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DIW Economic Outlook Summer 2021

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AT A GLANCE

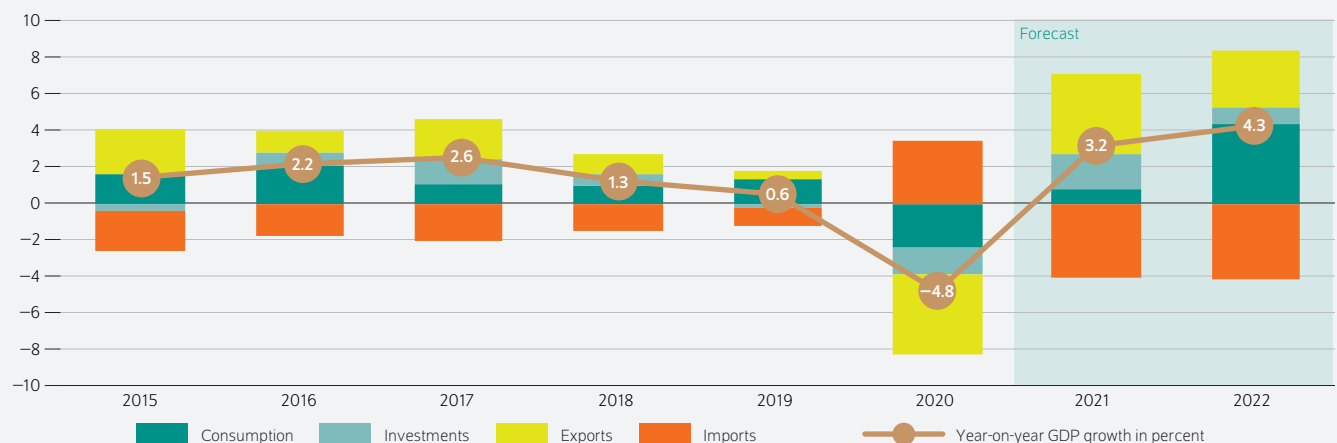
German economy with delayed recovery; industry in a tight spot

By Claus Michelsen et al.

- DIW Berlin is slightly increasing its growth forecast for the German economy to 3.2 percent for 2021 and to 4.3 percent for 2022
- However, the consequences of the pandemic are far from over and setbacks are feared; increasing raw material shortages are weighing on industry, risk of insolvencies is rising
- German exports are benefiting from global economic growth; boom in the USA is compensating for the weak recovery in some emerging economies
- In Germany, overall economic loss due to the pandemic should be around 350 billion euros, around ten percent of GDP
- Returning to a balanced budget too early would cause damage—without investments and innovation, structural changes such as the demographic shift cannot be handled

German economy growing faster than expected in spring 2021; consumption to primarily drive growth in 2022

Individual GDP components' contribution to growth in percentage points



Source: DIW Berlin Economic Outlook Summer 2021.

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FROM THE AUTHORS

“Service sectors in particular are benefiting from the easing of the lockdown measures. However, incidences could rise again as re-openings begin. We will only see a sustained upswing once the vaccination rate is high enough to approach herd immunity.”

— Claus Michelsen, DIW Berlin Chief Economic Forecaster —

MEDIA



Audio Interview with C. Michelsen (in German)
www.diw.de/mediathek

German economy with delayed recovery; industry in a tight spot

By Claus Michelsen, Guido Baldi, Marius Clemens, Geraldine Dany-Knedlik, Hella Engerer, Marcel Fratzscher, Max Hanisch, Simon Junker, Laura Pagenhardt, and Sandra Pasch

The coronavirus pandemic will continue to determine economic development worldwide in early summer 2021. The vaccination campaigns have gained momentum, especially in developed economies, and many countries, including Germany, are gradually easing restrictions on social life. The effects of the pandemic are determining the recovery process, but nevertheless, many service sectors—above all the hospitality sector and retail industries—have already been able to achieve significant sales gains in recent months and thus participate in the progress made in combating the pandemic.

The manufacturing sector, in contrast, is being significantly hampered by raw material shortages and other important advance services. Despite a return to well-filled order books, industry and the construction sector cannot meet demand fully. The prices of important advance services have increased significantly recently and a large number of businesses are reporting that the missing advance services are hindering production. Consequences of the pandemic not directly related to the spread of the virus or to preventative measures are now coming into the foreground: For example, the extraction and production of important raw materials were shut down during the pandemic and now the rapidly growing demand cannot be met immediately. Additionally, demand has shifted, in some cases drastically. In particular, the shift to digitalization has created skyrocketing demand for semiconductors in the electrical industry, which has resulted in a shortage for automotive manufacturing. Such shortages show that containing the pandemic is a necessary but insufficient precondition for a quick and smooth economic recovery.

Despite these developments, the outlook for the German economy is somewhat more positive than expected in spring

2021. For 2021, DIW Berlin is now forecasting growth of 3.2 percent compared to 2020. Strong recovery is expected to continue into 2022 with growth of 4.3 percent. However, this should not obscure the fact that the road to fully overcoming the impact of the pandemic is long and setbacks must always be expected. It is estimated that the pre-crisis growth level will be achieved by the final quarter of 2021. The cumulative, pandemic-related loss of value added in Germany is around 230 billion euros. Without the pandemic, economic output would have increased by around 2.5 percent. Overall losses due to the coronavirus pandemic from 2020 and 2021 are 350 billion euros, around ten percent of GDP. These losses also impact production potential, which will not reach its pre-crisis level in the medium term: In 2025, value added is likely to still be lower than projected before the crisis. Thus, it would be counterproductive to end the current economic stabilization measures too early. Rather, additional fiscal stimuli would be helpful to strengthen production potential in order for it to return to its pre-crisis growth path sooner.

In the short-term, the German economy will benefit from the global recovery: Important imports from the mechanical engineering and automotive sectors are in demand worldwide. Demand from the euro area and the USA in particular is better than forecast in spring 2021. In contrast, economic growth in the emerging markets is less positive than expected in spring 2021, as brutal waves of the coronavirus have led to tragic conditions in the hospitals in these countries. Moreover, the Chinese economy has lost some momentum as well. Nevertheless, despite the raw material shortage and temporary blockades of important sea trade routes, the global economy is on a recovery course overall.

In this forecast, it is assumed this shortage is temporary and the advanced economies will be able to lift restrictions on social life on a sustained basis due to the progress in their vaccination programs. The situation is different for emerging economies, however, where there are not enough vaccine doses to comprehensively cover the population. As a result, recovery in these countries will be repeatedly hindered and a high risk of further virus mutations remains. If the current vaccines do not protect from the new variants, recovery in Europe, the USA, and other parts of the world will also be at risk.

In Germany, the phased plan to determine the re-openings and closings of businesses based on the seven-day-incidence that was adopted by the federal and state governments still applies. According to the plan, many activities may be carried out largely without restrictions when there are fewer than 50 new infections per 100,000 inhabitants within one week, or with additional restrictions at 100 new infections. Accordingly, many districts and urban municipalities were able to ease restrictions and as a result, business activity, primarily in the service sectors, is increasing and currently driving the recovery in Germany. However, it is also to be expected that infections will increase as social activities resume. The race to vaccinate against the spread of further virus mutations has not yet been won. Therefore, it is assumed in this forecast that regional restrictions will be necessary in the summer months to keep the spread of infection under control. This is likely to lead to a stop-go situation for recovery in the service sectors, at least in districts currently experiencing higher incidences.

However, the recovery is likely to be held back considerably more by the obstacles faced by industry and the construction sector, which are not expected to be overcome until fall 2021. Many raw material prices have increased significantly within a short period of time and there is low availability of important primary products. On the one hand, this reflects the global economy's robust recovery; on the other, it is also a result of raw material extraction and production shutdowns during the peaks of the pandemic. However, there is much to suggest that this development will only have a temporary impact on value added and that no new supercycle in demand for raw materials is forming. Accordingly, the

worries of permanently high inflation rates on the consumer level are likely to be unfounded.

Nevertheless, the higher raw material prices are causing concern in other areas: Many industrial and construction sector orders are placed many months in advance without anticipating corresponding price developments. Small and medium-sized business as well as many tradespeople may have been unexpectedly affected by the latest developments without having agreed upon corresponding hedges against such price increases. This can lead to orders having to be carried out with losses or with delays and corresponding contractual penalties due to the delivery difficulties, particularly in the skilled trades. Depending on volume, this may cause economic hardship for smaller businesses and hides the risk of insolvencies despite high demand. In any case, an increase in insolvencies and business closures is expected over the coming months. In 2020, the requirement to report insolvency was suspended and the number of cases opened was accordingly low; the number of business deregistrations was also comparably low. This is atypical for recessions and likely means many businesses must head to the district court.

An increasing number of corporate insolvencies could entail negative effects on the labor market. Insolvencies are expected to rise in the scenario assumed here but a major wave of insolvencies beyond a normalization of insolvency activity is not expected. Accordingly, employment subject to social security should increase strongly and the unemployment rate is likely to decrease to five percent in 2022. Thus, the negative effects of the crisis would be overcome quickly, partly due to the expansive claims of short-time work allowances on the labor market. However, it is already clear that the results are unequally distributed over economic sectors and types of employment. The number of the self-employed has decreased significantly and the number of the marginally employed will probably no longer reach its pre-crisis level. Employment growth is not being driven by industry, the core sector of the German economy. Instead, the number of workers is increasing in some service sectors, the public sector especially. If a major wave of insolvencies occurs, it is likely to cost jobs and slow economic recovery overall.

The development of advance services and product prices is also putting pressure on profit margins and thus on the ability to build up necessary equity for investments. In this way, the increasing raw material prices could significantly hinder the global investment cycle and thus weigh on domestic and foreign demand for machines and installations.

Both equity items and the debt of many companies have already worsened noticeably during the crisis. This is reflected in the volume of emergency aid and loans granted, which secures the survival of many companies but also worsens their balance sheets. The KfW, a German business development bank, has issued around 50 billion euros in loans to the business sector. Subsidies and aid were significantly greater; these burdens on public debts are noticeable in the government debt ratio, which has expanded to over 70 percent.

In the run-up to the German federal election in September 2021, calls are now being made for a faster return to a balanced budget. However, such a return would be too early: On the one hand, the crisis has not yet been overcome. The aftereffects are showing up repeatedly in unexpected devel-

opments, as is now the case on the commodity markets. On the other hand, there are considerable structural changes ahead, especially the demographic change, that will weigh on the growth potential of the German economy. These changes should be countered with government stimuli: It will only be possible to get out of debt if Germany's locational qualities do not fall behind in international comparison and, above all, if its innovative power is strengthened. Its innovative power is likely to have suffered during the crisis, as start-ups and thus the potential for new, innovative business models were missing in large numbers in 2020. Moreover, businesses may have stopped cost-intensive, high-risk innovative projects or not begun them in the first place. Such a development is often met with an expansive industrial policy agenda and public investments, especially in the United States. Corresponding stimuli for private activities in research and development, state support for innovative start-ups, and public investments in research and education would be important in boosting Germany's growth path. The steps adopted as part of the German government's future package provide a tangible impetus in this regard, but are only a first step in light of the scale of the challenges.

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Global economy: advanced economies facing a strong upturn

By Claus Michelsen, Guido Baldi, Geraldine Dany-Knedlik, Hella Engerer, and Sandra Pasch

ABSTRACT

Global recovery is progressing more slowly than was indicated in 2020 due to high coronavirus rates and related economic restrictions in Europe and Japan. Recently, a disparate picture has been forming: In the advanced economies, declining infection rates and continued progress in vaccination campaigns will presumably lead to a revival that will be especially noticeable in the retail and service sectors while the manufacturing industries will lag behind in the short-term due to high raw material prices. In some emerging economies, in contrast, recently skyrocketing coronavirus rates and a lack of vaccine doses are likely to hinder recovery before the situation improves. Overall, the growth rate should increase in the second half of 2021 so that the outlook for the global economy remains nearly unchanged: DIW Berlin estimates growth of 6.7 percent for 2021 and growth of 4.9 percent for 2022. The USA, euro area, and China are delivering positive momentum to this growth, as they have remained spared from a further wave of the virus.

Global economic growth had lost significant momentum at the beginning of 2021. High coronavirus rates hindered recovery in winter 2020/2021, especially in advanced economies. Following the powerful upturn in summer 2020, the global economy increased by 2.7 percent in the fourth quarter of 2020 compared to the previous quarter, but growth slowed significantly to only 0.7 percent in the first quarter of 2021 (Figure 1).

Coronavirus infections reached a new high in many European countries and in Japan in the first quarter of 2021. As a result, strict containment measures were passed in February and March 2021, which massively restricted the course of business in these countries. Nevertheless, economic losses are likely to be markedly lower than in spring 2020, primarily because industrial value added remained virtually unaffected by the state of the pandemic. Thus, at 0.6 percent, euro area production slipped into a recession at the beginning of 2021 after already shrinking in the fourth quarter of 2020. Economic output declined by 1.5 percent in the United Kingdom in the first quarter of 2021 due to further waves as well as its exit from the European Union at the beginning of 2021. Japan's economic output also declined by 1.3 percent in the first quarter. In contrast, the brisk progress of the vaccination campaign and the financial aid passed in winter 2020 enabled the recovery process in the USA to pick up speed by the first quarter of 2021: economic output increased by 1.6 percent in the first three months of 2021 compared to the previous quarter. And in most of the emerging markets, primarily China, recovery is initially continuing in the first quarter of 2021. However, at 0.6 percent, growth in China was somewhat worse than expected; sluggish normalization of private consumption in particular has been hindering economic recovery in China.

At the end of the first half of 2021, the declines in infection rates in advanced economies are contrasting with rapidly increasing rates in some emerging economies in Asia and South America. Therefore, economic developments in these two groups are likely to drift apart for the time being. Overall, the advanced economies should return to or continue on their recovery course over the summer as the current waves of the coronavirus subside. This is primarily the

case for the USA, followed by many European countries and, somewhat delayed, Japan.¹ Simultaneously, these countries are making marked progress in establishing wide-reaching immunity, which would enable a phased easing of the containment measures. Although the infection rate in Japan is small relative to the total population, strict containment measures weighed on the economy in the first and second quarters of 2021. The share of the vaccinated population is still low. Overall, in the advanced economies, the further easing of restrictions over the summer as well as solid industrial performance should revive precisely those sectors of the economy that have so far been subject to contact restrictions. This is likely to provide sales growth for the retail and personal services sectors in particular.

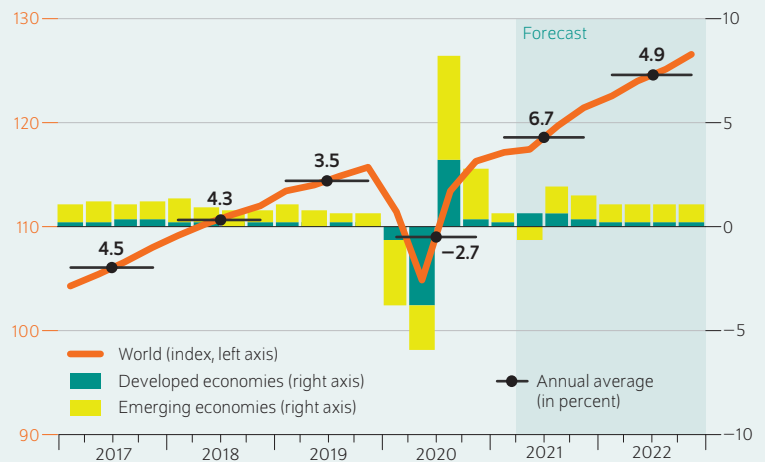
In some emerging economies, especially India and Brazil, case numbers worsened drastically and are likely to significantly weigh on growth into the third quarter of 2021. Public life was partially or almost completely paralyzed in most of the emerging economies affected. Additionally, many of these countries have been unable to begin comprehensive vaccination campaigns due to vaccine shortages. The domestic economies of the affected countries in Asia and South America should be accordingly hindered over the summer. Moreover, travel warnings and quarantine requirements have been implemented for travelers returning from these areas, resulting in a major lack of income from international tourism. So far, China has been spared from the increases in infection rates in Asia. The Chinese government's strict containment strategy as well as the acceleration of its vaccination campaign in May 2021 significantly lower the probability of another increase in case numbers and, thus, a wide-reaching lockdown. Chinese economic output, together with the production from advanced economies, are likely to have carried global growth in the second quarter of 2021 and compensated for the growth losses in some emerging markets.

The different developments in coronavirus rates are also reflected in consumer confidence. For example, consumer sentiment in the USA, the euro area, and the UK brightened noticeably in April and May 2021. In contrast, consumers in India and Brazil currently view the future more pessimistically (Figure 2). Moreover, the severity of the restrictions on public life can also be seen in retail sales. Industrial output as well as purchasing manager sentiment, however, remained almost untouched by pandemic-related developments since the beginning of 2021. For example, the purchasing manager indices for the manufacturing sectors in the advanced and emerging economies have recently been above the expansion wave of 50 index points (See chart-book world). Moreover, international retail is continuing its upward trend and should continue to be supported by stable industrial growth.

Figure 1

Growth of real GDP

Compared to previous quarter, in percent



Sources: National statistical offices; DIW Berlin Economic Outlook Summer 2021.

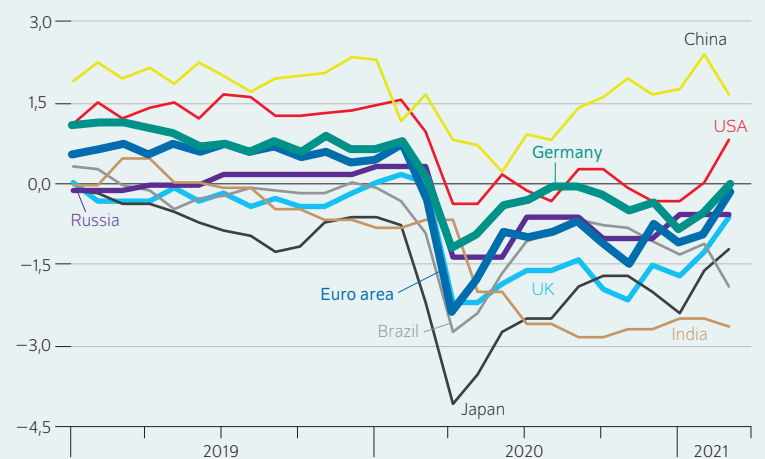
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Advanced economies are carrying the continuing recovery.

Figure 2

Consumer confidence

Indices (standardized)



Sources: Confidence Board; GfK UK; Japanese Cabinet Office; European Commission; IBRE Brazilian Institute of Economy; China Economic Monitoring and Analysis Center; Russian Federal State Statistics Services; Reserve Bank of India; authors' own calculations.

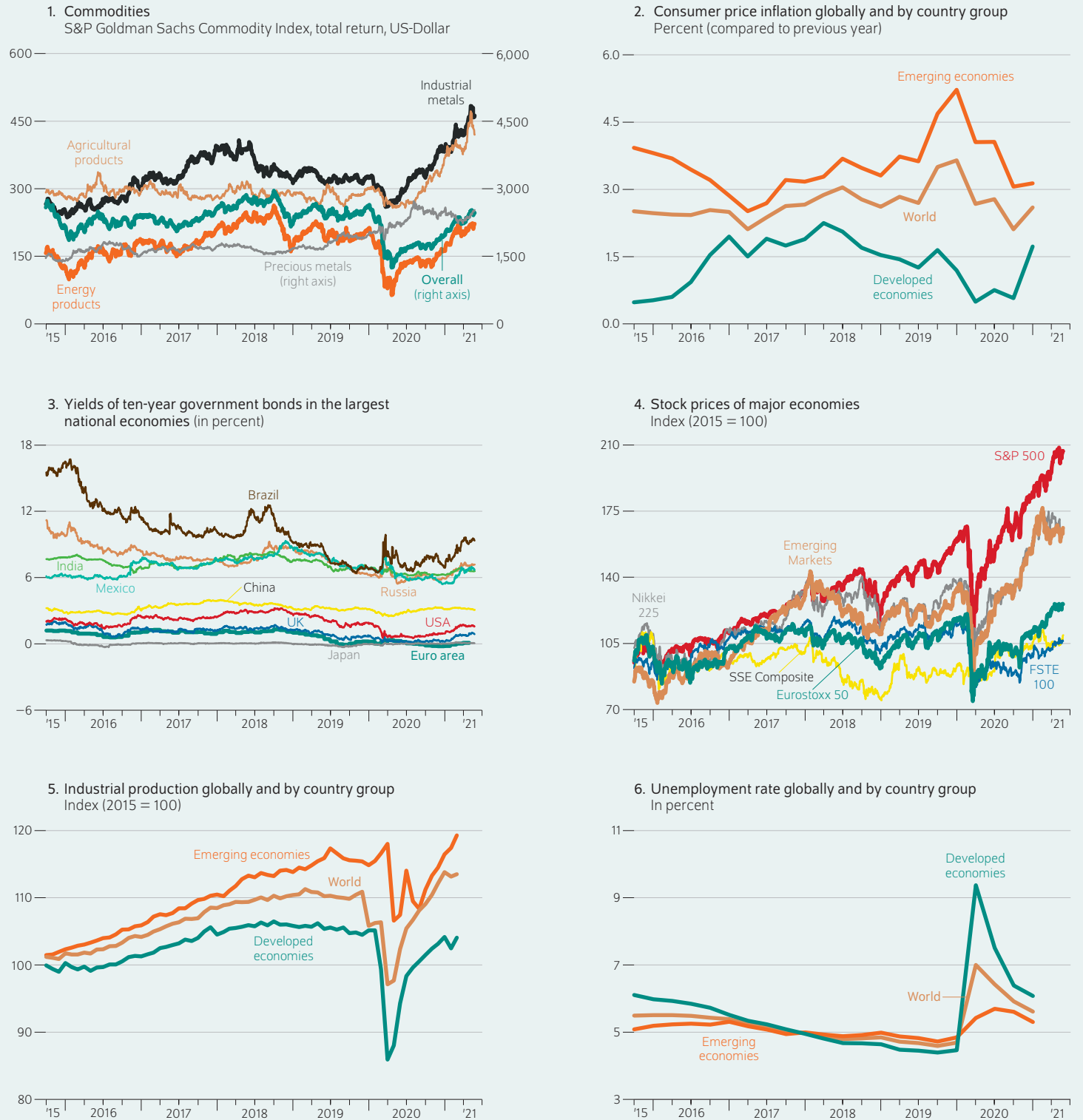
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Consumer confidence in advanced economies has brightened considerably recently.

¹ The seven-day-incidences in most European countries as well as in the USA have been declining since mid-April 2021. As of publication, they are at fewer than 50 new infections per 100,000 inhabitants in one week.

Figure 3

Global economic indicators



Note: Last observations on May 26, 2021 (part 1); first quarter of 2021 (part 2); April 30, 2021 (part 3); May 26, 2021 (part 4); March 1, 2020 (part 5); second quarter of 2021 (part 6).

Sources: S&P Dow Jones Indices (part 1); German Stock Exchange, CBOE (part 2); ECB, PboC, Federal Reserve, BoE, BOJ, Central Bank of Brazil (part 3); Bureau of Labor Statistics (part 4); IHS Markit (part 5); Macrobond (part 6). National statistical offices; IMF; Macrobond; Eurostat; CPB World Trade Monitor, STOXX, Nikkei Inc.; Shanghai Stock Exchange, FTSE; authors' own calculations.

Table

Real GDP, consumer prices, and unemployment rate in the global economy

In percent

| | GDP | | | | Consumer prices | | | | Unemployment rate in percent | | | |
|---------------------|--------------------------------------|-------|------|------|-----------------|------|------|------|------------------------------|------|------|------|
| | Change over previous year in percent | | | | | | | | | | | |
| | 2019 | 2020 | 2021 | 2022 | 2019 | 2020 | 2021 | 2022 | 2019 | 2020 | 2021 | 2022 |
| Euro area | 1.3 | -6.7 | 4.1 | 4.7 | 1.3 | 0.1 | 2.3 | 1.5 | 7.5 | 8.0 | 8.4 | 7.9 |
| without Germany | 1.6 | -7.5 | 4.5 | 4.9 | 1.2 | -0.1 | 2.1 | 1.2 | 9.5 | 9.7 | 10.3 | 9.7 |
| France | 1.5 | -8.2 | 5.7 | 4.4 | 1.3 | 0.5 | 1.4 | 1.1 | 8.5 | 8.1 | 9.2 | 8.7 |
| Italy | 0.3 | -8.9 | 4.2 | 4.7 | 0.7 | -0.3 | 1.4 | 1.2 | 10.0 | 9.3 | 10.0 | 9.8 |
| Spain | 2.0 | -10.8 | 5.6 | 6.6 | 0.7 | -0.3 | 1.5 | 1.3 | 14.1 | 15.8 | 15.8 | 14.4 |
| Netherlands | 1.6 | -3.7 | 2.6 | 3.4 | 2.8 | 1.2 | 1.8 | 1.5 | 3.4 | 3.9 | 4.4 | 4.3 |
| United Kingdom | 1.4 | -9.8 | 5.4 | 5.5 | 1.7 | 1.0 | 1.8 | 2.4 | 3.8 | 4.5 | 5.7 | 5.2 |
| USA | 2.2 | -3.5 | 6.9 | 3.7 | 1.9 | 1.2 | 3.5 | 2.0 | 3.7 | 8.1 | 5.4 | 4.3 |
| Japan | 0.0 | -4.7 | 2.2 | 3.0 | 0.5 | 0.0 | 0.2 | 1.0 | 2.4 | 2.8 | 2.5 | 2.0 |
| South Korea | 2.0 | -0.9 | 3.8 | 2.6 | 0.4 | 0.5 | 1.7 | 1.4 | 3.7 | 3.9 | 4.0 | 3.7 |
| East-Central Europe | 4.2 | -3.6 | 5.0 | 4.5 | 2.7 | 3.1 | 4.0 | 3.3 | 3.3 | 3.7 | 4.0 | 3.7 |
| Turkey | 1.0 | 1.6 | 5.3 | 2.7 | 15.2 | 12.3 | 15.2 | 12.9 | 13.7 | 13.2 | 13.3 | 13.1 |
| Russia | 1.8 | -2.6 | 2.6 | 2.7 | 4.5 | 3.4 | 5.3 | 4.1 | 4.6 | 5.8 | 5.5 | 4.9 |
| China | 6.0 | 2.0 | 8.3 | 5.5 | 2.9 | 2.5 | 1.8 | 2.3 | 3.6 | 4.0 | 3.7 | 3.6 |
| India | 4.6 | -6.9 | 8.9 | 7.9 | 3.7 | 6.6 | 4.3 | 3.9 | | | | |
| Brazil | 1.4 | -4.4 | 4.2 | 2.3 | 3.8 | 3.3 | 5.4 | 4.0 | 11.9 | 13.5 | 14.9 | 13.8 |
| Mexico | 0.0 | -8.5 | 5.2 | 3.3 | 3.4 | 3.4 | 4.1 | 3.5 | 3.5 | 4.4 | 3.9 | 3.4 |
| Developed economies | 1.6 | -4.8 | 5.4 | 3.9 | 1.5 | 0.8 | 2.6 | 1.8 | 4.5 | 6.9 | 5.7 | 4.9 |
| Emerging economies | 4.6 | -1.4 | 7.4 | 5.4 | 3.8 | 4.1 | 3.8 | 3.7 | 4.8 | 5.4 | 5.3 | 5.0 |
| World | 3.5 | -2.7 | 6.7 | 4.9 | 2.9 | 2.8 | 3.4 | 3.0 | 4.7 | 6.0 | 5.5 | 5.0 |

Sources: National statistical offices; DIW Berlin Economic Outlook Summer 2021.

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From the second half of 2021, the global economic upturn will pick up again strongly. For the purposes of this forecast, it is assumed that the pandemic will be able to continue to be contained in most advanced economies until the summer and that the increasing immunity there will prevent further intense waves of the virus. The existing restrictions on social life will be successively lifted and replaced with less far-reaching measures. From the fourth quarter of 2021, the restrictions should barely hinder economic activity. General hygiene and social distancing rules, mask requirements, and capacity constraints will continue to apply to selected economic sectors, such as the event or tourism industries. The pandemic is expected to be combated more slowly in less advanced economies; especially in countries in which the vaccination campaigns are not progressing as quickly, the only initial response can be a severe lockdown.

Powerful economic growth in the USA, robust production gains in China, and production recovery in the euro area are expected to buoy the global economy over the further course of the forecast period. Additionally, good and sustained development of industry is expected overall. Nevertheless, the recent high industrial raw material prices and temporary supply bottlenecks of primary products should weigh on industrial value added in the short term. Irrespective of this, corporate investment is likely to develop solidly in many places.

The loosening of many coronavirus-related restrictions should significantly boost private household consumption,

as some of the recently weak private consumption is likely to catch up. It is expected that sufficient immunity and less fear of new waves will give private consumption additional momentum and decrease the savings rate.

The labor market is likely to recover more sluggishly than production in many places. With rapidly progressing immunity and fiscal stimuli, the unemployment rate should continue to decline in advanced economies as long as emergency aid for businesses, such as short-time work allowance, is not ended too early. In many less developed and emerging economies, which often have less fiscal leeway, the situation in the employment sector will likely only gradually improve. Therefore, gradual recovery on the labor markets is also likely to weigh on wage developments in many economies; because of this, only a moderate increase of the consumer price inflation is expected in many places (Figure 3).

Additionally, fiscal stimuli are likely to support the recovery over the coming years. The fiscal aid packages passed in the USA in the amount of over two and a half trillion USD are expected to provide the biggest boost. In addition, substantial fiscal aid from the European Recovery and Resilience Facility is expected to flow to some large euro area economies in 2021 already and by 2022 in any case. Thus, the first approvals of spending programs by the European Commission and corresponding advance payments of funds can be expected from the end of July 2021. If the programs submitted so far are all approved in 2021, the upfront payments of 13 percent

of the countries' plans are expected to total 34 billion euros for the year. In contrast to the short-term stimulus packages designed to stabilize corporate and household revenues during the lockdown phases, the financial assistance recently launched in many places contains a substantial proportion of investment-enhancing funds that will support the recovery process over the next years.

In addition to expansionary fiscal policy, the further favorable financing conditions will support corporate investments. Although there has recently been a strong upturn in consumer price inflation in many places, a significant part of this increase can be attributed to energy and food prices, which are usually subject to greater fluctuations. The crude oil price recently increased to around 70 USD per barrel and thus was slightly below the pre-crisis level. Thus, the central banks of the major economies have so far seen no need for action. Monetary policy should remain expansionary initially. Nevertheless, long-term interest rates are increasing slightly due to the improved economic outlooks in most advanced economies. Overall, however, the interest rate should remain low. Initial restrictive monetary policy steps over the course of the global economy recovery are expected from the second half of 2022.

Overall, global economic growth at the beginning of 2021 was somewhat stronger than last projected, primarily due

to the powerful recovery in the USA and the milder than expected growth losses in Europe. However, beginning in summer 2021, the production losses in some emerging markets are likely to weigh more heavily on the global economy than previously forecast. Thus, global production will likely only be able to reach its long-term growth path by the second half of 2022. Overall, DIW Berlin confirms its global economic forecast from spring 2021 and is expecting growth rates of 6.7 percent for 2021 and 4.9 percent for 2022 (Table).

Downward risks have lessened recently due to the progress in vaccination campaigns. However, the overall forecast remains tainted with predominantly negative risks, especially due to the continuing uncertainties about the course of the pandemic and the effectiveness of available vaccines against new virus mutations. If ineffective, stricter restrictions would be required again, especially in countries with low vaccine protection. In turn, this would likely further delay an economic upswing. Another risk is that corporate and personal insolvencies will rise sharply, in particular as a result of the continuing (partial) lockdowns. This could lead to significant loan defaults and destabilize the financial markets, which could also jeopardize the solvency of a number of countries. Global recovery, on the other hand, would be strengthened by faster vaccine distribution and more effective treatments for COVID-19.

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Keywords: Business cycle forecast, economic outlook

German economy: uncertainty remains despite rebound

By Claus Michelsen, Marius Clemens, Max Hanisch, Simon Junker, and Laura Pagenhardt

ABSTRACT

Following prolonged coronavirus-related lockdowns, the German economy is slowly beginning to experience growth again. Due to an increasing number of vaccinated people and declining infection rates, many branches are hoping for a return to normal business operations, especially service providers in sectors hit hard by the pandemic, such as the cultural, event, and travel sectors. German industry, which fared better over the past few months than during the first lockdown in 2020, is being held back by worsening raw material shortages. Nevertheless, at 3.2 percent for 2021 and 4.3 percent for 2022, the growth of economic output in Germany is expected to be somewhat higher compared to spring 2021. However, the forecast remains subject to considerable uncertainty. Another flare-up of new infections could lead to setbacks as well as to a large wave of insolvencies. However, the situation could develop better if the infection rate remains low and private consumption picks up more quickly and sustainably than expected.

The German economy is on a recovery course following the flattening of the third wave of the coronavirus. The sectors affected by the lockdowns are restarting operations and a strong global economy is leading to a brisk demand for products “Made in Germany.” German industry was able to maintain its production and a powerful recovery will begin for many service sectors in summer 2021 as infection rates sink and the vaccination campaign continues. GDP will increase at a strong rate over the further course of 2021 (Figure). However, despite growth of 3.2 percent in 2021 (Table), capacities remain underutilized. With an average annual increase of 4.3 percent, normal utilization will be reached in 2022. A failure to invest, a lack of innovation and start-ups, distortions on the labor market and in vocational training and education, and business closures have damaged potential.

In the present forecast, it is assumed that the incidence can be kept permanently low enough for all sectors to return to regular operations only from late summer 2021 onward. With the number of unvaccinated people still high, increases in infection rates are expected; at least regionally, re-openings will have to be reversed over the next weeks. Thus, recovery in the service sector is progressing but taking longer than in summer 2020.

The upswing in industry, however, is progressing under difficult conditions. Foreign demand in particular is booming in the wake of international economic recovery programs. However, production was initially somewhat stunted by massive bottlenecks in advance payments, but presumably only until late summer 2021. **Exports** reflect these delays, as they will not return to full speed until later in the year.

The coronavirus pandemic has noticeably weighed on the **labor market** over the course of the lockdown. As in spring 2020, companies combated restricted business activity primarily through massively implementing **short-time work**. Short-time work will be noticeably reduced over the course of the recovery and thus contribute significantly to labor input, which is necessary for a noticeable increase in value added in the remaining quarters of 2021. However, the number of employed persons is likely to expand more strongly with an end to the pandemic in sight.

Figure

Gross domestic product and use of GDP Seasonally and working day adjusted



Sources: Federal Statistical Office; DIW Berlin Economic Outlook Summer 2021. Forecast from 2021 Q2 onward.

Table 1

Key economic indicators for the German economy

| | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---|--------|--------|--------|--------|--------|--------|
| Real GDP ¹ (percent change over previous year) | 2.6 | 1.3 | 0.6 | -4.8 | 3.2 | 4.3 |
| Domestic employment (1 000 persons) | 44 262 | 44 868 | 45 269 | 44 818 | 44 741 | 45 084 |
| Unemployed (ILO concept) | 1621 | 1468 | 1373 | 1846 | 1901 | 1631 |
| Unemployed (BA concept) | 2 533 | 2 340 | 2 267 | 2 695 | 2 666 | 2 327 |
| Unemployment rate ² (ILO concept) | 3.8 | 3.4 | 3.2 | 4.2 | 4.3 | 3.7 |
| Unemployment rate ² (BA concept) | 5.7 | 5.2 | 5.0 | 5.9 | 5.8 | 5.1 |
| Consumer prices | 1.5 | 1.8 | 1.4 | 0.5 | 2.7 | 1.8 |
| Unit labor costs ³ | 1.1 | 2.8 | 3.2 | 4.2 | 0.2 | 0.0 |
| Government budget balance ⁴ | | | | | | |
| in billion EUR | 44.4 | 61.6 | 52.5 | -149.2 | -160.7 | -79.4 |
| in percent of GDP | 1.4 | 1.8 | 1.5 | -4.5 | -4.5 | -2.1 |
| Current account balance, in percent of GDP | 7.8 | 7.9 | 7.5 | 7.0 | 6.6 | 5.4 |

1 Price-adjusted, chain-linked

2 As a share of domestic labor force (ILO), resp. Civilian labor force (BA)

3 Compensation of employees (national concept) per hour worked over real GDP

4 According to ESA 2010

Sources: Data from national and international institutions; DIW Berlin Economic Outlook Summer 2021; forecast from 2021 onward.

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Table 2

Use of GDP, quarter-on-quarter growth rates

Price, seasonally and working-day adjusted, in percent

| | 2020 | | | | 2021 | | | | 2022 | | | |
|---|------|-------|------|------|------|------|------|-----|------|------|------|------|
| | I | II | III | IV | I | II | III | IV | I | II | III | IV |
| Private consumption | -2.2 | -11.5 | 11.2 | -2.3 | -5.4 | 5.0 | 2.8 | 2.7 | 1.9 | 1.2 | 1.0 | 1.0 |
| Public consumption | 1.1 | 1.3 | 1.0 | 0.1 | 0.2 | 0.3 | 0.5 | 0.3 | 0.2 | 0.2 | 0.1 | 0.1 |
| Gross fixed capital formation | -0.4 | -6.7 | 3.7 | 2.5 | 0.3 | 1.4 | 2.3 | 1.9 | 0.2 | 0.9 | 0.8 | 0.8 |
| Investment in machinery and equipment | 4.3 | -4.3 | -1.3 | 3.7 | 1.1 | 0.9 | 1.7 | 1.6 | 0.9 | 0.9 | 0.8 | 0.7 |
| Construction investment | -6.8 | -15.1 | 15.9 | 1.9 | -0.2 | 2.6 | 4.3 | 3.2 | -1.4 | 1.1 | 0.9 | 0.9 |
| Other investment | -2.5 | 0.2 | 0.9 | 0.1 | -1.6 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 |
| Change in inventories ¹ | 0.1 | -0.1 | -1.9 | 0.5 | 1.4 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Domestic uses | -1.0 | -7.6 | 5.1 | -0.2 | -1.3 | 3.0 | 2.2 | 2.0 | 1.1 | 0.9 | 0.8 | 0.8 |
| Net exports ¹ | -1.1 | -2.4 | 3.8 | 0.7 | -0.6 | -0.5 | -0.4 | 0.0 | -0.3 | -0.2 | -0.2 | -0.2 |
| Exports | -3.3 | -20.4 | 17.9 | 4.4 | 1.8 | 0.6 | 2.2 | 3.1 | 1.4 | 1.2 | 1.1 | 1.1 |
| Imports | -1.1 | -16.9 | 9.2 | 3.3 | 3.8 | 1.9 | 3.7 | 3.4 | 2.3 | 1.9 | 1.7 | 1.7 |
| GDP | -2.0 | -9.7 | 8.7 | 0.5 | -1.8 | 2.3 | 1.6 | 1.9 | 0.7 | 0.6 | 0.5 | 0.5 |
| Gross value added | -1.6 | -10.3 | 8.3 | 0.5 | -0.8 | 2.3 | 1.6 | 1.9 | 0.7 | 0.6 | 0.5 | 0.5 |
| Manufacturing | -3.6 | -18.6 | 14.4 | 6.6 | 0.4 | -0.5 | 2.0 | 3.1 | 1.3 | 0.9 | 0.8 | 0.8 |
| Construction | 4.1 | -3.0 | -3.0 | 9.1 | -4.9 | 1.6 | 1.7 | 1.5 | 0.9 | 0.8 | 0.8 | 0.8 |
| Trade, accommodation, transport | -1.1 | -14.0 | 13.7 | -2.3 | -3.2 | 5.3 | 2.8 | 3.0 | 0.7 | 0.7 | 0.4 | 0.4 |
| Business and production services | -1.8 | -11.1 | 4.6 | 1.4 | 0.0 | 1.1 | 1.5 | 2.2 | 0.7 | 0.7 | 0.5 | 0.5 |
| Public admin, community and social services | -1.4 | -7.6 | 9.7 | -3.9 | -0.3 | 3.9 | 1.0 | 0.8 | 0.4 | 0.4 | 0.4 | 0.4 |

1 Contribution to GDP growth in percentage points

Sources: Federal Statistical Office; DIW Berlin Economic Outlook Summer 2021, forecast from Q2 2021 onward.

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Due to the declines in the 2020 winter half-year, there will be 76,000 fewer employed people compared to 2020 in 2021 on average. Thanks to dynamic growth over the further course of 2021, it will increase by 340,000 people in 2022. In 2021, **unemployment** will decrease accordingly little to 5.8 percent. However, over the course of 2022, it will reduce markedly more on average to 5.1 percent. Until recently, **wage growth**

came close to matching the solid increases seen before the crisis. In 2021, hourly wages should increase noticeably, by over 2.5 percent, and by almost two percent in 2022.

Inflation will remain moderate over the entire forecast period. However, at 2.7 percent, it is decidedly higher in 2021. In addition to the end of the VAT reduction and rapidly

increasing oil prices, a further factor has been driving inflation over the past weeks: global bottlenecks in many important raw materials and advance payments have led to massive price increases for these goods. This is likely to continue for the time being but will presumably subside from late summer 2021 onward. Altogether, inflation will temporarily exceed three, partially 3.5 percent, and it will be 2.7 percent for 2021 as a whole. Inflation will decrease to 1.8 percent in 2022, as most non-recurring effects will no longer apply. Thereby, the increase by two-tenths of a percentage point due to the renewed carbon tax increase is included.

Lockdown restrictions primarily curtailed **private consumption**. Diversionary effects could also not prevent consumption from collapsing. However, unspent funds were saved and cash reserves in particular skyrocketed. As was the case in 2020, repealing lockdown measures is associated with a rapid increase in consumption. Wage incomes will increase by five percent in both 2021 and 2022, with an even greater net increase in 2021. Despite a restrained increase in income from self-employment and assets—a stronger increase is expected in 2022—available income will grow noticeably in 2021 and 2022. Moreover, households are likely to return to normal saving behavior. After the savings rate ballooned to 20.1 percent at the beginning of 2021, which is almost equal to the record level of the second quarter of 2020, it should sink markedly over the course of the year and achieve the pre-crisis level of almost 11 percent in 2022. Nominally, consumer spending will increase powerfully, in real terms it will be damped by higher inflation in 2021.

Equipment investment is developing robustly, particularly against the backdrop of the rapidly improving global economy, but also due to the progress made in combating the pandemic. Together with high capacity utilization in industry, private investments are likely to increase strongly. **Public investment in equipment** is also providing impetus, in particular due to the projects in the German government's climate and future packages. **Building investments** were off to a better start in 2021 than expected at the beginning of the year, when it experienced a primarily weather-related production collapse. High demand for living space remains unaffected: building permits for new construction achieved its highest number in 15 years. However, the global shortage of important building materials, such as lumber and steel, is temporarily stunting growth.

Imports will continue a noticeable upward trend over the course of increasing domestic growth and the sustained powerful global economic growth; however, it will be temporarily dampened by strong price increases. Travel is expected to pick up as the pandemic is contained, as it had already spiked temporarily in recent months. The **current account balance** will decrease to 5.4 percent by 2022 in relation to economic output.

Restrictions on economic activity during the lockdown also affected **public finances**. At almost 161 billion euros, the deficit is expected to be around ten billion euros higher in 2021 than in 2020. On the one hand, the rebounding economy is driving revenue from taxes and social contributions. Moreover, the renewed increase in the VAT rate and, primarily, rising private consumption are boosting sales tax revenues. On the other hand, expenditures are rising: The vaccination and testing strategy is noticeably increasing government purchases and the emergency measures account for around 25 billion euros in the first quarter of 2021. Ten and five billion euros, respectively, are expected to flow out as investment grants from the future package contained in the economic stimulus program, which is also boosting public investment. A noticeable deficit of 79 billion euros is also expected for 2022. Previously at 70 percent in 2020, the **debt-to-GDP-ratio** is likely to be 72 percent in 2021 and 69 percent in 2022.

As long as the pandemic is not contained, this forecast is subject to considerably more uncertainty than usual. A further wave of infections could occur, especially in late fall 2021, due to the colder weather, new virus mutations, stalled vaccination progress, or a decrease in vaccination protection. Such factors would lead to a setback in economic activity. However, it is also possible case numbers can be sustained at the current low level. In that case, a more rapid recovery will take place, especially for the service sector. A more drastic number of insolvencies than assumed here would slow growth, especially over the further course, as fewer capacities would be available and indirect income effects will dampen consumer spending. The current shortage in important materials and supplies could last longer; this would stunt industrial growth primarily but also increasingly result in higher consumer prices and thus weigh on consumer spending. By contrast, consumption may receive a much stronger boost if the savings accumulated during the crisis were to be spent to a much greater extent.

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APPENDIX: NATIONAL ACCOUNTS DATA

The Main National Accounts Data for the Federal Republic of Germany Forecast for 2021 and 2022

| | 2020 | 2021 | 2022 | 2020 | | 2021 | | 2022 | |
|--|---------|---------|---------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year |
| 1. Origin of GDP | | | | | | | | | |
| Percentage change over previous year | | | | | | | | | |
| Domestic employment | -1.0 | -0.2 | 0.8 | -0.5 | -1.5 | -0.8 | 0.5 | 0.9 | 0.7 |
| Hours worked, per working day | -5.3 | 0.9 | 2.2 | -5.6 | -5.0 | 0.4 | 1.3 | 3.0 | 1.4 |
| Working days | 1.5 | 0.1 | -0.1 | 0.5 | 2.4 | 0.0 | 0.2 | 0.8 | -1.0 |
| Labor volume, calendar-monthly | -4.7 | 0.8 | 2.8 | -5.5 | -4.0 | -0.5 | 2.0 | 4.7 | 1.1 |
| Labor productivity¹ | 0.0 | 2.3 | 1.4 | -1.1 | 1.0 | 3.5 | 1.2 | 1.2 | 1.6 |
| Gross domestic product, price adjusted | -4.8 | 3.2 | 4.3 | -6.5 | -3.0 | 3.0 | 3.3 | 6.0 | 2.7 |
| 2. Disposition of GDP in current prices | | | | | | | | | |
| a) Billion EUR | | | | | | | | | |
| Final consumption expenditure | 2,466.0 | 2,567.6 | 2,764.5 | 1,195.9 | 1,270.1 | 1,225.3 | 1,342.2 | 1,344.2 | 1,420.3 |
| Private consumption expenditure² | 1,711.6 | 1,779.3 | 1,959.1 | 832.2 | 879.4 | 841.5 | 937.8 | 952.2 | 1,006.9 |
| Government consumption expenditure | 754.4 | 788.3 | 805.4 | 363.7 | 390.7 | 383.8 | 404.4 | 392.0 | 413.4 |
| Gross fixed capital formation (GFCF) | 738.4 | 799.2 | 852.2 | 353.1 | 385.3 | 373.9 | 425.3 | 407.3 | 444.9 |
| Construction | 215.1 | 238.8 | 252.6 | 98.0 | 117.1 | 109.2 | 129.6 | 119.6 | 132.9 |
| Machinery and equipment | 388.8 | 423.7 | 456.6 | 191.6 | 197.2 | 200.5 | 223.2 | 220.5 | 236.1 |
| GFCF in other products | 134.6 | 136.7 | 143.1 | 63.6 | 71.0 | 64.3 | 72.4 | 67.2 | 75.9 |
| Change in stocks³ | -61.7 | -18.4 | -20.3 | -11.4 | -50.3 | -4.0 | -14.4 | -5.5 | -14.7 |
| Domestic uses | 3,142.7 | 3,348.3 | 3,596.4 | 1,537.6 | 1,605.1 | 1,595.2 | 1,753.2 | 1,745.9 | 1,850.5 |
| Balance of exports and imports | 193.5 | 195.2 | 158.9 | 82.3 | 111.2 | 112.3 | 82.9 | 93.8 | 65.0 |
| Exports | 1,460.1 | 1,660.1 | 1,800.4 | 703.9 | 756.2 | 801.7 | 858.4 | 888.7 | 911.7 |
| Imports | 1,266.7 | 1,465.0 | 1,641.6 | 621.6 | 645.0 | 689.4 | 775.5 | 794.9 | 846.7 |
| GDP | 3,336.2 | 3,543.5 | 3,755.2 | 1,619.9 | 1,716.3 | 1,707.5 | 1,836.0 | 1,839.7 | 1,915.5 |
| b) Percentage change over previous year | | | | | | | | | |
| Final consumption expenditure | -1.8 | 4.1 | 7.7 | - 2.4 | - 1.3 | 2.5 | 5.7 | 9.7 | 5.8 |
| Private consumption expenditure² | -5.3 | 4.0 | 10.1 | - 5.9 | - 4.7 | 1.1 | 6.6 | 13.2 | 7.4 |
| Government consumption expenditure | 7.1 | 4.5 | 2.2 | 6.8 | 7.3 | 5.5 | 3.5 | 2.1 | 2.2 |
| Gross fixed capital formation (GFCF) | -1.3 | 8.2 | 6.6 | -2.0 | -0.6 | 5.9 | 10.4 | 8.9 | 4.6 |
| Construction | -10.4 | 11.1 | 5.7 | -15.5 | -5.8 | 11.5 | 10.7 | 9.5 | 2.5 |
| Machinery and equipment | 4.0 | 9.0 | 7.8 | 5.9 | 2.3 | 4.6 | 13.2 | 10.0 | 5.8 |
| GFCF in other products | 0.3 | 1.5 | 4.7 | 0.2 | 0.5 | 1.0 | 2.0 | 4.6 | 4.8 |
| Domestic uses | -3.3 | 6.5 | 7.4 | -3.2 | -3.3 | 3.7 | 9.2 | 9.4 | 5.6 |
| Exports | -9.7 | 13.7 | 8.5 | -12.6 | -6.8 | 13.9 | 13.5 | 10.9 | 6.2 |
| Imports | -10.6 | 15.7 | 12.1 | -11.4 | -9.9 | 10.9 | 20.2 | 15.3 | 9.2 |
| GDP | -3.3 | 6.2 | 6.0 | -4.3 | -2.3 | 5.4 | 7.0 | 7.7 | 4.3 |
| 3. Disposition of GDP, adjusted for prices | | | | | | | | | |
| a) Chain-linked estimated in billion EUR | | | | | | | | | |
| Final consumption expenditure | 2,296.9 | 2,321.1 | 2,462.2 | 1,118.5 | 1,178.4 | 1,117.7 | 1,203.4 | 1,206.9 | 1,255.3 |
| Private consumption expenditure² | 1,616.6 | 1,629.3 | 1,765.2 | 783.9 | 832.7 | 775.7 | 853.6 | 861.7 | 903.4 |
| Government consumption expenditure | 679.2 | 690.5 | 697.2 | 334.0 | 345.2 | 341.0 | 349.5 | 345.1 | 352.1 |
| Gross fixed capital formation (GFCF) | 665.4 | 699.8 | 729.4 | 317.4 | 348.0 | 329.9 | 369.9 | 350.0 | 379.4 |
| Construction | 206.1 | 226.6 | 237.2 | 94.0 | 112.1 | 103.7 | 122.9 | 112.4 | 124.8 |
| Machinery and equipment | 332.2 | 346.5 | 361.5 | 162.6 | 169.6 | 165.9 | 180.5 | 175.5 | 186.0 |
| GFCF in other products | 124.9 | 125.0 | 128.9 | 59.3 | 65.6 | 59.1 | 65.9 | 60.9 | 68.0 |
| Domestic uses | 2,924.7 | 3,010.8 | 3,180.3 | 1,434.4 | 1,490.3 | 1,446.7 | 1,564.1 | 1,555.6 | 1,624.8 |
| Exports | 1,426.3 | 1,570.0 | 1,673.5 | 686.8 | 739.5 | 766.6 | 803.4 | 828.5 | 844.9 |
| Imports | 1,274.6 | 1,409.2 | 1,550.1 | 625.4 | 649.2 | 671.8 | 737.4 | 752.5 | 797.6 |
| GDP | 3,078.2 | 3,175.9 | 3,311.6 | 1,497.2 | 1,581.1 | 1,542.5 | 1,633.4 | 1,634.6 | 1,677.0 |
| b) Percentage change over previous year | | | | | | | | | |
| Final consumption expenditure | -3.3 | 1.1 | 6.1 | - 4.3 | - 2.2 | -0.1 | 2.1 | 8.0 | 4.3 |
| Private consumption expenditure² | -6.0 | 0.8 | 8.3 | - 7.3 | - 4.6 | -1.1 | 2.5 | 11.1 | 5.8 |
| Government consumption expenditure | 3.7 | 1.7 | 1.0 | 3.5 | 3.9 | 2.1 | 1.3 | 1.2 | 0.7 |
| Gross fixed capital formation (GFCF) | -2.7 | 5.2 | 4.2 | -4.1 | -1.4 | 3.9 | 6.3 | 6.1 | 2.6 |
| Construction | -11.6 | 9.9 | 4.7 | -16.7 | -6.9 | 10.3 | 9.6 | 8.4 | 1.5 |
| Machinery and equipment | 2.3 | 4.3 | 4.3 | 2.8 | 1.9 | 2.1 | 6.4 | 5.8 | 3.0 |
| GFCF in other products | -1.1 | 0.1 | 3.1 | -1.2 | -0.9 | -0.4 | 0.5 | 3.0 | 3.2 |
| Domestic uses | -4.1 | 2.9 | 5.6 | -4.6 | -3.6 | 0.9 | 5.0 | 7.5 | 3.9 |
| Exports | -9.4 | 10.1 | 6.6 | -12.6 | -6.1 | 11.6 | 8.6 | 8.1 | 5.2 |
| Imports | -8.4 | 10.6 | 10.0 | -9.1 | -7.8 | 7.4 | 13.6 | 12.0 | 8.2 |
| GDP | -4.8 | 3.2 | 4.3 | -6.5 | -3.0 | 3.0 | 3.3 | 6.0 | 2.7 |

APPENDIX: NATIONAL ACCOUNTS DATA

Continued: The Main National Accounts Data for the Federal Republic of Germany
Forecast for 2021 and 2022

| | 2020 | 2021 | 2022 | 2020 | | 2021 | | 2022 | |
|---|---------|---------|---------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year |
| 4. Price level of national expenditure (2015 = 100) | | | | | | | | | |
| Percentage change over previous year | | | | | | | | | |
| Private consumption expenditure ² | 0.7 | 3.1 | 1.6 | 1.5 | 0.0 | 2.2 | 4.0 | 1.9 | 1.4 |
| Government consumption expenditure | 3.3 | 2.8 | 1.2 | 3.2 | 3.3 | 3.4 | 2.2 | 0.9 | 1.5 |
| Gross fixed capital formation (GFCF) | 1.5 | 2.9 | 2.3 | 2.2 | 0.8 | 1.9 | 3.8 | 2.7 | 2.0 |
| Construction | 1.3 | 1.0 | 1.0 | 1.4 | 1.2 | 1.0 | 1.0 | 1.1 | 1.0 |
| Machinery and equipment | 1.7 | 4.5 | 3.3 | 3.0 | 0.4 | 2.5 | 6.4 | 4.0 | 2.7 |
| Exports | -0.4 | 3.3 | 1.7 | 0.0 | -0.8 | 2.0 | 4.5 | 2.6 | 1.0 |
| Imports | -2.4 | 4.6 | 1.9 | -2.6 | -2.2 | 3.2 | 5.8 | 2.9 | 0.9 |
| GDP | 1.6 | 2.9 | 1.6 | 2.4 | 0.8 | 2.3 | 3.6 | 1.7 | 1.6 |
| 5. Distribution of income | | | | | | | | | |
| a) Billion EUR | | | | | | | | | |
| Primary income of private households ² | 2,387.4 | 2,475.5 | 2,594.0 | 1,183.2 | 1,204.2 | 1,212.2 | 1,263.3 | 1,272.3 | 1,321.6 |
| Employers' social contributions | 332.0 | 340.0 | 350.7 | 161.5 | 170.5 | 164.5 | 175.5 | 171.3 | 179.4 |
| Gross wages and salaries | 1,511.5 | 1,583.7 | 1,661.0 | 720.7 | 790.9 | 745.3 | 838.4 | 793.8 | 867.2 |
| Other primary income of private households ⁴ | 543.9 | 551.8 | 582.2 | 301.0 | 242.8 | 302.4 | 249.4 | 307.3 | 275.0 |
| Primary income of other institutional sectors | 386.1 | 486.7 | 555.4 | 148.0 | 238.1 | 199.7 | 287.0 | 259.2 | 296.2 |
| Net national income (primary income) | 2,773.5 | 2,962.2 | 3,149.4 | 1,331.2 | 1,442.3 | 1,411.9 | 1,550.4 | 1,531.5 | 1,617.8 |
| Consumption of fixed capital | 657.7 | 681.4 | 711.9 | 329.1 | 328.6 | 337.3 | 344.2 | 353.3 | 358.6 |
| Gross national income | 3,431.2 | 3,643.7 | 3,861.2 | 1,660.3 | 1,770.9 | 1,749.1 | 1,894.5 | 1,884.8 | 1,976.4 |
| Memorandum item: | | | | | | | | | |
| Net national income (factor costs) | 2,501.1 | 2,658.8 | 2,793.7 | 1,194.6 | 1,306.5 | 1,266.1 | 1,392.7 | 1,348.8 | 1,444.9 |
| Property and entrepreneurial income | 657.5 | 735.1 | 782.0 | 312.4 | 345.2 | 356.3 | 378.7 | 383.8 | 398.2 |
| Compensation of employees | 1,843.6 | 1,923.7 | 2,011.7 | 882.2 | 961.4 | 909.8 | 1,013.9 | 965.0 | 1,046.7 |
| b) Percentage change over previous year | | | | | | | | | |
| Primary income of private households ² | -1.5 | 3.7 | 4.8 | -1.3 | -1.8 | 2.4 | 4.9 | 5.0 | 4.6 |
| Employers' social contributions | 2.4 | 2.4 | 3.1 | 2.8 | 2.0 | 1.9 | 2.9 | 4.1 | 2.2 |
| Gross wages and salaries | -0.7 | 4.8 | 4.9 | -0.9 | -0.5 | 3.4 | 6.0 | 6.5 | 3.4 |
| Other primary income of private households ⁴ | -6.0 | 1.5 | 5.5 | -4.3 | -8.0 | 0.5 | 2.7 | 1.6 | 10.2 |
| Primary income of other institutional sectors | -19.3 | 26.1 | 14.1 | -30.7 | -10.2 | 34.9 | 20.6 | 29.8 | 3.2 |
| Net national income (primary income) | -4.5 | 6.8 | 6.3 | -5.7 | -3.3 | 6.1 | 7.5 | 8.5 | 4.4 |
| Consumption of fixed capital | 2.8 | 3.6 | 4.5 | 3.6 | 2.0 | 2.5 | 4.7 | 4.7 | 4.2 |
| Gross national income | -3.2 | 6.2 | 6.0 | -4.0 | -2.3 | 5.4 | 7.0 | 7.8 | 4.3 |
| Memorandum item: | | | | | | | | | |
| Net national income (factor costs) | -2.5 | 6.3 | 5.1 | -3.9 | -1.1 | 6.0 | 6.6 | 6.5 | 3.8 |
| Property and entrepreneurial income | -8.4 | 11.8 | 6.4 | -13.0 | -3.9 | 14.1 | 9.7 | 7.7 | 5.1 |
| Compensation of employees | -0.1 | 4.3 | 4.6 | -0.2 | -0.1 | 3.1 | 5.5 | 6.1 | 3.2 |
| 6. Income and expenditure of private households | | | | | | | | | |
| a) Billion EUR | | | | | | | | | |
| Mass income | 1,019.5 | 1,079.4 | 1,128.3 | 480.0 | 539.5 | 500.5 | 578.9 | 533.8 | 594.5 |
| Net wages and salaries | 654.4 | 666.8 | 672.2 | 322.7 | 331.8 | 336.8 | 330.0 | 332.2 | 339.9 |
| Social benefits | 140.3 | 145.6 | 149.1 | 69.1 | 71.2 | 71.9 | 73.7 | 73.7 | 75.4 |
| Fewer levies on social benefits | 543.9 | 551.8 | 582.2 | 301.0 | 242.8 | 302.4 | 249.4 | 307.3 | 275.0 |
| Other primary income ⁴ | -93.5 | -90.9 | -92.8 | -46.9 | -46.6 | -45.3 | -45.5 | -46.3 | -46.5 |
| Other transfers received (net) ⁵ | 1,983.9 | 2,061.6 | 2,140.8 | 987.6 | 996.3 | 1,022.4 | 1,039.2 | 1,053.3 | 1,087.4 |
| Disposable income | | | | | | | | | |
| Memorandum item: | | | | | | | | | |
| Adjustment for the change in net equity of households in pension funds reserves | 1,711.6 | 1,779.3 | 1,959.1 | 832.2 | 879.4 | 841.5 | 937.8 | 952.2 | 1,006.9 |
| Private consumption expenditure | 329.7 | 340.6 | 240.8 | 183.3 | 146.4 | 209.3 | 131.3 | 129.9 | 111.0 |
| Saving | 16.2 | 16.1 | 10.9 | 18.1 | 14.3 | 19.9 | 12.3 | 12.0 | 9.9 |
| Saving ratio in percent ⁶ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| b) Percentage change over previous year | | | | | | | | | |
| Mass income | 2.8 | 4.4 | 3.2 | 2.3 | 3.3 | 4.3 | 4.4 | 3.5 | 2.8 |
| Net wages and salaries | -0.1 | 5.9 | 4.5 | -0.6 | 0.4 | 4.3 | 7.3 | 6.7 | 2.7 |
| Social benefits | 7.9 | 1.9 | 0.8 | 7.2 | 8.7 | 4.4 | -0.5 | -1.3 | 3.0 |
| Fewer levies on social benefits | 3.6 | 3.7 | 2.4 | 3.4 | 3.9 | 4.0 | 3.4 | 2.4 | 2.4 |
| Other primary income ⁴ | -6.0 | 1.5 | 5.5 | -4.3 | -8.0 | 0.5 | 2.7 | 1.6 | 10.2 |
| Disposable income | 0.7 | 3.9 | 3.8 | 0.7 | 0.7 | 3.5 | 4.3 | 3.0 | 4.6 |
| Private consumption expenditure | -5.3 | 4.0 | 10.1 | -5.9 | -4.7 | 1.1 | 6.6 | 13.2 | 7.4 |
| Savings | 49.7 | 3.3 | -29.3 | 47.8 | 52.2 | 14.2 | -10.3 | -37.9 | -15.5 |

APPENDIX: NATIONAL ACCOUNTS DATA

Continued: The Main National Accounts Data for the Federal Republic of Germany Forecast for 2021 and 2022

| | 2020 | 2021 | 2022 | 2020 | | 2021 | | 2022 | |
|---|---------|---------|---------|------------------|------------------|------------------|------------------|------------------|------------------|
| | | | | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year | 1st half of year | 2nd half of year |
| 7. Government revenues and expenditures ⁵ | | | | | | | | | |
| a) Billion EUR | | | | | | | | | |
| Revenues | | | | | | | | | |
| Taxes | 771.4 | 804.9 | 853.3 | 388.1 | 383.3 | 406.2 | 398.7 | 430.7 | 422.7 |
| Direct taxes | 428.0 | 433.9 | 452.5 | 214.2 | 213.8 | 215.5 | 218.4 | 225.2 | 227.4 |
| Indirect taxes | 343.4 | 371.0 | 400.8 | 173.9 | 169.5 | 190.6 | 180.3 | 205.5 | 195.3 |
| Net social contributions | 607.1 | 626.5 | 656.9 | 295.0 | 312.0 | 302.1 | 324.5 | 317.6 | 339.3 |
| Property income | 19.5 | 14.9 | 17.2 | 11.6 | 7.8 | 7.3 | 7.7 | 9.7 | 7.6 |
| Other transfers | 24.1 | 25.9 | 27.3 | 11.2 | 12.9 | 11.3 | 14.6 | 12.3 | 15.0 |
| Capital transfers | 15.4 | 16.4 | 17.0 | 7.0 | 8.4 | 7.4 | 9.0 | 7.7 | 9.3 |
| Sales | 125.6 | 129.6 | 133.4 | 57.9 | 67.7 | 58.9 | 70.6 | 60.6 | 72.7 |
| Other subsidies | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Total revenues | 1,563.1 | 1,618.3 | 1,705.2 | 771.0 | 792.2 | 793.1 | 825.2 | 838.6 | 866.6 |
| Expenditures | | | | | | | | | |
| Intermediate consumption | 209.3 | 213.3 | 210.6 | 97.3 | 112.0 | 102.9 | 110.3 | 100.2 | 110.4 |
| Compensation of employees | 283.7 | 291.5 | 298.7 | 136.2 | 147.5 | 140.1 | 151.4 | 143.5 | 155.1 |
| Social benefits in kind | 311.2 | 333.1 | 346.3 | 150.2 | 161.1 | 159.8 | 173.3 | 167.4 | 178.9 |
| Property income (interests) | 22.2 | 20.6 | 19.5 | 11.7 | 10.5 | 10.8 | 9.8 | 10.3 | 9.3 |
| Subsidies | 71.0 | 67.5 | 45.2 | 37.3 | 33.7 | 44.9 | 22.6 | 22.9 | 22.3 |
| Social benefits | 593.0 | 604.7 | 609.6 | 292.1 | 301.0 | 305.8 | 298.9 | 301.0 | 308.5 |
| Other transfers | 82.6 | 94.2 | 102.0 | 39.9 | 42.7 | 46.6 | 47.7 | 49.8 | 52.1 |
| Gross capital formation | 92.3 | 96.9 | 101.7 | 41.0 | 51.3 | 42.1 | 54.9 | 44.1 | 57.6 |
| Capital transfers | 47.7 | 58.0 | 51.9 | 17.6 | 30.0 | 22.8 | 35.1 | 19.5 | 32.4 |
| Acquisitions less disposals of non-financial non-produced assets | -1.2 | -1.2 | -1.2 | -0.5 | -0.7 | -0.5 | -0.7 | -0.5 | -0.7 |
| Other taxes on production | 0.3 | 0.3 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 |
| Total expenditures | 1,712.3 | 1,779.1 | 1,784.6 | 823.0 | 889.3 | 875.6 | 903.4 | 858.4 | 926.3 |
| Balance | -149.2 | -160.7 | -79.4 | -52.1 | -97.1 | -82.5 | -78.2 | -19.8 | -59.7 |
| b) Percentage change over previous year | | | | | | | | | |
| Revenues | | | | | | | | | |
| Taxes | -6.7 | 4.3 | 6.0 | -6.7 | -6.8 | 4.7 | 4.0 | 6.0 | 6.0 |
| Direct taxes | -6.4 | 1.4 | 4.3 | -7.9 | -4.9 | 0.6 | 2.1 | 4.5 | 4.1 |
| Indirect taxes | -7.1 | 8.0 | 8.0 | -5.2 | -9.0 | 9.6 | 6.4 | 7.8 | 8.3 |
| Net social contributions | 1.6 | 3.2 | 4.8 | 1.8 | 1.5 | 2.4 | 4.0 | 5.1 | 4.6 |
| Property income | -11.3 | -23.4 | 15.5 | -11.7 | -10.7 | -37.7 | -2.2 | 33.4 | -1.3 |
| Other transfers | -4.3 | 7.5 | 5.4 | -1.1 | -6.9 | 0.6 | 13.5 | 9.2 | 2.4 |
| Capital transfers | 11.7 | 6.4 | 3.6 | 15.8 | 8.5 | 5.2 | 7.4 | 3.8 | 3.4 |
| Sales | 0.6 | 3.2 | 2.9 | -1.2 | 2.1 | 1.7 | 4.4 | 2.9 | 3.0 |
| Other subsidies | -14.0 | -4.1 | 0.0 | -7.9 | -17.4 | -10.3 | 0.0 | 0.0 | 0.0 |
| Total revenues | -2.9 | 3.5 | 5.4 | -3.0 | -2.8 | 2.9 | 4.2 | 5.7 | 5.0 |
| Expenditures | | | | | | | | | |
| Intermediate consumption | 15.1 | 1.9 | -1.2 | 17.2 | 13.2 | 5.8 | -1.5 | -2.7 | 0.1 |
| Compensation of employees | 4.5 | 2.7 | 2.5 | 4.4 | 4.5 | 2.9 | 2.6 | 2.4 | 2.5 |
| Social benefits in kind | 3.6 | 7.0 | 3.9 | 1.6 | 5.6 | 6.4 | 7.6 | 4.7 | 3.2 |
| Property income (interests) | -19.0 | -7.3 | -5.2 | -18.1 | -20.0 | -7.5 | -7.0 | -5.4 | -5.0 |
| Subsidies | 130.5 | -4.9 | -33.1 | 159.3 | 105.2 | 20.4 | -32.9 | -49.1 | -1.3 |
| Social benefits | 8.7 | 2.0 | 0.8 | 7.9 | 9.6 | 4.7 | -0.7 | -1.6 | 3.2 |
| Other transfers ⁷ | 8.4 | 11.7 | 7.7 | 3.2 | 5.2 | 6.7 | 5.0 | 3.3 | 4.4 |
| Gross capital formation | 7.2 | 5.0 | 4.9 | 8.9 | 5.8 | 2.6 | 6.9 | 4.8 | 5.1 |
| Capital transfers ⁷ | 6.7 | 10.3 | -6.1 | 3.6 | 3.0 | 5.2 | 5.1 | -3.3 | -2.8 |
| Acquisitions less disposals of non-financial non-produced assets ⁷ | 0.0 | 0.0 | 0.0 | 0.1 | -0.1 | 0.0 | 0.0 | 0.0 | 0.0 |
| Other taxes on production ⁷ | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total expenditures | 9.9 | 3.9 | 0.3 | 9.9 | 9.9 | 6.4 | 1.6 | -2.0 | 2.5 |

1 GDP (price-adjusted) per man-hour.

2 Including private organizations without pecuniary reward.

3 Including net increase in valuables.

4 Entrepreneurial income/operating surplus and received minus paid asset income.

5 Transfers, received minus paid.

6 Current saving as percentage of disposable income.

7 Absolute change over previous year in billion EUR.

8 All administrative units including social security.

Sources: Federal Statistical Office (Fachserie 18: Volkswirtschaftliche Gesamtrechnungen); DIW Berlin Economic Outlook Summer 2021.