Outlook for the German economy for 2020 to 2022

The COVID-19 pandemic and the measures taken to contain it have sent the German economy tumbling into a deep recession. Economic output already saw an exceptionally sharp drop in the first quarter of 2020. There are signs that there will be another and overall even greater decline in the second quarter, although the economy already bottomed out in April. However, there is still a very high degree of uncertainty about what lies ahead for the economy. This is especially true with regard to the future course of the pandemic, the potentially necessary countermeasures, and the resulting economic repercussions.

Due to the exceptionally high degree of uncertainty in this projection, it is appropriate to use a scenario-based approach. Alongside the baseline scenario, which seemed the most probable when the projection was finalised, both a less severe and a more severe scenario are analysed. The coalition parties' economic stimulus package presented on 3 June, which is likely to provide additional stimulus, is not taken into account. The baseline scenario assumes that the recovery will be slow at first, as the negative effects caused by the pandemic will likely diminish only gradually. The recovery will receive a boost once an effective medical solution to the pandemic becomes available. In this forecast, it is assumed that this will be the case as of mid-2021. Although the German economy will probably shrink by around 7% this year given these circumstances, it could then grow again by 3% in 2021 and 4% in 2022. Real gross domestic product (GDP) would subsequently return to its pre-crisis level towards the end of 2022. Despite large-scale short-time working, unemployment will probably rise considerably for a period of time. However, due in part to the comprehensive package of economic policy assistance measures that has been implemented, it is likely that significant lasting damage will be successfully avoided.

Consumer price inflation will fall considerably this year, but will rise again significantly in the next two years. This is mainly attributable to energy prices, which will initially fall as a result of the most recent slump in oil prices and then rise again sharply. By contrast, the core rate excluding energy and food will remain comparatively stable. Although falling demand is putting pressure on the prices of services and industrial products, this will be mitigated by inflationary factors caused by the pandemic on the supply side, however.

Public finances are making a substantial contribution to stabilisation. First, the automatic stabilisers are having an effect; second, comprehensive assistance measures have been implemented. As a result, there will be a very high budget deficit and a significant rise in the debt ratio this year. Public finances will subsequently improve over the course of the recovery and as the measures come to an end. However, in 2022, the deficit will not yet have been eliminated and the debt ratio will be significantly higher than its pre-crisis level.

In a less severe scenario, the negative economic effects of the pandemic fade away more quickly and the economic upswing could be more pronounced. By contrast, in a more severe scenario in terms of pandemic-related impairments, economic losses could be considerably greater and there could be more significant damage to long-term potential output.

Macroeconomic outlook[1]

Repercussions of the coronavirus pandemic have sent the German economy tumbling into deep recession

The repercussions of the spread of the coronavirus worldwide, as well as of the measures taken to contain it in a number of countries, have sent the German economy tumbling into a deep recession. This happened precisely at a time when economic activity was just beginning to emerge from its previous period of weakness.[2] This development was brought to an abrupt halt by the outbreak of the coronavirus pandemic. It impacted the German economy via consumption, investment, and foreign demand. In many consumption-related services sectors, businesses were required to substantially curtail or even completely suspend their activities due to government lockdown measures as of mid-March.[3] As a consequence, economic activity in these sectors collapsed. The behaviour of consumers – and enterprises – became increasingly cautious. Rising uncertainty, including with regard to income prospects, subdued the propensity to spend, even on many goods that were not subject to lockdown restrictions.[4] The economic effects of the pandemic abroad also had a direct and significant impact on the export-oriented economic sectors. Global demand for German industrial exports fell sharply. In addition, disruptions to global supply chains put a strain on businesses. Due to the throttled production activities among major trading partners as well as the restrictions to international travel and traffic, key intermediate goods were, in some cases, only available at delays or not available at all.[5] Lastly, the abruptly changing economic environment and the immense uncertainty regarding future prospects reinforced the existing aversion to invest in machinery and equipment. By contrast, construction investment has so far appeared to be robust, due likely in part to existing projects being continued and the construction sector largely being able to maintain its operations in spite of the social distancing measures.

June 2020 projection

Year-on-year percentage change

Item	2019	2020	2021	2022
Real GDP, calendar adjusted	0.6	– 7.1	3.2	3.8
Real GDP, unadjusted	0.6	– 6.8	3.2	3.7
Harmonised Index of Consumer Prices	1.4	0.8	1.1	1.6
excluding energy and food	1.4	1.2	1.1	1.2

Source: Federal Statistical Office. 2020 to 2022 Bundesbank projections.
Deutsche Bundesbank

Huge burden on economic activity since mid-March

In the first quarter of 2020, real gross domestic product (GDP) fell by 2.2% after adjustment for seasonal and calendar effects, although the various effects of the pandemic did not weigh on economic activity to a significant degree until mid-March and therefore only for two weeks of the first quarter.[6] In light of the previously robust economic indicators, it can be deduced that economic output contracted by between one-sixth and one-seventh in the second half of March.[7]

1 These projections for Germany were completed on 25 May 2020. They were incorporated into the projections for the euro area published by the ECB on 4 June 2020. The finalisation date of the projections coincided with the most recent publication of the detailed national accounts. Revisions to the national accounts (as well as to GDP) compared with the previous figures as of 25 February 2020 were therefore unable to be taken into consideration. The detailed figures for the first quarter were likewise unable to be incorporated into the projections in their entirety.
2 See Deutsche Bundesbank (2019a).
3 In particular, this includes hotel and restaurant services, travel services, other leisure and cultural services, and large parts of the stationary retail trade sector.
4 One exception, for example, was food retail trade. Sales rose considerably in this sector.
5 According to a survey conducted by the Association of German Chambers of Industry and Commerce (DIHK) at the beginning of May, export-oriented industrial firms struggled primarily with supply shortfalls and production losses in other regions of the world during their day-to-day operations. In the survey, around one in four businesses reported losses of goods or services in the value-added chain as well as logistical bottlenecks. See DIHK (2020).
6 Trade with China, which was the first country to experience massive economic effects from the pandemic, already showed considerable signs of slowing down in February.
7 On the basis of the business survey on capacity utilisation in the first half of April, the Ifo Institute reaches a very similar order of magnitude (16%) for the economic losses caused by COVID-19 during the period of strict lockdown measures. See Ifo Institute (2020).

Unprecedented fall in GDP in the second quarter

Although the lockdown measures were gradually eased as of mid-April, meaning that the economy has likely bottomed out, there are still severe restrictions on society and the economy due to the pandemic. As a result, economic activity has remained under significant pressure throughout the reporting period. This is suggested by timely, high-frequency indicators such as the truck toll mileage index and electricity consumption as well as the weekly activity index[8] that was recently developed for the German economy. While sentiment amongst enterprises and consumers also recovered somewhat in May from its earlier crash, figures from the Ifo Institute and the Gesellschaft für Konsumforschung (GfK) indicated that it remained highly subdued. Enterprises even assessed their current situations as being slightly worse overall than in the previous month, but expectations brightened up markedly as lockdown measures were eased. In industry, orders on hand recently plummeted. In April of this year, short-term expectations for exports and production were at their lowest level ever recorded by the survey and were still deep in negative territory in May. The business climate among service providers remains exceptionally poor, too. Although businesses in the construction sector still consider themselves to be in a fairly favourable position, their assessment of the future outlook is likewise pessimistic. On the whole, economic output will decline considerably more sharply in the second quarter than in the first quarter. A contraction of around 9½% on the quarter after seasonal and calendar adjustment is estimated for the projection. This would represent a decrease in economic output of around 11% compared with the previous year.

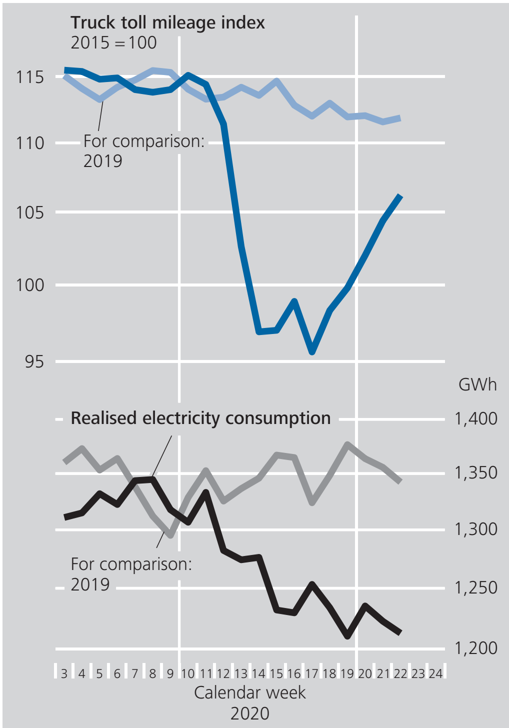
Further prospects extremely uncertain

The further prospects for the German economy are subject to extreme uncertainty. The speed and magnitude of the economic recovery following the recession will depend crucially on

8 See Deutsche Bundesbank (2020c). Current figures can be found online at www.bundesbank.de/en/statistics/economic-activity-and-prices/weekly-activity-index

Selected timely economic indicators

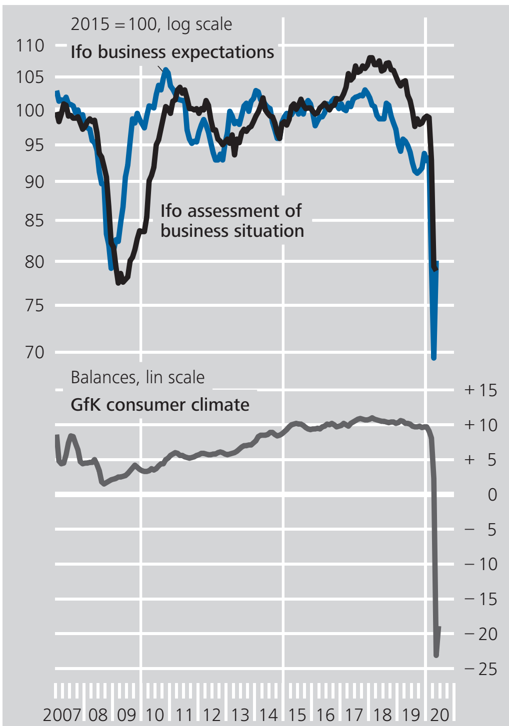
Seasonally and calendar adjusted, weekly averages, log scale



Sources of unadjusted figures: Federal Office for Goods Transport, Federal Statistical Office and Federal Network Agency.
Deutsche Bundesbank

Business and consumer climate

Seasonally adjusted, monthly



Sources: Ifo Institute and Gesellschaft für Konsumforschung (GfK).
Deutsche Bundesbank

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 18 May 2020. 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] As a general rule, these projections incorporate the fiscal policy measures which have been either adopted or adequately specified and deemed likely to be implemented. The economic stimulus package recently presented by the coalition parties is therefore not yet included in the projection (see the remarks on pp. 28 f. for more information).

Global spread of the coronavirus leads to deep global recession; major uncertainty surrounding the course of the recovery process

Global economic activity contracted significantly in the first quarter of 2020 in the wake of the global COVID-19 outbreak and the measures taken to contain it, though in virtually all countries except China, the slump did not occur until March.[2] With more lockdown measures taking place in the second quarter, an even sharper decline in global gross domestic product (GDP) is expected in this period. The speed at which restrictive measures can be relaxed and economic activity restarted in the coming months will depend on the extent to which the virus can be contained. This outlook is thus fraught with a lot of uncertainty. In line with the assumptions on which the projection for Germany and the other euro area countries is based, the projections for global economic growth also assume that fundamental restrictions will remain in place until a medical solution to the pandemic becomes available from the middle of next year.[3] Therefore, despite the recovery process that is expected to have kicked in over the course of the second quarter and the monetary and fiscal policy support measures adopted in many countries, global activity is not expected to return to pre-coronavirus crisis levels before next year at the earliest. However, the global economy is likely to remain on the road to recovery as time goes on. Overall, the global economy excluding the euro area[4] is projected to rebound in 2021 and 2022, with growth rates of 6% and 4%, respectively, following a decline of 4% this year.

International trade took an even harder hit than global GDP on account of the extreme slowdown in economic activity and the disruption to supply chains. Global trade is also expected to start recovering over the course of the second quarter and through to next year. The rate of this recovery will even be more dynamic than that of global activity. However, in view of the dramatic decline in the first half of this year and dwindling momentum as the recovery progresses, international trade is not expected to have returned to pre-crisis levels by the end of the projection horizon. Following a 13% slump on average this year, global trade (excluding the euro area) is projected to grow by 8% in 2021 and just over 4% in 2022.

1 The projections made by the national central banks of the euro area countries were completed on 25 May 2020.
2 See Deutsche Bundesbank (2020a).
3 See the remarks on the outlook for the German economy on pp. 15 ff.
4 Weighted by purchasing power parity.

Major assumptions of the projection

Item	2019	2020	2021	2022
Exchange rates of the euro				
US dollar/euro	1.12	1.09	1.08	1.08
Effective[1]	116.7	118.3	118.8	118.8
Interest rates				
Three-month EURIBOR	− 0.4	− 0.4	− 0.4	− 0.4
Yield on government bonds outstanding[2]	− 0.2	− 0.5	− 0.4	− 0.3
Commodity prices				
Crude oil[3]	64.0	36.0	37.2	40.7
Other commodities[4,5]	− 3.7	− 2.5	3.5	3.0
German exporters' sales markets[5,6]	1.5	− 14.8	8.0	4.6

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.

Deutsche Bundesbank

Dramatic drop in economic output in the hard hit euro area

Given the rapid rise in infection rates in several large euro area economies during March of this year, economic activity in the Member States was severely curtailed. In view of this, the euro area is expected to see a much stronger decline still in GDP in the second quarter of 2020 than in the first quarter. As measures imposed to contain the virus are gradually being lifted, it is assumed that economic activity will steadily recover in the second half of the year. On average, GDP is expected to experience a collapse of historic proportions this year – going significantly beyond what would be envisaged based on the projected decline in global economic activity. A contraction of around 9% is projected for the euro area (excluding Germany). With the economic headwinds whipped up by the pandemic fading, growth rates of 6% and 3% are expected for 2021 and 2022, respectively. Given the particularly high incidence of COVID-19 amongst euro area trading partners, German exporters' sales markets are likely to be hit a little harder this year than world trade itself. Its recovery process over the next two years could proceed at a similar pace to that of world trade.

Given the extreme level of uncertainty, two other economic outlook scenarios for the global and euro area economies developed

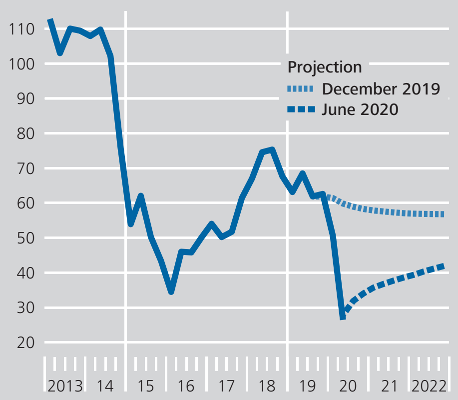
In view of the extremely high level of uncertainty surrounding the global economic outlook as a result of the pandemic, two other scenarios for the global economy and world trade were developed in addition to the projection's baseline scenario. One presents a less severe outlook and the other a more severe outlook. The scenarios for global economic activity are based on different assumptions regarding the extent of the fallout from the pandemic and the measures taken to combat it – as described with regard to Germany on pp. 26 ff. On this common basis, corresponding macroeconomic scenarios were developed for all euro area countries.

Technical assumptions of the projection

Crude oil prices have plummeted as a result of the abrupt decline in global demand and the temporary glut over the past few months. Despite production cuts by OPEC and other producers in the meantime, the ample supply in crude oil markets resulting from depressed demand is likely to push prices down for even longer. The assumptions derived from forward prices indicate that crude oil prices will rise again over the next two years. That said, however, crude oil prices over the entire projection horizon will, on average, be around one-third lower than was assumed in December 2019. The prices of other commodities measured in

Oil price

US$ per barrel of Brent, quarterly averages



Sources: Bloomberg and ECB projections.
Deutsche Bundesbank

US dollars also dropped significantly. They are expected to pick back up over the next two years in line with the global economy's expected recovery.

In response to the sharp deterioration in the economic outlook for the euro area, the ECB Governing Council adopted a raft of measures in March and April of this year.[5] These included the expanded asset purchase programme (APP) and a new pandemic emergency purchase programme (PEPP). In addition, the terms of the third series of targeted longer-term refinancing operations (TLTRO-III) were eased and two further series were announced. By contrast, the Eurosystem's key interest rates and forward guidance on the interest rate outlook remained unchanged. Safe haven flows[6] have caused yields on ten-year Bunds to fall significantly since the start of the year. Market expectations point to only gradual growth over the projection horizon, meaning that yields will consistently remain around 20 basis points below the assumptions in the December projection. In line with the technical interest rate assumptions and given the improved liquidity of the financial system as a result of the monetary policy measures adopted, bank lending rates are also expected to increase only slightly over the projection horizon,[7] meaning that financing conditions will in all likelihood remain highly favourable.

The turmoil in the financial markets associated with the effects of the pandemic led to a rise in demand for currencies regarded as safe, such as the US dollar and the euro. At the same time, the expected economic consequences of the pandemic weighed more heavily on the euro than on the dollar from the second half of March onwards. The single currency traded at US$1.08 in the period used for deriving the exchange rate assumptions, which was around 1¾% lower than the assumptions in the December projection. By contrast, compared with 38 currencies of major trading partners, the euro has appreciated by around 2½% since December.

Fiscal policy measures provide support during the coronavirus crisis

It is assumed in Germany's fiscal projection that, in view of the exceptional circumstances, the usual rules for limiting deficits will be suspended for the time being. The contribution rates of the social security funds are not expected to be raised either this year or next to compensate for any shortfalls that may be incurred. Standard deficit limits are temporarily non-binding for central, state and local governments. A similar approach was taken in the 2008-09 financial and economic crisis.

5 See Deutsche Bundesbank (2020b).
6 The term used to denote increased purchases of safe assets in the face of heightened uncertainty; see Deutsche Bundesbank (2018).
7 These forecasts are based on the assumption that the recovery process starting in the second half of 2020, together with the fiscal support measures adopted for the corporate sector and households – as well as the ample supply of liquidity to the markets – will ensure that there is no sharp growth in risk premia on lending rates.

The projection factors in those far-reaching stabilisation measures in place since March insofar as they were specified upon completion of the projection.[8] They will put a heavy strain on government budgets in 2020 and no longer be in place in later years. Overall, i.e. including previous decisions, the part of this year's deficit resulting from the measures factored into the projection amounts to 4% of GDP. Debt will rise at a significantly sharper rate. Far-reaching measures such as lending schemes with very extensive government guarantees and capital assistance will not raise the deficit, but rather debt.[9] For this, a figure of around 5% of GDP was also set on the basis of the outflows to date (change in debt not accounted for by the deficit: deficit-debt adjustments). This is well below the high-volume authorisations. Overall, there is currently an exceptionally high degree of uncertainty regarding the financial and macroeconomic effects of fiscal policy.

On the expenditure side, the measures are reflected primarily in a temporary increase in transfers to enterprises and households as well as additional spending on healthcare. A particularly large expenditure item is direct assistance to small to medium-sized enterprises, self-employed persons and freelancers (though it is assumed that spending will remain below budget estimates). The announced compensation of losses for Deutsche Bahn and comparable transfers for local public transport as well as cultural institutions also play a role. This year, support is being provided for short-time work in a variety of ways (the assumption of social contributions,[10] in particular), the basic allowance is being granted more readily, unemployment benefit I can be paid out to recipients for longer periods, and lost earnings resulting from a lack of childcare due to mandated closures are being partly compensated.

In the healthcare sector, additional spending is being incurred to contain and treat COVID-19 (e.g. on personal protective equipment and intensive care beds, informing the general public and promoting the development of a vaccine). Moreover, general government is compensating the healthcare sector for most of the revenue shortfalls resulting from the current restrictions on operations and procedures unrelated to the coronavirus. In addition, hospitals are receiving higher remuneration for nursing activities.

On the revenue side, the measures implemented to curb the coronavirus can be seen, inter alia, in value added tax.[11] For example, the reimbursement of special advance payments will result in lower tax revenue this year and higher tax revenue next year. In addition, the rate of value added tax on food items in the catering sector is to be cut from 19% to 7% from mid-2020 to mid-2021. Taxes on earnings can also be more easily adjusted to the adverse economic situation. For example, advance payments can be reduced in a simplified manner. As explained above, it is assumed that the social contribution rates will remain constant in 2021. In 2022, the rates of the statutory health insurance scheme will then increase slightly by an average of around 1 percentage point (2020: 15.6%), while those of the statutory unemployment insur-

8 See also Deutsche Bundesbank (2020e).
9 The measures do not necessarily have to be state-financed.
10 Like unemployment benefit I, short-time working benefits can be considered automatic stabilisers. Only the temporary assumption of social contributions and the gradual increase for longer-term recipients are taken into account in the above-mentioned scope of measures.
11 The special tax arrangements under which tax liabilities that have already been determined are merely postponed (e.g. interest-free deferrals) will not have an effect on the deficit in the national accounts. They are allocated to the national accounts on an accruals basis (see Deutsche Bundesbank (2020e)).

ance scheme and the statutory pension insurance scheme will rise slightly (2020: 2.4% and 18.6%, respectively).[12]

The projection also includes various measures that were adopted prior to the coronavirus crisis. For example, the impact of income tax cuts will be felt over the projection horizon – most notably the partial abolition of the solidarity surcharge in 2021. The planned introduction of the basic pension in 2021 is also factored in. The climate action package is included in a broadly budget-neutral manner. The spending measures (incentives) contained in this package commenced at the start of 2020. Starting in 2021, one notable measure to come into play will be the new emissions certificates for the transport and building heating sectors. From that point on, the incentives will be financed from the higher revenue generated by these certificates.

12 The statutory pension insurance scheme will thus roughly meet its minimum reserve requirements but continue to record high deficits. By contrast, the Federal Employment Agency will close the year with a broadly balanced budget, and the statutory health insurance scheme will make only moderate use of available reserves.

the future course of the economic impairments caused by both the pandemic and the measures taken to contain it. This projection assumes that the lockdown and precautionary measures in Germany will continue to be successively eased, that the spread of the virus will nevertheless remain generally under control, and that the healthcare system will not become overwhelmed. However, substantial restrictions are likely to remain in place until an effective treatment for the virus becomes available. This forecast makes the purely technical assumption that such a sweeping medical solution, such as a vaccine or an effective pharmaceutical treatment, will be available to large parts of the general public globally as of the middle of next year.

Negative effects of the pandemic will abate only gradually

It is anticipated that the negative economic effects caused by the lockdown measures will gradually abate during the transition period until that time (for a depiction of two additional scenarios, one assuming less severe and the other more severe developments, see the remarks on pp. 26 ff.). Households and enterprises both in Germany and abroad will probably cope better with the pandemic-related restrictions as time goes on and adapt their behaviour and business processes accordingly. Furthermore, lockdowns can be increasingly oriented towards measures that are less detrimental to the economy. These adaptation processes will probably be aided by potential advances in medical research. Ultimately, the comprehensive package of fiscal assistance measures is likely to have a stabilising effect.

Normalisation after the end of the pandemic will boost economic recovery

As soon as a medical solution to the pandemic becomes available and can be administered on a large scale, consumption and investment behaviour should normalise fairly rapidly. This will likely provide an additional boost to economic growth as of the middle of next year. As private consumption will contract to a greater extent than disposable income during the recession, the saving ratio will initially see a significant rise. After the dangers of the pandemic have been overcome, and once the associated restrictions to public life have been lifted and uncertainty then begins to recede, the propensity to consume should rebound and the saving ratio should drop off considerably again. For a time, it could even fall short of its pre-crisis level, for instance if consumers catch up on postponed purchases. The greater certainty of planning should also benefit business investment, particularly as exports will recover in line with sales markets.

Economic output set to return to pre-crisis level towards the end of the projection horizon

Following a decline of around 7% this year, the German economy is likely to grow by 3% in 2021 and 4% in 2022 under these circumstances. Real GDP would then return to its pre-crisis level towards the end of 2022.

Economic support measures help largely avoid damage to goods and labour markets

Although the current severe recession could have serious long-term macroeconomic consequences, these will be mitigated by the extensive monetary and fiscal policy support measures that have been taken. For example, the exceptionally large-scale guarantees, capital deposits, subsidies and capital transfers provided by the government to the corporate sector will reduce the risk of a downward spiral. They thus help to at least limit any permanent damage to the goods and labour markets.

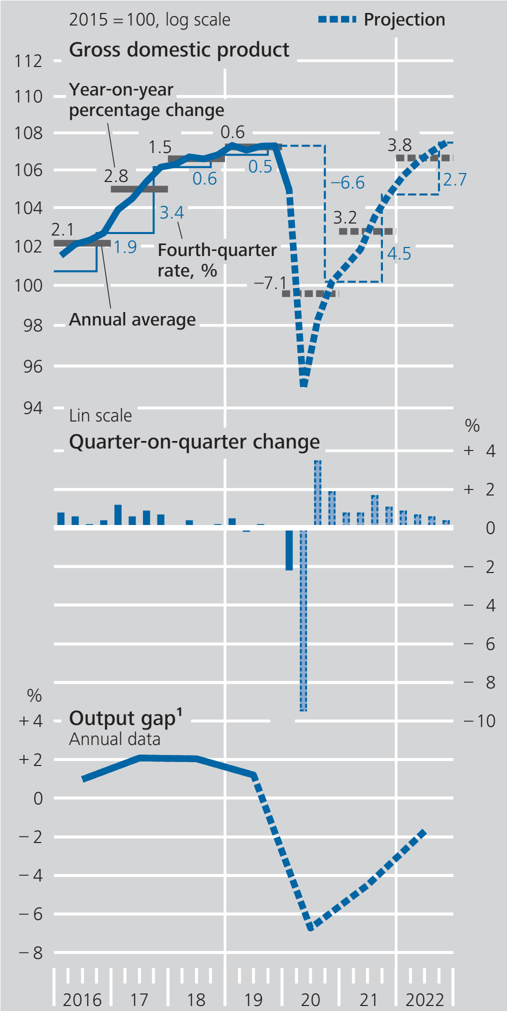
Relatively marginal flattening of long-term growth trajectory; normal capacity utilisation not reached again over projection horizon

The concept of potential output can be drawn on in order to estimate potential impairments to the German economy's longer-term growth trajectory caused by the pandemic. Potential output is determined by applying the production theory-based approach, which requires the longer-term growth factors of capital and labour as well as production technology (total factor productivity: TFP) as inputs.[9] While the government-imposed restrictions associated with the pandemic are temporarily preventing this potential from being harnessed in full, they are likely to have dampened the contributions from longer-term growth factors only partially. Over the projection horizon, capital input and

9 See Deutsche Bundesbank (2017).

Aggregate output and output gap

Price, seasonally and calendar adjusted



Sources: Federal Statistical Office and Bundesbank calculations. 2020 to 2022 Bundesbank projections. **1** Deviation of GDP from estimated potential output.
Deutsche Bundesbank

Technical components of the GDP growth projection

% or percentage points

Item	2019	2020	2021	2022
Statistical carry-over at the end of the previous year[1]	0.2	0.1	0.6	1.9
Fourth-quarter rate[2]	0.4	− 6.6	4.5	2.7
Average annual GDP growth rate, calendar adjusted	0.6	− 7.1	3.2	3.8
Calendar effect[3]	0.0	0.4	0.0	− 0.1
Average annual GDP growth rate[4]	0.6	− 6.8	3.2	3.7

Sources: Federal Statistical Office; 2020 to 2022 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.
Deutsche Bundesbank

Key figures of the macroeconomic projection (baseline scenario)

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

Item	2019[2]	2020	2021	2022
GDP (real)	0.6	– 7.1	3.2	3.8
GDP (real, unadjusted)	0.6	– 6.8	3.2	3.7
Components of real GDP				
Private consumption	1.6	– 5.3	3.2	4.7
Government consumption	2.6	3.1	2.3	0.7
Gross fixed capital formation	2.7	– 7.2	– 3.0	5.9
Exports	0.9	– 13.5	7.4	4.5
Imports	1.9	– 6.9	3.9	5.2
Contributions to GDP growth[3]				
Domestic final demand	1.9	– 3.7	1.6	3.8
Changes in inventories	– 0.9	0.1	0.0	0.0
Exports	0.4	– 6.4	3.2	2.0
Imports	– 0.8	2.8	– 1.6	– 2.1
Labour market				
Total number of hours worked[4]	0.6	– 5.8	1.9	2.3
Employed persons[4]	0.9	– 1.2	– 0.6	1.1
Unemployment rate[5]	5.0	6.1	6.7	5.9
Memo item: ILO unemployment rate[6]	3.2	4.5	5.2	4.3
Wages and wage costs				
Compensation per employee	3.2	– 1.6	2.9	2.4
Real GDP per employed person	– 0.3	– 6.0	3.8	2.7
Unit labour costs[7]	3.5	4.6	– 0.9	– 0.3
Memo item: GDP deflator	2.2	2.4	1.2	1.2
Consumer prices[8]	1.4	0.8	1.1	1.6
Excluding energy	1.4	1.6	1.3	1.3
Energy component	1.4	– 5.9	– 0.8	4.5
Excluding energy and food	1.4	1.2	1.1	1.2
Food component	1.5	3.5	2.2	2.0

Sources: Federal Statistical Office; Federal Employment Agency; Eurostat; 2019 to 2022 Bundesbank projections. **1** If calendar effects present. For unadjusted data see the table on p. 27. **2** Data vintage: 25 February 2020. **3** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **4** Domestic concept. **5** As a percentage of the civilian labour force. **6** Internationally standardised as per ILO definition, Eurostat differentiation. **7** Ratio of domestic compensation per employee to real GDP per employed person. **8** Harmonised Index of Consumer Prices (HICP), unadjusted figures.

Deutsche Bundesbank

TFP in particular are likely to grow less dynamically. This is attributable to the decline in investment and the lower intensity of use of capital stock, on the one hand, and potentially lower investment in research and development, on the other. Overall, potential growth has therefore been revised downwards only slightly and is now estimated to be around 0.8% p.a. over the projection horizon. The output gap, measured by the differential between current economic output and the long-term production level that can be achieved, which was still slightly positive in the previous year, will thus be negative this year and is likely to open up enormously. However, this underutilisation of aggregate capacity is only partly a consequence of declining aggregate demand. It also reflects the temporary restrictions on the supply side that were put in place to combat the pandemic. Although the economy will move rapidly towards normal utilisation in subsequent years, it will still be far from achieving this by the end of the projection horizon.

Labour market under pressure

The recession is also putting considerable pressure on the German labour market. The many years of employment gains came to an abrupt halt, and unemployment is already up significantly. However, a reduction in the average number of hours worked is likely to account for the lion's share of the crisis-induced changes in the labour market. This is mainly due to the massive increase in short-time work, for which applications for more than one-third of all employees subject to social security contributions had already been submitted by the end of May. During April, around 6 million employees may have been in short-time work.[10] This figure is likely to decline gradually over the rest of the year. However, the annual average for 2020 is still estimated to be just over 2½ million employees, whose average working hours will shrink by approximately half. In addition, overtime has been reduced, balances on working time accounts scaled back and a number of businesses have cut back their regular weekly

10 See Deutsche Bundesbank (2020d).

working hours. Despite the intensive use of these instruments, the number of employees is likely to decline through to next year and unemployment will probably continue to rise markedly. Nevertheless, the stronger economic recovery starting from mid-2021 is likely to be accompanied by increasing employment and declining unemployment.

Wage growth slows down considerably

In this macroeconomic environment, wage growth, which had been fairly dynamic over the past few years, will slow down considerably. The social partners are clearly striving to preserve jobs. For example, there were wage freezes in the metal-working and electrical engineering industry and in the automobile trade and service sector. In textiles services, wage increases were postponed by 12 months. Instead, in some sectors, the social partners agreed to increase the statutory short-time working benefits to between 80% and 100% of lost earnings. Further wage freezes, minimal increases of negotiated wages or postponements of already-agreed wage rises are foreseeable. Performance-related bonus payments are also likely to be scaled back considerably in the wake of the recession. Even a decline in compensation per employee is expected this year. This will be mainly because of the massive decrease in the average number of hours worked caused by short-time working. The associated income losses will be largely offset by short-time working benefits.[11] The gradual normalisation set to take place in 2021 will precipitate a countereffect as short-time working payments decrease. Nonetheless, wage growth is expected to recover only moderately over the remainder of the projection horizon.

Temporary sharp rise in unit labour costs

Unit labour costs are likely to rise sharply initially as production losses are pushing down labour productivity. As the economy begins to recover, unit labour costs will gradually return to normal. Conversely, firms' profit margins are likely to be squeezed considerably at first despite the government support measures, but will widen again from next year onwards as the economy recovers.

Real gross domestic product and employment

Year-on-year percentage change, calendar adjusted

Sources: Federal Statistical Office, Bundesbank projections for 2020 to 2022. **1** Real GDP divided by the total number of hours worked by employed persons. **2** Total number of hours worked by employed persons divided by the number of employed persons.

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Inflation trajectory characterised by sharp slump and subsequent rebound in energy prices

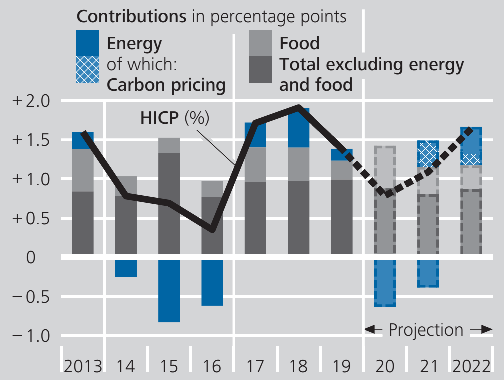
Over the projection horizon, the trajectory of consumer price inflation will be largely determined by energy prices.[12] Owing to the collapse in crude oil prices, the Harmonised Index of Consumer Prices (HICP) inflation rate dropped from 1.7% in February to 0.5% in May according to provisional data. The decline in oil prices has not been passed through to con-

11 Payments of short-time working benefits are not part of employee compensation, but considered transfer payments to employees by the Federal Employment Agency. Businesses pay in advance (and also continue to pay the reduced salaries). Upon application, the Federal Employment Agency refunds the short-time working benefits retroactively. This year the Federal Employment Agency is also including social contributions in the short-time working benefits.

12 The pandemic is causing inflation measurement problems in the short term. The containment measures mean that prices for certain services, including travel services, which account for a distinct proportion of the basket of goods, are unavailable or available only to a limited extent for official measurement. The missing prices are then supplemented ("imputed") under a harmonised European approach. See Federal Statistical Office (2020a). This makes it more difficult to identify a trend in the short-run inflation rate and increases uncertainty regarding the outlook for inflation.

Contributions to headline HICP inflation, by component

Year-on-year change



Source: Federal Statistical Office and Bundesbank calculations. 2020 to 2022 Bundesbank projections.
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sumers in full yet. As this happens gradually, the inflation rate is likely to decrease somewhat further until the end of this year. In the year ahead, any lagged effects of lower crude oil prices should be offset by the price-driving effects of the Climate Package.[13] In 2022, it is not just the measures in this package that will push up prices. Crude oil prices will also see a distinct rise, which means that a marked increase in energy prices is to be expected.

Above-average food inflation to persist for longer

Food prices are expected to rise quite sharply this year in line with European producer prices. Even if price pressures abate at the producer level in the years ahead, consumer price inflation could remain somewhat above average. Restrictions on the availability of seasonal labour and additional necessary precautionary measures in production and sales will cause costs to rise, which will likely be gradually passed on to consumers, also because they also meet with increased retail demand for food by private consumers as a result of the pandemic. Wage and distribution costs, which will pick up again significantly as the economy recovers, are likely to provide impetus towards the end of the projection horizon.

For (non-energy) industrial goods and services together, the inflation rate of 1.4% in 2019 was distinctly higher than its longer-term average. Faltering aggregate demand this year and next year is expected to exert marked downward pressure, however. That said, core inflation should dip only moderately to 1.2% this year and 1.1% next year, as prices for certain goods and services are exhibiting a degree of downward rigidity. Added to this are price-increasing effects. In much the same way as for food products, the pandemic is likely to result in rising costs, i.e. from disruptions to national and international supply chains as well as from distancing rules and stricter hygiene requirements. The interplay between price-dampening demand factors[14] and price-increasing cost effects could highlight major differences in individual areas of consumption and over time.[15] As the number of business closures is also likely to go up in certain sectors due to the pandemic and the measures taken to contain it, market concentration is also expected to rise in these areas in the longer term. This could provide the remaining businesses with more leeway to raise their prices and once again widen their profit margins, which had initially been squeezed considerably. In individual sectors, there might be cost increases if selected segments of pro-

Core inflation relatively stable due to countervailing demand-side and cost-side effects, with major sectoral differences

13 The impact of the Climate Package on inflation and economic growth was already included in the last forecast (for more information on this, see Deutsche Bundesbank (2019b)). However, after the forecast was published, the CO_2 pricing in the transport and heating sectors, which has the greatest impact on consumer prices, was readjusted once more. The starting price is now much higher, while subsequent gradual increases will be weaker. At the same time, the renewable energy (EEG) levy will be lowered. On balance, these measures will probably raise the inflation rate in 2021 by just over 0.3 percentage point and by around 0.2 percentage point in 2022. Based on the Climate Package data available at the time, the December forecast still projected a rise of one-quarter percentage point per year.

14 In some segments, such as travel services or restaurant visits, pent-up demand could even have a price-driving effect.

15 For example, the Verband Deutscher Friseurunternehmen (association of German hairdresser companies) calculates that hairdressers with well-filled order books are charging a hygiene surcharge of €1 to €2. According to provisional data from some Federal states, the price of visiting a hairdresser did indeed rise by 3%-4%. By contrast, consumers were reluctant to buy clothing, and prices did not go up. As the spring and summer collections had already been finalised before the disruptions in the supply chains occurred, cost-side price hikes are likely to occur until the launch of the autumn and winter collections at the earliest.

duction were to relocate to Germany, thus pushing up prices. Higher prices are expected to be achievable later in the projection horizon in particular if aggregate output returns to normal and wages rise considerably. Core inflation would then pick up again to 1.2%. After a temporary dip of 0.8%, headline inflation this year is likely to return to 1.1% and ultimately increase to 1.6%.

Outlook for public finances

Government budget runs large deficit in 2020

Following a significant surplus in 2019 (1.4% of GDP), the government budget will run a large deficit this year of, according to the projection, around 6% of GDP (for information on the economic stimulus package, which is not yet included, see the box on pp. 28 f.). The automatic stabilisers and fiscal policy are having an impact on the government budget. Tax revenue, in particular, is declining steeply as a result of the economic downturn caused by the pandemic, and spending on short-time work and unemployment is surging. However, only a little under half of the deterioration in the balance is attributable to the automatic stabilisers.[16] Another even more important factor here is fiscal policy – particularly the extensive temporary measures to mitigate the effects of the coronavirus crisis. These measures include transfers and subsidies to enterprises, monetary social benefits to households and healthcare expenditure. Furthermore, the measures are amplifying the decline in tax revenue (see also pp. 18 ff. for a description of the measures included).

Government budget to recover to increasing extent until 2022, but set to remain in deficit

In 2021, the deficit will fall noticeably again, reaching 3% in the baseline scenario. The decline is due, first, to the fact that temporary measures will largely have lapsed. Second, the economy will increasingly make a recovery, with the result that the automatic stabilisers have a positive impact. In 2022, the deficit could continue to decline, roughly halving. This will be due, in particular, to the continued economic recovery, but also to the assumed increases in social contribution rates, for example. By contrast, social spending, especially for old-age provisions, is expected to see continued strong growth in structural terms.

Debt ratio to surge in 2020 …

The debt ratio, i.e. government debt relative to GDP, was just below 60% in 2019. This year, it will surge towards a level of around 75%. The increase is due to high local government deficits, government assistance loans and capitalisation measures and the nominal GDP decline (in the ratio's denominator). By contrast, the deficits of the social security funds will be largely offset by reserves; the debt level therefore will not rise.

… and to subsequently resume downward trajectory

In subsequent years, the debt ratio will decline moderately and will still be around 70% at the end of the projection horizon. Here, a renewed nominal GDP rise in the ratio's denominator is chiefly responsible for significantly lower debt growth due to local government deficits. In addition, it is assumed that parts of the pandemic-related assistance loans and investments as well as of the portfolios of bad banks established in the wake of the 2008-2009 financial crisis will gradually be scaled back.

Risk assessment and two alternative scenarios

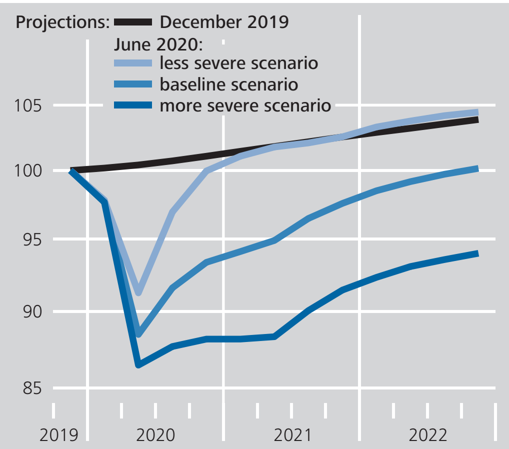
Global recession caused by pandemic results in unprecedented uncertainty for economic outlook owing to lack of historical benchmark

The global recession, triggered almost simultaneously worldwide, is an extraordinary situation with no historical precedent. As a result, the current outlook for the German economy is also characterised by unparalleled uncertainty. This is true in terms of economic activity, but also with regard to the inflation rate. This is because the current crisis is associated with shocks that are simultaneously having cost and price-increasing effects as well as demand and price-dampening effects. These shocks will also affect pricing in different ways in each sector

16 Here, the automatic stabilisers are equated with the change in the cyclical balance. Interest expenditure will continue to decrease markedly owing to negative interest rates.

Scenarios for real GDP

Q4 2019 = 100



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Key figures of the different macroeconomic scenarios

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

Item	2019[2]	2020	2021	2022
Baseline scenario				
GDP (real)	0.6	– 7.1	3.2	3.8
Unemployment rate[3]	5.0	6.1	6.7	5.9
Compensation per employee	3.2	– 1.6	2.9	2.4
Consumer prices[4]	1.4	0.8	1.1	1.6
Excluding energy and food	1.4	1.2	1.1	1.2
Less severe scenario				
GDP (real)	0.6	– 3.4	5.6	2.0
Unemployment rate[3]	5.0	5.4	5.1	4.9
Compensation per employee	3.2	– 1.1	3.7	3.5
Consumer prices[4]	1.4	0.8	1.3	1.9
Excluding energy and food	1.4	1.2	1.3	1.5
More severe scenario				
GDP (real)	0.6	– 10.0	– 0.5	4.2
Unemployment rate[3]	5.0	7.1	8.6	7.4
Compensation per employee	3.2	– 2.0	0.8	0.6
Consumer prices[4]	1.4	0.8	0.9	1.4
Excluding energy and food	1.4	1.2	0.8	0.9

Sources: Federal Statistical Office; Federal Employment Agency; Eurostat; 2020 to 2022 Bundesbank projections. **1** If calendar effects present. **2** Data vintage: 25 February 2020. **3** As a percentage of the civilian labour force. **4** Harmonised Index of Consumer Prices (HICP), unadjusted figures.

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and develop differently over time. This makes it even more difficult to assess the recession's impact.

Upside risks result from additional fiscal stimuli; downside risks arise if key trading partners remain in recession

While some uncertainties remain abstract, others are more tangible. For example, the Federal Government is planning to launch an extensive fiscal stimulus package which is not yet included in the projection. Taken in isolation, this would, in all probability, contribute to a faster economic recovery in Germany (see the box on pp. 28 f.). If a self-reinforcing downward spiral emerges in due course in spite of monetary and fiscal policy countermeasures, further fiscal support measures could be expected in Germany. However, crisis management in partner countries with which the German economy has close economic and financial ties will also be key. This is particularly true of the euro area. If the economies of Germany's European neighbours, which were hit hard by the pandemic, do not recover, Germany's own economy will remain severely impaired.

Uncertainty surrounding impact of pandemic illustrated by two alternative scenarios

One way to depict the extent of the economic uncertainty relating to the pandemic is to illustrate alternative paths of development.[17] One paints a less severe picture and the other a more severe picture (in terms of the assumed economic repercussions of the pandemic).[18]

Less severe scenario: more successful adjustments during the pandemic …

In the less severe scenario, it is assumed that the easing of the lockdown measures will already have had a stronger positive impact in the short term. In addition, behavioural adjustments on the part of households and enterprises are taken to be significantly quicker over time. Moreover, such a scenario would probably require the pandemic situation to change drastically in the near future. This change could come in the form of new discoveries concerning the specific properties of the novel coronavirus, for example, and a consequent break-

17 These were incorporated into the alternative scenarios for the euro area published by the ECB on 4 June 2020.
18 The two alternative scenarios also differ in terms of assumed underlying conditions (particularly the development of the global economy). See the box on p. 17.

through in medical research on the treatment of COVID-19. The successful restriction of occasional outbreaks of the infection to the local level is equally conceivable. In this case, the impact of the lockdown measures (which would then be more targeted) is likely to recede rapidly, and the economic recovery in Germany could pick up sharply again as early as the second half of 2020.

… lead to swifter recovery

As a result, the German economy will, in this scenario, have already reached its pre-crisis level of activity next year, and its potential output will not be hampered. In line with the less severe macroeconomic outlook, the rise in unemployment is markedly smaller, and wage growth rises significantly more strongly as the crisis is gradually overcome. At the same time, enterprises have more scope to make up for losses incurred by increasing their profit margins. As a result, the core HICP rate will increase more quickly and more strongly, and headline inflation will also be above the level of the baseline scenario.[19] Under these conditions, the government deficit ratio would be lower in every year of the forecast.[20] Only a small deficit is then anticipated at the end of the projection horizon. The differences between the scenarios mainly reflect the automatic stabilisers, i.e. higher revenue from taxes and social contributions and lower expenditure on short-time workers and unemployment benefits. In addition, in the less severe scenario, fewer firms will receive direct assistance and expenditure

19 It should be noted that crude oil prices in the alternative scenarios develop in the same way as in the projection, according to the Eurosystem's jointly defined assumptions. The headline rate will thus retain its V-shaped time pattern. However, should the pandemic take a different course, it is quite conceivable that crude oil prices will recover either more quickly or more slowly. The headline rate would then also rise faster or slower accordingly.
20 First, the automatic stabilisers were taken into account when calculating the alternative scenarios for the general government fiscal balance and debt ratio. Second, it was assumed that the measures included in the baseline scenario of the projection would be exhausted to a greater or lesser extent depending on the macroeconomic scenario. The approaches are calibrated as schematic, illustrative scenarios and should not be seen as differentiated estimates of a fiscal response to the respective developments of the epidemic and the economy as a whole.

Key figures of the macroeconomic projection (baseline scenario) – non-calendar adjusted

Year-on-year percentage change

Item	2019[1]	2020	2021	2022
GDP (real)	0.6	– 6.8	3.2	3.7
GDP (real, calendar adjusted)	0.6	– 7.1	3.2	3.8
Components of real GDP				
Private consumption	1.6	– 5.1	3.2	4.7
Government consumption	2.6	3.1	2.3	0.7
Gross fixed capital formation	2.6	– 6.5	– 2.9	6.3
Exports	0.9	– 12.8	7.5	4.4
Imports	1.9	– 6.2	4.0	5.1
Contributions to GDP growth[2]				
Domestic final demand	1.9	– 3.4	1.6	3.9
Changes in inventories	– 0.9	0.1	– 0.0	– 0.1
Exports	0.4	– 6.0	3.2	2.0
Imports	– 0.8	2.5	– 1.6	– 2.0
Labour market				
Total number of hours worked[3]	0.6	– 5.3	1.9	2.1
Employed persons[3]	0.9	– 1.2	– 0.6	1.1
Unemployment rate[4]	5.0	6.1	6.7	5.9
Memo item: ILO unemployment rate[5]	3.2	4.5	5.2	4.3
Wages and wage costs				
Compensation per employee	3.2	– 1.6	2.9	2.4
Real GDP per employed person	– 0.3	– 5.6	3.9	2.6
Unit labour costs[6]	3.5	4.3	– 0.9	– 0.2
Memo item: GDP deflator	2.2	2.4	1.2	1.2
Consumer prices[7]	1.4	0.8	1.1	1.6
Excluding energy	1.4	1.6	1.3	1.3
Energy component	1.4	– 5.9	– 0.8	4.5
Excluding energy and food	1.4	1.2	1.1	1.2
Food component	1.5	3.5	2.2	2.0

Sources: Federal Statistical Office; Federal Employment Agency; Eurostat; 2019 to 2022 Bundesbank projections. **1** Data vintage: 25 February 2020. **2** In arithmetical terms, in percentage points. Discrepancies in the totals are due to rounding. **3** Domestic concept. **4** As a percentage of the civilian labour force. **5** Internationally standardised as per ILO definition, Eurostat differentiation. **6** Ratio of domestic compensation per employee to real GDP per employed person. **7** Harmonised Index of Consumer Prices (HICP).

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The fiscal stimulus package announced by the coalition parties

Economic forecasts are currently faced with major challenges. Uncertainty abounds and conditions are in a state of flux. For instance, this projection was concluded on 25 May 2020 and therefore does not take into account, amongst other things, the fiscal package recently unveiled by the coalition parties of the Federal Government.

On 3 June 2020, the coalition committee agreed on a comprehensive fiscal stabilisation and stimulus package. On the whole, such a stimulus package appears to be appropriate in light of the current situation, and the package of measures is welcome in this respect. Due in particular to the fact that some of the specifics have yet to be finalised, it is not possible at this time to make a detailed fiscal and economic policy assessment or an in-depth evaluation of the impact on the projection presented here. However, a general assessment of the measures as things stand today is provided below.

The package contains a raft of individual measures covering 2020 and 2021, in particular. The package is worth a total of €130 billion over the two years (4% of 2020's gross domestic product (GDP)), with a strong focus on this year. A key element is a temporary but significant slashing of value added tax rates in the second half of 2020 (regular rate cut from 19% to 16% and reduced rate cut from 7% to 5%; expected tax revenue shortfalls of €20 billion in 2020). Furthermore, transfers to enterprises are to be ramped up considerably this year to provide support in cases of very large revenue losses (maximum volume of €25 billion), and additional tax liquidity assistance is planned (e.g. expansion of tax loss carryforwards). Other components are a child bonus (€300 per child, which especially benefits lower-income families) and a reduction in electricity costs as of 2021 due to central government assuming part of the renewable energy levy. In addition, the package contains a whole host of direct and indirect investment components, such as support in the areas of transport, digitalisation and healthcare (with an estimated total volume of €50 billion). Relief is also envisaged at the local government level (including compensation for local business tax shortfalls and the permanent assumption by central government of larger shares of accommodation costs for recipients of unemployment benefit II). These transfers from central to local government should, amongst other things, enable local governments to stabilise or step up their investment spending. In addition, by making transfers to the social security funds if necessary, central government aims to ensure that social security contribution rates remain below 40% overall for the time being (this is already assumed in the projection).

Factoring the package into the projection for government finances would result in higher deficits and debt. It should be taken into account here that, judging from past experience, investment and structural policy measures, in particular, can only be implemented with a time lag and some payments are made between government budgets. Positive macroeconomic effects also ease the strain on government finances via the automatic stabilisers. In an initial approximation, additional deficits of around 1½% of GDP in 2020 and ½% of GDP in 2021, followed by smaller budgetary burdens, appear likely compared with the projection presented. Accordingly, the expanded baseline scenario would produce a deficit of

7½% this year, which could subsequently fall to around 2% in 2022.

The macroeconomic effects of fiscal measures are particularly uncertain in the current economic environment, dominated as it is by the pandemic. This is especially true of one of the largest individual items in the stimulus package, namely the temporary reduction in value added tax. If the lower value added tax were to be passed on to consumers on a large scale, substantial gains in purchasing power could be expected, especially for households with a comparatively high marginal propensity to consume. Otherwise, corporate profitability, at least, will probably be boosted, which is also likely to have positive macroeconomic effects during the recession. The temporary reduction in value added tax would also have a secondary effect of incentivising buyers to bring forward their purchases of durable consumer goods. This could help bring a quicker end to the current reluctance to spend. Combined with the additional relief for households and enterprises, the economic stimulus package could thus have a positive impact on consumer and investor sentiment. The cyclical recovery would consequently be likely to progress somewhat faster, and economic activity could return to its pre-crisis level somewhat earlier than assumed in the projection's baseline scenario. According to an initial, very rough estimate based on standard model elasticities, real GDP could be more than 1% higher this year and around ½% higher next year (growth rates would be correspondingly higher this year and lower next year). These standard model elasticities reflect mean historical relationships and do not take into account either the anticipatory effects of the reduction in value added tax or any possible beneficial confidence effects.

In addition to its indirect impact on the inflation rate resulting from higher aggregate demand, the package of measures also has direct price effects that are considerably more significant in quantitative terms. In this vein, the reduction in value added tax will have considerable price effects if the technical assumption is made that it will be completely and directly passed on to consumers. Using such a purely mechanical approach, the annual HICP rate could be around one percentage point lower in 2020 and – owing to the base effect – higher by the same amount in 2021.[1] However, it can probably be assumed that the reduction will, in fact, be passed on only partially and, in some cases, with a time lag. Moreover, it is likely to be highly dependent on the respective cost and demand conditions in each sector as well as on consumers' willingness to spend, which means that the impact on the inflation rate will probably be markedly lower overall than would be suggested by the assumption that the reduction will be completely and immediately passed on to consumers.

1 The calculations are approximated on the basis of the shares of goods and services subject to value added tax in the Harmonised Index of Consumer Prices (HICP). See also Deutsche Bundesbank (2008) and Elbel and Werner (2008).

on the basic allowance is lower. The debt ratio will rise significantly less and return to around 60% in 2022.

More severe scenario: no significant adjustments are made during the pandemic, …

In a more severe scenario, the initial easing of the lockdown measures will already have relieved the economy in the short term to a lesser extent than expected in the baseline scenario. In addition, during the transition period of just over one year until a comprehensive medical solution is assumed to be at hand to combat the virus, the economy will barely have recovered, as economic agents are taken to have made significantly less successful adjustments. As a result, economic activity will continue to be severely impaired for a long period of time. This outlook also covers the possibility of infection rates temporarily picking up again, meaning that stricter lockdown measures become necessary once more.

… resulting in substantial lasting damage to the product and labour markets

Although fiscal policy will play a substantially supportive role in this scenario, too, the protracted period of greatly subdued economic activity is likely to cause considerable lasting damage to the product and labour markets. While the product markets are likely to be primarily affected by numerous corporate insolvencies and a devaluation of the capital stock, the labour market could suffer a loss of human capital. A substantial permanent loss of potential output is therefore to be expected, primarily due to lower capital accumulation compared with a non-pandemic scenario, but also on account of significantly depressed TFP and a shrinkage of the potential labour force. The latter circumstance chiefly reflects a higher structural unemployment rate. Even if a medical solution for COVID-19 were to become available, in this scenario, the economy would not make a full recovery during the projection horizon. Unemployment would rise much more strongly, and wage growth would remain greatly subdued over the entire period. In such a situation, many firms would be likely to increase their prices to a lesser extent or even lower them in order to maintain their market shares. The core HICP rate could then fall to just below 1% in the following year and barely improve in 2022.[21] The headline rate would also be correspondingly lower. The government deficit ratio would be higher in all years. At the end of the projection horizon, a deficit of more than 5% of GDP would still be recorded. This would mainly be due to the automatic stabilisers. In addition, more direct assistance would be provided to enterprises, basic allowance expenditure would be higher and a greater number of defaults would occur on coronavirus assistance loans. The debt ratio would already have risen above 80% in 2020, partly due to enterprises drawing on government assistance loans and capital to an increasing extent. It would continue rising to around 90% over the projection horizon.

21 Overall, the core rate would therefore remain fairly stable in the two alternative scenarios, compared with the real economic differences. For one thing, this expectation mirrors the fact that prices are usually adjusted fairly rarely. For another, it reflects the generally low sensitivity of core inflation with regard to cyclical fluctuations in Germany. See also Deutsche Bundesbank (2016).

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