Global Economic Effects of COVID-19

Updated November 10, 2021

Congressional Research Service
https://crsreports.congress.gov
R46270

CRS REPORT
Prepared for Members and
Committees of Congress

Congressional Research Service
Informing the legislative debate since 1914

Global Economic Effects of COVID-19

SUMMARY

The COVID-19 viral pandemic is an unprecedented global phenomenon that is also a highly personal experience with wide-ranging effects. On September 20, 2021, U.S. viral deaths surpassed the 675,446 total from the 1918 Spanish flu, the previously worst U.S. pandemic-related death total on record. The pandemic has disrupted lives across all countries and communities and negatively affected global economic growth in 2020 beyond anything experienced in nearly a century. Estimates indicate the virus reduced global economic growth in 2020 to an annualized rate of around -3.2%, with a recovery of 5.9% projected for 2021. Global trade is estimated to have fallen by 5.3% in 2020, but is projected to grow by 8.0% in 2021. According to a consensus of forecasts, the economic downturn in 2020 was not as negative as initially estimated, due in part to the fiscal and monetary policies governments adopted in 2020. In most countries, economic growth fell sharply in the second quarter of 2020, rebounded quickly in the third quarter, and has been mostly positive since. Although lessening, the total global economic effects continue to mount. In particular, the prolonged nature of the health crisis is affecting the global economy beyond traditional measures with potentially long-lasting and far-reaching repercussions. Economic forecasts reflect continuing risks to a sustained global recovery posed by a resurgence of infectious cases and potential inflationary pressures associated with pent-up consumer demand fueled by an increase in personal savings. On the supply side, shortages reflect lingering disruptions to labor markets, production and supply chain bottlenecks, disruptions in global energy markets, and shipping and transportation constraints that are adding to inflationary pressures.

As some developed economies start recovering, central banks and national governments are weighing the impact and timing of tapering off monetary and fiscal support as a result of concerns over potential inflationary pressures against the prospect of slowing the pace of the recovery. These concerns are compounded by the emergence of new disease variants and rolling pandemic hotspots that challenge national efforts to contain infections and fully restore economic activities. Major advanced economies, comprising 60% of global economic activity, are projected to operate below their potential output level through at least 2024, which indicates lower national and individual economic welfare relative to pre-pandemic levels. Compared with the synchronized nature of the global economic slowdown in the first half of 2020, the global economy has shown signs of a two-track recovery that began in the third quarter of 2020 and has been marked by a nascent recovery in developed economies where rates of vaccinations are high, but a slower pace of growth in developing economies where vaccination rates are low.

As a whole, developed economies have made strides in vaccinating growing shares of their populations, raising prospects of a sustained economic recovery in late 2021 and into 2022 and, in turn, a recovery in the broader global economy. However, new variants of the COVID-19 virus and a surge in diagnosed cases in large developing economies and resistance to vaccinations among some populations in developed economies raise questions about the speed and strength of an economic recovery over the near term. A resurgence of infectious cases in Europe, Latin America, Russia, the United States, Japan, Brazil, India, and across much of Africa renewed calls for lockdowns and curfews and threatened to weaken or delay a potential sustained economic recovery into late 2021. The economic fallout from the pandemic has had a disparate impact on certain sectors of the economy, particularly the service sector, and certain population groups and could risk continued labor dislocations. In some cases, workers are reconsidering their career choices and work patterns, which may imply post-pandemic economies marked by more varied labor arrangements and altered urban environments.

The human costs in terms of lives lost will permanently affect global economic growth in addition to the cost of elevated levels of poverty, lives upended, careers derailed, and increased social unrest. Some estimates indicate that 65 million to 75 million people may have entered into extreme poverty in 2020 with 80 million more undernourished compared to pre-pandemic levels. In addition, some estimates indicate that the decline in global trade in 2020 exacted an especially heavy economic toll on trade-dependent developing and emerging economies. This report provides an overview of the global economic costs to date and the response by governments and international institutions to address these effects.

R46270

November 10, 2021

James K. Jackson, Coordinator
Specialist in International Trade and Finance

Martin A. Weiss
Specialist in International Trade and Finance

Andres B. Schwarzenberg
Analyst in International Trade and Finance

Rebecca M. Nelson
Specialist in International Trade and Finance

Karen M. Sutter
Specialist in Asian Trade and Finance

Michael D. Sutherland
Analyst in International Trade and Finance

Contents

Figures

Tables

Contacts

Overview

The World Health Organization (WHO) first declared COVID-19 a global health emergency in January 2020; on March 11 it announced the viral outbreak was officially a pandemic, the highest level of health emergency.[1] Since then, the emergency evolved into a global public health and economic crisis that affected the $90 trillion global economy beyond anything experienced in nearly a century. In a variance of John Donne's poem, "No Man is an Island," the viral infection spread between and across countries and affected nearly every community, demonstrating the highly interconnected nature of the global economy: the virus has been detected in every country and all U.S. states.[2] The focal point of infections shifted from China to Europe, especially Italy, by early March 2020, but by April, the focus had shifted to the United States, where the number of infections had been accelerating. By April 2021, India, Brazil, parts of Africa and Asia emerged as viral hot spots with the number of infections and deaths reaching daily record levels.

By mid-September 2021, the more virulent COVID-19 Delta variant reportedly had become the more globally dominant strain of the virus and prompted various national leaders to call for additional health measures, including reintroducing travel restrictions.[3] Projections by the European Center for Prevention and Disease Control (ECDC) indicated the variant could account for 90% of coronavirus infections across much of Europe by the end of August 2021 and "could lead to a fast and significant increase in daily cases in all age groups."[4] The Delta variant was also growing as a share of total cases in the United States, accounting for 97.9% of all cases in late August 2021, according to the Center for Disease Control (CDC).[5] After escaping the initial rounds of infections, cases were growing rapidly in Australia and New Zealand, which instituted restrictions on social gatherings and movement.[6] COVID-19 infections were rising in Russia in June 2021, reportedly due to the unwillingness of the populace to receive the Russian-developed Sputnik V vaccine.

According to the World Health Organization, by November 1, 2021, the COVID-19 virus had sickened over 246.6 million people globally with over 5.0 million fatalities:[7] the United States reported that over 45.6 million Americans had been diagnosed and over 740 thousand people had died from the virus. At one point, more than 80 countries had closed their borders to arrivals from countries with infections, ordered businesses to close, instructed their populations to self-quarantine, and closed schools to an estimated 1.5 billion children.[8] On August 23, 2021, the

---

[1] Bill Chappell, "COVID-19: COVID-19 Is Now Officially a Pandemic, WHO Says," *National Public Radio*, March 11, 2020. https://www.npr.org/sections/goatsandsoda/2020/03/11/814474930/COVID-19-COVID-19-is-now-officially-a-pandemic-who-says.

[2] "Mapping the Spread of the COVID-19 in the U.S. and Worldwide," Washington Post Staff, *Washington Post*, March 4, 2020. https://www.washingtonpost.com/world/2020/01/22/mapping-spread-new-COVID-19/?arc404=true.

[3] Ang, Katerina, Delta is By Far World's Most Dominant Coronavirus Variant, WHO Says, *The Washington Post,* September 22, 2021; Gross, Anna, Leila Abboud, and John Burn-Murdoch, Delta Variant Begins to Spread, Threatening EU's Covid Progress, *Financial Times*, June 21, 2021. https://www.ft.com/content/d4abbe5e-8650-4a76-9fea-2d3efa2ed52b.

[4] Miller, Michael E., Covid-19 Updates: Merkel Warns Europe is 'On Thin Ice' as Concerns About Delta Variant Grow, *The Washington Post*, June 25, 2021.

[5] Center for Disease Control. https://covid.cdc.gov/covid-data-tracker/#variant-proportions.

[6] Pannett, Rachael, Sydney Enters 'Scariest' Phase of Pandemic as Delta Variant Spreads, Leader Says, *The Washington Post*, June 24, 2021.

[7] World Health Organization. https://covid19.who.int/.

[8] "The Day the World Stopped: How Governments Are Still Struggling to Get Ahead of the COVID-19," *The Economist,* March 17, 2020. https://www.economist.com/international/2020/03/17/governments-are-still-struggling-to-

Food and Drug Administration (FDA) gave full approval to the Pfizer-BioNTech coronavirus vaccine, leading various institutions and the U.S. military to begin mandating vaccinations for employees and members.[9]

As infectious cases began rising sharply in late February 2020, governments took unprecedented steps in March 2020 to lock down social activities to contain the spread of the pandemic, inadvertently creating a global economic recession. Government responses in March 2020 were extraordinary in terms of the speed with which they took place, the broad scope of the fiscal and monetary policies they adopted, and the number of countries that were involved, often without a formal, coordinated plan. Initially, governments adopted monetary policies aimed at stabilizing financial markets and ensuring the flow of credit. In the second phase, governments focused policy actions on fiscal measures aimed at sustaining economic growth as they adopted quarantines and social distancing measures. In the third phase, governments shifted policies to developing, purchasing and distributing vaccines. As the health and economic effects have evolved and persisted, the phases of government actions have become less distinct: efforts to vaccinate populations have coincided with additional fiscal measures to sustain household income, for instance.

The Bureau of Economic Analysis (BEA) reported that policy actions to lock down the economy pushed the U.S. GDP growth rate down to 9.0% in the second quarter of 2020 compared with the previous quarter, or at an annualized rate of -31%, the largest quarterly decline in U.S. GDP recorded over the past 70 years.[10] Subsequently, U.S. GDP grew by 7.5% in the third quarter, or at an annualized rate of 30%, based primarily on gains in personal consumption, reflecting an increase in income and support through government transfer payments.[11] Fourth quarter 2020 data indicate the U.S. economy grew by slightly more than 1.0% over the third quarter, or at an annualized rate of 4.5%. On a year-over-year basis, U.S. real GDP is estimated to have declined by 3.4% in 2020 compared with 2019.[12] In the third quarter of 2021, the annual rate of growth of U.S. GDP rose by 2.0%, after rising by 6.3% and 6.7% in the first and second quarters, respectively.

In its September 8, 2021, Beige Book analysis, the Federal Reserve (Fed) reported that economic activity had slowed slightly in the July through August period compared with moderate to robust growth in all 12 Federal Reserve Districts during the May to early July period. The Fed attributed the slowdown in activity to lower levels of consumer dining and recreation activities arising from concerns over the spread of infections by the Delta variant of the COVID-19 virus. Other sectors of the economy experienced slower growth as a result of labor and supply-side shortages. Low inventory levels in the auto sector and reduced supplies of residential housing also constrained sales activity in these sectors; the Fed also reported mild gains in residential and nonresidential construction and in the energy and agricultural sectors.[13] In its Monetary Policy report on September 22, the Fed indicated the economy had recovered to the point where it could begin a

get-ahead-of-the-COVID-19.

[9] Guarino, Ben, Laurie McGinley and Tyler Pager, Pfizer-BioNTech Coronavirus Vaccine Gets Full FDA Approval, Potentially Persuading the Hesitant to Get a Shot, *The Washington Post*, August 23, 2021.

[10] *Gross Domestic Product, 2nd Quarter 2020 (Advance Estimate) and Annual Update*, Bureau of Economic Analysis, July 30, 2020. https://www.bea.gov/news/2020/gross-domestic-product-2nd-quarter-2020-advance-estimate-and-annual-update.

[11] *Gross Domestic Product, Third Quarter 2020 (Advance Estimate),* Bureau of Economic Analysis, October 29, 2020.

[12] *Gross Domestic Product, Third Quarter 2021 (Advance Estimate),* Bureau of Economic Analysis, October 28, 2021.

[13] *The Beige Book: Summary of Commentary on Current Economic Conditions by Federal Reserve District*, the Federal Reserve System, September 8, 2021. https://www.federalreserve.gov/monetarypolicy/beige-book-default.htm.

gradual tapering off its monthly asset purchases in November, characterized as a "moderation in the pace of asset purchases," and make adjustments to interest rates in 2022.[14]

The Fed's Beige Book analytical period occurred prior to a strong Gulf-centered hurricane in late August that compounded existing shipping and transportation issues through Gulf ports that were struggling with pandemic-related issues that had handicapped oil production, refining and transportation, and shipments of agricultural products. In addition, damage to housing stock, urban infrastructure, and increased need for medical assistance in Gulf Coast areas increased strains on communities already struggling with the impact of the pandemic that further compounded efforts by workers to return to their jobs.[15]

Through the various stages of the pandemic-related health and economic crises, governments responded with a number of policy initiatives that often attempted to balance competing policy objectives. As the health crisis subsides and economic activity resumes, policymakers may consider evaluating the various policy approaches for lessons learned and for best practices to employ in addressing similar crises, should they arise. Such an evaluation could include

- Assessing the short and long-term costs and benefits of fiscal policies that were adopted during the crisis to address employment dislocations and support social safety nets, compared with the potential long-term impact of deficit spending on the rate of inflation and the long-term financial stability of the economy.
- Evaluating the costs and benefits of economy-wide business and social lockdowns compared with the impact and effectiveness of targeted closures or other types of restrictions.
- Reviewing the effectiveness of monetary and fiscal policies that were adopted to support credit markets and sustain economic activity broadly during the initial stages of the crisis, compared with policies targeted to assist specific sectors and businesses as they experienced financial distress.
- Assessing the effectiveness of transfer payments that were directed at supporting the most heavily affected households, the impact of such payments on household saving rates, consumption, and decisions to return to full-time employment, the necessary conditions and timing for tapering off the support, and the impact on the long-term rate of growth between public versus private debt.
- Assessing the impact that central banks and monetary authorities had on financial markets and market liquidity by intervening in sovereign debt and corporate bond markets during the early stages of the health and economic crisis and the impact, if any, on the ability of the markets to perform their traditional functions of pricing risk and allocating capital.
- Assessing the optimal combination and impact of fiscal policies during a national or global economic crisis between assisting households, firms, or state and local governments.
- Evaluating the effectiveness of unemployment insurance systems that provide short-term unemployment insurance to sustain workers incomes, compared with

[14] *Press Release*, Board of Governors of the Federal Reserve System, September 22, 2021; Smith, Colby and Kate Duguid, The Fed Prepares to Tighten: Five Takeaways From its Latest Meeting, *Financial Times*, September 22, 2021. https://www.ft.com/content/1cc28b4c-63ea-44c5-a0af-af681ee6a4a4.

[15] Plume, Karl, U.S. Gulf Coast Grain Exports Slowly Resume After Ida as More Power Restored, *Reuters*, September 9, 2021; Mohindru, Sameer C., and Pradeep Rajan, Hurricane Ida Roils Global Shipping Market: Sources, *S&P Global*, September 17, 2021.

European-style job retention programs that maintain pre-crisis employment, even as those jobs could disappear once the support ends.[16]

Background

According to the October 2021 *World Economic Outlook* prepared by the International Monetary Fund (IMF), global economic growth fell to an annualized rate of around -3.2% in 2020, with a recovery of 5.9% projected for 2021 and 4.9% for 2022.[17] The IMF also concluded that advanced economies would face continued economic challenges into 2022 as a result of supply shortages and that prospects for low-income developing economies "had darkened considerably" due to the disparities in access to vaccines and differences in economic policy support. The pandemic-related recession is characterized as being more global in nature than that experienced during the 2009-2010 global financial crisis as a result of its effects on developing economies. In its recent forecast, the IMF projected geographic regions of the global economy would recover at different speeds, reflecting differences in the pace of vaccinations, the extent of policy support, and various structural conditions, such as the role of tourism in the economy.

Through late October 2021, various key economic and financial indicators had rebounded from the depths of the pandemic-related economic recession, although not all parts of the global economy had recovered to pre-COVID-19 pandemic levels.[18] In addition, a resurgence in viral cases and the emergence of new and more virulent strains of the COVID-19 virus caused some institutions in late 2021 to lower their economic growth projections for 2021.[19] Although vaccination rates increased in various developed economies, particularly the United States, developing economies struggled to get access to vaccines and their populations vaccinated, and consequently, to get their economies operating at or above pre-pandemic levels. Financial market indices largely recovered from the losses experienced in March and April 2020, international oil prices surpassed the pre-pandemic levels, pressure appreciating the dollar had generally eased, and labor markets appeared to be stabilizing.

By fall 2021, prior to the end of U.S. pandemic-related unemployment assistance, U.S. and European consumers appeared to have adjusted to pandemic restrictions by relying on unemployment benefits, personal savings, and credit to sustain their consumption activities. Personal consumption expenditures generally increased and fell with the state of the spread of the virus and partial business closures. Increased household and business spending, however, increased demand for a broad range of products, including housing, food, energy, and new and used cars and trucks, that were constrained by supply shortages and raised U.S. consumer and producer prices in September, which rose at a monthly rate of 0.4% and 0.5%, or at annual rates of over 4.8% and 6.0%, respectively.[20]

Over the long run, damage to labor markets could be problematic with a large share of the labor force unable to or, in some sectors, unwilling to return to pre-pandemic jobs. In some cases, workers who were unemployed during the crisis reportedly reconsidered returning to their

[16] *Job Retention Schemes During the COVID-19 Lockdown and Beyond*, Organization for Economic Cooperation and Development, August 3, 2020.

[17] *World Economic Outlook Update,* International Monetary Fund, October, 2021, p. 6.

[18] Mapping the Spread of the COVID-19.

[19] Platt, Eric and Colby Smith, Economists Trim Forecasts and Investors Feel Jitters Over Delta Variant, *Financial Times*, August 19, 2021. https://www.ft.com/content/c21958ff-80d2-4b3b-863c-c492b361b2a4.

[20] *Consumer Price Index September 2021*, Bureau of Labor Statistics, October 13, 2021; *Producer Price Index September 2021*. Bureau of Labor Statistics, October 14, 2021.

previous jobs and were exploring other options, which potentially could affect the pace of the economic recovery.[21] Reportedly, employment in the U.S. child-care sector in August 2021was down more than 137,000 workers compared with March 2020 levels and played a role in keeping 1.6 million women who are mothers of children under the age of 17 from returning to the labor force.[22] Similarly, economies could face long-term costs as a result of children who were held out of in-person education for over a year that could result in lower academic performance and graduation rates and delayed entry into the labor market. On March 31, 2021, Kristalina Georgieva, Managing Director of the International Monetary Fund (IMF), also warned that an emerging market debt crisis could unfold as the global economy begins recovering and interest rates rise, which could cause a capital outflow from developing economies.[23]

Economic Policy Challenges

Over the course of the pandemic and economic crises, policymakers have had to adjust to the changing nature of the crises, while implementing targeted policies that address what had been expected to be short-term problems without creating distortions in economies that can outlast the impact of the virus itself. Initially, policymakers were overwhelmed by the quickly changing nature of the global health crisis and the immediate economic effects. The extended health crisis, however, created wide-ranging spill-over effects beyond those typically associated with monetary and fiscal policies in ways that have hampered national economic recoveries and reinforced a more wide-spread global trade and economic crisis. During the initial stages of the pandemic, policymakers weighed the impact of policies that addressed the immediate economic effects at the expense of longer-term considerations such as debt accumulation. Initially, many policymakers felt constrained in their ability to respond to the crisis as a result of limited flexibility for monetary and fiscal support within conventional standards, given the broad-based synchronized slowdown in global economic growth, especially in manufacturing and trade, which had developed prior to the viral outbreak.

Initially, the economic effects of the pandemic had been expected to arise from short-term supply issues as factory output fell, because workers were quarantined to reduce the spread of the virus through social interaction. The drop in China's GDP growth rate of 8.7% in the first quarter of 2020, as indicated in **Table 1**, had broad international repercussions that became evident in the second quarter of 2020 as firms experienced delays in supplies of intermediate and finished goods through supply chains. Concerns grew, however, that virus-related supply shocks had created more prolonged and wide-ranging demand shocks as reduced activity by consumers and businesses led to a lower rate of economic growth in most countries and most areas. Nearly every country experienced a decline in economic activity in the second quarter of 2020, with the notable exception of China, which experienced a rebound in its rate of growth by 10% over the previous quarter and was one of a few number of countries to post an overall positive rate of growth in 2020. In contrast to China's positive rate of growth in the second quarter of 2020, a broad range of countries experienced historic declines in growth, with India's GDP falling by nearly 25%. Similarly, most countries experienced a rebound in economic growth in the third quarter of 2020,

[21] Dodd, Darren, Businesses Suffer Labor Pains as Economies Reopen, *Financial Times*, June 21, 2021. https://www.ft.com/content/e47575aa-b6ec-4635-a0be-f4e623dacbdb.

[22] *The Employment Situation August 2021*, Bureau of Labor Statistics, September 3, 2021; Long, Heather, The Pay is Absolute Crap: Child-care Workers Are Quitting Rapidly: A Red Flag for the Economy, *The Washington Post*, September 20, 2021.

[23] Giles, Chris, Prepare for Emerging Markets Debt Crisis, Warns IMF Head, *Financial Times*, March 31, 2021. https://www.ft.com/content/487c30f4-7f21-4787-b519-dde52264d141.

although at rates that generally were lower than the rate of decline in the second quarter, reflecting challenges posed by the on-going health crisis.

As demand shocks unfolded, businesses experienced reduced activity and profits and potentially escalating and binding credit and liquidity constraints. While manufacturing firms experienced supply chain shocks, reduced consumer activity through social distancing affected the services sector of the economy, which accounts for two-thirds of annual U.S. economic output. In this environment, manufacturing and services firms initially tended to hoard cash, which affected market liquidity. In response, the Federal Reserve, along with other central banks, lowered interest rates where possible and expanded lending facilities to provide liquidity to financial markets and to firms potentially facing insolvency.

Table 1. Change in Gross Domestic Product by Major Country

Percentage change from previous period

			2020				2021	
Country	**2019**	**2020**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**
Argentina	-2.1%	-9.9%	-4.1%	-15.8%	13.2%	4.4%	2.6%	..
Australia	-0.3	-2.5	-0.3	-7.0	3.6	3.2	1.9	0.7
Austria	1.4	-6.3	-2.6	-10.6	11.6	-3.1	-1.1	4.3
Belgium	1.8	-6.3	-3.3	-11.9	11.8	-0.1	1.1	1.7
Brazil	..	..	-2.3	-9.0	7.7	3.1	1.2	-0.1
Canada	1.9	-5.3	-2.0	-11.3	9.1	2.2	1.4	-0.3
Chile	0.9	-5.8	1.9	-12.7	5.4	6.5	3.4	1.0
China	6.1	2.3	-8.7	10.0	2.8	3.0	0.4	1.3
Colombia	3.3	-6.8	-2.6	-14.8	9.7	6.2	2.9	-2.4
Costa Rica	2.2	-4.5	-1.2	-7.8	2.2	2.6	1.4	..
Czech R.	3.0	-5.8	-3.4	-8.9	6.8	0.7	-0.4	1.0
Denmark	2.1	-2.1	-0.7	-6.4	6.1	0.9	-0.9	2.3
Finland	1.3	-2.8	-0.5	-6.1	4.6	0.5	0.1	2.1
France	1.8	-7.9	-5.7	-13.5	18.6	-1.1	0.0	1.1
Germany	1.1	-4.6	-1.8	-10.0	9.0	0.7	-2.0	1.6
Greece	1.9	-8.2	-0.4	-13.0	3.9	3.5	4.5	3.4
Hungary	4.6	-5.0	-0.3	-14.4	10.6	1.6	2.0	2.7
India	..	..	0.6	-24.5	21.2	8.6	2.3	-10.2
Indonesia	5.0	-2.1	-0.9	-6.4	3.1	2.3	0.3	1.3
Ireland	4.9	5.9	2.6	-2.9	9.8	-4.6	8.7	6.3
Israel	3.8	-2.2	-1.2	-9.2	8.9	2.4	-0.4	3.9
Italy	0.3	-8.9	-5.6	-13.1	16.0	-1.8	0.2	2.7
Japan	0.3	-4.8	-0.6	-7.9	5.4	2.8	-1.1	0.5
Korea	2.0	-1.0	-1.3	-3.2	2.2	1.1	1.7	0.8
Luxembourg	2.3	-1.3	-1.6	-7.1	9.2	1.9	1.4	..
Mexico	-0.1	-8.2	-0.9	-17.3	12.7	3.3	1.1	1.5

			2020				2021	
Country	**2019**	**2020**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**
Netherlands	2.0	-3.8	-1.6	-8.4	7.5	0.0	-0.8	3.1
New Zealand	2.0	-1.1	-1.4	-9.9	13.9	-1.0	1.4	2.8
Norway	0.9	-0.8	-1.5	-4.6	4.3	0.8	-0.6	1.1
Poland	4.7	-2.7	-0.1	-9.2	7.7	-0.3	1.3	2.1
Portugal	2.5	-7.6	-4.0	-14.0	13.4	0.2	-3.2	4.9
Russia	2.0	..	-0.7	-2.6	0.7	-0.2	-0.0	..
Saudi Arabia	0.3	-4.1	-1.6	-5.5	2.1	1.8	-0.5	0.6
South Africa	0.2	-7.0	-0.4	-16.6	13.7	1.4	1.1	..
Spain	2.0	-10.8	-5.4	-17.8	17.1	0.0	-0.4	2.8
Sweden	2.0	-2.8	-0.8	-8.1	7.5	0.2	0.8	0.9
Switzerland	1.2	-2.4	-1.6	-6.2	6.4	-0.1	-0.4	1.8
Turkey	0.9	1.8	0.4	-10.8	16.4	1.2	2.2	0.9
United Kingdom	1.4	-9.8	-2.8	-19.5	16.9	1.3	-1.6	4.8
United States	2.3	-3.4	-1.3	-8.9	7.5	1.1	1.5	1.6
EU – 27	1.8	-5.9	-3.1	-11.3	11.8	-0.2	-0.1	2.1
OECD – Total	1.7	-4.7	-1.8	-10.4	9.4	1.1	0.6	1.7

Source: Organization for Economic Cooperation and Development, Quarterly National Accounts Dataset, September 17, 2021.

As the economic effects persisted through the spring and summer of 2020, the economic impact spread through trade and financial linkages to an ever-broadening group of countries, firms and households. These growing economic effects potentially increased liquidity constraints and credit market tightening in global financial markets as firms hoarded cash, with negative fallout effects on economic growth. At the same time, financial markets factored in what they anticipated would be an increase in government bond issuance in the United States, Europe, and elsewhere as government debt levels rose to meet spending obligations during an expected economic recession and increased fiscal spending to fight the effects of COVID-19. Unlike the 2008-2009 financial crisis, reduced demand by consumers, labor market issues, and a reduced level of activity among businesses, rather than risky trading by global banks, led to corporate credit issues and potential insolvency.

Liquidity and credit market issues presented policymakers with a different set of challenges than addressing supply-side constraints. As a result, the focus of government policy expanded from a health crisis to macroeconomic and financial market issues that were addressed through a combination of monetary, fiscal, and other policies, including border closures, quarantines, and restrictions on social interactions. Essentially, while businesses attempted to address worker and output issues at the firm level, national leaders attempted to implement fiscal policies to prevent economic growth from contracting sharply by assisting workers and businesses that faced financial strains, and central bankers adjusted monetary policies to address mounting credit market issues.

In the initial stages of the health crisis, households were concerned about a repeat of the loss of wealth they experienced during the 2008-2009 financial crisis when the value of their primary residence dropped sharply. Instead, home prices rose in the United States and Europe as supply bottlenecks raised the cost of construction materials and demand for housing increased due in part to low interest rates. Simultaneously, rising rates of unemployment and job losses raised concerns that defaults on mortgages and delinquencies on rent payments could increase and would require some financial institutions to provide loan forbearance or other mechanism to provide financial assistance. Various central banks offered specific programs to forestall mortgage foreclosures and rent assistance to prevent an increase in homelessness. In the first stages of the economic downturn, mortgage defaults threatened to negatively affect the market for mortgage-backed securities, the availability of funds for mortgages, and negatively affected the overall rate of economic growth. Losses in the value of most equity markets in the U.S., Asia, and Europe were projected at that time to affect household wealth, especially that of retirees living on a fixed income and others who own equities. Subsequently, increased demand for housing outside large urban areas by workers shifting to at-home work and an increase in prices for construction materials raised the prices for U.S. housing by an estimated 13.2% in 2020[24] and contributed to an increase in U.S. household wealth.[25]

Within countries, the employment and earnings of youth, women, and the relatively lower-skilled workers have been affected disproportionately. The two-track nature of the economic recovery between developed and developing economies combined with new variants of the virus and viral outbreaks in some major developing economies increased the impact of the crisis on the global economy and complicated economic forecasts. The IMF estimated in October 2021 the economic fallout from the pandemic pushed 65 to 75 million people into extreme poverty, reversing a decades-long trend.[26] However, the IMF also concluded that spending on social programs to limit the impact of the pandemic could reduce the number of people falling into extreme poverty.

In addition to the asynchronous recovery, the IMF concluded that support provided by central banks may have had unintended consequences of supporting equity valuations that at times may have been misaligned with their model-estimated fundamentals and may have increased financial risks overall that could become problematic should interest rates rise.[27] These risks could increase for non-financial firms and households that had high levels of debt relative to income prior to the pandemic crisis. Accommodative monetary and fiscal policies intended to limit the economic impact of the crisis may have aided non-financial firms and households, but such support may also have come at the expense of higher debt levels for most countries and the prospect of a lower rate of economic growth in the future.[28]

The staggered economic recovery is projected to widen gaps in living standards between developed economies and others. Such differences in living standards are estimated to reflect differences in cumulative per capital income with losses in 2020 to 2022 projected to be equivalent to 20% of 2019 global GDP, or about $18 trillion. The largest losses are estimated to fall disproportionately on low-income and emerging market economies. In addition, the IMF estimated that (1) per capita incomes would remain below the pre-pandemic levels for several years, adversely affecting productivity; (2) the demands placed on national health systems to

---

[24] Adamczyk, Alicia, *The Typical Home Price is Up a Record 13.2% Compared to Last Year, According to Zillow*, CNBC, June 16, 2021. https://www.cnbc.com/2021/06/16/typical-us-home-price-up-record-13point2percent-compared-to-last-year.html.

[25] According to the Federal Reserve, between Q1 2020 and Q1 2021, the value of U.S. household holdings of real estate increased by nearly 10%, rising to $37.6 trillion and accounting for 84% of household wealth. *Financial Accounts of the United States,* Board of Governors of the Federal Reserve System, First Quarter 2021, June 10, 2021.

[26] *Fiscal Monitor,* International Monetary Fund, October 2021, p. 2.

[27] *Global Financial Stability Report*, International Monetary Fund, October, 2021, p. 2.

[28] Ibid., p. 36.

address the pandemic could hinder the treatment of other diseases; (3) business bankruptcies could reduce productivity; and (4) rising debt levels could crowd out potential borrowing and investment.[29]

The IMF urged G-20 leaders to maintain supportive monetary and fiscal policies to lessen the economic impact of the global recession, In particular, the IMF recommended a combination of accommodative monetary policies characterized by low interest rates and central bank programs to facilitate credit availability, a continuation of fiscal support for individuals and firms, and engagement in a synchronized infrastructure investment program to promote growth. According to an IMF analysis, all other things being equal, an increase in infrastructure spending by G-20 countries of one-half percent of their GDP in 2021 and 1% in 2022 through 2025 would increase global GDP by 2% in 2025, compared with under 1.2% growth for an unsynchronized approach.[30]

On December 2, 2020, IMF Managing Director Kristalina Georgieva indicated the global financial system had been resilient enough to withstand the impact of the global pandemic, but she urged policymakers to "act quickly" to return economic growth to its re-pandemic levels and avoid widespread financial distress.[31] The Director reportedly also urged policymakers to take "urgent, coordinated steps" to deliver investment in digital technology, infrastructure and the environment. She also indicated the IMF had projected that the loss of global economic output between 2020 and 2025 as a consequence of the pandemic would total $28 trillion and that 120 million jobs would be lost permanently in the tourism industry alone. The pandemic-related economic recession raised concerns over the growing debt problems in developing economies, where the IMF projected that as much as 40% of banks assets were in danger of becoming distressed.

Impact on Workers

In a report prepared for the January 25-29, 2021, World Economic Forum, the International Labor Organization (ILO) estimated that 93% of the world's workers at that time were living under some form of workplace restrictions as a result of the global pandemic and that 8.8% of global working hours were lost in 2020 relative to the fourth quarter of 2019, an amount equivalent to 255 million full-time jobs. The ILO estimated the loss in working hours was comprised of (1) workers who were unemployed, but actively seeking employment, (2) workers who were employed, but had their working hours reduced, and (3) workers who were unemployed and not actively seeking employment. Based on this approach, the ILO estimated that unemployment globally was equivalent to 0.9% of total working hours lost in 2020, while inactivity and reduced hours accounted for 7.9% of total working hours lost, as indicated in **Figure 1**.

Total working hours lost in 2020 compared with 2019 were highest in Europe (14.6%) and the Americas (13.7%), where quarantines and lockdowns had been extensive, followed by lower-middle income economies. The ILO also estimated that global job losses totaled 114 million jobs in 2020 relative to 2019. The share of lost worker hours due to higher rates of unemployment were highest in Europe (6.0%), the Americas (2.7%), including the United States, and Arab States

---

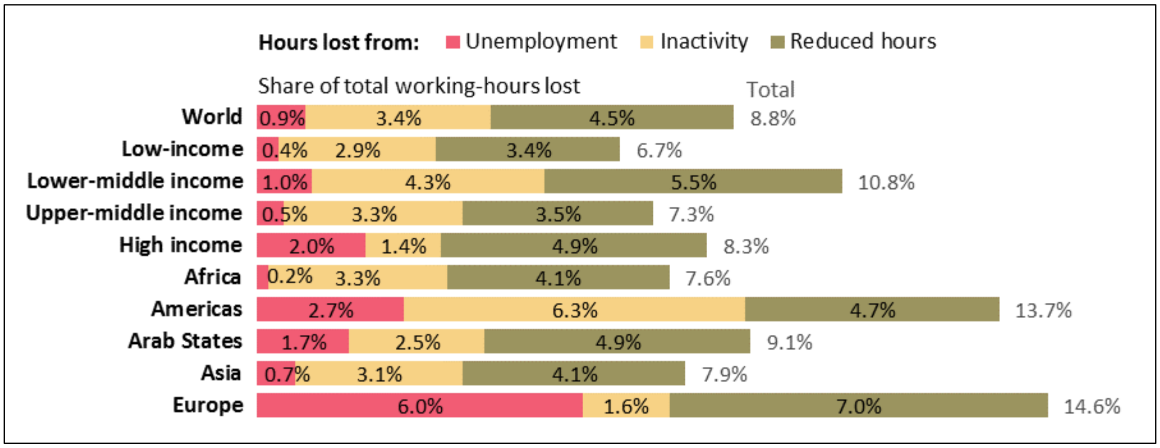
[29] *G-20 Surveillance Note,* International Monetary Fund, November, 2020, p. 6.

[30] Ibid., p. 10.

[31] Wheatley, Jonathan, IMF Chief Warns Against Complacency on Global Economy, *Financial Times*, December 2, 2020. https://www.ft.com/content/fda34b47-33d2-457e-a0b6-45be6001920d.

(1.7%).[32] The ILO also estimated that an increase in global economic activity through part of the fourth quarter was equal to an increase of 130 million full-time jobs.

Figure 1. Composition of Working-Hours Lost by Region, 2020



Source: *ILO Monitor: COVID-19 and the World of Work,* International Labor Organization, 2021.

In June 2021, the ILO published an updated report that estimated employment levels globally remained below pre-pandemic levels through the first half of 2021, due to waves of COVID-19 infectious cases. Consequently, the ILO estimated that working hours fell by 4.8% in the first quarter of 2021 and by 4.4% in the second quarter of 2021, or an amount equivalent to 140 million jobs and 127 million full-time jobs, respectively. The ILO also estimated the loss in total hours worked in the first half of 2021 was equivalent to 5.3% loss in global worker income, exclusive of government transfer payments and benefits, or an amount equivalent to $1.3 trillion. Despite a projected rebound in job growth in 2021 and 2022, the ILO estimated that employment levels would fall short by 75 million jobs in 2021 and 25 million in 2022 compared to the number of jobs that had been projected to be created in the absence of the pandemic.[33]

Similarly, the OECD estimated in July 2021 the pandemic-related recession cost 22 million jobs in OECD countries in 2020 and that 114 million jobs had been lost globally, compared with 2019.[34] The estimate concluded that unprecedented government fiscal policies supported worker's incomes, thereby likely limiting the impact of shutdowns and social restrictions on labor markets. Nevertheless, the OECD concluded the unique nature of the crisis accentuated and deepened economic and social divides along skill levels, education, income, and gender bases in OECD countries and amplified longstanding trends toward increasing economic inequalities in many OECD countries.[35]

A number of economists and others estimated that pandemic-related disruptions to labor markets in developed and developing economies could have long-lasting effects. One group of economists estimated that even after the pandemic recedes and economic activity ramps up, firms may not abandon the labor-saving lessons they learned, with fewer jobs created in retail stores, restaurants,

---

[32] *ILO Monitor: COVID-19 and the World of Work, Seventh Edition*, International Labor Organization, January 15, 2021, p. 2.

[33] *World Employment and Social Outlook, Trends 2021*, International Labor Organization, June 2021.

[34] OECD Employment Outlook 2021: Navigating the COVID-19 Crisis and Recovery, Organization for Economic Cooperation and Development, July 2021, p. 4.

[35] Ibid., p. 5.

auto dealerships, and meat-packing facilities, among other places.[36] Other analysts estimated the pandemic could affect the structure of work in three main areas by

1. Creating a permanent presence of telework, which could account for 20% to 25% of workers in developed economies and 20% in developing economies working from home three to five times per week, which could reduce demand for public transportation, restaurants, and retail stores;
2. Increasing the level of e-commerce that could disrupt jobs in travel and leisure, low-wage jobs in brick-and-mortar stores and restaurants, and increase jobs in distribution centers.
3. Accelerating the adoption of artificial intelligence (AI) and robotics.[37]

Analysts with the Pew Research Center surveyed American workers in January 2021 who were unemployed and looking for work. The results indicated that half of those surveyed were pessimistic about finding another job in the near future and two-thirds had considered changing their occupations, a sentiment shared across income levels. The other third indicated they had already engaged in re-skilling through job retraining programs or educational activities.[38]

U.S. Labor Market

In the United States, labor markets were recovering, but by September 2021 the overall rate of unemployment remained above pre-pandemic rates. In testimony before the Senate and House in mid-July 2021, Federal Reserve Chairman Jerome Powell indicated that vaccinations had led to a reopening of the economy and "strong economic growth and improvements in the labor market," but that there was still a long way to go.[39] He indicated the rate of unemployment had fallen, but the rate was still elevated and the official published rate understated the actual shortfall in employment as a result of a workforce participation rate that remained below pre-pandemic levels. The Federal Reserve also indicated in an accompanying monetary policy report the pandemic-related economic recession was disproportionately affecting certain groups in the economy: lower-wage and less-educated workers, racial and ethnic minorities, and women.[40]

According to the U.S. Census Bureau, between March 2020 and February 2021, 115 million Americans experienced a loss in employment income and 37 million qualified for and received unemployment insurance. In addition, an estimated 26 million households reported receiving Supplemental Nutritional Assistance Program (SNAP) in February 2021, while nearly 12 million households with children were estimated not to have had enough to eat.[41]

Additionally, the Census Bureau data indicated the stimulus checks appropriated under the COVID-19 Aid, Relief, and Economic Security Act (P.L. 116-136) were used by households to cover usual expenses such as food, housing, and gas. The Census Bureau reported that

[36] Autor, David, and Elizabeth Reynolds, *The Nature of Work After the COVID Crisis: Too Few Low-Wage Jobs*, The Hamilton Project, Brookings Institution, July 2020, p. 2

[37] McKinsey Global Institute, *The Future of Work After COVID-19*, February 18, 2021.

[38] Parker, Kim, Ruth Igielnik, and Rakesh Kochhar *Unemployed Americans are Feeling the Emotional Strain of Job Loss; Most Have Considered Changing Occupations*, Pew Research Center. February 10, 2021.

[39] Powell, Jerome, H., Testimony before the House Financial Services Committee and the Senate Committee on Banking, Housing, and Urban Affairs, July 15, 2021.

[40] Board of Governors of the Federal Reserve System, *Monetary Policy Report*, July 9, 2021.

[41] Monte M., Lindsay, Historical Look at Unemployment, Sectors Shows Magnitude of COVID-19 Impact on Economy, *Census Bureau*, March 15, 2021, https://www.census.gov/library/stories/2021/03/putting-economic-impact-of-pandemic-in-context.html.

- By late summer 2020, 76.5 million American adults reported that it was somewhat or very difficult for them to pay usual expenses: that number rose to 89.7 million by December 2020.
- Households accumulated debt to meet their usual expenses with roughly 30% of adults using credit cards, taking out loans or borrowing from family and friends between June and December 2020 to pay for usual expenses.
- In June 2020, 33.7 million adults were using debt rather than income to pay their expenses. By late December, that number had increased to 43.7 million adults.
- Households used the second stimulus check under the Consolidated Appropriations Act of 2021 (P.L. 116-260) to cover usual expenses and reduced the number of all adults in households struggling to cover usual costs to 80.5 million. Households also used the second stimulus check to pay down debt.[42]

During the 82-week period from mid-March 2020 to end-October, 2021, 95.8 million Americans (more than half the 160 million civilian work force) had filed for unemployment insurance at some point during the preceding 18 months.[43] On a seasonally adjusted basis, the number of insured unemployed individuals was 2.1 million on October 23, 2021, down from a peak of 25 million in mid-May, 2020. As indicated in **Figure 2,** weekly claims have fallen from the sharp increases recorded in April and May, 2020. On a week-over-week basis, new claims totaled 269,000 in the week ending October 30, 2021, falling by 14,000 from the previous week's total of 283,000. This number is above the average number of weekly claims recorded prior to the pandemic of about 200,000. In the week ending October 16, 2021, 2.7 million people claimed benefits in all programs, down 158,000 from the previous week's total.

The insured unemployment rate for the week ending October 23, 2021, was 1.6%, down 0.1 percentage point from the previous week. As workers approached, or surpassed, the traditional 26-week maximum for receiving standard unemployment benefits they had been able to apply for benefits under the extended Pandemic Emergency Unemployment Compensation (PEUC) program or the Pandemic Unemployment Assistance (PUA) program.[44] Between October 16, 2021, and October 9, 2021, claims under the PEUC program fell by 10,695 to 233.684, while claims under the PUA program rose by 7,096 to 272,109. Benefits were extended by P.L. 116-260, signed by President Trump on December 27, 2020. Subsequently, benefits were extended again through September 6, 2021, by the American Rescue Plan Act of 2021, P.L. 117-2, signed

[42] Perez-Lopez, Daniel J. and Lindsay M. Monte, Household Pulse Survey Shows Stimulus Payments Have Eased Financial Hardship, *Census Bureau*, March 24, 2021. https://www.census.gov/library/stories/2021/03/many-american-households-use-stimulus-payments-to-pay-down-debt.html.

[43] *Unemployment Insurance Weekly Claims*, Department of Labor, November 4, 2021. https://www.dol.gov/; Romm, Tony and Jeff Stein, 2.4 Million Americans Filed Jobless Claims Last Week, Bringing Nine Week Total to 38.6 Million, *Washington Post,* May 21, 2020. https://www.washingtonpost.com/business/2020/05/21/unemployment-claims-coronavirus/

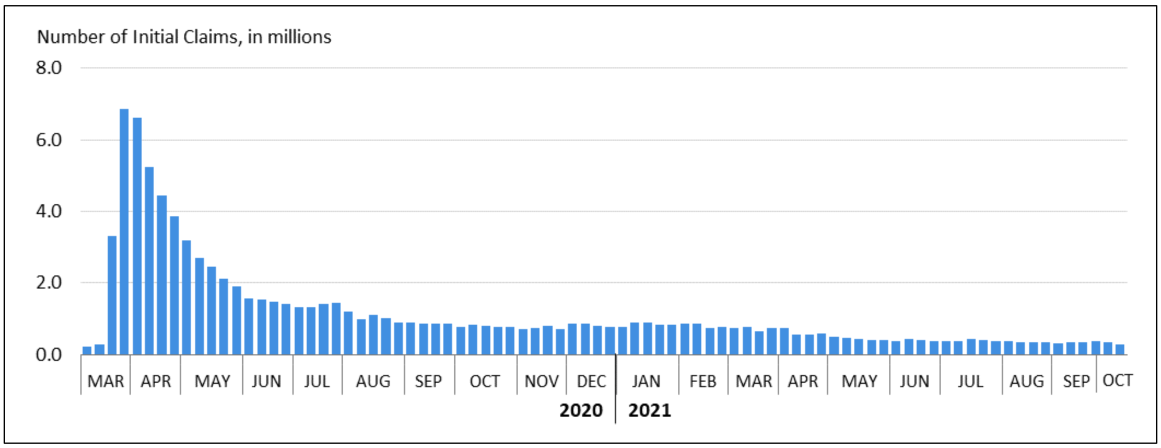
[44] Both programs were authorized under P.L. 116-136, March 27, 2020, the Coronavirus Aid, Relief, and Economic Security (CARES) Act, with benefits ending by December 31, 2020. The PUA program provided 39 weeks of unemployment assistance, including $600 weekly benefits (expired in August 2020), under certain conditions, for workers who had exhausted regular unemployment benefits, were not eligible for regular benefits, or were not eligible for benefits under the PEUC program. On December 27, 2020, President Trump signed the Consolidated Appropriations Act of 2021 (P.L. 116-260), extending PUA benefits for 11 weeks. The PEUC program provided 13 weeks of additional benefits to individuals who had exhausted standard unemployment assistance and met other eligibility requirements. Benefits were further extended through September 6, 2021, by the American Rescue Plan Act of 2021, P.L. 117-2, signed by President Biden on March 11, 2021. DOL, *Unemployment Insurance Program Letter No. 14-21*, March 15, 2021; DOL, *Unemployment Insurance Program Letter No. 16-20*, February 25, 2021.

by President Biden on March 11, 2021. On September 6, 2021, unemployment benefits under the two pandemic-related programs expired.

In June, 2021, 26 states announced they were ending early the extended pandemic-related federal benefits, potentially affecting more than 7.5 million workers. Some state leaders argued the extended unemployment benefits enabled workers to remain unemployed, thereby creating a labor shortage and hobbling a return to full economic activity. The nearly equal division of states between those that maintained and those that ended the pandemic-related unemployment benefits prior to the September scheduled cutoff provided economists and other analysts the opportunity to assess the impact of the extended unemployment benefits on employment decisions. In general, most assessments concluded the benefits played a small role in workers' decisions to return to work. Instead, such decisions were prompted by concerns over the spread of the virus, childcare arrangements, the status of schools openings, and retirements. In some cases, job openings were filled by individuals who had dropped out of the labor market, rather than by those recently unemployed, which altered the composition of the labor market rather than changing the rate of unemployment.[45]

Figure 2. Weekly Claims for Unemployment Insurance, 2020 and 2021

In millions of individual claims



Source: Department of Labor. Created by CRS.

At the beginning of the pandemic-related economic recession, the Bureau of Labor Statistics (BLS) reported on May 8, 2020, that 20 million Americans lost their jobs in April 2020 as a consequence of business lockdowns, pushing the total number of unemployed Americans to 23 million,[46] out of a total civilian labor force of 158 million. The increase pushed the national unemployment rate to 14.7% (with some caveats), the highest since the Great Depression of the 1930s.[47] In contrast, on October 8, 2021, BLS reported that nonfarm employment rose by 194,000

[45] Iacurci, Greg, *26 States Ended Federal Unemployment Benefits Early. Data Suggests it's Not Getting People Back to Work,* Bloomberg, August 4, 2021; Smith, Colby and Christine Zhang, End of US's Extra Unemployment Benefits Gives Little Boost to Labor Market, *Financial Times,* September 21, 2021; Ganong, Peter, Pascal J. Noel, and Joseph S. Vavra, *US Unemployment Insurance Replacement Rates During The Pandemic*, NBER Working Paper No. 27216, May 2020; Petrosky-Nadeau, Nicolas and Robert G. Valletta, *UI Generosity and Job Acceptance: Effects of the 2020 CARES Act,* Working Paper 2021-13, Federal Reserve Bank of San Francisco, June 2021.

[46] This total did not include 10.9 million workers who were working part time not by choice and 9.9 million individuals who were seeking employment.

[47] *The Employment Situation-September 2020,* Bureau of Labor Statistics, October 8, 2020. https://www.bls.gov/.

in September to reach 147.6 million, rising by less than the previous month's increase of 366,000; the total number of unemployed Americans was 7.7 million, down from the previous month's total of 8.4 million;[48] the unemployment rate fell to 4.8%, again with some caveats.[49]

Financial Markets

Policymakers and financial and commodity market participants had generally estimated that a global economic recovery would take hold in the third quarter of 2020. A resurgence in infectious cases in developed and developing countries starting in September 2020, however, shifted more of the projected recovery to 2021. Various indicators in the third quarter suggested the worst of the economic crisis had passed, although the extent and strength of any global economic recovery remained difficult to predict. As previously indicated, the rate of economic growth slowed in the fourth quarter of 2020 and through the second quarter of 2021 in Europe and the broader OECD. The emergence of more infectious strains of the COVID-19 virus pushed governments to reimpose lockdowns and curtail social and economic activity during the fourth quarter. Updated forecasts indicate the pandemic affected global economic growth in 2020 less negatively than had been forecasted in the spring, but that the effects could last longer with a slower rate of growth in 2021 and 2022.

As one indicator of the economic impact of the pandemic, news concerning the pandemic dominated financial news and at times was a major factor driving market activity. For instance, the Dow Jones Industrial Average Index (DJIA), along with other market indices, lost one-third of its value between February 14, 2022 and March 23, 2020. The Index rose steadily between March and November and rose nearly three percentage points on Monday, November 9, 2020, reportedly on news that a COVID-19 vaccine had been developed.[50] During the period November 3 through 24, the DJIA rose over 9%. On November 24, 2020, the DJIA, along with global equities markets, increased by 1.5%, and reached an index milestone of 30,000 for the first time and surpassed the previous high value recorded on February 14, 2020, prior to the pandemic-related economic shutdown. Reportedly, the rise in market indices reflected a positive assessment by investors of announcements of effective vaccines against COVID-19, political developments in the United States, potential additional fiscal measures by governments to stimulate economic activity, and prospects of stronger economic growth in 2021.[51] The DJIA has trended upward during 2021, rising above 35,000 for the first time on July 23 and rising by over 14% between January 4, 2021, and September 17.

Prospects of a vaccine initially signaled an eventual end to the business lockdowns and social restrictions and reduced demands on policymakers to implement additional fiscal and monetary policies. In places where vaccines have not been broadly distributed, policymakers may have to continue weighing efforts that balance the competing requirements of households, firms, and state

[48] This total does not include 4.5 million workers who were working part time not by choice and 5.7 million individuals who were seeking employment.

[49] *The Employment Situation-September 2021.* BLS indicated that some individuals had been misclassified in previous months. Instead of being classified as unemployed, they were misclassified as employed, but absent from work due to coronavirus-related business closures. If such individuals had been classified as unemployed, the unemployment rate would have been 5 percentage points higher in April 2020.

[50] Telford, Taylor, and Hamza Shaban, "Dow Climbs More Than 800 Points as Vaccine News, Biden Victory Rev Up Markets," *Washington Post,* November 9, 2020. https://www.washingtonpost.com/business/2020/11/09/stocks-markets-biden-trump-coronavirus/.

[51] Smith, Colby, Camilla Hodgson, and Hudson Lockett, US Stocks Set Record High as Investors Look to New Administration, *Financial Times*, November 24, 2020. https://www.ft.com/content/433048a5-c489-4ddd-aebd-d56fb8f3edfc.

and local governments. Various U.S. states reversed course in late June 2021 to impose or reimpose social distancing guidelines and close businesses that had begun opening as a result of a rise in new confirmed cases of COVID-19, raising the prospect of a delayed recovery. A prolonged recovery could also increase the financial strains on small and medium-sized firms that face liquidity constraints and the prospects of insolvency.[52]

Differences in policy approaches between countries initially slowed a coordinated response. This lack of response may have inflicted longer-term damage to the global economy by impairing international political, trade, and economic relations, particularly between countries that promoted nationalism and those that argued for a coordinated international response to the pandemic. Policy differences also strained relations between developed and developing economies and between northern and southern members of the Eurozone, challenging alliances and conventional concepts of national security, and raising questions about the future of global leadership.

In some countries, the pandemic elevated the importance of public health as a national security issue and as a national economic priority on a par with traditional national security concerns such as terrorism, cyberattacks, and proliferation of weapons of mass destruction.[53] The pandemic-related economic and human costs could have long-term repercussions for economies through the tragic loss of life and job losses that derail careers and permanently shutter businesses. Fiscal and monetary measures implemented to prevent a financial crisis and sustain economic activity may have inadvertently worsened income and wealth disparities that were being affected by the disproportionate impact of quarantines and lockdowns on services sector workers. Within some countries, the economic fallout may have widened racial and socio-economic cleavages and increased social unrest.

Economic Policy Responses

After a delayed response, central banks and monetary authorities in developed and emerging market economies engaged in an ongoing series of interventions in financial markets and national governments adopted an array of fiscal policy initiatives to stimulate their economies. The Bank for International Settlements (BIS) characterized the pandemic as fully global in nature, eliciting a fiscal, monetary, and prudential response that surpassed that of the global financial crisis of 2008-2009. In addition, the BIS argued the evolving nature of the health crisis caused the financial crisis to evolve as well, changing from a liquidity crisis in the initial stages to a solvency crisis that could have been worse had the economic recovery been delayed. As global economic conditions deteriorated in the first quarter of 2020, large internationally active banks tripled the amount of assets they held as loss provisions, according to BIS.[54] With improving economic conditions in the second quarter, however, banks began reducing their asset holdings and by the end of 2020, loss provisions had returned to pre-pandemic levels. As a result of the potential damage to the global economy arising from the pandemic, the BIS stated that future economic historians may describe the pandemic as, "the defining moment of the 21st century."[55]

[52] *Global Financial Stability Report*, International Monetary Fund, October 2020, p. 1.

[53] Harris, Shane and Missy Ryan, To Prepare for the Next Pandemic, the U.S. Needs to Change its National Security Priorities, Experts Say, *Washington Post*, June 16, 2020. https://www.washingtonpost.com/national-security/to-prepare-for-the-next-pandemic-the-us-needs-to-change-its-national-security-priorities-experts-say/2020/06/16/b99807c0-aa9a-11ea-9063-e69bd6520940_story.html.

[54] *BIS Quarterly Review, March 2021*, Bank for International Settlements, p. 10.

[55] *Annual Economic Report 2020*, Bank for International Settlements, June 2020, p. ix.

For a complete list of actions 193 countries have taken in response to the economic challenge of COVID-19, see the list compiled by the IMF.[56]

Industry Measures

During 2020, governments adopted a range of measures at both the national and international level to address the health and economic consequences of the COVID-19 pandemic, as indicated in **Table 2**.[57] These measure include incentives to increase domestic production of vaccines and personal protective equipment (PPE) and direct state intervention through nationalization or through directives to increase output at facilities that produced PPE materials or to initiate production at other facilities. In some cases, policy changes included enhanced screening of foreign investment for "public interest" reasons that may remain as a legacy issue after the pandemic crisis has been resolved.[58]

The shift in approach toward the national security dimensions of foreign investment, especially by developed economies, has blurred the distinction between foreign investment, trade, and national security and could reflect a fundamental change in the concept of national security relative to foreign investment. Arguably, changes in technology and the global economy have made it more difficult to assess the economic costs and benefits of changes in foreign investment policies taken on national security grounds.

Table 2. Investment Policy Instruments Adopted at the National and International level to Address the COVID-19 Pandemic

Investment policy areas	Policy measures
Policy actions at the national level	
Investment facilitation	Alleviate administrative burdens and bureaucratic obstacles for firms. Use of online tools and e-platforms.
Investment retention and aftercare by investment promotion agencies (IPAs)	COVID-19-related information services. Administrative and operational support during the crisis. Move to online services.
Investment incentives	Financial or fiscal incentives to produce COVID-19-related medical equipment. Incentives for conversion of production lines. Incentives for enhancement of contracted economic activities.
State participation in crisis-affected industries	Acquisition of equity in companies, including nationalization.

[56] See International Monetary Fund, *Policy Responses to COVID-19*. https://www.imf.org/en/Topics/imf-and-covid19/Policy-Responses-to-COVID-19.

[57] Countries include Australia, Canada, the European Union, France, Germany, Hungary, Italy, India, Japan, Poland, and Spain, among others. *World Investment Report 2020*, United Nations Conference on Trade and Development 2020, p. 93.

[58] *World Investment Report 2020*, United Nations Conference on Trade and Development, June 16, 2020, p. 96.

Investment policy areas	Policy measures
Local small and medium enterprises (SMEs) and supply chains	Financial or fiscal support for domestic suppliers (such as SMEs).
National security and public health	Application and potential reinforcement of FDI screening in pandemic-relevant industries.
Other State intervention in the health industry	Mandatory production. Export bans. Import facilitation.
Intellectual property (IP)	General authorization of non-voluntary licensing, to speed up research and development (R&D). IP holder-specific non-voluntary licensing, to enable imports of medication.
Policy actions at the international level	
International support measures for investment	International pledges in support of cross-border investment.
IIAs	Reform International Investment Agreements (IIAs) to support public health policies and to minimize investor–State dispute risks.
Intellectual property (IP)	General authorization of non-voluntary licensing, to speed up research and development (R&D).

Source: *World Investment Report 2020*, United Nations Conference on Trade and Development, June 16, 2020, p. 89.

Fiscal Measures

As indicated in **Table 3**, central governments in advanced and emerging economies adopted various fiscal measures to provide financial support to the health sector, households, and firms, although the size and scope of the programs vary by country.[59] These measures broadly include tax cuts and tax deferrals for individuals and businesses, wage and income supplements to individuals, including expanding unemployment insurance, and other payments to businesses. The U.S. Congress approved historic fiscal spending packages, while other governments abandoned traditional borrowing caps in order to increase fiscal spending to sustain economic growth. In some emerging economies, governments reportedly adopted special programs to provide financial assistance to "informal" workers, or workers outside traditional labor markets such as family businesses.[60]

In developed economies, however, as governments adopted fiscal packages to assist households, consumers sharply increased their savings as they faced limited spending opportunities, or a form of involuntary saving, and concerns over lost jobs, incomes, and the course of their economies, or precautionary saving. International organizations also took steps to provide loans and other financial assistance to countries in need. These and other actions have been labeled "unprecedented," a term that has been used frequently to describe the pandemic and the policy responses.

[59] Ibid.

[60] Ibid., p. 25.

Table 3. Elements of Announced Fiscal Measures to Address COVID-19

	Advanced Economies							Emerging Market Economies							
Measures	US	JP	DE	FR	IT	ES	GB	BR	CN	ID	IN	KR	MX	RU	ZA
Measures supporting the health sector															
	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Measures supporting households															
Targeted transfers[a]	×	×	×	×	×	×	×	×	×	×	×	×		×	×
Other labor income support[b]	×	×	×	×	×	×	×	×	×	×	×	×		×	×
Wage subsidies	×	×	×	×	×	×	×	×	×		×	×		×	×
Tax cuts	×	×	×	×		×			×	×	×	×		×	×
Tax deferral	×	×	×		×	×	×				×	×	×		×
Measures supporting firms															
Tax deferral	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Liquidity support[c]	×	×	×	×	×	×	×	×	×	×	×	×	×	×	×
Tax cuts	×	×	×		×	×	×	×	×	×	×	×		×	
Targeted transfers		×	×	×	×		×		×	×				×	×

Source: *Annual Economic Report 2020*, Bank for International Settlements, June 2020, p. 24, based on data collected by the International Monetary Fund and the Organization for Economic Cooperation and Development.

Notes:

a. Includes cash and in-kind transfers to affected households.

b. Extended unemployment and sick leave benefits.

c. Non-budgetary measures such as equity injections, asset purchases, loans and debt assumptions or government guarantees and contingent liabilities, US: United States; JP: Japan; DE: Germany; FR: France; IT: Italy; ES: Spain; GB: Great Britain; BR: Brazil; CN: China; ID: Indonesia; IN: India; KR: South Korea; MX: Mexico; RU: Russia; ZA: South Africa.

Fiscal Deficits

As one measure of the extent of the global fiscal and monetary responses by governments, the IMF estimated that government spending and revenue measures to sustain economic activity adopted through September 2021 amounted to $16.9 trillion.[61] The IMF also updated its estimate of the increase in borrowing by governments globally to finance their fiscal responses to rise to 10.2% of global gross domestic product (GDP) in 2020, before falling to 7.9% in 2021 and 5.2% in 2022, as indicated in **Figure 3**. Other estimates indicate that central banks have committed $17 trillion to support their economies to counter pandemic-related economic effects.[62]

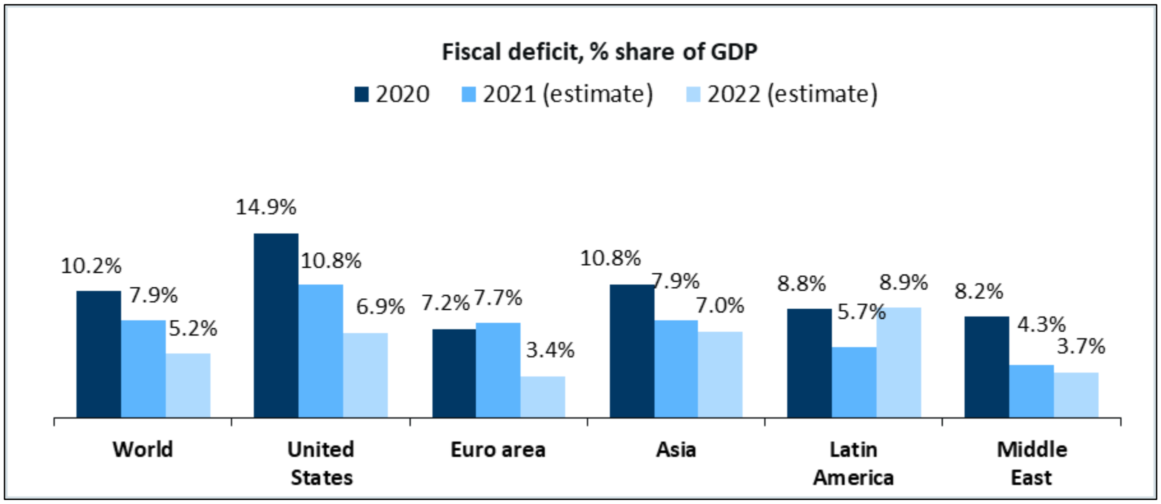
---

[61] *Fiscal Monitor,* International Monetary Fund, October 2021. p. 7.

[62] Wigglesworth, Robin, Long Live Jay Powell, the New Monarch of the Bond Market, *Financial Times*, June 23, 2020. https://www.ft.com/content/5db9d0f1-3742-49f0-a6cd-16c471875b5e.

Figure 3. IMF Projected Government Fiscal Deficits Relative to GDP

In percentage shares of Gross Domestic Product



Source: *Fiscal Monitor,* International Monetary Fund, October 2021. Created by CRS.

Notes: Data for 2021 and 2022 are estimates.

Among developed economies, the fiscal deficit to GDP ratio is projected to rise to 10.8% in 2020, before falling to 8.8% in 2021 and 4.8% in 2022; the ratio for the United States is projected to rise to 14.9% in 2020, the highest ratio for any country or region, before falling to 10.8% in 2021 and 6.9% in 2022.[63] For most areas and countries, the IMF forecasts that debt to GDP ratios will fall in 2021, but fall more substantially as percentage shares of GDP in 2022 as the economic recovery is projected to take hold. Some economists and others have raised concerns that fiscal deficits financed through borrowing in a low-interest rate environment could substantially increase the debt servicing costs on government budgets under certain conditions, particularly if national economic growth rates rise, which tend to push up central banks' interest rates, and if the accumulated debt is refinanced at those higher rates, thereby increasing debt servicing costs.[64]

According to the IMF, France, Germany, Italy, Japan, and the United Kingdom announced public sector support measures in 2020 that total more than 10% of their annual GDP.[65] For emerging market economies, the fiscal deficit to GDP ratio is projected to rise from 9.6% in 2020 to 6.6% in 2021 and 5.8% in 2022, significantly increasing their debt burden.[66] According to some estimates, the most fiscally vulnerable countries are Argentina, Venezuela, Lebanon, Jordan, Iran, Zambia, Zimbabwe, and South Africa.[67] The IMF concluded that among low-income developing countries, near-term debt vulnerabilities remain high.[68]

[63] *Fiscal Monitor,* Table 1.1.

[64] Hagaman, Chase, *Fiscal, Monetary, and Economic Challenges of the Post-Pandemic Economy,* The Concord Coalition, February 18, 2021, Edelberg, Wendy, and Louise Sheiner, *The Macroeconomic Implications of Biden's $1.9 Trillion Fiscal Package,* The Hamilton Project, Brookings Institution, January 28, 2021.

[65] *Fiscal Monitor,* International Monetary Fund, October 2021, p. 3.

[66] Ibid., p. 3

[67] Wheatley, Jonathan, Tommy Stubbington, Michael Stott, Andrew England, and Joseph Cotterill, Debt Relief: Which Countries Are Most Vulnerable? *Financial Times,* May 6, 2020. https://www.ft.com/content/31ac88a1-9131-4531-99be-7bfd8394e8b9.

[68] *Global Financial Stability Report,* October 2021, p. xi.

The IMF argued the actions by central banks risked creating a disconnect between the pricing of risk in financial markets and projected economic prospects, because investors apparently had expected a quick recovery in 2020 based on continued and unprecedented central bank intervention. However, a perceived or real shift in central bank intervention in financial markets could negatively affect investors' concept of risk and, in turn, negatively affect asset markets and the economic recovery.[69] In addition to central banks' actions, the IMF concluded that a number of preexisting vulnerabilities could affect the timing and the rate of the economic recovery. These vulnerabilities include corporate and household debt levels in developed and some emerging market economies that could become unmanageable in a prolonged recession; a rising number of insolvencies that could test the resilience of the banking sector; additional stresses that could affect nonbank financial institutions; and the prospect of some developing economies facing high external financing requirements.[70]

Worker Assistance Programs

As part of their fiscal policy measures, governments in advanced economies either enhanced existing worker support programs, or adopted new programs. As indicated in **Table 4**, the OECD categorized the various job retention programs into six major groups, which the OECD estimated had supported 60 million workers in developed economies.[71]As would be expected, programs to assist workers varied across countries, but they generally were comprised of increased subsidies for existing programs designed to support workers for work hours lost or extended wage subsidies to maintain pre-pandemic employment levels. Other programs assisted individual firms in retaining workers with the objective of facilitating a quick return to full activity once pandemic-related restrictions are lifted.[72] In some cases, benefits were increased by extending the length of time benefits were available and benefits were extended to workers in non-standard jobs such as temporary and self-employed workers. New programs adopted by some OECD members were designed to assist some temporary and non-standard workers quickly gain access to support funds.[73] Some countries also eased qualification requirements to facilitate workers or businesses gaining access to support funds

In its July 2021 updated employment outlook, the OECD concluded that many workers in OECD countries had not regained full-time employment by mid-2021 and that elevated rates of unemployment could persist on average beyond 2022. In addition, the OECD concluded the longer workers go without regaining employment, the more difficult it could be for them to compete with those whose jobs had been sustained during the recession and the greater the risks of a rapid increase in long-term unemployment.[74] The OECD also indicated that the timing of any withdrawal of government fiscal support could affect the timing and strength of a recovery and it urged governments to continue supporting families most in need of jobs, while providing incentives for job creation and for returning workers. It also concluded that withdrawing support too soon "to the many still in need risks generating mass bankruptcies and job losses in sectors

[69] *Global Financial Stability Report Update*, International Monetary Fund, December 2020, p. 4.

[70] Ibid., pp. 6-7.

[71] *OECD Employment Outlook 2021*, p. 15.

[72] *Job Retention Schemes During the COVID-19 Lockdown and Beyond*, Organization for Economic Cooperation and Development, October 12, 2020, p. 2.

[73] *OECD Employment Outlook 2021*, pp. 5-6.

[74] Ibid., p. 15.

still deeply affected by containment measures, making the recovery more difficult and uncertain."[75]

In anticipation of governments reducing or eliminating worker support programs, the OECD encouraged governments to

- Continue providing support to firms affected by social distancing restrictions and reducing delays in providing payments.
- Target workers support programs to jobs that are likely to remain viable in the medium term in firms or sectors where activity can resume.
- Use worker support programs to limit excessive layoffs in cases of temporary reduction in business activity and not to support firms with structural difficulties.[76]

Table 4. Developed Economy Worker Support Programs During COVID-19

	Preexisting short-time work scheme	Increased access and coverage	Increased benefit generosity	Increased access for workers in non-standard jobs	New short-time work scheme	New wage subsidy scheme
Australia						x
Austria	x	x	x			
Belgium	x	x	x			
Canada	x					x
Chile	x	x	x	x		
Czech Republic	x	x	x			
Denmark	x	x			x	
Estonia						x
Finland	x	x	x	x		
France	x	x	x	x		
Germany	x	x	x	x		
Greece					x	
Hungary					x	
Iceland					x	
Ireland	x					x
Italy	x	x		x		
Japan	x	x	x	x		
Korea	x	x	x			
Latvia					x	
Lithuania					x	
Luxembourg	x	x	x			

[75] Ibid., p. 6.

[76] Ibid., p. 100.

	Preexisting short-time work scheme	Increased access and coverage	Increased benefit generosity	Increased access for workers in non-standard jobs	New short-time work scheme	New wage subsidy scheme
Netherland	x					x
New Zealand						x
Norway	x	x	x			
Poland						x
Portugal	x	x		x		
Slovak Republic	x	x	x			
Slovenia					x	
Spain	x	x	x	x		
Sweden	x	x	x			
Switzerland	x	x		x		
Turkey	x	x		x		
United Kingdom					x	
United States	x	x	x			

Source: *Job Retention Schemes During the COVID-19 Lockdown and Beyond*, Organization for Economic Cooperation and Development, October 12, 2020, p. 7.

Monetary and Prudential Measures

Among central banks, the Federal Reserve initiated extraordinary steps not experienced since the 2008-2009 global financial crisis to address the economic effects of COVID-19. According to a March 2021 BIS review of the monetary policies adopted by the central banks of 11 advanced economies and 28 developing economies between February and July 2020 to address the impact of the pandemic, the banks moved quickly and on a massive scale,[77] as indicated in **Table 5.** Central banks in advanced economies acted to prevent a financial crisis by purchasing assets and providing liquidity at favorable rates. In contrast, central banks in emerging economies responded less aggressively, in part reflecting the success of advanced economy central banks in easing global financial pressures, which effectively made it possible for emerging economies to focus their efforts on supporting domestic demand.

BIS grouped the central bank measures into five categories: (1) interest rates; (2) reserve policies; (3) lending operations; (4) asset purchases; and (5) foreign exchange policies, including foreign exchange swaps. In some cases, central banks also relaxed capital buffers and countercyclical

[77] Cantu, Carlos, Paolo Cavalino, Fiorella De Fiore, and James Yetnam, *A Global Database of Central Banks' Monetary Responses to COVID-19,* BIS Working Papers No. 934, Bank for International Settlements, March 2021, p.5.

capital buffers,[78] adopted after the 2008-2009 financial crisis.[79] Generally, however, banks did not use their capital buffers to supply credit in their respective economies.[80]

The five policy areas identified by BIS are

- *Interest rates*. Interest rates were reduced in most countries, except in Japan and the Euro area, where interest rates were zero. In numerous countries, monetary authorities attempted to ease the concerns of financial market participants by announcing they would maintain accommodative policies (low interest rates) for an extended period.
- *Reserve policies.* With low interest rates, some central banks adjusted reserve requirements for commercial banks, which alters the amount of assets banks are required to hold. Some central banks also adjusted the remuneration rate, or the rate the central bank uses to pay interest on required and excess reserves. Some banks also changed compliance requirements, or the types of assets that could be counted as reserves.
- *Lending operations.* Central banks adjusted lending facilities to maintain liquidity, either by expanding existing lending facilities or by creating new programs, which accounted for 60% of lending operations. In some cases, policies were targeted to specific financial market segments, particularly banks and small and medium-sized enterprises.
- *Asset purchases*. Central banks in advanced economies used targeted and non-targeted lending operations to support monetary policies and maintain liquidity in the financial system. These goals were accomplished by increasing the size of existing programs and by lengthening the maturities of loans. Central banks in emerging economies expanded their existing liquidity facilities by lowering interest rates, broadening the types of eligible collateral, and increasing the number and types of eligible counterparties. The main difference between existing and new lending policies was that a large share of the new facilities targeted the private sector, including lending measures to support the flow of credit to households and non-financial corporations. In advanced economies about 40% of asset purchase programs were new facilities, while the share of new programs in emerging economies accounted for over 90%. In addition, asset purchases were split nearly evenly between public and private assets in advanced economies
- *Foreign exchange*. The Federal Reserve implemented foreign exchange swaps initially with five countries (Canada, Euro area, Japan, UK, Switzerland), followed by swap lines extended to nine other countries (Australia, Brazil, Korea, to relieve pressure in the dollar funding market.

Throughout the early stages of the economic crisis, central banks served as lenders of last resort through large purchases of government debt and as the buyers or lenders of last resort for private

[78] Countercyclical capital buffers require banks to increase their capital buffers during periods of rapid growth in assets (when they are making a lot of loans), to ensure they have sufficient capital to absorb losses during a recession. *Countercyclical Capital Buffers*, Bank for International Settlements, April 3, 2020. https://www.bis.org/bcbs/ccyb/.

[79] Arnold, Martin, "Regulators Free up $500bn Capital for Lenders to Fight Virus Storm," *Financial Times,* April 7, 2020. https://www.ft.com/content/9a677506-a44e-4f69-b852-4f34018bc45f.

[80] *Lessons Learnt From the COVID-19 Pandemic From a Financial Stability Perspective: Interim Report*, Financial Stability Board, July 13, 2021, p. 9.

sector securities, in many cases engaging in activities that previously had been considered off-limits.[81] As a result of these activities, the BIS argued that central banks effectively managed the initial liquidity crisis, the first of three phases often identified with financial crises. The second and third phases, insolvency and recovery, were also navigated successfully, but could still become more challenging the longer the pandemic-related economic crisis persists. Capital buffers were raised after the 2008-2009 financial crisis to assist banks in absorbing losses and staying solvent during financial crises. Some governments directed banks to freeze dividend payments and halt pay bonuses. The Financial Stability Board (FSB) argued in its July 13, 2021, report to the G-20 Finance Ministers and Governors that the monetary and fiscal actions taken by central banks and national governments, respectively, in combination with regulatory and supervisory measures adopted following the 2008-2009 global financial crisis effectively contained the impact of the crisis, supported the functioning of the global financial system, and facilitated funding to the real economy.[82]

Since the beginning of the pandemic, central banks often adopted similar policies, although not always in unison. Most central banks followed the Federal Reserve in cutting interest rates as one of their main policy tools to support economic activity; the ECB (Euro Area) and Japan are notable exceptions, since they had reduced their main interest rates to zero prior to the economic recession. The low interest rates had an additional, although not necessarily intended, impact on currency markets by reducing arbitrage opportunities and, thereby, reducing volatility in exchange rates.[83] According to some analysts, the period through mid-summer 2021 experienced the longest period on record of low volatility between the dollar and the euro.

Table 5. Selected Central Bank and Prudential Measures to Address COVID-19

Advanced Economies

Tool type	Measure	US	EA	JP	GB	CA	AU	CH	DK	NO	NZ	SE
Interest	Policy Rate cut	X			X	X	X			X	X	X
Lending operations	Liquidity provision	X	X	X	X	X	X		X	X	X	X
	Targeted lending	X	X	X	X		X	X			X	X
Asset purchases	Government bonds	X	X	X	X	X	X				X	X
	Corporate paper	X	X	X	X	X						X
	Corporate bonds	X	X	X	X	X						X
	Other		X	X		X						X
Foreign exchange	US dollar swap line		X	X	X	X	X	X	X	X	X	X
	Swaps											
	Spot intervention							X				
Reserve policy	Remuneration						X	X			X	
	Required Ratio	X										
	Compliance											

[81] For a review of monetary policies of the Federal Reserve, the ECB, the Bank of Japan, and the Bank of England, see Haas, Jacob, Christopher J. Neely, William B. Emmons, Responses of International Central Banks to the COVID-19 Crisis, *Federal Reserve Bank of St. Louis Review*, Fourth Quarter 2020.

[82] *Lessons Learnt From the COVID-19 Pandemic*, p. 10.

[83] Duguid, Kate and Tommy Stubbington, Central Bank Sync Puts Foreign Exchange Market to Sleep, *Financial Times*, September 21, 2021.

Middle East and Asia

Tool type	Measure	AE	DZ	IL	KW	MA	SA	TR	ZA
Interest	Policy Rate cut	X	X	X	X	X	X	X	X
Lending operations	Liquidity provision		X	X	X	X	X	X	X
	Targeted lending	X		X			X	X	X
Asset purchases	Government bonds		X					X	X
	Corporate paper								
	Corporate bonds			X					
	Other								
Foreign exchange	US dollar swap line								
	Swaps			X					
	Spot intervention							X	
Reserve policy	Remuneration							X	
	Required Ratio	X	X					X	
	Compliance								

Emerging Asia

Tool type	Measure	CN	HK	ID	IN	KR	MY	PH	SG	TH	VN
Interest	Policy Rate cut	X	X	X	X	X	X	X		X	X
Lending operations	Liquidity provision	X	X	X	X	X		X		X	
	Targeted lending	X			X	X		X	X	X	X
Asset purchases	Government bonds			X	X	X		X		X	
	Corporate paper					X					
	Corporate bonds					X				X	
	Other										
Foreign exchange	US dollar swap line					X			X		
	Swaps			X	X				X		
	Spot intervention		X	X							
Reserve policy	Remuneration			X							
	Required Ratio	X	X	X	X						
	Compliance						X	X			

		Latin America							Eastern Europe			
Tool type	Measure	AR	BR	CL	CO	MX	PE		CZ	HU	PL	RO
Interest	Policy Rate cut	X	X	X	X	X	X		X	X	X	X
Lending operations	Liquidity provision		X	X	X	X	X		X	X	X	X
	Targeted lending	X	X	X		X	X				X	

Asset purchases	Government bonds				X	X				X	X	X
	Corporate paper											
	Corporate bonds									X		
	Other			X	X					X		
Foreign exchange	US dollar swap line		X			X						
	Swaps		X	X	X	X	X			X		
	Spot intervention			X					X			
Reserve policy	Remuneration	X	X		X	X						
	Required Ratio	X	X		X	X	X				X	
	Compliance	X	X							X		

Source: Cantu, Carlos, Paolo Cavalino, Fiorella De Fiore, and James Yetnam, *A Global Database of Central Banks' Monetary Responses to COVID-19,* BIS Working Papers No. 934, Bank for International Settlements, March 2021, p. 5.

Notes: AE: United Arab Emirates; AR: Argentina; AU: Australia; BR: Brazil; CA: Canada; CH: Switzerland; CL: Chile; CN: China; CO: Colombia; CZ: Czech Republic; DK: Denmark; DZ: Algeria; EA: Euro Area; GB: Great Britain; HK: Hong Kong; HU: Hungary; ID: Indonesia; IL: Israel; IN: India; JP: Japan; KR: South Korea; KW: Kuwait; MA: Morocco; MY: Malaysia; MX: Mexico; NO: Norway; NZ: New Zealand; PE: Peru; PH: the Philippines; PL: Poland; RO: Romania SG: Singapore; SA: Saudi Arabia; SE: Sweden; TH: Thailand; TR: Turkey; US: United States; VN: Vietnam; ZA: South Africa;

Economic Forecasts

Global Growth

As the COVID-19 pandemic began, the global economy was struggling to regain a broad-based recovery. Global economic growth was being challenged by the lingering impact of growing trade protectionism, trade disputes among major trading partners, falling commodity and energy prices, and economic uncertainties in Europe over the impact of the UK withdrawal from the European Union. Individually, each of these issues presented a solvable challenge for the global economy. Collectively, however, the issues weakened the global economy and reduced the available policy flexibility of many national leaders, especially among the leading developed economies. While the economic impact has become less uncertain, the combination of policy responses may continue to have a significant and enduring impact on the way businesses organize their work forces, on global supply chains, and on government responses to a global health crisis.[84] As a result of the rapidly spreading virus and its compounding effects on global and national rates of economic growth, forecasting the impact of the virus has been especially challenging.

In the early stages of the global economic recession, economic forecasts were compounded further by a historic drop in the price of crude oil. Since then, oil prices recovered from the low of nearly $20 per barrel in April 2020 to a range of $40 to $45 per barrel by the end of 2020, in part reflecting the decline in global economic activity. By early June 2021, the international price of

[84] Rowland, Christopher and Peter Whoriskey, "U.S. Health System is Showing Why It's Not Ready for a COVID-19 Pandemic," *Washington Post*, March 4, 2020. https://www.washingtonpost.com/business/economy/the-us-health-system-is-showing-why-its-not-ready-for-a-COVID-19-pandemic/2020/03/04/7c307bb4-5d61-11ea-b29b-9db42f7803a7_story.html.

Brent crude oil had crossed the $70 per barrel mark, where it remained through early October, when it rose above $80 dollars per barrel.

Through the first half of 2021, economic forecasts turned more positive based on an expected return to pre-pandemic rates of growth. Nevertheless, the economic situation has remained highly fluid globally and for most countries and regions. Uncertainty about the length and depth of the health crisis-related economic effects continue to influence perceptions of risk and volatility in financial markets and corporate decision-making. In addition, uncertainties concerning the global pandemic and the effectiveness of public policies intended to contain its spread and prevent a subsequent round of infections have added to market volatility. At various times, corporations postponed investment decisions, laid off workers who previously had been furloughed, and in some cases filed for bankruptcy.

Progress in producing and administering vaccines through the first half of 2021 raised prospects that social distancing rules could be relaxed or removed, which could improve economic activity. Most forecasts indicate that 2021 GDP growth rates for most countries could outpace pre-pandemic forecasts; while economic growth in 2022 could return to more historic rates. However, these forecasts may be dampened by: a resurgence in viral cases that could move governments to reinstate business and social lockdowns, continuing shortfalls in supplies through supply chains that have not fully recovered, and rising demand for construction materials that is driven by government infrastructure projects and new residential housing construction.

The IMF, the OECD, and The World Bank revised their forecasts downward between late 2019 and mid-2020, reflecting the rapidly deteriorating state of the global economy and a marked decline in projected rates of growth. Between October 2019 and January 2021, for instance, the IMF lowered its global economic growth forecast for 2020 from a positive 3.4% to a negative 3.5%. In its June 2020 forecast, the OECD forecasted the effects of a single and double wave of infections, with the projections for a single wave reflected in **Table 6**. By late 2020 and early 2021, most forecasts were revised upward to reflect assessments the recession would be less severe than had been forecasted for 2021, as indicated in **Figure 4.** The OECD estimated in May 2021 that global GDP had declined by 3.5% in 2020, compared with a December forecast of -4.2%, and would experience a stronger recovery in 2021 of 5.8% instead of a March forecast of 5.6%.[85] Between January 2020 and January 2021, the World Bank also lowered its forecast of global growth from 2.5% to a negative 4.3%. In most forecasts, advanced economies were projected to experience the steepest declines in economic growth from 2019 to mid-June 2020.

Table 6. Major Economic Forecasts

Percentage changes at annual rates

	World		Advanced economies		Developing economies		United States	
	2020	2021	2020	2021	2020	2021	2020	2021
International Monetary Fund								
October 2019	3.4%	3.6%	1.7%	1.6%	4.6%	4.8%	2.1%	1.7%
April 2020	-3.0	5.8	-6.1	4.5	-1.0	6.6	-5.9	4.7
June 2020	-4.9	5.4	-8.0	4.8	-3.0	5.9	-8.0	4.5
October 2020	-4.4	5.2	-5.8	3.9	-3.3	6.0	-4.3	3.1

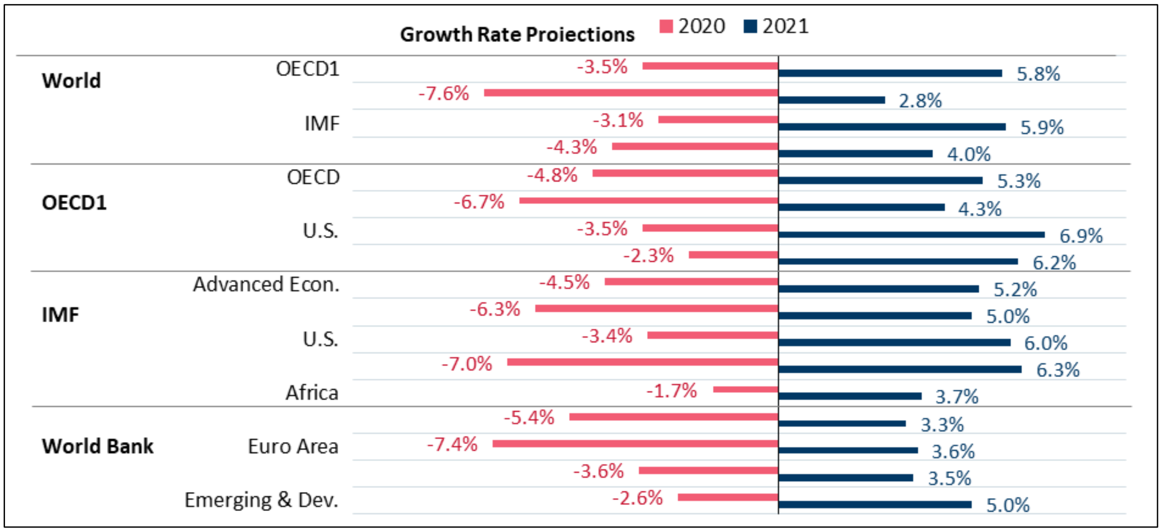
85 *OECD Economic Outlook, Interim Report March 2021*, Organization for Economic Cooperation and Development, March, 2021.

	World		Advanced economies		Developing economies		United States	
	2020	2021	2020	2021	2020	2021	2020	2021
January 2021	-3.5	5.5	-4.9	4.3	-2.4	6.3	-3.4	5.1
July 2021	-3.2	6.0	-4.6	5.6	-2.1	6.3	-3.5	7.0
October 2021	-3.1	5.9	-4.5	5.2	-2.1	6.4	-3.4	6.0
Organization for Economic Cooperation and Development								
Nov 2019	2.9	3.0	1.6	1.7	4.0	4.0	2.0	2.0
March 2020	2.4	3.3	0.8	1.2	NA	NA	1.9	2.1
June 2020 single	-6.0	5.2	-7.5	4.8	-4.6	5.6	-7.3	4.1
June 2020 double	-7.6	2.8	-9.3	2.2	-6.1	3.2	-8.5	1.9
Sept. 2020	-7.6	2.8	-9.3	2,2	-6.1	3.2	-8.5	1.9
Dec. 2020	-4.2	4.2	-5.5	3,2	-3.0	5.1	-3.7	3.2
March 2021	-3.4	5.6	NA	NA	NA	NA	-3.5	6.5
May 2021	-3.5	5.8	-4.8	5.3	-2.3	6.2	-3.5	6.9
September 2021	-3.4	5.7	NA	NA	NA	NA	-3.4	6.0
World Bank								
January 2020	2.5	2.6	1.4	1.5	4.1	4.3	1.8	1.7
June 2020	-5.2	4.2	-7.0	3.9	-2.5	4.6	-6.1	4.0
January 2021	-4.3	4.0	-5.4	3.3	-2.6	5.0	-3.6	3.5

Sources: *World Economic Outlook*, various issues, International Monetary Fund; *OECD Economic Outlook,* various issues, Organization for Economic Cooperation and Development; *Global Economic Prospects*, various issues, World Bank.

Figure 4. Major Economic Forecasts by Region

Projections in annual percent change



Source: *OECD Economic Outlook, March 2021*, Organization for Economic Cooperation and Development. March 2021; *World Economic Outlook, Update,* International Monetary Fund, October 2021; *Global Economic Prospects*, World Bank Group, January 2021. Created by CRS.

Notes: The OECD estimated rates of growth as a result of two scenarios, indicated as OECD1 and OECD2. The first scenario assumes there is a single wave of infections from COVID-19, while the second scenario estimated the effect of a two-wave scenario.

The OECD Forecast

The Organization for Economic Cooperation and Development (OECD) released an updated forecast in September 2021, which estimated that global economic growth had declined by 3.4% in 2020, but also estimated that the global economy would grow at an annual rate of 5.7% in 2021 and 4.5% in 2022, assuming continued strong support from macroeconomic policies and accommodative monetary policies.[86] In the updated forecast, the rate of GDP growth in the Euro area was forecast to grow at a rate of 5.3% in 2021 and the U.S. economy would grow at rate of 6.0%. The G20, which includes both developed and major developing economies, was projected to grow by 6.1% in 2021 and by a rate of 4.8% in 2022. The OECD estimated that global GDP had surpassed the pre-pandemic level, but that output levels and employment in mid-2021 remained 3.5% below pre-pandemic projections, which was estimated to be equivalent to an income loss of about $4.5 trillion, or the value of a year of global GDP growth. While inflation began rising in developed economies, the OECD attributed the price increases to higher commodity and shipping costs and projected they would moderate by the end of 2022, unless higher rates of inflation became embedded in demands for higher wages.[87]

The OECD forecast also reflected recent analysis that an economic recovery would take place over the next two years, but that "the recovery would be uneven across countries, potentially

[86] *OECD Economic Outlook, Interim Report: Keeping the Recovery on Track*, Organization for Economic Cooperation and Development, September 2020.

[87] According to OECD calculations, global commodity prices were 55% higher in July and August 2021 than in the previous year and were driven by higher metals and oil prices; containerized freight prices were estimated to be two to three times the level of the previous year. Ibid., p. 11.

leading to lasting changes in the world economy."[88] In addition, the OECD concluded the pandemic is fragmenting the global economy through a growing number of trade and investment restrictions and diverging policy approaches that are being implemented on a country-by-country basis. The OECD concluded further that

> as long as the vast majority of the global population is not vaccinated, all of us remain vulnerable to the emergence of new variants. Confidence could be seriously eroded by further lockdowns, and a stop-and-go of economic activities. Firms, so far well protected but often with higher debt than before the pandemic, could go bankrupt. The most vulnerable members of society would risk further suffering from prolonged spells of inactivity or reduced income, exacerbating inequalities, across and within countries, and potentially destabilizing economies.[89]

As a consequence of the slowdown in economic activity in the fourth quarter of 2020 and projected slow growth and partial recovery in 2021, the OECD estimated there would be long-lasting effects on the global economy, including

- Output was projected to remain around 5% below pre-crisis expectations in many countries in 2022, raising the specter of substantial permanent costs, disproportionately affecting vulnerable populations.
- Smaller firms and entrepreneurs are more likely to go out of business.
- Many low wage earners who lost their jobs and are only covered by unemployment insurance, at best, with poor prospects of finding new jobs quickly.
- People living in poverty and usually less well covered by social safety nets experienced a deterioration in their living standards.
- Children and youth from less well-off backgrounds, and less qualified adult workers struggled to learn and work from home, with potentially long lasting damage.[90]

Through the third and fourth quarters of 2020 and the first and second quarters of 2021, most OECD countries had not experienced extended periods of high rates of unemployment, in part due to national income and wage maintenance programs, as indicated in **Figure 5**. The main exceptions were the United States and Canada, where unemployment rates spiked starting at the end of the first quarter 2020 and into the second quarter of 2020. By August 2021, most OECD economies had unemployment rates in the 6.5% to 9.0% range with some exceptions: Japan (2.8%) and Germany (3.6%) had rates below the OECD average of 6.2%, while Greece (14.6%), Spain (14.3%), Colombia (13.7%), and Italy (9.3%) had rates that were higher than the OECD average. In a major difference between U.S. and EU data, EU workers absent from work due to temporary layoff are counted as employed, whereas, in the United States, they are counted as unemployed.

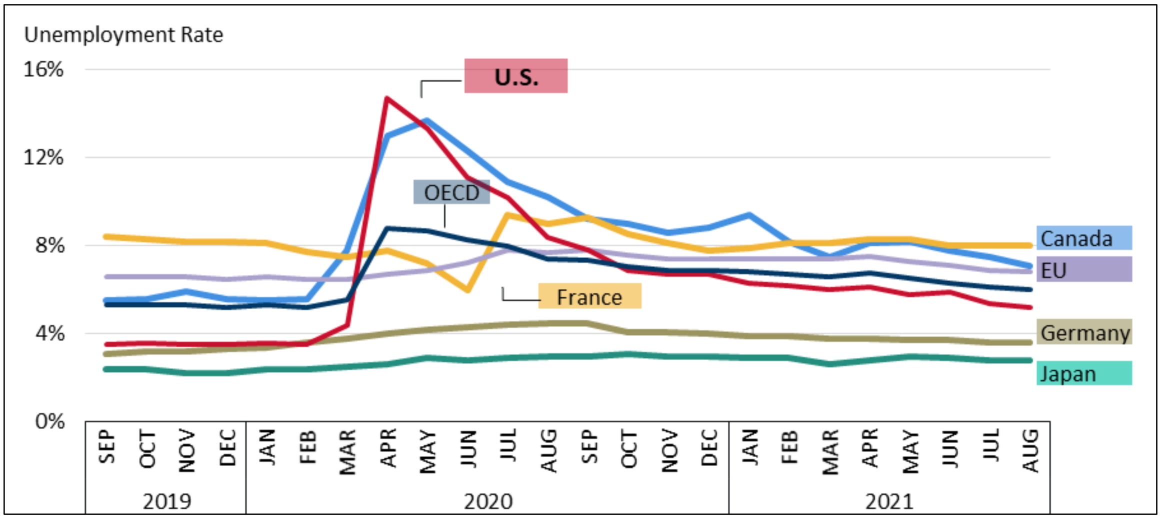
[88] *OECD Economic Outlook, Interim Report March 2021*, Organization for Economic Cooperation and Development. March 2021, p. 4. http://www.oecd.org/economic-outlook/#resources.

[89] *OECD Economic Outlook May 2021*, *Preliminary Version*, p. 9.

[90] Ibid., p. 8.

Figure 5. Unemployment Rates Among Major OECD Countries

In percentage terms



Source: OECD Dataset: Short-term Labor Market Statistics, Organization for Economic Cooperation and Development. Created by CRS.

The OECD estimated that global trade would contract by 9.5% in 2020 assuming the global economy did not experience a strong second wave of infections that caused countries to reimpose stringent social and business lockdowns, as indicated in **Table 7**.[91] In addition to current rates of unemployment, the OECD projected the length of time it could take in quarters, or three-month periods, from the end of 2019 to the second quarter of 2025 for selected OECD countries to return to full employment, as indicated in **Figure 6**. The OECD estimated in its July 2021 *Employment Outlook* that by the end of 2020, around 22 million jobs had been lost in the OECD compared to 2019. The estimate indicates that four countries-Australia, Japan, New Zealand, and Poland-could reach pre-pandemic rates of unemployment by mid-2021, or a year and a half after the start of the recession. On the other hand, OECD countries on average would not reach pre-pandemic level of unemployment until after the end of 2022, or three years after the start of the recession.[92] Other counties were projected not to reach pre-pandemic levels of unemployment until mid-2024, or more than four years after the recession began. The OECD indicated the delay in returning to full employment reflected challenges that long-term unemployment present for workers attempting to reenter the workforce.[93]

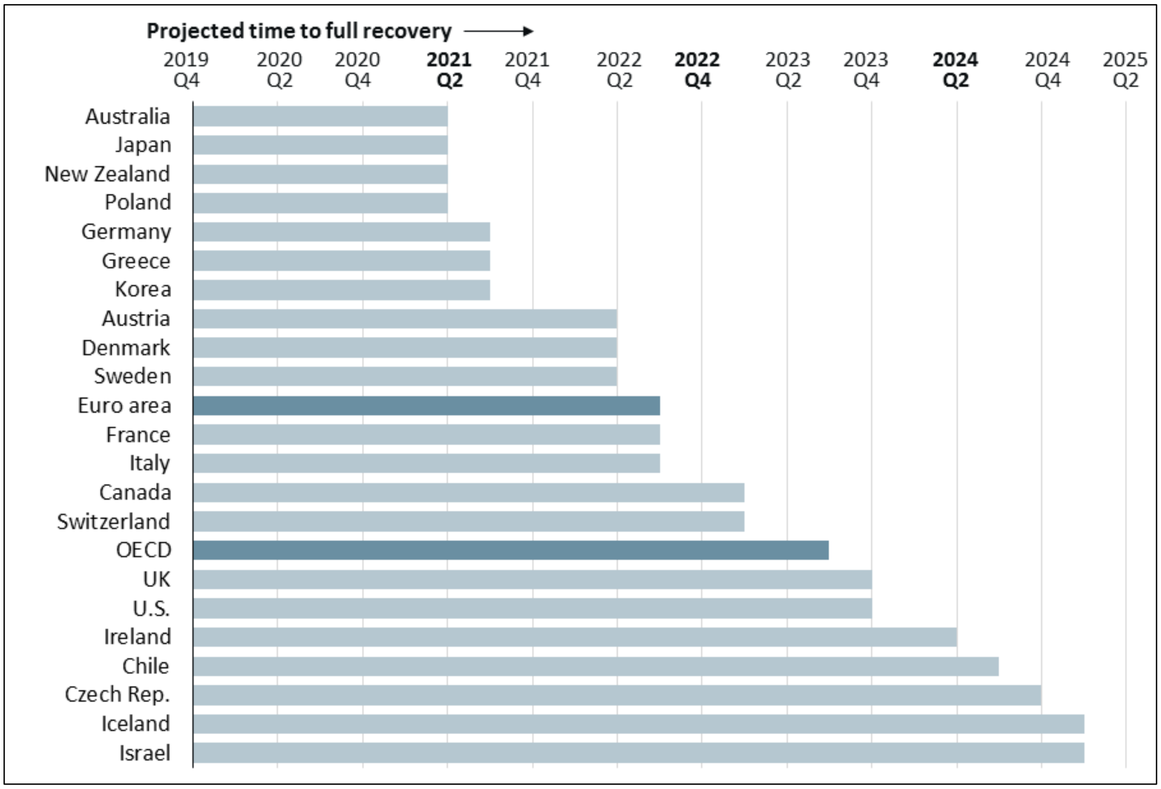
[91] Ibid., p. 13.

[92] *OECD Employment Outlook 2021: Navigating the COVID-19 Crisis and Recovery*, Organization for Economic Cooperation and Development, July 17, 2021, p. 4.

[93] Ibid., pp. 39-40.

Figure 6. Projected Time to Full Recovery in Employment in Selected OECD Countries

Periods are in quarters by year Q4 2019 to Q2 2025



Source: OECD Employment Outlook 2021.

Table 7. OECD, IMF and World Bank Economic Forecasts

Percentage change in Real GDP Growth

		OECD Sep. 2021 Projections				IMF Oct. 2021 Projections				World Bank Jan. 2021 Projections	
	2020	2021	2022		2020	2021	2022		2019	2020	2021
World	-3.4%	5.7%	4.5%	World	–3.1	5.9	4.9	World	2.3%	-4.3%	4.0%
Adv. Economies	-4.8	5.3	3.8	Adv. Economies	–4.5	5.2	4.5	Adv. Economies	1.6	-5.4	3.3
Australia	-2.5	4.0	3.3	United States	–3.4	6.0	5.2	United States	2.2	-3.6	3.5
Canada	-5.3	5.4	4.1	Euro Area	–6.3	5.0	4.3	Euro Area	1.3	-7.4	3.6
Euro area	-6.5	5.3	4.6	Germany	–4.6	3.1	4.6	Japan	0.3	-5.3	2.5
Germany	-4.9	2.9	4.6	France	–8.0	6.3	3.9	Emerging	3.6	-2.6	5.0
France	-8.0	6.3	4.0	Italy	–8.9	5.8	4.2	E. Asia	5.8	0.9	7.4
Italy	-8.9	5.9	4.1	Spain	–10.8	5.7	6.4	China	6.1	2.0	7.9
Spain	-10.8	6.8	6.6	Japan	–4.6	2.4	3.2	Indonesia	5.0	-2.2	4.4
Japan	-4.6	2.5	2.1	United Kingdom	–9.8	6.8	5.0	Thailand	2.4	-6.5	4.0
Korea	-0.9	4.0	2.9	Canada	–5.3	5.7	4.9	Cen. Asia	2.3	-2.9	3.3
Mexico	-8.3	6.3	3.4	China	2.3	8.0	5.6	Russia	1.3	-4.0	2.6
Turkey	1.8	8.4	3.1	India	–7.3	9.5	8.5	Turkey	0.9	0.5	4.5
United Kingdom	-9.8	6.7	5.2	Russia	–3.0	4.7	2.9	Poland	4.5	-3.4	3.5
United States	-3.4	6.0	3.9	Latin America	–7.0	6.3	3.0	Brazil	1.4	-4.5	3.0
Argentina	-9.9	7.6	1.9	Brazil	–4.1	5.2	1.5	Mexico	-0.1	-9.0	3.7
Brazil	-4.4	5.2	2.3	Mexico	–8.3	6.2	4.0	Argentina	-2.1	-10.6	4.9
China	2.3	8.5	5.8	Mid. East	–2.8	4.1	4.1	Mid. East	0.1	-5.0	2.1
India	-7.3	9.7	7.9	Saudi Arabia	–4.1	2.8	4.8	Saudi Arabia	0.3	-5.4	2.0
Indonesia	-2.1	3.7	4.9	Africa	–1.7	3.7	3.8	Iran	-6.8	-3.7	1.5

		OECD Sep. 2021 Projections				IMF Oct. 2021 Projections				World Bank Jan. 2021 Projections	
	2020	2021	2022		2020	2021	2022		2019	2020	2021
S. Africa	-7.0	4.6	2.5	Nigeria	–1.8	2.6	2.7	Egypt	5.6	3.6	2.7
				S. Africa	–6.4	5.0	2.2	S. Asia	4.4	-6.7	3.3
				World Trade Volume	–8.2	9.7	6.7	India	4.2	-9.6	5.4
				Oil prices ($)	–32.7	59.1	–1.8	Pakistan	1.9	-1.5	0.5
								Bangladesh	8.2	2.0	1.6
								Africa	2.4	-3.7	2.7
								Nigeria	2.2	-4.1	1.1
								S. Africa	0.2	-7.8	3.3
								Angola	-0.9	-4.0	0.9

Sources: *OECD Economic Outlook: Interim Report*, Organization for Economic Cooperation and Development, September 2021; *World Economic Outlook,* International Monetary Fund, October, 2021; *Global Economic Prospects*, World Bank Group, January 2021.

Among developing and emerging economies, the economic downturn is projected to most negatively affect countries that rely on commodity exports to support annual economic growth. In addition to lower prices for commodity exports and reduced global demand for exports, developing countries are projected to be negatively affected by reduced remittances, weaker currencies and tighter financial conditions.

The OECD also concluded that

- Real per capita income in 2020 was projected to decline by 8%, with substantial declines in all economies. Even with an economic recovery in 2021, real per capita income was projected to rise to only that of 2013.
- Unemployment was projected to rise to its highest level in more than 25 years in 2020, while the average unemployment rate was projected to rise to 7.4% in 2021and 6.9% in 2022. The OECD concluded that, "scarring effects from job losses are likely to be felt particularly by younger workers and lower-skilled workers, with attendant risks of many people becoming trapped in joblessness for an extended period."
- Net productive investment (business and government) was weak prior to the pandemic, falling behind the average rate of investment during the previous decade. Investment was forecast to contract by half in 2020 as a percent of real GDP, falling from 4.7% to 2.3% and 2.0%, respectively for the one-wave and two-wave scenarios and increasing the risk of entrenched weak economic growth. Investment is also expected to be negatively affected by bankruptcies and insolvencies among corporations and financial institutions.[94]

Through its various forecasts, the OECD has estimated that increased direct and indirect economic costs through global supply chains, reduced demand for goods and services, and declines in tourism and business travel mean that, "the adverse consequences of these developments for other countries (non-OECD) are significant."[95] Global trade, measured by trade volumes, slowed in the last quarter of 2019 and had been expected to decline further in 2020, as a result of weaker global economic activity associated with the pandemic, which is negatively affecting economic activity in various sectors, including airlines, hospitality, ports, and the shipping industry.[96]

According to the OECD's assessment

- The greatest impact of the containment restrictions has been on retail and wholesale trade, and in professional and real estate services, although there are notable differences between countries.
- Countries dependent on tourism have been affected more severely, while countries with large agricultural and mining sectors experienced less severe effects.
- Economic effects likely varied across countries reflecting differences in the timing and degree of containment measures.[97]

---

[94] Ibid., p. 31.

[95] *OECD Interim Economic Assessment: COVID-19: The World Economy at Risk,* Organization for Economic Cooperation and Development. March 2, 2020, p. 2.

[96] Ibid., p. 4.

[97] *Evaluating the Initial Impact of COVID Containment Measures on Activity,* Organization for Economic Cooperation

In addition, the OECD argued that China's emergence as a global economic actor marked a significant departure from previous global health episodes. China's growth, in combination with globalization and the interconnected nature of economies through capital flows, supply chains, and foreign investment, magnify the cost of containing the spread of the virus through quarantines and restrictions on labor mobility and travel.[98] China's global economic role and globalization mean that trade has played a role in spreading the economic effects of COVID-19. More broadly, the economic effects of the pandemic were spread through three trade channels: (1) directly through supply chains as reduced economic activity spread from intermediate goods producers to finished goods producers; (2) as a result of a drop overall in economic activity, which reduced demand for goods in general, including imports; and (3) through reduced trade with commodity exporters that supplied producers, which, in turn, reduced their imports and negatively affected trade and economic activity of exporters.

The IMF Forecast

Having labeled the projected decline in global economic activity as the "Great Lockdown," the IMF released an updated forecast in October 2021. The IMF concluded in its revised forecast that the global economy was recovering, but cautioned the recovery was hobbled by renewed waves of infections and new variants of the virus.[99] The updated forecast estimated a slightly slower rate of growth in advanced economies than that forecasted in April 2021 and a slower rate of growth for emerging and developing economies. IMF concluded that health risks continue to abound and are holding back a full return to economic activity. In addition, the IMF concluded that pandemic outbreaks in critical links of global supply chains have "resulted in longer-than-expected supply disruptions," which are feeding inflation in many countries. The IMF concluded that "risks to economic prospects have increased and policy trade-offs have become more complex."[100]

In its baseline forecast, the IMF estimated the global rate of economic growth declined by 3.2% in 2020, slightly less negative than its April forecast of -3.5%, before growing by 6.0% in 2021 and 4.9% in 2022, revised upward from its previous forecast. Global trade was projected to fall in 2020 by 8.2% and oil prices were projected to fall by 32.7%. For 2021 and 2022, the IMF forecast indicated that global trade could grow by 9.7% and 6.7%, respectively, and that oil prices could rebound by 59.0% in 2021, before falling by 1.8% in 2022. The forecast also indicated the economic recovery will be uneven across countries depending on, "access to medical interventions, effectiveness of policy support, exposure to cross-country spillovers, and structural characteristics entering the crisis." India and China, in particular, were projected to outpace the rate of global economic growth, experiencing a rate of growth in 2021 of 9.5% and 8.0%, respectively.

The IMF's forecasts reflect the impact of policy measures on the U.S. economy in the first half of 2020 that are larger than it had assumed in its earlier forecasts, a slower recovery in the second half of 2020, and the impact of U.S. spending measures adopted in 2021. Also, the IMF forecast reflects an estimated larger decline in consumption than previously assumed as consumers curtailed spending to increase their savings and the effects of social distancing on economic activity. The IMF also stated that many countries have faced a multi-layered crisis that included a health crisis, a domestic economic crisis, falling external demand, capital outflows, and a collapse in commodity prices. In combination, these various effects interacted in ways that made

and Development, March 27, 2020.

[98] Goldin, Ian, "COVID-19 Shows How Globalization Spreads Contagion of All Kinds," *Financial Times*, March 2, 2020. https://www.ft.com/content/70300682-5d33-11ea-ac5e-df00963c20e6.

[99] *World Economic Outlook*, International Monetary Fund, October, 2021.

[100] Ibid., p. xiii.

forecasting difficult. As a result, the IMF indicated its forecast depends on a number of factors, including

- The length of the pandemic and required lockdowns.
- Voluntary social distancing, which affects consumer spending.
- The ability of displaced workers to secure employment, possibly in different sectors.
- The long-term impact of firm closures and unemployed workers leaving the workforce, compounding the ability of the economy to recover.
- The impact of changes to strengthen workplace safety—such as staggered work shifts, enhanced hygiene and cleaning between shifts, new workplace practices relating to proximity of personnel on production lines—which incur business costs.
- Global supply chain reconfigurations that affect productivity as companies try to enhance their resilience to supply disruptions.
- The extent of cross-border spillovers from weaker external demand as well as funding shortfalls.
- A resolution of the current disconnect between rising asset values, as reflected in market indices, and forecasts of a synchronized downturn in global economic activity.

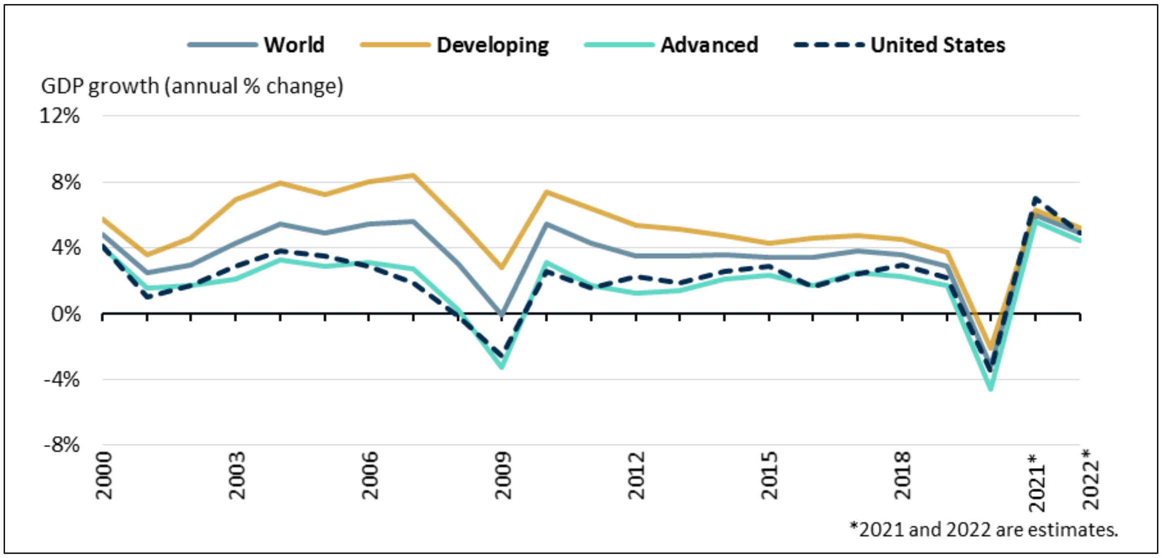
The IMF forecasted indicated that advanced economies as a group experienced an economic contraction in 2020 of 4.5% of GDP, with a rebound of 5.2% in 2021 and 4.5% in 2022; the U.S. economic rate of growth was estimated to have declined in 2020 by -3.4%, greater than the rate of decline experienced in 2009 during the financial crisis, but grow by 6.0% in 2021 and 5.2% in 2022, as indicated in **Figure 7**. The rate of economic growth in Euro area GDP in 2020 was projected to decline by 6.3%, but grow by 5.0% in 2021 and 4.3% in 2022. Most developing and emerging economies were projected to experience a decline in the average rate of economic growth of -2.0% in 2020, reflecting tightening global financial conditions and falling global trade and commodity prices, but grow at a rate of 6.0% in 2021 and 3.6% in 2022. In contrast, China was projected to experience small, but positive rate of growth in 2020 of 2.3% and by 8.0% in 2021 and 5.6% in 2020, while India's rate of growth was projected to decline by 7.3% in 2020 and grow by 9.5% in 2021 and 8.5% in 2020. The IMF estimated that recovery of the global economy could be weaker than projected as a result of lingering uncertainty about possible contagion, lack of confidence, and permanent closure of businesses and shifts in the behavior of firms and households.[101]

The IMF concluded that fiscal and monetary actions by developed economies provided developing and emerging market economies the ability to avoid tightening monetary policy to stem capital outflows. Instead, the countries relied on movements in their exchange rates to carry the brunt of the economic adjustment, while also following developed economies in easing monetary policy, providing liquidity injections, and using unconventional monetary policy measures such as purchases of government and corporate bonds.

[101] Ibid., p. 9.

Figure 7. IMF Forecast, Gross Domestic Product

Percentage change



Source: *World Economic Outlook, Update*, International Monetary Fund, July, 2021. Created by CRS.

As a result of the various challenges, the IMF qualified its forecast by arguing that

> A partial recovery is projected for 2021, with above trend growth rates, but the level of GDP will remain below the pre-virus trend, with considerable uncertainty about the strength of the rebound. Much worse growth outcomes are possible and maybe even likely. This would follow if the pandemic and containment measures last longer, emerging and developing economies are even more severely hit, tight financial conditions persist, or if widespread scarring effects emerge due to firm closures and extended unemployment.[102]

The World Bank Forecast

In January 2021, the World Bank released its updated economic forecast, which indicated that global economic growth would reach 4.3% in 2020 and 4.0% in 2021, compared with June 2020 projections of -5.2% for 2020 and 4.2% in 2021, but rise by a slower rate of 3.8% in 2022.[103] The assessment also concluded that absent "substantial and effective reforms," the global economy would experience a decade of "disappointing growth." The Bank concluded that the forecast was tilted toward downside risks. In particular, the Bank assessed that all regions of the world remain vulnerable to renewed outbreaks of the virus, that there were logistical impediments to the distribution of effective vaccines, that there are financial stresses in addition to elevated debt levels and there is the possibility that the pandemic could have a more negative effect on incomes and growth.[104]

An earlier forecast published on June 8, 2020 indicated the economic recession in 2020 would be the deepest since World War II. It also estimated that the global economic recession would affect 90% of the world's economies, a percentage that is greater than what was experienced during the Great Depression.[105] Similar to the OECD and the IMF forecasts, the World Bank argued that the

[102] *World Economic Outlook*, p. v.

[103] *Global Economic Prospects*, World Bank Group, January 2021, p. xvii.

[104] Ibid., p. xviii.

[105] *Global Economic Prospects*, World Bank Group, June 8, 2020, p. 15.

economic impact of the global recession would fall most heavily on developing and emerging economies that rely on global trade, tourism, or remittances from abroad, and those that depend on commodity exports. In addition, the World Bank forecasted that most emerging and developing economies could experience rates of growth in 2020 that could be the lowest overall since the 1960s, with 90% of such economies expected to experience contractions in per capita incomes and many millions of people falling back into poverty.

The World Bank also estimated that economic growth in advanced economies could decline by 5.4% in 2020 and recover to 3.3% in 2021, compared with the June forecast of 7.0% and 3.8%, respectively. The United States, the Euro area and Japan were all estimated to experience a slower rate of growth in 2020 and rise at a smaller rate in 2021 than the IMF forecast.

The global economic recession was projected to affect all regions in a type of synchronous downturn, with some regions faring worse than others. Differences in the magnitude of regional growth rates were attributed to the "scale of the domestic outbreak, vulnerability of the economy to spillovers from global economic and financial stress the severity of preexisting challenges such as widespread poverty, and the degree to which debt levels constrain the fiscal response."[106]

According to the Bank's baseline scenario, the projected economic recovery was expected to be slow, reflecting shifts in consumption and work patterns as consumers attempted to rebuild savings and businesses strengthen balance sheets. The World Bank also issued both a downside and an upside scenario in which government lockdown policies were required to remain in effect for a longer or a shorter period of time, respectively. The downside scenario projects a contraction in global economic growth of 8% in 2020, as lockdown procedures are assumed to last an additional three months, followed by a sluggish recovery. In contrast, the upside scenario projects a decline in economic activity in 2020 of 4%, based on the assumption that economic activity rebounds quickly in the third quarter of 2020.[107]

The Bank also concluded that global value chains (GVCs) had been important conduits through which macroeconomic developments associated with the pandemic had been transmitted across national borders. The economic effects of the pandemic were spread through trade linkages but also amplified through quarantines, production shutdowns and border closures.[108] Estimates by the World Bank indicated that national policies adopted to blunt the spread of the virus affected the global economy through four shocks: a decline in employment due to factory closures and social distancing, a trade shock as a result of an increase in the cost of traded goods, a tourism shock through a sharp contraction in international tourism, and a services shock. The magnitude of the shocks varies by country depended on various factors, including the composition of output, reliance on trade, and the level of GVC integration.

Global Trade

According to an October 4, 2021, forecast update, the World Trade Organization (WTO) estimated that global trade volumes fell by 5.3% in 2020, nearly half as much as the drop of 9.2% the WTO had forecasted in October 2020.[109] The WTO data indicated that in the first half of 2021, global merchandise export and import volumes were up 13% compared with the same

[106] *Global Economic Prospects* June 8, 2020, p. 115.

[107] Ibid., p. 33.

[108] Ibid., p. 118.

[109] *Global Trade Rebound Beast Expectations But Marked by Regional Divergences*, World Trade Organization, October 4, 2021.

period in 2021. Similarly, trade volumes were up 20% over the same period in the previous year and up 5.7% quarter over quarter, as indicated in **Figure 8**.

Trade gains were more pronounced for North America, Europe, and Asia, with other regions lagging behind. The WTO concluded the trade recovery was broad-based with all major goods categories experiencing year-over-year gains and reflected strong monetary and fiscal policy actions taken by many governments. In particular, the WTO attributed the improved growth performance to fiscal policies that supported personal incomes in advanced economies that, in turn, supported relatively higher levels of consumption and global trade. The WTO indicated, however, that supply shortages, particularly of semiconductor chips, could dampen the trade recovery in subsequent quarters.[110]

The WTO's comprehensive semi-annual forecast issued in March 2021 indicated the decline in global trade in 2020 was not as severe as it had estimated in its previous forecast. The forecast reflected a marked revision from its earlier forecast that global trade volumes could decline between 13% and 32% in 2020 as a result of the economic impact of COVID-19. The updated forecast also indicates the recovery in global trade in 2021 could be slightly faster than the WTO had projected in October 2020, primarily reflecting expectations of a faster recovery in global GDP in 2021 (5.1% compared with 4.9%).

In the first quarter of 2020, global exports and imports fell by 7.8% and 6.8%, respectively, in volume terms and 10.6% and 8.6% in value terms, reflecting the global economic impact of the pandemic, as indicated in **Figure 8**. In the second quarter, global exports and imports dropped by 11.6% and 11.1%, respectively, in volume and by 13.4% and 14.1%, in value terms. The WTO estimated that some trade sectors were affected more than others, particularly trade in fuels and mineral products fell by 38%, while trade in agricultural products fell by 5%. In the third quarter, however, export and import volumes rebounded, increasing by 15.7% and 12.9%, respectively, while export and import values increased by 20.7% and 18.3%, respectively. In the fourth quarter, global exports and imports increased by 6.1% and 7.2%, respectively, in volume terms and by 9.7% and 9.6%, in value terms. Although the WTO has no comprehensive data on trade in services, it concluded that the trend in trade in services likely matched that experienced in trade in merchandise goods. The updated forecast also projected that global GDP had declined at an annual rate of 3.8% in 2020, but could recover in 2021 at an annual growth rate of 5.1%. The WTO indicated in its March forecast that renewed economic lockdowns in response to a resurgence of COVID-19 cases in the fall of 2020 potentially shaved an additional 2% to 3% percentage points off the annual global GDP growth rate in 2021 and negatively affected global trade.

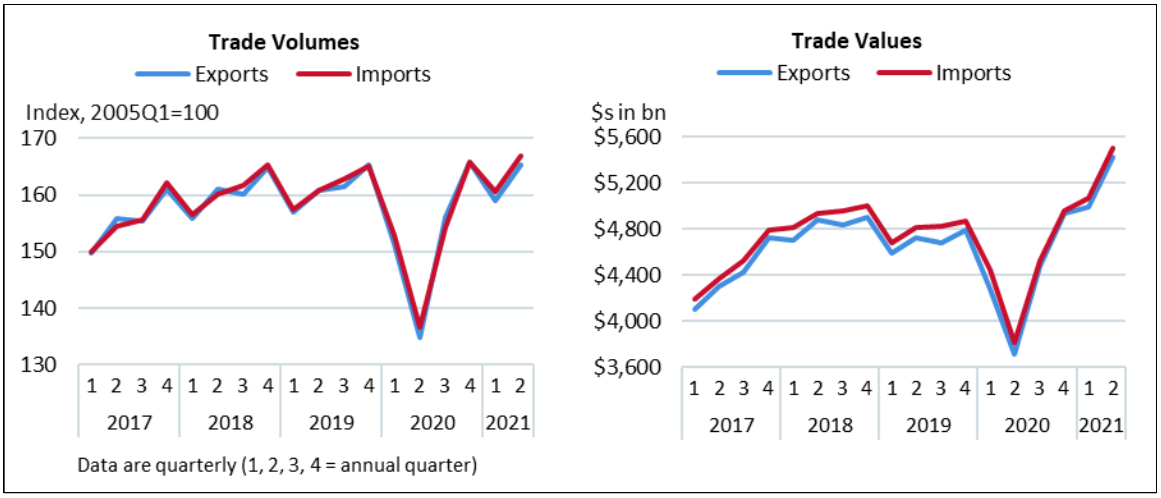
The WTO reported in its June 29, 2020 report on G-20 trade measures that during the mid-October 2019 to mid-May 2020 period, countries had made "significant" progress in facilitating imports, including products related to COVID-19.[111] According to the report, various governments initially responded to the pandemic by introducing new trade restrictive measures, 90% of which were export bans on medical products, such as surgical masks, gloves, medicine and disinfectant. Since then, the WTO indicated that G20 economies have repealed 36% of the restrictions and lowered barriers to imports of many pandemic-related products. As of mid-May 2020, the WTO reported that 65 of the 93 pandemic-related trade measures implemented during

[110] Ibid., p. 1.

[111] WTO Report on G20 Shows Moves to Facilitate Imports Even as Trade Restrictions Remain Widespread, *World Trade Organization*, June 29, 2020. https://www.wto.org/english/news_e/news20_e/trdev_29jun20_e.htm.

the monitoring period were of a trade-facilitating measures, rather than trade-restricting measures.[112]

Figure 8. WTO Estimates of Quarterly Global Exports and Imports, Volumes and Values



Source: World Trade Organization, October, 2021. Created by CRS.

In its October 2021 forecast, the WTO estimated the impact on trade volumes was larger in 2020 than it had estimated in previous forecasts, but trade volumes were projected to recover stronger in 2021, by growing at 10.8%. The WTO's various forecasts indicate that all geographic regions would experience a rise in trade volumes in 2021 and 2022 compared with 2020, while North America and Europe could experience a positive percentage increase in trade volumes in 2021, comparable to the decline in volumes in percentage terms experienced in 2020. The forecast also projected that sectors with extensive value chains, such as automobile products and electronics, could experience the steepest declines in 2020. Although services were not included in the WTO forecast, this segment of the economy could experience the largest disruption as a consequence of restrictions on travel and transport and the closure of retail and hospitality establishments. Such services as information technology, however, were growing to satisfy the demands of employees working from home.

Table 8. WTO Forecast: Merchandise Trade Volume and Real GDP 2020-2022

Annual percentage change

	Forecast scenario (October 2020)		Forecast scenario (March 2021)			Forecast scenario (October 2021)		
	2020	2021	2020	2021	2022	2020	2021	2022
Volume of world merchandise trade	-0.1%	0.1%	-0.1%	0.1%	0.0%	-5.8%	10.8%	4.7%
Exports								
North America	-14.7	10.7	-8.5	7.7	5.1	-8.6	8.1	6.9
South and Central America	-7.7	5.4	-4.5	3.2	2.7	-4.7	7.2	2.0
Europe	-11.7	8.2	-8.0	8.3	3.9	-7.9	9.7	5.6

[112] *Report on G20 Trade Measures (Mid-October 2019 to Mid-May 2020)*, World Trade Organization, June 29, 2020.

	Forecast scenario (October 2020)		Forecast scenario (March 2021)			Forecast scenario (October 2021)		
	2020	2021	2020	2021	2022	2020	2021	2022
CIS			-3.9	4.4	1.9	-1.5	0.6	8.5
Africa			-8.1	8.1	3.0	-8.8	7.0	6.0
Middle East			-8.2	12.4	5.0	-11.6	5.0	9.6
Asia	-4.5	5.7	0.3	8.4	3.5	0.3	14.4	2.3
Imports								
North America	-8.7	6.7	-6.1	11.4	4.9	-6.1	12.6	4.5
South and Central America	-13.5	6.5	6.5	-9.3	8.1	-9.9	19.9	2.1
Europe	-10.7	8.7	-7.8	8.4	3.7	-7.6	9.1	6.8
CIS			-4.7	5.7	2.7	-5.6	13.8	-0.8
Africa			-8.8	5.5	4.0	-11.1	11.3	4.1
Middle East			-11.3	7.2	4.5	-13.9	9.3	8.7
Asia	-4.4	6.2	-1.3	5.7	4.4	-1.2	10.7	2.9
World Real GDP at market exchange rates	-4.8	4.9	-3.8	5.1	3.8	-3.5	5.3	4.1
North America	-4.4	3.9	-4.1	5.9	3.8	-4.0	5.6	3.7
South and Central America	-7.5	3.8	-7.8	3.8	3.0	-7.5	4.9	2.9
Europe	-7.3	5.2	-7.1	3.7	2.6	-6.4	4.3	4.0
CIS			-0.5	1.0	1.2	-2.7	3.9	3.4
Africa			-2.9	2.6	3.8	-2.8	3.5	4.1
Middle East			-6.0	2.4	3.5	-4.6	2.9	4.5
Asia	-2.4	5.9	-1.1	6.1	4.1	-0.9	6.1	4.7

Source: Global Rebound Beats Expectations But Marked by Regional Divergences, World Trade Organization, October 4, 2021.

Notes: Data for 2021 and 2022 are projections; GDP projections are based on scenarios simulated with the WTO Global Trade Model. In the April and October forecasts, the CIS countries, Africa, and the Middle East were grouped together as "Other Regions." CIS is the Commonwealth of Independent States: Azerbaijan, Armenia, Belarus, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Russia, Tajikistan, Turkmenistan, Uzbekistan, and Ukraine.

Supply Chains

The pandemic also raised questions about the costs and benefits of the global supply chains that businesses have erected over the past three decades. Evidence indicates that growth in supply chains had slowed prior to the pandemic, but there is little consensus on the long-term impact of the crisis. According to a December 2020 report by DHL and the New York University Stern Scholl of Business, global interconnectedness comprises four distinct types of transactions: trade, capital, information, and people.[113] This analysis concluded the pandemic affected cross-border movements of people in response to travel restrictions and in trade through a sharp contraction in

[113] Altman, Steven A. and Phillip Bastian, *DHL Global Connectedness Index 2020*, 2020

the global economy. Capital flows also dropped during 2020 as a result of lower corporate earnings, business travel restrictions, negative business prospects, and concerns over global supply chains.[114]

In some cases, businesses reportedly were reassessing their exposure to the risks posed by extensive supply chains that potentially are vulnerable to numerous points of disruption. Also, some governments were assessing the risks supply chains pose to national supplies of items considered to be important to national security as a result of firms locating or shifting production offshore. For multinational businesses, changing suppliers and shifting production locations can be especially costly for some firms and can introduce additional risks.[115] In addition, businesses may be reluctant to relocate from production locations, such as China, that serve not only as production platforms, but also represent important markets for their output. For instance, the Bureau of Economic Analysis (BEA) reports that 10% of the global sales of the majority-owned foreign affiliates of U.S. parent companies is shipped back to the U.S. parent company. In contrast, 60% of such sales take place in the foreign country where the affiliate is located and another 30% is shipped to other foreign countries in close proximity. For China, about 6% of the sales of the majority-owned foreign affiliates of U.S. parent companies is shipped to the U.S. parent, while 82% is sold in China and another 12% is shipped to other foreign countries.[116]

Beyond the current challenges the pandemic poses to global supply chains, a recent report by McKinsey Global Institute catalogued a number of risks to supply chains.[117] The report estimates that 16% to 26% of global goods exports, worth $2.9 trillion to $4.6 trillion, potentially could move to new countries over the next five years "if companies restructure their supplier networks." The report concluded, however, the pandemic had not caused firms to reshape their global production networks in dramatic ways, because the networks reflect, "economic logic, hundreds of billions of dollars' worth of investment, and long-standing supplier relationships."[118] In addition, the report concluded that although firms can shift production locations, the interconnected nature of these chains "limits the economic case for making large-scale changes in their physical location."[119] Instead of shifting production locations, firms reportedly considered various strategies to withstand the challenges of a global economy by increasing sources of raw materials and critical materials, expanding and diversifying supplier bases, investing in suppliers to upgrade their capabilities, and regionalizing supply chains, among a number of possible actions.[120]

Amidst the decline in global trade, 15 countries, including Brunei, Colombia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Vietnam. Australia, China, Japan, New Zealand, and South Korea, signed the Regional Comprehensive Economic Partnership (RCEP) on November 15, 2020, to create potentially one of the largest free trade agreements.[121] The

[114] Ibid., p. 32.

[115] Beattie, Alan, Will Coronavirus Pandemic Finally Kill Off Global Supply Chains?, *Financial Times*, May 28, 2020. https://www.ft.com/content/4ee0817a-809f-11ea-b0fb-13524ae1056b.

[116] *Activities of U.S. Multinational Enterprises: U.S. Parent Companies and Their Foreign Affiliates, Preliminary 2017 Statistics*, Bureau of Economic Analysis, August 23, 2019, Table II.E.2. https://www.bea.gov/news/2019/activities-us-multinational-enterprises-2017.

[117] *Risk, Resilience, and Rebalancing in Global Value Chains*, McKinsey Global Institute, August 2020, p. 1

[118] Ibid., p. 2.

[119] Ibid., In Brief.

[120] *Risk, Resilience, and Rebalancing in Global Value Chains*, p. 16.

[121] Shih, Gerry, and Simon Denyer, As Trump Era Ends, Massive New Asian Trade Deal Leaves U.S. on the Sidelines, *Washington Post*, November 16, 2020. https://www.washingtonpost.com/world/asia_pacific/trade-china-trump-obama-

agreement needs to be ratified by at least six ASEAN countries and three non-ASEAN countries. This agreement followed by two years the conclusion of negotiations over the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) that replaced the proposed Trans-Pacific Partnership agreement after the United States pulled out of the negotiations. The agreement includes Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, and Vietnam. The UK reportedly applied to join the trade agreement and China announced on September 17, 2021, that it had formally applied to join the agreement.[122]

Global Foreign Investment

Similar to the negative impact on global trade of policy measures that were adopted to control the spread of COVID-19, the measures negatively affected global foreign investment flows. In addition, national governments implemented new or expanded foreign investment policies related to national security, while attempting to navigate between legitimate national security risks and policies that some policymakers argue are fundamentally protectionist. During 2020, various governments adopted measures at both the national and international level to address the health and economic consequences of the COVID-19 pandemic, as indicated in **Table 9**.[123] According to the United Nations Conference on Trade and Development (UNCTAD), these measure include incentives and subsidies to increase domestic production of vaccines and personal protective equipment (PPE) and direct state intervention through nationalization or through directives to increase output at facilities that currently produced PPE materials or to initiate production at other facilities. EU members moved independently to amend existing legislation or adopt new rules to expand their review of foreign investments for national security reasons, particularly rules related to acquisitions of firms involved in the production of medical care and health. Also, Australia, Canada, and Japan expanded the range of foreign investments they screen. In some cases, policy changes included enhanced foreign investment screening of foreign investment for "public interest" reasons that may remain after the pandemic crisis.[124]

Table 9. Foreign Investment Screening Legislation Adopted During COVID-19

Country	Investment Measure
Spain	Adopted a Royal Decree to suspend its liberalization regime regarding listed and unlisted Spanish companies and require authorization to acquire 10% or more of stock in certain sectors, including critical infrastructure, critical technologies, media and food security.
European Union	The EU Commission issued a Guidance to Member States concerning efforts by non-EU investors to attempt to acquire health care capacities or related industries through foreign investment during the pandemic and recommended that EU members make full use of FDI screening regimes or establish such regimes where they are not fully developed.
Australia	Temporarily lowered the monetary screening threshold to zero for all foreign investments, requiring prior approval for all foreign investments and extended the timeframe for screening procedures from 30 days to six months.

asia/2020/11/16/f02f43e4-27b7-11eb-9c21-3cc501d0981f_story.html.

[122] Qian, Colin, Twinnie Siu, Tom Daly, Gabriel Crossley, Daniel Leussink, Sakura Murakami, Ben Blanchard, Jeanny Kao, and David Brunnstrom, China Applies to Join Pacific Trade Pact to Boost Economic Clout, *Reuters*, September 17, 2021. https://www.reuters.com/world/china/china-officially-applies-join-cptpp-trade-pact-2021-09-16/.

[123] *World Investment Report 2020*, United Nations Conference on Trade and Development, 2020, p. 93.

[124] Ibid., p. 96.

Country	Investment Measure
Italy	Expanded the scope of its FDI screening regime, including acquisitions from within the EU, by adding finance, credit and insurance to its list of strategic sectors.
India	Introduced a requirement for prior governmental approval for all investment originating from countries that share land borders with India.
Canada	Announced "enhanced security" reviews of foreign investments in Canadian firms to prevent foreign firms from taking advantage of low stock valuations during the pandemic to acquire any Canadian firm, but particularly those related to public health or involved in the supply of critical goods and services to Canadians to protect Canadian's health and safety.
France	Added biotechnology to its list of critical sectors requiring prior governmental approval for foreign acquisitions and temporarily lowered the voting rights threshold for listed companies for FDI screening from 25% to 10%.
Germany	Amended its Foreign Trade and Payments Ordinance to emphasize critical public health sectors and require prior governmental approval for foreign acquisitions of 10% or more of the stock of German companies involved in developing, manufacturing or producing vaccines, medicines, protective medical equipment and other medical goods for the treatment of highly infectious diseases. Also adopted measures to align German reviews with EU rules.
Hungary	Adopted a foreign investment screening mechanism that requires approval for investments in 21 industries, including health care, pharmaceuticals and medical device manufacturing, and non-medical industries. An investment can be denied that violates or threatens public security or order, particularly the security of supply of basic social needs.
Japan	Amended its list of sectors considered critical to national security by adding the production of vaccines, medicines and advanced medical equipment, including ventilators.
Poland	Adopted a FDI screening regime for foreign acquisitions of 20 % or more in publicly listed companies, companies controlling strategic infrastructure or developing critical IT software, or companies active in 21 industries, including pharmaceuticals, manufacturing of medical devices, food processing and utilities.

Source: *World Investment Report 2020,* United Nations Conference on Trade and Development, 2020, pp. 92-93.

The U.N. also reported that governments adopted new regulations across a spectrum of areas and also supported joint international efforts to address public aspects of the pandemic, as indicated in **Table 10.** State intervention spanned policy approaches from investment incentives to promote the production of medicines and medical equipment, assistance to affected firms and industries, measures to circumvent intellectual property rights restrictions, and international efforts to speed up vaccine production and cross-border sharing.

The shift in approach toward the national security dimensions of foreign investment, especially by developed economies, has tended to blur the distinction between foreign investment, trade, and national security and reflects the evolving nature of the concept of national security relative to foreign investment. Conceivably, changes in technology and the global economy have made it more difficult to assess the economic costs and benefits of changes in foreign investment policies taken on national security grounds.

Table 10. Investment Policy Instruments Adopted at the National and International Levels to Address the COVID-19 Pandemic

Investment policy areas	Policy measures
Policy actions at the national level	
Investment facilitation	Alleviate administrative burdens and bureaucratic obstacles for firms. Use of online tools and e-platforms.
Investment retention and aftercare by investment promotion agencies (IPAs)	COVID-19-related information services. Administrative and operational support during the crisis. Move to online services.
Investment incentives	Financial or fiscal incentives to produce COVID-19-related medical equipment. Incentives for conversion of production lines. Incentives for enhancement of contracted economic activities.
State participation in crisis-affected industries	Acquisition of equity in companies, including nationalization.
Local small and medium enterprises (SMEs) and supply chains	Financial or fiscal support for domestic suppliers (such as SMEs).
National security and public health	Application and potential reinforcement of FDI screening in pandemic-relevant industries.
Other State intervention in the health industry	Mandatory production. Export bans. Import facilitation.
Intellectual property (IP)	General authorization of non-voluntary licensing, to speed up research and development (R&D). IP holder-specific non-voluntary licensing, to enable imports of medication.
Policy actions at the international level	
International support measures for investment	International pledges in support of cross-border investment.
IIAs	Reform International Investment Agreements (IIAs) to support public health policies and to minimize investor–State dispute risks.
Intellectual property (IP)	General authorization of non-voluntary licensing, to speed up research and development (R&D).

Source: *World Investment Report 2020*, United Nations Conference on Trade and Development, 2020, p. 89.

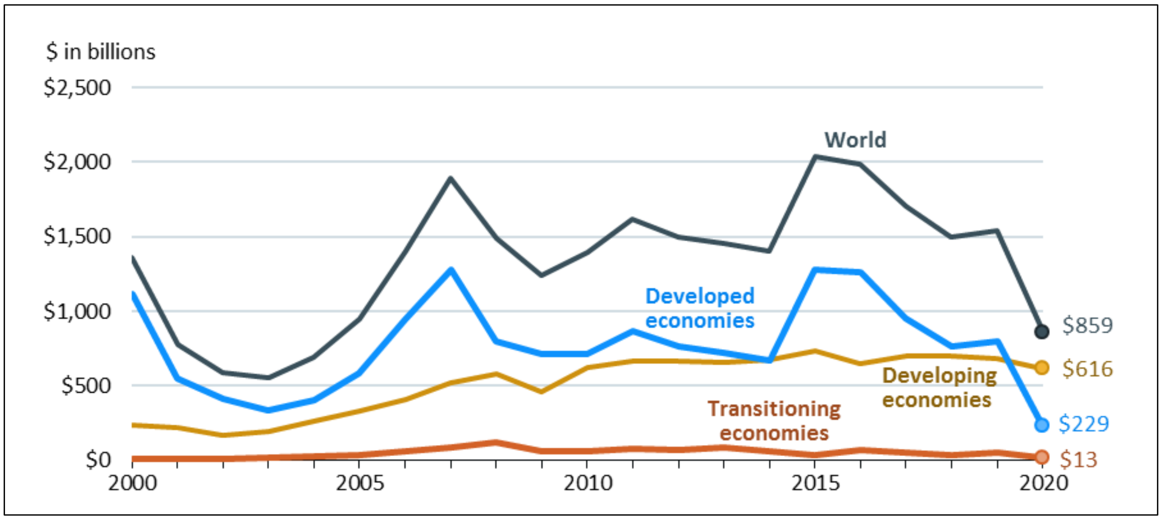
According to UNCTAD, global foreign direct investment inflows fell by 42% in 2020 compared with the same period in 2019, with continued weakness expected in 2021, as indicated in **Figure 9**.[125] Global inflow totals were driven in large part due to the decline in foreign investment

[125] *Investment Trends Monitor*, United Nations Conference on Trade and Development, January, 2021. Investment Policy Instruments Adopted at the National and International level to Address the COVID-19 Pandemic

inflows to developed economies, which fell by 69%. Inflows to Europe fell to -$4 billion, indicating an outflow, compared with inflows in 2019 of $344 billion. In contrast, inflows to developing economies fell by 12% over the period, aided in large part by positive inflows to China. Investment flows to developing Asia, at $476 billion, dropped by 4% compared with 2019 and accounted for about half the total $859 billion global direct investment inflows in 2020.

Figure 9. Annual Foreign Direct Investment Inflows by Major Country Groups

Inflows in billions of dollars



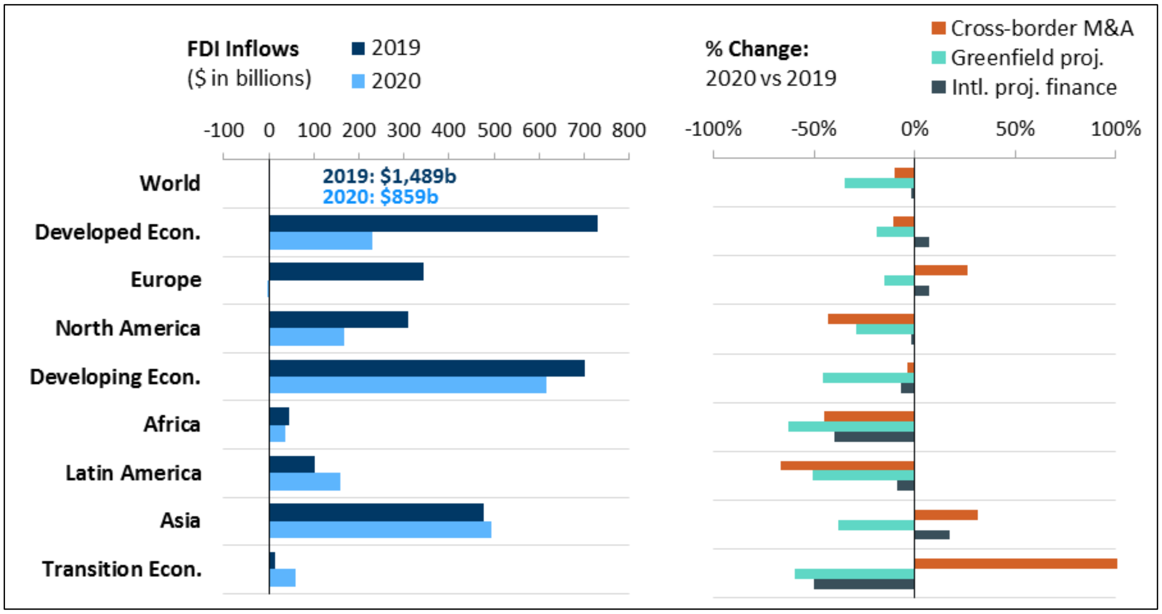
Source: United Nations Conference on Trade and Development. Created by CRS.

As indicated in **Figure 10**, all major geographic areas except Asia experienced a drop in foreign direct investment inflows in 2020 compared with 2019.[126] This drop in foreign investment was apparent in the three major types of foreign investment: cross-border investments; greenfield investment, or investment in new business activity; and international project finance. In the three types of investment activity, global activity fell by 10%, 35%, and 2%, respectively in 2020 compared with 2019. Cross-border merger and acquisition (M&A) activity increased by 31% and 147%, respectively, in Asia and Transition economies, but declined by 11% in developed economies and 67% in Latin America. International project finance, reportedly an important source of infrastructure finance, fell globally by 2%, but rose by 7% in developed economies, primarily in Europe, and by 17% in Asia.

[126] *Investment Trends Monitor*, United Nations Conference on Trade and Development, January 24, 2021.

Figure 10. Global Foreign Direct Investment Inflows

In billions of dollars and percentage change

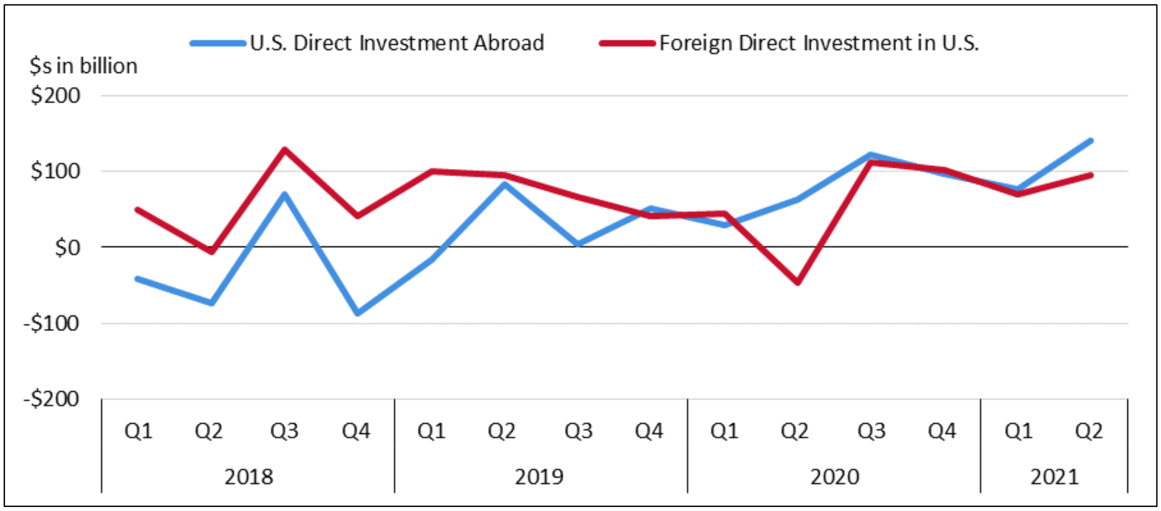


Source: United Nations Conference on Trade and Development. Created by CRS.

For the United States, BEA reported that U.S. direct investment abroad (outflows) and foreign direct investment in the United States (inflows) rose by 37% and fell by half, respectively, in the first half of 2020 compared with the first half of 2019, as indicated in **Figure 11**.[127] The drop in inbound foreign direct investment values partly reflect the lower values for equity, mirroring the declines in major equity markets in the first half of 2020. For 2020 as a whole, U.S. direct investment outflows rose by 155%, while foreign direct investment inflows fell by 30% compared with 2019. In the first quarter of 2021, U.S. direct investment abroad fell by 20% compared with the previous quarter; foreign direct investment in the United States fell by 31%, reflecting the continuing challenges facing the global economy that are affecting a sustained recovery. In the second quarter, U.S. direct investment outflows increased by 81% over the previous quarter to reach $139 billion, the largest outflows recorded preceding the pandemic, while foreign direct investment in the United States rose increased by 35% to reach $95 billion.

[127] *U.S. International Transactions, Second Quarter 2021*, Bureau of Economic Analysis, September 21, 2021.

Figure 11. U.S. Direct Investment; Inflows and Outflows



Source: Bureau of Economic Analysis. Created by CRS.

Notes: In the balance of payments, direct investment outflows are represented as a negative value, indicating an outflow and direct investment inflows are represented as positive values. For presentation purposes, the signs for direct investment abroad, or outflows, have been reversed.

Major Economic Developments

Between late February 2020 and spring 2021, financial markets from the United States to Asia and Europe were whipsawed as investors alternated between optimism and pessimism amid concerns that COVID-19 would create a global economic and financial crisis with few metrics to indicate how prolonged and extensive the economic effects could be.[128] February 24, in particular, stands as a red-letter date as financial market indexes from Asia, Europe, and the United States dropped by large amounts. Investors searched for safe-haven investments, such as the benchmark U.S. Treasury 10-year security, which experienced a historic drop in yield to below 1% on March 3, 2020.[129] In response to concerns that the global economy was in a freefall, the Federal Reserve lowered key interest rates on March 3, 2020, to shore up economic activity, while the Bank of Japan engaged in asset purchases to provide short-term liquidity to Japanese banks; Japan's government indicated it would also assist workers with wage subsidies. The Bank of Canada also lowered its key interest rate. The International Monetary Fund (IMF) announced that it was making about $50 billion available through emergency financing facilities for low-income and emerging market countries and through funds available in its Catastrophe Containment and Relief Trust (CCRT).[130] As assessments of risk by financial market participants lessened, pressure on the dollar and on U.S. Treasury securities lessened as well.

[128] Samson, Adam and Hudson Lockett, "Stocks Fall Again in Worst Week Since 2008 Crisis," *Financial Times*, February 28. https://www.ft.com/content/4b23a140-59d3-11ea-a528-dd0f971febbc.

[129] The price and yield of a bond are inversely related; increased demand for Treasury securities raises their price, which lowers their yield. Levisohn, Ben, "The 10-Year Treasury Yield Fell Below 1% for the First Time Ever. What That Means," *Barrons*, March 3, 2020. https://www.barrons.com/articles/the-10-year-treasury-yield-fell-below-1-for-the-first-time-ever-what-that-means-51583267310.

[130] Georgieva, Kristalina, "Potential Impact of the COVID-19 Epidemic: What We Know and What We Can Do," *International Monetary Fund*, March 4, 2020. https://blogs.imf.org/2020/03/04/potential-impact-of-the-COVID-19-epidemic-what-we-know-and-what-we-can-do/.

Financial Markets

Reflecting investors' uncertainties, the DJIA lost about one-third of its value between February 14, 2020, and March 23, 2020, as indicated in **Figure 12**. Expectations that the U.S. Congress would adopt a $2.0 trillion spending package moved the DJIA up by more than 11% on March 24, 2020. From March 23 to April 15, the DJIA moved higher by 18%, paring its initial losses by half. Since then, the DJIA trended upward, but moved erratically at times as investors weighed news about the human cost and economic impact of the pandemic and the prospects of various medical treatments. Between March 23 and July 1, the DJIA regained 70% of the value lost during the February to March decline. On Monday, November 9, 2020, the DJIA gained over 800 points, or nearly three percentage points, as markets responded positively to press reports that an effective COVID-19 vaccine had been developed. On November 10, the DJIA rose above 29,400 for the first time since the index fell in February 2020. Between January 1, 2021, and February 4, 2021, the DJIA increased by about 3.0%, continuing a rise in the index of 17% since the end of October 2020. Through April, 2021, the DJIA had gained more than 12% in value and was 16% higher than the value on February 14, 2020. On July 23, 2021, the DJIA crossed the 35,000 mark, nearly doubling the value of the index since March 23, 2020.

As indicated in **Table 11**, the DJIA lost the largest part of its market valuation in trading during February and March when the index lost nearly one-fourth of its value as more trading sessions ended with overall market values lower than higher. Since March, the index has posted more trading sessions that closed with positive gains than losses. By October 23, 2020, the DJIA had recovered most of the value lost in February and March. During the final week of October 2020, the DJIA lost more than 1,800 points, the largest weekly loss since March 2020 as Germany, France and other European countries reinstituted lockdowns in response to a resurgence of COVID-19 cases. In the first three days of November, however, the Index regained three-fourths of the value it lost the previous week.

Announcements of vaccines portending a resurgence of economic activity boosted market sentiment in November and December with the DJIA rising by over a combined 3,700 points or by nearly 14%. In January 2021, the DJIA dropped by about 1% with more trading days ending with the index down than days with the index up from the previous day. During the first six months of 2021, the DJIA gained 15% in market value. During June 2021, the DJIA had one more day of the index closing down than up as the index lost one-quarter of a point overall, the first such decline since January 2021. Through October 2021, however, more trading session closed higher than lower, the Index gained 1.24%, and closed above 35,000 for the first time on July 23, 2021. In October, trading sessions closing lower outnumbered sessions closing higher 13 to 7, with the index as a whole rising by 5.57% in value, the largest decline since March 2021.

Table 11. Dow Jones Industrial Average Market Changes by Month

	Sessions up	Sessions down	Open	Close	Change in index valuation	
January 2020	13	8	28,638.97	28,256.03	-382.94	-1.34%
February	8	11	28,319.65	25,409.36	-2,910.29	-10.28%
March	10	12	25,590.51	21,917.16	-3,673.35	-14.35%
April	12	9	21,227.38	24,345.72	3,118.34	14.69%
May	10	10	24,120.78	25,383.11	1,262.33	5.23%
June	14	8	25,342.99	25,812.88	469.89	1.85%
July	13	9	25,879.38	26,428.32	548.94	2.12%

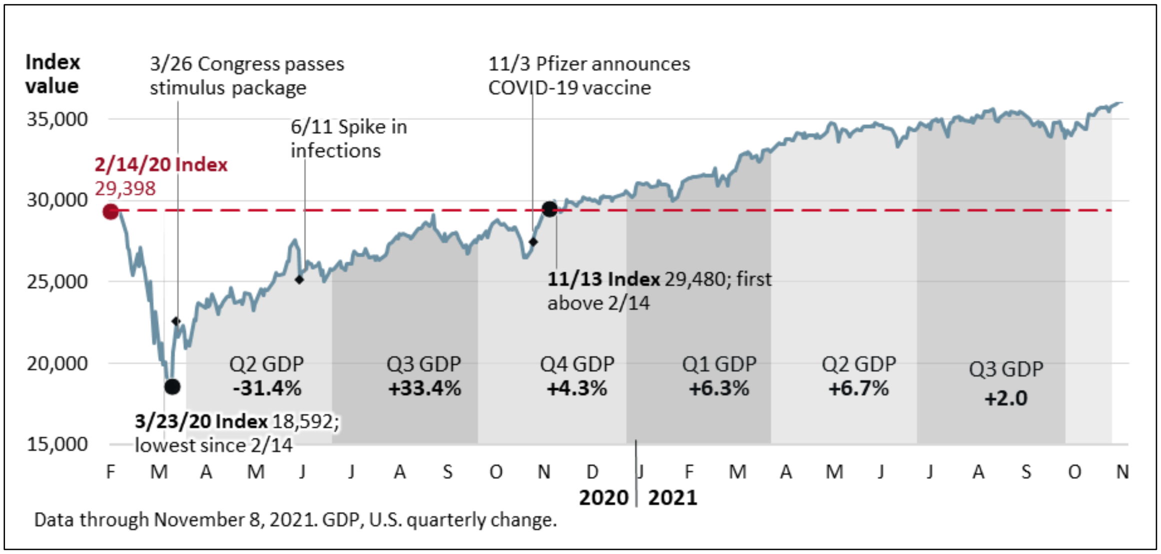
	Sessions up	Sessions down	Open	Close	Change in index valuation	
August	14	7	26,542.32	28,430.05	1,887.73	7.11%
September	12	9	28,439.61	27,781.70	-657.91	-2.31%
October	10	12	27,816.90	26,501.60	-1,315.30	-4.73%
November	12	8	26,691.28	29,638.64	2,947.36	11.04%
December	14	8	29,707.50	30,606.48	808.98	2.71%
January 2021	8	11	30,223.89	29,981.10	-242.79	-0.80%
February	15	5	30,054.73	30,932.37	877.64	2.92%
March	13	10	31,065.90	32,981.55	1,915.65	6.17%
April	12	8	33,054.58	33,874.85	820.27	2.48%
May	13	7	33,904.89	34,529.45	624.56	1.84%
June	10	11	34,584.19	34, 502.51	-81.68	-0.24%
July	13	7	34,507.32	34,935.47	428.15	1,24%
August	13	9	34,968.56	35,360.73	392.17	1.12%
September	8	13	35,387.55	33,843.92	-1,543.63	-4.36%
October	13	7	33,930.70	35,819.56	1,888.86	5.57%

Source: *Financial Times*; calculations by CRS.

Similar to the 2008-2009 global financial crisis, central banks implemented a series of monetary operations to provide liquidity to their economies. These actions, however, initially were not viewed entirely positively by all financial market participants who questioned the use of policy tools by central banks that were similar to those employed during the 2008-2009 financial crisis, despite the fact that the COVID-19 and the previous crises were fundamentally different in origin. During the previous financial crisis, central banks intervened to restart credit and spending by banks that had engaged in risky assets. In the 2020 environment, central banks attempted to address financial market volatility and prevent large-scale corporate insolvencies that reflected the underlying economic uncertainty caused by the pandemic.

Figure 12. Dow Jones Industrial Average

February 14, 2020, through November 8, 2021



Source: *Financial Times*. Created by CRS.

The yield on U.S. Treasury securities dropped to historic levels on March 6, 2020, and March 9, 2020, as investors moved out of stocks and into Treasury securities and other sovereign bonds, including UK and German bonds, due in part to concerns over the impact the pandemic would have on economic growth and expectations the Federal Reserve and other central banks would lower short-term interest rates.[131] On March 5, the U.S. Congress passed an $8 billion spending bill to provide assistance for health care, sick leave, small business loans, and international assistance. At the same time, commodity prices dropped sharply as a result of reduced economic activity and disagreements among oil producers over production cuts in crude oil and lower global demand for commodities, including crude oil.

The drop in some commodity prices raised concerns about corporate profits and led some investors to sell equities and buy sovereign bonds. In overnight trading in various sessions between March 8, and March 24, U.S. stock market indexes moved sharply (both higher and lower), triggering automatic circuit breakers designed to halt trading if the indexes rise or fall by more than 5% when markets are closed and 7% when markets are open.[132] By early April, the global mining industry had reduced production by an estimated 20% in response to falling demand and labor quarantines and as a strategy for raising prices.[133]

On March 11, as the WHO designated COVID-19 a pandemic, governments and central banks adopted additional monetary and fiscal policies to address the growing economic impact. The Bank of England lowered its key interest rate, reduced capital buffers for UK banks, and provided a funding program for small and medium businesses. The UK Chancellor of the Exchequer proposed a budget that appropriated £30 billion (about $35 billion) for fiscal stimulus spending,

---

131 Smith, Colby, Richard Henderson, Philip Georgiadis, and Hudson Lockett, "Stocks Tumble and Government Bonds Hit Highs on Virus Fears," *Financial Times*, March 6, 2020. https://www.ft.com/content/9f94d6f8-5f51-11ea-b0ab-339c2307bcd4.

132 Georgiadis, Philip, Adam Samson, and Hudson Lockett, "Stocks Plummet as Oil Crash Shakes Financial Markets," *Financial Times*, March 9, 2020. https://www.ft.com/content/8273a32a-61e4-11ea-a6cd-df28cc3c6a68.

133 Hume, Neil, "Mine Closures Bolster Metals Prices as Demand Collapses," *Financial Times*, April 7, 2020. https://www.ft.com/content/06ef38c9-18d8-427e-8675-a567227397c0.

including funds for sick pay for workers, guarantees for loans to small businesses, and cuts in business taxes. The European Commission announced a €25 billion (about $28 billion) investment fund to assist EU countries and the Federal Reserve announced that it would expand its repo market purchases to provide larger and longer-term funding to provide added liquidity to financial markets.

International Role of the Dollar

Similar to conditions during the 2008-2009 financial crisis, the dollar emerged as the preferred currency by investors, reinforcing its role as the dominant global reserve currency. As indicated in **Figure 13**, the dollar appreciated more than 3.0% during the period between March 3 and March 13, 2020, reflecting increased international demand for the dollar and dollar-denominated assets. Since the highs reached on March 23, the exchange value of the dollar has dropped between 1% and 2% per month in a slow decline through December 2020 as financial strains eased and demand for the dollar in international financial markets lessened.

By the end of January 2021, the dollar had depreciated by more than 11% from the highest value it reached in March 2020. The development of COVID-19 vaccines likely affected the value of the dollar in various ways, including factors that tend to appreciate the dollar as a result of renewed economic growth in the United States and opposing forces that tend to depreciate the dollar if demand declines for the dollar as a safe-haven currency. As previously noted, common central banks policies of keeping key interest rates low also affected movements in the foreign exchange value of the dollar in 2021 by reducing arbitrage opportunities and curtailing volatility.

Despite periods of appreciation and depreciation of the dollar through 2020 and 2021, by the end of April, 2021, the dollar was down 2% compared with the value on January 2, 2020. In part, the resolution of the UK's withdrawal from the EU has strengthened both the Euro and the pound, which tended to depreciate the value of the dollar. The decline in the value of the dollar reportedly pushed some countries to consider intervening to weaken their currencies.[134] Between June 10, 2021, and August 20, 2021, the dollar appreciated about 3.6%, nearly reaching the value recorded on January 2, 2020. The strengthening in the value of the dollar is attributed to a number of factors, including an anticipated change in Fed monetary policies.[135]

[134] Szalay, Eva, Central Banks Take Rare Step of Flagging Currency Sales in Advance, *Financial Times*, February 3, 2021. https://www.ft.com/content/0383f3a4-41a0-464a-b831-fd1a09a6b1b0.

[135] Stubbington, Tommy, Federal Reserve's Tilt Towards Tighter Policy Unleashes Dollar Bulls, *Financial Times*, July 19, 2021.

Figure 13. U.S. Dollar Trade-Weighted Broad Index, Goods and Services

January 2, 2020, through October 29, 2021

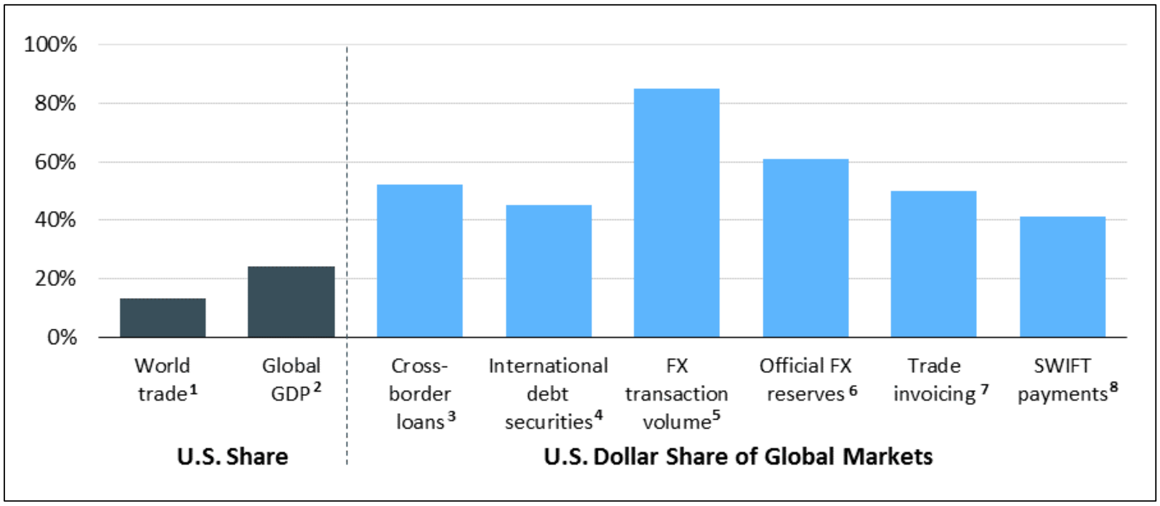
Source: St. Louis Federal Reserve Bank. Created by CRS.

The Bank for International Settlements (BIS) emphasized the role of the dollar as a dominant global currency in its 2019 triennial survey of currency markets.[136] According to the survey, the dollar accounts for 88% of global foreign exchange market turnover and is key in funding an array of financial transactions, including serving as an invoicing currency to facilitate international trade, as indicated in **Figure 14.** It also accounts for about 60% of central bank foreign exchange holdings, half of non-U.S. banks foreign currency deposits, and two-thirds of non-U.S. corporate borrowings from banks and the corporate bond market.[137] In comparison, the United States accounts for about one-fourth of global GDP and about one-fifth of global trade (exports plus imports).

[136] *Foreign Exchange Turnover in April 2019*, Bank for International Settlements, September 16, 2019. https://www.bis.org/statistics/rpfx19_fx.htm.

[137] See CRS In Focus IF10112, *Introduction to Financial Services: The International Foreign Exchange Market*.

Figure 14. International Role of the Dollar



Source: *U.S. Dollar Funding: An International Perspective*, CGFS Papers No. 65, Bank for International Settlements, June 2020. Created by CRS.

Notes: (1) Data refer to 2019. (2) Data refer to 2019. (3) U.S. dollar-denominated cross-border loans by banks to counterparties in all countries; data refer to Q4 2019 (excluding interoffice claims but including interbank claims on account of loans and deposits); loans comprise nonnegotiable debt instruments that are loaned by creditors directly to a debtor or represented by evidence of a deposit. (4) US dollar denominated international debt securities by all issuers; data refer to Q4 2019; these securities are issued outside the local market of the country where the borrower resides, and capture issues conventionally known as eurobonds and foreign bonds and exclude negotiable loans; instruments such as bonds, medium-term notes and money market instruments are included. (5) Data refer to 2019. (6) Data refer to Q4 2019. (7) As estimated in Gopinath (2015). (8) Data refer to February 2020. Sources: Gopinath (2015); Federal Reserve; IMF; CPB World Trade Monitor; Bloomberg; SWIFT; BIS Triennial Central Bank Survey of Foreign Exchange and Over-the-counter (OTC) Derivatives Markets; BIS locational banking statistics (LBS).

As a result of the dominant role of the dollar as a global reserve currency, disruptions in the smooth functioning of the global dollar market can have far-reaching repercussions on international trade and financial transactions. A June 2020 report by BIS stressed the central role of the dollar in the global economy by concluding that dollar funding activities are highly complex, geographically dispersed, and interconnected in ways that provide benefits to the stability of the global financial system. This also means, however, that strains in the system can easily be transmitted across different financial markets and across regions.[138]

In addition, the dominant role of the dollar in international trade pricing and trade financing means the dollar plays a key role in the global economic recovery and that it can amplify the impact of economic disruptions, according to the IMF.[139] Traditionally, most economic models are based on the assumption that countries set their prices in their home currencies. As a result, domestically produced goods and services become cheaper for trading partners when the domestic currency weakens, leading to increased demand by trading partners and increased exports. However, much international trade, including many commodities, is priced in dollars, which means that trade volumes respond less than they would if goods were priced in exporters' home currencies. Limited evidence indicates that a significant share of bilateral trade between

[138] Bank for International Settlements, *U.S, Dollar Funding: An International Perspective,* CGFS Papers, No. 65, June 2020, p. 52. https://www.bis.org/publ/cgfs65.htm.

[139] *Dominant Currencies and External Adjustment,* IMF Staff Discussion Note 20/05, International Monetary Fund, July 2020.

countries other than the United States is invoiced in U.S. dollars.[140] As a result, an appreciation of the dollar against other currencies, or a weakening in other currencies, has a muted effect on export volumes by other countries, at least in the short run, as has been evident in movements in exchange rates and trade volumes of emerging market and developing economies. The IMF also concluded that because countries other than the United States price much of their trade in dollars, an appreciation in the value of the dollar, or a depreciation in the value of other currencies relative to the dollar, reduces both exports and imports. As a result, a depreciation in other currencies relative to the dollar provides less of a boost in their exports and, therefore, less of a countercyclical support.

Together, these effects translate into movements in the exchange value of the dollar that at times contrast with traditional theory, since such movements do not affect trade volumes as much as might be expected. For instance, after appreciating in March 2020, the trade-weighted value of the dollar steadily depreciated through December 2020 and then has roller-coasted through 2021. In standard models, the depreciation in the dollar would be expected to lower export prices and, in turn, increase demand for U.S. exports, or increase the volume of exports, while import volumes would be expected to decline along with the rising price of foreign currencies relative to the dollar. GDP data through the second quarter of 2021 indicate, however, that U.S. trade prices for exports and imports and trade volumes for exports and imports generally moved in tandem, as indicated in **Figure 15.**

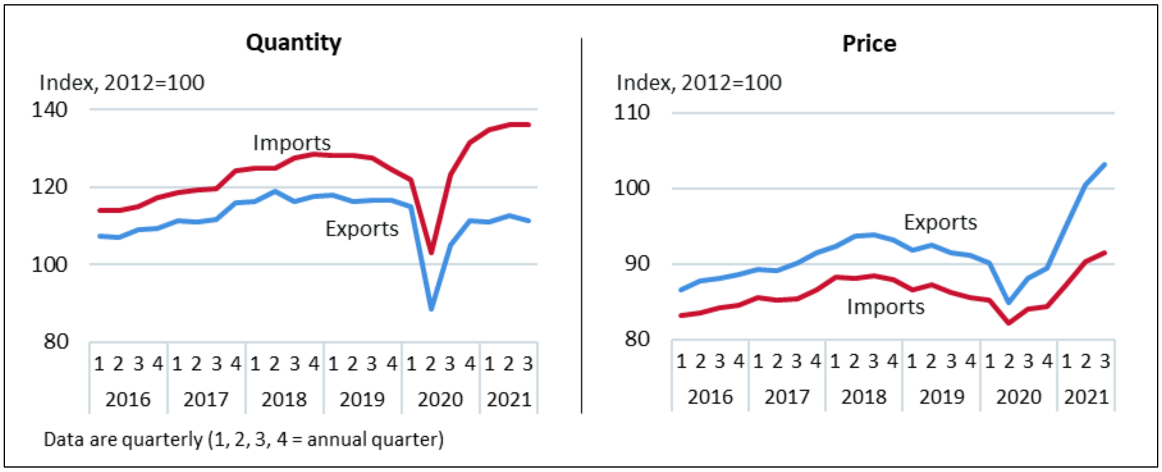
The international role of the dollar and the well-developed U.S. capital markets also provide the United States with greater latitude in financing its trade deficit. For some trade specialists, the widely accepted characterization of the current account as a product of a domestic saving-investment relationship fails to distinguish between a country's domestic saving-investment balance, its ability to finance its trade deficit, and the role of cross-border capital flows. These flows suggest that the ability of the United States to finance its trade imbalances through capital inflows eases the constraint imposed by the domestic saving-investment balance.

The international role of the dollar also increases pressure on the Federal Reserve essentially to assume the lead role as the global lender of last resort during crises. Reminiscent of the financial crisis, the global economy experienced a period of dollar shortage, requiring the Federal Reserve to take numerous steps to ensure the supply of dollars to the U.S. and global economies, including activating existing currency swap arrangements, establishing such arrangements with additional central banks, and creating new financial facilities to provide liquidity to central banks and monetary authorities.[141] Typically, banks lend long-term and borrow short-term and can only borrow from their home central bank. In turn, central banks can only provide liquidity in their own currency. Consequently, a bank can become illiquid in a panic, meaning it cannot borrow in private markets to meet short-term cash flow needs. Swap lines are designed to allow foreign central banks the funds necessary to provide needed liquidity to their country's banks in dollars.

[140] Ibid., p. 8.

[141] Politi, James, Brendan Greeley, and Colby Smith, "Fed Sets Up Scheme to Meet Booming Foreign Demand for Dollars," *Financial Times*, March 31, 2020. https://www.ft.com/content/6c976586-a6ea-42ec-a369-9353186c05bb.

Figure 15. Quarterly Price and Quantity Indexes, U.S. Goods Imports and Exports



Source: Bureau of Economic Analysis. Created by CRS.

Notes: 2012 = 100.

U.S. Monthly Trade

BEA data illustrate the sharp drop in U.S. trade volumes for both exports and imports of goods and services in 2020 compared with 2019. Trade in services was especially hard hit as a result of lockdowns that restricted tourism travel and lower transport revenues as a result of the overall decline in economic activity. Trade in services fell sharply with the volume of services exports and imports declining by multiples of the percentage decline in goods trade, as indicated in **Table 12**. Prices for services exports and imports, however, fell slightly compared with the decline in prices of goods imports and exports. The largest changes in prices and quantities for goods and services occurred in the second quarter of 2020 following the same pattern as the second quarter change in GDP. The quantity of U.S. exports and imports fell by 23% and 16%, respectively, in second quarter 2020, compared with the preceding quarter.[142]

In value terms, the prices of U.S. goods exports in second quarter 2020 fell by 6.0%, while the price of imports fell by 3.5%, compared with the first quarter. In the third quarter, both export and import volumes increased by about 20%, while export and import prices rose by 3.8% and 2.1%, respectively. In fourth quarter 2020, U.S. export and import prices increased slightly, while export and import volumes increased by 6.0% and 7.0%, respectively. As a result, the overall value of exports and imports rose slightly less than 5% in the fourth quarter of 2020. According to U.S. balance of payments data, the overall annual value of U.S, goods exports and imports (the combined changes in prices and volumes) dropped by 35% and 16%, respectively year-over-year (2020 compared to 2019).[143]

In the first quarter of 2021, U.S. goods export volumes fell slightly, while import volumes rose by 2.6%. Export and import price indexes both rose, reflecting an increase of 30% in petroleum export prices and a rise in petroleum import prices of 38%. Compared to the decline in goods export and import volumes in the second quarter of 2020, first quarter 2021 export and import volumes were up 28% and 31%, respectively, reflecting an increase in the global rate of economic growth. Relative to first quarter 2021, price indexes for exports and imports in the second quarter

[142] *Gross Domestic Product, Second Quarter, 2021 (Advance Estimate) and Annual Update*, Bureau of Economic Analysis, July 29, 2021.

[143] *U.S. International Trade in Goods and Services June 2021*, Bureau of Economic Analysis, August 5, 2021.

of 2021 rose by 5.8% and 3.4%, respectively. In contrast, goods export and import volumes increased by 1.4% and 1.6$, respectively. The combined price and quantity affects indicate that goods exports grew by 6.8% in the second quarter of 2021 compared with first quarter 2021, while goods imports increased by 4.2%.

In the first half of 2020, trade in services experienced a sharp drop in quantity and price terms as travel exports fell by 61% and travel imports dropped by 90%. Overall, exports of services declined by 10.3% and 15.3% in the first and second quarters of 2020, but demonstrated mixed changes in the subsequent four quarters. Similarly, total import services fell by 9.7% and 24.6% in the first two quarters of 2020, but experienced positive changes in volumes since. Travel-related imports, in particular, rose by 97.9% in fourth quarter 2020 compared with the preceding quarter. The quarterly prices of both services exports and imports increased over each of the subsequent four quarters. U.S. imports of services in the second quarter, however, grew twice as fast as exports of services; the overall goods and services deficit in the second quarter increased by 1.4% over the first quarter.[144]

Table 12. U.S. Goods and Services Exports and Imports, Change in Quarterly Price and Quantity Indexes

Percentage change

	Year over Year % Change		Quarter over Quarter % Change					
			2020				2021	
	2019	2020	1q	2q	3q	4q	1q	2q
Goods								
Exports								
Quantity	-0.1%	-10.2%	-1.2%	-23.1%	18.8%	5.9%	-0.4%	1.4%
Price	-1.6	-4.0	-1.1	-6.0	3.8	1.7	6.1	5.8
Imports								
Quantity	0.5	-5.6	-1.9	-15.6	19.5	6.8	2.6	1.4
Price	-2.1	-2.8	-0.5	-3.5	2.1	0.4	3.5	3.4
Services								
Exports								
Quantity	-0.1	-19.7	-10.3	-15.3	-1.3	3.8	-1.5	1.6
Price	1.7	0.4	0.4	-2.1	2.1	1.2	2.2	1.7
Imports								
Quantity	3.9	-22.6	-9.7	-24.6	6.7	8.3	0.5	4.6
Price	0.9	0.5	0.7	-1.0	1.1	1.2	1.1	2.1

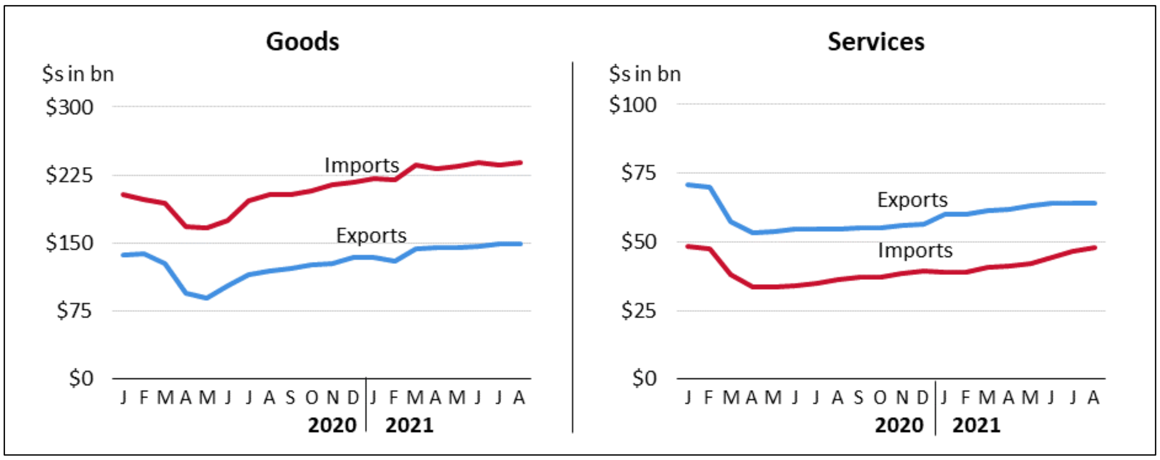
Source: Bureau of Economic Analysis. Quarterly GDP estimates, export and imports price and quantity indices. Created by CRS.

Notes: Annual changes represent percentage change in 4th quarter index values over the 4th quarter of the preceding year; quarterly changes represent the change in quarterly index values over the previous quarter.

[144] Ibid.

On October 5, 2021, the U.S. Census Bureau reported an increase in the overall U.S. goods and services trade deficit in August 2021 of about $3 billion to reach a monthly total of $73.3 billion (the largest monthly goods and services trade deficit on record), compared to the July total of $70.3 billion. The increase in the August goods and services deficit primarily reflected a 1.8% increase in the goods trade deficit and a 7.7% decrease in the services trade surplus, compared to July data, as indicated in **Figure 16**.[145] The August exports of goods were the highest on record, while the imports of goods and services was also the highest on record. According to BEA data, goods exports increased from $148.6 billion in July 2021 to $149.7 billion in August 2021; goods imports rose from $236.4 billion to $239.1 billion. Relative to services, U.S. services exports fell from $64.1 billion in July to $64.0 billion in August, while imports of services increased from $46.6 billion to $47.9 billion. On a year-over-basis, the overall goods and services trade deficit in 2020 increased by $105 billion, or 18.2%, compared with 2019 and demonstrates the impact that business lockdowns had on U.S. and global trade in the first quarter of 2020. Relative to 2019, U.S. goods exports in 2020 fell by 13.2%, while goods imports fell by 6.6%, accounting for the largest part of the increase in the annual U.S. trade balance. Services exports declined by 21% in 2020 relative to 2019, while services imports fell by 22%, reflecting the drop overall in services activities as a result of quarantines and business lockdowns.

Figure 16. Monthly U.S. Exports and Imports of Goods and Services 2020-2021



Source: Census Bureau, Bureau of Economic Analysis. Created by CRS.

Global Energy Markets

The price of oil has served as an additional indicator of the impact of the pandemic on the global economy. As global economic activity fell in March and April 2020, demand for oil also fell, resulting in rising inventories and falling prices. In response, oil producers reduced oil production, only slowly restoring output as the global economic activity recovered. As financial market indexes declined in 2020 and the dollar appreciated, the price of Brent crude oil dropped close to $20 per barrel on March 20, as indicated in **Figure 17.**

As a result of the steep drop in oil prices, oil producers agreed in April, 2020 to reduce global supply by 10%, or 9.6 million barrels per day. Since the low prices recorded in April, the price of Brent crude oil generally moved within a range of $40 to $44 per barrel through late November 2020, when it began edging above $50 per barrel. In trading December 10, 2020, the price of Brent crude oil breached the $50 per barrel mark for the first time since March 2020. As energy

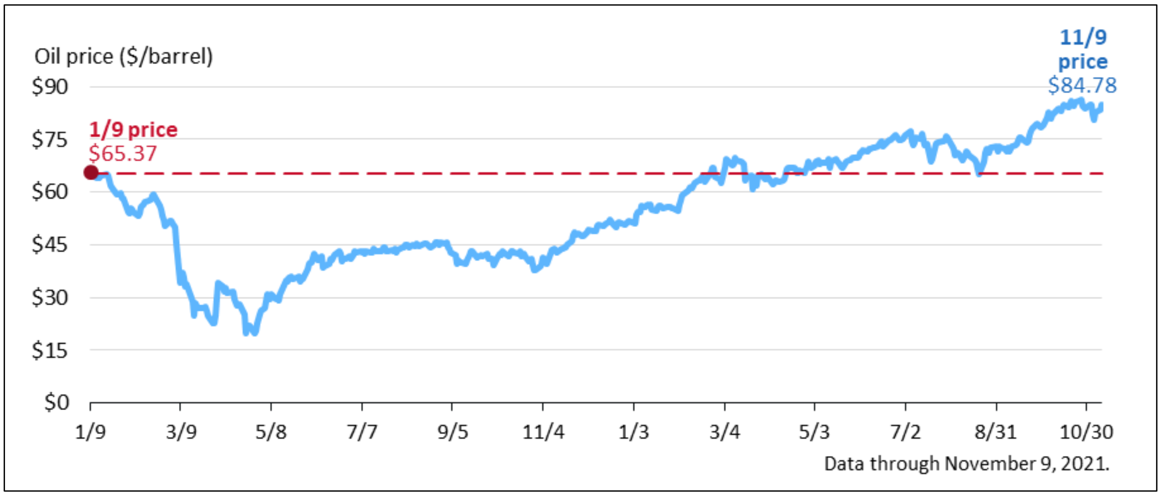
[145] *Monthly U.S. International Trade in Goods and Services, August 2021*, Census Bureau, October 5, 2021.

demand showed signs of recovering in 2021, the cuts in oil production that began in April were trimmed to 7.7 million barrels per day and were trimmed by an additional 2 million barrels per day starting in January 2021.

On February 23, 2021, the price of Brent crude oil rose above $67 per barrel, the highest price since January 9, 2020, but dropped to $64 per barrel by March 3, 2021. On March 5, 2021, the Brent crude price of a barrel of oil rose to $69 per barrel, the highest since January 2020, as OPEC and Russia decided against increasing petroleum output.[146] By the end of June 2021 the price of Brent crude oil pushed above $75 per barrel. In meetings in early July 2021, OPEC members agreed to increase production as the international price of crude oil reached nearly $78 per barrel, but objections by the United Arab Emirates (UAE) over the calculation used to increase production targets held up the agreement.[147] On July18, 2021, OPEC and Russia agreed to increase crude oil production by an additional 400,000 barrels a day into 2022.[148] On August 11, 2021, the Biden Administration, citing concerns over the negative impact rising energy prices could have on an economic recovery, called on OPEC to increase oil production beyond levels previously announced.[149] According to the Bureau of Labor Statistics, U.S. energy prices in June had increased by 35% over the previous year.[150]

Figure 17. Brent Crude Oil Price Per Barrel in Dollars

January 9, 2020, through November 9, 2021



Source: Markets Insider. Created by CRS.

---

[146] Raval, Anjli, Oil Jumps as OPEC and Allies Decide Against Big Rise in Output, Financial Times, March 5, 2021. https://www.ft.com/content/771ebf3a-cff0-4ff3-ab9a-0bbd01a33f55.

[147] Sheppard, David, Why is OPEC+ in Turmoil When Oil Prices Are Elevated?, *Financial Times*, July 5, 2021.

[148] Rovnick, Naomi, Tommy Stubbington, Hudson Lockett, and Joe Rennison, Global Markets Shaken by Fears Over Delta Variant, *Financial Times*, July 19, 2021. https://www.ft.com/content/5b2248be-8f0e-4235-ba2e-2187c96f16a6.

[149] Fedor, Lauren and Derek Brower, White House Calls on OPEC to Boost Production to Contain Fuel Prices, *Financial Times*, August 11, 2021. https://www.ft.com/content/a8a631cf-de43-47e8-8cc4-99732c39c4da.

[150] *Producer Price Indexes-June 2021*, Bureau of Labor Statistics, July 14, 2021.

Country Policy Responses

As previously indicated, after a delayed response, most central banks followed the actions of Federal Reserve. In addition, national governments adopted various fiscal measures to sustain economic activity. In response to growing concerns over the global economic impact of the pandemic, G-7 finance ministers and central bankers released a statement on March 3, 2020, indicating they would "use all appropriate policy tools" to sustain economic growth.[151] The Finance Ministers also pledged fiscal support to ensure health systems can sustain efforts to fight the outbreak.[152] In most cases, however, countries pursued their own divergent strategies, in some cases including banning exports of medical equipment. Following the G-7 statement, the U.S. Federal Reserve (Fed) lowered its federal funds rate by 50 basis points, or 0.5%, to a range of 1.0% to 1.25% due to concerns about the "evolving risks to economic activity of the COVID-19."[153] At the time, the cut was the largest one-time reduction in the interest rate by the Fed since the 2008-2009 global financial crisis.

On April 15, 2021, the Director-General of the WTO called on WTO members and vaccine manufacturers to increase production, reduce export restrictions, and suspend intellectual property rights on COVID-19 vaccines to increase immunizations.[154] The WHO also reported that new COVID-19 cases had nearly doubled around the world over the preceding two months, approaching the highest rates of infection since the start of the pandemic. Reportedly, new case numbers had spiked in every region of the world, with the largest outbreaks occurring in India, Brazil, Poland, Turkey and some other countries.[155] Also on April 15, 2021, a group of 175 former world leaders and Nobel laureates called on the United States to suspend intellectual property rights for COVID-19 vaccines to facilitate the international production and distribution of vaccines by allowing developing countries the ability to manufacture their own vaccines. The group warned that, "… inequitable vaccine access would impact the global economy and prevent it from recovering."[156]

On April 16, the WHO announced that it would develop one or more COVID-19 technology hubs to transfer a "comprehensive technology package and provide appropriate technology to interested manufacturers" in developing economies.[157] Reportedly, the initiative's goal is to make the technology either free of intellectual property constraints in developing economies, or that such rights are made available through nonexclusive licenses.

[151] *Statement of G-7 Finance Ministers and Central Bank Governors*, March 3, 2020. https://home.treasury.gov/news/press-releases/sm927. Long, Heather, "G-7 Leaders Promise to Help Economy as COVID-19 Spreads, But They Don't Announce Any New Action," *Washington Post,* March 3, 2020. https://www.washingtonpost.com/business/2020/03/03/economy-COVID-19-rate-cuts/.

[152] Giles et al., "Finance Ministers Ready to Take Action."

[153] *Federal Reserve Releases FOMC Statement*, March 3, 2020, https://www.federalreserve.gov/newsevents/pressreleases/monetary20200303a.htm.

[154] Cunnigham, Erin, New African WTO Head Urges Members to Take Action on Vaccine Inequity, *The Washington Post*, April 15, 2021.

[155] Cunningham, Erin and Siobhan O'Grady, New Global Coronavirus Cases Nearly Double in Two Months, *The Washington Post*, April 16, 2021. https://www.washingtonpost.com/world/2021/04/16/global-coronavirus-cases-surge-who/.

[156] Williams, Aime, Former World Leaders Call on Biden to Suspend Covid-19 Vaccine Patents, *Financial Times*, April 15, 2021. https://www.ft.com/content/43fd53f5-2b82-4e41-981c-8544a6ce996b.

[157] World Health Organization, Establishment of a COVID-19 mRNA Vaccine Technology Transfer Hub to Scale Up Global Manufacturing, April 16, 2021.

China, which experienced positive quarterly rates of economic growth throughout the pandemic-related recession, reportedly considered a series of actions to support its economic growth rate due to concerns over a slowing economy. On July 7, 2021, the Chinese Cabinet stated it would scale back pandemic-related spending to address concerns over accumulated government debt and potentially to maintain low borrowing costs for small businesses. The statement also indicated the cabinet supported cuts by the People's Bank of China (PBOC) in its required reserve ratio (RRR)—generally considered to be among the strongest actions central banks can take—to support the economy.[158]

According to the WHO, sixteen African countries experienced their worst period during the pandemic in early July 2021, as a result of rising rates of infections and deaths, with even larger numbers expected.[159] Some of the most severely affected countries were Namibia, Uganda, Zambia, and South Africa, The WHO indicated the continent was experiencing a third wave of infections as a result of the rapidly spreading Delta variant. Reportedly, less than one percent of the continent's population has been vaccinated.

In the early stages of the pandemic, foreign investors pulled an estimated $26 billion out of developing Asian economies not including more than $16 billion out of India, increasing concerns about a major economic recession in Asia. Some estimates indicate that 29 million people in Latin America could fall into poverty, reversing a decade of efforts to narrow income inequality. Some analysts also expressed concern that Africa, after escaping the initial spread of infections, could face a sharp increase in rates of infection outside South Africa, Egypt, Nigeria, Algeria, and Ghana, where most of the initial infections had occurred.[160]

In October 2020, the Bank of Canada indicated that Canada's quarterly rate of growth declined by 13.0% in the second quarter of 2020, but by 4.4% in the third quarter as business and other restrictions were relaxed and by a rebound in home sales. The Bank also estimated that growth for 2020 declined at an annual rate of 5.3% in 2020, but could increase by an estimated 6.0% in 2021 and 4.6%in 2022.[161] On December 1, the Canadian government adopted a C$1 trillion spending package to support economic growth, reportedly the largest such fiscal stimulus package adopted in the post-World War II period.[162] The package provided relief to provinces and territories to improve infection in long-term care facilities, industries hard hit by the pandemic, such as tourism, travel and arts, and provide loans to eligible businesses and to lower and middle income families.

India announced on March 25, 2021, that it was temporarily halting exports of COVID-19 vaccines and prioritizing local vaccinations in response to a resurgence in viral cases.[163] In early April 2021, India and Brazil were designated global viral infection hot spots due to a resurgence

[158] Qian, Colin, Judy Hua, Kevin Yao, Giles Elgood and Mark Heinrich, China's Cabinet Says It Will Use RRR Cuts to Support Real Economy, *Reuters*, July 7, 2021.

[159] Cunningham, Erin, Africa Suffers 'Worst Pandemic Week Ever' as Cases Surge, Vaccinations Lag, *The Washington Post*, July 9, 2021.

[160] Pilling, David, The Pandemic is Getting Worse: Africa Prepares for Surge in Infections, *Financial Times*, July 20, 2020. https://www.ft.com/content/1b3274ce-de3b-411d-8544-a024e64c3542.

[161] *Monetary Policy Report July 2021*, Bank of Canada, July 2021.

[162] Canada Unveils Largest Economic Relief Package Since WW2, BBC News, December 1, 2020. https://www.bbc.com/news/world-us-canada-55139229.

[163] Findlay, Stephanie, Michael Peel, Donato Paolo Mancini, Andres Schipani and Jasmine Cameron-Chileshe, India Blocks Vaccine Exports in Blow to Dozens of Nations *Financial Times*, March 25, 2021. https://www.ft.com/content/5349389c-8313-41e0-9a67-58274e24a019.

in cases. On May 6, India reported a single-day total of 412,000 new cases.[164] By July 2, India's death toll from the pandemic surpassed 400,000.[165] Brazil reportedly has had over 350,000 viral-related deaths: in some cities in Brazil, COVID-related daily deaths have outnumbered daily births.[166]

In April 2021, India reported that in the second quarter its GDP growth rate fell by 25.8% compared with the first quarter, raising concerns that the country could experience its most severe economic contraction on record.[167] Subsequent forecasts indicate that India's economy grew by 23.7% in the third quarter of 2020, reportedly reflecting higher levels of consumer activity, and by 7.9% in the fourth quarter.[168] On an annual basis, India's economy reportedly grew at a rate of -3.5%. On November 12, India's finance minister announced a new package of fiscal measures totaling $35 billion to increase consumer spending and to assist manufacturing, agriculture, and exports. The move followed an announcement by India's cabinet that it had approved a spending package of $27 billion to provide incentives over five years to manufacturing firms, including automobiles, auto parts, pharmaceuticals, textiles, and food products.[169]

As a consequence of the resurgence in cases and renewed lockdowns in economies, the IMF argued that advanced economies needed to sustain fiscal support for consumers and businesses as the most effective means of stimulating their economies. The IMF argued this support was necessary because the global economy was experiencing what economists term a Keynesian liquidity trap, named after economist John Maynard Keynes. In theoretical terms, a liquidity trap exists when central banks' key interest rates are so low they have little impact through traditional means to affect business and consumer activity. According to the IMF, in 60% of the global economy, central banks had pushed key interest rates below 1% and in one-fifth of the global economy, interest rates were below zero. In these circumstances, economists generally argue that adjusting fiscal policy, or government taxing and spending, is the more effective policy tool for raising the rate of economic growth.[170] The IMF concluded that, "Fiscal policy must play a leading role in the recovery."

The United States

Recognizing the growing impact the pandemic was having on financial markets and economic growth, the Federal Reserve (Fed) took a number of steps to promote economic and financial

---

[164] Slater, Joanna, India Announces Record Number of Deaths and New Cases as Outbreak Rages on, *The Washington Post*, May 6, 2021; Parker, Claire, Paul Schemm, Sean Sullivan, India Sets Another Daily Coronavirus Case Record: U.S. Pledges Help, *The Washington Post*, April 26, 2021. https://www.washingtonpost.com/world/asia_pacific/india-coronavirus-deaths-pandemic/2021/04/25/ec0f208a-a51c-11eb-b314-2e993bd83e31_story.html.

[165] Cunningham, Erin, Covid-19 Global Updates: India's Death Toll Tops 400,000 as Delta Variant Gains Ground Worldwide, *The Washington Post*, July 2, 2021.

[166] Caverni, Alexandre, Brazil Sees 1,803 COVID-19 Deaths; Chinese Vaccine Found 50.7% Effective Against Variant, *Reuters*, April 11, 2021; Hassan, Jennifer, In Many Brazilian Cities, Deaths Have Overtaken Births, *The Washington Post*, April 15, 2021.

[167] Slater, Joanna, India's Economy Contracts by Nearly 24%, Its Sharpest Drop On Record, *Washington Post*, August 31, 2020. https://www.washingtonpost.com/world/asia_pacific/indias-economy-contracts-by-nearly-24-percent-amid-pandemic/2020/08/31/92318fbe-eb70-11ea-bd08-1b10132b458f_story.html?hpid=hp_world-right-4-0_world-latest-feed%3Ahomepage%2Fstory-ans.

[168] *RBI Bulletin—November 2020*, Reserve Bank of India, November 2020.

[169] Sharma, Ashok, India Announces $35 Billion Economic Stimulus Package, *ABCNews*, November 12, 2020. https://abcnews.go.com/International/wireStory/india-announces-35-billion-economic-stimulus-package-74165709.

[170] Gopinath, Gita, Global Liquidity Trap Requires a Big Fiscal Response, *Financial Times*, November 3, 2020, https://www.ft.com/content/2e1c0555-d65b-48d1-9af3-825d187eec58.

stability involving the Fed's monetary policy and "lender of last resort" roles. Some of these actions were intended to stimulate economic activity by reducing interest rates; other actions were intended to provide liquidity to financial markets so firms would have access to needed funding. In announcing its decisions, the Fed indicated that "[t]he COVID-19 outbreak has harmed communities and disrupted economic activity in many countries, including the United States. Global financial conditions have also been significantly affected.[171]" On March 31, 2020, the Trump Administration announced that it was suspending for 90 days tariffs it had placed on imports of apparel and light trucks from China, but not on other consumer goods and metals.[172] In October, Congress and the Trump Administration negotiated over the substance of an additional spending package to support the U.S. economy. The U.S. Congress passed a $1.9 trillion economic stimulus bill, designated the American Rescue Plan Act (P.L. 117-2), that was signed by President Biden on March 11, 2021.

On May 5, 2021, the Biden administration announced it would support international discussions to waive intellectual property restrictions on COVID-19 vaccine production for developing economies.[173] Prior to this announcement, developed economies, including Britain, Switzerland, the EU, and the United States, had blocked a proposal by over 80 developing countries at the World Trade Organization to suspend intellectual property rights restrictions on production of COVID-19 vaccines.[174] The EU announced on June 4, 2021, that it would reject the U.S. proposal to drop IP protections and offered a three-point plan of its own that included (1) maintaining export restrictions; (2) encouraging vaccine manufacturers to negotiate agreements with producers in developing economies and increasing vaccine supplies to vulnerable countries; and (3) using existing WTO rules to grant licenses to producers without the consent of the patent-holder.[175] During the G-7 summit in England on June 11, 2021, the United States and the other G-7 leaders announced they would provide a combined total of 1 billion doses of the COVID-19 vaccine in addition to lifesaving medical supplies, oxygen, diagnostics, therapeutics, and personal protective equipment (PPE) to low and middle income developing countries.[176]

On October 28, 2021, the Bureau of Economic Analysis (BEA) released estimated third quarter data on U.S. GDP, which indicated the U.S. economy grew at an annual rate of 2.0% growth and that the economy grew by annualized rates of 6.3% in the first quarter and 6.7% in the second quarter of 2021, outpacing the 4th quarter 2020 rate of 4.5%. The deceleration in the rate of growth in the third quarter reflected lower levels of personal consumption expenditures on motor vehicles and parts and on food, services, and accommodation. In contrast, U.S. GDP fell at an annual rate of 31.4% in the second quarter of 2020, after falling by 5.0% at an annual rate in the first quarter, as indicated in **Figure 18**.[177] On an annual basis, the 2020 rate of growth fell by 3.4%, compared with a 2019 rate of 2.3%. In the second quarter of 2020, amidst a large decline

---

[171] *Federal Reserve Issues FOMC Statement*, March 15, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm.

[172] Politi, James and Aime Williams, "Trump to Suspend Some Tariffs for 90 Days," *Financial Times*, March 31, 2020. https://www.ft.com/content/46add447-2048-4348-bd34-2088ad0e3bc8.

[173] Diamond, Dan, Tyler Pager, and Jeff Stein, Biden Commits to Waiving Vaccine Patents, Driving Wedge With Pharmaceutical Companies, *The Washington Post,* May 5, 2021.

[174] *Rich, Developing Economies Wrangle Over COVID Patents*, *Reuters*, March 10, 2021. https://www.reuters.com/article/us-health-coronavirus-wto/rich-developing-nations-wrangle-over-covid-vaccine-patents-idUSKBN2B21V9.

[175] Blenkinsop, Phillip, Resisting Patent Waiver, EU Submits Vaccine Plan to WTO, *Reuters*, June 4, 2021. https://www.reuters.com/world/europe/eu-executive-submits-vaccine-access-proposal-wto-2021-06-04/.

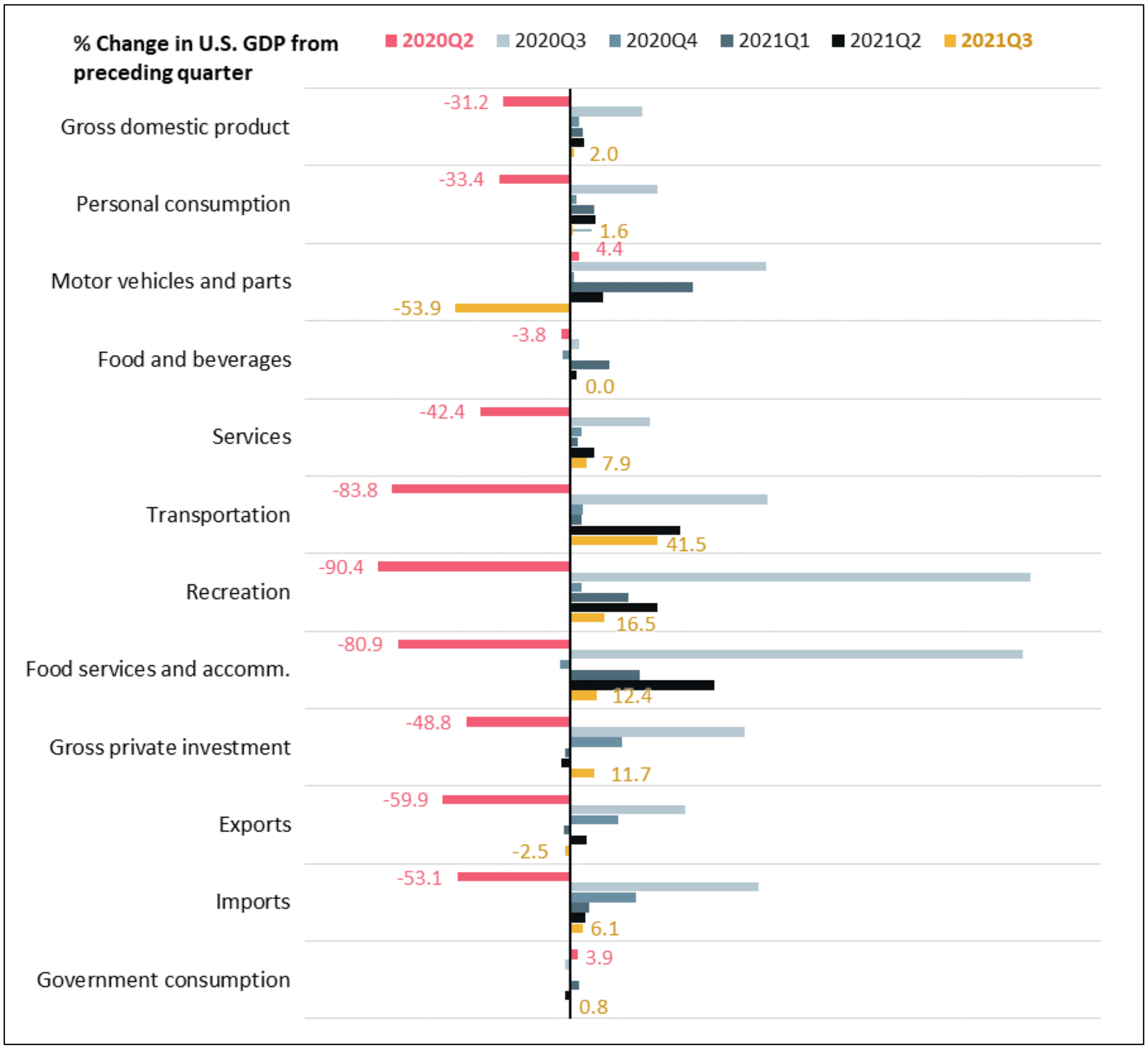
[176] Scott, Eugene, G-7 Leaders Commit to Making 1 Billion Coronavirus Vaccines Available Starting This Summer, *The Washington Post*, June 11, 2021.

[177] *Gross Domestic Product, Third Quarter 2021, (Advance Estimate)*, Bureau of Economic Analysis, October 28, 2021.

overall in U.S. economic activity in response to business lockdowns, some sectors experienced a decline in activity of 80% or more, including recreation, food services and accommodation and transportation sectors. In the third quarter, however, all sectors except mining experienced positive rate of growth. Personal consumption increased by 41% in the third quarter, after falling by 31.4% in the second quarter, sustaining economic growth.

Figure 18. U.S. GDP Percentage Change From Preceding Quarter

Seasonally adjusted at annual rates



Source: Bureau of Economic Analysis. Created by CRS.

Notes: Exports and imports represent the combination of goods and services.

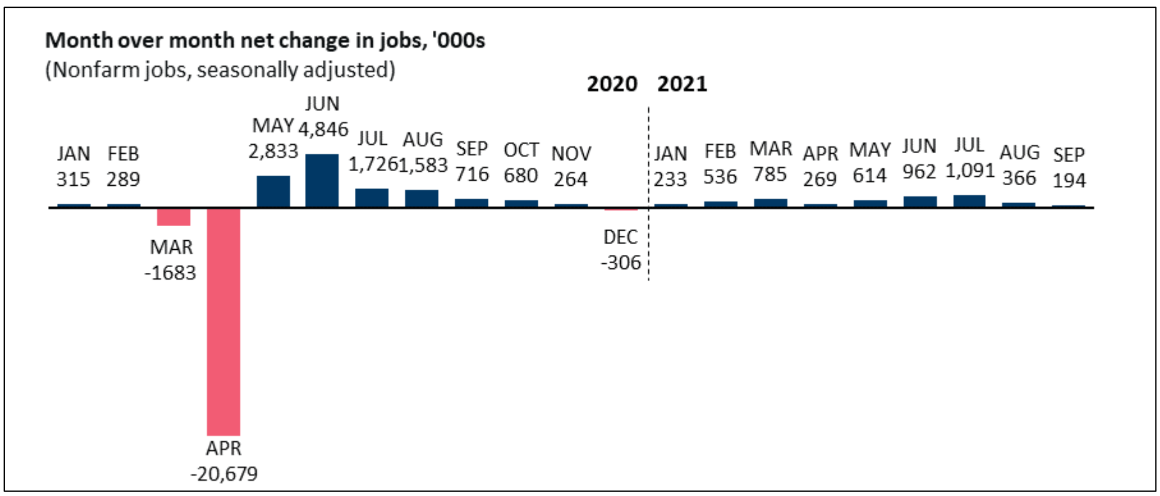
On October 8, 2021, the BLS released data on the employment situation in September, which indicated that nonfarm payrolls rose by 194,000, down from 366,000 jobs gained in August and represents the lowest number of job gains since January 2021; the rate of unemployment was 4.8%.[178] The data also indicated that 5.0 million persons reported in September they did not work

[178] *The Employment Situation-September 2021*, Bureau of Labor Statistics, October 8, 2021. https://www.bls.gov/. The unemployment number does not include 4.5 million workers who were working part time not by choice and 6.0 million

at all or worked fewer hours at some point in the previous 4 weeks because their employer closed or lost business due to the pandemic.

As indicated in **Figure 19**, with the exception of December 2020, the U.S. economy experienced monthly gains in jobs since the loss of more than 20 million jobs in April 2020. In general, the monthly gains in jobs has varied, but by September 2021 had not equaled the number of jobs lost in April 2020. The number of unemployed workers was 7.7 million in September 2021, down 710,000 from the previous month's total of 8.4 million. Over the period from May 2020 through September 2021, job gains were notable in the leisure and hospitality industry (particularly in food services and drinking establishments), retail trade, public-sector education and health services, health care and social assistance, professional and business services, and other services, while employment in utilities fell.

Figure 19. Change in Total Monthly U.S. Nonfarm Employment

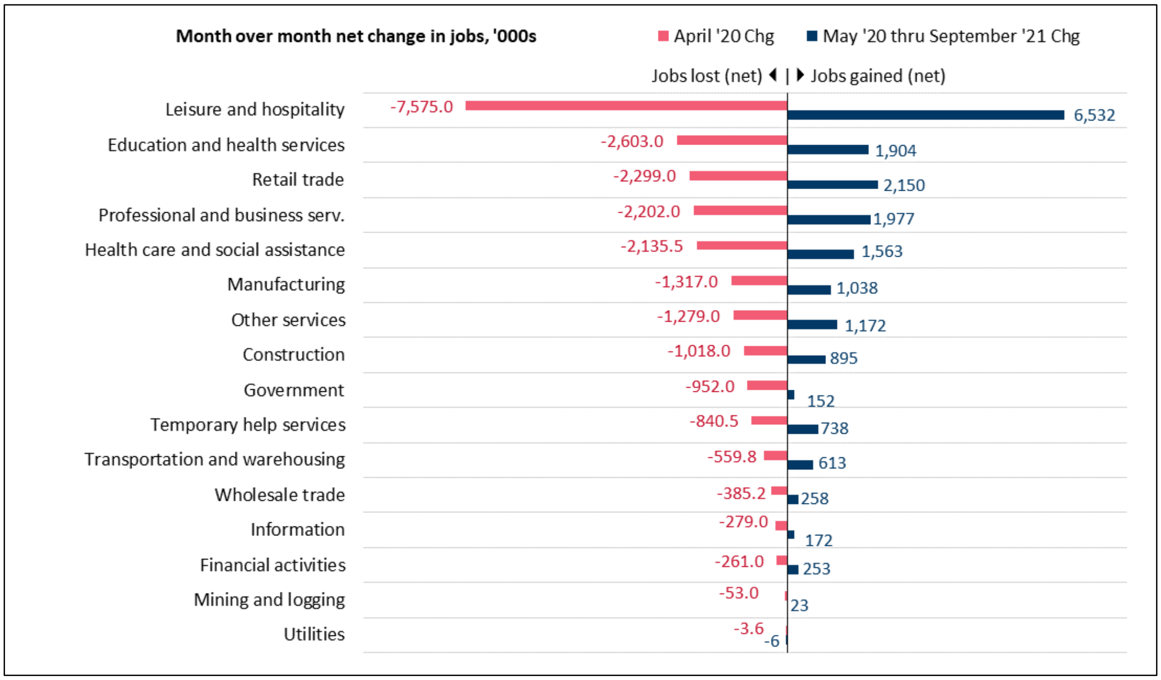


Source: Bureau of Labor Statistics. Created by CRS.

In the first stages of the pandemic, the Department of Labor reported on May 8, 2020, that the U.S. nonfarm unemployment rate in April, 2020, increased by 20 million workers, which raised the total number of unemployed Americans to 23 million, or an unemployment rate of 14% of the total civilian labor force of about 160 million. The unemployment rate did not include approximately 10 million workers who were involuntarily working part-time and another 9 million individuals who were seeking employment. As indicated in **Figure 20**, the number of unemployed individuals increased the most in the leisure and hospitality sector, reflecting national quarantining policies to reduce the spread of COVID-19 through social contact. The employment losses were widely spread across the economy, affecting every nonfarm sector and all labor groups. Between March and Aril 2020, the number of U.S. nonfarm civilian workers dropped from 150 million to 130 million. Between June 2020 and September 2021, the nonfarm civilian labor force increased from 139 million to 148 million.

individuals seeking employment. In addition, BLS indicated that some workers had been misclassified as employed, but should have been classified as unemployed, which would have raised the rate of unemployment by 0.1 percentage point.

Figure 20. Change in U.S. Employment by Major Industrial Sector



Source: *The Employment Situation*, Bureau of Labor Statistics, various months 2020 and 2021. Created by CRS.

In a speech on May 13, 2020, Federal Reserve Chairman Jerome Powell reported that Federal Reserve analyses indicated that of individuals working in February, 2020, "almost 40 percent of those in households making less than $40,000 a year had lost a job in March."[179] Chairman Powell also indicated that given the extraordinary nature of the current economic downturn the Fed would, "continue to use our tools to their fullest until the crisis has passed and the economic recovery is well under way."

In characterizing the monetary and fiscal response to the economic downturn, Chairman Powell said in a speech on October 6, the monetary response included, "the full range of tools at our disposal," including cutting key interest rates, "unprecedented" asset purchases, establishing emergency lending facilities to support households, businesses and state and local governments, and implementing targeted and temporary measures for banks to support their customers.[180] In addition, the fiscal response accomplished three objectives, it provided support to households, businesses through the Paycheck Protection Program, and financial markets. Chairman Powell concluded his remarks by arguing for the necessity of continued fiscal support for the economy:

> The expansion is still far from complete. At this early stage, I would argue that the risks of policy intervention are still asymmetric. Too little support would lead to a weak recovery, creating unnecessary hardship for households and businesses. Over time, household insolvencies and business bankruptcies would rise, harming the productive capacity of the economy, and holding back wage growth. By contrast, the risks of overdoing it seem, for now, to be smaller. Even if policy actions ultimately prove to be greater than needed, they will not go to waste.[181]

---

[179] *Current Economic Issues*; Speech at the Peterson Institute for International Economics, Jerome H. Powell, May 13, 2020.

[180] *Recent Economic Developments and the Challenges Ahead*, Jerome H Powell, Remarks at the National Association for Business Economists, October 6, 2020.

[181] Ibid., p. 7.

Monetary Policy[182]

Forward Guidance

Forward guidance refers to Fed public communications on its future plans for short-term interest rates, and it took many forms following the 2008 financial crisis. As monetary policy returned to normal in recent years, forward guidance was phased out. It is being used again today. For example, when the Fed reduced short-term rates to zero on March 15, it announced that it "expects to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals."

Quantitative Easing

Large-scale asset purchases, popularly referred to as *quantitative easing* or *QE*, were also used during the financial crisis. Under QE, the Fed expanded its balance sheet by purchasing securities. Three rounds of QE from 2009 to 2014 increased the Fed's securities holdings by $3.7 trillion.

On March 23, the Fed announced that it would increase its purchases of Treasury securities and mortgage-backed securities (MBS)—including commercial MBS—issued by government agencies or government-sponsored enterprises to "the amounts needed to support smooth market functioning and effective transmission of monetary policy.... " These would be undertaken at the unprecedented rate of up to $125 billion daily during the week of March 23. As a result, the value of the Fed's balance sheet is projected to exceed its post-financial crisis peak of $4.5 trillion. One notable difference from previous rounds of QE is that the Fed is purchasing securities of different maturities, so the effect likely will not be concentrated on long-term rates.

Actions to Provide Liquidity

Reserve Requirements

On March 15, the Fed announced that it was reducing reserve requirements—the amount of vault cash or deposits at the Fed that banks must hold against deposits—to zero for the first time ever. As the Fed noted in its announcement, because bank reserves are currently so abundant, reserve requirements "do not play a significant role" in monetary policy.

Term Repos

The Fed can temporarily provide liquidity to financial markets by lending cash through repurchase agreements (repos) with primary dealers (i.e., large government securities dealers who are market makers). Before the financial crisis, this was the Fed's routine method for targeting the federal funds rate. Following the financial crisis, the Fed's large balance sheet meant that repos were no longer needed, until they were revived in September 2019. On March 12, the Fed announced it would offer a three-month repo of $500 billion and a one-month repo of $500 billion on a weekly basis through the end of the month in addition to the shorter-term repos it had already been offering. These repos would be larger and longer than those offered since September. On March 31, the Fed announced the Foreign and International Monetary Authorities (FIMA) Repo Facility, which works like the foreign repo pool in reverse. This facility allows foreign central banks to convert their U.S. Treasury holdings into U.S. dollars on an overnight

---

[182] This section was prepared by Marc Labonte, Specialist in Macroeconomic Policy, Government and Finance Division, CRS. CRS Insight IN11259, *Federal Reserve: Recent Actions in Response to COVID-19,* by Marc Labonte.

basis. The Fed will charge a (typically) above market interest rate of 0.25 percentage points above the interest rate paid on bank reserves. The facility is intended to work in tandem with currency swap lines to provide additional dollars to meet global demand and is available to a broader group of central banks than the swap lines.

Discount Window

In its March 15 announcement, the Fed encouraged banks (insured depository institutions) to borrow from the Fed's discount window to meet their liquidity needs. This is the Fed's traditional tool in its "lender of last resort" function. The Fed also encouraged banks to use intraday credit available through the Fed's payment systems as a source of liquidity.

Foreign Central Bank Swap Lines

Both domestic and foreign commercial banks rely on short-term borrowing markets to access U.S. dollars needed to fund their operations and meet their cash flow needs. But in an environment of strained liquidity, only banks operating in the United States can access the discount window. Therefore, the Fed has standing "swap lines" with major foreign central banks to provide central banks with U.S. dollar funding that they can in turn lend to private banks in their jurisdictions. On March 15, the Fed reduced the cost of using those swap lines and on March 19 it extended swap lines to nine more central banks. On March 31, 2020, the Fed set up a new temporary facility to work in tandem with the swap lines to provide additional dollars to meet global demand. The new facility allows central banks and international monetary authorities to exchange their U.S. Treasury securities held with the Federal Reserve for U.S. dollars, which can then be made available to institutions in their jurisdictions.[183]

Emergency Credit Facilities for the Nonbank Financial System

In 2008, the Fed created a series of emergency credit facilities to support liquidity in the nonbank financial system. This extended the Fed's traditional role as lender of last resort from the banking system to the overall financial system for the first time since the Great Depression. To create these facilities, the Fed relied on its emergency lending authority (Section 13(3) of the Federal Reserve Act). To date, the Fed has created six facilities—some new, and some reviving 2008 facilities—in response to COVID-19.

- On March 17, the Fed revived the commercial paper funding facility to purchase commercial paper, which is an important source of short-term funding for financial firms, nonfinancial firms, and asset-backed securities (ABS).
- Like banks, primary dealers are heavily reliant on short-term lending markets in their role as securities market makers. Unlike banks, they cannot access the discount window. On March 17, the Fed revived the primary dealer credit facility, which is akin to a discount window for primary dealers. Like the discount window, it provides short-term, fully collateralized loans to primary dealers.
- On March 19, the Fed created the Money Market Mutual Fund Liquidity Facility (MMLF), similar to a facility created during the 2008 financial crisis. The MMLF makes loans to financial institutions to purchase assets that money market funds are selling to meet redemptions.

[183] For additional information about swap lines, see CRS In Focus IF11489, *Federal Executive Agencies: Selected Pay Flexibilities for COVID-19 Response*, by Barbara L. Schwemle.

- On March 23, the Fed created two facilities to support corporate bond markets—the Primary Market Corporate Credit Facility to purchase newly issued corporate debt and the Secondary Market Corporate Credit Facility to purchase existing corporate debt on secondary markets.
- On March 23, the Fed revived the Term Asset-Backed Securities Loan Facility to make nonrecourse loans to private investors to purchase ABS backed by various nonmortgage consumer loans.
- On April 6, the Fed announced the Payroll Protection Program Lending Facility (PPPLF) to provide credit to depository institutions (e.g., banks) making loans under the CARES Act (H.R. 748/P.L. 116-136) Payroll Protection Program. Because banks are not required to hold capital against these loans, this facility increases lending capacity for banks facing high demand to originate these loans. The PPP provides low-cost loans to small businesses to pay employees. These loans do not pose credit risk to the Fed because they are guaranteed by the Small Business Administration.
- On April 9, the Fed announced the Main Street Lending Program (MSLP), which purchases loans from depository institutions to businesses with up to 10,000 employees or up to $2.5 billion in revenues. The loans to businesses would defer principal and interest repayment for one year, and the businesses would have to make a "reasonable effort" to retain employees.
- On April 9, the Fed announced the Municipal Liquidity Facility (MLF) to purchase state and municipal debt in response to higher yields and reduced liquidity in that market. The facility will only purchase debt of larger counties and cities.

Many of these facilities are structured as special purpose vehicles controlled by the Fed because of restrictions on the types of securities that the Fed can purchase. Although there were no losses from these facilities during the financial crisis, assets of the Treasury's Exchange Stabilization Fund have been pledged to backstop any losses on several of the facilities today.

Fiscal Policy

In terms of a fiscal stimulus, Congress adopted H.R. 6074 on March 5, 2020 (P.L. 116-123), to appropriate $8.3 billion in emergency funding to support efforts to fight COVID-19; President Trump signed the measure on March 6, 2020. President Trump also signed on March 18, H.R. 6201 (P.L. 116-127), the Families First COVID-19 Response Act, that provided paid sick leave and free COVID-19 testing, expanded food assistance and unemployment benefits, and required employers to provide additional protections for health care workers. Other countries indicated at that time that they would also provide assistance to workers and to some businesses. Congress also considered other possible measures, including contingency plans for agencies to implement offsite telework for employees, financial assistance to the shale oil industry, a reduction in the payroll tax,[184] and extended of the tax filing deadline.[185] President Trump took additional actions, including

[184] Armus, Theo, "Federal, State Officials Attempt to Fight Virus Through Social Distancing, Stimulus Package," *Washington Post*, March 11, 2020. https://www.washingtonpost.com/world/2020/03/11/Covid-19-live-updates/.

[185] Sevastopulo, Demetri, "US Treasury Considers Tax Filing Extension to Ease Virus Impact," *Financial Times*, March 11, 2020. https://www.ft.com/content/c65a6e40-639f-11ea-b3f3-fe4680ea68b5.

- Announcing on March 11, 2020, restrictions on all travel from Europe to the United States for 30 days, directing the Small Business Administration (SBA) to offer low-interest loans to small businesses, and directing the Treasury Department to defer tax payments penalty-free for affected businesses.[186]
- Declaring on March 13, a state of emergency that freed up disaster relief funding to assist state and local governments to address the effects of the pandemic. The President also announced additional testing for the virus, a website to help individuals identify symptoms, increased oil purchases for the Strategic Oil Reserve, and a waiver on interest payments on student loans.[187]
- Invoking on March 18, 2020, the Defense Production Act (DPA) that gave him the authority to require some U.S. businesses to increase production of medical equipment and supplies that were in short supply.[188]

On March 25, 2020, the Senate adopted the COVID-19 Aid, Relief, and Economic Security Act (S. 3548) to formally implement President Trump's proposal by providing direct payments to taxpayers, loans and guarantees to airlines and other industries, and assistance for small businesses, actions similar to those of various foreign governments. The House adopted the measure as H.R. 748 on March 27, and President Trump signed the measure (P.L. 116-136) on March 27. The law

- Provided funding for $1,200 tax rebates to individuals, with additional $500 payments per qualifying child. The rebate begins phasing out when incomes exceed $75,000 (or $150,000 for joint filers).
- Assisted small businesses by providing funding forgivable bridge loans; and additional funding for grants and technical assistance; authorized emergency loans to distressed businesses, including air carriers; and suspended certain aviation excise taxes.
- Created a $367 billion loan program for small businesses, established a $500 billion lending fund for industries, cities and states, $150 billion for state and local stimulus funds, and $130 billion for hospitals.
- Increased unemployment insurance benefits, expanded eligibility and offered workers an additional $600 a week for four month, in addition to state unemployment programs.[189]
- Established special rules for certain tax-favored withdrawals from retirement plans; delayed due dates for employer payroll taxes and estimated tax payments for corporations; and revised other provisions, including those related to losses, charitable deductions, and business interest.

[186] McAuley, James, and Michael Birnbaum, "Europe Blindsided by Trump's Travel Restrictions, with Many Seeing Political Motive," *Washington Post*, March 12, 2020. https://www.washingtonpost.com/world/europe/europe-blindsided-by-trumps-travel-restrictions-with-many-seeing-political-motive/2020/03/12/42a279d0-6412-11ea-8a8e-5c5336b32760_story.html.

[187] Fritz, Angela and Meryl Kornfield, "President Trump Declares a National Emergency, Freeing $50 Billion in Funding," *Washington Post*, March 13, 2020. https://www.washingtonpost.com/world/2020/03/13/Covid-19-latest-news/.

[188] Hellmann, Jessie, "Trump Invokes Defense Production Act as Covid-19 Response," *The Hill*, March 18, 2020. https://thehill.com/policy/healthcare/488226-trump-invokes-defense-production-act-as-Covid-19-response.

[189] For additional information about unemployment and sick leave provisions, see CRS Insight IN11249, *H.R. 6201: Paid Leave and Unemployment Insurance Responses to COVID-19*, by Sarah A. Donovan, Katelin P. Isaacs, and Julie M. Whittaker, and CRS In Focus IF11487, *The Families First Coronavirus Response Act Leave Provisions*, by Sarah A. Donovan and Jon O. Shimabukuro.

- Provided additional funding for the prevention, diagnosis, and treatment of COVID-19; limited liability for volunteer health care professionals; prioritized Food and Drug Administration (FDA) review of certain drugs; allowed emergency use of certain diagnostic tests that had not been approved by the FDA; expanded health-insurance coverage for diagnostic testing and required coverage for preventative services and vaccines; and revised other provisions, including those regarding the medical supply chain, the national stockpile, the health care workforce, the Healthy Start program, telehealth services, nutrition services, Medicare, and Medicaid.
- Temporarily suspended payments for federal student loans and revised provisions related to campus-based aid, supplemental educational-opportunity grants, federal work-study, subsidized loans, Pell grants, and foreign institutions.
- Authorized the Department of the Treasury temporarily to guarantee money-market funds.

On April 23, 2020, the House of Representatives passed H.R. 266 (P.L. 116-139), the Paycheck Protection Program and Health Care Enhancement Act, following similar actions by the Senate the previous day. The measure provided $484 billion for small business loans, health care providers, and COVID-19 testing. In particular, the law

- Provided additional lending authority for certain Small Business Administration (SBA) programs in response to COVID-19, increased the authority for (1) the Paycheck Protection Program, under which the SBA may guarantee certain loans to small businesses during the COVID-19 pandemic; and (2) advanced on emergency economic injury disaster loans made in response to COVID-19. The provision also expanded eligibility for disaster loans and advances to include agricultural enterprises.
- Provided $100 billion in FY2020 supplemental appropriations to HHS for the Public Health and Social Services Emergency Fund, including $75 billion to reimburse health care providers for health care related expenses or lost revenues that were attributable to the coronavirus outbreak; and $25 billion for expenses to research, develop, validate, manufacture, purchase, administer, and expand capacity for COVID-19 tests to effectively monitor and suppress COVID-19.
- Allocated specified portions of the $25 billion for COVID-19 testing to states, localities, territories, and tribes; the Centers for Diseases Control and Prevention; the National Institutes of Health; the Biomedical Advanced Research and Development Authority; the Food and Drug Administration; community health centers; rural health clinics; and testing for the uninsured.

On May 12, House Democrats introduced H.R. 6800, the Heroes Act, to provide a $3 trillion supplemental spending bill for additional financial resources to state and local governments. The measure passed the House on May 15 and was sent to the Senate for consideration. Among other provisions, the bill would have

- Appropriated $200 billion in hazard pay to essential workers.
- Extended additional payments to individuals, for nutrition and housing assistance, and provide funding for additional testing and contact tracing.
- Restored the tax deduction for state and local taxes.
- Provided FY2020 emergency supplemental appropriations to federal agencies.

- Provided payments and other assistance to state, local, tribal, and territorial governments.
- Provided additional direct payments of up to $1,200 per individual.
- Expanded paid sick days, family and medical leave, unemployment compensation, nutrition and food assistance programs, housing assistance, and payments to farmers.
- Modified and expanded the Paycheck Protection Program, which provides loans and grants to small businesses and nonprofit organizations.
- Expanded several tax credits and deductions.
- Provided funding and establish requirements for COVID-19 testing and contact tracing.
- Eliminated cost-sharing for COVID-19 treatments;
- Extended and expanded the moratorium on certain evictions and foreclosures; and
- Required employers to develop and implement infectious disease exposure control plans.

On December 2, the Federal Reserve released its "Beige Book"—a mostly qualitative assessment of the U.S. economy produced 8 times a year by the 12 regional Federal Reserve banks—that provides an assessment of economic activity across the various regions of the country. The assessment indicated that economic activity in November had improved modestly, although was negligible in some Districts.[190]

On December 27, 2020, President Trump signed the Consolidated Appropriations Act of 2021 (P.L. 116-260) that provided funding for government operations and $900 billion in additional funding for COVID-19 related programs and a $1.4 trillion budget that comprised 12 appropriations bills. In general, the measure provided

- $600 in stimulus checks to qualifying individuals, including adults and children.
- Extended unemployment benefits of up to $300 per week through at least March 14, 2021, and Pandemic Unemployment Assistance for qualifying individuals up to 11 weeks.
- Financial assistance to businesses, including forgivable Paycheck Protection Program loans, extensions of the PPP program to churches and the entertainment industry, and grants through the Economic Injury Disaster Loans program.
- A moratorium on rental evictions through January 31, 2021, and emergency funding for renters.
- Funds to support vaccine production, distribution, and testing.
- Funds for schools, colleges, and child-care assistance.
- Assistance to the transportation industry through funds for busses, roads, airports, and Amtrak and assistance to the airline workers through the Payroll Support Program.

On March 11, 2021, President Biden signed the American Rescue Plan Act (P.L. 117-2) that appropriated $1.9 trillion to stimulating the U.S. economy. The major features of the act included

[190] *The Beige Book: Summary of Commentary on Current Economic Conditions by Federal Reserve District*, December 2, 2020, the Federal Reserve System.

- Expanded unemployment benefits with a $300 weekly supplement through September 6, 2021.
- $1,400 in direct payments to individuals making up to $75,000, $112,500 for single parents, and $150,000 for couples.
- Emergency paid leave, expanded child tax credit up to $3,600 per child, expanded child and dependent care credit, and earned income tax credit.
- Over $50 billion in grants and other payments to small businesses.
- $350 billion in assistance to state, local, and tribal governments.
- Education funding: $130 billion for schools; $40 billion to colleges and universities.
- Nearly $50 billion in housing assistance, emergency rental assistance, homeowner assistance, and other housing programs.
- Over $160 billion in health care-related programs, including COVID-19 vaccines, testing, contact tracing and other health-care related funding.
- $50 billion for transportation provisions, including funding for airports, airlines, Amtrak and other commuter rail services.
- $10.4 billion for agriculture, including debt relief for farmers.
- $1.9 billion to improve cybersecurity.
- Changes to other health care provisions.

Personal Income and Outlays

Another metric for assessing the impact of the pandemic on the U.S. economy is provided through changes in personal income, consumption, and saving. The economic lockdown pushed millions of Americans out of their jobs and left them without an income. During the pandemic-related recession, transfer payments from the federal government to individuals, primarily through unemployment insurance, offset some of their lost income and played an important role in supporting household consumption. On August 27, 2020, the Bureau of Economic Analysis (BEA) reported that U.S. personal income fell by 13.6% in April and 2.1% in May, primarily reflecting a decrease in government transfer payments to individuals from federal economic recovery programs of 41.8% in April and 11.6% in May, as indicated in **Figure 21**.[191] In contrast, personal income rose in June and July by 0.2% and 1.1%, respectively, reflecting an increase in transfer payments by 1.8% in June and an increase of 2.9% in July. During the same period, personal consumption rose by 1.1% and 0.3%, respectively as consumers increased spending. The lower level of spending and income transfers were also associated with a lower level of personal savings rate of 8.8% in June and 8.6% in July as consumers attempted to sustain their level of consumption by reducing their level of saving.

In September 2021 the Census Bureau released its annual Income and Poverty[192] report and its Supplemental Poverty Measure (SPM)[193] report. According to the SPM report, which measures

[191] *Personal Income and Outlays, April 2020*, Bureau of Economic Analysis, May 29, 2020.

[192] Shrider, Emily A., Mellissa Kollar, Frances Chen, and Jessica Semega, *Income and Poverty in the United States: 2020*, U.S. Census Bureau, September 2021.

[193] Fox, Liana E. and Kalee Burns, *The Supplemental Poverty Measure: 2020*, U.S. Census Bureau, September 2021. According to the Census Bureau: The SPM does not replace the official poverty measure and is not designed to be used for program eligibility or funding distribution. The SPM is designed to provide information on aggregate levels of

the impact of government programs designed to assist low-income families and individuals that are not included in the official poverty measure, the overall SPM poverty rate was 9.1%, which was 2.6 percentage points below the 2019 rate of 11.8%, representing 8.5 million people lifted out of poverty due to the government stimulus payments.[194] The SPM report also indicated that in 2020: unemployment rates were down for all major age categories, Social Security continued to be the most important anti-poverty program and moved 26.5 million individuals out of poverty, and pandemic-related stimulus payments moved 11.7 million people out of poverty.

During the first half of 2021, wages and salaries to individuals, generally the major source of income for households, increased by 2.9%, compared with a drop in total personal income of 4.0% and a drop in transfer receipts of 26% in 2020.[195] Similar to early 2020 data, transfer payments to households in early 2021 increased personal income and sustained personal consumption. In addition, household savings rates were bolstered by the transfer payments, although the peak saving rate in 2021 was lower than the rate in 2020. After peaking again in April 2021, the rate declined steadily as consumers drew down accumulated savings to support consumption as economic activity began recovering. By August 2021, most measures had returned to their first quarter 2019 levels, except for the personal saving rate, which remained slightly elevated compared with data for early 2020, prior to the pandemic.

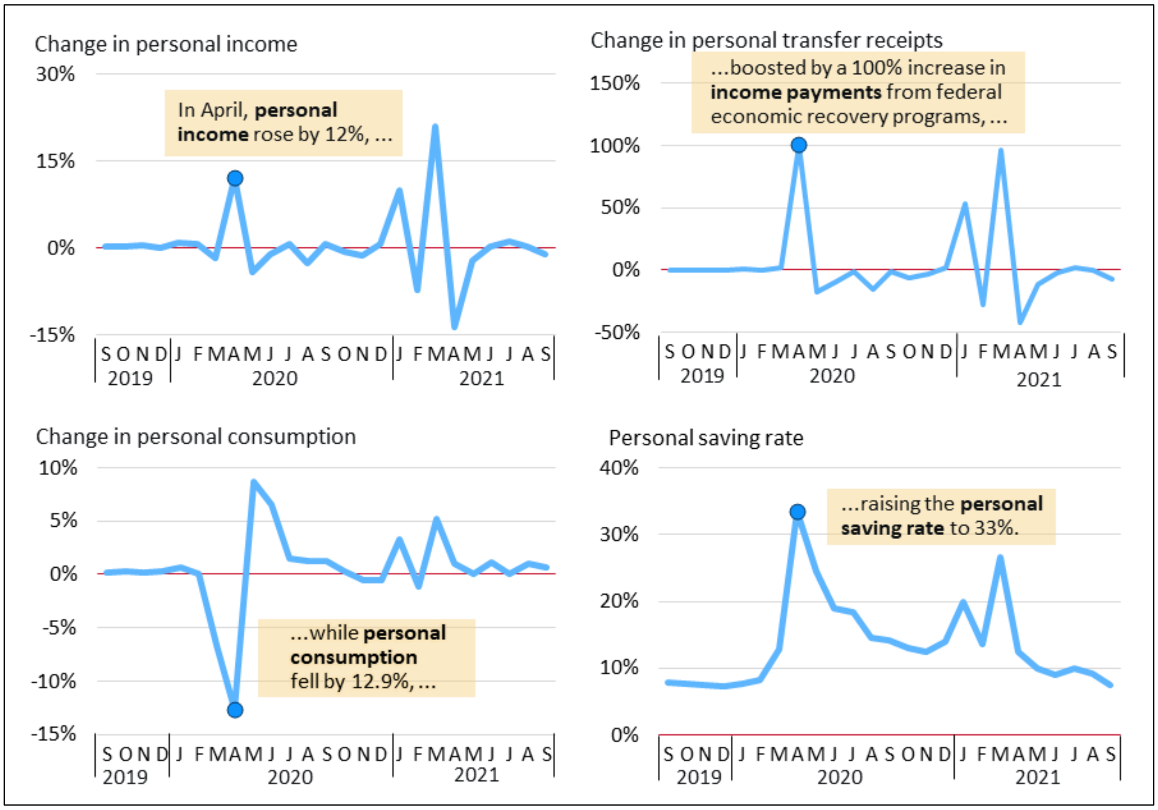
---

economic need at a national level or within large subpopulations or areas. As such, the SPM provides an additional macroeconomic statistic for further understanding economic well-being, conditions, and trends.

[194] Ibid., p. 25.

[195] *Personal Income and Outlays, September 2021*, Bureau of Economic Analysis, October 29, 2021.

Figure 21. U.S. Personal Income, Consumption, and Saving



Source: *Personal Income and Outlays, September 2021*, Bureau of Economic Analysis, October 29, 2021. Created by CRS.

GDP Output "Gap"

Another measure of the economic impact of the COVID-19 pandemic on the global economy is represented by the difference between actual economic performance, measured by gross domestic product (GDP), and potential output, or the maximum amount an economy can produce at full employment, referred to as the output gap.[196] The IMF estimated that the loss in economic output represented by the GDP output gap among major advanced economies, which as a group accounts for about 60% of global GDP, would be -3.6% in 2020, or that the economies operated at a rate that was 3.6% below their combined potential, as indicated in **Table 13**.[197] According to the IMF's assessment, not only would the major advanced economies as a group operate below their full potential through 2025, but none of the individual economies was projected to operate above potential during the 2020-2025 forecasting period. The Euro area as a whole, and France and Italy in particular, were projected to experience the largest output gap through 2022. At 3.2% the U.S. output gap was among the smallest of the major advanced economies.

[196] According to the Congressional Budget Office, The output gap is the difference between GDP and potential GDP, expressed as a percentage of potential GDP. A positive value indicates that GDP exceeds potential GDP; a negative value indicates that GDP falls short of potential GDP. Values for the output gap are for the fourth quarter of each year.

[197] *World Economic Outlook*, International Monetary Fund, October 2020, Table A.8.

Table 13. IMF Forecast of Major Advanced Economy GDP Output Gap

In percentage terms

				Projected					
	2017	2018	2019	2020	2021	2022	2023	2024	2025
Major Advanced Economies	-0.5%	0.2%	0.4%	-3.6%	-2.2%	-1.0%	-0.4%	-0.2%	-0.1%
United States	-1.0	0.4	1.0	-3.2	-1.5	-0.5	-0.2	-0.1	-0.1
Euro Area	-0.4	0.2	0.1	-5.1	-3.2	-1.6	-0.6	-0.2	0.0
Germany	1.0	1.2	0.4	-3.5	-1.8	-0.7	-0.2	-0.1	0.0
France	-1.3	-0.5	0.0	-5.6	-4.0	-2.5	-1.4	-0.6	0.0
Italy	-1.2	-0.7	-0.7	-5.4	-5.4	-2.6	-0.9	-0.6	-0.5
Japan	-0.3	-0.8	-0.7	-3.0	-2.1	-1.0	-0.4	0.0	0.0
United Kingdom	0.3	0.0	0.0	-3.9	-3.5	-1.7	-1.0	-0.5	0.0
Canada	0.4	0.6	0.4	-3.8	-1.4	-0.3	-0.1	0.0	0.0

Source: International Monetary Fund.

Notes: The output gap is the difference between GDP and potential GDP, expressed as a percentage of potential GDP. A positive value indicates that GDP exceeds potential GDP; a negative value indicates that GDP falls short of potential GDP.

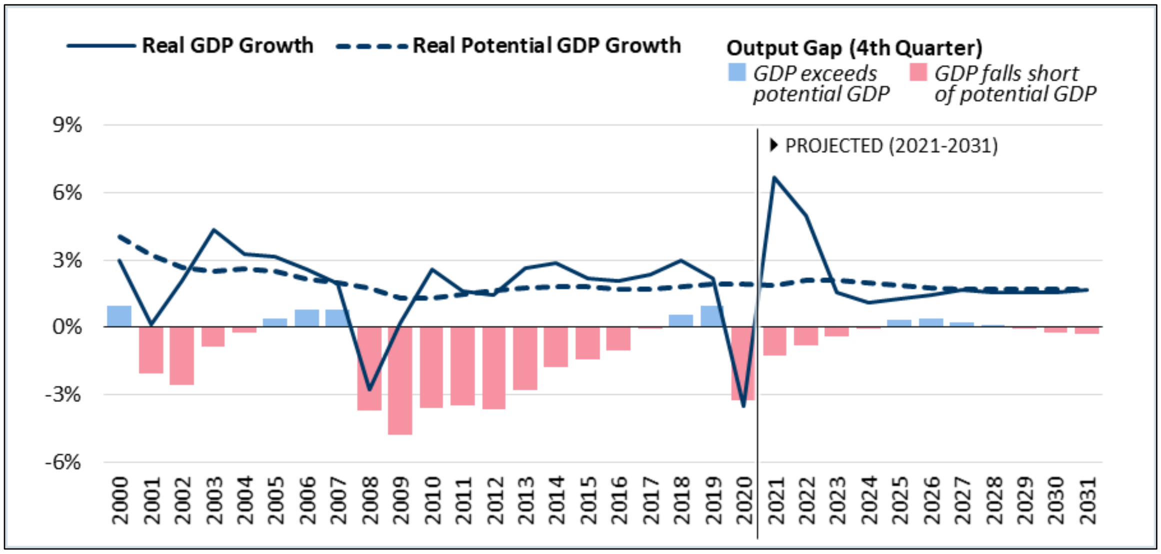
On July 2, 2021, the Congressional Budget Office (CBO) issued an updated estimate of the impact of the COVID-19 pandemic on the U.S. GDP output gap and on other major indicators.[198] In the forecast, the U.S. output gap in 2020 was estimated at 3.3%, similar to the size of the gap estimated by the IMF, the largest difference between the actual and potential output in the U.S. economy since the period following the 2008-2009 financial crisis, as indicated in **Figure 22**. The CBO also estimated that the output gap following the financial crisis persisted from 2009-2016, reflecting the lengthy period of the recovery. In the current context, the CBO estimates that

- a rise in vaccinations will lead to reductions in social distancing and an economic recovery;
- real GDP will expand in 2021 and reach its pre-pandemic peak in mid-2021;
- the labor force participation rate will recover, but lag behind the pre-pandemic rate through the estimation period.[199]

[198] *An Update to the Budget and Economic Outlook: 2021 to 2031*, Congressional Budget Office, July 2021.

[199] Ibid., p. 2.

Figure 22. Real and Potential U.S. GDP and the Output Gap



Source: Congressional Budget Office, July 2021. Created by CRS.

Notes: The output gap is the difference between GDP and potential GDP, expressed as a percentage of potential GDP. A positive value indicates that GDP exceeds potential GDP; a negative value indicates that GDP falls short of potential GDP. Values for the output gap are for the fourth quarter of each year.

CBO also estimated that U.S. GDP would grow at an annual rate of 6.7% in 2021, outpacing the CBO's February forecast of 4.6%. The CBO attributes this higher growth estimate to three factors: added fiscal spending is projected to increase output; a more rapid return to pre-pandemic levels of social activity; higher levels of consumer spending propelled by savings accumulated during the pandemic.[200] After growing by 5.0% in 2022, the economy is projected to grow at pre-pandemic rates in the 2024-2031 period, as indicated in **Table 14**. The unemployment rate was also projected to peak in 2020 at 8.1%, but trend downward and reach the pre-pandemic rate in the 2024 to 2025 period. Similarly, the growth rates of exports and imports were projected to fall by 12.9% and 9.3%, respectively, in 2020, before growing at positive rates through the forecast period.

Table 14. Congressional Budget Office Projection of Major U.S. Economic Indicators, 2021 to 2031

Annual percentage change

								Average annual	
					2021	*2022*	*2023*	*2024-2025*	*2026-2031*
	2017	2018	2019	2020	*Projected*				
Gross Domestic Product (GDP)	2.3	3.0	2.2	-3.5	6.7	5.0	1.5	1.2	1.6
Potential GDP	1.7	1.8	1.9	1.9	1.9	2.1	2.1	1.9	1.7
Output Gap	0.0	0.6	1.0	-3.3	-1.3	-0.8	-0.4	0.4	-0.1
Civilian Unemp. Rate	4.4	3.9	3.7	8.1	5.5	3.8	3.7	4.1	4.4

[200] Ibid., p. 3.

								Average annual	
					2021	*2022*	*2023*	*2024-2025*	*2026-2031*
	2017	2018	2019	2020			*Projected*		
Labor Force Participation Rate	62.9	62.9	63.1	61.7	61.9	62.6	62.9	62.3	61.3
Exports	3.9	3.0	-0.1	-12.9	7.7	9.1	3.9	1.3	1.5
Imports	4.7	4.1	1.1	-9.3	14.4	4.0	1.9	0.7	2.1

Source: *An Update to the Budget and Economic Outlook: 2021-2031,* Congressional Budget Office, July 2021.

Federal Reserve Forecast

On June 16, 2021, the Federal Open Market Committee released an updated forecast of the U.S. economy. In testimony before the House Select Subcommittee on the Coronavirus Crisis, Fed Chairman Powell reviewed the major conclusions of the assessment and indicated the U.S. economy was recovering at a faster pace than it had forecasted in March. According to Powell, "Widespread vaccinations have joined unprecedented monetary and fiscal policy actions in providing strong support to the recovery."[201] Despite progress, Powell indicated the pandemic posed continued risks to the economic outlook in part due to a slower rate of vaccinations and new strains of the virus. He concluded by indicating that progress on vaccinations would support a return to more normal economic conditions and that the Fed was willing to do "everything we can to support the economy for as long as it takes to complete the recovery."[202]

The Fed's June 2021 forecast also offered a more positive assessment of the economy than previous forecasts released in March and December, with the economy projected to grow by 7.0% in 2021, compared with the March forecast of 6.5%, as indicated in **Table 15**. The forecast typically makes three projections for such major economic variables as GDP, the unemployment rate, and the personal consumption expenditure (PCE) measure of inflation compared with its March 2021 projections of the same variables. The three measures include (1) the median projected change; (2) the central tendency, which excludes the highest and lowest three projections; and (3) the range, which indicates forecasts from the highest to the lowest values.

According to the June median forecast, U.S. GDP between 2021 and 2023 was projected grow at a slightly faster pace in 2021, but at about the same pace for 2022 and 2023 compared with the March forecast; the unemployment rate at 4.5% is the same as the previous forecast; the rate of inflation could rise by 1.0% above the rate forecasted in March. The possible range for GDP, however could vary between 6.3% and 7.8% in 2021, or 0.5% to 1.0% above the previous forecast with a possible rate of unemployment between 4.2% and 5.0%, comparable to the previous forecast. The Fed indicated it based its forecast on the best available information, but cautioned there was "considerable uncertainty" about the forecast.[203]

The Fed also announced it would continue its dollar liquidity swap lines with nine central banks until the end of 2021 to facilitate liquidity in the global U.S. dollar funding market. The swap

[201] Powell, Jerome H., *Statement,* House of Representatives, Select Subcommittee on the Coronavirus Crisis, June 22, 2021, p. 1.

[202] Ibid., p. 4.

[203] *Summary of Economic Projections*, Board of Governors of the Federal Reserve System, June 16, 2021, p. 17. The Fed indicated that due to the level of uncertainty, its forecasts could vary within a range of ±1.5% to ±2.0% for GDP; ±0.9% to ±1.8% for unemployment; and ±0.9% to ±1.0% for prices.

lines include providing up to $60 billion to the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Korea, the Banco de México, the Monetary Authority of Singapore, and the Sveriges Riksbank (Sweden); and up to $30 billion each for the Danmarks Nationalbank (Denmark), the Norges Bank (Norway), and the Reserve Bank of New Zealand.

In previous statements, the FOMC had stated that the range of estimates is necessary to represent the "extremely elevated" uncertainty related to the economic effects of the pandemic and the limited historical response of the U.S. economy to past economic shocks. As a result of the "significant uncertainty and downside risks associated with the pandemic, including how much the economy would weaken and how long it would take to recover," the assessment of a more pessimistic projection was judged to be no less pessimistic than the baseline scenario (median). Another member of the Fed indicated that the pandemic-related economic crisis should be used to distill lessons and "institute reforms so our system is more resilient and better able to withstand a variety of possible shocks in the future, including those emanating from outside the financial system.[204]

Table 15. Federal Reserve Economic Projections, September 2021

Percentage change, fourth quarter over previous year fourth quarter

	Change in real GDP	June projection	Unemploy-ment rate	June projection	PCE inflation	June projection	Core PCE inflation	June projection
Median[1]								
2021	5.9	7.0	4.8	4.5	4.2	3.4	3.7	3.0
2022	3.8	3.3	3.8	3.8	2.2	2.1	2.3	2.1
2023	2.5	2.4	3.5	3.5	2.2	2.2	2.2	2.1
2024	2.0		3.5		2.1		2.1	
Longer run	1.8	1.8	4.0	4.0	2.0	2.0		
Central Tendency[2]								
2021	5.8–6.0	6.8–7.3	4.6–4.8	4.4–4.8	4.0–4.3	3.1–3.5	3.6–3.8	2.9–3.1
2022	3.4–4.5	2.8–3.8	3.6–4.0	3.5–4.0	2.0–2.5	1.9–2.3	2.0–2.5	1.9–2.3
2023	2.2–2.5	2.0–2.5	3.3–3.7	3.2–3.8	2.0–2.3	2.0–2.2	2.0–2.3	2.0–2.2
2024	2.0–2.2		3.3–3.6		2.0–2.2		2.0–2.2	
Longer run	1.8–2.0	1.8–2.0	3.8–4.3	3.8–4.3	2.0	2.0		
Range[3]								
2021	5.5–6.3	6.3–7.8	4.5–5.1	4.2–5.0	3.4–4.4	3.0–3.9	3.5–4.2	2.7–3.3
2022	3.1–4.9	2.6–4.2	3.0–4.0	3.2–4.2	1.7–3.0	1.6–2.5	1.9–2.8	1.7–2.5
2023	1.8–3.0	1.7–2.7	2.8–4.0	3.0–3.9	1.9–2.4	1.9–2.3	2.0–2.3	2.0–2.3
2024	1.8–2.5		3.0–4.0		2.0–2.3		2.0–2.4	
Longer run	1.6–2.2	1.6–2.2	3.5–4.5	3.5–4.5	2.0	2.0		

[204] Brainard, Lael, *Some Preliminary Financial Stability Lessons From the COVID -19 Shock*, At the 2021 Annual Washington Conference, Institute of International Bankers March 1, 2021.

Source: Summary of Economic Projections, September 22, 2021.

Notes: (1) For each period, the median is the middle projection when the projections are arranged from lowest to highest. (2) The central tendency excludes the three highest and three lowest projections for each variable in each year. (3) The range for a variable in a given year includes all participants' projections, from lowest to highest, for that variable in that year. Projections for the unemployment rate represent the average civilian unemployment rate in the fourth quarter of the year indicated.

For additional information about the impact of COVID-19 on the U.S. economy see CRS Insight IN11235, *COVID-19: Potential Economic Effects*.[205]

Europe

In the early stages of the pandemic, European countries did not adopt a synchronized fiscal policy response similar to the one they developed during the 2008-2009 global financial crisis. For the most part, EU members used a combination of national fiscal policies and bond buying by the ECB to address the economic impact of the pandemic. Individual countries adopted quarantines and required business closures, travel and border restrictions, tax holidays for businesses, extensions of certain payments and loan guarantees, and subsidies for workers and businesses. The European Commission advocated for greater coordination among the EU members in developing and implementing monetary and fiscal policies to address the economic fallout from the viral pandemic.

Over the summer of 2020, European governments attempted a phased reopening of businesses.[206] These efforts generated a 12.4% increase in GDP in the Eurozone in the third quarter of 2020. Initial estimates indicated the EU economic rate of growth nearly stalled in the fourth quarter, falling by 0.5% due to a resumption of lockdown measures. After several months of data indicating an economic rebound had begun in the Eurozone, surveys of business activity in August 2020 indicated the recovery had slowed amid an increase in new COVID-19 cases after countries had begun reimposing new quarantines and lockdowns in various parts of the Euro area, although most lockdowns did not include schools or some manufacturing firms.[207] Such lockdowns became more widespread in September and October as infections cases began rising in Germany, France, the United Kingdom, the Czech Republic, the Netherlands, Spain, and Poland.[208] By mid-October, Greece and Belgium also had begun implementing business lockdowns and social distancing measures. Germany reportedly closed bars, restaurants, and most public entertainment, France closed bars and restaurants and imposed travel restrictions, and on October 31, UK Prime Minister Boris Johnson announced a month-long lockdown across the UK.[209]

---

[205] CRS Insight IN11235, *COVID-19: Potential Economic Effects*, by Marc Labonte.

[206] Stott, Michael, Coronavirus Set to Push 29m Latin Americans Into Poverty, *Financial Times*, April 24, 2020. https://www.ft.com/content/3bf48b80-8fba-410c-9bb8-31e33fffc3b8; Hall, Benjamin, Coronavirus Pandemic Threatens Livelihoods of 59m European Workers, *Financial Times*, April 19, 2020, https://www.ft.com/content/36239c82-84ae-4cc9-89bc-8e71e53d6649, Romei, Valentina and Martin Arnold, Eurozone Economy Shrinks by Fastest Rate on Record, *Financial Times*, April 30, 2020, https://www.ft.com/content/dd6cfafa-a56d-48f3-a9fd-aa71d17d49a8.

[207] Arnold, Martin, Eurozone Economic Rebound is Losing Steam, Surveys Suggest, *Financial Times*, August 21, 2020. https://www.ft.com/content/cc4fa3df-40e7-4e19-be9f-9d01efb74f69. Chazan, Guy and Anna Gross, Europe Battles to Contain Surge in Coronavirus Cases. *Financial Times*, July 29, 2020. https://www.ft.com/content/bcddc297-b7f2-444d-908f-54e8ce6f4f98.

[208] Lockdown 2.0: Europe Imposes Painful Curbs as Infections Surge, *Financial Times*, October 16, 2020. https://www.ft.com/content/b1a7d1e8-4bb9-41cf-be5b-2f7f04bdb9bb.

[209] Peel, Michael, European Countries Impose Shutdowns as Covid-19 Cases Rise, *Financial Times*, October 30, 2020.

The WHO indicated in early January 2021, that 230 million Europeans were living under lockdown restrictions at that time and that 26 million Europeans had contracted COVID-19 in 2020.[210] On April 13, 2021, the WHO estimated that 1 million Europeans had died from the disease, nearly twice as many as in the United States. In an attempt to stop the spread of new variant strains of the virus, the UK, Ireland, Germany, Denmark, and some northern Italian regions closed schools in January 2021 for several weeks.[211] Reportedly, disputes over vaccine distribution within and among European countries and with Britain and the spread of more virulent strains of the COVID-19 virus increased public criticism of government leaders in some EU countries and prompted renewed business lockdowns and school closures.[212]

After protracted talks, European leaders agreed on July 21, 2020, to a €750 billion (about $859 billion) pandemic economic assistance package to support European economies. On December 11, 2020, EU members finalized the agreement, which took effect on February 2021. The package consists of a Recovery and Resilience Facility (RRF) that will provide up to €312.5 billion in grants and €360 billion in loans and support and funds for existing budget priorities to speed up Europe's recovery from the economic impact of the pandemic. The EU describes the Facility as the centerpiece of its NextGenerationEU program, a temporary recovery instrument that allows the EC to raise funds to address the economic and social impact of the pandemic.[213] Individual EU members developed recovery and resilience plans to support clean technologies and renewable energy, energy efficiency, sustainable transportation and recharging stations, broadband services, green transition, digital transformation, and education and skills training, among other areas.

According to data released by Eurostat in August 2021, the EU rate of GDP growth during the second quarter of 2020 contracted by 11.1%, relative to the first quarter, and by 11.4% in the Euro area from the previous quarter, reflecting negative rates of growth across all EU countries, as indicated in **Table 16**. In contrast, the EU and the Euro area grew by 11.6% and 12.4%, respectively, in the third quarter. Compared with growth during the third quarter in the previous year, however, EU and Euro area growth rates were down 3.9% and 4.0%, respectively. During fourth quarter 2020 and first quarter 2021, the rate of economic growth declined by 0.4% and 0.1%, respectively, in the EU and by 0.6% 0.3% in the Euro area as a result of a renewed social activity restrictions and business lockdowns during the period that dampened expectations somewhat of a strong recovery across the EU in the first half of 2021. At 18.8%, the United Kingdom experienced the largest contraction in its GDP growth rate in the second quarter of 2020, compared with the previous quarter among European countries, but third quarter growth rate rebounded by 16.0%, the third fastest rate behind France (18.8%) and Spain (17.1%).

https://www.ft.com/content/a89f89ba-08be-44e2-8d21-3e9ada605e17; Packard, Jim, Boris Johnson Announces Second Lockdown for England, *Financial Times*, October 31, 2020, https://www.ft.com/content/8c2ede22-9dcf-4d31-81ef-82ae4ee76e10.

[210] Clarfelt, Harriet, Pandemic at 'tipping point', Says WHO Europe Official, *Financial Times*, January 7, 2021. https://www.ft.com/content/9b42e8fa-dde1-3663-a4ad-7d6605121866.

[211] Hall, Ben, Bethan Staton, Joshua Chaffin, Guy Chazan, European Capitals Follow UK With School Closures as Virus Surges, *Financial Times*, January 7, 2021. https://www.ft.com/content/8121ca0a-4d96-4cf5-b5df-a73adc16a606.

[212] Chazan, Guy, We Are a Laughing Stock': Covid-19 and Germany's Political Malaise, *Financial Times*, April 1, 2021. https://www.ft.com/content/bc5a3b02-a90d-4206-a441-1bada29feba2.

[213] European Commission, *The Recovery and Resilience Facility*. https://ec.europa.eu/info/business-economy-euro/recovery-coronavirus/recovery-and-resilience-facility_en#the-recovery-and-resilience-task-force.

Table 16. EU Real GDP Growth Rates 2020 and 2021

Seasonally adjusted data

	Percentage change compared with the previous quarter					Percentage change compared with the same quarter of the previous year				
	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1
EU	-3.2	-11.1	11.6	-0.4	-0.1	-2.6	-13.6	-3.9	-4.3	-1.3
Euro area	-3.6	-11.4	12.4	-0.6	-0.3	-3.2	-14.4	-4.0	-4.6	-1.3
Belgium	-3.3	-11.9	11.8	-0.1	1.1	-2.0	-14.0	-4.3	-4.9	-0.5
Bulgaria	0.4	-10.1	4.3	2.2	2.5	2.3	-8.6	-5.2	-3.8	-1.8
Czechnia	-3.4	-8.9	6.8	0.7	-0.3	-1.5	-10.9	-5.4	-5.3	-2.4
Denmark	-0.7	-6.3	6.0	0.9	-1.0	0.2	-6.6	-1.3	-0.5	-0.8
Germany	-1.8	-10.0	9.0	0.7	-2.1	-1.9	-11.3	-3.7	-2.9	-3.2
Estonia	-1.6	-5.1	2.7	2.8	4.8	-0.1	-5.6	-3.5	-1.3	5.0
Ireland	3.1	-1.4	8.3	-5.2	8.6	6.7	1.4	11.2	4.3	9.9
Greece	-0.5	-12.9	3.8	3.4	4.4	-0.5	-13.9	-10.0	-6.9	-2.3
Spain	-5.4	-17.8	17.1	0.0	-0.4	-4.3	-21.6	-8.6	-8.9	-4.2
France	-5.8	-13.5	18.8	-1.0	0.0	-5.5	-18.7	-3.6	-4.2	1.7
Croatia	-0.6	-15.1	5.9	4.1	5.8	0.8	-14.6	-10.1	-6.9	-0.9
Italy	-5.7	-13.1	16.0	-1.8	0.2	-5.8	-18.2	-5.2	-6.5	-0.7
Cyprus	-0.8	-13.0	9.5	1.1	2.0	1.1	-12.5	-4.6	-4.4	-1.6
Latvia	-2.3	-7.0	6.9	1.1	-1.7	-1.2	-8.6	-2.8	-1.8	-1.2
Lithuania	-0.3	-6.2	6.1	-0.3	2.2	2.5	-4.7	0.1	-1.1	1.4
Luxem-bourg	-1.6	-7.1	9.2	1.9	1.4	1.1	-8.0	-0.1	1.7	4.9
Hungary	-0.4	-14.5	9.7	2.8	2.0	2.1	-13.3	-5.2	-3.9	-1.6
Malta	-3.9	-13.9	7.4	4.0	1.9	1.6	-14.8	-9.6	-7.7	-2.0
Nether-lands	-1.6	-8.4	7.5	0.0	-0.8	-0.4	-9.1	-2.6	-3.1	-2.3
Austria	-2.6	-10.6	11.6	-3.1	-1.1	-3.1	-13.2	-3.4	-5.9	-4.5
Poland	-0.2	-8.9	7.5	-0.5	1.1	2.0	-7.9	-2.0	-2.7	-1.4
Portugal	-4.0	-14.0	13.4	0.2	-3.2	-2.2	-16.4	-5.6	-6.1	-5.3
Romania	0.7	-11.8	5.5	4.6	2.9	2.8	-10.0	-5.5	-2.0	0.1
Slovenia	-5.6	-9.9	12.6	-0.6	1.4	-3.5	-13.1	-2.9	-4.8	2.3
Slovakia	-4.6	-7.5	9.9	0.8	-2.0	-3.3	-10.9	-2.5	-2.3	0.3
Finland	-0.5	-6.1	4.5	0.5	0.0	0.0	-7.0	-2.7	-1.9	-1.4
Sweden	-0.9	-7.8	7.4	0.0	0.8	0.1	-8.1	-1.8	-1.8	-0.1
Other countries										
United Kingdom	-3.0	-18.8	16.0	:	:	-2.4	-20.8	-8.6	:	:

	Percentage change compared with the previous quarter					Percentage change compared with the same quarter of the previous year				
	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1	2020 Q1	2020 Q2	2020 Q3	2020 Q4	2021 Q1
Iceland	:	:	:	:	:	:	:	:	:	:
Norway	-1.5	-4.6	4.3	0.8	-0.6	0.4	-4.3	-0.2	-1.1	-0.2
Switzer-land	-1.7	-6.8	7.2	0.1	-0.5	-0.3	-7.5	-1.4	-1.7	-0.5

Source: *Eurostat*, August 13, 2021.

Draft budget estimates submitted by Eurozone governments in the fall of 2020 indicated the countries could experience a combined budget deficit of nearly €1 trillion, or equivalent to about 9% of their annual GDP.[214] The rise in budget deficits reflects the growing cost to governments of supporting their economies to sustain economic activity and a marked change in attitudes toward budget deficits also reflected in statements by the IMF and World Bank. Second quarter data indicated that employment among EU countries fell by 2.6%, or 5.5 million jobs in 2020. The jobs data, however, do not include roughly 45 million people, or a third of the workforce in Germany, France, Britain, Italy, and Spain, that were covered by employment protection programs.[215]

In its June summer 2021 economic forecast, the European Commission projected that EU GDP growth rate would rise by 4.8% in 2021, after falling by 6.0% in 2020, more than a full percentage point lower than it had estimated in its Autumn forecast of -7.4%, as indicated in **Table 17**.[216] The EC forecast indicated a smaller drop in gross domestic product (GDP) in 2020 among European economies than it had forecasted in its autumn 2020 report, as a result of a third quarter rebound in growth before an anticipated slow-down in the fourth quarter as a result of the resumption of business lockdowns. The forecast projects a rebound in the EU economy in the second and third quarters of 2021 before a slowdown in the fourth quarter. The forecast indicated that

- Firms and households were adapting to pandemic-related constraints and a more positive global environment combined with increased global trade and the effects of domestic economic stimulus policies that were contributing to growth.
- A faster-than-expected recovery in travel, including intra-EU travel, was reflecting higher levels of consumer spending.
- Certain manufacturing sectors were continuing to experience supply shortages, but the impact was expected to be transitory.
- Inflation pressures were increasing as a result of rising energy and commodity prices, production bottlenecks, and rising demand, but there was uncertainty about whether the increase was transitory or could become entrenched.
- National public and private investment spending was expected to help sustain the economic recovery in 2021 and 2022.[217]

---

[214] Arnold, Martin and Sam Fleming, Eurozone Budget Deficits Rise Nearly Tenfold to Counter Pandemic, *Financial Times*, October 19, 2020. https://www.ft.com/content/5579361f-5aac-4cd3-9e93-190fffdc0baf.

[215] Ben Hall, Ben, Delphine Strauss, and Daniel Dombey, Millions of European Jobs at Risk When Furlough Support Ends, *Financial Times*, August 14, 2020. https://www.ft.com/content/0f01a9ed-5b15-4e2d-921c-6eed7a80d0bd.

[216] *European Economic Forecast Summer 2021*, European Commission, July 2021.

[217] Ibid., 2.

Table 17. European Commission Economic Forecast

Percentage change, real GDP

	Summer Forecast 2021		Spring Forecast 2021			Autumn Forecast 2020		
	2021	2022	2020	2021	2022	2020	2021	2022
EU	4.8	4.5	-6.0	4.2	4.4	-7.4	4.1	3.0
Euro area	4.8	4.5	-6.5	4.3	4.4	-7.8	4.2	3.0
Belgium	5.4	3.7	-6.3	4.5	3.7	-8.4	4.1	3.5
Germany	3.6	4.6	-4.8	3.4	4.1	-5.6	3.5	2.6
Ireland	7.2	5.1	3.4	4.6	5.0	-2.3	2.9	2.6
Greece	4.3	6.0	-8.2	4.1	6.0	-9.0	5.0	3.5
Spain	6.2	6.3	-10.8	5.9	6.8	-12.4	5.4	4.8
France	6.0	4.2	-7.9	5.7	4.2	-7.8	4.2	3.0
Italy	5.0	4.2	-8.9	4.2	4.4	-9.4	5.8	3.1
Luxembourg	4.8	3.3	-1.3	4.5	3.3	-9.9	4.1	2.8
Malta	5.6	5.8	-7.8	4.6	6.1	-4.5	3.9	2.7
Netherlands	3.3	3.3	-3.7	2.3	3.6	-7.3	3.0	6.2
Austria	3.8	4.5	-6.3	3.4	4.3	-5.3	2.2	1.9
Portugal	3.9	5.1	-7.6	3.9	5.1	-7.1	4.1	2.5
Finland	2.7	2.9	-2.8	2.7	2.8	-9.3	5.4	3.5
Denmark	3.0	3.4	-2.7	2.9	3.5	-4.3	2.9	2.2
Sweden	4.6	3.6	-2.8	4.4	3.3	-3.9	3.5	2.4
World	5.9	4.2	-2.9	5.9	4.2	-3.4	3.3	2.4

Source: *European Economic Forecast Summer 2021*, European Commission, July 2021.

The Commission indicated the EU economy was weaker in the fall of 2020 and weaker going into 2021 than its earlier forecast had indicated as a result of a resurgence of COVID-19 cases and the emergence of new, more virulent strains of the virus in the fall that led countries to reimpose restrictions. The Commission concluded, however, that the outlook for the EU economy had improved since its November 2020 forecast due to the development of vaccines and the pace of vaccinations. The economic impact of the renewed lockdowns was projected to be unequal across EU members due to differences in the stringency of containment measures, the severity of the infections and differences in economic institutions and policy responses.[218]

The Commission forecast assumed that trade activity in the EU and the UK would be negatively affected beginning in January 2021 due to the UK withdrawal from the EU. By country, Spain, France, Italy, Portugal, and Greece were forecasted to experience the largest declines in GDP in 2020 due to a number of factors, including a dependence on tourism, which is expected to experience a slow economic recovery. Germany and other Northern European countries were projected to experience a more modest decline in economic activity. Some analysts argue that this disparity in economic effects may complicate efforts to coordinate economic policies.[219]

[218] *European Economic Forecast Winter 2021*, European Commission, February 2021, p. 1.

[219] Birnbaum, Michael, European Union Says That Pandemic Recession Will be Worst in its History, *Washington Post,*

In assessing the challenge of the crisis, the Commission argued that, "[t]he risk … is that the crisis will lead to severe distortions within the Single Market and to entrenched economic, financial and social divergences between euro area Member States that could ultimately threaten the stability of the Economic and Monetary Union."[220] The Commission estimated that European countries would emerge from the recession at different rates and different paths, reflecting differences in the timing of the introduction and removal of social distancing measures, dependency on tourism, and the magnitude and effectiveness of economic policies. The Commission also noted the rise in saving among EU households that it argued was mostly involuntary, rather than precautionary and was projected to revert to pre-crisis levels once consumers resumed their regular spending patterns.

In previous actions, the European Commission announced that it would relax rules on government debt to allow countries more flexibility in using fiscal policies. Also, the European Central Bank (ECB) announced that it was ready to take "appropriate and targeted measures," if needed. France, Italy, Spain and six other Eurozone countries have argued for creating a "coronabond," a joint common European debt instrument. Similar attempts to create a common Eurozone-wide debt instrument have been opposed by Germany and the Netherlands, among other Eurozone members.[221] With interest rates already low, however, it indicated that it would expand its program of providing loans to EU banks, or buying debt from EU firms, and possibly lowering its deposit rate further into negative territory in an attempt to shore up the Euro's exchange rate.[222] ECB President-designate Christine Lagarde called on EU leaders to take more urgent action to avoid the spread of COVID-19 from triggering a serious economic slowdown. The European Commission indicated that it was creating a $30 billion investment fund to address COVID-19 issues.[223] In other actions taken in 2020 to address the economic crisis

- On March 12, 2020, the ECB decided to (1) expand its longer-term refinance operations (LTRO) to provide low-cost loans to Eurozone banks to increase bank liquidity; (2) extend targeted longer-term refinance operations (TLTRO) to provide loans at below-market rates to businesses, especially small and medium-sized businesses, directly affected by COVID-19; (3) provide an additional €120 billion (about $130 billion) for the Bank's asset purchase program to provide liquidity to firms that was in addition to €20 billion a month it previously had committed to purchasing.[224]
- On March 13, 2020, financial market regulators in the UK, Italy, and Spain intervened in stock and bond markets to stabilize prices after historic swings in

May 6, 2020. https://www.washingtonpost.com/world/european-union-says-pandemic-recession-will-be-worst-in-its-history/2020/05/06/e787a70e-8f96-11ea-9322-a29e75effc93_story.html.

[220] *European Economic Forecast Autumn 2020*.

[221] Dombey, Daniel Dombey, Guy Chazan, and Jim Brunsden, "Nine Eurozone Countries Issue Call for 'Coronabonds,'" *Financial Times,* March 26, 2020. https://www.ft.com/content/258308f6-6e94-11ea-89df-41bea055720b.

[222] "US Fed's Covid-19 Rate Cut Is First Move in a Dance with Markets," *Financial Times*, March 4, 2020. https://www.ft.com/content/83c07594-5e3a-11ea-b0ab-339c2307bcd4. Giles, Chris, Martin Arnold, Sam Jones, and Jamie Smyth, **"**Finance Ministers 'Ready to Take Action' on Covid-19," *Financial Times*, March 3, 2020. https://www.ft.com/content/b86f7d92-5d38-11ea-b0ab-339c2307bcd4.

[223] Arnold, Martin and Guy Chazan, "Christine Lagarde Calls on EU Leaders to Ramp up Covid-19 Response," *Financial Times*, March 11, 2020. https://www.ft.com/content/44eac1f2-6386-11ea-a6cd-df28cc3c6a68.

[224] *Monetary Policy Decisions*, The European Central Bank, March 12, 2020. https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.mp200312~8d3aec3ff2.en.htm.

indexes on March 12, 2020.[225] In addition, the ECB announced that it would do more to assist financial markets in distress, including altering self-imposed rules on purchases of sovereign debt.[226]

- Germany's Economic Minister announced on March 13, 2020, that Germany would provide unlimited loans to businesses experiencing negative economic activity (initially providing $555 billion), tax breaks for businesses,[227] and export credits and guarantees.[228]
- On March 18, the ECB indicated that it would: create a €750 billion (about $800 billion) Pandemic Emergency Purchase Program to purchase public and private securities; expand the securities it will purchase to include nonfinancial commercial paper; and ease some collateral standards.[229] In announcing the program, President-designate Lagarde indicated that the ECB would, "do everything necessary." In creating the program, the ECB removed or significantly loosened almost all constraints that applied to previous asset-purchase programs, including a self-imposed limit of buying no more than one-third of any one country's eligible bonds, a move that was expected to benefit Italy.
- The ECB also indicated that it would make available up to €3 trillion in liquidity through refinancing operations.[230] Britain ($400 billion) and France ($50 billion) also announced plans to increase spending to blunt the economic effects of the virus. Recent forecasts indicate that the economic effect of COVID-19 could push the Eurozone into an economic recession in 2020.[231]
- On March 23, 2020, Germany announced that it would adopt a €750 billion (over $800 billion) package in economic stimulus funding.
- On April 15, Eurozone finance ministers announced a €500 billion (about $550 billion) emergency spending package to support governments, businesses, and workers and will provide funds to the European Stability Mechanism, the European Investment Bank, and for unemployment insurance.[232]

On May 5, 2020, Germany's Constitutional Court issued a ruling challenging the legality of a bond-buying program conducted by the ECB since 2015, the Public Sector Purchase Program (PSPP). In its ruling, the court directed the German government to request clarification from the

[225] Stafford, Philip and Adam Samson, "European Regulators Intervene in Bid to Stabilize Stock and Bond Prices," *Financial Times*, March 13, 2020. https://www.ft.com/content/77f57d4c-6509-11ea-a6cd-df28cc3c6a68.

[226] Arnold, Martin, "ECB Enters Damage-Limitation Mode with Pledge of More Action," *Financial Times*, March 13, 2020. https://www.ft.com/content/f1cbd4f8-650f-11ea-b3f3-fe4680ea68b5.

[227] Loveday, Morris and Louisa Beck, "Germany Announces 'Bazooka' Economic Plan to Mitigate Covid-19 Hit," *Washington Post*, March 13, 2020. https://www.washingtonpost.com/world/2020/03/13/Covid-19-latest-news/.

[228] Arnold, Martin, Guy Chazan, Victor Mallet, Miles Johnson, and Daniel Dombey, "How European Economies Are Trying to Mitigate the Covid-19 Shock," *Financial Times*, March 17, 2020. https://www.ft.com/content/26af5520-6793-11ea-800d-da70cff6e4d3.

[229] *ECB Announces €759 Billion Pandemic Emergency Purchase Program*, the European Central Bank, March 18, 2020. https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200318_1~3949d6f266.en.html.

[230] Lagarde, Christine, "The ECB Will Do Everything Necessary to Counter the Virus," *Financial Times*, March 20, 2020. https://www.ft.com/content/281d600c-69f8-11ea-a6ac-9122541af204.

[231] "Lagarde to Confront Covid-19 Crisis at ECB Policy Meeting," *Financial Times*, March 8, 2020. https://www.ft.com/content/79a280c6-5fb5-11ea-b0ab-339c2307bcd4.

[232] Fleming, Sam and Mehreen Khan, "Eurozone Countries Strike Emergency Deal on Coronavirus Rescue," *Financial Times*, April 9, 2020. https://www.ft.com/content/b984101a-42b8-40db-9a92-6786aec2ba5c.

ECB about various aspects of the PSPP program that the court argued might exceed the ECB's legal mandate. The German government did not immediately respond to the ruling, but many analysts contended the ruling—and the challenge to the authority of the ECB and the European Court of Justice—could have far-reaching implications for future ECB activities. This potentially included challenges to the ECB's Pandemic Emergency Purchase Program (PEPP) initiated in March. The PEPP is a temporary program that authorized the ECB to acquire up to €750 billion (about $820 billion) in private and public sector securities to address the economic effects of the pandemic crisis.

The German court's ruling heightened tensions between the court and the European Court of Justice. Following the 2008-2009 financial crisis and the subsequent Eurozone financial crisis, the ECB launched four asset purchase programs in 2014 to provide assistance to financially strapped Eurozone governments and to sustain financial liquidity in Eurozone banks. Those programs included the Corporate Sector Purchase Program (CSPP), the Public Sector Purchase Program (PSPP), the Asset-Backed Securities Purchase Program (ABSPP), and the Third Covered Bond Purchase Program (CBPP3). The programs operated from 2014 to 2018; the PSPP was restarted in November 2019. As of May 8, 2020, the PSPP program held €2.2 trillion (about $2.5 trillion) with another €600 billion (about $700 billion) held under other asset purchase programs.[233] Various groups in Germany challenged the legality of the ECB bond-buying programs before the German Constitutional Court by arguing the programs exceeded the ECB's legal mandate. In turn, the German court referred the case to the European Court of Justice, which ruled in December 2019 that the ECB's actions were fully within the ECB's authority.

In the German Constitutional Court's May 5, 2020 ruling, the German judges characterized the ECJ's ruling as "incomprehensible," and directly challenged the ECB and the European Court of Justice and the primacy of the European Court of Justice ruling over national law. The German justices argued the ECB had exceeded its authority by not fully evaluating the economic costs and benefits of previous bond-buying activities, including the impact on national budgets, property values, stock markets, life insurance and other economic effects. The German court also argued that the ECB's lack of a strategy for reducing its holdings of sovereign debt of Eurozone members increased risks for national governments that back up the ECB, and it challenged the ECB's strategy for reducing its holdings of sovereign debt. By the end of June, however, the standoff appeared to be reaching a resolution. The ECB reportedly agreed to provide the German court with the Bank's analysis of the economic and fiscal policy impact of the ECB bond-buying programs. The ECB reportedly will also provide the unpublished full minutes of the central bank's governing council monetary policy meetings, including the ECB's discussions in March 2015 of its purchases of sovereign bonds.[234]

On March 26, 2021, Germany's highest court stopped a law that would have ratified the PEPP bond-buying program. The program required ratification by each of the EU member's national parliaments. The legislation was adopted by both of Germany's houses of Parliament and was expected to be signed by German president, Frank-Walter Steinmeier when the court intervened.[235]

On May 18, German Chancellor Angela Merkel and French President Emmanuel Macron proposed a €500 billion (about $620 billion) EU recovery fund in an effort to gain a coordinated

[233] European Central Bank. https://www.ecb.europa.eu/mopo/implement/pepp/html/pepp-qa.en.html.

[234] Arnold, Martin, Berlin and ECB Signal End to Legal Impasse Over Bond-Buying, *Financial Times*, June 25, 2020. https://www.ft.com/content/5f000a25-3d54-4610-8579-cab9b21759ee.

[235] Chazan, Guy, Germany's Highest Court Blocks Ratification of EU Recovery Fund, *Financial Times*, March 26, 2021. https://www.ft.com/content/74841ea6-4fbf-4c7a-b015-66ba191ffc9b.

EU fiscal response to the pandemic.[236] Reportedly, the funds would have been raised by the European Commission and used to fund EU spending through grants to individual members to ease the economic strain in some of the southern EU members that have been the most negatively affected. Austria, the Netherland, Denmark, and Sweden indicated they would only support proposals that provided funds to members through loans that would be required to be repaid.

On May 27, ECB President Lagarde indicated the ECB projected a drop in the EU economy of 8% to 12% in 2020, twice as severe as the recession following the 2008 financial crisis, and called for a €500 billion (about $620 billion) stimulus package.[237] In addition, European Commission President Ursula von der Leyen proposed a €750 billion (about $820 billion) EU recovery fund, termed the "Next Generation Fund," that would provide €500 billion ($550 billion) in grants in a Recovery and Resilience Facility and €250 billion ($270 billion) in loans. The proposal would take the unprecedented step of allowing the EU to issues bonds independently from the other EU central banks.[238] Questions remained over the source and distribution of the funds. The program may have limited appeal given various restrictions: reportedly, the funds must be used to achieve certain EU goals, including increasing competitiveness, shifting away from declining heavy industry, supporting a green economy, and building the digital economy.[239] Proposals for raising funds include issuing 30-year bonds and raising taxes on large technology firms, such as Google and Facebook. In addition to the recovery fund, von der Leyen proposed a revised EC seven-year budget, the Multiannual Financial Framework (MFF), of €1.1trillion for 2021 to 2027.

On May 28, several key political groups within the EU Parliament voiced their support for new rules that would allow the EU to retaliate in such trade areas as services and intellectual property protection without waiting for a WTO ruling. Some Parliamentarians reportedly argued that such expanded authority, termed a "trade bazooka," was necessary to respond to trade disputes, because the United States had blocked the appointment of judges to the WTO's appellate body.[240] European leaders, reportedly interested in finalizing an investment agreement with China, announced they would not follow President Trump in applying trade restrictions on China for positioning itself to limit Hong Kong's autonomy granted by the "one country two systems" principle after the end of British rule in 1997.[241]

The European Central Bank announced on June 4 that it would double to $1.5 trillion its Pandemic Emergency Purchase Program to stimulate the European economy; it also extended the program to at least June 2021.[242] At the same time, the German government announced a package of fiscal measures, including tax cuts, aid to small businesses, cash payments to parents, and other

[236] Fleming, Sam, Victor Mallet, and Guy Chazan, Germany and France Unite in Call for €500 Billion Europe Recovery Fund, *Financial Times*, May 18, 2020. https://www.ft.com/content/c23ebc5e-cbf3-4ad8-85aa-032b574d0562.

[237] Arnold, Martin, Coronavirus Hit to Eurozone Economy Set to Dwarf Financial Crisis, *Financial Times*, May 27, 2020. https://www.ft.com/content/a01424e8-089d-4618-babe-72f88184ac57.

[238] Birnbaum, Michael, and Loveday Morris, E.U. Proposes $825 Billion Coronavirus Rescue Plan Giving Brussels Power to Raise Money for First Time, *Washington Post,* May 27, 2020. https://www.washingtonpost.com/world/europe/angela-merkel-economic-rescue/2020/05/27/9d21b998-9f7c-11ea-be06-af5514ee0385_story.html.

[239] Brunsden, Jim and Sam Fleming, How Would Ursula von der Leyen's Coronavirus Recovery Fund Work?, *Financial Times,* May 27, 2020. https://www.ft.com/content/ebaa7dcd-b6f7-418f-802b-7a8dbc9668f1.

[240] Vela, Jakob Hanke, Trade Bazooka Gets Backing From Main Political Groups in EU Parliament, *Politico Pro*, May 28, 2020; *Draft Report*, 2019/10273(COD), European Parliament, Committee on International Trade, May 6, 2020.

[241] Lau, Stuart Lau, Jakob Hanke Vela, Jacopo Barigazzi, and Finbarr Bermingham, EU Won't Follow Trump Into a Trade War Over Hong Kong, Politico Pro, May 28, 2020.

[242] Arnold, Martin, ECB Boosts Bond-Buying Stimulus Package by €600, *Financial Times*, June 4, 2020. https://www.ft.com/content/c59ab92d-e614-4284-a028-46ee3bcf92f9.

measures totaling €135 billion (about $150 billion). Austria, Denmark, the Netherland, and Sweden resisted payouts in grants instead of loans that require repayment. The German plan would have given households $336 per child, reduced value added taxes on daily items, and reduced households' utility bills. The plan also included about $6 billion for the social security system, $11 billion to assist cities cover housing and other costs, about $2 billion for cultural institutions and nonprofit groups and incentives for purchases of electric vehicles.[243]

On June 25, Germany's Minister for Economic Affairs and Energy announced that the German government would provide more than €300 million (about $330 million), to acquire a 25% stake in a privately owned German drug company that is conducting trials on a possible COVID-19 vaccine. Reportedly, the U.S. Government had attempted to acquire part of the company to secure supplies of a potential vaccine. Germany placed legal restrictions on foreign investments in critical industries such as energy and telecoms, but the German Parliament amended Germany's Foreign Trade Act, set to become law in 2020, that broadened the scope of transactions that must be approved by the Federal government to include "critical" technologies, including robotics, biotech, and quantum computing.[244]

On July 17, the European Commission met to approve the proposed €750 billion support fund to assist European countries address the economic effects of the pandemic. Initially, the Commission was unable to agree on various aspects of the program, but talks continued over the weekend and resumed on July 20. European leaders announced on July 21 they had approved a €750 billion (about $859 billion) pandemic relief package and a multi-year EU budget, referred to as the Multiannual Financial Framework (MFF), with a combined value of over €2 trillion. The pandemic plan was developed to direct funding to post-pandemic economic recovery efforts with the European Commission set to borrow an unprecedented amount of funds on European capital markets.[245] The €750 billion relief fund reportedly included the proposed Recovery and Resilience Facility of €672.5 billion, which included €360 billion in loans and €312.5 billion in grants and half a dozen other initiatives to assist economically weakened member states. The relief fund was coupled with rebates on EU budget contributions for so-called "frugal" states, or EU members with stronger fiscal balances. Austria, the Netherlands, Denmark, and Sweden reportedly would receive such budget rebates.[246]

On March 31, 2021, French President Macron announced a four-week country-wide business lockdown to curb a resurgence in viral cases that were overwhelming French hospitals and extending by one week a planned two week closure of schools.[247] The EU also blocked shipments to Britain of the AstraZeneca vaccine produced in Belgium and the Netherlands until commitments made to supply the EU had been met, or until other countries showed reciprocity in their distribution of vaccines.[248]At the same time, 16 European countries, including Germany,

---

[243] Ewing, Jack, and Melissa Eddy, 'Europe Finally Got the Message': Leaders Act Together on Message, *The New York Times*, June 4, 2020. https://www.nytimes.com/2020/06/04/business/europe-coronavirus-economic-support.html?action=click&module=Top%20Stories&pgtype=Homepage.

[244] Miller, Joe, Germany Flexes its Muscles on Foreign Investment, *Financial Times*, June 25, 2020. https://www.ft.com/content/54f92ca5-5380-466b-95f8-3e98b40ebc82.

[245] Special Meeting of the European Council-Conclusions, EUCP 10/20, July 21, 2020.

[246] Fleming, Sam, Mehreen Khan and Jim Brunsden, EU Leaders Strike Deal on €750bn Recovery Fund After Marathon Summit, *Financial Times*, July 21, 2020. https://www.ft.com/content/713be467-ed19-4663-95ff-66f775af55cc.

[247] Mallet, Victor, Macron Extends Lockdown Across France to Combat Covid Surge, *Financial Times*, April 1, 2021. https://www.ft.com/content/731ec423-03dc-405c-9ff4-f8670b953f2d.

[248] Fleming, Sam, Michael Peel, and George Parker, EU Warns 'zero' Jabs Shipped to UK Until AstraZeneca Meets Bloc's Targets, *Financial Times*, April 1, 2021. https://www.ft.com/content/28158bed-5f07-4504-9a00-2f3d8f7519df.

France, Italy, and Spain, temporarily suspended use of the AstraZeneca vaccine over concerns of possible negative side-effects, despite assurances by EU drug regulators that the benefits of the vaccine outweighed any risks.[249] On September 3, 2020, French Prime Minister Jean Castex announced that France would implement a €100 billion (about $130 billion) spending plan to speed the economy's recovery from the economic effects of the COVID-19 pandemic. Reportedly, the plan included funding for green energy (including hydrogen energy), transportation (state railways), and industrial innovation.[250]

The United Kingdom

The United Kingdom has taken a number of steps to support economic activity that were expected to limit the damage to the UK economy. The Bank of England (BOE) forecasted in May 2020 that the UK economy would contract by 30% in the first half of 2020, but then rebound sharply in the second half of the year, exhibiting a "V" shaped recovery. During the initial stages of the economic crisis, the Bank of England announced a number of policy initiatives including

- On March 11, the BOE adopted a package of four measures to deal with any economic disruptions associated with COVID-19. The measures included an unscheduled cut in the benchmark interest rate by 50 basis points (0.5%) to a historic low of 0.25%; the reintroduction of the Term Funding Scheme for Small and Medium-sized Enterprises (TFSME) that provides banks with over $110 billion for loans at low interest rates; a lowering of banks' countercyclical capital buffer from 1% to zero, which is estimated to support over $200 billion of bank lending to businesses; and a freeze in banks' dividend payments.[251]
- On March 15, the BOE reinstituted U.S. dollar swap lines with the Federal Reserve.
- On March 17, the BOE and the UK treasury introduced the COVID Corporate Financing Facility (CCFF) to provide assistance to UK firms to bridge through Covid-19-related disruptions to their cash flow.
- On March 19, during a Special Monetary Policy Meeting, the Bank of England reduced its main interest rate to 0.1%, increased the size of its TFSME fund, and increased the stock of asset purchases by £200 billion to a total of £645 billion financed by issuing UK government bonds and some additional nonfinancial investment-grade corporate bonds.[252]
- On March 20, the BOE participated in an internationally coordinated central bank expansion of liquidity through U.S. standing dollar liquidity swap line arrangements.
- On March, the BOE activated the Contingent Term Repo Facility (CTRF).

---

[249] Paolo Mancini, Donato, Miles Johnson, Michael Peel, David Keohane, Richard Milne, and Sarah Neville, European Capitals Coordinated Suspension of Oxford/AstraZeneca Covid Jab, *Financial Times*, April 1, 2021. https://www.ft.com/content/a046e340-892b-4e68-bfae-4f5c40a5506a.

[250] Mallet, Victor, France Launches €100 Billion Coronavirus Recovery Plan, *Financial Times*, September 3, 2020. https://www.ft.com/content/0921c871-17b5-4e2e-bdea-aab78c2d0090.

[251] Romei, Valentina, "Covid-19 Fallout: Bank of England Launches 4 Key Measures," *Financial Times*. https://www.ft.com/content/4e60c08e-6380-11ea-b3f3-fe4680ea68b5.

[252] Johnson, Miles, Chris Giles, Martin Arnold, and James Politi, "Italy's PM Urges Brussels to Unleash €500bn Rescue Fund," *Financial Times*, March 18, 2020. https://www.ft.com/content/5b8205ac-6a06-11ea-800d-da70cff6e4d3.

- On April 6, announced the activation of the TFSME ahead of schedule.
- On April 23, the Bank of England indicated it would quadruple its borrowing over the second quarter of 2020, reflecting a contraction in the UK economy, lower tax revenues, and increased financial demands to support fiscal policy measures.[253]

In terms of fiscal policy, UK Chancellor of the Exchequer Rishi Sunak proposed a national budget on March 11, 2020, that included nearly $3.5 billion in fiscal spending to counter adverse economic effects of the pandemic and increased in statutory sick leave by about $2.5 billion in funds to small and medium businesses to provide up to 14 days of sick leave for affected employees. The plan provided affected workers up to 80% of their salary, or up to £2,500 a month (about $2,800) if they were laid off. Some estimates indicated that UK spending to support its economy would rise to about $60 billion in 2020.[254] Identified as the Coronavirus Job Retention Scheme (CJRS), the program was backdated to start on March 1 and had been expected to run through May, but was extended to expire the end of June 2020. Prime Minister Johnson also announced that all pubs, cafés, restaurants, theatres, cinemas, nightclubs, gyms and leisure centers would be closed.[255] Part of the fiscal spending package included open-ended funding for the National Health Service (NHS), $6 billion in emergency funds to the NHS, $600 million hardship fund to assist vulnerable people, and tax cuts and tax holidays for small businesses in certain affected sectors.[256]

On July 8, Chancellor Sunak proposed additional fiscal measures to support the UK economy.[257] The measures included raising threshold tax levels on home purchases, reducing taxes for the hospitality industry, and a "job retention bonus" of £1.000 (around $1,200) per worker to companies that bring employees out of furlough, estimated at around 9 million workers, and a subsidy of £2.000 for firms that hire new apprentices. In addition, the proposed plan includes a 50% discount on meals and nonalcoholic drinks eaten at restaurants and cafes during August, with some restrictions.

After falling in the first and second quarters of 2020, growth accelerated in the 3rd and 4th quarters, as indicated in **Table 18.** Despite this growth, the UK economy at the end of 2020 remained 8.4% below the level where it was at the end of 2019. For 2020 as a whole, the rate of growth of the UK economic contracted by 9.8%. As was typical of other developed economies, the Q2 decline was driven by lower levels of activity by households (-20.8%), business investment (gross fixed capital formation) (-20.7%)-primarily manufacturing, and construction (35%) and declines in both exports and imports, constituting the largest quarterly decline since 1955.[258] In contrast, the Q3 and Q4 expansion occurred in services, industrial production, and construction.

---

[253] Giles, Chris, and Tommy Stubbington, UK Treasury to Quadruple Borrowing to £180bn Over Next Quarter, *Financial Times*, April 23, 2020. https://www.ft.com/content/8886e002-c260-4daa-8b7b-509b3f7e6edb.

[254] Parker, George, Chris Giles, and Sebastian Payne, "Sunak Turns on Financial Firepower to Help Workers," *Financial Times,* March 20, 2020. https://www.ft.com/content/826d465a-6ac3-11ea-a3c9-1fe6fedcca75.

[255] Ibid.

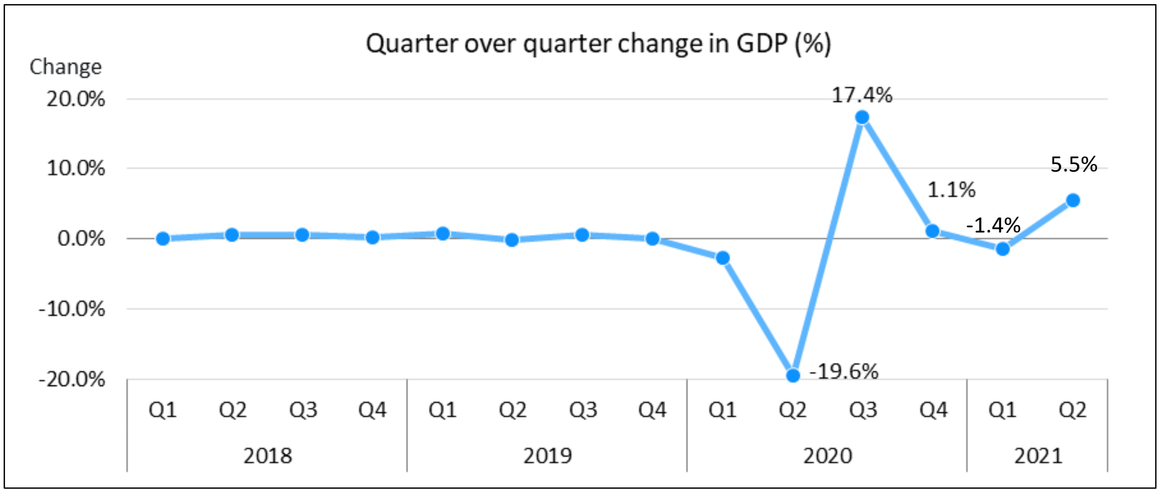
[256] Payne, Sebastian and Chris Giles, "Budget 2020: Sunak Unveils £30bn Stimulus to Counter UK Covid-19 Shock," *Financial Times*. https://www.ft.com/content/f7b27264-6384-11ea-a6cd-df28cc3c6a68.

[257] Pickard, Jim and Chris Giles, Sunak's Summer Statement: UK Government to Pay Companies to Bring Workers Back From Furlough, *Financial Times*, July 7, 2020. https://www.ft.com/content/ad1688ee-3d8d-4e52-9b16-a3632eed8be9.

[258] *GDP Quarterly National Accounts, UK: October to December 2020,* Office for National Statistics, March 31, 2021.

On September 30, 2021, the UK Government announced that UK GDP in the second first quarter of 2021 grew by 5.5%, after contracting by 1.4% in the first quarter of 2021, based on market prices, as indicated in **Figure 23**.[259] The Bank of England indicated in August 2021 that it would maintain its base interest rate at 0.1% and begin reducing its bond purchases.[260]

Figure 23. UK Quarter Over Quarter Percentage Change in GDP



Source: *GDP Quarterly National Accounts, UK: April to June 2021*, Office for National Statistics, September 30, 2021. Created by CRS.

Table 18. UK Quarterly GDP Aggregates 2019-2021

Percentage change from preceding period

	GDP	**Households**	**Gross Fixed Capital Formation**	**Government**	**Exports**	**Imports**
2019	1.4%	1.1%	1.5%	4.0%	2.7%	1.9%
Q1	0.6	0.0	2.1	1.4	-1.2	6.5
Q2	0.1	0.6	-1.1	2.3	-0.8	-9.0
Q3	0.5	0.1	1.3	-0.9	5.3	1.5
Q4	0.0	-0.3	-1.6	0.0	3.8	-3.1
2020	-9.8	-10.6	-8.8	-6.5	-15.8	-11.8
Q1	-2.8	-2.6	-1.2	-1.8	-18.8	-5.3
Q2	-19.5	-20.8	-20.7	-17.3	-5.1	-20.2
Q3	16.9	19.7	19.0	15.8	-2.6	20.9
Q4	1.3	-1.7	4.4	6.7	9.0	14.3

[259] Giles, Chris and Valentina Romei, BoE Economist Warns Against Pessimism After Record Drop in GDP, *Financial* Times, September 30, 2020. https://www.ft.com/content/fed4fe06-8c6a-4272-b0b3-a0759805eb64.

[260] Milliken, David, Francesco Canepa, and William Schomberg, Bank of England Sets Out Plans to Wean UK Economy Off Stimulus, *Reuters*, August 5, 2021.

	GDP	Households	Gross Fixed Capital Formation	Government	Exports	Imports
2021						
Q1	-1.6	-4.6	-1.7	1.5	-10.2	-16.4
Q2	4.8	7.3	-0.5	6.1	9.6	10.0

Source: *GDP First Quarterly Estimate, UK; April to June 2021* Office for National Statistics, August 12, 2021.

Note: Chained volume measures.

The UK-EU trade arrangement, the Trade and Cooperation Agreement, which became effective on December 24, 2020, was projected to raise some barriers on UK-EU trade and increase administrative costs, which could reduce UK trade and GDP by 10.5% and 3.25%, respectively, over the long run, compared with earlier forecasts. Trade during first quarter 2021 was also projected to be dampened as a consequence of UK firms adjusting to the new trade rules.[261] As lockdowns and restrictions were lessened or removed in the second quarter of 2021, UK exports and imports posted positive gains of 9.6% and 10.0%, respectively. Consumer spending also rebounded from the decline in the first quarter in response to renewed social restrictions and buoyed by the extra 5% of savings households accumulated during 2020.

As indicated in **Table 19**, the growth catch-up period is projected to last through 2022, before slowing in 2023. The Bank of England also conducted stress tests on UK banks in 2020 and concluded the banks had sufficient capital buffers to absorb the losses that could arise under the Bank's main projections.[262] The Bank also concluded that UK businesses had successfully raised the funds they needed to satisfy their cash-flow requirements. In addition, the government extended three financing facilities for businesses—the Bounce Back Loan Scheme (BBLS), the Coronavirus Business Interruption Loan Scheme and the Coronavirus Large Business Interruption Loan Scheme -through to the end of January 2021.[263] The forecast also projected an increase in unemployment and business insolvencies in 2021.

Table 19. UK Forecast of Major Aggregate National Accounts, 2020-2023

Percentage change from the preceding period

	Averages	Projection		
	2010-2019	2021	2022	2023
GDP	1.75%	5.00%	7.25%	1.25%
Households	1.75	4.25	11.75	1.00
Business	3.75	4.00	12.00	4.50
Exports	3.25	-3.00	5.25	4.25
Imports	3.50	5.25	12.75	3.50

Source: *GDP Quarterly National Accounts, UK: October to December 2020*, Office of National Statistics, March 31, 2021.

On March 3, 2021, Chancellor of the Exchequer Sunak proposed a £65 billion financial assistance package spread out over two-years to assist UK businesses and households recover from the

[261] Ibid., p. 4.

[262] *Financial Stability Report,* Bank of England, December 2020, p. ii.

[263] Ibid., p. 3.

economic effects of the pandemic. The Chancellor argued the spending was necessary, because the UK economy was projected to not fully recover for at least five years. With a continuation of state supported measures into the summer, the total cost to the UK economy of addressing the pandemic-related economic recession was estimated at £407 billion over two years. The spending initiative was expected to be followed by large increases in corporate and individual taxes starting in 2023.[264] Given the announced planned tax increases in subsequent years, some economists could argue the spending initiative could fall short of the estimated stimulative effects. On June 14, 2021, UK Prime Minister Boris Johnson announced a four-week extension in social restrictions and business lockdowns in response to a rise in viral infections, further delaying the return of the UK economy to pre-pandemic activity.[265] By early July, Prime Minister Johnson announced that England (exclusive of Scotland, Wales, and Northern Ireland) would remove all social restrictions by July 19, despite warnings from UK health officials that the rapidly spreading Delta viral variant could result in 100,000 deaths per day by the end of summer, surpassing the previous record of 60,000 deaths per day.[266]

Japan

As a countermeasure to the pandemic-related economic crisis, the Bank of Japan, injected $4.6 billion in liquidity into Japanese banks in March 2020 to provide short-term loans for purchases of corporate bonds and commercial paper and twice that amount into exchange traded funds to aid Japanese businesses. The Japanese government also pledged to provide wage subsidies for parents forced to take time off due to school closures.[267] In March, Japan also adopted an emergency fiscal package of about $1.1 trillion, roughly equivalent to 10% of Japan's annual gross domestic product (GDP). On April 27, 2020, the Bank of Japan announced it would purchase unlimited amounts of government bonds and quadruple its purchases of corporate debt to keep interest rates low and stimulate the Japanese economy.[268]

In May 2020, the Japanese Cabinet proposed a second supplemental appropriation measure that included $296 billion in spending and a total value of about $1.1 trillion in loans and guarantees, funded through new bonds. This and a previous set of spending measures reportedly were comparable to 40% of Japan's GDP and included grants for businesses to pay rents through the Development Bank of Japan and funds to small and medium-sized businesses through the Regional Economy Vitalization Corporation of Japan, payments to assist furloughed workers, and a reserve fund to provide capital injections to struggling firms through the Japan Investment Corporation.[269]

In terms of monetary policy, the Bank of Japan (BOJ) maintained its low interest rates policy of -0.1%, even as it increased its coronavirus lending facility from $700 billion to $1 trillion and

---

[264] Pickard, Jim, Chris Giles and George Parker, Rishi Sunak Delivers Spend Now, Tax Later Budget to Kickstart UK Economy, *Financial Times,* March 3, 2021. https://www.ft.com/content/da66ce9a-6dfc-4a3a-bde7-d4f4faed6c4a.

[265] Payne, Sebastian, Jim Pickard and Daniel Thomas, Four-week Extension to England's Lockdown Dashes Business Hopes, *Financial Times*, June 14, 2021. https://www.ft.com/content/2d00de1a-92d7-4b63-a151-53a6ae064368.

[266] Cunningham, Erin, Britain's Daily Infections Could Reach 100,000 This Summer, Health Secretary Says, *The Washington Post*, July 6, 2021.

[267] Harding, Robin and Hudson Lockett, "BoJ Spurs Asia Markets Rebound with Vow to Fight Covid-19," *Financial Times,* March 2, 2020. https://www.ft.com/content/9fa91e06-5c3b-11ea-b0ab-339c2307bcd4.

[268] Harding, Robin, Bank of Japan Steps up Coronavirus Stimulus With Bond-buying Pledge, *Financial Times,* April 27, 2020. https://www.ft.com/content/7ba5c507-df9e-4107-87eb-73afa2c13e91.

[269] Harding, Robin, Japan's Cabinet Approves Extra $1.1 Trillion Budget to Counter Recession, *Financial Times*, May 27, 2020. https://www.ft.com/content/ce7f3564-c997-339c-ad3d-c6d092fb7f1e.

stated it would continue purchasing commercial paper, corporate bonds, and exchange traded funds at the rate of ¥12 trillion a year.[270] The COVID-19 lending facility assisted banks in providing zero interest rate loans to businesses. In a separate program, the BOJ provided about ¥110 trillion to buy commercial paper and corporate bonds and provided dollars through swap arrangements with the U.S. Federal Reserve. Japan reported on August 17 that its economy had contracted by 7.8% in the second quarter of 2020, compared with the previous quarter, or at an annual a rate of 27.8%. This drop in economic activity was precipitated by a drop in exports of 18.5% from the preceding quarter (56.0% at an annual rate) and a decline in personal consumption of 8.6% (30.1% at an annual rate).[271]

On July 19, 2021, the Bank of Japan issued a revised forecast that indicated Japan's GDP had contracted by 4.6% in Japan's fiscal year ending March 2021, as indicated in **Table 20.** The economy was projected to grow by 3.5% to 4.0% in 2021 and by 2.6% to 2.9% the following year. However, the Bank remained "highly uncertain" and its forecast faced large downside risks that the impact of the pandemic would begin to wane in 2021 as a result of an increase in vaccinations.[272] The Bank also indicated that its forecast was based on the assumption that events outside Japan, particularly growth in trade as other economies began reviving, and as domestic consumer spending and business investment strengthened. As indicated, the Bank estimated the Japanese economy would grow by 0.3% in the second quarter of 2021, compared with a decline of 0.9% in the first quarter.

Table 20. Japan Main Economic Accounts, 2020 and 2021

Percentage change over previous period

			2020				2021	
	2019	**2020**	Q1	Q2	Q3	Q4	Q1	Q2
GDP	0.6%	-3.8%	-0.6%	-7.9%	5.3%	2.8%	-0.9%	0.3%
Household consumption	0.2	-5.2	-0.8	-8.3	5.1	2.3	-1.0	0.8
Government spending	2.2	2.3	-0.3	0.7	2.8	1.8	-1.7	0.5
Gross fixed capital formation	1.7	-4.1	0.2	-3.2	-2.0	2.9	-0.9	1.1
Exports (goods and services)	-4.4	-13.9	-4.7	-17.5	7.3	11.7	2.4	2.9
Imports (goods and services)	-2.7	-14.0	-3.0	-0.7	-8.2	4.8	4.0	5.1

Source: Bank of Japan, Outlook for Economic Activity and Prices, July 19, 2021.

In other actions, Japan's Prime Minister Suga announced on January 5, 2021, that Tokyo and three surrounding prefectures would initiate a voluntary "soft" state of emergency on January 8 that stressed teleworking, restricting unnecessary travel, and reducing sporting and cultural events.[273] On April 23, 2021, Japan announced new two-week lockdown protocols for Tokyo,

[270] Harding, Bank of Japan Pledges $1 trillion in Coronavirus Lending.

[271] *Quarterly Estimates of GDP for April–June 2020 (First Preliminary Estimates),* Cabinet Office, August 17, 2020.

[272] *Outlook for Economic Activity and Prices*, Bank of Japan, July 19, 2021.

[273] Harding, Robin and Kana Inagaki, Japan Declares State of Emergency in Tokyo as Coronavirus Cases Surge, *Financial Times*, January 5, 2021. https://www.ft.com/content/72ceb064-2231-4d17-bd8f-92bd7f99f33c.

Osaka, and two other large cities as Japan faced a rise in viral infections. The lockdowns were intended to encourage workers to work from home, to close all venues that serve alcohol and supermarkets, but not close schools.[274] In April, May, and June, 2021, Japan again experienced a resurgence of cases, reportedly raising the total number of diagnosed case to 811,000. On July 8, Japanese officials announced that no spectators would be allowed to attend the summer Olympics, which began on July 23, after Japan declared a state of emergency amid a rise in diagnosed COVID-19 cases.[275] Previously, Japan had indicated it would limit attendees to a maximum of 10,000 Japanese residents per event. It is unclear if the new ban included sponsors and sporting federation officials.[276]

China

According to a recent CRS In Focus,[277] China emerged in June 2020 as the first major country to announce a return to economic growth since the outbreak of the COVID-19 pandemic. The government reported 3.2% gross domestic product (GDP) growth in the second quarter and 4.9% GDP growth in the third quarter of 2020. China is still grappling with the economic effects of the COVID-19 pandemic, however, including sluggish domestic consumption, slow recovery in its top export markets, and reliance on government spending and exports to boost initial growth. China also is facing growing restrictions on its overseas commercial activities and access to foreign technology and pressures for firms to diversify China-based supply chains. Against this backdrop, China's leadership is deliberating the country's economic direction and national industrial plans for the next 5 to 15 years.

To boost economic growth, China has provided an estimated $506 billion in stimulus since February 2020 and increased the government's budget deficit target to a record high of 3.6% of GDP, up from 2.8% in 2019. China reduced the value-added tax (VAT) rate and introduced VAT exemptions for certain goods and services. China's central bank extended monetary support with interest rate cuts, eased loan terms, and injected liquidity into banks. Shifting from efforts to reduce debt, the government announced the issuance of $142.9 billion of special treasury bonds for the first time since 2007; increased the quota for local government special bonds (a source of infrastructure funding); and fast-tracked issuance of corporate bonds to cover pandemic costs but with potential broader uses. The IMF estimates that the fiscal measures and financing plans announced amounted to 4.1% of the China's GDP, as of July 2020. The government says it seeks to control credit risk but the need for additional fiscal and monetary support to boost growth may undermine this goal.

[274] Harding, Robin, Japan to Impose New State of Emergency as COVID-19 Cases Rise, *Financial Times,* April 23, 2021. https://www.ft.com/content/a3d3a8bc-6d0e-4b2b-9e09-3310db13222e.

[275] Dooley, Ben, Spectators Will Be Barred at Tokyo Olympics Amid New Covid Emergency, The New York Times, July 8, 2021. https://www.nytimes.com/2021/07/08/world/asia/tokyo-state-of-emergency-olympics.html.

[276] Wade, Stephen, Tokyo Olympics to Allow Local Fans-But With Strict Limits, *AP*, June 21, 2021.

[277] CRS In Focus IF11667, *China's Economy: Current Trends and Issues*, by Karen M. Sutter and Michael D. Sutherland.

Multilateral Response[278]

International Monetary Fund

Created in the aftermath of World War II, the IMF's fundamental mission is to promote international monetary stability. To advance this goal, one of the key functions of the IMF is providing emergency loans to countries facing economic crises. The COVID-19 pandemic has resulted in an unprecedented demand for IMF financial assistance. More than 100 of the IMF's 189 member countries have requested IMF programs,[279] and IMF Managing Director Kristalina Georgieva stated the IMF stands ready to deploy the entirety of its current lending capacity—approximately $1 trillion—in response to the pandemic and resulting economic crises.[280] The IMF has already approved several COVID-related programs, including for Bolivia, Chad, the Democratic Republic of Congo, Kyrgyz Republic, Nigeria, Niger, Rwanda, Madagascar, Mozambique, Pakistan, and Togo, among others, and additional programs are expected.[281]

In addition to loans, the IMF has taken a number of other policy steps to bolster its COVID-19 response. The IMF is tapping its Catastrophe Containment and Relief Trust (CCRT), a donor country trust fund at the IMF, to cover six months of debt payments owed by 29 low-income countries to the IMF. The IMF also created a new a new Short-term Liquidity Line.[282] It is a revolving and renewable backstop for member countries with very strong economic policies in need of short-term and moderate financial support, and intends to support a country's liquidity buffers. The IMF also adopted proposals to accelerate Board consideration of member financing requests for emergency financing and doubled (to about $100 billion) access to IMF emergency assistance. The International Monetary Fund (IMF) is providing funding to poor and emerging market economies that are short on financial resources.[283] If the economic effects of the virus persist, countries may need to be proactive in coordinating fiscal and monetary policy responses, similar to actions taken by of the G-20 following the 2008-2009 global financial crisis.

In August 2021, the IMF announced it was supporting low and middle-income countries in their response to the pandemic crisis through a $650 billion allocation in special drawing rights (SDRs)—reportedly the largest increase on record. The SDR allocation is intended to supplement the existing financial reserves to reduce their need to turn to domestic or external sources of funds. About $275 billion of the funds is intended to be allocated to emerging and developing economies, with the rest intended for larger developed economies.[284]

For FY2021, the Administration had requested authorization for about $38 billion for a supplemental fund at the IMF (the New Arrangements to Borrow [NAB]). In March 2020,

---

[278] For more information, see CRS Report R46342, *COVID-19: Role of the International Financial Institutions*, by Rebecca M. Nelson and Martin A. Weiss.

[279] Remarks by IMF Managing Director Kristalina Georgieva During the G20 Finance Ministers and Central Bank Governors Meeting, International Monetary Fund, April 15, 2020.

[280] IMF Managing Director Kristalina Georgieva's Statement Following a G20 Ministerial Call on the Coronavirus Emergency, March 23, 2020. Some policy experts estimate the IMF's current maximum lending capacity is about $787 billion.

[281] IMF Lending Tracker, https://www.imf.org/en/Topics/imf-and-covid19/COVID-Lending-Tracker.

[282] "IMF Adds Liquidity Line to Strengthen COVID-19 Response," International Monetary Fund, April 15, 2020.

[283] Politi, James, "IMF Sets Aside $50bn for Covid-19-Hit Countries," *Financial Times*, March 4, 2020, https://www.ft.com/content/83c07594-5e3a-11ea-b0ab-339c2307bcd4.

[284] Jonathan Wheatley in London and Colby Smith, IMF Allocates $650bn to Boost Pandemic-hit Economies, *Financial Times*, August 2, 2021.

Congress enacted this authorization in the Coronavirus Aid, Relief, and Economic Security Act (CARES Act, P.L. 116-136) as a way to bolster IMF resources available to support countries during the pandemic. There is ongoing debate about whether member countries should contribute additional resources to the IMF, whether the IMF should raise funds by selling a portion of its gold holdings, and whether the IMF should enact policies to buffer member state reserves, through a process called an SDR allocation.

Despite the IMF's various announcements and pledges of support for heavily indebted countries, through October 2021, it had played a small role in alleviating the economic impact of the pandemic.[285] In addition, the G20 in cooperation with the Paris Club[286]initiated efforts to provide assistance through a Common Framework for Debt Treatments to support countries with unsustainable levels of debt. Due to opposition by China over various issues, through October 2021, the initiative had not progressed. In late October, the Biden Administration was pressing the G20 to speed up its response.[287] As a percentage share of GDP, Multilateral Developments Banks provided commitments of funds that were much smaller than that of highly developed economy; nevertheless, the Banks reportedly increased their financial commitments by 39% to about $145 billion, with the World Bank providing about half of that mount.[288]

World Bank and Regional Development Banks

The World Bank, which finances economic development projects in middle- and low-income countries, among other activities, is mobilizing its resources to support developing countries during the COVID-19 pandemic.[289] As of June 1, 2020, the World Bank had approved, or was in the process of approving, 150 COVID-19 projects, totaling $15 billion, in 99 countries.[290] Examples of approved projects include $47 million for the Democratic Republic of Congo to support containment strategies, train medical staff, and provide equipment for diagnostic testing to ensure rapid case detection; $11.3 million for Tajikistan to expand intensive care capacity; $20 million for Haiti to support diagnostic testing, rapid response teams, and outbreak containment; and $1 billion for India to support screening, contract tracing, and laboratory diagnostics, procure personal protective equipment, and set up new isolation wards, among other projects.[291]

The World Bank Group estimated it could deploy as much as $160 billion to respond to the COVID-19 pandemic, more than double the amount it committed in FY2019. In April 2020, the World Bank also announced its plans to establish a new multi-donor trust fund to help countries prepare for disease outbreaks, the Health Emergency Preparedness and Response Multi-Donor

[285] How Has the IMF Fared During the Pandemic? *Economist*, April 3, 2021, https://www.economist.com/finance-and-economics/2021/04/03/how-has-the-imf-fared-during-the-pandemic?.

[286] The Paris Club is an informal group of official creditors whose role is to find coordinated and sustainable solutions to the payment difficulties experienced by debtor countries.

[287] U.S. Pushing to Speed up G20 Common Debt Restructuring Process, Reuters, October 21, 2021, https://www.reuters.com/world/us/us-pushing-speed-up-g20-common-debt-restructuring-process-2021-10-27/.

[288] Lee, Nancy and Rakan Aboneaaj, MDBs to the Rescue? The Evidence on COVID-19 Response, Center for Global Development, May 2021, https://www.cgdev.org/publication/mdbs-rescue-evidence-covid-19-response.

[289] Remarks by World Bank Group President David Malpass on G20 Finance Ministers Conference Call on COVID-19, March 23, 2020.

[290] https://maps.worldbank.org/. Accessed on June 1, 2020.

[291] World Bank, "World Bank Group Launches First Operations for COVID-19 (Coronavirus) Emergency Health Support, Strengthening Developing Country Response," Press Release, April 2, 2020.

Fund (HEPRF).[292] The new fund is to complement, and augment, the $160 billion of financing provided by the World Bank.

In addition to the World Bank, which has a near-global membership and operates in many sectors in developing countries worldwide, a number of smaller and more specialized multilateral development banks (MDBs) are also mobilizing resources in response to the COVID-19 pandemic. The United States is a member of a number of regionally focused MDBs, including the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development, and the Inter-American Development Bank, as well as the functionally focused International Fund for Agricultural Development. The United States does not belong to some MDBs, including the Chinese-led Asian Infrastructure Investment Bank and the New Development Bank created by the BRICS countries (Brazil, Russia, India, China, and South Africa), the European Investment Bank, or the Islamic Development Bank.

In response to COVID-19, MDBs are reprogramming existing projects, establishing and funding with existing resources lending facilities dedicated to the COVID-19 response, and streamlining approval procedures. According to the President of the World Bank, other multilateral development banks have committed roughly $80 billion over the next 15 months to respond to COVID-19.[293] Together with the World Bank's commitment of $160 billion, $240 billion in financing is to be made available to developing countries from the MDBs during this time period.[294]

To support the MDB response to COVID-19, Congress accelerated authorizations requested by the Administration for FY2021 for two lending facilities at the World Bank and two lending facilities at the African Development Bank in the CARES Act (P.L. 116-136). Given the unprecedented demand for MDB resources, discussions are underway about whether the MDBs should pursue fiduciary reforms that would allow them to expand their lending based on existing resources, particularly lending against donor country guarantees to the institutions (called "callable" capital).

International Economic Cooperation

On March 16, 2020, the leaders of the G-7 countries (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) held an emergency summit by teleconference to discuss and coordinate their policy responses to the economic fallout from the global spread of COVID-19. In the joint statement released by the G-7 leaders after the emergency teleconference summit, the leaders stressed they are committed to doing "whatever is necessary to ensure a strong global response through closer cooperation and enhanced cooperation of efforts."[295] The countries pledged to coordinate research efforts, increase the availability of medical equipment; mobilize "the full range" of policy instruments, including monetary and fiscal measures as well as targeted actions, to support workers, companies, and sectors most affected by the spread of COVID-19; task the finance ministers to coordinate on a weekly basis, and direct the IMF and the World Bank

[292] World Bank, "World Bank Group to Launch New Multi-donor Trust Fund to help Countries Prepare for Disease Outbreaks," Press Release, April 17, 2020.

[293] David Malpass, "Remarks to G20 Finance Ministers," World Bank, April 15, 2020.

[294] World Bank Group President David Malpass: Remarks to G20 Finance Ministers, April 15, 2020.

[295] White House, G-7 Leaders' Statement, March 16, 2020, https://www.whitehouse.gov/briefings-statements/g7-leaders-statement/.

Group, as well as other international organizations, to support countries worldwide as part of a coordinated global response.[296]

Saudi Arabia, the 2020 chair of the G-20, called an emergency G-20 summit on March 25 to discuss a response to the pandemic.[297] The G-20 is a broader group of economies, including the G-7 countries and several major emerging markets.[298] During the global financial crisis, world leaders decided that henceforth the G-20 would be the premiere forum for international economic cooperation. Some analysts have been surprised that the G-7 has been in front of the G-20 in responding to COVID-19, while other analysts have questioned whether the larger size and diversity of economies in the G-20 can make coordination more difficult.[299]

Analysts are hopeful that the recent G-7 summit, and a G-20 summit, will mark a shift towards greater international cooperation at the highest (leader) levels in combatting the economic fallout from the spread of COVID-19.[300] An emergency meeting of G-7 finance ministers on March 3, 2020, fell short of the aggressive and concrete coordinated action that investors and economists had been hoping for, and U.S. and European stock markets fell after the meeting.[301] More generally, governments have been divided over the appropriate response and in some cases have acted unilaterally, particularly when closing borders and imposing export restrictions on medical equipment and medicine. Some experts argue that a large, early, and coordinated response is needed to address the economic fallout from COVID-19, but several concerns loom about the G-20's ability to deliver.[302] Their concerns focus on the Trump Administration's prioritization of an "America First" foreign policy over one committed to multilateralism; the 2020 chair of the G-20, Saudi Arabia, is embroiled in its own domestic political issues and oil price war; and U.S.-China tensions make G-20 consensus more difficult.

Meanwhile, international organizations including the IMF and multilateral development banks, have tried to forge ahead with economic support given their current resources. Additionally, the Financial Stability Board (FSB), an international body including the United States that monitors the global financial system and makes regulations to ensure stability, released a statement on March 20, 2020, that its members are actively cooperating to maintain financial stability during market stress related to COVID-19.[303] The FSB is encouraging governments to use flexibility within existing international standards to provide continued access to funding for market participants and for businesses and households facing temporary difficulties from COVID-19, while noting that many FSB members have already taken action to release available capital and liquidity buffers.

---

[296] Ibid.

[297] "Spain Says Saudi Arabia to Cal G-20 to Meet on Covid-19 in Coming Days," *Reuters*, March 16, 2020.

[298] The G-20 includes the G-7 countries plus Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, and the European Union (EU).

[299] For more information about the G-20, see CRS Report R40977, *International Economic Policy Coordination at the G-7 and the G-20*, by Rebecca M. Nelson.

[300] See for example, Jennifer Rankin, "EU Leaders Divided on How to Protect Economies after Covid-19," *The Guardian*, March 14, 2020.

[301] Jack Ewing and Jeanna Smialek, "Economic Powers Vow to Fight Crisis," *New York Times*, March 3, 2020.

[302] Matthew Goodman and Mark Sobel, "Time to Pull the G-20 Fire Bell," Center for Strategic and International Studies, March 18, 2020.

[303] "FSB Coordinates Financial Sector Work to Buttress the Economy in Response to Covid-19," Financial Stability Board, Press Release 6/2020, March 20, 2020.

Estimated Effects on Other Economies

Travel bans and quarantines have had a heavy economic toll on a broad range of countries. The OECD notes that production declines in China have had spillover effects around the world given China's role in producing computers, electronics, pharmaceuticals and transport equipment, and as a primary source of demand for many commodities.[304] Across Asia, some forecasters argue that recent data indicate that Japan, South Korea, Thailand, the Philippines, Indonesia, Malaysia, and Vietnam could experience an economic recession in 2020.[305]

In early January 2020, before the COVID-19 outbreak, economic growth in developing economies as a whole was projected by the International Monetary Fund (IMF) to be slightly more positive than in 2019. This outlook was based on progress being made in U.S.-China trade talks that were expected to roll back some tariffs and an increase in India's rate of growth. Growth rates in Latin America and the Middle East were also projected to be positive in 2020.[306] These projections likely will be revised downward due to the slowdown in global trade associated with COVID-19, lower energy and commodity prices, an increase in the foreign exchange value of the dollar, and other secondary effects that could curtail growth. Commodity exporting countries, in particular, likely will experience a greater slowdown in growth than forecasted in earlier projections as a result of a slowdown on trade with China and lower commodity prices.

Asian Development Bank 2021 Forecast

According to the Asian Development Bank's (ADB) July 2021 report, developing Asia GDP is projected to grow by 7.2% in 2021, after falling by 0.1% in 2020, reportedly the first decline in economic activity in the region in six decades, reflecting the slowdown in global trade and national quarantines.[307] Similar to other groups, the ADB's forecasts indicate progressively more positive rates of growth over the September 2020 to July 2021 period for most areas of Asia, led by a rebound in growth of 7% in India.

ADB sub-regional forecasts indicate that South Asia, particularly India is projected grow at the fastest rate in 2022. East Asia is similarly projected to experience an overall positive rate of growth in 2022, reflecting the dominating influence of the Chinese economy, which is projected to grow by 8% in 2021 and 5% in 2022, as indicated in **Figure 24**. Hong Kong, which experienced a slowing rate of growth in 2020 due to domestic political turmoil and trade issues between the United States and China, was projected to experience a 6.2% rate of growth in 2021 and a 3.5% rate in 2022.

South Asia, which includes India, is projected to experience a decline in its annual GDP growth rate of 5.5% in 2020, but a positive rate of growth in 2021 of 8.9% and 7.0% in 2022, driven in part by a turn-around in India's growth rate from -7.3 in 2020 to a positive 10.0% in 2021 and 7.5% in 2022. Countries in the region have implemented different measures to contain the spread of the virus, reflecting differences in the extent of viral infections. Across governments within the region, total fiscal support totaled $3.6 trillion by the end of August 2020, divided between income support measures and measures intended to support liquidity. Similar to other regions and

[304] Ibid., p. 5.

[305] Arnold, Martin Arnold and Valentina Romei, "European Factory Output Plummets as Covid-19 Shutdown Bites," *Financial Times*, April 1, 2020. https://www.ft.com/content/8646c0ee-8fba-4e4c-a047-cf445ff41cf6.

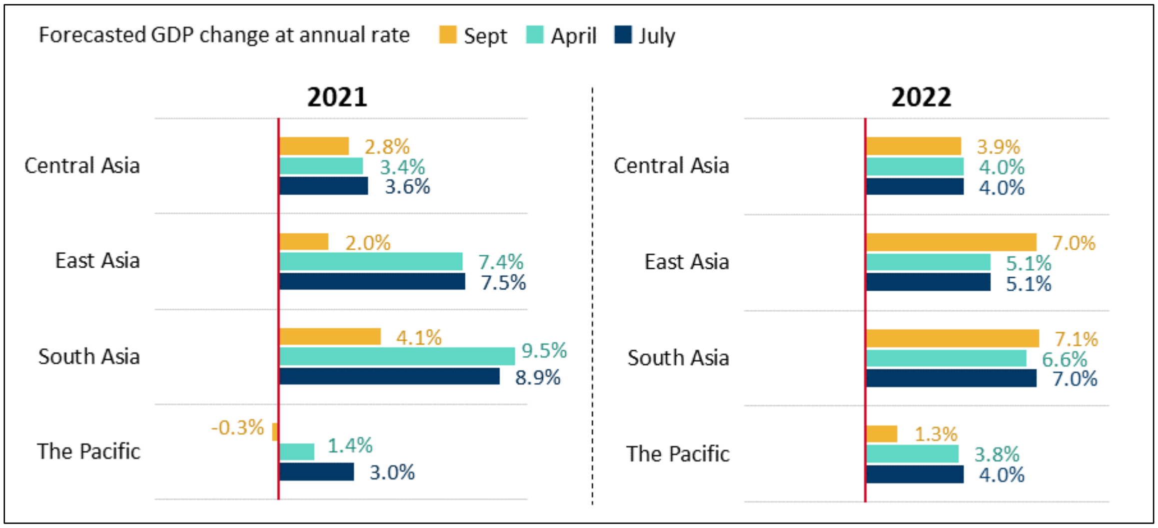
[306] *Tentative Stabilization, Sluggish Recovery? World Economic Outlook Update*, January 20, 2020, The International Monetary Fund. https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020.

[307] *Asian Development Outlook Supplement*, Asian Development Bank, July 2021.

countries, growth prospects in developing Asia depend on the length and depth of the health crisis and the protracted nature of trade tensions between the United States and China.

Figure 24. Asian Development Bank 2020 and 2021 GDP Forecasts

In percentage change



Source: *Asian Development Outlook Supplement*, Asian Development Bank, July 2021. Created by CRS.

International Economic Cooperation

Initial efforts at coordinating the economic response to the COVID-19 pandemic across countries were uneven. Governments were divided over the appropriate response and in some cases acted unilaterally, particularly when closing borders and imposing export restrictions on medical equipment and medicine. An emergency meeting of G-7 (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) finance ministers on March 3, 2020, fell short of the aggressive and concrete coordinated action that investors and economists had hoped for, and U.S. and European stock markets fell sharply after the meeting.[308] However, on March 16, 2020, the leaders of the G-7 countries held an emergency summit by teleconference to discuss and coordinate their policy responses to the economic fallout from the global spread of COVID-19.

In a joint statement released by the G-7 leaders after the emergency teleconference summit, the leaders stressed they were committed to doing “whatever is necessary to ensure a strong global response through closer cooperation and enhanced cooperation of efforts.”[309] The countries pledged to coordinate research efforts, increase the availability of medical equipment; mobilize “the full range” of policy instruments, including monetary and fiscal measures as well as targeted actions, to support workers, companies, and sectors most affected by the spread of COVID-19; tasked the finance ministers to coordinate on a weekly basis, and directed the IMF and the World Bank Group, as well as other international organizations, to support countries worldwide as part of a coordinated global response.[310] G-7 coordination was problematic however, including

[308] Jack Ewing and Jeanna Smialek, “Economic Powers Vow to Fight Crisis,” *New York Times*, March 3, 2020.

[309] White House, G-7 Leaders’ Statement, March 16, 2020, https://www.whitehouse.gov/briefings-statements/g7-leaders-statement/.

[310] Ibid.

disagreement among G-7 foreign affairs ministers about how to refer to the virus (coronavirus or the "Wuhan virus") and concerns about collaboration on vaccine research.[311] The United States chaired the G-7 in 2020, but the June summit at Camp David was canceled due to concerns about COVID-19.

The G-20, which has a broader membership of major advanced and emerging-market economies representing 85% of world GDP, was slower to respond to the pandemic.[312] Even though G-20 coordination was widely viewed as critical in the response to the global financial crisis of 2008-2009, several factors may have complicated G-20 coordination in the pandemic context: the Trump Administration's prioritization of an "America First" foreign policy over one committed to multilateralism; the 2020 chair of the G-20, Saudi Arabia, was embroiled in its own domestic political issues and oil price war; and U.S.-China tensions make G-20 consensus more difficult.[313] The G-20 held a summit by teleconference on March 26, 2020, but the resulting communique was criticized for failing to include concrete action items beyond what national governments were already doing.[314] However, G-20 coordination appeared to be gaining momentum, most notably with the G-20 agreement on debt relief for low-income countries (see "Looming Debt Crises and Debt Relief Efforts").

Meanwhile, international organizations including the IMF and multilateral development banks, tried to forge ahead with economic support given their current resources. Additionally, the Financial Stability Board (FSB), an international body including the United States that monitors the global financial system and makes regulations to ensure stability, released a statement on March 20, 2020, that its members were actively cooperating to maintain financial stability during market stress related to COVID-19.[315] The FSB encouraged governments to use flexibility within existing international standards to provide continued access to funding for market participants and for businesses and households facing temporary difficulties from COVID-19, while noting that many FSB members had taken action to release available capital and liquidity buffers.

Looming Debt Crises and Debt Relief Efforts

COVID-19 could trigger a wave of defaults around the world.[316] In Q3 2019—before the outbreak of COVID-19—global debt levels reached an all-time high of nearly $253 trillion, about 320% of global GDP.[317] About 70% of global debt is held by advanced economies and about 30% is held by emerging markets. Globally, most debt is held by nonfinancial corporations (29%), governments (27%) and financial corporations (24%), followed by households (19%). Debt in

[311] "Pompeo, G-7 Foreign Ministers Spar over 'Wuhan Virus'," *Politico*, March 25, 2020; Katrin Bennhold and David E. Sanger, "U.S. Offered 'Large Sum' to German Company for Access to Coronavirus Vaccine Research, German Officials Say," New York Times, March 15, 2020.

[312] The G-20 includes the G-7 countries plus Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, and the European Union (EU).

[313] Matthew Goodman and Mark Sobel, "Time to Pull the G-20 Fire Bell," Center for Strategic and International Studies, March 18, 2020.

[314] Matthew Goodman, Stephanie Segal, and Mark Sobel, "Assessing the G20 Virtual Summit," Center for Strategic and International Studies, March 27, 2020.

[315] "FSB Coordinates Financial Sector Work to Buttress the Economy in Response to Covid-19," Financial Stability Board, Press Release 6/2020, March 20, 2020.

[316] John Plender, "The Seeds of the Next Debt Crisis," *Financial Times,* March 4, 2020.

[317] Emre Tiftik, Khadija Mahmood, Jadranka Poljak, and Sonja Gibbs, "Global Debt Monitor: Sustainability Matters," Institute for International Finance, January 13, 2020.This includes debt held by governments, financial institutions, nonfinancial institutions, and households.

emerging markets has nearly doubled since 2010, primarily driven by borrowing from state-owned enterprises.

High debt levels make borrowers vulnerable to shocks that disrupt revenue and inflows of new financing. The disruption in economic activity associated with COVID-19 is a wide-scale exogenous shock that will make it significantly more difficult for many private borrowers (corporations and households) and public borrowers (governments) around the world to repay their debts. COVID-19 has hit the revenue of corporations in a range of industries: factories have ceased production, brick-and-mortar retail stores and restaurants have closed, commodity prices plunged (Bloomberg commodity price index—a basket of oil, metals, and food prices—initially dropping by 27% to its lowest level since 1986), and overseas and in some cases domestic travel was curtailed.[318] Some governments, including Argentina and Lebanon, were already experiencing debt pressures, which were exacerbated by the pandemic. Other countries faced new debt pressures created by the pandemic, while some countries, such as Abu Dhabi and Egypt, completed successful sovereign bond sales since the outbreak of the pandemic.[319]

Households faced a rapid increase in unemployment and, in many developing countries, a decline in remittances. With fewer resources, corporations and households faced default on their debts, absent government intervention. Such defaults could result in a decline in bank assets, making it difficult for banks to extend new loans during the crisis or, more severely, create solvency problems for banks. Meanwhile, many governments increased spending to combat the pandemic, and could face sharp reductions in revenue, putting pressure on public finances and raising the likelihood of sovereign (government) defaults. Debt dynamics are particularly problematic in emerging economies, where debt obligations are denominated in foreign currencies (usually U.S. dollars). Many emerging market currencies depreciated since the outbreak of the pandemic, raising the value of their debts in terms of local currency.

Governments will face difficult choices if there is a widespread wave of defaults. Most governments signaled a commitment to or already implemented policies to support those economically impacted by the pandemic. These governments face decisions about the type of assistance to provide (loans versus direct payments), the amount of assistance to provide, how to allocate rescue funds, and what conditions if any to attach to funds. Governments have undertaken extraordinary fiscal and monetary measures to combat the crisis. However, developing countries that are constrained by limited financial resources and where health systems can quickly become overloaded, making them particularly vulnerable.

In terms of defaults by governments (sovereign defaults), emergency assistance is generally provided by the IMF, and sometimes paired with additional rescue funds from other governments on a bilateral basis. The IMF and other potential donor countries will need to consider whether the IMF has adequate resources to respond to the crisis, how to allocate funding if the demand for funding exceeds the amount available, what conditions should be attached to rescue funding, and whether IMF programs should be paired with a restructuring of the government's debt ("burden sharing" with private investors).

International efforts are underway to help the most vulnerable developing countries grapple with debt pressures. In mid-April 2020, the IMF tapped its Catastrophe Containment and Relief Trust (CRRT), funded by donor countries, to provide grants to cover the debt payments of 25 poor and vulnerable countries to the IMF for six months. The IMF hopes that additional donor contributions will allow this debt service relief to be extended for two years. Additionally, the G-

[318] "Covid-19 Worsens Debt Crisis in Poor Countries," Jubilee Debt Campaign, March 22, 2020.

[319] Trieu Pham, "EM Sovereign Debt Issuance: Encouraging Signs but Not Yet Back to Business as Usual," *ING*, May 26, 2020.

20 finance ministers agreed to suspend debt service payments for the world's poorest countries through the end of 2020. The Institute for International Finance (IIF), which represents 450 banks, hedge funds, and other global financial funds, also announced that private creditors will join the debt relief effort on a voluntary basis. This debt standstill will free up more than $20 billion for these countries to spend on improving their health systems and fighting the pandemic.[320] Private sector commitments were critical for official creditors, so that developing countries could redirect funds to improving health systems rather than repaying private creditors.

However, the debt standstill is complicated. There is debate among creditor governments about what debts should be included in the standstill, and how it can be enforced. On May 1, the IIF in a letter laid out some of the obstacles facing private sector participation in the debt still, including reliance on "voluntary" participation, each participating creditor will need to make its own assessments, the standstill could require a lengthy contract-by-contract approach, and the participating borrowing countries may face risks, such as rating downgrades and inability to borrow from financial markets (often referred to as "loss of market access"). Some economists have characterized the letter as a list of reasons private creditors may cite as justification for their refusal to participate in the debt standstill.[321] Reportedly, some African countries are opting to negotiate debt relief individually with China and other creditor nations because of concerns they will be blocked from financial markets if they participate in the G-20 debt standstill.[322]

Other Affected Sectors

Since early 2000, concerns over the spread of the virus led to self-quarantines, reductions in airline and cruise liner travel, the closing of such institutions as the Louvre, and challenges to existing parental leave policies.[323] Work from home arrangements reportedly caused some businesses to consider new approaches to managing their workforces and work methods. These techniques build on, or in some places replace, such standard techniques as self-quarantines and travel bans. Some firms adopted an open-leave policy to ensure employees receive sick pay if they are, or suspect they are, infected. Other firms adopted paid sick leave policies to encourage sick employees to stay home and adopting remote working policies.[324] Microsoft and Amazon initially instructed all of their Seattle-based employees to work from home until the end of March 2020, but Microsoft indicated in October it would allow a large share of its employees to work from home permanently.[325]

---

320 Davide Barbuscia, Marwa Rashad, and Andrea Shalal, "G20 Countries Agree Debt Freeze for World's Poorest Countries," *Reuters*, April 15, 2020

321 Patrick Bolton, Lee Buchheit, Pierre-Olivier Gourinchas, et. al, "Sovereign Debt Standstills: An Update" *VoxEU*, May 28, 2020.

322 Jevans Nyabiage, "All Eyes on China as Africa Spurns G20 Debt Relief Plan," *South China Morning Post*, May 26, 2020.

323 Taylor, Adam, Teo Armus, Rick Noak, "Covid-19 Turmoil Widens as U.S. Death Toll Mounts; Xi Cancels Japan Trip," *Washington Post*, March 5, 2020; Strauss, Valerie, "1.5 Billion Children Around Globe Affected by School Closure. What Countries Are Doing to Keep Kids Learning During Pandemic," *Washington Post*, March 27, 2020. https://www.washingtonpost.com/education/2020/03/26/nearly-14-billion-children-around-globe-are-out-school-heres-what-countries-are-doing-keep-kids-learning-during-pandemic/.

324 Hill, Andrew and Emma Jacobs, "Covid-19 May Create Lasting Workplace Change," *Financial Times*, February 27, 2020. https://www.ft.com/content/5801a710-597c-11ea-abe5-8e03987b7b20.

325 Armus, Teo, "Live Updates: Covid-19 Turmoil Widens as U.S. Death Toll Mounts; Xi Cancels Japan Trip," *Washington Post*, March 5, 2020, https://www.washingtonpost.com/world/2020/03/05/Covid-19-live-updates/.

The drop in business and tourist travel caused a sharp drop in scheduled airline flights by as much as 10%; airlines estimated they lost $113 billion in 2020, an estimate that could prove optimistic given various restrictions on flights between Europe to the United States and the growing list of countries that similarly restricted flights.[326] Airports in Europe estimated they lost $4.3 billion in revenue in 2020 due to fewer flights.[327] The loss of Chinese tourists was another economic blow to countries in Asia and elsewhere that benefitted from the growing market for Chinese tourists and the stimulus such tourism provided.

The decline in industrial activity in 2020 reduced demand for energy products such as crude oil and caused prices to drop sharply, which negatively affected energy producers, renewable energy producers, and electric vehicle manufacturers, but generally was positive for consumers and businesses. In March 2020, Saudi Arabia pushed other OPEC (Organization of the Petroleum Exporting Countries) members collectively to reduce output by 1.5 million barrels a day to raise market prices. U.S. shale oil producers, who are not represented by OPEC, supported the move to raise prices.[328] An unwillingness by Russia to agree to output reductions added to other downward pressures on oil prices and caused Saudi Arabia to engage in a price war with Russia that drove oil prices below $25 per barrel at times, half the estimated $50 per barrel break-even point for most oil producing countries.[329] Rising oil supplies and falling demand combined to create an estimated surplus of 25 million barrels a day and overwhelmed storage capacity at times and challenged the viability of U.S. shale oil production.[330] In 2019, low energy prices combined with high debt levels reportedly caused U.S. energy producers to reduce their spending on capital equipment, reduced their profits and, in some cases, led to bankruptcies.[331] Reportedly, in late 2019 and early 2020, bond and equity investors, as well as banks, reduced their lending to shale oil producers and other energy producers that typically use oil and gas reserves as collateral.[332] As economic activity began recovering in 2021 and demand for energy increased, energy prices rose to surpass the levels reached prior to the onset of the pandemic and put pressure on OPEC producers to increase output.

Disruptions to industrial activity in China reportedly caused delays in shipments of computers, cell phones, toys, and medical equipment.[333] Factory output in China, the United States, Japan, and South Korea all declined in the first months of 2020.[334] Reduced Chinese agricultural exports,

---

[326] Taylor, Adam, "Airlines Could Suffer up to $113 Billion in Lost Revenue Due to Covid-19 Crisis, IATA Says," *Washington Post*, March 5, 2020. https://www.washingtonpost.com/world/2020/03/05/Covid-19-live-updates/.

[327] "Airlines Slash Flights to Cut Costs as Covid-19 Hits Travel Demand," *Financial Times*. https://www.ft.com/content/c28b5790-62c6-11ea-a6cd-df28cc3c6a68.

[328] Brower, Derek, "Cash-Strapped US Shale Producers Pray for OPEC Aid," *Financial Times*, March 3, 2020. https://www.ft.com/content/9161e62c-5cb1-11ea-b0ab-339c2307bcd4.

[329] Strauss, Delphine, "Why There Are No Winners from the Oil Price Plunge This Time," *Financial Times*, March 10, 2020. https://www.ft.com/content/da2b0700-622c-11ea-b3f3-fe4680ea68b5; Mufson, Steve and Will Englund, "Oil Price War Threatens Widespread Collateral Damage," *Washington Post*, March 10, 2020. https://www.washingtonpost.com/climate-environment/oil-price-war-threatens-widespread-collateral-damage/2020/03/09/3e42c9e2-6207-11ea-acca-80c22bbee96f_story.html.

[330] Sheppard, David and Derek Brower, "U.S. Crude Oil Price Drops Below $20," *Financial Times*, March 29, 2020. https://www.ft.com/content/bc938195-82d3-43eb-b031-740028451382.

[331] "Texas Oil Groups: Panhandling Ahead," *The Financial Times*, January 20, 2020.

[332] Ibid.

[333] Hille, Kathrin, Alistair Gray, and Patrick McGee, "Covid-19 Delays PC and Smartphone Shipments for Weeks," *Financial Times*, March3, 2020. https://www.ft.com/content/72742872-5c31-11ea-b0ab-339c2307bcd4.

[334] Newmyer, Tory, "The Finance 202: Stocks Stage Major Comeback, but Manufacturing Report Points to Continued Covid-19 Pain," *Washington Post*, March 3, 2020. https://www.washingtonpost.com/news/powerpost/paloma/the-finance-202/2020/03/03/the-finance-202-stocks-stage-major-comeback-but-manufacturing-report-points-to-continued-

including to Japan, created shortages in some commodities. In addition, numerous auto producers faced shortages in parts and other supplies, including semiconductor chips that have been sourced in China, leading to calls by some producers for subsidies to restart production in the United States. Reductions in international trade affected ocean freight prices, causing some freight companies to face the prospect of shuttering businesses.[335] Disruptions in the movements of goods and people reportedly caused some companies to reassess how international they want their supply chains to be.[336] According to some estimates, nearly every member of the Fortune 1000 was affected by disruptions in production in China.[337]

Issues for Congress

According to numerous indicators, significant parts of the global economy appear to have weathered the worst of the economic recession that resulted from the unprecedented COVID-19-related social distancing and business lockdowns in early 2020. However, rolling epidemic hotspots and the emergence of new and virulent mutations of the COVID-19 virus continue to add to the overall economic and human costs of the pandemic and to uncertainties about the timing of a sustained recovery. Over the course of the pandemic, governments adopted policies to curtail the virus's spread that inadvertently caused an economic recession and temporarily altered the daily patterns of peoples' lives. After a year and a half, it remains unclear how quickly and to what extent people will return to their pre-pandemic patterns.

For Members of Congress, the pandemic-related economic and social costs could influence public policy debates long after the crisis itself has passed. While various policy debates may emerge from seemingly unlikely sources, some areas could include the following.

- During the pandemic, segments of the labor force shifted from work on-site to work at home. After a prolonged period of working off-site, some workers question the need to return to pre-pandemic labor arrangements. Should new labor arrangements and work patterns become embedded in the economy, it potentially raises questions about the impact on housing, traffic patterns, including public transportation, labor force participation rates, and child care arrangements. What role should Congress play in assessing and addressing such potential changes to the economy?
- The pandemic exposed weaknesses in supply chains and the production of certain types of equipment, including personal protective equipment that previously had not featured prominently in national security priorities. Arguably, the pandemic raised the profile of public health as a national security issue. It also highlighted the importance of improving domestic health care-related supply chains and potentially relocating parts of the health care supply chain from abroad. This shift in emphasis presents Congress with questions about the manner and extent to which government policy should alter existing production and supplier arrangements. In particular, Congress could consider the costs and benefits of adopting policies that attempt to reallocate resources within the economy toward developing domestic production of goods currently being imported, possibly at

Covid-19-pain/5e5d84a6602ff10d49ac081f/?itid=hp_hp-cards_hp-card-politics%3Ahomepage%2Fcard-ans.

[335] Lynch, David J., "Economic Fallout from China's Covid-19 Mounts Around the World," *Washington Post,* February 13, 2020. https://www.washingtonpost.com/business/economy/economic-fallout-from-chinas-Covid-19-mounts-across-the-globe/2020/02/13/7bb69a12-4e8c-11ea-9b5c-eac5b16dafaa_story.html?itid=lk_inline_manual_12

[336] Ibid.

[337] Ibid.

the expense of other domestic economic activities. Alternatively, Congress could reinforce U.S. support for global trade arrangements and agreements, while also supporting the global presence of U.S. firms and encouraging U.S. firms to utilize a greater diversity of foreign suppliers.

- The pandemic emphasized the interconnected nature of the global economy. Typically, these global connections facilitate a seamless flow of goods and services to the broadest number of people. However, during the pandemic-related recession, these global supply channels were disrupted, exposing their vulnerabilities. In turn, these disruptions raised questions concerning the role and importance of certain industrial activities amid shifting concepts of national security and the extent to which domestic economic policy should attempt to sustain or subsidize certain industrial activities. Congress could consider whether and to what extent it should engage in a direct role in reallocating resources in the economy.
- The pandemic had a disproportionate impact on various industrial sectors of the economy and on workers in those sectors. These included certain segments of the labor force, including women, minority populations, and workers in less skilled jobs. The depth and duration of the recession challenged the effectiveness of customary worker assistance programs. Congress may consider reviewing these programs to determine what if any changes may be necessary to align the programs more closely with the needs of workers experiencing similar periods of extended dislocations.
- Global trade activity fell sharply as a result of the global economic recession, which added to the depth and extent of the economic disruption. The impact on global trade raised questions concerning what actions, if any, Congress could take through U.S. trade policy that might strengthen the role of international trade and consultative bodies such as the WTO, the IMF, and the OECD, in facilitating a return to pre-crisis levels of activity during similar international crises.
- The economic recession placed increased demands on developed and developing economies to abandon traditional deficit spending guidelines to stimulate their economies. While the fiscal spending likely lessened the impact of the crisis, it sharply increased the debt burden of developing countries, in particular, that could well outlast the health-related crisis. This debt burden could constrain the ability of developing economies to provide additional fiscal stimulus should the health crisis persist, which could delay a global economic recovery with spillover effects on developed economies. Developing economies could face rising costs for refinancing their accumulated debts if developed economies begin tapering off low-interest rate monetary policies. Congress could consider examining the performance and the adequacy of resources of international financial institutions in addressing the financial and debt servicing needs of developing economies.
- During the initial stages of the economic crisis, global financial markets were severely disrupted, requiring central banks to take unprecedented actions. Following the 2008-2009 global financial crisis, central banks and other financial market participants adopted wide-ranging reforms to strengthen the ability of financial institutions to withstand an economic crisis. The pandemic-related global economic crisis presents Congress with an opportunity to assess the effectiveness of these reforms and to determine if they were adequate in preparing financial market participants to withstand a sever disruption to the global economy or whether additional reforms are necessary.

Author Information

James K. Jackson, Coordinator
Specialist in International Trade and Finance

Rebecca M. Nelson
Specialist in International Trade and Finance

Martin A. Weiss
Specialist in International Trade and Finance

Karen M. Sutter
Specialist in Asian Trade and Finance

Andres B. Schwarzenberg
Analyst in International Trade and Finance

Michael D. Sutherland
Analyst in International Trade and Finance

Acknowledgments

The authors would like to thank and acknowledge the expert assistance provided by Amber Wilhelm, Visual Information Specialist, CRS, in the preparation of this report.

Disclaimer