

DIW Weekly Report

A policy bulletin from the German Institute for Economic Research

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2020

Economy. Politics. Science.

DIW BERLIN

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Volume 10 December 11, 2020

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Layout

Roman Wilhelm, DIW Berlin

Cover design

© imageBROKER / Steffen Diemer

Composition

Satz-Rechen-Zentrum Hartmann + Heenemann GmbH & Co. KG, Berlin

ISSN 2568-7697

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AT A GLANCE

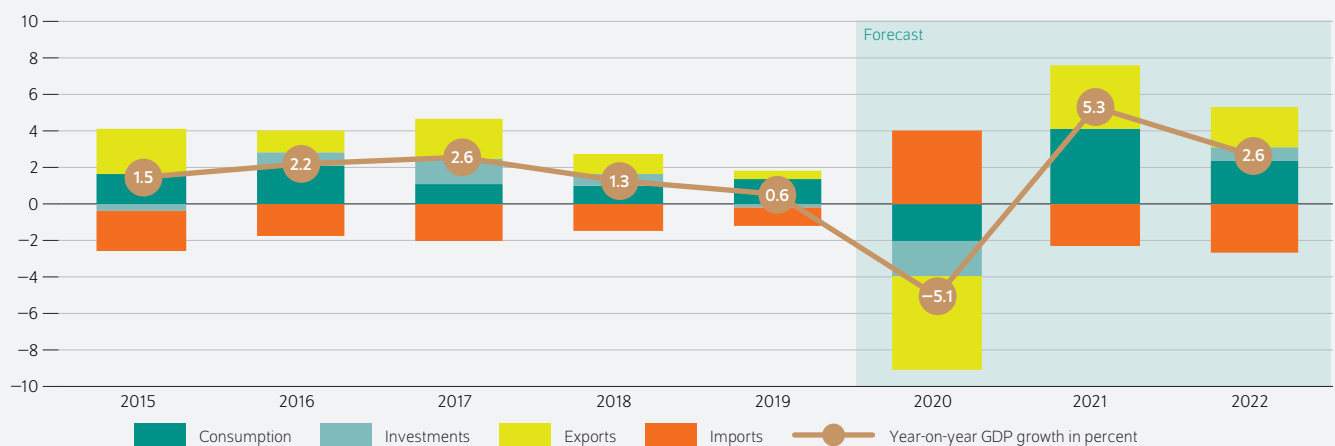
Second coronavirus wave affecting German economy and halting recovery

By Claus Michelsen et al.

- The German economy is still on a roller coaster: after an unexpected strong recovery in summer 2020, GDP is shrinking as 2020 ends
- Economic output expected to fall by 5.1 percent in 2020; DIW Berlin forecasts growth of 5.3 percent in 2021 and 2.6 percent in 2022
- Pre-crisis level would be reached by the end of 2021 if the pandemic can be successfully controlled over winter 2020/2021, but significant risks remain
- Many of Germany's important trade partners remain in difficult situations; only the USA, China, and Japan offer glimmers of hope for foreign business
- Public budgets in 2020 have a record deficit of 186 billion euros; despite this, the investment path decided upon should be consistently pursued

German economy could significantly recover in 2020, but risks remain

Individual GDP components' contribution to growth in percentage points



Source: DIW Berlin Economic Outlook Winter 2020.

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FROM THE AUTHORS

“Despite the record deficit in the public budgets, it will most likely be cheaper in the end to fight the recession with fiscal policy measures now than to save up against it to avoid a national debt crisis, as that risk is not on the horizon.”

— Claus Michelsen, DIW Berlin Chief Economic Forecaster —

MEDIA



Audio Interview with Claus Michelsen (in German)
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Second coronavirus wave affecting German economy and halting recovery

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

The coronavirus pandemic continues to weigh on global development. Although the situation improved over summer 2020—as the German economy experienced a strong recovery in the first half of 2020, in part due to financial aid packages, after a combined decrease of almost 12 percent—this improvement did not last long. In fall 2020, the second wave arrived, negatively impacting the German economy and putting an abrupt end to the recovery process. As a result, Germany, like many other countries, re-implemented containment measures, although they are less expansive compared to spring 2020. However, significant risks for companies, their solvency, and labor market development remain. The declining equity base of many companies and the decreased disposable income of private households is likely to again dampen demand for capital and durable goods. Important trade partners, especially those in the euro area, have also been severely affected by the pandemic and are likely to have lower demand for German goods, at least temporarily. However, the development of the Chinese, American, and Japanese economies are providing rays of hope for foreign business.

In light of the surprisingly strong recovery process in summer 2020, DIW Berlin is now forecasting that Germany's economic output will only sink by around 5.1 percent in 2020. A powerful recovery in 2021 will lead to growth of 5.3 percent that year and 2.6 percent in 2022. In the underlying scenario, it is assumed that the measures will lower the infection rate and successfully bring it under control in winter 2020/2021 and that COVID-19 vaccines will be widespread soon. As herd immunity grows, the German economy could experience another powerful recovery in spring 2021. It is also assumed that corporate insolvencies, loan defaults, and significant increases in unemployment can be avoided by economic aid packages and that the crisis will not reach

the financial sector. If the sector were hit, this would pose the danger that banks could experience difficulties, ultimately leading to a public debt crisis in countries with high debt ratios.

These assumptions also represent the main risks of the forecast: It is entirely possible that one or more of the risks mentioned will actually occur. Primarily, it is questionable whether the infection rate can be controlled despite vaccine breakthroughs. If the rate cannot be controlled and containment measures last until spring 2021, economic output in 2021 is likely to be 1.7 percent lower. In Germany, it would likely be 1.5 percent.

These risks have been avoided successfully in part due to extremely expansive monetary and financial policies worldwide, which have compensated for a large portion of lost income. The German Federal Government passed an expansive economic stimulus package in summer 2020, which is likely to support the economy by around 1.3 percent in 2020 and 1.5 percent in 2021. In addition to this stimulus package, the November aid should compensate for a large part of the losses in the sectors affected by the renewed lockdown. Short-time allowance and interim aid that stabilizes the corporate sector were extended as well. This impacts Germany's debt-to-GDP ratio, which should be around 69 percent at the end of 2020.

The resolutions also contain numerous positions on strengthening public and private investment activities. Private investment activities are likely to decline especially steeply during the crisis, as sales prospects have clouded, capacities are underutilized, and the capital buffers necessary for modernizing capital stock have shrunk significantly. With regard to debt sustainability, it is important to increase Germany's growth rate, thus reducing the debt burden. Studies show that during

economic crises and in an environment of low interest rates, public investment activity entails considerable private investment. In particular, public research and development, expenditure in the education sector, and infrastructure will generate strong growth impulses in the medium term. As many areas of public infrastructure are experiencing high demand, it is prudent to support them and to expand public investment activity in a sustainable manner. Additionally, there is considerable additional need for public investment that financial planning does not yet reflect, as was discussed before the crisis. Such additional public investment includes investment expenditure for research and development, education, decarbonization and digitalization, and infrastructure. Until 2030, a further 220 billion euros would be necessary for this in addition to the measures already passed. Therefore, an economic policy that focuses on strengthening and transforming Germany as a business location makes sense for reasons beyond long-term crisis management.

Discussions on the fiscal consolidation strategy have already begun and will likely shape political discourse in 2021. It is in no way clear that the debt brake in its current form will simultaneously reduce public debt and enable Germany to modernize as a business location. Rather, rapidly returning to the debt brake regulations would result in a substantial reduction in the loans taken out. Such a consolidation path would significantly narrow the leeway for necessary investment activity and halt the modernization process. For investment purposes, net borrowing is justified as long as the return on the projects exceeds the cost of capital. In the current environment of low interest rates and underutilized capacities, this is often the case. Numerous proposals for a reform of the debt rule exist, ranging from focusing on the interest burden to considering symmetrical investment rules to implementing a nominal spending rule. These proposals should now be discussed in depth in order to create the space for the necessary modernization investments.

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Global economy: recovery slowing down

By Claus Michelsen, Paul Berenberg-Gossler, Geraldine Dany-Knedlik, Hella Engerer, and Sandra Pasch

ABSTRACT

The global economy recovered more quickly than expected in the third quarter of 2020. Following the coronavirus-related slumps, economic output increased by seven percent. A decrease in infection rates and thus an easing of containment measures contributed to re-normalizing production processes and trade. Private households also began demanding more consumer goods again, especially personal services. However, the second wave in fall 2020 will slow down the recovery. In 2020, global production will shrink by 3.4 percent; the growth rates in 2021 and 2022, 6.3 and 4.4 percent respectively, are likely to be stronger than forecasts in fall 2020. Despite this, there are many risks: Even though the vaccine breakthroughs are promising, other uncontrolled increases in coronavirus cases could occur. Furthermore, the extent to which corporate insolvencies will increase and how a wave of insolvencies would impact economic recovery cannot be predicted.

The global economy grew significantly in the third quarter of 2020, partly recovering from the slumps in the first half of the year. In the third quarter, global production increased by seven percent compared to the previous quarter (see Figure 1), thus compensating for 68 percent of the losses from the first half of 2020. However, the coronavirus pandemic continues to leave its mark: economic output is lower than it was at the beginning of 2020 despite the catch-up effects and in many countries, further increases in the spread of the virus in the fourth quarter are slowing down the recovery.

In the third quarter of 2020, decreasing infection rates and an easing of containment measures drove recovery. Production processes and international trade normalized again. Private households began demanding more consumer goods and, after the restrictions were relaxed, were able to make use of personal services once more. In many countries, transport, tourism, stationary retail, and gastronomy recorded particularly strong growth in value added. Expansive monetary and fiscal policies in many countries likely supported the recovery process significantly: Many economies, for example in Europe and North America, launched fiscal aid programs, cushioned wage losses, and provided liquidity or loan guarantees on a significant scale to companies that suffered revenue losses due to the lockdowns.

At the beginning of the fourth quarter, the number of new coronavirus cases rose in many countries again rapidly. As of autumn 2020, significantly more people are contracting COVID-19 every day than in spring 2020, particularly in Europe, the United States and some South American countries. As a result, some governments have noticeably increased containment measures. For example, many European countries reimposed lockdowns, although they are often less restrictive compared to spring 2020.

Breakthroughs in vaccine development towards the end of 2020 have generated hope that the pandemic will soon come to an end. At the beginning of November 2020, some pharmaceutical companies applied for approval of COVID-19 vaccines and the first doses should be distributed in Europe and the United States by December 2020. However, effective herd

immunity will probably not be achieved in populous countries in the short term. Thus, it is unlikely that travel and contact restrictions will end in the first half of 2021.

The second wave dampened corporate and household sentiment markedly in fall 2020. The purchasing managers' indexes of manufacturing industries in many large economies have been stagnating since the end of summer 2020 and are slightly declining in some cases (see Figure 2). Consumer confidence is not increasing and remains under the pre-crisis level in many countries. However, the present surveys were conducted before the vaccine breakthroughs and thus cannot accurately depict the current state. The fact that recent breakthroughs have significantly brightened the economic outlook is reflected in the financial markets: At the beginning of November 2020, the stock markets recorded substantial price gains, reaching new record highs in some cases.

However, further economic recovery is expected to slow down towards the end of 2020. The increase in the infection rate in many countries, especially Europe, and the resulting stricter containment measures are likely to weigh on production and trade, especially personal services.

The present forecast assumes that the containment measures implemented in many countries will slow the spread in the short-term and prevent further uncontrolled, significant increases in the infection rate. New, expansive lockdowns are thus not assumed. In the first half of 2021, it is likely that containment measures will slowly be relaxed and replaced by gradual herd immunity. A moderate recovery can therefore be expected in the further course of the forecast. Global production will therefore probably reach its long-term growth path at the end of the forecast period.

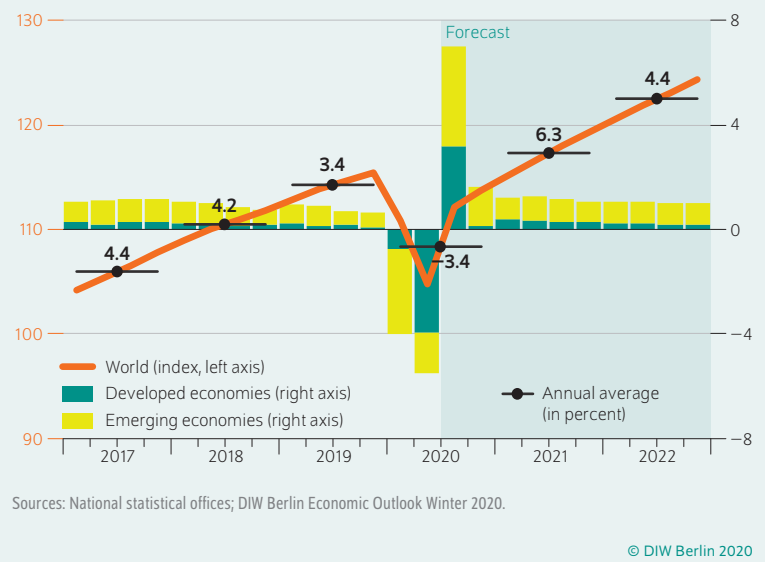
An expansive monetary and financial policy should further support the recovery process. While parts of the fiscal measures from coronavirus aid packages will expire in 2021 in many major economies, in some, such as Europe, further aid packages are being prepared to support the recovery process.

This extensive financial aid will probably only partially compensate for companies' revenue losses and the income losses of private households, resulting in a gradual recovery. The uncertainty in relation with the exit of the UK, despite the presumed ordered exit, will further slow down the recovery of European economies. This is likely to have a negative impact on companies' willingness to invest. On the other hand, the hope for an effective vaccine and future herd immunity should support the willingness to invest. Moreover, the victory of Democrat Joe Biden in the 2020 US presidential election is likely to resolve some trade uncertainties¹. In addition, the disruptions in international supply chains shall be resolved and world trade is likely to continue its rapid recovery. All in all, these developments will boost investment activity slightly.

¹ Cf. Paul Berenberg-Gossler et al., "Trumps protektionistische Handelspolitik hat ihre Ziele verfehlt," *DIW Wochenbericht* no. 50 (2020) (in German).

Figure 1

Growth of real GDP
Compared to previous quarter, in percent



By 2022, the global economy should have reached its long-term growth path.

The situation on the labor market is likely to only recover gradually. Many economies have recorded recent employment growth, but in most cases, this increase compensates for less than half of the employment losses of the first half of the year. Unemployment rates have also fallen again in many countries after what were in some cases historically unprecedented increases, but often remain well above pre-crisis levels. In some developed economies, the expiration of emergency aid for companies, such as short-time work benefits, is expected to lead to another increase in unemployment. Overall, private households' income losses and their continuing uncertainty about future income trends are likely to continue to weaken private consumption, which is reflected in many countries by high savings rates.

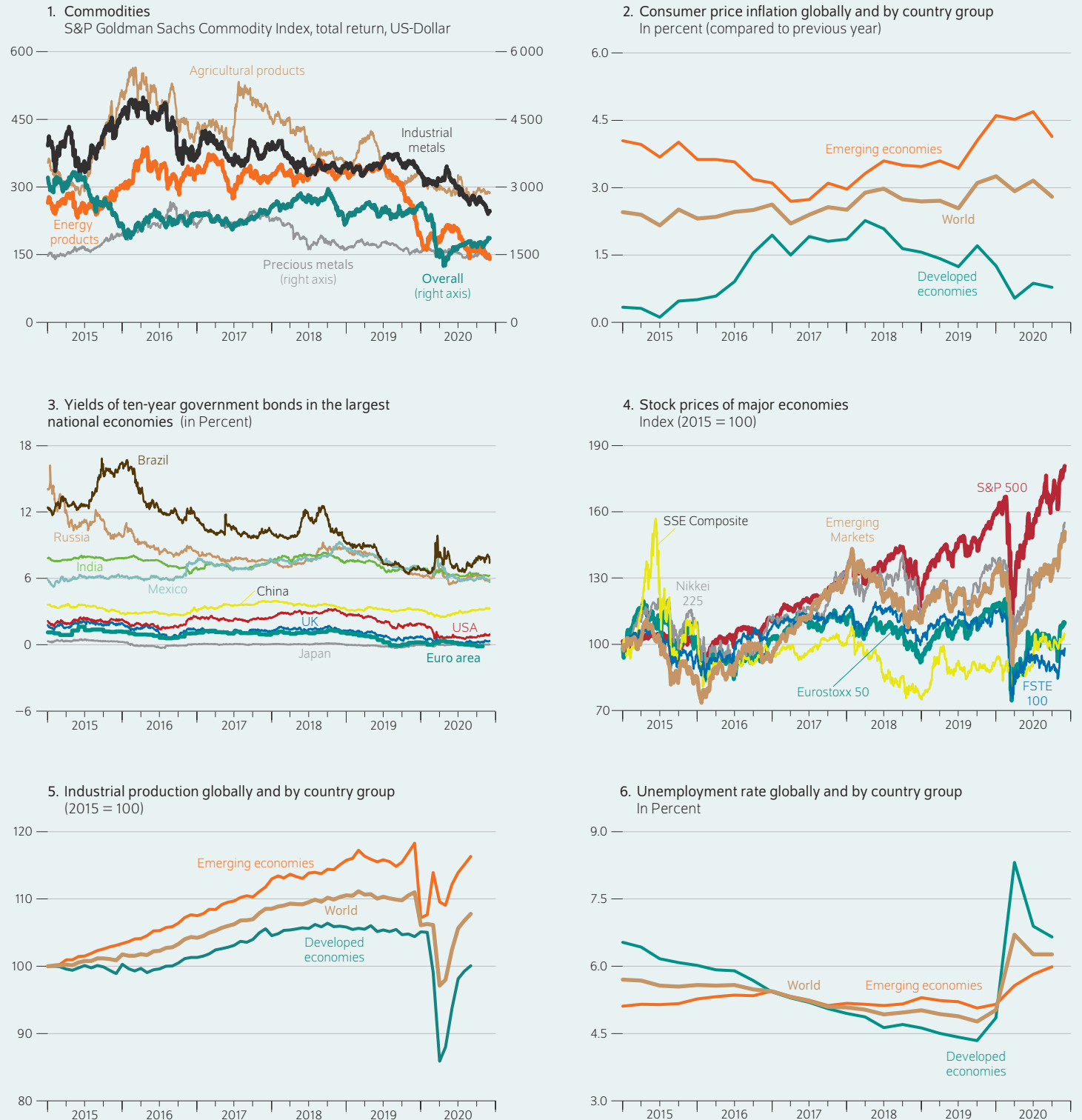
The poor situation on the labor markets will probably also affect wage development in many economies. If energy prices remain low, weak consumer price inflation is initially expected in many places, which should gradually increase over the course of the recovery process and rising wages.

Overall, the coronavirus pandemic will cause global production to shrink by 3.4 percent this year (Table). The recovery process is beginning at high growth rates of 6.3 percent in 2021 and 4.4 percent in 2022. Thus, DIW Berlin is increasing its forecast for 2020 by 0.4 percentage points, mainly due to the strong catch-up effects in the third quarter. DIW Berlin forecasts higher growth rates of around half a percentage point for 2021 and 2022, respectively.

Despite the prospect of vaccine rollouts in winter 2020 and early 2021 in many countries, uncertainties regarding the short-term course of the pandemic remain. Accordingly,

Figure 2

Global economic indicators



Note: Last observations on December 3, 2020 (parts 1,3, and 4) and October 22, 2020 (parts 2,5, and 6)

Sources: National statistical offices; IMF; Macrobond; Eurostat; CPB World Trade Monitor, S&P Dow Jones Indices, STOXX, Nikkei Inc.; Shanghai Stock Exchange, FTSE; 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	-7.5	4.8	2.9	1.3	0.0	0.8	1.3	7.5	8.2	9.8	9.5
without Germany	1.6	-8.4	4.5	2.9	1.2	-0.2	0.4	1.2	9.5	9.9	12.4	12.1
France	1.5	-9.7	5.2	2.8	1.1	0.6	0.7	1.1	8.5	7.9	10.5	10.6
Italy	0.3	-9.2	4.4	2.9	0.6	-0.1	0.5	1.3	9.9	9.4	11.1	11.0
Spain	2.0	-11.3	5.9	3.6	0.7	-0.2	0.8	1.1	14.1	15.8	18.8	17.7
Netherlands	1.6	-5.2	2.1	2.0	2.7	1.1	1.3	1.4	3.4	4.4	6.5	6.1
United Kingdom	1.3	-10.0	4.7	2.7	1.7	1.0	0.9	1.6	3.8	4.4	6.7	6.3
USA	2.2	-3.5	3.9	3.0	1.9	1.3	2.3	2.0	3.6	7.6	6.4	5.3
Japan	0.7	-5.2	2.6	1.2	0.6	0.0	0.2	0.6	2.4	2.9	2.7	2.5
South Korea	2.0	-1.0	3.0	2.8	0.4	0.6	1.3	1.4	3.7	3.9	4.1	3.7
East-Central Europe	4.1	-4.7	5.4	4.0	2.7	3.2	3.0	2.6	3.3	3.8	4.2	3.7
Turkey	1.0	0.4	2.5	3.1	15.2	11.6	10.7	10.0	13.7	14.5	14.3	13.3
Russia	1.3	-3.7	2.6	1.9	4.5	3.3	3.9	3.4	4.6	6.0	5.9	4.8
China	6.2	1.8	9.0	5.8	2.4	3.6	2.9	3.0	4.1	4.1	4.1	4.1
India	4.7	-9.8	9.2	7.9	3.7	6.2	4.4	4.0				
Brazil	1.1	-5.0	5.9	2.0	3.8	3.1	4.7	3.5	11.9	13.4	12.5	11.5
Mexico	-0.3	-8.6	4.5	2.2	3.4	3.4	3.4	3.3	3.5	4.6	5.1	4.0
Developed economies	1.7	-5.1	3.9	2.7	1.5	0.8	1.6	1.6	4.5	6.7	6.7	6.0
Emerging markets	4.5	-2.4	7.8	5.4	3.6	4.5	3.9	3.7	5.2	5.6	5.6	5.2
World	3.4	-3.4	6.3	4.4	2.8	3.0	3.0	2.9	4.9	6.1	6.0	5.5

Sources: National statistical offices; DIW Berlin Economic Outlook Winter 2020.

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the forecast uncertainty continues to be predominantly afflicted with considerable downside risks. For example, global infection rates could continue to increase markedly despite containment measures, which would slow down the recovery process. Stricter containment measures that last into 2021 would be necessary and would lead to renewed slumps in economic output. A further risk is that there will be a sharp increase in corporate and private insolvencies in

2021, which could lead to considerable loan defaults that would destabilize the financial markets, endangering the solvency of several countries. The recovery process in Europe is also likely to be slowed down considerably if an agreement between the EU and the United Kingdom fails despite the last agreement in the negotiations. Effective, faster containment of the pandemic through rapid herd immunity would strengthen the global upswing.

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JEL: E32, E66, F01

Keywords: Business cycle forecast, economic outlook

German economy: optimistic despite decline as 2020 ends

By Claus Michelsen, Paul Berenberg-Gossler, Marius Clemens, Max Hanisch, Simon Junker, and Laura Pagenhardt

ABSTRACT

The coronavirus pandemic is once again slowing down the German economy: Following a strong and unexpected economic recovery over summer 2020, which compensated for large parts of the losses from the spring, the second wave has resulted in renewed restrictions affecting both social and economic life. Therefore, the German economy is likely to shrink again in the final quarter of 2020. If the second wave can be brought under control over the course of winter 2020/2021, as this forecast assumes, there is still hope of a speedy recovery. In this case, the German economy would reach its pre-crisis level in the later part of 2021. However, there is a significant risk that things will progress differently: If the second wave lasts longer than assumed, the recovery in spring 2021 will probably not occur. As a result, many companies and even banks would face considerable difficulties, which could lead to an even deeper economic crisis. However, there is hope the pandemic will soon end due to breakthroughs in developing vaccines and the impending rollouts.

The coronavirus pandemic continues to significantly affect economic development in Germany. The second wave, which began in fall 2020, is putting a temporary stop on the strong economic recovery Germany had been experiencing. Economic actors are once again acting carefully, reducing social contacts, and foregoing free time activities, resulting in significant sales losses in affected branches of the economy. Germany, like many other countries, is reinforcing this behavior by strengthening official containment measures.

In the present forecast, it is assumed that these measures can rapidly contain the pandemic, that restrictions will begin to be reduced gradually in mid-January 2021, and that the impending arrival of a vaccine will increase the confidence of economic actors.

Given these favorable conditions, the German economy is likely to return to a path of recovery by the first quarter of 2021 after shrinking in the final quarter of 2020. As in summer 2020, a loosening of lockdown measures will be accompanied by strong catch-up growth. A decline in economic output of 5.1 percent in 2020 (see Figure) will be followed by correspondingly strong growth of 5.3 percent in 2021. With 2.6 percent growth in 2022, overall economic capacity will once again be normally utilized. If the second wave cannot be contained and restrictions last until spring 2021, the economic output in Germany could be 1.5 percent less than in the more optimistic scenario.

It is entirely possible the second wave will not be successfully contained. In that case, the containment measures must remain in place longer, preventing the affected branches from recovering rapidly. The insolvency risk would also increase with prolonged declines in sales. So far, this risk has not been a pressing issue, as the requirement to file for insolvency and government aid has been suspended. However, the equity base of many companies is likely to have already begun deteriorating in the spring and will be further negatively affected by the setback in the final quarter of 2020. A wave of insolvencies would create unused capital that can only gradually be used for other purposes. In addition, workers in the affected companies would lose their jobs. Even if many of them are already working short-time,

Figure

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



Sources: Federal Statistical Office; DIW Berlin Economic Outlook Winter 2020. Forecast from 2020 Q4 onward.

Table 1

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	-2.3	-11.1	10.8	-0.7	2.0	2.6	1.9	1.4	0.7	0.4	0.4	0.4
Public consumption	0.8	2.2	0.8	0.5	0.4	0.3	0.3	0.3	0.4	0.4	0.3	0.3
Gross fixed capital formation	-0.4	-6.6	3.6	0.0	1.7	1.6	1.3	1.1	1.0	0.8	0.5	0.5
Investment in machinery and equipment	5.1	-4.3	-2.0	0.9	1.2	1.0	1.0	0.9	0.7	0.6	0.3	0.3
Construction investment	-7.0	-15.1	16.0	-2.0	3.0	3.0	2.0	1.5	1.5	1.0	0.7	0.7
Other investment	-4.1	0.6	1.9	0.8	0.9	0.8	0.8	0.8	0.9	0.8	0.8	0.8
Change in inventories ¹	0.0	-0.1	-2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Domestic uses	-1.2	-7.2	4.7	-0.2	1.6	1.9	1.4	1.1	0.7	0.5	0.4	0.4
Net exports ¹	-0.8	-2.9	3.9	-0.2	0.3	0.4	-0.3	-0.3	-0.2	0.0	0.0	0.0
Exports	-3.3	-20.5	18.1	-2.6	3.1	3.0	1.7	1.5	1.0	0.7	0.6	0.3
Imports	-1.9	-15.9	9.1	-2.4	2.7	3.4	3.5	2.6	1.6	0.8	0.6	0.4
GDP	-1.9	-9.8	8.5	-0.5	1.8	2.2	1.0	0.7	0.5	0.5	0.4	0.4
Gross value added	-1.5	-10.4	8.0	-0.5	1.8	2.2	1.0	0.7	0.5	0.5	0.4	0.4
Manufacturing	-3.8	-18.3	14.0	1.6	2.4	3.0	1.5	0.9	0.8	0.8	0.7	0.7
Construction	4.8	-3.1	-4.7	1.8	1.2	1.0	1.0	0.9	0.7	0.6	0.3	0.3
Trade, accomodation, transport	-1.2	-14.2	13.8	-4.8	2.4	4.5	1.5	0.9	0.7	0.5	0.4	0.4
Business and production services	-1.9	-12.0	6.1	-1.5	2.8	2.6	1.0	0.7	0.4	0.3	0.3	0.3
Public admin, community and social services	-0.9	-8.2	9.5	2.6	1.1	1.0	0.5	0.4	0.3	0.3	0.3	0.3

1 Contribution to GDP growth in percentage points

Source: Federal Statistical Office; DIW Berlin Economic Outlook Winter 2020. Forecast from 2020 Q4 onward.

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this can noticeably strain the overall labor volume and result in income losses. This forecast also assumes that the presumably high number of quarantine cases are not economically significant. However, with 780,000 new infections in Germany in October and November 2020, eight times as many people are testing positive for COVID-19 than compared to the average of previous quarters. These people must spend up to two weeks in quarantine, resulting in an inability to work for those who cannot work from home. This could also affect people who have been in direct contact with the infected people, as they must also quarantine. None of this is included in the forecast presented here.

However, the second wave is likely to weigh less on economic development in Germany overall compared to spring 2020 (see Table 1). For one, the restrictions are less rigid than in the spring. For example, schools, day care centers, and retail stores are currently allowed to remain open, while in March and April 2020, these sectors were ordered to close. Consumer-oriented services, such as gastronomy or the culture and events sector, have been the hardest hit by the new lockdown. The industrial sector, in contrast, is less affected than it was in the first half of 2020, in part because companies are better prepared for potential supply bottlenecks. The automotive industry also experienced a massive slump in spring 2020, but domestic sales are unlikely to fall again in the final quarter of 2020 due to the temporary reduction in VAT effectively stimulating demand. Foreign demand is set to decline markedly, although not as drastically as in the second quarter. As in spring 2020, companies are likely to combat the decline in economic output in the final quarter mainly

with short-time work. A substantial increase in the number of short-time workers in November and December will temporarily interrupt the recent downtrend. Employment, on the other hand, is affected to a much lesser degree, with declines especially among mini-jobbers.

Beginning in 2021, the global economy should improve and boost German exports as the lockdown measures end gradually in many places and hopes for an end to the pandemic increase. However, exports will likely not reach the pre-crisis level until late in the forecast period. The German export economy, which is heavily investment oriented, is being dampened due to a slow recovery of corporate investment both domestically and worldwide. Private consumption, by contrast, will likely experience strong growth following the forced break in the fourth quarter, in part due to economic policy having stabilized disposable incomes.

The path to recovery is also appearing on the labor market. Short-time work will be reduced markedly beginning in 2021 and employment figures will rise again following the setback in the final quarter of 2020 due to an increase in employment subject to social security contributions. In contrast, the coronavirus recession has intensified the downward trend among mini-jobbers and especially among the self-employed, where employment is likely to remain permanently lower. In an annual average comparison, unemployment will be roughly at the 2020 rate of 5.9 percent in 2021 before falling to 5.3 percent in 2022 (see Table 2). Due to the recession, wages are only rising moderately, but the growth is trending upwards overall.

Table 2

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	-5.1	5.3	2.6
Domestic employment (1000 persons)	44,262	44,868	45,269	44,813	44,737	45,052
Unemployed (ILO concept)	1,621	1,468	1,373	1,838	1,818	1,666
Unemployed (BA concept)	2,533	2,340	2,267	2,703	2,679	2,424
Unemployment rate ² (ILO concept)	3.8	3.4	3.2	4.4	4.3	4.0
Unemployment rate ² (BA concept)	5.7	5.2	5.0	5.9	5.9	5.3
Consumer prices ³	1.5	1.8	1.4	0.5	1.6	1.6
Unit labor costs ⁴	1.1	2.8	3.2	3.7	-2.6	1.6
Government budget balance ⁵						
in billion EUR	44	62	52	-186	-146	-78
in percent of GDP	1.4	1.8	1.5	-5.6	-4.1	-2.1
Current account balance, in percent of GDP	7.8	7.4	7.1	7.0	7.5	6.8

1 Price-adjusted, chain-linked

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

3 Consumer price index

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

5 According to ESA 2010

Sources: National and international institutions; DIW Berlin Economic Outlook Winter 2020. Forecast from 2020 onward.

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The government deficit is likely to skyrocket to a record 186 billion euros in 2020, partly because of the aid and economic stimulus measures. Since many measures will also involve significant expenditure in the coming years, especially in terms of subsidies, the deficit will remain substantial

at 146 billion euros in 2021 and 78 billion euros in 2022. The government debt ratio is likely to increase to 69 percent this year, and to 71 percent in 2021, and decrease somewhat in 2022.

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JEL: E32, E66, F01

Keywords: Business cycle forecast, economic outlook

APPENDIX: NATIONAL ACCOUNTS DATA

The Main National Accounts Data for the Federal Republic of Germany

Forecast for 2020 to 2022

	2020	2021	2022	2020		2021		2022	
				1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
1. Origin of GDP									
Percentage change over previous year									
Domestic employment	-1.0	-0.2	0.7	-0.5	-1.5	-0.8	0.5	0.7	0.7
Hours worked, per working day	-5.2	3.3	1.6	-5.3	-5.1	3.7	3.0	1.2	1.9
Working days	1.5	0.1	-0.1	0.5	2.4	0.0	0.2	0.8	-1.0
Labour volume, calendar-monthly	-4.6	3.2	2.1	-5.1	-4.2	2.8	3.7	2.8	1.5
Labour productivity ¹	-0.4	2.0	0.5	-1.4	0.5	2.6	1.5	0.9	0.0
Gross domestic product, price adjusted	-5.1	5.3	2.6	-6.5	-3.7	5.4	5.2	3.8	1.6
2. Disposition of GDP in current prices									
a) Billion EUR									
Final consumption expenditure	2,463.4	2,633.1	2,755.0	1,197.1	1,266.3	1,270.0	1,363.1	1,346.8	1,408.2
Private consumption expenditure ²	1,715.4	1,857.3	1,956.2	833.0	882.5	893.3	964.0	957.4	998.8
Government consumption expenditure	748.0	775.9	798.8	364.1	383.9	376.7	399.1	389.4	409.4
Gross fixed capital formation (GFCF)	735.8	777.7	820.1	354.6	381.2	368.3	409.4	393.3	426.8
Construction	212.9	234.5	248.8	98.0	115.0	109.0	125.5	118.1	130.7
Machinery and equipment	388.2	401.1	422.2	193.0	195.2	191.9	209.2	204.5	217.7
GFCF in other products	134.7	142.1	149.2	63.6	71.1	67.4	74.7	70.7	78.5
Change in stocks ³	-64.6	-90.0	-92.5	-14.7	-49.9	-39.7	-50.3	-41.6	-50.8
Domestic uses	3,134.7	3,320.8	3,482.6	1,536.9	1,597.7	1,598.6	1,722.2	1,698.5	1,784.2
Balance of exports and imports	186.7	218.2	202.5	83.7	103.1	119.4	98.8	110.0	92.5
Exports	1,432.9	1,552.4	1,640.1	703.3	729.7	753.0	799.4	814.3	825.8
Imports	1,246.2	1,334.3	1,437.7	619.6	626.6	633.6	700.7	704.3	733.3
GDP	3,321.4	3,539.0	3,685.1	1,620.6	1,700.8	1,718.0	1,821.0	1,808.5	1,876.6
b) Percentage change over previous year									
Final consumption expenditure	-1.9	6.9	4.6	-2.3	-1.6	6.1	7.6	6.0	3.3
Private consumption expenditure ²	-5.1	8.3	5.3	-5.8	-4.3	7.2	9.2	7.2	3.6
Government consumption expenditure	6.2	3.7	3.0	6.9	5.4	3.5	4.0	3.4	2.6
Gross fixed capital formation (GFCF)	-1.6	5.7	5.5	-1.6	-1.6	3.9	7.4	6.8	4.2
Construction	-11.3	10.1	6.1	-15.5	-7.5	11.3	9.1	8.4	4.1
Machinery and equipment	3.9	3.3	5.3	6.7	1.3	-0.6	7.2	6.6	4.0
GFCF in other products	0.4	5.5	5.0	0.2	0.6	5.9	5.1	5.0	5.0
Domestic uses	-3.5	5.9	4.9	-3.3	-3.8	4.0	7.8	6.2	3.6
Exports	-11.4	8.3	5.6	-12.7	-10.1	7.1	9.6	8.1	3.3
Imports	-12.1	7.1	7.7	-11.7	-12.4	2.3	11.8	11.2	4.7
GDP	-3.7	6.6	4.1	-4.3	-3.2	6.0	7.1	5.3	3.1
3. Disposition of GDP, adjusted for prices									
a) Chain-linked estimated in billion EUR									
Final consumption expenditure	2,306.6	2,434.8	2,512.1	1,120.5	1,186.2	1,184.3	1,250.5	1,237.1	1,275.0
Private consumption expenditure ²	1,623.9	1,737.7	1,805.8	784.9	839.0	839.0	898.7	887.3	918.4
Government consumption expenditure	681.7	696.9	706.6	335.0	346.7	345.0	351.9	349.8	356.8
Gross fixed capital formation (GFCF)	662.5	689.5	714.5	318.7	343.8	327.7	361.8	343.9	370.6
Construction	204.0	222.2	234.2	94.0	110.0	103.3	118.9	111.1	123.1
Machinery and equipment	331.3	336.1	345.1	163.8	167.5	161.7	174.4	168.1	177.0
GFCF in other products	125.0	129.9	134.3	59.3	65.7	61.9	68.0	64.0	70.4
Domestic uses	2,921.5	3,048.0	3,149.7	1,434.2	1,487.3	1,478.3	1,569.7	1,546.6	1,603.1
Exports	1,400.9	1,513.7	1,589.5	686.2	714.7	735.9	777.8	791.0	798.5
Imports	1,255.9	1,330.6	1,425.4	623.6	632.3	633.8	696.8	699.3	726.0
GDP	3,068.5	3,232.0	3,317.3	1,498.2	1,570.3	1,579.7	1,652.2	1,639.3	1,678.0
b) Percentage change over previous year									
Final consumption expenditure	-2.8	5.6	3.2	-4.1	-1.6	5.7	5.4	4.5	2.0
Private consumption expenditure ²	-5.5	7.0	3.9	-7.2	-3.9	6.9	7.1	5.8	2.2
Government consumption expenditure	4.1	2.2	1.4	3.8	4.3	3.0	1.5	1.4	1.4
Gross fixed capital formation (GFCF)	-3.2	4.1	3.6	-3.8	-2.6	2.8	5.2	4.9	2.5
Construction	-12.5	8.9	5.4	-16.7	-8.6	9.9	8.1	7.6	3.5
Machinery and equipment	2.1	1.5	2.7	3.6	0.6	-1.3	4.2	3.9	1.5
GFCF in other products	-1.0	3.9	3.4	-1.2	-0.8	4.3	3.5	3.4	3.5
Domestic uses	-4.2	4.3	3.3	-4.6	-3.8	3.1	5.5	4.6	2.1
Exports	-11.0	8.0	5.0	-12.7	-9.3	7.2	8.8	7.5	2.7
Imports	-9.8	5.9	7.1	-9.3	-10.2	1.6	10.2	10.3	4.2
GDP	-5.1	5.3	2.6	-6.5	-3.7	5.4	5.2	3.8	1.6

APPENDIX: NATIONAL ACCOUNTS DATA

Continued: The Main National Accounts Data for the Federal Republic of Germany

Forecast for 2020 to 2022

	2020	2021	2022	2020		2021		2022	
				1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
4. Price level of national expenditure (2015 = 100)									
Percentage change over previous year									
Private consumption expenditure ²	0.5	1.2	1.4	1.5	-0.4	0.3	2.0	1.3	1.4
Government consumption expenditure	2.0	1.4	1.6	3.0	1.1	0.5	2.4	1.9	1.2
Gross fixed capital formation (GFCF)	1.6	1.5	1.8	2.2	1.0	1.0	2.1	1.8	1.7
Construction	1.4	1.1	0.7	1.4	1.3	1.2	0.9	0.7	0.6
Machinery and equipment	1.8	1.8	2.5	3.0	0.6	0.7	2.9	2.5	2.5
Exports	-0.5	0.3	0.6	0.0	-0.9	-0.2	0.7	0.6	0.6
Imports	-2.6	1.1	0.6	-2.6	-2.5	0.6	1.5	0.7	0.4
GDP	1.4	1.2	1.5	2.4	0.6	0.5	1.8	1.4	1.5
5. Distribution of income									
a) Billion EUR									
Primary income of private households ²	2,390.2	2,472.4	2,582.5	1,185.6	1,204.6	1,225.1	1,247.4	1,280.0	1,302.5
Employers' social contributions	333.1	335.0	346.0	161.2	171.8	163.5	171.5	169.3	176.7
Gross wages and salaries	1,497.2	1,543.4	1,610.3	721.1	776.1	739.4	804.1	768.0	842.3
Other primary income of private households ⁴	559.9	594.0	626.1	303.3	256.7	322.2	271.8	342.7	283.4
Primary income of other institutional sectors	370.0	499.2	516.6	146.2	223.8	203.1	296.1	229.2	287.3
Net national income (primary income)	2,760.2	2,971.6	3,099.0	1,331.8	1,428.4	1,428.2	1,543.5	1,509.2	1,589.8
Consumption of fixed capital	656.5	668.3	691.1	329.1	327.4	331.8	336.5	343.5	347.6
Gross national income	3,416.8	3,639.9	3,790.2	1,660.9	1,755.8	1,759.9	1,880.0	1,852.8	1,937.4
<i>Memorandum item:</i>									
Net national income (factor costs)	2,517.2	2,646.8	2,726.7	1,196.5	1,320.6	1,263.9	1,382.9	1,318.6	1,408.1
Property and entrepreneurial income	686.9	768.4	770.4	314.2	372.7	361.0	407.4	381.3	389.1
Compensation of employees	1,830.3	1,878.4	1,956.3	882.4	947.9	902.9	975.5	937.3	1,019.1
b) Percentage change over previous year									
Primary income of private households ²	-1.4	3.4	4.5	-1.1	-1.7	3.3	3.6	4.5	4.4
Employers' social contributions	2.7	0.6	3.3	2.6	2.8	1.4	-0.2	3.5	3.1
Gross wages and salaries	-1.6	3.1	4.3	-0.8	-2.3	2.5	3.6	3.9	4.8
Other primary income of private households ⁴	-3.2	6.1	5.4	-3.6	-2.8	6.2	5.9	6.4	4.3
Primary income of other institutional sectors	-22.7	34.9	3.5	-31.6	-15.6	38.9	32.3	12.9	-3.0
Net national income (primary income)	-4.9	7.7	4.3	-5.7	-4.2	7.2	8.1	5.7	3.0
Consumption of fixed capital	2.6	1.8	3.4	3.6	1.6	0.8	2.8	3.5	3.3
Gross national income	-3.6	6.5	4.1	-4.0	-3.2	6.0	7.1	5.3	3.1
<i>Memorandum item:</i>									
Net national income (factor costs)	-1.8	5.1	3.0	-3.8	0.0	5.6	4.7	4.3	1.8
Property and entrepreneurial income	-4.4	11.9	0.3	-12.5	3.8	14.9	9.3	5.6	-4.5
Compensation of employees	-0.8	2.6	4.1	-0.2	-1.5	2.3	2.9	3.8	4.5
6. Income and expenditure of private households									
a) Billion EUR									
Mass income	1,524.5	1,565.6	1,605.0	732.6	792.0	758.6	807.0	770.7	834.3
Net wages and salaries	1,009.8	1,046.3	1,086.2	480.6	529.2	494.2	552.1	510.3	575.9
Social benefits	654.2	663.9	669.2	320.9	333.3	335.8	328.1	334.7	334.6
Fees levied on social benefits	139.5	144.6	150.4	69.0	70.5	71.4	73.2	74.2	76.1
Other primary income ⁴	559.9	594.0	626.1	303.3	256.7	322.2	271.8	342.7	283.4
Other transfers received (net) ⁵	-90.2	-92.0	-93.1	-45.7	-44.5	-46.5	-45.5	-47.1	-45.9
Disposable income	1,994.2	2,067.6	2,138.1	990.1	1,004.1	1,034.3	1,033.3	1,066.4	1,071.7
<i>Memorandum item:</i>									
Adjustment for the change in net equity of households in pension funds reserves	57.4	57.4	57.5	27.9	29.5	27.9	29.5	27.9	29.5
Private consumption expenditure	1,715.4	1,857.3	1,956.2	833.0	882.5	893.3	964.0	957.4	998.8
Saving	336.2	267.8	239.4	185.0	151.2	168.9	98.9	136.9	102.4
Saving ratio in percent ⁶	16.4	12.6	10.9	18.2	14.6	15.9	9.3	12.5	9.3
b) Percentage change over previous year									
Mass income	2.2	2.7	2.5	2.2	2.3	3.6	1.9	1.6	3.4
Net wages and salaries	-1.0	3.6	3.8	-0.4	-1.6	2.8	4.3	3.3	4.3
Social benefits	7.9	1.5	0.8	6.6	9.2	4.7	-1.6	-0.4	2.0
Fees levied on social benefits	3.0	3.7	4.0	3.2	2.8	3.6	3.8	3.9	4.0
Other primary income ⁴	-3.2	6.1	5.4	-3.6	-2.8	6.2	5.9	6.4	4.3
Disposable income	1.2	3.7	3.4	1.0	1.5	4.5	2.9	3.1	3.7
Private consumption expenditure	-5.1	8.3	5.3	-5.8	-4.3	7.2	9.2	7.2	3.6
Savings	52.6	-20.3	-10.6	49.2	57.1	-8.7	-34.6	-18.9	3.6

APPENDIX: NATIONAL ACCOUNTS DATA

Continued: The Main National Accounts Data for the Federal Republic of Germany

Forecast for 2020 to 2022

	2020	2021	2022	2020		2021		2022	
				1. half year	2. half year	1. half year	2. half year	1. half year	2. half year
7. Government revenues and expenditures³									
a) Billion EUR									
Revenues									
Taxes	755.4	813.4	863.0	386.6	368.9	415.6	397.8	437.3	425.7
Direct taxes	419.8	422.9	444.7	212.3	207.5	213.2	209.7	224.2	220.5
Indirect taxes	335.6	390.5	418.3	174.3	161.4	202.4	188.1	213.1	205.2
Net social contributions	606.2	618.4	639.8	295.2	311.0	300.6	317.8	311.6	328.2
Property income	19.7	18.3	18.2	12.0	7.7	10.7	7.6	10.7	7.5
Other transfers	24.3	24.7	25.1	11.2	13.1	11.4	13.3	11.6	13.5
Capital transfers	15.1	14.8	15.2	7.0	8.0	6.7	8.1	6.9	8.3
Sales	123.0	128.0	132.0	58.0	65.0	60.4	67.6	62.4	69.6
Other subsidies	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1
Total revenues	1,543.8	1,617.8	1,693.5	770.0	773.8	805.6	812.3	840.5	853.0
Expenditures									
Intermediate consumption	205.4	206.8	212.1	97.7	107.7	97.0	109.7	99.6	112.6
Compensation of employees	282.7	288.8	295.4	136.3	146.5	139.4	149.4	142.5	152.8
Social benefits in kind	307.2	329.1	340.9	150.2	157.0	160.9	168.2	168.4	172.5
Property income (interests)	23.8	20.7	18.6	11.8	12.0	10.1	10.6	9.0	9.6
Subsidies	92.5	65.6	46.0	38.9	53.6	38.1	27.5	22.4	23.5
Social benefits	593.2	602.8	607.9	290.6	302.7	305.4	297.4	304.1	303.8
Other transfers	83.1	91.6	92.9	40.2	42.8	44.7	46.9	45.8	47.1
Gross capital formation	92.8	100.5	104.4	40.8	52.0	43.7	56.8	46.6	57.8
Capital transfers	49.9	58.3	53.9	18.1	31.8	24.1	34.2	21.8	32.1
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	1,729.9	1,763.4	1,771.2	824.2	905.6	863.1	900.2	859.8	911.4
Balance	-186.0	-145.5	-77.7	-54.2	-131.8	-57.6	-88.0	-19.3	-58.4
b) Percentage change over previous year									
Revenues									
Taxes	-8.7	7.7	6.1	-7.1	-10.3	7.5	7.8	5.2	7.0
Direct taxes	-8.2	0.7	5.2	-8.7	-7.7	0.4	1.0	5.1	5.2
Indirect taxes	-9.2	16.3	7.1	-5.0	-13.4	16.1	16.6	5.3	9.1
Net social contributions	1.4	2.0	3.5	1.8	1.1	1.8	2.2	3.7	3.3
Property income	-10.2	-7.1	-0.7	-9.1	-11.8	-10.3	-2.2	-0.4	-1.1
Other transfers	-3.4	1.7	1.6	-1.0	-5.4	1.7	1.6	1.5	1.7
Capital transfers	9.4	-1.5	2.2	15.9	4.4	-3.9	0.7	2.3	2.1
Sales	-1.5	4.1	3.1	-1.1	-1.9	4.1	4.1	3.3	3.0
Other subsidies	-11.0	0.0	0.0	-7.9	-12.8	0.0	0.0	0.0	0.0
Total revenues	-4.1	4.8	4.7	-3.2	-5.1	4.6	5.0	4.3	5.0
Expenditures									
Intermediate consumption	12.9	0.7	2.6	17.7	8.8	-0.7	1.9	2.6	2.6
Compensation of employees	4.1	2.2	2.3	4.5	3.8	2.3	2.0	2.2	2.3
Social benefits in kind	2.3	7.1	3.6	1.6	2.9	7.1	7.1	4.6	2.6
Property income (interests)	-13.3	-12.9	-10.4	-17.9	-8.4	-13.9	-11.9	-11.4	-9.4
Subsidies	200.4	-29.1	-30.0	170.7	226.4	-2.2	-48.6	-41.1	-14.6
Social benefits	8.8	1.6	0.9	7.3	10.2	5.1	-1.8	-0.4	2.2
Other transfers ⁷	8.9	8.6	1.3	3.6	5.4	4.5	4.1	1.1	0.2
Gross capital formation	7.7	8.2	3.9	8.3	7.3	7.0	9.2	6.6	1.8
Capital transfers ⁷	8.9	8.4	-4.4	29.3	17.7	33.4	7.5	-9.7	-6.1
Acquisitions less disposals of non-financial non-produced assets ⁷	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Other taxes on production ⁷	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0
Total expenditures	11.0	1.9	0.4	10.1	11.9	4.7	-0.6	-0.4	1.2

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 Winter 2020.