to the ifo Institute, construction companies plan to hire new staff over the next months, which, however, might be difficult given current labour shortages in some regions. Furthermore, with collective wage negotiations for around 700,000 employees in the construction sector under way, there is some risk that workers will put down tools to add authority to the demands of the trade unions. An adjustment of production and machinery capacities to high utilisation rates should also add momentum to investment in machinery and equipment.

Strong growth, limited inflation

Consumption: Just pay back? 6

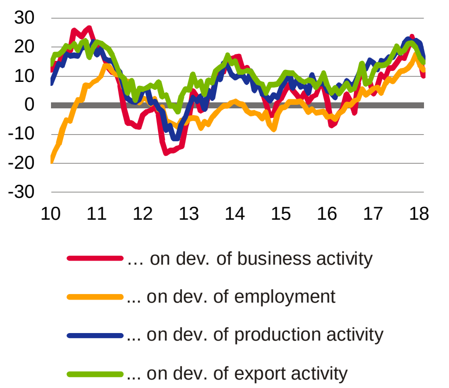
%, qoq Index



Sources: Deutsche Bundesbank, GfK, Deutsche Bank Research

Sentiment indicators in the German industry still in positive territory 7

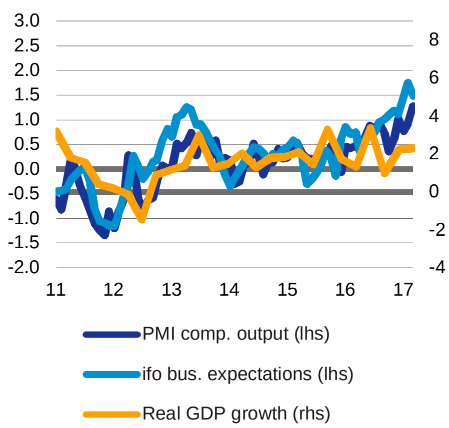
Company expectations, balance of positive and negative company reports



Source: ifo Institute

Real GDP growth & leading indicators 8

Germany; standardised values (lhs); % yoy (rhs)



Sources: IHS Markit, ifo , Federal Statistical Office

Private consumption showing restraint in the second half of the year

Although employment picked up sharply in the fourth quarter, private consumption was flat on the previous quarter. The number of persons in employment rose to a record of 44.7 million in the final quarter of 2017, up by 642,000 compared with the previous year. For the full year, there was a year-over-year increase of 1.5%. Additionally, wages continued their uptrend. On an hourly basis (excl. one-off payments), collective wages advanced by 1.9% (Bundesbank) compared with the same quarter a year earlier, resulting in a wage drift of 1% relative to effective wages, which edged up by 2.9%. Despite the positive employment trend, private consumption expenditure was nearly unchanged and hence fell behind expectations in the second half of the year.

Restrained private consumption in Q4 2017 – catch-up effects to be expected

Consumer confidence, on the other hand, is an astoundingly mixed bag. In the quarter-over-quarter comparison, the trend has been to the upside since Q4 2015. In Q1 2018, sentiment marked a record high of just under 11 points. Based on the detailed results, consumers seem very optimistic about the German economy and the growth outlook. This is also reflected in the high propensity to buy, which edged up to 58.8 points in the final quarter of 2017 (Q3: 56.6). The interesting question in this context is: Why were these plans shelved? GfK is speculating that the prolonged period of government formation may have unsettled consumers. Other surveys indicate that discussions about driving bans for diesel cars may have been another negative factor. Moreover, the strong uptick in private consumption expenditure at the start of 2017 could have played a role, too. A moderation in buying big ticket items would not really come as a surprise, following robust growth in H1 2017 (Q1: 0.8% qoq, Q2: 0.9% qoq). This would argue for more dynamic private consumption expenditure growth in the quarters ahead.

German economic cycle remains intact – 2018 forecast with upside risks

The German economy continued to expand at the start of the year. Even though recent PMI (Composite Feb: 57.6 vs. Jan: 59) and ifo (Climate Index Feb: 115.4 vs. Jan: 117.6) survey results for industry showed a decline for February, they continue to be at high levels. Since the end of 2017, current assessment and expectations with respect to exports have deteriorated somewhat, likely in reaction to the euro's appreciation of around 10% against the USD (year-over-year comparison). Hard economic data such as industrial production (- 0.1% mom) and incoming orders (-3.9% mom) weakened as well in January. On balance, however, there are some indications that companies will ramp up capacity-increasing investment. In light of the economic environment, but in particular, the ongoing recovery of the euro area, we currently do not see any need to adjust our growth forecast of 2.3% for the current year. This is all the more true, as the Germany economy started the new year with a growth overhang of 1%. Despite the weakness in the second half of 2017, private consumption and investment look set to be the key drivers in 2018.

From a German perspective, an unsettling factor of recent months has disappeared now as government formation is finally within reach. In the first quarter of 2018, the wage negotiations in the public sector and construction industry are the key domestic issues. The unexpectedly high settlement in the metal and electrical engineering sector (3.9% in 2018) should have provided fresh fuel for the employees' expectations. Both wage settlements could actually strengthen the domestic cycle, at least in the short term. However, from the external side, the plan of the USA to impose tariffs is a risk for German exports.

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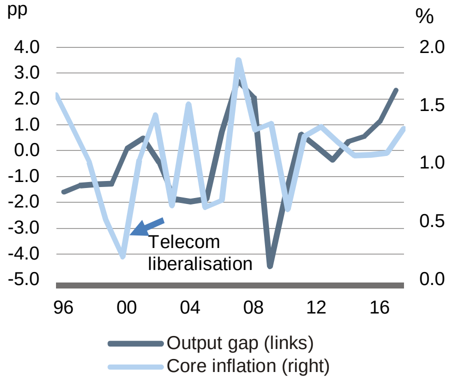
Inflation in Germany: Expecting a normalisation for now

— The economic boom and considerable wage rises agreed in the current wage negotiations will drive core inflation up, from currently just below 1½% towards 2%.

— Headline inflation looks set to accelerate less, as the uptrend of both food and energy price is likely to slow compared to 2017, not least due to the euro appreciation.

— However, as global capacities are getting scarcer and the world is leaving its demographic "sweet spot" behind, the disinflationary trends of the last few years might become a thing of the past. Overall, upside risks to our inflation forecast clearly prevail.

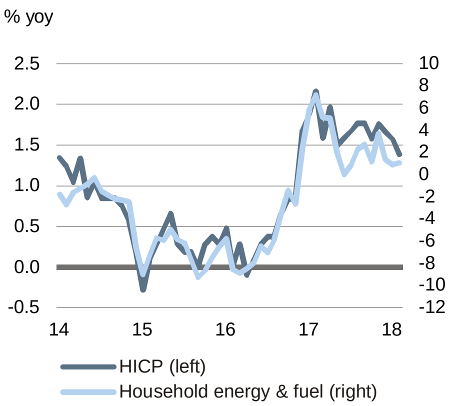
Output gap and core inflation 1



Sources: Eurostat, OECD

As the German economy has a significant weight within EMU (28.1%, measured by the EMU HICP) and is quite far along in the current economic cycle, the ECB – and others – are closely watching current inflation developments in Germany. The German output gap has been closed for more than four years now. By the end of 2017, overall excess capacity utilisation probably amounted to at least 2 pp. Similar to the Phillips curve relationship for the labour market, this excess capacity utilisation should lead to wage pressures. And in 2017, the average rate of inflation did indeed rise palpably to 1.8% (in national terms), up from less than 1% in the three preceding years (0.9%, 0.3% and 0.5%, respectively). However, headline inflation is considerably influenced by two volatile components, namely food and energy prices (household energy and fuels), each of which has a weight of c. 10%. The core rate (excluding food and energy) remained much more stable; it declined from 1.4% in 2014 to 1.2% in each of the two subsequent years and returned to 1.4% in 2017.

HICP: Strong impact of energy component 2

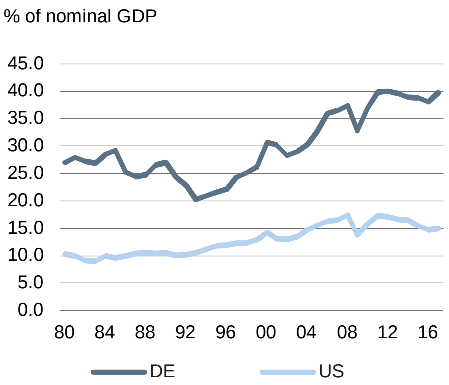


Sources: Deutsche Bank Research, Deutsche Bundesbank

Pick-up in headline inflation so far caused by volatile components

This stable development suggests that the deflation risks, which were a matter of concern for the ECB until end-2016[1], did not exist in Germany. The inertia of the core rate also shows that the significant increase in overall capacity utilisation in the economy has not yet led to major price pressures. One important reason is that wage growth has been very subdued until 2017. Hourly wages were up by only just above 2% p.a. during the past three years (2017: 2.1%). And effective wage growth has not been much stronger, at just above 2 ½% (2017: 2.8%). However, the gap between the two series, the so-called wage drift, has widened slightly since 2016.

Import share 3



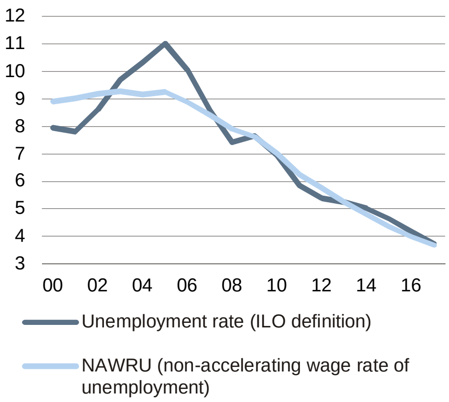
Sources: Federal Statistical Office, Haver

Openness of the German economy dampens wage growth

Just like the Phillips curve, the relationship between the output gap and inflation is a national concept, which does not sufficiently take into account the fact that the German economy in particular has become more and more integrated into global trade. Imports amounted to 39.7% of German GDP in 2017. Intra-industrial trade makes up a large share of this total, which means that domestic output may be substituted to a large extent by imports. As capacity utilisation in key trade partners (particularly in the euro area) has been much lower up until recently, German producers have experienced considerable actual and latent

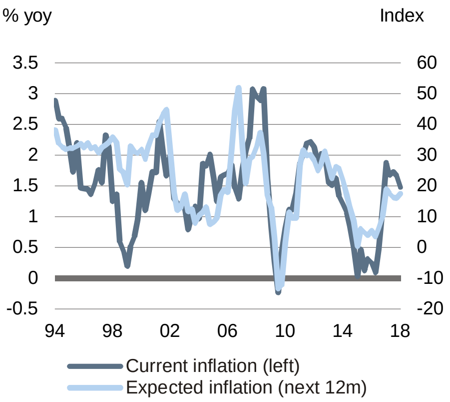
[1] Reuters, ECB says no longer sees deflation risks in euro zone, 9 March 2017

Unemployment rate and NAWRU 4



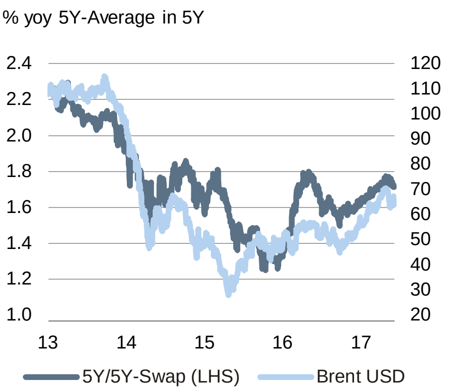
Sources: AMECO, OECD

Survey-based inflation expectations and current inflation 5



Sources: EU Commission, Federal Statistical Office

Financial market based inflation expectations and oil price 6



Sources: Haver, Thomson Reuters

competition from imports. This has put a lid on wages even though unemployment in Germany has declined markedly.[2]

Moreover, the "simple" Phillips curve relationship does not take into account that labour supply in Germany has improved significantly. The labour-market reforms of the Agenda 2010 have rendered the labour market much more flexible and probably caused a flattening of the Phillips curve, which means that any decline in unemployment will lead to lower wage increases than in former years. Structural unemployment probably declined as well. The EC estimates that the NAWRU (non-accelerating wage rate of unemployment), i.e. the level of unemployment which must be undershot for wage growth to pick up, has dropped from more than 9% at the beginning of the millennium to less than 4% by now. Actual unemployment was above NAWRU in the last few years and only converged to it in 2017, dropping to an annual average of 3.8% (ILO definition, in % of the total workforce). Such estimates are to some extent tautological: If, under this approach, wage moderation cannot be explained by other, identifiable shocks, the unemployment threshold must have dropped. In reality, however, unusually low inflation and the related gains in purchasing power probably contributed to wage moderation as well.

The chicken-and-egg question of inflation

This leads us to the key question of how the causality between wages and inflation works. Under the Keynesian concept of "cost-push" inflation, which serves as basis for the Phillips curve, wages influence inflation. The neo-Keynesian approach, however, assumes that wage rises depend not only on unemployment, but also on inflation expectations, which means that the causality runs both ways. This concept is confirmed by most statistical examinations of the relationship. "Measuring" inflation expectations is quite difficult, however. Survey-based approaches often simply extrapolate recent developments (adaptive forming of expectations). Financial-markets based approaches often result in extreme and less plausible results as the financial markets are subject to herd behaviour. Moreover, German trade unions used the ECB inflation target of just below 2% for their wage demands, at least during periods of low inflation, and not an inflation forecast, which might have been lower.

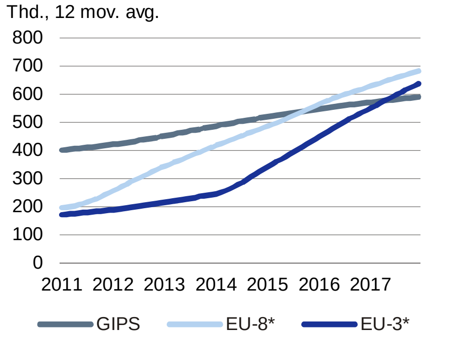
The openness of the German economy has led to higher import substitution and, via factor endowment, subdued inflation. Since 2010, more than 1.7 million EU citizens have come to Germany to work in a regular job which is subject to social-security contributions. This development certainly slowed down wage growth and prevented an even stronger decline in unemployment. These inflows have probably slowed considerably, as the labour-market situation in other EU countries has improved. In addition, German labour market regulations have been re-tightened for several years now. This might drive structural unemployment up again.

Significant wage growth in 2018

The recent wage agreement in the metals sector foresees wage increases of 3.9% in 2018. This suggests that wage growth will pick up considerably, particularly since the results of other important wage agreements (construction, public sector) will not be far behind. Roughly $^{2}/_{3}$% of the wage increases foreseen for 2018 still stem from wage agreements concluded at much lower rates in 2017, which is why overall wage growth will come in at 3% this year at

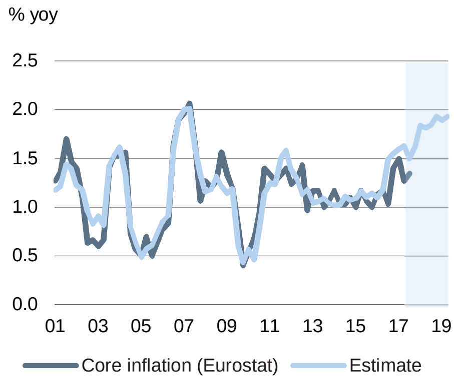
[2] Strompreis für Verbraucher geht leicht zurück (Consumer electricity prices to decline slightly), Frankfurter Allgemeine Zeitung, 21 February 2018

Persons employed from different EU regions 7



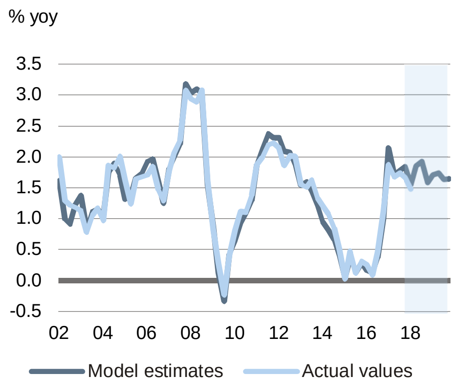
* Eastern European countries that joined the EU on 1 May 2004
** Bulgaria, Romania, Croatia
Source: BA

German core inflation rate 8



Sources: European Commission, Deutsche Bank Research

Germany: CPI estimate 9



Sources: Deutsche Bank Research, Eurostat

most. In view of the increasing wage drift, however, effective wages will rise by almost 4%.

Core rate to pick up again

Thus, the two most important domestic influencing factors for core inflation point to a significant pick-up. We estimate that both the output gap and wage rises will have an impact on core inflation with a lag of four quarters, with the coefficients being quite low, at 0.15 for wages and 0.1 for the output gap. However, declining import price growth is likely to slow down the trend in core inflation. While import prices, particularly for crude oil, but also for food, feed through quite rapidly to the volatile energy component of headline inflation, they also affect the core rate, if with a more marked lag. The considerable slowdown in import price inflation during 2017, from 7.4% in February to 1.1% by the end of the year, looks set to dampen core inflation in 2018. Moreover, we expect the euro to appreciate steadily versus the US dollar, to USD/EUR 1.35 by the end of 2019. This should moderate import price growth, too, particularly since oil prices look set to decline slightly again. While commodity prices excluding energy have risen slightly in euro terms in the last few months, they will probably stabilise on average during the year, despite dynamic global growth (OECD, World Bank).

Core inflation therefore looks set to accelerate to almost 1 ¾% on average in 2018 and to nearly 2% in 2019. Both forecasts are considerably above the average rate of the past 20 years (1.1%). A rate of 2% in 2019 would be equivalent to that of 2007, which was the strongest in the past two decades.

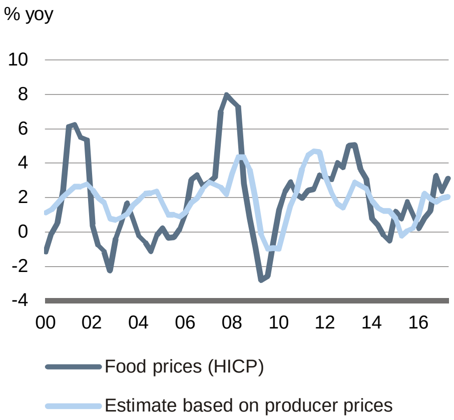
Energy prices to keep average inflation below 2% in both 2018 and 2019

Headline inflation is likely to come in at c. 1¾% in either of the two years, as energy price inflation is likely to slow down palpably (see above) due to a slight decline in oil prices in EUR terms and a drop in electricity prices due to a minimal reduction of the surcharge under the Renewable Energy Sources Act (EEG)[2].Our assumptions for USD/EUR and oil prices suggest energy prices will probably rise slightly in year-on-year terms in Q2 before dropping below their pre-year level in Q4 at the latest. Food prices, the second component which does not enter into the core rate, are almost impossible to forecast even for the near future; estimates on the basis of upstream prices (commodity, import or producer prices) are notoriously unreliable. Producer prices seem to be the only factor which may be used; they have a lead of about 3 quarters over consumer prices. However, this relationship gives an indication of the food price trend at best; it is too unstable for a forecast, not least due to the lag. We therefore have to “set” this component in our model for an estimate of overall inflation. We assume that food price inflation slows from 3.1% in 2017 to c. 2%.

Risks: Assumptions and structural changes

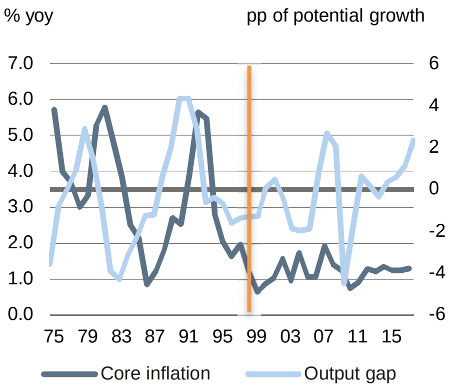
As exchange rate and oil price forecasts have repeatedly turned out to be wrong, inflation estimates are evidently quite risky. Assuming a constant USD/EUR exchange rate of 1.23 instead of an appreciation to USD/EUR 1.28 by end-2018 and USD/EUR 1.35 by end-2019 (as in our baseline scenario), inflation in 2018 would not be much higher than in the baseline scenario, as the average appreciation during the year would not be much below that assumed in the baseline scenario (6.9% vs 8.9%). In 2019, an unchanged exchange rate in year-on-year terms (baseline scenario: further appreciation by 6%) would push inflation up by 0.1 of a pp. If, in addition, the oil price was USD 10 above the

Food prices 10



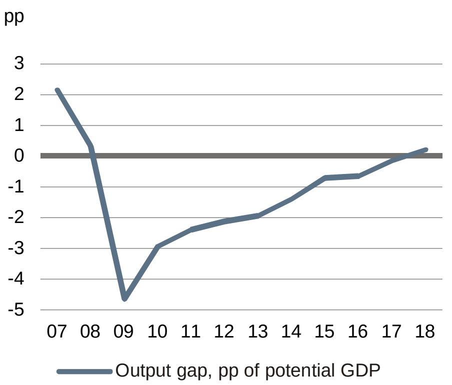
Sources: Deutsche Bank Research, Federal Statistical Office

Output gap and core inflation: Slackening relation 11



Sources: Deutsche Bank Research, OECD

Industrial countries: Again above potential 12



Source: IMF

baseline assumption, inflation would come in at 2% in both years, with rates of 2 ¼% – 2 ½% possible in H2 2018.

We have estimated our simple OLS inflation model (year-on-year change, quarterly basis) from 2001, i.e. in fact from 2002 taking into account the lag structure. An earlier starting date leads to considerably worse estimate results. This might be due to the introduction of the euro and massive cuts in telecommunications prices between 1999 and 2001. Thus, the estimate period covers the last phase of the so-called "Great Moderation", i.e. the period during which growth and inflation volatility receded considerably and globalisation kept consumer price inflation unusually low despite strong growth. Prominent central bank representatives also believed that structural changes, such as higher central bank credibility, might have contributed to lower inflation expectations and, in turn, lower inflation[3]. From 2009, the disinflationary effects of the global financial and economic crises made themselves felt. While Germany quickly overcame the growth dip, persistent weakness in key emerging economies and euro-area countries, which did not come out of the woods until 2013, probably dampened inflation in Germany, too, due to the openness of the German economy.

Free capacities are shrinking world-wide

During the past four years the output gap in the developed economies has narrowed considerably. The IMF expects output in this group of countries to exceed potential for the first time in 9 years in 2018. The PMIs for large emerging economies also show that growth in these countries has picked up considerably in the past 18 months. PMI output prices have risen palpably in the large developed economies since 2017. And the trend in the emerging markets is similar, apart from China, where the assessment of output prices has declined since summer 2017. This means that global free capacities will shrink and there will be fewer substitution options if there are bottlenecks in Germany. At the global level, this might lead to stronger price increases through feedback effects.

Demographic developments will not dampen inflation any more

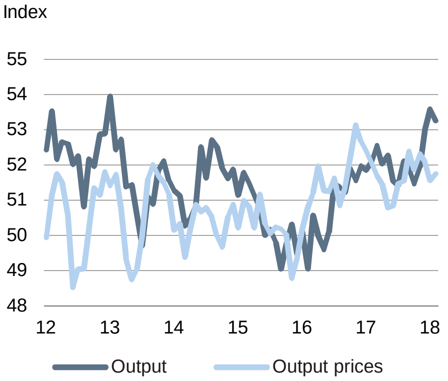
Beyond global economic developments, an important structural trend might reverse and cause inflation to accelerate again. According to a BIS working paper, the global potential workforce has increased by 120% to roughly 1.9 billion people between 1990 and 2014, with most of this growth originating in China and eastern Europe (from 820 million to 1,120 million)[4]. According to World Bank forecasts, the share of the workforce in the overall population has probably started to decline, which means that the demographic "sweet spot" is already a thing of the past. This is also confirmed by a study quoted in the Working Paper, which focuses on the effect of the population structure on inflation[5]. This study finds that the shares of those age groups which are usually not gainfully employed (i.e. people aged below 20 and above 60) push up inflation, whereas the share of persons who are of working age dampens inflation considerably.

[3] The Federal Reserve Board, The Great Moderation, Remarks by Governor Ben S. Bernanke, February 2004

[4] BIS Working Papers No 656, Demographics will reverse three multi-decade global trends, Charles Goodhart and Manoj Pradhan, August 2017

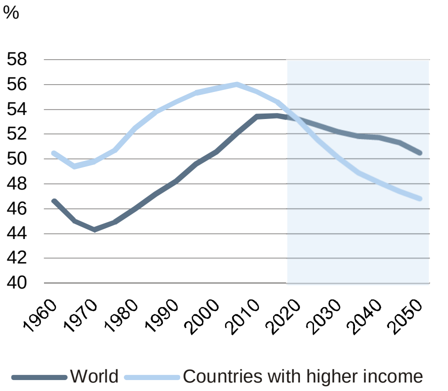
[5] Birbeck Working Papers No 1501, Demographic structure and macroeconomic trends, Y. Aksoy, et al., 2015

Emerging countries: More dynamic 13



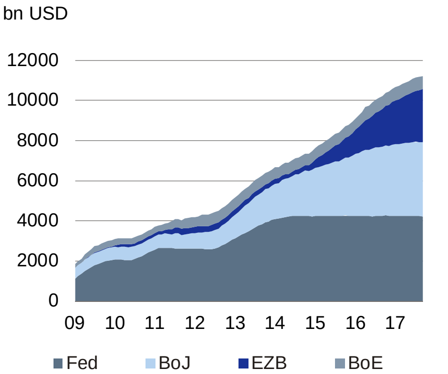
Source: Markit

Share of age cohort 20-60 years 14



Sources: Deutsche Bank Research, UN

Securities purchases of G4 central banks 15



Source: Thomson Reuters

Inflation risks stemming from monetary policy

While many observers had forecasted a considerable acceleration of inflation, we pointed out early on that unconventional monetary policy did not come with significant inflation risks, at least in its early years[6]. By now, however, risks will rise as central banks, not least the ECB, delay the overdue exit from their ultra-loose monetary policies[7].

At the moment, the effect of digitalisation on inflation is still unclear, as it involves technical and methodical difficulties in collecting prices and calculating inflation. However, according to statistical offices these difficulties should not lead to major errors for now.[8] In addition, digitalisation might lead to higher price transparency and more choice between different procurement channels. This might intensify competition and have a disinflationary effect. Still, this effect might not be permanent; the concentration in the online economy supported by digitalisation might, in the end, result in higher margins and prices. The long-term effects on productivity from more cost-efficient technologies and production procedures will be even more difficult to gauge.

Inflation is obviously an issue that still holds many secrets. This applies not only to short-term, cyclical developments, but also to structural and long-term factors. This is probably the reasoning behind the very sober title of a presentation given in 2017 by Claudio Borio, Head of the Monetary and Economic Department at the BIS: “How much do we really know about inflation?”[9] Still, there have been more and more signs of a pick-up in global inflation for some time now, which means that both central banks and investors should adapt their strategies rather sooner than later – even if several questions are still open.

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[6] DB Research, Medium-term inflation risks – how much of a threat are they?, B. Gräf and S. Schneider, June 2009

[7] German Council of Economic Experts, Annual Report 2017/18, Towards a forward-looking economic policy, Chapter III, 2017

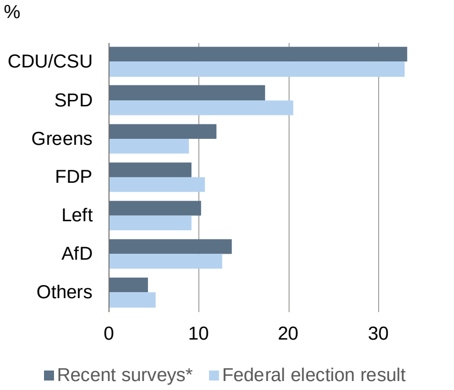
[8] Federal Statistical Office, Methodeninformation, Auswirkungen der Digitalisierung auf die Preisstatistik, 2016

[9] Claudio Borio, How much do we really know about inflation?, BIS 87th Annual General Meeting

Coalition treaty – myopic policy approach[10]

From the start, the negotiations were ill-fated. To begin with, the SPD leadership rejected a revival of the grand coalition (Groko). Then, the partly diametrically opposed interests of the parties involved, seemingly abundant financial scope and a lack of interest in fundamental reforms on the part of the German population led to a – in many areas – mixed bag of measures which, on balance, aims to further increase governmental control of the business sector and society at the expense of individual freedom.

Major political parties' popularity & result of the past federal election 1



* Average of major recent surveys (Allensbach, Emnid, Forsa, Forschungsgruppe Wahlen, Infratest dimap, INSA)

Source: Wahlrecht.de

In this respect, the European course of the government also lacks consistency. Competitiveness and growth forces shall be strengthened, whilst, at the same time, a framework for minimum wage regulations and national basic income is to be created and minimum rates for corporate taxes shall be introduced. In addition, when it comes to important proposals such as the transformation of the ESM into an EMF and the push for "fiscal control and economic cooperation" key details are left open.

Social policy is again geared towards the "all-risks-insured mentality" of the German citizens. Here, the trend of tighter labour market regulation is continued which was kicked off by the outgoing Groko, even though the demographic challenges and digitisation call for greater flexibility. Major social policy projects will – at least partly – reverse the reforms of the past decade, which were aimed at making the system more sustainable. Again, as under the previous grand coalition government, the younger generation will therefore be among the losers in this area.

The doubtlessly pressing investment programmes in the areas of education, research & development and digitisation are aimed at putting Germany on a solid footing in future. This takes more than government funds, though, namely a sufficient degree of confidence in private initiative as well as entrepreneurial freedom.

The next government enjoys fiscal scope for the time being. However, it will be used for spending programmes rather than systematic tax cuts – in line with the paternalistic state concept of the grand coalition partners. Once interest rates and economy start to normalise, though, the federal budget ought to immediately slip back into negative territory.

At present, the predominant feeling is relief that Germany now has a "decent"government. But not only coalition partners may soon wonder whether the price is too high. Speculation about an early end of the Groko have already started, particularly because the partners are likely to position themselves well in advance for the post-Merkel era. After all, there are enough breaking points.

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[10] Executive summary of Deutsche Bank Research, Standpunkt Deutschland, published March 7, 2018

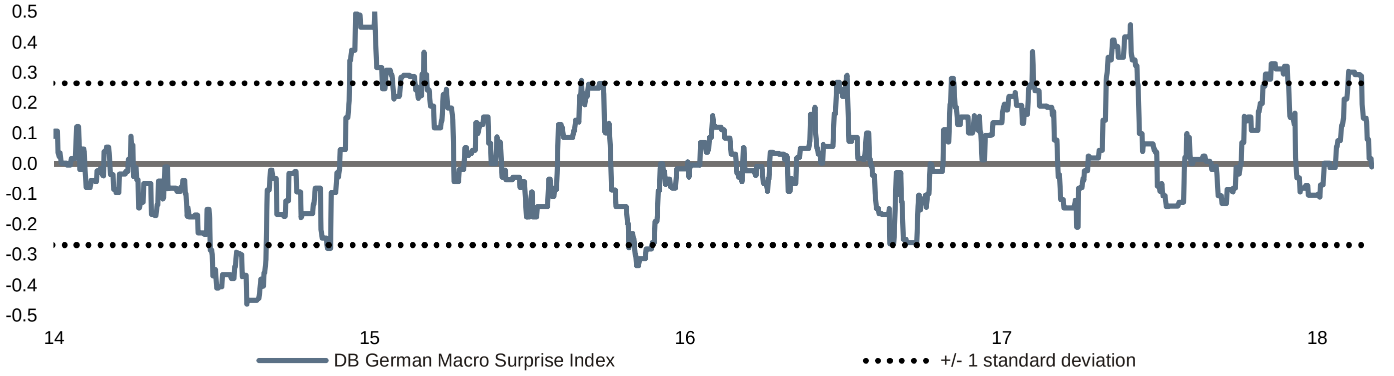
Strong growth, limited inflation

DB German Macro Surprise Index

The DB German Macro Surprise Index compares published economic data with market forecasts and thus provides clues as to the direction of future forecast revisions.

DB German Macro Surprise Index

Average of last 20 z-scores of data surprises



Values above (below) 0 indicate the data came in better (worse) than expected

Sources: Bloomberg Finance LP, Deutsche Bank Research

Last 20 published economic data for Germany

Bloomberg Tickers	Indicator	Reporting month	Publication date	Current value	Bloomberg consensus	Surprise	Standardised surprise	Quantile rank
GRIFPBUS Index	IFO Business Climate	1 2018	25/01/2018	117.6	117.0	0.6	0.3	0.6
GRIMP95Y Index	Import Price Index (% yoy)	12 2017	29/01/2018	1.1	1.1	0.0	0.3	0.6
GRFRIAMM Index	Retail Sales (% mom)	12 2017	31/01/2018	-1.1	-0.4	-0.7	-0.3	0.3
GRUECHNG Index	Unemployment Change (000's mom)	1 2018	31/01/2018	-25.0	-17.0	8.0	0.1	0.6
MPMIDEMA Index	Markit Manufacturing PMI	1 2018	01/02/2018	61.1	61.2	-0.1	-0.2	0.3
MPMIDESA Index	Markit Services PMI	1 2018	05/02/2018	57.3	57.0	0.3	0.4	0.7
GRIORTMM Index	Factory Orders (% mom)	12 2017	06/02/2018	3.8	0.7	3.1	1.4	0.9
GRIPIMOM Index	Industrial production (% mom)	12 2017	07/02/2018	-0.6	-0.7	0.1	0.2	0.6
GRCAEU Index	Current Account Balance (EUR bn)	12 2017	08/02/2018	27.8	28.0	-0.2	-0.4	0.3
GRCP20YY Index	CPI (% yoy)	1 2018	14/02/2018	1.6	1.6	0.0	0.2	0.3
GRZEWI Index	ZEW Survey Expectations	2 2018	20/02/2018	17.8	16.0	1.8	0.2	0.7
GRZECURR Index	ZEW Survey Current Situation	2 2018	20/02/2018	92.3	93.9	-1.6	-0.4	0.3
GRIFPBUS Index	IFO Business Climate	2 2018	22/02/2018	115.4	117.0	-1.6	-1.4	0.1
GRGDPPGQ Index	GDP (% qoq)	12 2017	23/02/2018	0.6	0.6	0.0	-0.1	0.3
GRCP20YY Index	CPI (% yoy)	2 2018	27/02/2018	1.4	1.5	-0.1	-0.4	0.2
GRUECHNG Index	Unemployment Change (000's mom)	2 2018	28/02/2018	-22.0	-15.0	7.0	0.1	0.5
MPMIDEMA Index	Markit Manufacturing PMI	2 2018	01/03/2018	60.6	60.3	0.3	0.3	0.7
GRIMP95Y Index	Import Price Index (% yoy)	1 2018	02/03/2018	0.7	0.7	0.0	0.3	0.6
GRFRIAMM Index	Retail Sales (% mom)	1 2018	02/03/2018	-0.7	0.7	-1.4	-0.8	0.2
MPMIDESA Index	Markit Services PMI	2 2018	05/03/2018	55.3	55.3	0.0	0.0	0.5

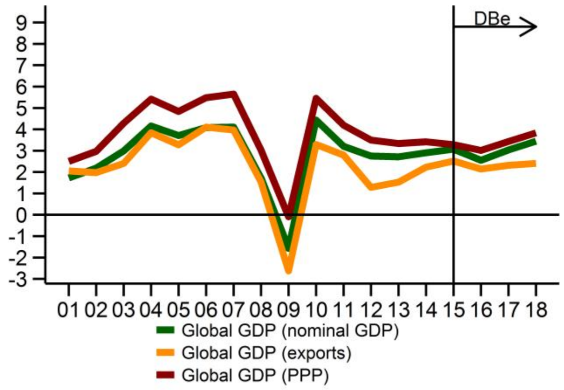
Updated by Jochen Möbert (+49 69 910-31727, jochen.moebert@db.com)
Source: Focus Germany, 4 August 2014, DB German Macro Surprise Index

German Export Indicator

The Export Indicator identifies the effects on German exports of changes in global demand on the one hand, and currency movements on the other (price impact).[11]

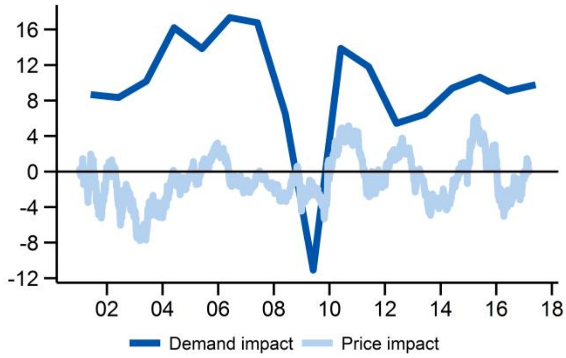
Global growth expected to accelerate

% yoy, weighting factor in brackets



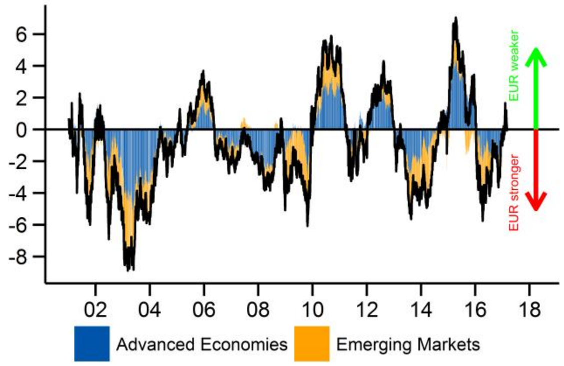
Demand and price impact for German exports

% yoy



Price impact about neutral so far in 2017

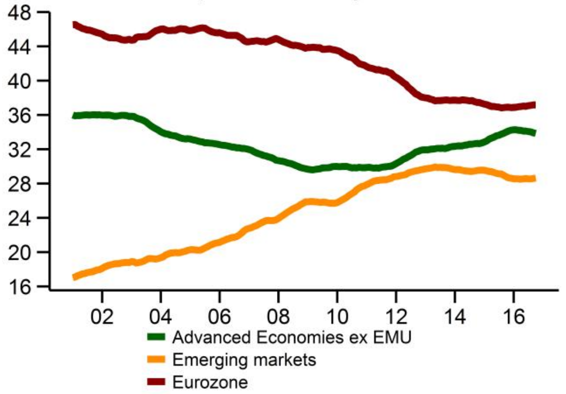
% yoy



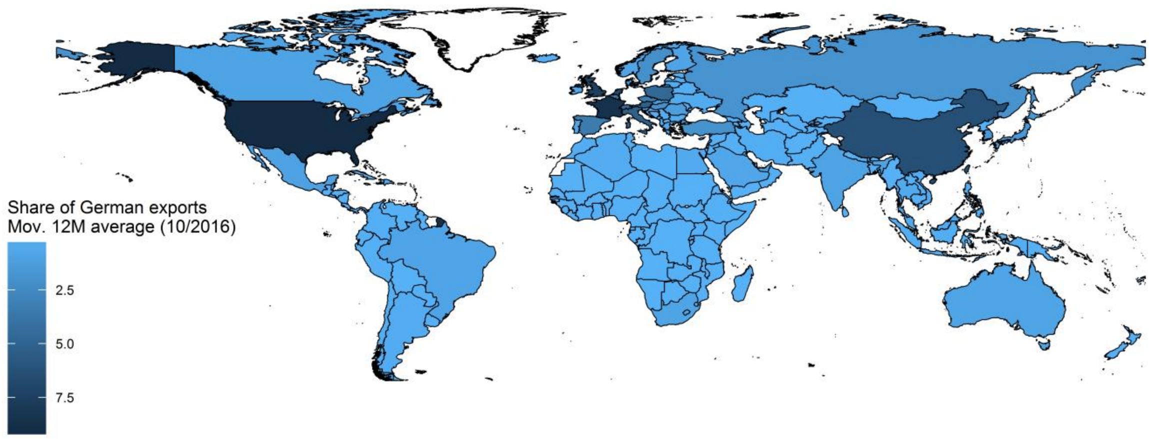
Weighed EUR yoy change using German export destination shares

Importance of EMU increased again recently

% of total German exports, 12M mov. avg.



German exports focus on Europe, the USA and China



Sources: Eurostat - Comext, Deutsche Bank Research

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[11] See for details Focus Germany, March 3, 2016

Strong growth, limited inflation

Germany: Events of economic-, fiscal- and euro-politics

Date	Event	Remarks
12-13 March	Eurogroup and ECOFIN meeting, Brussels	(Poss.) Greece – state of play, annual ex-ante reporting on debt issuance plans, (poss.) preparation of international meetings: inflation and exchange rate developments.
14 March	Election of the Federal Chancellor, Berlin	Given the SPD member's approval of the coalition treaty, the Bundestag will elect Angela Merkel with the necessary majority as the chancellor of a renewed coalition between the CDU, CSU and the SPD. This will be her 4th term.
14 March	Formal appointment of the new Federal Cabinet, Berlin	On March 9 the SPD presented the nominees for its 6 posts in the new cabinet. Most important: Hamburg's First Mayor Olaf Scholz will become Finance Minister, Hubertus Heil, a former SPD general secretary, will be Labour Minister, Heiko Maas, so far Minister of Justice, will lead the Foreign Office. Among the CDU's 5 positions the Ministry for Economic Affairs and Energy which will be held by Peter Altmaier, at present the acting Finance Minister, will play a special role. Amongst the CSU's portfolio the Ministry of the Interior is in the focus, as party leader Horst Seehofer, at present PM in Bavaria, will move to Berlin to take office.
22-23 March	European Council	Debates on the future of the EU, foreign affairs and international relations, (poss.) decisions on the Brexit transition period and the guidelines for the post-Brexit relationship.
27-28 March	Eurogroup and ECOFIN meeting, Brussels	Thematic discussion on growth and jobs – wage dynamics, (poss.) follow-up to the March European Council – Deepening EMU, Banking Union – euro area aspects.
26 April	ECB Governing Council meeting, press conference	Review of the monetary policy stance. On March 8 the ECB changed its forward guidance. This means exit is in play. The change is consistent with the sequence we had expected – removing the QE reaction function sets the ground for a June announcement that net asset purchases will end in December and keeps the path open to a preliminary rate hike in June 2019.
24 May	Eurogroup and ECOFIN meeting, Brussels	Economic situation in the euro area – Commission spring forecast, thematic discussions on growth and jobs – Spending reviews – follow-up, (poss.) Greece – state of play, Cyprus – Post Programme Surveillance.

Source: Deutsche Bank Research

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Deutschland: Datenkalender

Datum	Uhrzeit	Daten	Berichtszeitraum	DB Schätzung	Letzter Wert
22 Mar 2018	9:30	PMI Verarbeitendes Gewerbe (Flash)	März	60.0	60.6
22 Mar 2018	9:30	PMI Dienstleistungssektor (Flash)	März	55.5	55.3
22 Mar 2018	10:30	ifo Geschäftsklima (Index, sb.)	März	115.0	115.4
29 Mar 2018	09:55	Arbeitslosenrate (%, sb.)	Februar	5.4	5.4
29 Mar 2018	14:00	Vorläufiger VPI (% gg. Vj., sb.)	März	1.5	1.4
3 Apr 2018	8:00	Einzelhandelsumsätze (Index, sb.), % gg. Vm.*	Februar	1.5	-0.7
5 Apr 2018	8:00	Auftragseingang im Ver. Gewerbe (% gg. Vm., sb.)	Februar	2.0	-3.9
6 Apr 2018	8:00	Industrieproduktion (% gg. Vm., sb.)	Februar	1.0	-0.1
9 Apr 2018	8:00	Handelsbilanz (EUR Mrd., sb.)	Februar	20.5	21.3
9 Apr 2018	8:00	Warenexporte (% gg. Vm., sb.)	Februar	1.5	-0.5
9 Apr 2018	8:00	Warenimporte (% gg. Vm., sb.)	Februar	1.4	-0.5

*lt. Statistischem Bundesamt auch früherer Veröffentlichungstermin möglich
Quellen: Deutsche Bank Research, Statistisches Bundesamt, Bundesagentur für Arbeit, ifo, Markit

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Financial Forecasts

	US	JP	EMU	GB	CH	SE	DK	NO	PL	HU	CZ
Key interest rate, %											
Current	1.375	-0.10	0.00	0.50	-0.75	-0.50	0.05	0.50	1.50	0.02	0.75
Mar 18	1.625	-0.10	0.00	0.50	-0.75	-0.50	0.05	0.50	1.50	0.03	0.75
Jun 18	1.875	-0.10	0.00	0.50	-0.75	-0.50	0.05	0.50	1.50	0.05	0.75
Sep 18	2.125	-0.10	0.00	0.50	-0.75	-0.50	0.05	0.50	1.50	0.05	0.75
3M interest rates, %											
Current	2.06	0.07	-0.33	0.60							
Mar 18	1.83	0.05	-0.35	0.55							
Jun 18	2.08	0.05	-0.35	0.55							
Sep 18	2.33	0.05	-0.35	0.65							
10Y government bonds yields, %											
Current	2.90	0.05	0.65	1.57							
Mar 18	2.80	0.00	0.70	1.45							
Jun 18	3.00	0.00	0.85	1.55							
Sep 18	2.95	0.00	1.05	1.65							
Exchange rates											
	EUR/USD	USD/JPY	EUR/GBP	GBP/USD	EUR/CHF	EUR/SEK	EUR/DKK	EUR/NOK	EUR/PLN	EUR/HUF	EUR/CZK
Current	1.24	106.12	0.90	1.39	1.17	10.21	7.45	9.68	4.19	311.74	25.42
Mar 18	1.22	100.00	0.88	1.38	1.17	10.00		9.50	4.11	312.89	25.45
Jun 18	1.24	102.00	0.91	1.37	1.20	9.60		9.25	4.06	317.00	25.32
Sep 18	1.26	105.00	0.93	1.35	1.22	9.40		9.10	4.07	316.00	25.19

Sources: Bloomberg Finance LP, Deutsche Bank Research

Strong growth, limited inflation

German data monitor

	Q1 2017	Q2 2017	Q3 2017	Q4 2017	Q1 2018	Sep 2017	Oct 2017	Nov 2017	Dec 2017	Jan 2018	Feb 2018
Business surveys and output											
Aggregate											
Ifo business climate	111.2	114.5	115.9	117.2		115.4	116.9	117.6	117.2	117.6	115.4
Ifo business expectations	104.3	106.2	107.5	109.9		107.4	109.3	111.0	109.5	108.3	105.4
Industry											
Ifo manufacturing	106.1	109.8	112.0	113.4		111.4	113.0	113.9	113.3	113.8	111.3
Headline IP (% pop)	1.2	1.9	1.1	0.7		-1.1	-1.2	3.1	-0.6		
Orders (% pop)	-0.3	1.2	3.3	3.5		0.7	0.9	-0.1	3.0	-3.9	
Capacity Utilisation	85.8	86.0	86.7	87.3	87.9						
Construction											
Output (% pop)	4.4	5.1	-0.8	-2.7		0.1	-2.6	2.7	-5.6		
Orders (% pop)	0.1	-2.8	-2.1	12.2		0.4	0.6	9.0	16.8		
Ifo construction	128.7	130.5	133.0	134.0		134.0	135.1	133.1	133.7	133.5	132.4
Consumer demand											
EC consumer survey	-0.6	3.6	4.1	5.5		3.9	5.2	5.3	6.1	7.4	6.5
Retail sales (% pop)	0.2	1.2	0.5	0.6		1.2	-0.8	1.7	-1.1	-0.7	
New car reg. (% yoy)	6.7	0.0	0.3	4.2		-3.3	3.9	9.4	-1.0	11.6	7.4
Foreign sector											
Foreign orders (% pop)	0.7	1.5	3.5	4.9		1.3	1.3	-0.3	4.4	-4.6	
Exports (% pop)	2.8	1.6	0.7	3.0		-0.4	-0.3	4.1	0.0		
Imports (% pop)	3.4	1.5	0.2	3.3		-4.4	2.3	1.1			
Net trade (sa EUR bn)	59.4	60.7	62.4	63.6		21.7	19.9	22.3	21.3		
Labour market											
Unemployment rate (%)	5.9	5.7	5.7	5.5		5.6	5.6	5.5	5.5	5.4	5.4
Change in unemployment (k)	-52.0	-42.0	-25.0	-55.3		-24.0	-13.0	-21.0	-29.0	-25.0	-22.0
Employment (% yoy)	1.5	1.5	1.5	1.5		1.5	1.5	1.5	1.5	1.4	
Ifo employment barometer	110.3	111.1	111.9	112.9		112.3	112.1	113.2	113.6	113.8	113.6
Prices, wages and costs											
Prices											
Harmonised CPI (% yoy)	1.9	1.6	1.7	1.6		1.8	1.5	1.8	1.6	1.4	1.2
Core HICP (% yoy)	1.0	1.4	1.5	1.3		1.5	1.1	1.3	1.4	1.3	1.4
Harmonised PPI (% yoy)	2.8	2.8	2.7	2.5		3.1	2.7	2.5	2.3	2.1	
Commodities, ex. Energy (% yoy)	32.7	8.9	4.2	-5.6		5.3	0.7	-6.2	-10.5	-11.1	-13.5
Crude oil, Brent (USD/bbl)	54.5	50.8	52.2	61.5		55.5	57.6	62.7	64.4	69.1	65.3
Inflation expectations											
EC household survey	18.9	17.6	16.3	16.0		18.1	16.0	17.2	14.8	16.6	18.3
EC industrial survey	13.0	12.2	11.7	14.2		12.8	12.3	13.4	16.9	15.1	14.4
Unit labour cost (% yoy)											
Unit labour cost	0.9	2.6	1.9	1.1							
Compensation	2.6	2.7	2.7	2.5							
Hourly labour costs	1.2	4.1	2.8	2.8							
Money (% yoy)											
M3	5.9	5.6	4.7	4.3		4.7	4.9	4.5	4.3	3.6	
M3 trend (3m cma)	5.6	5.3	5.0	4.7		5.0	4.7	4.8	4.7		4.1
Credit - private	3.3	3.8	3.9	4.2		3.9	3.9	4.0	4.2	0.0	
Credit - public	21.0	4.1	5.5	-2.9		5.5	-0.6	-4.4	-2.9	-5.1	

% pop = % change this period over previous period.
Sources: Deutsche Bundesbank, European Commission, Eurostat, Federal Employment Agency, German Federal Statistical Office, HWWI, ifo, Markit

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