Outlook for the German economy – macroeconomic projections for 2019 and 2020 and an outlook for 2021

After a boom phase, the German economy is currently experiencing a marked cooldown. Domestic expansionary forces remain intact, yet the underlying cyclical trend is only subdued. This is mainly due to the downturn in industry, where lacklustre export growth is taking a toll. From the second half of 2019, exports should gradually start increasing more strongly again, however. Industry ought to regain traction, too, and the dichotomous state of Germany's economy should become less pronounced. Private consumption and investment are likely to record solid growth over the remainder of the projection horizon, albeit slightly weaker than in 2019. A slowdown in employment growth driven by demographic factors is the key contributor here. Fiscal policy will continue to have an expansionary effect in the coming years.

In this scenario, calendar-adjusted real gross domestic product (GDP) is set to grow by just 0.6% this year. At a rate of 1.2%, the pace of growth will be markedly higher again in 2020. It could then see another slight intensification in 2021 and again reach the pace at which aggregate capacity is expanded. Capacity utilisation is going to be distinctly higher than the norm across the whole of the projection horizon. Inflation, as measured by the Harmonised Index of Consumer Prices (HICP), is likely to weaken significantly this year, from 1.9% in 2018 to 1.4%. This is due, above all, to lower price rises for energy. In the following two years, energy is not expected to increase by much in price. This partially masks the fact that other goods and services will see somewhat stronger price increases from year to year against the backdrop of rising import prices and persistent wage pressures. Accordingly, the inflation rate excluding energy and food could go up from 1.3% in 2018 to 1.7% in 2021. Parallel to this, headline inflation will probably climb to 1.5% in 2020, then 1.7% in 2021.

The general government surplus will likely shrink markedly this year, but will still amount to around 1% of GDP. It should fall further over the coming years. A loosened fiscal policy is the main reason behind the decrease. In addition, positive cyclical effects are tailing off. The debt ratio is likely to fall below the 60% threshold this year.

Compared with the projections from last December, significantly lower economic growth is now expected for the current year in particular. In line with the subdued state of economic activity over the projection horizon, inflation excluding energy and food will likely turn out to be markedly lower. Changing with the path of energy prices, consumer price inflation is now expected to be considerably weaker overall, especially in 2020. For economic growth and, to a lesser extent, for the rate of inflation, it is the downside risks that predominate as things stand today.

Economic outlook[1]

Only muted growth again for the German economy in Q4 2018 and Q1 2019

In the fourth quarter of 2018 and the first quarter of 2019, the German economy saw only muted growth. In the final quarter of 2018 and the first quarter of 2019 taken together, real GDP rose by just 0.4% after seasonal and calendar adjustment. It thus fell well short of the expectations expressed in the December projection.[2] This means that the underlying cyclical trend has remained persistently weak since mid-2018. The December outlook had projected a fairly subdued underlying pace of growth, but it had been assumed that production in the automobile industry would be significantly ramped up once the problems in connection with the introduction of a new EU-wide emissions test (Worldwide Harmonised Light Vehicle Test Procedure – WLTP) were gradually overcome. For this reason, in particular, GDP growth of slightly above potential had been expected. In reality, however, the catch-up effects in the automobile industry were largely eclipsed by weaker global demand for motor vehicles.[3] In addition, the autumn brought the beginnings of a broad-based downturn in other export-oriented industry beyond the automotive sector, too; this had not been foreseen. By contrast, domestic economic activity remained robust, in line with the expectations contained in the December projection.[4] Temporary factors played a big part in the marked increase in GDP in the first quarter of 2019. The fiscal measures effective since the beginning of the year and consumers catching up on deferred car purchases gave a further boost to private consumption. On top of this, the favourable weather conditions facilitated high levels of construction investment.[5]

June 2019 projections

Year-on-year percentage change

	2018	2019	2020	2021
Real GDP, calendar adjusted	1.5	0.6	1.2	1.3
Real GDP, unadjusted	1.4	0.6	1.6	1.3
Harmonised Index of Consumer Prices	1.9	1.4	1.5	1.7
excluding energy and food	1.3	1.5	1.6	1.7

Source: Federal Statistical Office. 2019 to 2021 Bundesbank projections.
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GDP growth set to be low in Q2 and Q3 2019, too

Only a slight increase in GDP is to be expected in the second and third quarters of the current year. The economy in Germany is initially likely to remain in its dichotomous state. On the one hand, the outlook for exports is weak and the downturn in industry is likely to continue. New orders have declined strongly and on a broad front since the start of 2019. Furthermore, the ifo Institute's business climate index for the manufacturing sector has fallen significantly in recent months, as have production and export expectations. In industry's wake, business investment is also likely to take a hit. On the other hand, domestic expansionary forces remain intact. Wages and employment should continue to climb robustly. Overall recruitment plans are one indicator of this, even if those of industry have dimmed recently. Furthermore, business expectations in the main construction sector and in trade, as well as in the other services sectors, albeit to a lesser extent, brightened again somewhat after dipping at the start of 2019. On balance, the weak underlying cyclical trend is likely to continue in the second and third quarters of 2019. After a slight decrease in the second quarter, real GDP is likely to pick up again somewhat in the third quar-

1 This projection for Germany was completed on 23 May 2019. It was incorporated into the projections for the euro area published by the ECB on 6 June 2019.
2 See Deutsche Bundesbank (2018).
3 For more information on the weak state of the global car market, see Deutsche Bundesbank (2019a).
4 The comparatively steep increase in aggregate demand was bolstered by, among other factors, clear catch-up effects when it came to motor vehicle purchases. At the same time, however, inventories were heavily depleted, to an extent which had not been anticipated.
5 See Deutsche Bundesbank (2019b).

ter.[6] A more protracted, clear decline in economic output currently seems an unlikely prospect, though.

Return to somewhat stronger economic growth in the medium term

Over the remainder of the projection horizon, the German economy is likely to see somewhat stronger growth again. Key here is the expectation that exports will gradually shake off stagnation in the second half of the year and will then go on to increase more strongly again in keeping with the assumed recovery in foreign demand. This should allow industry to regain traction, and business investment should recover. These developments should see Germany's economic dichotomy become less pronounced. Over the coming years, the domestic economy will tend to become weaker. There will be a solid increase in private consumption, albeit somewhat weaker than that recorded this year on account of less dynamic growth in real disposable incomes. The impact of demographic effects will be increasingly curbing growth in the labour supply; as a result, while wages will continue to climb fairly sharply, employment growth will slacken substantially. Together with the demographically induced reduction in newly established households, the smaller increase in real disposable incomes overall will tend to also have a dampening effect on demand for housing and thus on housing construction investment. On top of this, the construction sector is already working at maximum capacity and expanding production capacity can only be done gradually. Fiscal policy, which is set to be expansionary in the coming years, will not fully counterbalance the domestic economy.

GDP growth likely to be considerably weaker than expected in December 2018, particularly in 2019

In this scenario, the German economy will initially see only weak growth but will pick up some speed again in the medium run. After an increase in calendar-adjusted real GDP of just 0.6% in the current year, economic output should increase markedly more strongly in 2020 at 1.2%. The year 2021 could see it expand slightly more robustly again (see the table

Manufacturing sector

Seasonally and calendar adjusted

Sources: Federal Statistical Office and ifo Institute.
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Business climate by sector

Balances, seasonally adjusted

Source: ifo Institute.
Deutsche Bundesbank

6 A contributing factor here is that the one-off effects which played a major part in the higher Q1 GDP growth will likely peter out to a large extent. Looking at the construction industry, irrespective of the sector's continuing boom, the very strong first quarter on the back of good weather could be followed up by dampening bounce-back effects. On the other hand, fiscal policy will additionally bolster the purchasing power of households as the year progresses.

Underlying conditions for macroeconomic projections

This projection is based on assumptions made by Eurosystem experts about the global economy, exchange rates, commodity prices and interest rates. They are based on information available as at 15 May 2019. The assumptions regarding economic activity in the euro area are derived from projections made by the national central banks of the euro area countries.[1] They include fiscal policy measures that have been adopted or which have already been sufficiently specified and are likely to be implemented.

Momentum of global economy unchanged, muted outlook for world trade

The global economy (excluding the euro area) grew only slightly more slowly in the fourth quarter of 2018 and first quarter of 2019 than predicted in the December projection. The assumption is still that the pace of growth will pick up again slightly in the second half of 2019 and then remain largely constant across the projection horizon. This outlook primarily reflects the developments anticipated for the group of emerging market economies. Here, the assumption is that the reviving momentum in several east Asian economies and in Latin America will cancel out a continued gradual slowdown in growth in China. The pace of growth of the advanced economies (excluding the euro area), by contrast, is likely to ease somewhat across the projection horizon as the effects of expansionary fiscal measures wane and given an additional cyclical slowdown.[2] All in all, the global economy (excluding the euro area and weighted by purchasing power parity) looks set to expand by 3½% per year over the next two years following growth of 3¼% this year.

The slowdown in global industrial and investment activity as well as trade disputes are weighing on international trade. In fact, global trading volume actually dropped perceptibly in the fourth quarter of 2018 and first quarter of 2019 and therefore fell considerably short of the expectations expressed in the December projection. A gradual recovery of global trade (excluding the euro area) is assumed over the projection horizon. Following growth rates of ¾% in the current year and 2¾% next year, it is not likely to largely match global economic growth again until 2021. Unlike the outlook for the global economy, the expectations for global trade were consequently lowered markedly as compared with the December projection. Growth in German exporters' sales markets, too, has slowed noticeably in the last few quarters. Here, as with global trade, a gradual revival of momentum is anticipated over the period covered by the projection.

Technical assumptions of the projection

Crude oil prices initially fell markedly following publication of the December projection given high global production and concerns about global oil demand. Since the beginning of 2019, however, OPEC production cutbacks, production stoppages in Venezuela, the US sanctions on Iran as well as recently intensifying geopolitical tensions sent

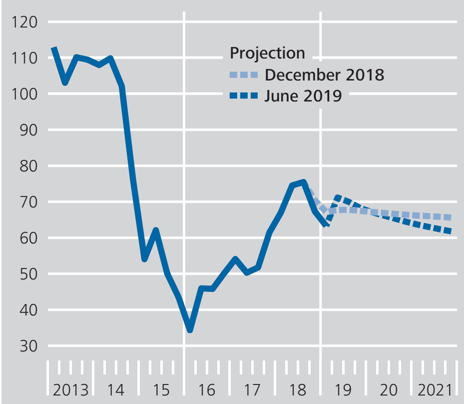
1 The projections made by the national central banks of the euro area countries were completed on 23 May 2019.
2 As for the United Kingdom's planned withdrawal from the EU, the assumption remains, as in the December projection, that no tariffs will be introduced before the end of 2020. In the short term, the uncertainty about how the decision to leave the EU will be implemented is likely to weigh on economic activity. It is likewise thought that the transition to new trade relations will dampen economic growth in the United Kingdom in 2021.

crude oil prices sharply higher again. As this projection was produced, they therefore exceeded the assumptions of the December forecasts. However, the forward quotations, from which the assumptions for the June projection were derived, suggest that crude oil prices will fall distinctly. After that there will be no notable change as compared with the December assumptions in the anticipated average level of crude oil prices this year and next, though in 2021 it will be slightly lower than the December assumption. Similarly, the prices of other commodities as measured in US dollars initially fell further following publication of the December projection. This has a stronger impact on the average rate of change for the current year than assumed in December. In view of the expected growth of the global economy, the recovery that has been under way since the beginning of the year is forecast to continue throughout the projection period with moderate increases.

At its December meeting, the Governing Council of the ECB decided to discontinue its net purchases under the expanded asset purchase programme (APP) at the end of 2018. It also announced that it would continue to reinvest the principal payments from maturing securities purchased under the APP for an extended period of time past the date of the first increase in key ECB interest rates. After its March meeting, the ECB Council adjusted its forward guidance on key interest rates. Interest rates are now to remain unchanged not only throughout the summer of 2019, but at least through the end of this year. As a consequence, market expectations regarding a future interest rate hike shifted even further into the future as compared with the assumptions of the December projection. In addition, rates are now expected to rise significantly more slowly. On balance, the EURIBOR will be largely constant across the projection horizon. By contrast, the assumptions regarding

Oil price

US$ per barrel of Brent, quarterly data



Sources: Bloomberg and ECB projections.
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Major assumptions of the projection

Item	2018	2019	2020	2021
Exchange rates of the euro				
US dollar/euro	1.18	1.12	1.12	1.12
Effective[1]	117.9	116.7	116.8	116.8
Interest rates				
Three-month EURIBOR	− 0.3	− 0.3	− 0.3	− 0.2
Yield on government bonds outstanding[2]	0.4	0.0	0.0	0.2
Commodity prices				
Crude oil[3]	71.1	68.1	65.8	62.7
Other commodities[4,5]	3.9	− 3.4	3.9	3.8
German exporters' sales markets[5,6]	3.4	1.8	2.9	3.3

1 Compared with 38 currencies of major trading partners of the euro area (EER-38 group of currencies); Q1 1999 = 100. **2** Yield on German government bonds outstanding with a residual maturity of over nine and up to ten years. **3** US dollars per barrel of Brent crude oil. **4** In US dollars. **5** Year-on-year percentage change. **6** Calendar adjusted.
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the yield on long-term German government bonds still point upwards, but from a perceptibly lower level than in the December projection. Based on the technical interest rate assumptions, bank lending rates will also rise only moderately over the next two years. Across the projection horizon, financing conditions are, therefore, expected to be extremely advantageous overall. Accordingly, the percentage of enterprises citing financing difficulties as a risk to their business growth remained at a historically low level, according to the economic survey conducted by the Association of German Chambers of Commerce and Industry (DIHK) in the early summer of 2019.

Since the December projection was finalised, weaker-than-expected economic data for the euro area as well as the ECB Governing Council's extended forward guidance on policy interest rates have dampened the single currency's value against the US dollar. The euro was trading at US$1.12 in the period relevant for deriving the exchange rate assumptions, which is around 1¾% lower than the assumptions in the December projection. Compared with the currencies of 38 major trading partners of the euro area, the euro's depreciation was lower, at around 1%.

Muted pace of growth in the euro area

Following muted growth in the second half of last year, economic growth in the euro area accelerated significantly at the beginning of 2019. However, the pace of growth is expected to moderate again in the second quarter. Given further employment gains,[3] considerably rising wages and good capacity utilisation, domestic demand in the euro area is likely to continue to display robust growth as the projection period progresses. In addition, the currently palpable headwind from foreign demand is likely to ease off across the projection horizon, thus creating stronger external stimuli again. Here, exports are expected to grow largely in line with the sales markets. Overall, the euro area economy is therefore likely to grow roughly at potential again over the next two years.

Compared with the December projection, expected GDP growth in the euro area (excluding Germany) was revised downwards by around three-tenths to 1.4% for the current year. Looking to the next two years, largely unchanged growth rates of 1.8% and 1.4% are anticipated for 2020 and 2021 respectively, which means that the momentum is likely to be slightly lower than assumed in the December projection.

Considerably looser fiscal policy

Fiscal policy in Germany will be loosened considerably over the projection horizon, with the strongest loosening occurring this year.[4] It will have an expansionary effect mainly via the expenditure side. Additional spending has been agreed in many areas. In terms of the social security funds, this relates primarily to pensions. Central, state and local governments are planning additional spending, especially on transport infrastructure, childcare, education, and internal and external security. On the revenue side, the income tax cuts passed so far will be offset by additional revenue from progressive taxation. On balance, the changes to the social security contributions largely cancel each other out. Whereas the contribution rate to unemployment insurance has fallen, the contribution rate to the public long-term care insurance scheme has risen by the same amount (0.5 percentage point in each case). While the return to parity funding by employers and employees of the statutory health insurance reduces members' contributions, the contributions required of enterprises, the various levels of government and the statutory pension insurance scheme will go up accordingly.

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3 The labour market is increasingly experiencing tightness in Germany as well as several other euro area countries. See also Deutsche Bundesbank (2019c).
4 Numerous priority measures in the coalition agreement have now been passed and incorporated into this projection. However, in particular, the agreed partial abolition of the solidarity surcharge in 2021 has not yet been included (revenue shortfall of around €10 billion a year). The basic pension currently being discussed is also not included.

on p. 2).[7] Compared with the December outlook, a considerably lower rate of GDP growth is therefore expected, most notably for 2019 (see the table on p. 8). This reflects, in particular, weaker global demand, which, through German exports and industry, has been weighing more heavily on economic growth than anticipated in December, placing pressure over the last quarter of 2018 and the first quarter of 2019 as well as over the remainder of this year. Other factors feeding into the downward revision for GDP growth for the next two years are private consumption, the outlook for which is now being assessed more weakly, and the more subdued pace of business investment.

High aggregate capacity utilisation abates

This means that the current, marked slowdown in the German economy, on the heels of a period of economic boom, will only continue at a reduced pace into the next two years. According to this projection, economic output will fall considerably short of potential output this year and still slightly short next year. The growth rate of potential output for 2019 is estimated at 1.4%. By 2021, it is likely that this rate will fall slightly to 1.3% due to fact that the potential labour supply will then stop growing due to demographic trends. The level of aggregate capacity utilisation, which was high in 2018, will therefore abate over the projection horizon. However, capacity utilisation will still be higher than the norm in 2021, too.

Exports record solid growth again after weak second and third quarters in 2019

The latest data on new industrial orders from abroad are indicative of weak German foreign business in the short term. This was confirmed by survey-based indicators, such as the export expectations captured by both the DIHK and the ifo Institute as well as the Purchasing Managers' Index (PMI) for incoming orders in the export sector. Gradually rising growth in exports is expected again in the second half of 2019. Alongside the latest depreciation of the euro against the currencies of major trading

7 Without adjusting for calendar effects, the growth rate for 2020 will be considerably higher, at 1.6%, as the year has more working days than 2019. Such calendar effects will have no impact in the current year and 2021, however.

Technical components of the GDP growth projection

% or percentage points

Item	2018	2019	2020	2021
Statistical carry-over at the end of the previous year[1]	0.8	0.0	0.3	0.5
Fourth-quarter rate[2]	0.6	0.9	1.3	1.3
Average annual GDP growth rate, calendar adjusted	1.5	0.6	1.2	1.3
Calendar effect[3]	0.0	0.0	0.4	0.0
Average annual GDP growth rate[4]	1.4	0.6	1.6	1.3

Sources: Federal Statistical Office; 2019 to 2021 Bundesbank projections. 1 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. 2 Annual rate of change in the fourth quarter, seasonally and calendar adjusted. 3 As a percentage of GDP. 4 Discrepancies in the totals are due to rounding.

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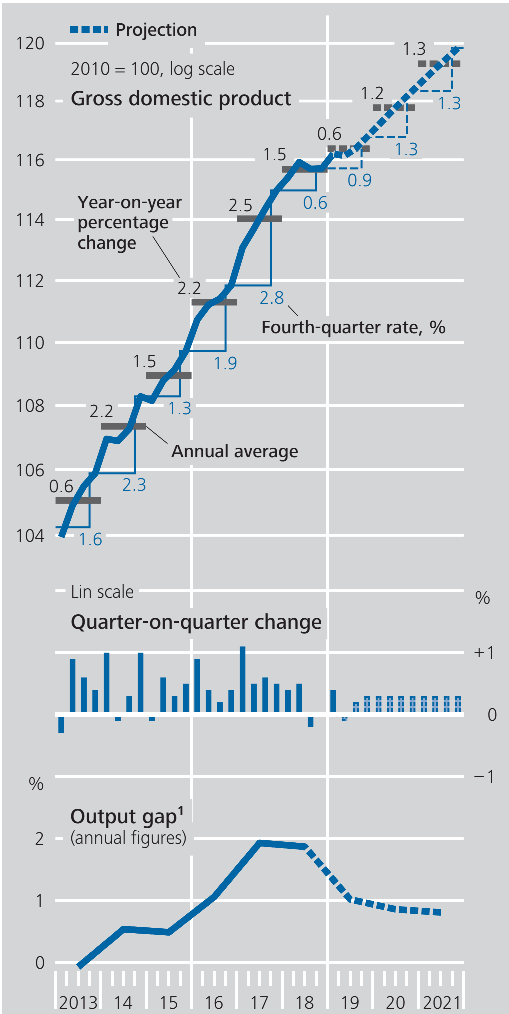
Aggregate output and output gap

Price, seasonally and calendar adjusted



Sources: Federal Statistical Office and Bundesbank calculations. 2019 to 2021 Bundesbank projections. 1 Deviation of GDP from estimated potential output.

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Revisions since the December 2018 projection

Year-on-year percentage change

Item	2019	2020	2021
GDP (real, calendar adjusted)			
June 2019 projection	0.6	1.2	1.3
December 2018 projection	1.6	1.6	1.5
Difference in percentage points	− 1.0	− 0.4	− 0.2
Harmonised Index of Consumer Prices			
June 2019 projection	1.4	1.5	1.7
December 2018 projection	1.4	1.8	1.8
Difference in percentage points	0.0	− 0.3	− 0.1

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Leading indicators for exports

Seasonally adjusted

Sources: Federal Statistical Office, Association of German Chambers of Commerce and Industry (DIHK), ifo Institute.
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partners, this will be attributable primarily to the anticipated increasing growth in foreign demand. Looking ahead, it is likely that the rate of growth in German exports will approach that of German exporters' sales markets, whilst initially still lagging behind. At most, certain market share losses are to be expected within the euro area. In this context, unit labour costs, which are rising faster than in other euro area countries, will probably have an adverse effect on German exporters' price competitiveness over the projection horizon.

Despite the downturn in industry in the fourth quarter of 2018 and first quarter of 2019, business investment expanded significantly and even to a somewhat greater extent than had been expected in the December projection. First, this was due to one-off effects. The brisk commercial construction activity in winter is likely to have benefited from the favourable weather conditions and there were fairly pronounced catch-up effects in commercial vehicle fleets following the sluggish phase last autumn. At that time, the introduction of the new WLTP emissions testing procedure had noticeably dampened commercial motor vehicle registrations. These catch-up effects are now likely to have run their course, however. Second, industrial investment, which has been notably robust until recently, was probably linked not least to the comparatively weak propensity to invest during the previous economic boom. Unlike in previous economic cycles, there had been no excessively dynamic expansion of investment activity in that period. As a result, there was no major build-up of setback potential that would significantly depress industrial investment at the end of the boom phase. Even so, due to the supportive one-off effects petering out, the poor outlook for exports, and the industrial downturn continuing for the time being, business investment is expected to decline in the second and third quarters of 2019.[8] Thereafter, in the wake of rising export business, industrial investment should again see at least subdued growth. The increasingly unfavourable demographic trends – which result in a flatter potential growth path for the German economy – will dampen fixed capital formation.[9] Furthermore, aggregate overutilisation will further diminish somewhat in the coming years. This is likely to lead to a weaker propensity to invest.

Business investment sees initial decline followed by subdued growth

Housing construction investment rose steeply in the fourth quarter of 2018 and first quarter of 2019. This was also helped, in particular, by the favourable weather conditions in the first

8 Due to the statistical carry-over effect, this will not have a considerable impact on annual average growth rates until 2020.
9 See Deutsche Bundesbank (2018), p. 23.

Moderate growth in housing construction investment over projection horizon

quarter of 2019. Starting from this high level, housing construction investment will probably then see only moderate growth over the projection horizon. The cost of construction work will rise sharply and at an accelerating pace, partly because companies are suffering from a lack of skilled workers. Due to demand-side factors, too, housing construction investment could tend to see a slight loss of momentum. Alongside demographic trends, the expected fall in immigration will reduce the growth in newly established households. An additional factor is the significantly weaker underlying cyclical trend compared with the December projection. It will have an impact on real disposable income, thereby reducing households' additional scope for expenditure.

Government investment expected to continue expanding significantly

Government investment is likely to continue to see significant expansion. The key areas of investment will probably be transport infrastructure, schools and childcare. Military spending is also expected to rise considerably. However, in real terms, the strong nominal increase in construction investment is likely to be substantially eroded by the large price increases.

Gross fixed capital formation loses steam

Based on the trends in the three areas described – business, housing construction, and general government – gross fixed capital formation will see waning growth overall in the current and coming year. In 2021, fixed capital formation could grow somewhat more strongly again due to the slightly better dynamics in business and general government investment on average over the year.

Private consumption remains reliable mainstay of economic activity

The lull in consumption in the second half of 2018 persisted somewhat longer than expected in the December projection. Private consumption then rose sharply in the first quarter of 2019. As was also the case in business investment, catch-up car purchases played a decisive role here. An additional boost was provided by the fiscal measures that came into effect at the start of the year. In particular, the return to parity financing of the statutory health insurance scheme eased the financial burden on house-

Key figures of the macroeconomic projection

Year-on-year percentage change, calendar adjusted[1]

Item	2018	2019	2020
GDP (real)	1.5	0.6	1.2
GDP (real, unadjusted)	1.4	0.6	1.6
Components of real GDP			
Private consumption	1.1	1.7	1.1
Memo item: Saving ratio	10.4	10.5	10.4
Government consumption	1.0	2.0	1.9
Gross fixed capital formation	2.7	2.3	1.0
Business investment[2]	2.3	1.6	0.5
Private investment in housing construction	2.9	3.1	1.6
Exports	2.2	1.3	2.5
Imports	3.5	2.8	2.8
Memo item: Current account balance[3]	7.4	7.0	6.9
Contributions to GDP growth[4]			
Domestic final demand	1.3	1.7	1.2
Changes in inventories	0.5	– 0.6	0.0
Exports	1.0	0.6	1.2
Imports	– 1.4	– 1.1	– 1.1
Labour market			
Total number of hours worked[5]	1.5	0.5	0.2
Employed persons[5]	1.3	0.9	0.3
Unemployed persons[6]	2.3	2.2	2.2
Unemployment rate[7]	5.2	4.9	4.8
Memo item: ILO unemployment rate[8]	3.4	3.2	3.1
Wages and wage costs			
Negotiated pay rates[9]	2.9	2.9	2.7
Gross wages and salaries per employee	3.2	3.0	3.0
Compensation per employee	3.0	3.2	2.9
Real GDP per employed person	0.2	– 0.3	0.9
Unit labour costs[10]	2.8	3.5	2.0
Memo item: GDP deflator	1.9	2.1	2.2
Consumer prices[11]	1.9	1.4	1.5
Excluding energy	1.5	1.4	1.7
Energy component	4.9	1.4	0.0
Excluding energy and food	1.3	1.5	1.6
Food component	2.6	1.1	2.1

Sources: Federal Statistical Office; Federal Employment Agency; Eurostat; 2019 to 2020 Bundesbank projections. **1** If calendar effects present. For unadjusted data see the table on p. 17. **2** Private non-residential fixed capital formation. **3** As a percentage of nominal GDP. **4** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **5** Domestic concept. **6** In millions of persons (Federal Employment Agency definition). **7** As a percentage of the civilian labour force. **8** Internationally standardised as per ILO definition, Eurostat differentiation. **9** Unadjusted figures, monthly basis (pursuant to the Bundesbank's negotiated wage index). **10** Ratio of domestic compensation per employee to real GDP per employed person. **11** Harmonised Index of Consumer Prices (HICP), unadjusted figures.

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holds. However, it is unlikely that the upswing in the first quarter of the year will continue to the same degree over the projection horizon. Although additional expansionary fiscal stimuli will take effect over the remainder of this year and in the coming year, at the same time aggregate profit margins, which have been subdued as a result of the economic slowdown, will probably put a distinct damper on other income, such as investment income. Furthermore, it is likely that the catch-up processes in car purchases have largely been completed. Based on the underlying trend, the expected labour market developments will cause private consumption to experience a moderate upsurge, which will then lose momentum over the projection horizon. Although wage growth is likely to remain robust, it will tend to be somewhat in decline after deducting inflation. In addition, employment growth will recede considerably in the coming years. Overall, this means that, following another fairly sharp rise in the current year, households' real disposable income will see significantly weaker growth in the future. However, this will probably be mitigated to a certain extent by a somewhat lower propensity to save. All things considered, private consumption will remain a reliable mainstay of economic activity over the projection horizon, although its momentum is likely to be markedly more subdued than in the years of the upswing.

Government consumption sees stronger growth again

Government consumption is likely to rise considerably in the projection period. In this context, stronger growth is expected in tangible goods purchases, healthcare and long-term care spending, and personnel expenditure.

Import growth initially experiences dip, then strengthens again

On balance, aggregate final demand rose sharply in the fourth quarter of 2018 and first quarter of 2019, even after having fallen slightly in the third quarter of 2018. By contrast, growth in imports was only relatively muted in comparison.[10] One explanation for this is that a considerable portion of final demand was apparently met by stocks that had been built up previously. In the second and third quarters of 2019, the momentum of import growth is likely to initially slacken further. In this context, the decisive factor is the poor outlook for German exports and business investment, the latter of which is affected by imports to an above-average degree. In line with the anticipated firming of demand in these two components, import growth will probably strengthen again towards the end of this year. The ongoing solid growth in exports and the thoroughly robust domestic demand give reason to expect considerable gains in imports over the remaining course of the projection horizon, too. Furthermore, imports will be bolstered by the fact that, despite the mounting barriers to trade in recent times, the German economy is likely to become increasingly integrated in the international division of labour over the coming years as well. It is therefore expected that the import shares of all demand components will continue to rise over the projection horizon. Due to improved price competitiveness, trading partners in the euro area should benefit more greatly from the increased demand from Germany than their third-country competitors from outside the euro area.

Distinct fall in current account surplus

The current account surplus is likely to record a marked decline this year. Economic activity, which is dichotomous at present with weak exports on the one hand and robust domestic demand on the other, will have an impact here, too. On average over the year, the balance of trade will therefore feature subdued real exports opposed by imports that will still be seeing comparatively solid growth. As a result, the volume effect will reduce the surplus. By contrast, price effects will not play a major role, as the cost of imports will rise to a similar extent to that of exports. In the coming year, these trends are expected to continue, although to a considerably lesser extent due to the distinct upturn in exports. Over the projection horizon,

10 However, motor vehicle imports, particularly from the euro area, again saw strong growth in the fourth quarter of 2018 and the first quarter of 2019 after having previously suffered from supply difficulties as a result of the WLTP emissions testing procedure.

it is assumed that the balance of primary and secondary income will develop in line with that of nominal GDP. Overall, this means that the current account surplus will decrease this year by almost ½ percentage point to 7% of GDP. As things stand today, it could fall marginally further in the coming year.

Labour market

Further rise in employment despite slumping economy, but recent adjustment in working hours

In the period spanning the final quarter of 2018 and the first quarter of 2019, the labour market resisted the economic downturn. In seasonally adjusted terms, employment rose by 290,000 persons, which was higher than the figure assumed in the December projection. Even so, the economic slowdown left its mark. For instance, the average working hours per employee dropped; in particular, less overtime was worked. All in all, the rise in the total number of hours worked over the final quarter of 2018 and the first quarter of 2019 was somewhat weaker than expected. Registered unemployment declined roughly as anticipated. However, the decline also reflects the greater use of labour market policy instruments since the start of the year.

In the short term, unemployment unlikely to decrease by much and employment likely to expand more slowly

Leading indicators suggest that unemployment will probably not decrease much further over the coming months. At 5.0%, the seasonally adjusted unemployment rate published by the Federal Employment Agency is currently at a historically low level.[11] The weak underlying cyclical trend, which also persisted in the spring, will drag down working hours per employee. Employment, on the other hand, will continue to rise, but probably at a slower pace. In addition to the current subdued demand for labour, especially in the manufacturing sector, labour supply constraints also play a key role here. Demand for labour remains high in most sectors; the number of vacancies has dwindled mainly in the manufacturing industry. Nonetheless, the vacancy periods in which openings unexpectedly remained unfilled have also increased continuously up to now.

Leading indicators for the labour market

Seasonally adjusted

Sources: Federal Employment Agency, ifo Institute and Institute for Employment Research (IAB). **1** Qualitative employment plans of 9,000 surveyed enterprises over the next three months. **2** Values above 100 correspond to rising employment.
Deutsche Bundesbank

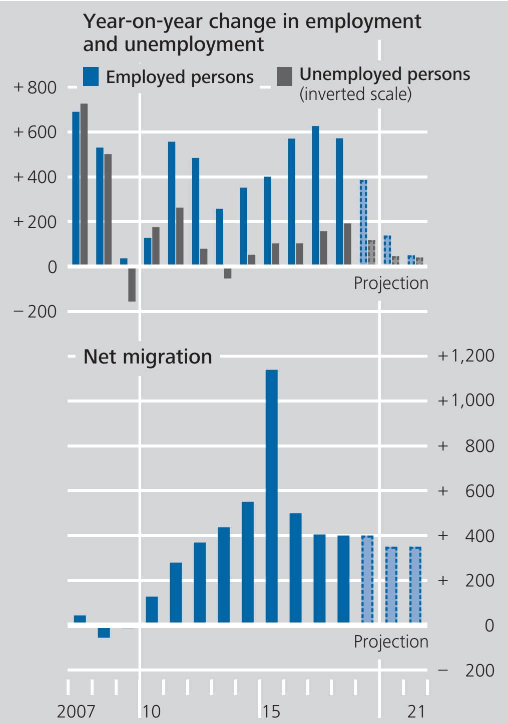
Labour supply shortages prevail in the coming years

Labour market tightness is likely to remain high in the coming years. The effects of demographic developments are increasingly curbing growth in the labour supply.[12] The rising labour participation rate among women and older workers, as well as the greater integration of migrants into the labour market, are helping to offset an unfavourable age structure and the smaller age cohorts of more recent years. Although net migration from abroad has diminished over the last few years, it is still very significant. Starting from a figure of 386,000 people in 2018, it will probably continue to shrink slightly, however. Overall, growth in the labour force is likely to fall from just under 1% in 2018 to almost zero over the projection horizon.

11 The unemployment rate edged up slightly in May. This was partly due to a review carried out by the Federal Employment Agency which saw more unemployment benefit II recipients classified as being unemployed.
12 See also Deutsche Bundesbank (2018) and Deutsche Bundesbank (2017).

Employment and migration

Thousands



Sources: Federal Employment Agency and Federal Statistical Office. Projections: Bundesbank calculations.
Deutsche Bundesbank

However, demand for labour also subdued in the coming years as overutilisation decreases

At the same time, demand for labour is expected to be subdued over the next two years. With GDP growth slightly below potential, demand for labour is unlikely to be high enough to assume that there will be a significant reduction in unemployment. To this extent, unemployment will probably only go down marginally in 2020 – and probably also in 2021. Generally speaking, growth in employment will therefore be considerably reduced in parallel with the growth in the labour force.

Working hours to stabilise

Working hours per employed person are likely to stabilise again after the clear cyclical decline this year. Over the last few decades, average working hours per employed person have fallen as part-time employment has increased. This trend largely appears to have come to a halt in the last few quarters. If the share of all employees working part-time remains stable at two-fifths, one of the main reasons for a decline in working hours over the projection horizon will have been eliminated. It is therefore assumed that working hours will remain unchanged in the years ahead. However, in contrast to the December forecast, working hours are no longer expected to be used to compensate for what is now only moderate growth in the labour pool in the face of high and rising capacity overutilisation. As a result, parallel to the pick-up in employment, the total number of hours worked will also grow at only a subdued pace and will continue to expand only moderately in 2020 and 2021.

Labour costs and prices

High new wage agreements will see negotiated pay rates rise as strongly in 2019 as last year

Negotiated pay rates are likely to rise as strongly in 2019 as they did last year. On the one hand, the new wage agreements agreed in this year's wage round, which are generally still relatively high, reflect the pronounced domestic labour market shortages. But on the other, the second incremental wage increases from last year's wage round, which are often smaller (or wholly absent), will gradually take effect over the course of this year. Viewed in isolation, this will suppress the average annual growth rate of negotiated pay rates.

Temporarily weaker growth in negotiated pay rates in 2020

Over the next years, too, the conditions for relatively high wage agreements are favourable given the labour market shortages on the supply side. In addition, following two weak years, it is likely that labour productivity will pick up again considerably as of 2020, and the inflation rate will rise. However, especially in 2020, the average growth rate will be curbed again by low phased increases and "zero-months" with no pay rise from previously concluded collective wage agreements with long lifetimes.[13] The recent trend towards long agreement periods

13 Here, "zero-months" are taken to mean months in which the last phased increase took place more than 12 months previously. For example, compared to the previous year, negotiated pay rates in the metal-working and electrical engineering industry will stagnate between April 2019 and the end of March 2020. The only exceptions here are the new collective special payments due in July 2019, which, taken in isolation, will lead to annual growth rates of over 20% in July 2019.

with first higher and then gradual wage increases is likely to persist. On balance, at just under 3% per annum, negotiated pay rates will rise as strongly as in 2018 over the projection horizon, only easing off slightly in 2020.[14]

Consistently positive wage drift

Actual earnings are set to rise at an annual rate of 3% over the projection horizon, and thus slightly more sharply than negotiated pay rates. This year, however, the resulting wage drift is likely to be small in comparison to the previous years. First, fewer paid overtime hours are being worked on account of the slower pace of economic activity. Second, owing to the surge in costs caused by the return to parity funding of the statutory health insurance scheme, enterprises are likely to expand wages and benefits that exceed wage agreements slowly, if at all. Since average annual growth in negotiated pay rates is likely to be fairly moderate in 2020, enterprises will then probably be more willing to grant wage supplements and bonuses outside the wage agreements, which will contribute to higher wage drift. Raises to the statutory minimum wage in 2019 and 2010 should only have a small impact on aggregate average earnings through wage-boosting stimuli.

Strong growth in labour costs

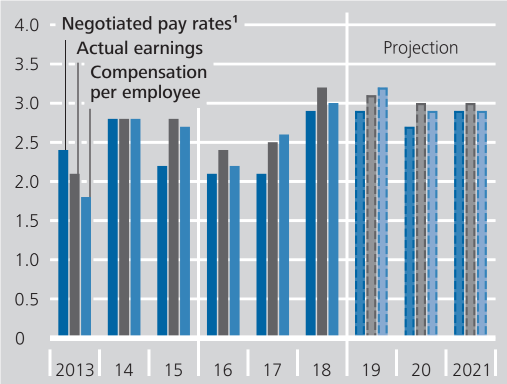
Compensation per employee, which includes employers' social contributions on top of actual earnings, will grow relatively strongly over the projection horizon. It is set to record a particularly sharp one-off rise this year as a result of the return to parity funding of the statutory health insurance scheme.[15] Labour costs will go up by almost 3% in each of the years thereafter.

Rebound in labour productivity currently curbing sharp rise in unit labour costs

Growth in unit labour costs, which was already strong last year, is likely to accelerate considerably this year. The reasons for this include, in particular, labour productivity, which is likely to be similarly weak to last year. However, the duration of the dip in productivity also reflects the assumption that the robust labour market can continue to escape the clutches of the economic downturn. Most enterprises appear to see the current weak growth as temporary, whereas the increasingly gloomy outlook for the availability of skilled workers is of a more structural nature. The gradual firming of the economy expected in the second half of 2019 is therefore also likely to see labour productivity increase more sharply again. Unit labour costs should thus rise at a significantly more subdued rate across the remainder of the projection horizon.

Negotiated pay rates, actual earnings and compensation of employees

Year-on-year percentage change, monthly basis



Sources: Federal Statistical Office. 2019 to 2021 Bundesbank projections. **1** According to the Bundesbank's negotiated wage index.
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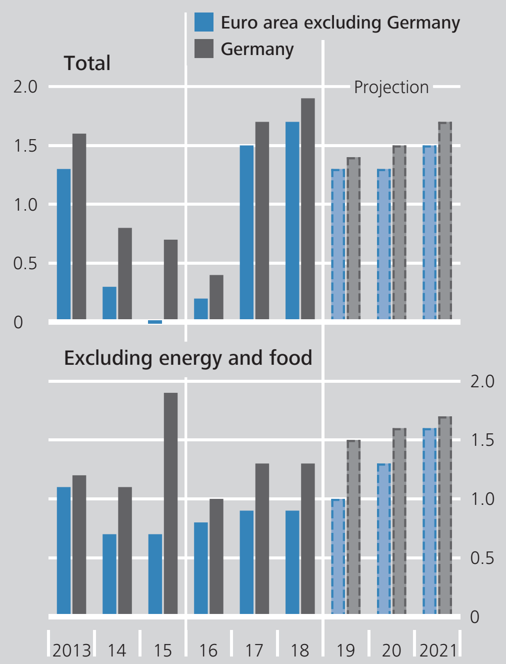
Domestic inflation as measured by GDP deflator to stabilise at high level

Domestic inflation as measured by the GDP deflator is likely to increase again somewhat at first before stabilising at an elevated level over the rest of the projection horizon. Already last year, the sharp rise in unit labour costs was reflected only partially in the increase in the GDP deflator, and aggregate profit margins were substantially compressed. This trend is likely to continue even more strongly this year. In the current environment of increasingly tight supply conditions in the labour market and temporarily weak aggregate demand, corporate earnings provide a major buffer. However, margins should recover

14 All past pay agreements included in the Bundesbank's negotiated pay rate statistics (around 500 collective wage agreements and regulations on civil servant pay) are factored into the projections of negotiated wage increases and extrapolated beyond their contractual term, taking into account the overall economic situation and industry-specific features.
15 The cut in the contribution rate to the unemployment insurance scheme and the simultaneous rise in the contribution rate to the public long-term care insurance scheme at the beginning of 2019 will cancel each other out from the employer's perspective.

Price projection (HICP)*

Year-on-year percentage change



Sources: Federal Statistical Office, Eurostat and Bundesbank calculations. 2019 to 2021 Bundesbank projections (for Germany) and calculations based on Eurosystem projections (for the euro area excluding Germany). * Based on the Harmonised Index of Consumer Prices.

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again to a large extent thanks to the anticipated normalisation of unit labour cost growth in the following years. This will also be helped by the fact that, as economic activity stabilises, enterprises will probably resume passing on a significant share of their higher labour costs through to their sales prices. The construction sector, which is still booming, will make a disproportionately large contribution to domestic inflation over the projection horizon as a whole.

Price trend somewhat flatter than expected in Q4 2018 and Q1 2019

Since the end of last year, consumer prices have tended to rise somewhat more weakly than expected. Annual inflation as measured by the Harmonised Index of Consumer Prices (HICP) stood at 2.1% in April and was thus 0.5 percentage point higher than assumed in the December projection. This was, however, attributable to an unexpected rise in energy prices and in particular a jump in the price of package holidays. The latter is likely to be temporary, since it is probably first and foremost linked to methodological changes in the measurement of prices.[16] Prices for other services, including rents,[17] and for non-energy industrial goods, on the other hand, did not develop as dynamically as expected.

Contribution of energy to inflation close to zero …

Energy prices are not likely to rise much over the projection horizon. Crude oil prices are even expected to go down slightly, which should lead to lower consumer prices for refined petroleum products. However, these could be more or less offset by higher tariffs for electricity and gas resulting from increased market prices. The rise in food prices this year will probably be dampened slightly by the fact that it is taking some time for previous decreases in the price of some agricultural products to be passed through. The price decreases are not expected to last, however, meaning that the effect will peter out. The comparatively strong wage growth in the retail sector in the next two years could thus become more visible in food prices.

… but growing contribution of core inflation

Excluding energy and food, the inflation rate could climb from 1.3% last year to 1.7% in 2021. Owing to the further depreciation of the euro in the final quarter of 2018 and the first quarter of 2019 and the resultant marked increase in import prices, prices for non-energy industrial goods are expected to rise more sharply in 2019 than was already the case one year earlier. It is likewise possible that services will become even more expensive on the back of the persisting wage pressures that pass through to prices with a certain lag. This will apply all the more given the absence of any dampening one-off factors such as the partial abolition of childcare centre fees in a number of Federal states in 2018 and 2019. In view of the ongoing, albeit slightly easing overutilisation, core inflation is expected to remain at an elevated level over the projection horizon, as import prices climb sharply and domestic price

16 These methodological changes came into effect in January 2019 when the national consumer price index (CPI) was rebased on a new basket of goods; see Deutsche Bundesbank (2019d) and European Central Bank (2019).
17 Rents were also subject to methodological changes after a new basket of goods was introduced.

pressures remain high. Here, the recovery in profit margins serves to counteract waning unit labour cost growth. In the final quarter of 2020, the proposed infrastructure levy will additionally push up prices.[18]

Headline rate set to go down significantly in 2019 due to energy prices, after which, however, an increasing core rate will predominate

Headline inflation is initially set to dip significantly in the course of the current year, from 1.9% to 1.4%, on account of the diminishing contribution of the energy component. From 2020 onwards, however, the countervailing influence of a growing core rate is then projected to outweigh other factors, and the headline rate is likely to rise slightly. A further hike up to 1.7% is anticipated in 2021. Compared with the projection made last December, core inflation will turn out to be much lower over the entire projection horizon due to the less favourable macroeconomic outlook. Because the expected development of oil prices changed, though, the headline rate for 2019 was barely adjusted, while it was lowered somewhat more than the core rate in 2020 (see table on p. 8).

Public finances

Surplus narrows considerably amid fiscal loosening

The general government surplus will probably shrink markedly from this year onward (2018: 1.7% of GDP): in 2019 it is likely to stand at around 1% of GDP, and is projected to fall further to ½% of GDP by 2021, mainly on account of fiscal loosening. Moreover, the positive impact of the cyclical upswing on public finances is on the wane. This will, to a limited extent, be counterbalanced by the future exclusion of funds for supporting banks from projections as of 2020.[19] In addition, interest expenditure will continue to fall. On balance, the easing of fiscal policy will be reflected in a considerably falling structural primary surplus (i.e. excluding interest payments, cyclical effects and major temporary effects), thus markedly bolstering economic growth across the entire projection horizon.

Loosening: the result of a marked increase in expenditure

The uninterrupted narrowing of the structural surplus has chiefly resulted from the significant jump in spending growth across the board, as demonstrated by spending on pensions (notably on mothers' pensions), which has expanded considerably of late on the back of recent measures. Similarly, outlays on Germany's public long-term care insurance scheme and its statutory health insurance scheme are expected to rise steeply. This is compounded by the fact that investment activity and intermediate consumption are set to rise steeply, with more funds being earmarked for areas such as transport infrastructure, schools, childcare, defence and digitalisation. By contrast, on the revenue side the fiscal stance is broadly neutral. Here, the moderate tax cuts passed so far, mostly in the income tax regime, will be offset by additional revenue from progressive taxation. Meanwhile, the changes made to social security contributions will largely cancel each other out.

Debt ratio likely to fall below the 60% threshold in 2019

This projection sees the debt ratio continuing to fall at a rapid rate. In the course of this year, it is expected to dip below the reference value of 60% of GDP agreed upon by the EU (60.9% at year-end 2018) for the first time since 2002, partly due to the primary surpluses run by central, state and local governments. Furthermore, government-owned bad banks are expected to continue deleveraging their portfolios, using the resulting proceeds to repay debt. Last but not least, the average interest rate will remain clearly below nominal GDP growth, likewise pushing the debt ratio down.

Risk assessment

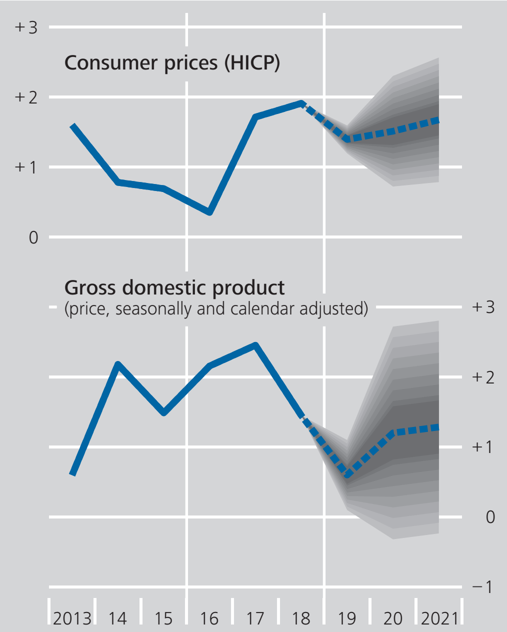
The outlook for the German economy presented here describes the scenario deemed the

18 As opposed to past projections, the introduction of this levy is now no longer expected to happen in January 2020, but in October of that year. Notwithstanding the similarly high degree of relief in motor vehicle tax on residents, the levy would still push up core inflation somewhat. The HICP is based on the domestic concept, which means that domestic expenditure by non-residents is included in the basket of goods and is taken into account when measuring inflation.

19 After a payment of €5 billion last year for HSH Nordbank, this year around €2½ billion in expenditure is expected for Norddeutsche Landesbank (Nord/LB).

Baseline and uncertainty margins of the projection*

Annual data, year-on-year percentage change



Sources: Federal Statistical Office and Bundesbank calculations. 2019 to 2021 Bundesbank projections. * Uncertainty margins calculated on the basis of the empirical forecast errors. The width of the band distributed symmetrically around the most probable value equals double the mean absolute forecast error.

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Overall, downside risks dominate with respect to GDP growth and, to a lesser extent, also to the inflation rate

most likely to occur as things stand. That said, this projection is surrounded by heightened uncertainty. In particular, given the ongoing downturn in the manufacturing sector, the German economy is likely to be especially vulnerable to shocks from abroad at the current juncture. Additional negative external developments could intensify or prolong the downturn in Germany's strongly export-driven industry. This would increase the risk of the downturn spilling over into sectors focused on the domestic economy, a scenario diverging from the assumptions of the projection. As regards the overall assessment of Germany's economic growth, external downside risks thus outweigh external and domestic upside risks, which also certainly exist. The same holds true, albeit to a lesser extent, for Germany's inflation rate.

Future international trade relations remain uncertain as a result of various conflicts between the United States and some of its trading partners. Although the current talks could lead to new trade liberalising agreements, there is still a risk that protectionist measures will increase worldwide. This would further impair global trade momentum, which is already sluggish at present. The adverse impact of this on Germany's industrial sector, which is strongly integrated into global value chains, is likely to be large.[20] If the prevailing tensions over trade policy were to permanently damage enterprises' trust in the reliability of cross-border production links and investment, the repercussions, which cannot be gauged at the moment, would potentially be stronger and longer-lasting. Additionally, the still-present risk of the United Kingdom exiting in a disorderly fashion from the European Union could cause strong disruptions to the financial system and the real economy. Moreover, the uncertainty surrounding the Italian government's fiscal policy stance could intensify. This could well have a negative impact on financing conditions in other European partner countries, too, as well as on economic activity in the euro area as a whole. By contrast, a swifter recovery in global industrial and investment activity than assumed here could result in stronger demand stimulus from abroad and thus opportunities for higher economic growth in Germany.

Risks for economic activity stemming from international environment tilted to the downside

By contrast, German fiscal policy likely to produce stronger economic stimulus

Looking at the domestic economy, fiscal policy is expected to be loosened further. This would shrink the general government surplus, meaning that the growth stimulus would be stronger than assumed in the projection. The planned partial abolition of the solidarity surcharge has not been factored into the projection, for instance. Furthermore, there is talk of introducing a basic pension, further increasing defence and development policy spending in view of international agreements, or lending additional

20 This risk looms particularly large for Germany's automotive industry. Although the US government's decision to apply additional tariffs to vehicles imported from the EU, originally scheduled for May this year, has been postponed, it is still on the cards.

financial support to the planned withdrawal from coal production, for example.[21]

Risks regarding price of crude oil largely offset

Assumptions regarding future crude oil prices have a major bearing on the projection for consumer prices, in particular. For one thing, global supply disruptions resulting from heightened geopolitical tensions, for instance, could push crude oil prices up. For another, weaker global demand and the potentially stronger than expected production of US shale oil could see prices fall to a lower level. As things stand today, these risks largely offset each other. However, the oil price dropped significantly after this projection was finalised. If this decline persists and the oil price develops in line with the latest forward quotations, the inflation rate would be slightly lower this year and next, and would edge up somewhat in 2021.

Inflationary risks tilted to the downside overall

In overall terms, the risk assessment for inflation rate expectations is also tilted to the downside, albeit to a lesser extent than for economic growth.[22] Admittedly, the fact that domestic fiscal policy will probably be more expansionary could result in certain additional price pressures. The same would be true if a firming of the economy saw enterprises' profit margins recover more strongly than suggested in the projection. Higher tariffs and other protectionist measures could put additional upward pressure on the inflation rate. Taken in isolation, weaker global demand stemming from, for instance, new trade barriers would ease the rate of inflation beyond the dampening effect on the oil price. This would especially be the case if the downturn in German industry were to escalate significantly and broadly spill over to the economy as a whole.

21 There are also legal risks. For instance, property tax has been ruled unconstitutional and can only continue to be applied as of 2019 if it is thoroughly overhauled. Furthermore, doubts have also been raised as to whether it is constitutional to maintain the solidarity surcharge at all.
22 The recent methodological changes have resulted in a large degree of uncertainty in the measurement of prices – both in terms of interpreting HICP data in the recent past and with regard to its implications for the short-term inflation outlook. This mainly affects rents and package holidays and thus significant or volatile components of the consumer price index.

Key figures of the macroeconomic projection – non-calendar adjusted

Year-on-year percentage change

Item	2018	2019	2020
GDP (real)	1.4	0.6	1.6
GDP (real, calendar adjusted)	1.5	0.6	1.2
Components of real GDP			
Private consumption	1.1	1.6	1.3
Memo item: Saving ratio	10.4	10.6	10.5
Government consumption	1.0	2.0	1.9
Gross fixed capital formation	2.6	2.2	1.8
Business investment[1]	2.2	1.4	1.4
Private investment in housing construction	2.9	3.1	2.5
Exports	2.0	1.2	3.3
Imports	3.3	2.8	3.4
Memo item: Current account balance[2]	7.3	6.9	6.9
Contributions to GDP growth[3]			
Domestic final demand	1.3	1.7	1.5
Changes in inventories	0.5	− 0.6	0.0
Exports	0.9	0.6	1.6
Imports	− 1.3	− 1.1	− 1.4
Labour market			
Total number of hours worked[4]	1.4	0.5	0.9
Employed persons[4]	1.3	0.9	0.3
Unemployed persons[5]	2.3	2.2	2.2
Unemployment rate[6]	5.2	4.9	4.8
Memo item: ILO unemployment rate[7]	3.4	3.2	3.1
Wages and wage costs			
Negotiated pay rates[8]	2.9	2.9	2.7
Gross wages and salaries per employee	3.2	3.0	3.0
Compensation per employee	3.0	3.2	2.9
Real GDP per employed person	0.1	− 0.3	1.3
Unit labour costs[9]	2.8	3.5	1.6
Memo item: GDP deflator	1.9	2.1	2.2
Consumer prices[10]	1.9	1.4	1.5
Excluding energy	1.5	1.4	1.7
Energy component	4.9	1.4	0.0
Excluding energy and food	1.3	1.5	1.6
Food component	2.6	1.1	2.1

Sources: Federal Statistical Office; Federal Employment Agency; Eurostat; 2019 to 2020 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 Internationally standardised as per ILO definition, Eurostat differentiation. 8 Monthly basis (pursuant to the Bundesbank's negotiated wage index). 9 Ratio of domestic compensation per employee to real GDP per employed person. 10 Harmonised Index of Consumer Prices (HICP).

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List of references

Deutsche Bundesbank (2017), Demographic change, immigration and the potential output of the German economy, Monthly Report, April 2017, pp. 35-47.

Deutsche Bundesbank (2018), Outlook for the German economy – macroeconomic projections for 2019 and 2020 and an outlook for 2021, Monthly Report, December 2018, pp. 15-32.

Deutsche Bundesbank (2019a), The weak state of the global car market, Monthly Report, May 2019, pp. 12-13.

Deutsche Bundesbank (2019b), The German economy, Monthly Report, May 2019, pp. 48-59.

Deutsche Bundesbank (2019c), Unemployment and labour shortages in the euro area, Monthly Report, February 2019, pp. 18-19.

Deutsche Bundesbank (2019d), The revision of the sub-index for package holidays and its impact on the HICP and core inflation, Monthly Report, March 2019, pp. 8-9.

European Central Bank (2019), A new method for the package holiday price index in Germany and its impact on HICP inflation rates, Economic Bulletin, Issue 2/2019, pp. 56-59.