The German economy

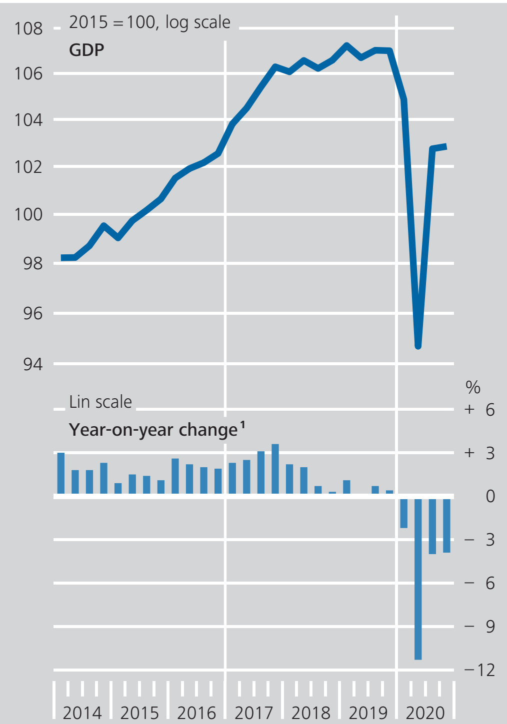
Macroeconomic situation

Second wave of pandemic caused Germany's economic recovery to stall at end of 2020

The economic recovery in Germany was brought to a standstill in the final quarter of 2020. According to the Federal Statistical Office's flash estimate, real gross domestic product (GDP) was up by a marginal 0.1% after seasonal and calendar adjustment. This means that economic activity was still almost 4% down on the pre-crisis level of the final quarter of 2019. The catch-up was halted by the resurgent infection rates and the associated gradual tightening of containment measures. These measures primarily targeted contact-intensive areas such as leisure and culture-related services, hotel and restaurant services, and bricks-and-mortar retail outlets, leading them to sustain considerable losses in revenue in some cases. By contrast, many sectors that were not directly affected by the measures continued to recover. The industrial sector, in particular, stepped up production substantially. The leading indicators suggest that the upturn in industry will continue at the beginning of 2021 – albeit with reduced momentum. Nevertheless, aggregate economic activity is likely to decline markedly in the first quarter of 2021 due to the measures to contain the pandemic being more protracted and stricter compared with the previous quarter. With the gradual easing of containment measures and the wider availability of vaccines, however, the economy should return to significantly higher output from the second quarter and continue its recovery. Even so, the pandemic's behaviour still poses the risk of setbacks, in particular due to virus mutations.

Overall output

Price and seasonally adjusted



Source of unadjusted figures: Federal Statistical Office. **1** Price and calendar adjusted.
Deutsche Bundesbank

Sectors hit by containment measures to varying degrees

The individual economic sectors were affected very differently by the renewed tightening of measures to contain the pandemic in the autumn. On the supply side, they are likely to have led to a decline in gross value added in the services sector. Turnover even declined considerably in the case of hotels and restaurants, whose business activity was severely restricted from November. By contrast, retail trade actually recorded a slight rise in turnover in the fourth quarter overall, with sales figures still climbing steeply in October and November. The mandatory closure of retail stores led to a slump in December, however. The manufacturing sector meanwhile continued to recover on the back of buoyant domestic and foreign demand for industrial products. The construction sector also increased its value added, so far remaining largely unscathed by the pandemic. On the expenditure side, the tightened restrictions had a particularly noticeable effect on household consumption, which is likely to have shrunk considerably despite the strong increase in motor vehicle purchases. Exports remained on an upward trajectory, by contrast. Economic indicators are also signalling that enterprises are likely to have increased their investment in machinery and equipment as well.

Goods exports up substantially

German exports of goods were up substantially after price adjustment in the fourth quarter of 2020. One factor behind this was the continued revival of world trade. In a regional breakdown, the increase in the volume of German enterprises' exports was broadly based, with a noticeably sharper rise in deliveries to non-euro area countries than to the euro area. This is probably also due to the fact that economic output in the euro area was more strongly affected by the pandemic than in many non-euro area countries and that the shortfall against the pre-crisis level of the last quarter of 2019 was somewhat larger in the latter group. There was a particularly steep rise in the value of exports to Japan, the OPEC countries, the United States and China. Broken down by category of goods, price-adjusted exports of intermediate goods recorded a particularly substantial increase, according to the figures available up to November. Exports of capital goods were likewise up significantly, with motor vehicle exports playing a particular part in this. Exports of consumer goods rose sharply.

Probable marked increase in commercial machinery and equipment

Investment in commercial machinery and equipment is likely to have increased markedly in the final quarter of 2020. Both the nominal sales of capital goods in Germany and the value of capital goods imports were substantially higher on average in the fourth quarter. New purchases of motor vehicles also contributed to the rise in investment expenditure. Registration figures for commercial passenger cars were up distinctly on the third quarter. There was also an increase in commercial vehicle registrations, albeit to a significantly smaller extent. One probable reason for the growth in investment in commercial machinery and equipment is that, according to the ifo Institute, industrial capacity utilisation continued to rise between October and January, falling only slightly short of pre-crisis levels. In addition, enterprises possibly made investments in order to be better able to adapt to conditions imposed by the pandemic.

Foreign trade

Seasonally adjusted, quarterly data

Source of unadjusted figures: Federal Statistical Office. **1** Adjusted using the price indices for foreign trade.
Deutsche Bundesbank

Growth in construction investment

Construction investment is likely to have grown again in the final quarter of 2020. This is suggested by sales in the main construction sector – figures for which are available up to November – which were up significantly on the quarter in terms of value. Housing investment is likely to have experienced a particularly steep increase but investment in commercial buildings has probably risen markedly, too.

Tightened containment measures place heavy burden on private consumption

Private consumption is likely to have declined significantly at the end of 2020. This was mainly due to the gradual re-tightening of containment measures in the fourth quarter, severely restricting consumption opportunities in some areas. This is particularly true of the hotel and restaurant sector, whose business has been largely prohibited since November. Compared with the pre-crisis level, the drops in sales were slightly smaller than during the lockdown in the second quarter, however. This suggests that enterprises have now adapted somewhat better to the pandemic-related restrictions. Retail sales in December were down considerably on the month, mainly due to the store closures imposed on parts of the bricks-and-mortar retail segment from mid-December. Owing to strong sales figures in October and November, however, retail trade sales were up slightly on average over the final quarter compared with the third quarter, although performance within the retail sector was very mixed. Sales of textiles, clothing, footwear and leather goods collapsed. As in spring, online and mail order trade profited from the closure of bricks-and-mortar stores, posting a steep increase on the previous quarter. New vehicle registrations by private buyers suggest that motor vehicle sales are likely to have counterbalanced the setbacks in the hotel and restaurant sector and in retail. They rose steeply shortly before the temporary reduction in German VAT rates ceased to apply at the end of the year.

Strong increase in goods imports

In the final quarter of 2020, German imports of goods rose sharply in real terms. Imports from non-euro area countries showed a somewhat steeper increase than imports from euro area countries. Broken down by category of goods, price-adjusted imports of intermediate goods recorded steep growth, according to the figures available up to November. The volume of imported capital goods was likewise up strongly and there was also significantly increased demand for imported consumer goods, which had been robust up to now.

Sectoral trends

Continued rebound in industry

The industrial sector stepped up production substantially in the final quarter of 2020. It has hardly been affected by the containment measures so far and profited from a strong increase in demand for industrial goods both from within Germany and abroad. Seasonally adjusted industrial output rose by 6¾% compared with the third quarter, primarily driven by the steep rise in the production of intermediate goods and capital goods. The automotive sector, which had been severely hit in the first wave of the pandemic, and manufacturers of computer, electronic and optical products saw a particularly strong rise in production. By contrast, the production of consumer goods was only slightly higher. In spite of the continued catch-up movement, industrial output was still 3% lower than the pre-crisis level of the final quarter of 2019. Only the production of intermediate goods was already up on pre-crisis levels again.

Further increase in industrial capacity utilisation

In line with the increase in output, manufacturing capacity utilisation also continued to rise markedly, according to the ifo Institute. In January 2021, capacity utilisation in the intermediate goods sector was significantly higher than in the previous survey in October 2020, but it fell distinctly in the case of capital goods producers. Overall, capacity utilisation was almost back at its pre-crisis level.

Construction sector barely affected by lockdown so far

Construction was barely affected by the second wave of the coronavirus pandemic in the final quarter of 2020. Instead, in the fourth quarter of 2020, construction output recorded a steep rise on the quarter after seasonal adjustment (+4%). This was attributable to a considerable expansion in construction activity in the finishing trades, where the data are highly prone to revision. By contrast, output in the main construction sector was only slightly higher. A noticeable increase in building construction was offset by a slight fall in civil engineering work. Overall, construction activity continues to be quite favourable, with activities in both building construction and civil engineering being stepped up significantly compared with levels in the final quarter of 2019. Furthermore, capacity utilisation in the main construction sector and the firms' assessment of the situation according to the ifo Institute's survey were high compared with the long-term average.

Heterogeneous development in services sector

Economic output in the services sector is likely to have fallen in the fourth quarter of 2020 but with very varied developments in the individual services sectors. Hotel and restaurant services suffered considerable losses in turnover due to the strong pandemic-related restrictions on business activity. In addition, real retail sales saw only a slight rise on the third quarter owing to the enforced closures for many areas from mid-December. Sales of textiles, clothing, footwear and leather goods suffered a considerable slump. Bricks-and-mortar retail stores selling furniture and furnishings, household appliances and home improvement materials experienced a marked decline in sales. By contrast, sales of food, beverages and tobacco remained at a high level. Online and mail order trade profited from the closures of stores and posted a steep increase in turnover. Wholesale trade, which often behaves similarly to industry, is also likely to have seen growth in the final quarter. Taking the average of October and November, the months available so far, sales in this area were up markedly, with ifo Institute data also indicating a significant improvement in the assessment of the business situation here in the fourth-quarter months. Motor vehicle sales are also likely to have been dynamic, as signalled by the steep increase in motor vehicle registrations, which was probably also partly due to the end of the VAT reduction.

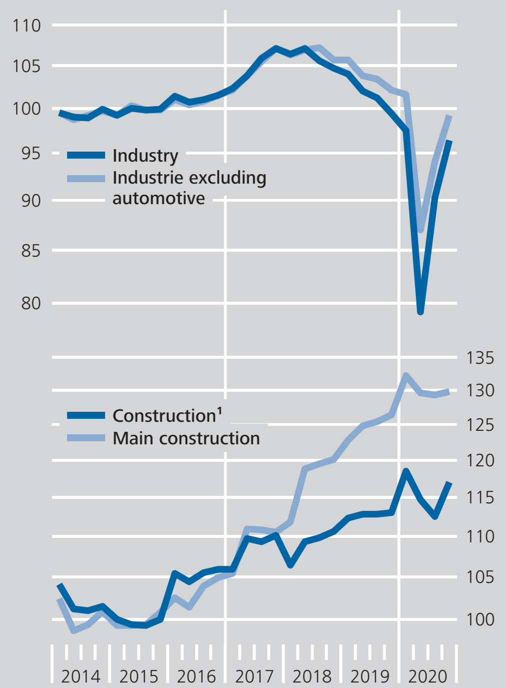
Labour market

Labour market robust

The labour market proved relatively robust in the face of tightened measures taken during the fourth quarter to contain the pandemic. Based on the data available so far, the level of employment remained more or less constant compared with the third quarter. However, this may mask a significant bifurcation depending on the form of employment and economic sector. This heterogeneity also applies to take-up of short-time working arrangements. Overall,

Output in industry and in construction

2015 = 100, seasonally adjusted, quarterly data, log scale



Source of unadjusted figures: Federal Statistical Office. **1** Main construction sector and finishing trades.

Deutsche Bundesbank

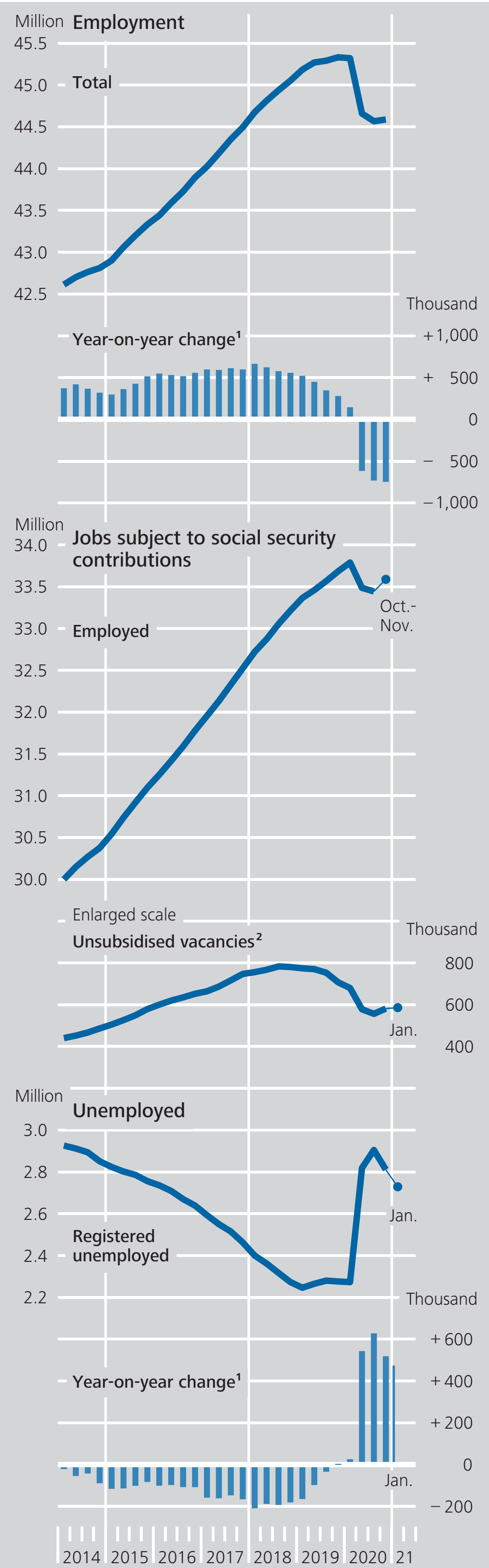
the number of people in short-time work rose again at last report, but on the other hand, unemployment fell fairly significantly up to January, despite all the restrictions caused by the pandemic. The expanded contact restriction measures in place since mid-December dampened expectations and the outlook for the next few months, however.

Employment stable overall in spite of varying developments depending on forms of employment …

Employment had stabilised quickly in the third quarter, but barely recovered going forward from the low reached in June. Instead, the higher volume of work resulting from the macroeconomic recovery was used to reduce short-time working. Employment also remained remarkably stable in the face of the restrictions brought about by the second wave of the pandemic from November, however. On an average of the fourth quarter, total employment was up by around 21,000 persons on the level of the previous quarter (+0.0%). This reflects varying developments depending on the form of employment. Exclusively low-paid part-time

Labour market

Seasonally adjusted, quarterly data



Sources of unadjusted figures: Federal Statistical Office and Federal Employment Agency. **1** Not seasonally adjusted. **2** Excluding seasonal jobs and jobs located abroad.

Deutsche Bundesbank

employment dropped considerably in November, the most recent month for which data are available, mainly due to the enforced closures in accommodation and food services. After a modest recovery in the third quarter, it is now even below the low following the first wave in May. Towards the end of the period under review, the number of persons working exclusively in "mini-jobs" was 8% lower than before the pandemic. Self-employment has shown a downward tendency for quite some time, with its share in the areas heavily affected by the containment measures, such as the hotel and restaurant sector, arts, entertainment, recreation and personal services being above average. From February to December, the number of self-employed persons therefore showed a somewhat stronger decline, with 4¼%, than before the pandemic.

… and sectors of employment subject to social security contributions

When it comes to employment subject to social security contributions, the picture is quite different. As vacancies were increasingly filled up to November, more than half of the job losses in the second quarter were recouped, leaving figures now just over ½% short of the pre-pandemic level. The sectoral disaggregation for positions subject to social security contributions shows, by way of example, how heterogeneous the impact of the pandemic containment measures has been across the different economic sectors. Employment in the hotel and restaurant sector, for instance, fell steeply again during the second wave of the pandemic. The manufacturing sector (excluding construction), which is underpinning the economic recovery, shed jobs throughout the reporting period, albeit at an increasingly slow pace at the current end. Having said that, the volume of work in that sector is likely to have expanded, partly because short-time work was scaled back sharply. By contrast, temporary agency employment saw vigorous hiring activity. Temporary workers are often deployed in the manufacturing sector. It is possible that new hires are only taking place cautiously and in such a way as to allow swift workforce adjustments. Recruitment was also substantial in business-related services, construction, logistics and the (predominantly) public services sector (health and social services, education, civil service).

Short-time work on rise again since November

By October, the number of employees in economically induced short-time work had fallen to 2.06 million, down by two-thirds on the peak in April 2020. Short-time work was still very widespread in the manufacturing sector and in the hotel and restaurant trade. The latest estimate by the Federal Employment Agency covers the period up to November. The number of people in short-time work climbed by 200,000 on the month (+10%) as the pandemic intensified once more. However, since the average amount of working time lost per short-time worker rose again considerably in November, the volume of labour lost grew significantly more strongly (+45%). Sectoral data on utilisation of short-time work schemes in November are not yet available. In November, short-time work notifications mainly concerned employees in the catering and accommodation sectors, while the manufacturing sector continued to recover. Based on its own surveys, the ifo Institute believes that there were 2.6 million people in short-time work in January 2021.[1] The further increase is likely to be mainly attributable to trade.

Sharp fall in unemployment throughout the period

Unemployment fell sharply in the fourth quarter, with the number of people officially registered as unemployed down by a seasonally adjusted 94,000 persons and the corresponding rate 0.2 percentage point lower than before. Unemployment continued to decline markedly in January too, leaving the current unemployment rate at 6.0%. The reduction was more pronounced than employment developments would suggest. Active labour market policy measures have not been stepped up significantly either. It is therefore reasonable to assume that unemployment has fallen because people have moved out of the labour force. In particular, persons previously working in low-paid part-time jobs or the self-employed are generally not entitled to unemployment insurance benefits and often do not register as unemployed.

Leading indicators barely any lower, despite lockdown

Expectations for employment growth in the coming months were dampened only very moderately by the measures taken to contain the pandemic. Over the past two months, firms only made minor downward revisions to their short-term employment plans according to the ifo employment barometer. The corresponding indicators published by the Institute for Employment Research (IAB) and the Federal Employment Agency's BA-X job index even remained virtually unchanged. Overall, it is currently unlikely that the labour market situation will deteriorate significantly over the next few months.

Wages and prices

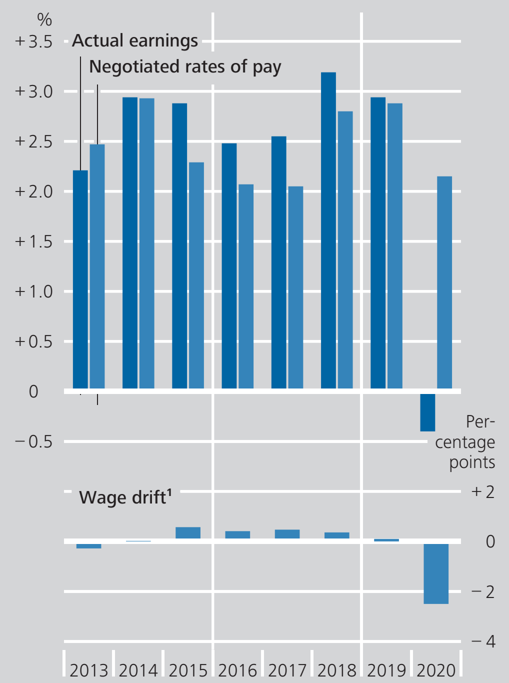
Negotiated pay rates rose moderately and actual earnings hardly at all in Q4 on account of pandemic

The pandemic is continuing to shape wage developments as well. The rise in negotiated wages in the autumn months was again moderate. As in the third quarter, there was only muted growth in basic negotiated rates of pay in year-on-year terms (1.7%). However, if additional benefits are taken into account, wage growth in the final quarter of the year was significantly higher than when looking at basic pay (2.6%). A driving factor here has been the granting of one-off coronavirus special payments in several sectors. For employees these payments are tax-free and not subject to social security contributions.[2] The latest wage agreements provide for low wage increases following pay freezes of several months at the start of the contracts. Having decreased in the third quarter, actual earnings may have picked up again in the fourth quarter due to the decline

1 See ifo Institute, Munich, press release of 1 February 2021: https://www.ifo.de/en/node/61427
2 Under Section 3 No 11a of the Income Tax Act *(Einkommensteuergesetz),* employers can pay their employees special tax-exempt payments up to an amount of €1,500. Initially these could be made up to 31 December 2020 but the Federal Ministry of Finance has since extended the arrangement until 30 June 2021. The special payment is intended to cushion the additional strain caused by the coronavirus crisis in 2020.

Rates of pay and wage drift

Year-on-year change, on monthly basis



Sources: Federal Statistical Office (actual earnings) and Deutsche Bundesbank (negotiated rates of pay). **1** The wage drift is calculated as the annual change in the ratio of actual earnings to negotiated rates of pay.
Deutsche Bundesbank

in short-time work and the temporary easing of the measures designed to contain the pandemic. Even so, wage drift (i.e. the difference between negotiated wages and actual earnings) is likely to have been distinctly negative, as in the two preceding quarters.

Past year brings significantly smaller rise in negotiated pay rates than before and even a fall in actual earnings

At 2.1%, the overall rise in negotiated wages in 2020 was significantly smaller than in the previous two years.[3] Initial figures calculated by the Federal Statistical Office indicate that actual earnings even fell by 0.4%, primarily on account of the high volume of short-time work. Wage drift was thus well into negative territory at -2.5 percentage points.

Wage demands between 4% and 6% for major pay round of 2021

This year's major pay round will affect around 11 million employees. The wage demands put forward by the trade unions currently amount to between 4% and 6% for a period of 12 months and continue to reflect the ongoing strains of the pandemic. Alongside pay levels, the negotiations currently under way in the metal and electrical engineering industry are concerned with aspects of structural change. These include job protection initiatives (for instance, through models with reduced working hours for upskilling) and framework agreements for operational investment commitments to secure the viability of business sites. Based on a notional duration of 12 months, the most recent pay agreement in the textile and clothing industry of western Germany culminated in a fairly low wage increase of 1.1%. Further talks are currently pending at Volkswagen and in the steel industry. Over the rest of the year, wage negotiations are set to take place in a number of areas, including the retail and wholesale trade, private banks, the main construction sector and the public sector of the Federal states.

Rise in general minimum wage to €9.50 per hour from January 2021

Effective from January 2021, the German Government brought the general statutory minimum wage up from €9.35 to €9.50 per hour (+1.6%). A further moderate increase to €9.60 per hour (+1.1%) will come in July 2021.

Inflation rate still negative in Q4 2020; …

In the final quarter of 2020, consumer prices (HICP) remained unchanged on the quarter in seasonally adjusted terms after falling markedly in the third quarter owing to the temporary reduction in VAT. While food and services became slightly more expensive, prices for industrial goods excluding energy went down somewhat. Energy also became slightly cheaper again. By contrast, the temporary VAT cut and energy prices continued to have a significant dampening effect in a year-on-year comparison.[4] At -0.6%, inflation in the final quarter of 2020 was even slightly lower than in the previous quarter (-0.2%). The rate excluding energy and food was likewise in slightly negative territory (-0.1% from 0.5%).

Average inflation for 2020 was considerably lower than the corresponding figure for 2019,

3 For a review of the 2020 pay round, see Deutsche Bundesbank (2020a).
4 See: Deutsche Bundesbank (2020b).

… temporary VAT cut and energy prices likewise exerting significant dampening effect on 2020 annual average

with the inflation rate falling from 1.4% to 0.4%. The reduction in VAT, which was limited to the months from July to December 2020, exerted considerable downward pressure on inflation, as did the sharp fall in energy prices at the beginning of the year. At the same time, however, food prices rose more sharply than in the previous year. This meant that the rate excluding energy and food declined slightly less strongly, from 1.4% to 0.7%. By contrast, the official consumer price statistics indicate that the increase in housing rents remained virtually unchanged (see the box on pp. 60 ff. for an account of developments in house prices in 2020).

Strong increase in inflation rate (HICP) in January primarily due to VAT increase and significant adjustments to the weighting scheme

Consumer prices experienced a strong increase in January 2021. The inflation rate rose exceptionally steeply, from -0.7% in December to +1.6%.[5] The core rate also picked up significantly (from -0.1% to 2.0%). The increase was thus even stronger than had been expected as a result of the reintroduction of the regular VAT rates and the measures contained in the climate package. This is likely to be explained by extensive updates to the HICP expenditure weights, in particular those applied for package holidays. In accordance with the HICP Framework Regulation, the weights underwent their customary annual update in January. This year, however, the updates were more extensive than usual owing to the shifts in consumption observed during the coronavirus pandemic (see also the box on pp. 63 ff.). In the coming months, the HICP is likely to be affected by further one-off effects, stemming in particular from the weight update for the volatile package holiday prices.[6]

Order books and outlook

The increased burdens caused by the strict containment measures in place until at least early March are likely to hamper aggregate output in the first quarter of 2021. However, there is no reason to fear that economic activity will sink to the low recorded during the lockdown in

Import, export, producer and consumer prices

Seasonally adjusted, quarterly data

Source of unadjusted figures: Federal Statistical Office. **1** Producer price index for industrial products in domestic sales. **2** Harmonised Index of Consumer Prices. **3** Not seasonally adjusted.

Deutsche Bundesbank

German economic output likely to contract markedly in Q1 2021, but return to a significantly higher level from Q2 onwards

the second quarter of 2020. One key reason for this is that many sectors that are hardly directly affected by the measures, such as industry, have so far continued to recover. In addition, enterprises in the sectors strongly impacted by the measures, such as retail trade and the hotel and restaurant sector, are likely to be increasingly adapting to the conditions of the pandemic. According to the ifo Institute, enter-

5 However, due to the renewed tightening of measures to contain the coronavirus pandemic at the end of the year, just under one-quarter of the prices had to be estimated, much like in April 2020. See Federal Statistical Office (2021).
6 See also Deutsche Bundesbank (2019a).

Housing prices in Germany in 2020

The broad-based, sharp rise in housing prices in Germany continued in 2020 during the coronavirus pandemic. At the same time, the attraction of non-urban regions seemed to grow further. Housing prices in towns and cities also continued to climb and remained well above the level that appears justified by the longer-term economic and demographic determinants. The pandemic has not, to date, caused a decline in housing demand in Germany, while housing supply was further expanded in the reporting year.[1]

The coronavirus pandemic had little impact on housing prices last year. Having remained more or less unchanged in the first half of the year, housing price inflation picked up in the second half. According to data provided by the Association of German Pfandbrief banks (vdp), the prices of owner-occupied housing rose by 7½% in the reporting year, following an increase of 6¾% in 2019. At 7%, the house price index of the Federal Statistical Office likewise shows higher rates of price increase for the first three quarters of 2020 than in the preceding year. Hypoport AG's Europace house price index (EPX) indicates that housing prices grew by 11% in the reporting year.

In urban areas, housing price momentum in the year under review and the previous year remained significantly slower across all segments than in the years 2015 to 2018. Calculations based on bulwiengesa AG data for 127 German towns and cities show that prices rose by 6¼% last year, which is similar to the rate in 2019. At 7%, housing inflation in the seven major cities was barely higher than in the previous year.[2] According to data provided by vdp, residential property prices in the seven major cities grew more strongly in the reporting year than in the preceding year, at 5%, but also significantly less than in the years 2015 to 2018.

Looking at rents for new tenancies, the trend towards lower rates of increase continued last year. According to calculations based on data provided by bulwiengesa AG, rents for new lettings in towns and cities rose by 2¼% in 2020. In the seven major cities, rents for new tenancies also rose moderately, at 2½%. Data provided by vdp likewise suggest less momentum in rent developments. According to this data, rent adjustments for new lettings were slightly smaller than a year earlier, at 3¼%, for Germany as a whole. According to the vdp data, this slowdown was fairly pronounced in the seven major cities, with rents rising by just 1¾%.

The fact that the tendency towards slower housing price momentum that appeared in 2019 did not continue last year could be because the coronavirus pandemic boosted housing demand to some extent. Even though growth in households' disposable income was significantly weaker than in preceding years, this dampened housing demand only marginally, as households may not have expected a persistent loss of income. By contrast, the restrictions imposed to contain the pandemic may have permanently boosted the importance of residential property in households' consumption plans. Moreover, residential real estate appears to

1 This box deals with residential property price developments in the context of the real economy. For an assessment from a financial stability perspective, aspects relating to mortgage financing also need to be taken into account.
2 The seven major cities are Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart.

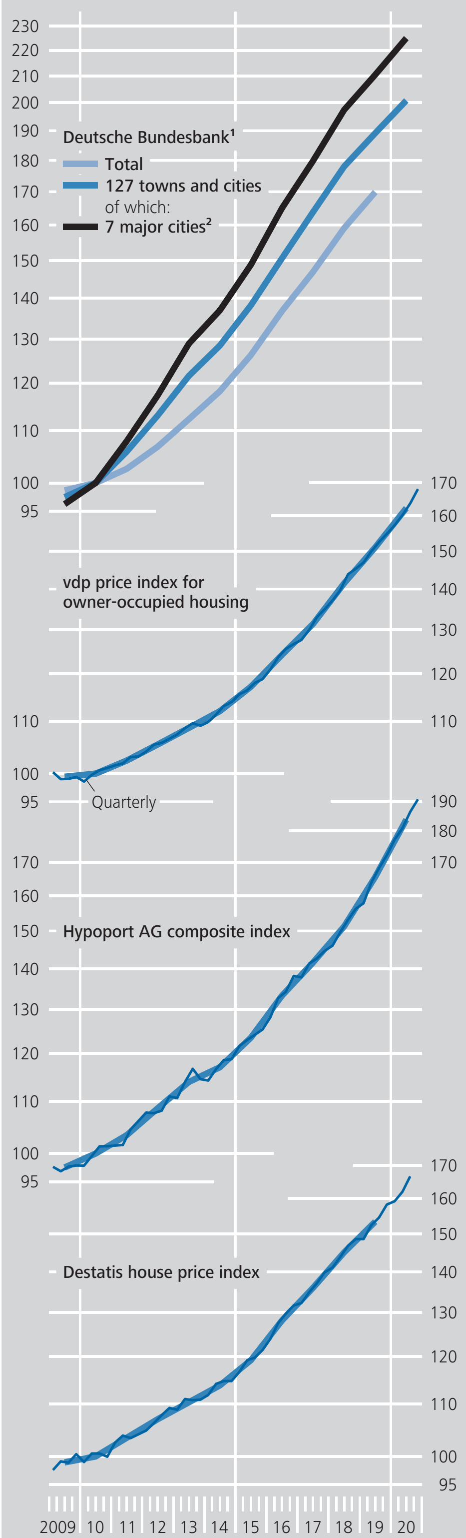
have remained an attractive investment in the low interest rate environment, especially as financing conditions improved further. The average rate of mortgage loans, which was already at a historically low level, fell further to 1.3% in the reporting year. Nevertheless, residential property did not become more affordable overall, as household incomes rose only moderately compared with housing prices in the reporting year.[3]

The coronavirus pandemic caused no serious disruption to the expansion of housing supply last year. The additional supply is likely to have exceeded that of the previous year, in which just over 290,000 apartments were completed. Last year, the number of building permits granted was also above average, with approximately more than 350,000 units approved. Even in the months in which social distancing measures applied to contain the pandemic, the number of building permits remained stable. Capacity utilisation in the construction sector fell somewhat over the course of the year, albeit from a previously extremely high level. Nonetheless, construction prices rose less strongly than a year earlier – even excluding value added tax. Construction costs did not increase as sharply as in the previous year, partly because material costs remained unchanged. Federal Statistical Office data show that the prices of building land were just 4¾% above the average of the previous year in the first half of 2020, the most recent period for which data are available. However, these price data capture only the first phase of the coronavirus pandemic.

3 See the Bundesbank's system of indicators for the German residential property market, which is available at https://www.bundesbank.de/en/statistics/sets-of-indicators/system-of-indicators-for-the-german-residential-property-market/system-of-indicators-for-the-german-residential-property-market-795268

Price indices for housing

2010 = 100, annual data, log scale



1 Weighted by transaction. Bundesbank calculations based on price data provided by bulwiengesa AG. 2 Berlin, Cologne, Düsseldorf, Frankfurt am Main, Hamburg, Munich and Stuttgart.

Deutsche Bundesbank

In terms of housing price valuations, the net impact of the coronavirus pandemic was limited. According to recent estimates, prices in urban areas remained between 15% and 30% above the level suggested by the demographic and economic fundamentals.[4] Standard indicators for assessing housing price developments suggest that the marked price exaggerations in the urban housing markets increased somewhat during the coronavirus pandemic in the reporting year. The price-rent ratio for apartments in towns and cities was more than 25% above its long-term mean since reunification in the reporting year; in the seven major cities, the ratio was slightly more than 35% above its long-term average.

4 For an explanation of the valuation approaches used, see Deutsche Bundesbank (2020c).

prises from the retail, and hotel and restaurant sectors, for example, were distinctly more optimistic about their business situation in January than during the first lockdown in April 2020.[7] However, industry could encounter headwinds from growing supply bottlenecks for a number of intermediate products owing, for example, to border closures or stricter border controls. On the demand side, private consumption is likely to suffer on account not only of the withdrawal of consumption opportunities during the pandemic but also the restoration of VAT rates to their original levels. As infection figures decline, vaccines become more widely available and the containment measures are gradually eased, the current drags on growth should slowly recede, however. Economic output is therefore likely to return to a significantly higher level from the second quarter and resume its path of recovery. However, the future outlook remains closely linked to developments in the pandemic, with the risk of further setbacks stemming from mutations of the virus, in particular.

Distinct dip in economic sentiment

Sentiment in the German economy has dipped distinctly of late. According to the ifo Institute, the Business Climate Index for Germany deteriorated markedly in January 2021. Enterprises' assessment of the business situation and business expectations were both contributing factors here. The main reason for this downturn in sentiment is likely to have been the renewed tightening of restrictions on economic activity brought into force from mid-December 2020 onwards. For the most part, these new curbs had not yet been reflected in the December survey. Sentiment in the retail sector, which was particularly hard hit by the measures, thus collapsed. The business climate deteriorated in most other sectors, too. By contrast, sentiment

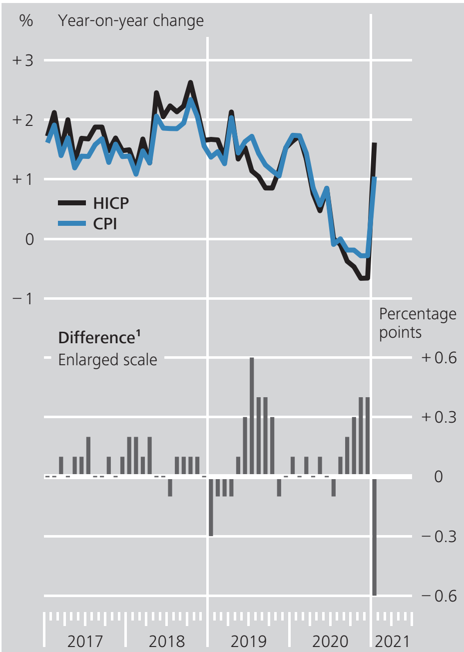
7 At the same time, retailers felt more negatively about their situation than they had done in December due to the mandatory store closures imposed.

One-off effects relating to COVID-19 in the HICP in 2021

At the start of the year, there was an unexpected sharp rise in consumer prices in Germany. The annual inflation rate as measured by the Harmonised Index of Consumer Prices (HICP) surged from -0.7% in December 2020 to 1.6% in January 2021, an increase of 2.3 percentage points. Prior to this, a distinctly higher inflation rate had been expected owing to the reversal of the temporary lowering of VAT rates[1] and the implementation of measures contained in the climate package,[2] but the increase was far stronger than anticipated in the December forecast and by market participants. The jump in the HICP rate was also significantly larger than that of the national consumer price index (CPI), which climbed from -0.3% in December to 1.0% in January. The unusually large difference of 0.6 percentage point between the HICP and CPI rates in January – and equally the expectation errors – can be explained for the most part by adjustments to the HICP's weighting scheme and the specific way in which the index is constructed.[3] While the CPI weights are normally only updated every five years, the HICP weights are adjusted annually in January for the current year in accordance with the EU Framework Regulation. The HICP weights are essentially based on the pattern of consumption expenditure in the previous year, which is usually obtained from the national accounts.[4] This means that the annual HICP rate is calculated from two index levels which are based on different weightings and therefore are not completely compatible. This can lead to statistical distortions, which are generally minimal when only minor changes are made to the weighting scheme.

On account of the coronavirus pandemic, however, the adjustments to the HICP weighting scheme in 2021 were more extensive than usual. Households' patterns of expenditure changed significantly in some areas, for example, owing to the restrictions caused by the pandemic in 2020. Within a year, the expenditure shares for food and for other goods excluding energy included in the HICP rose by almost 2 percentage points and by 1 percentage point, respectively, while the weight for services dropped by nearly 3 percentage points. By

Comparison of HICP and CPI



Sources: Federal Statistical Office and Bundesbank calculations. **1** Difference between CPI and HICP at the time of initial publication (real-time data).
Deutsche Bundesbank

1 The December forecast had assumed that the return to the higher VAT rates in January 2021 would be passed on in the same way as the temporary lowering in July 2020. For more on the estimated pass-through in July, see Deutsche Bundesbank (2020b).
2 See Deutsche Bundesbank (2019b).
3 For a description of the coronavirus-related changes to the official methodology for weight updates, see Federal Statistical Office (2021).
4 See Chapter 3 of Eurostat (2018) for information on the annual updating of HICP weights.

HICP by special aggregate

Item	HICP weight 2020 (‰)	HICP weight 2021 (‰)	Difference (‰ points)	Average inflation rate[1] 2011 to 2020	Standard deviation[1] 2011 to 2020
Food incl. alcohol and tobacco	155.5	174.0	18.5	2.2	1.0
Energy	108.7	107.7	− 1.0	0.6	5.7
Non-energy industrial goods	265.6	275.1	9.5	0.8	0.5
Clothing and footwear	51.4	43.8	− 7.6	1.0	1.4
Services	470.3	443.2	− 27.1	1.5	0.6
Package holidays	31.5	10.3	− 21.2	2.9	8.1
Total	1,000	1,000	.	1.3	0.8

1 Based on monthly year-on-year rates in the period from January 2011 to December 2020.
Deutsche Bundesbank

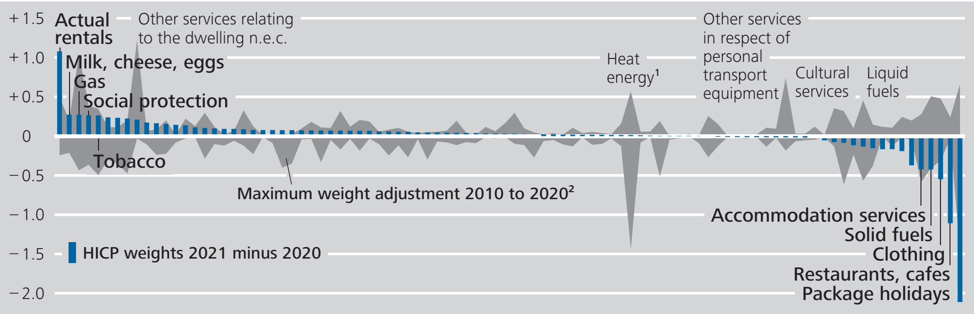
contrast, the expenditure share of energy remained virtually unchanged on balance.

Looking in detail at the goods and services contained in the HICP, a number of especially large weight updates become apparent.[5] The clearest drop was in the case of package holidays, which were subject to particularly tight restrictions. Their weight fell by more than 2 percentage points to the new level of 1%. The expenditure share of clothing and footwear also went down markedly, as did that of restaurant visits and accommodation services, since, due to the pandemic, there was less demand for these goods and services or they were unavailable. Consumption of transport fuels was probably lower as well, seeing as mobility was restricted. Weights were increased primarily for rents, the share of which grew by just over 1 percentage point, as well as for some basic food products. Aside from these ten or so components with especially large updates to the HICP weights for 2021, which make up just under one-third of the current HICP basket of goods and services, barely any notable adjustments were made.

5 This analysis looked at 94 goods and services contained in the HICP ("four-digit" level).

Adjustment of HICP weights in 2021 as a historical comparison, 94 HICP components*

Percentage points

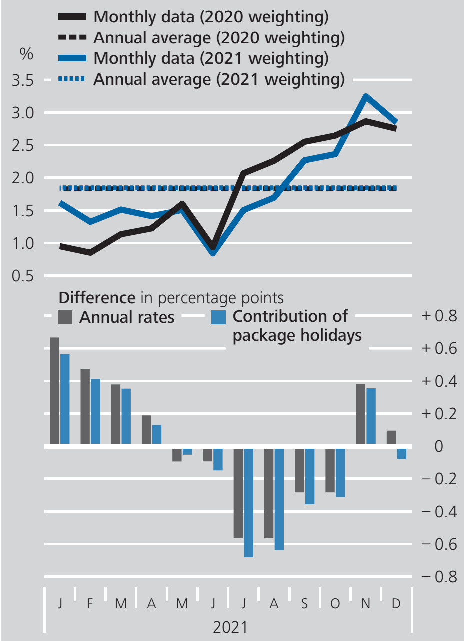


* Decomposition of HICP into 94 components at the "four-digit" level. The ten HICP categories in bold have the highest positive or negative HICP weight adjustment in 2021. For the five other categories (not in bold), relatively strong weight adjustments were made in the past. **1** The HICP weight of "heat energy" fell markedly in 2015 as a large portion of the energy products it contained were allocated to "gas". **2** The edges of the grey band denote the strongest positive and negative adjustment to the weight of a HICP category between 2010 and 2020. Weight adjustments in 2021 that fall within this band therefore are not exceptionally large by historical standards.
Deutsche Bundesbank

This is because the weight updates for many HICP components were still within the range of what has been observed in the past few years.[6]

One way to gauge the impact of the updated weights on the inflation rate in 2021 is to apply the 2021 weights to the Bundesbank's December 2020 inflation forecast, which was based on the 2020 HICP weighting scheme, and to compare the results. The December forecast had predicted the HICP inflation rate would remain at roughly 1% overall in the first half of 2021, before temporarily picking up to almost 3% in the second half of 2021 on account of the VAT base effect, and reaching 1.8% on an annual average. This pattern is only roughly maintained when applying the new weighting scheme for 2021, mainly due to package holidays, which make widely varying monthly contributions to the inflation rate. However, the reason for this is not just the updating of the HICP weight for package holidays; it is also because the prices of package holidays vary a great deal throughout the year and because of the specific way in which the HICP is constructed as a chain-linked index with December as the link month. These three aspects in combination produce a statistical effect, which had already materialised in 2019, inter alia.[7] As a result, package holidays made a counterintuitive, strongly positive contribution to the inflation rate in January, despite a negative year-on-year rate. In the HICP, this contribution can be described as the sum of two opposing price movements within the past 12 months, both of which relate to the link month of December 2020.[8] Thus, package holiday prices rose from January 2020 until the usual seasonal peak in December 2020, while they fell from December 2020 to January 2021.[9] The past year's price rise then fed into the calculation of the contribution with the relatively high 2020 HICP

Updated (HICP) inflation forecast from December 2020 with 2021 weights



Source: Bundesbank forecast based on data provided by the Federal Statistical Office.
Deutsche Bundesbank

weight and thus weighed more heavily than the price drop at the start of the year, which was accounted for with the lower 2021 HICP weight. Overall, then, the price increase for package holidays last year outweighed the price drop, and thus also made a positive contribution to overall inflation in

6 The derivation of HICP weights is not based exclusively on the average consumption patterns of the previous year. Relative price changes over the course of the year are also taken into account. This means that very volatile HICP sub-indices can undergo marked weight updates solely on the basis of price fluctuations.
7 In 2019, however, the weight update was based less on changed demand for package holidays and more on a methodological change in the HICP sub-index for package holidays. See also Deutsche Bundesbank (2019a).
8 A sub-component's contribution to the annual rate of the chain-linked HICP can be further broken down into a this-year term and a last-year term using the Ribe formula. See Chapter 8 of Eurostat (2018).
9 It should be noted that the prices of package holidays in most months of 2020 as well as in January 2021 had to be estimated ("imputed") because many holidays were not being offered at all. See https://ec.europa.eu/eurostat/de/web/hicp/methodology for more information.

January 2021. Strongly positive one-off effects relating to package holidays are likely to be evident over the course of the year, too, with the effect reversing in the summer months. On an annual average, the one-off effects at the start of the year and in mid-year will more or less balance out, meaning that the forecast for the average inflation rate in 2021 ultimately remains unaffected by the weight update. In other words, when analysing the effects of weights, it is necessary to look at the price dynamics of the components in question, in addition to the update of the weights themselves. Strong weight updates for components which display fairly average and less volatile price dynamics throughout the year are unlikely to have much effect on the general rate of inflation. By contrast, significant updates to the weights of HICP components with very volatile prices throughout the year can have a marked impact on the path of the inflation rate.

Overall, the unexpectedly high January rate in Germany compared with the December forecast can be explained almost entirely by the one-off effect relating to package holidays. By comparison, the impact of other structural effects on the inflation rate was relatively minor and is also likely to have largely dissipated. On balance, the price effects of the VAT adjustment and the impact of the climate package probably matched expectations.

A number of other euro area countries also saw an unexpectedly strong rise in the inflation rate in January. In those countries, this unexpected development does not seem to be caused primarily by shifts in consumption patterns, but instead by other one-off effects such as changes in seasonal sales activities or higher electricity costs. Since Eurostat did not publish all the updated HICP country weights for 2021 until 23 February, however, the precise impact of the shifts in weights in the euro area remains unclear. Information on the weights is particularly relevant for the HICP, however, because it is a chain-linked index always comparing index levels that were calculated on the basis of differing weights, and this can generally lead to distortions in the year-on-year rates. To identify the underlying inflation trend, it would therefore be extremely useful if statistical offices were to provide up-to-date information on consumption patterns of relevance to the HICP weighting scheme in a more timely way in future. This is especially true given that a potential normalisation of consumption patterns in 2021 will entail significant shifts in the HICP weights for some components in 2022 as well. In general, weight updates such as this are consistent with the HICP Framework Regulation and can help to ensure that the HICP is representative in the sense that it is based on the most up-to-date basket of goods and services possible. However, should such updates to the weights lead to strong fluctuations of a purely statistical nature in the annual HICP rate, with its importance for monetary policy, it would be a welcome step if statistical authorities could at least improve ways of communicating them in advance.

in the hotel and restaurant sector, which had already been heavily impacted by the measures from November 2020 onwards, improved markedly for the second time in a row. This could be the result of possible adjustments in the sector due to lessons learnt. The business climate in the manufacturing sector deteriorated slightly on the month but was nevertheless distinctly better than the fourth-quarter average. In industry, the business situation and short-term expectations for exports and production were a marked improvement on December, whereas business expectations for the longer term deteriorated distinctly. Overall, the sentiment indicators suggest that industry is likely to continue to bolster economic activity in the first quarter of 2021. In addition, while sentiment in the hotel and restaurant sector and the retail trade is very depressed, it is better than during the first lockdown in April 2020.

Positive order situation in industry

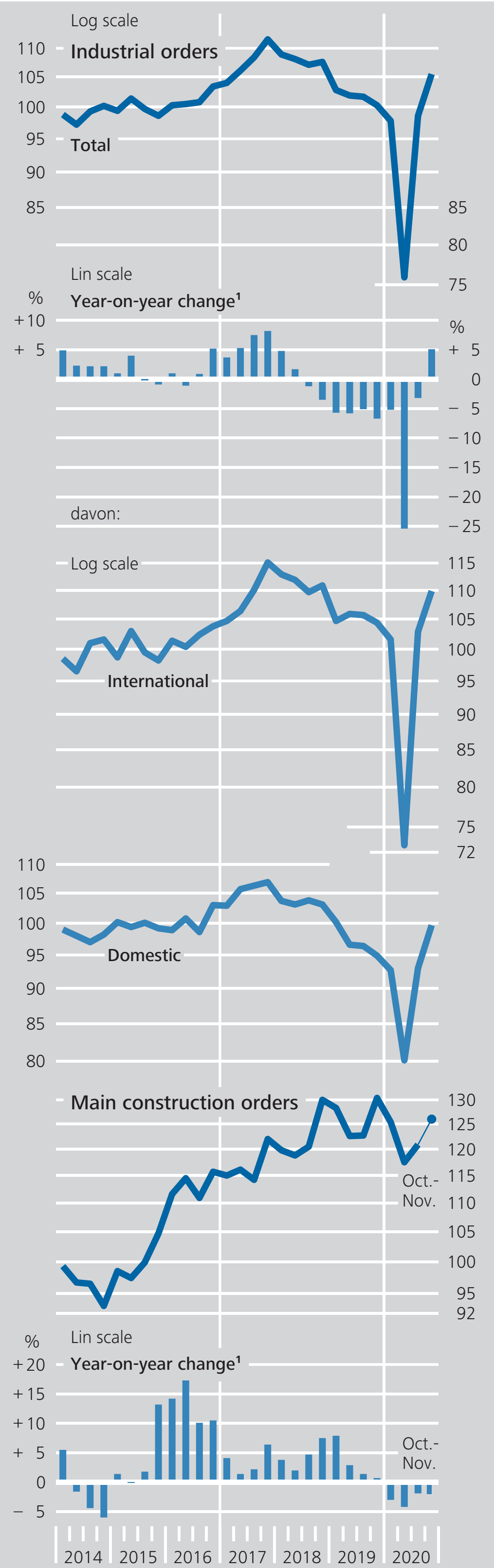
German industry enjoyed healthy order books in autumn. Industrial orders rose sharply in the final quarter of 2020 compared with the third quarter and are now significantly higher than before the crisis. There was a substantial increase in demand for intermediate goods and computer, electronic and optical products as well as in the mechanical engineering sector. Broken down by region, growth in new orders from non-euro area countries and from Germany was particularly strong. The inflow of orders from the euro area also rose considerably, however. According to the ifo Institute's survey results, the assessment of order books in the manufacturing sector improved for the seventh time in a row in January and significantly exceeded the level of the pre-crisis quarter.

Construction activity likely to remain favourable as 2021 gets under way

Construction activity is likely to remain favourable in the first quarter of 2021. This is signalled by orders received by the main construction sector, which on an average of October and November – the latest period for which statistics are available – showed a substantial increase on the third quarter after seasonal adjustment. The inflow of orders in housing construction rose particularly sharply, with the

Demand for industrial goods and construction services

Volumes, 2015 = 100, seasonally adjusted, quarterly data



Source of unadjusted figures: Federal Statistical Office. **1** Only calendar adjusted.

Deutsche Bundesbank

same being true of building permits in that particular sector. Survey indicators also paint a favourable picture for the construction sector, although there has been a slight deterioration of late. According to the ifo Institute, equipment utilisation in the main construction sector declined in January, but was still significantly higher than the long-term average. The reach of the order books fell only slightly from a very high level. However, there has been a distinct deterioration in the business climate recently.

Private consumption probably even more strongly depressed in first quarter of 2021

Private consumption is likely to decline further in the first quarter of 2021. Some contact-intensive opportunities for consumption are set to remain under tight restrictions until at least the beginning of March. This particularly affects the retail trade, the hotel and restaurant sector and other leisure and culture-related services. In addition, the restoration of VAT rates to their higher levels is likely to exert a dampening effect on private consumption, primarily because purchases of consumer durables were probably brought forward. January saw a massive drop in new passenger car registrations by private owners, for example, after they had significantly overshot the pre-crisis level of the final quarter of 2019 between July and December. This is also consistent with the survey results gathered by the market research institution Gesellschaft für Konsumforschung (GfK), which found that there was a significant decline particularly in consumers' propensity to purchase in January. The GfK consumer climate index forecast for February deteriorated as a result.

List of references

Deutsche Bundesbank (2020a), The German economy, Monthly Report, November 2020, p. 54.

Deutsche Bundesbank (2020b), Impact of the temporary reduction in VAT on consumer prices, November 2020, pp. 56-57.

Deutsche Bundesbank (2020c), The protracted rise in residential property prices in Germany from a macroeconomic perspective: transmission channels and fundamental determinants, Monthly Report, October 2020, pp. 67-85.

Deutsche Bundesbank (2019a), Dampening special effect in the HICP in July 2019, Monthly Report, August 2019, pp. 57-59.

Deutsche Bundesbank (2019b), The impact of the Climate Package on economic growth and inflation, Monthly Report, December 2019, pp. 29-33.

Eurostat (2018), Harmonised Index of Consumer Prices (HICP) Methodological Manual, Luxembourg: Publications Office of the European Union, November 2018.

Federal Statistical Office (2021), Impact of the corona crisis on the CPI/HICP price collection, method report of 10 February 2021, https://www.destatis.de/EN/Themes/Economy/Prices/Consumer-Price-Index/Methods/corona-cpi-hicp.pdf?__blob=publicationFile