Global Economic Effects of COVID-19

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Global Economic Effects of COVID-19

SUMMARY

Since the COVID-19 outbreak was first diagnosed, it has spread to over 190 countries and all U.S. states. The pandemic is having a noticeable impact on global economic growth. Estimates so far indicate the virus could trim global economic growth by as much as 2.0% per month if current conditions persist and raise the risks of a global economic recession similar in magnitude to that experienced during the Great Depression of the 1930s. Global trade could also fall by 13% to 32%, depending on the depth and extent of the global economic downturn. The full impact will not be known until the effects of the pandemic peak. This report provides an overview of the global economic costs to date and the response by governments and international institutions to address these effects.

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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

Contents

Figures

Tables

Appendixes

Contacts

Overview

The World Health Organization (WHO) first declared COVID-19 a world health emergency in January 2020. Since then, the emergency has evolved into a global public health and economic crisis that has affected the global economy beyond anything experienced in nearly a century. Governments are attempting to balance often-competing policy objectives that include, but are not limited to:

- Confronting ballooning budget deficits weighed against increasing spending to support unemployed workers and social safety nets;
- Providing financial support for national health systems that are under pressure to develop vaccines while also funding efforts to care for and safeguard citizens; and
- Implementing monetary and fiscal policies that support credit markets and sustain economic activity, while also assisting businesses under financial distress.

Differences in policy approaches are also threatening to impair international political, trade, and economic relations, particularly between countries that promote nationalism and those that argue for a coordinated international response. Policy differences are also straining 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. 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. In speaking about these costs for Americans, Federal Reserve Chairman Powell said on May 19, 2020,

> Since the pandemic arrived in force just two months ago, more than 20 million people have lost their jobs, reversing nearly 10 years of job gains. This precipitous drop in economic activity has caused a level of pain that is hard to capture in words, as lives are upended amid great uncertainty about the future.[1]

The virus was first diagnosed in Wuhan, China, but has been detected in over 200 countries and all U.S. states.[2] In early March 2020, the focal point of infections shifted from China to Europe, especially Italy, but by April, the focus had shifted to the United States, where the number of infections was accelerating. The infection has sickened more than 6.1 million people, about one-third in the United States, with nearly 370,000 fatalities. More than 80 countries have 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.[3]

Over the ten-week period from mid-March to late May 2020, more than 40.8 million Americans filed for unemployment insurance.[4] On May 8, 2020, the Bureau of Labor Statistics (BLS)

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[1] Powell, Jerome H. *Coronavirus and CARES Act*, Testimony before the Committee on Banking, Housing and Urban Affairs, U.S. Senate, May 19, 2020.

[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] "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-get-ahead-of-the-COVID-19.

[4] *Unemployment Insurance Weekly Claims*, Department of Labor, May 28, 2020. 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, *The Washington Post*, May 21, 2020. https://www.washingtonpost.com/business/2020/05/21/unemployment-claims-

reported that 20 million Americans lost their jobs in April 2020, pushing the total number of unemployed Americans to 23 million,[5] out of a total civilian labor force of 156 million. The increase pushed the national unemployment rate to 14.7%, the highest since the Great Depression of the 1930s.[6] Preliminary data also indicate that U.S. GDP fell by 5.0% in the first quarter of 2020, the largest quarterly decline in GDP since the fourth quarter of 2008 during the global financial crisis.[7] In its May 27 Beige Book analysis, the Federal Reserve reported that economic activity had fallen sharply in each of the 12 Federal Reserve districts.[8]

In Europe, over 30 million people in Germany, France, the UK, Spain, and Italy have applied for state support of their wages, while first quarter 2020 data indicate that the Eurozone economy contracted by 3.8% at an annual rate, the largest quarterly decline since the series started in 1995.[9] The European Commission's May 6, 2020 forecast projected that EU economic growth in 2020 could contract by 7.4% and only partially recover in 2021.[10] On May 27, 2020, however, European Central Bank (ECB) President Christine Lagarde characterized that forecast as outdated and warned that the Eurozone economy could contact by 8% to 12% in 2020, a level of damage to the Eurozone economy that Lagarde characterized as being unsurpassed in peace time.[11] Foreign investors have 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.

After a delayed response, central banks and monetary authorities are engaging in an ongoing series of interventions in financial markets and national governments are announcing fiscal policy initiatives to stimulate their economies. International organizations are also taking 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.

As one measure of the global fiscal and monetary responses, the International Monetary Fund (IMF) estimated that government spending and revenue measures to sustain economic activity adopted through mid-April 2020 amounted to $3.3 trillion and that loans, equity injections and guarantees totaled an additional $4.5 trillion.[12] The IMF also estimated that the increase in borrowing by governments globally could rise from 3.7% of global gross domestic product

coronavirus/

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

[6] *The Employment Situation-April 2020*, Bureau of Labor Statistics, May 8, 2020. https://www.bls.gov/.

[7] *Gross Domestic Product, First Quarter 2020 (Second Estimate)*, Bureau of Economic Analysis, May 28, 2020. https://www.bea.gov/data/gdp/gross-domestic-product.

[8] *The Beige Book*, Federal Reserve System, May 27, 2020. https://www.federalreserve.gov/monetarypolicy/beige-book-default.htm.

[9] 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.

[10] *European Economic Forecast Spring 2020*, European Commission, May 2020.

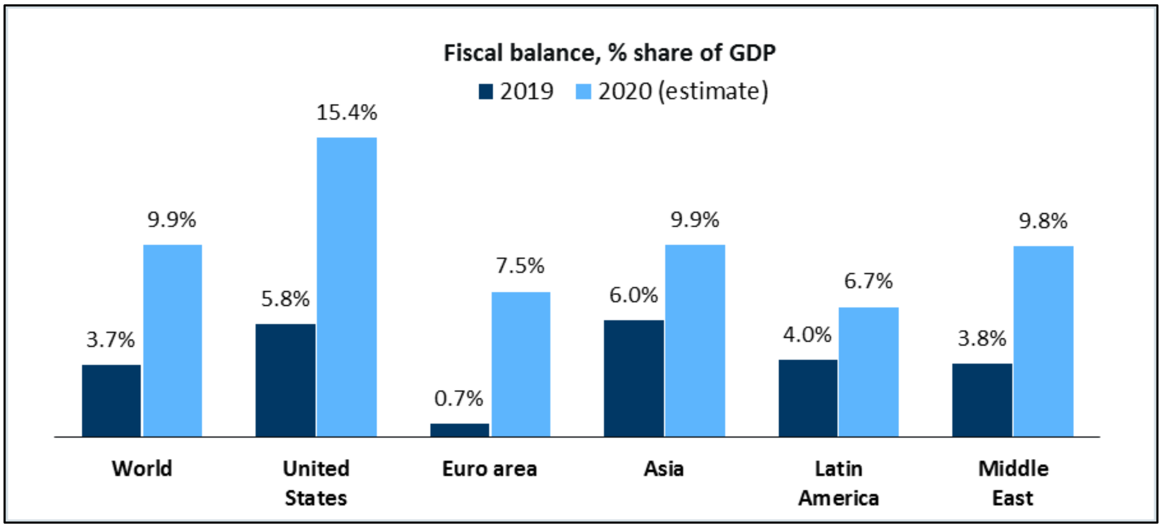
[11] Arnold, Martin, Coronavirus Hit to Eurozone Economy Set to Dwarf Financial Crisis, *Financial Times*, May 27, 2020. https://www.ft.com/content/a01424e8-089d-4618-babe-72f88184ac57.

[12] *Global Financial Stability Report*, International Monetary Fund, April 14, 2020. P. 2;

(GDP) in 2019 to 9.9% in 2020, as indicated in **Figure 1**. Among developed economies, the fiscal balance to GDP ratio is projected to rise from 3.0% in 2019 to 10.7% in 2020; the ratio for the United States is projected to rise from 5.8% to 15.4%. According to the IMF, France, Germany, Italy, Japan, and the United Kingdom have each announced public sector support measures that total more than 10% of their annual GDP.[13] For developing economies, the fiscal balance to GDP ratio is projected to rise from 4.8% to 9.1%, significantly increasing their debt burden and raising prospects of defaults or debt rescheduling.[14] According to some estimates, the most fiscally vulnerable countries are: Argentina, Venezuela, Lebanon, Jordan, Iran, Zambia, Zimbabwe, and South Africa.[15]

Figure 1. IMF Projected Government Fiscal Balances Relative to GDP

In percentage shares of Gross Domestic Product



Source: *Fiscal Monitor*, International Monetary Fund, April 14, 2020. Created by CRS.

Notes: Data for 2020 are estimates.

Among central banks, the Federal Reserve has taken extraordinary steps not experienced since the 2008-2009 global financial crisis to address the growing economic effects of COVID-19. The U.S. Congress also has approved historic fiscal spending packages. In other countries, governments have abandoned traditional borrowing caps to sustain growth. Simultaneously, central banks and monetary authorities have lowered interest rates and reserve requirements, announced new financing facilities, relaxed capital buffers and, in some cases, countercyclical capital buffers,[16] adopted after the 2008-2009 financial crisis, potentially freeing up an estimated $5 trillion in funds.[17] Capital buffers were raised after the financial crisis to assist banks in

13 *Fiscal Monitor*, International Monetary Fund, April 14, 2020, p. 2.

14 Ibid., p. 6.

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

16 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/.

17 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.

absorbing losses and staying solvent during financial crises. In some cases, governments have directed banks to freeze dividend payments and halt pay bonuses.

On March 11, the WHO announced that the outbreak was officially a pandemic, the highest level of health emergency.[18] A growing list of economic indicators makes it clear that the outbreak is negatively affecting global economic growth on a scale that has not been experienced since at least the global financial crisis of 2008-2009.[19] Global trade and GDP are forecast to decline sharply, at least through the first half of 2020. The global pandemic is affecting a broad swath of international economic and trade activities, from services generally to tourism and hospitality, medical supplies and other global value chains, consumer electronics, and financial markets to energy, transportation, food, and a range of social activities, to name a few. The health and economic crises could have a particularly negative impact on the economies of developing countries that are constrained by limited financial resources and where health systems could quickly become overloaded.

Without a clear understanding of when the global health and economic effects may peak and a greater understanding of the impact on economies, forecasts must necessarily be considered preliminary. Similarly, estimates of when any recovery might begin and the speed of the recovery are speculative. Efforts to reduce social interaction to contain the spread of the virus are disrupting the daily lives of most Americans and adding to the economic costs. Increasing rates of unemployment are raising the prospects of widespread social unrest and demonstrations in developed economies where lost incomes and health insurance are threatening living standards and in developing economies where populations reportedly are growing concerned over access to basic necessities and the prospects of rising levels of poverty.[20] U.N. Secretary General Antonio Guterres argued in a video conference before the U.N. Security Council on April 10, 2020, that:

> …[T]he pandemic also poses a significant threat to the maintenance of international peace and security—potentially leading to an increase in social unrest and violence that would greatly undermine our ability to fight the disease.[21]

Economic Forecasts

Global Growth

The economic situation remains highly fluid. Uncertainty about the length and depth of the health crisis-related economic effects are fueling 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 curtail its spread are adding to market volatility. In a growing number of cases, corporations are postponing investment decisions, laying off workers

[18] 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.

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

[20] Sly, Liz, Stirrings of Unrest Around the World Could Portend Turmoil as Economies Collapse, *The Washington Post*, April 19, 2020; Ingraham, Christopher, Coronavirus Recession Could Plunge Tens of Millions Into Poverty, New Report Warns, *The Washington Post*, April 20, 2020. https://www.washingtonpost.com/business/2020/04/20/coronavirus-recession-could-plunge-tens-millions-into-poverty-new-report-warns/.

[21] *Secretary-General's Remarks to the Security Council on the COVID-19 Pandemic*, United Nations, April 9, 2020. https://www.un.org/sg/en/content/sg/statement/2020-04-09/secretary-generals-remarks-the-security-council-the-covid-19-pandemic-delivered.

who previously had been furloughed, and in some cases filing for bankruptcy. Compounding the economic situation is a historic drop in the price of crude oil that reflects the global decline in economic activity and prospects for disinflation, while also contributing to the decline of the global economy through various channels. On April 29, 2020, Federal Reserve Chairman Jerome Powell stated that the Federal Reserve would use its "full range of tools" to support economic activity as the U.S. economic growth rate dropped 5.0% at an annual rate in the first quarter of 2020. In assessing the state of the U.S. economy, the Federal Open Market Committee released a statement indicating that, "The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term."[22]

The Organization for Economic Cooperation and Development (OECD) on March 2, 2020, lowered its forecast of global economic growth by 0.5% for 2020 from 2.9% to 2.4%, based on the assumption that the economic effects of the virus would peak in the first quarter of 2020[23] (see **Table 1**). However, the OECD estimated that if the economic effects of the virus did not peak in the first quarter, which is now apparent that it did not, global economic growth would increase by 1.5% in 2020. That forecast now seems to have been highly optimistic.

On March 23, 2020, OECD Secretary General Angel Gurria stated that:

> The sheer magnitude of the current shock introduces an unprecedented complexity to economic forecasting. The OECD Interim Economic Outlook, released on March 2, 2020, made a first attempt to take stock of the likely impact of COVID-19 on global growth, but it now looks like we have already moved well beyond even the more severe scenario envisaged then…. [T]he pandemic has also set in motion a major economic crisis that will burden our societies for years to come.[24]

On March 26, 2020, the OECD revised its global economic forecast based on the mounting effects of the pandemic and measures governments have adopted to contain the spread of the virus. According to the updated estimate, the current containment measures could reduce global GDP by 2.0% per month, or an annualized rate of 24%, approaching the level of economic contraction not experienced since the Great Depression of the 1930s. The OECD estimates in **Table 1** will be revised when the OECD releases updated country-specific data.

Labeling the projected decline in global economic activity as the "Great Lockdown," the IMF released its forecast on April 14, 2020. The IMF concluded that the global economy would experience its "worst recession since the Great Depression, surpassing that seen during the global financial crisis a decade ago."[25] In addition, the IMF estimated that the global economy could decline by 3.0% in 2020, before growing by 5.8% in 2021; global trade is projected to fall in 2020 by 11.0% and oil prices are projected to fall by 42%, also shown in **Table 1**.[26] This forecast assumes the pandemic fades in the second half of 2020 and that containment measures can be reversed quickly. The IMF also stated that many countries are facing a multi-layered crisis that includes a health crisis, a domestic economic crisis, falling external demand, capital outflows, and

[22] *Federal Reserve Issues FOMC Statement*, Board of Governors of the Federal Reserve System, April 29, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200429a.htm.

[23] *OECD Interim Economic Assessment: COVID-19: The World Economy at Risk*, Organization for Economic Cooperation and Development. March 2, 2020. http://www.oecd.org/economic-outlook/#resources.

[24] *COVID-19: Joint Actions to Win the War*, Organization for Economic Cooperation and Development, March 23, 2020. https://www.oecd.org/COVID-19/#op-ed.

[25] *World Economic Outlook*, International Monetary Fund, April 14, 2020, p. v.

[26] The IMF database indicates that global GDP fell by 0.075% in 2009 during the height of the global financial crisis.

a collapse in commodity prices. In combination, these various effects are interacting in ways that make forecasting difficult.

Table 1. OECD and IMF Economic Forecasts

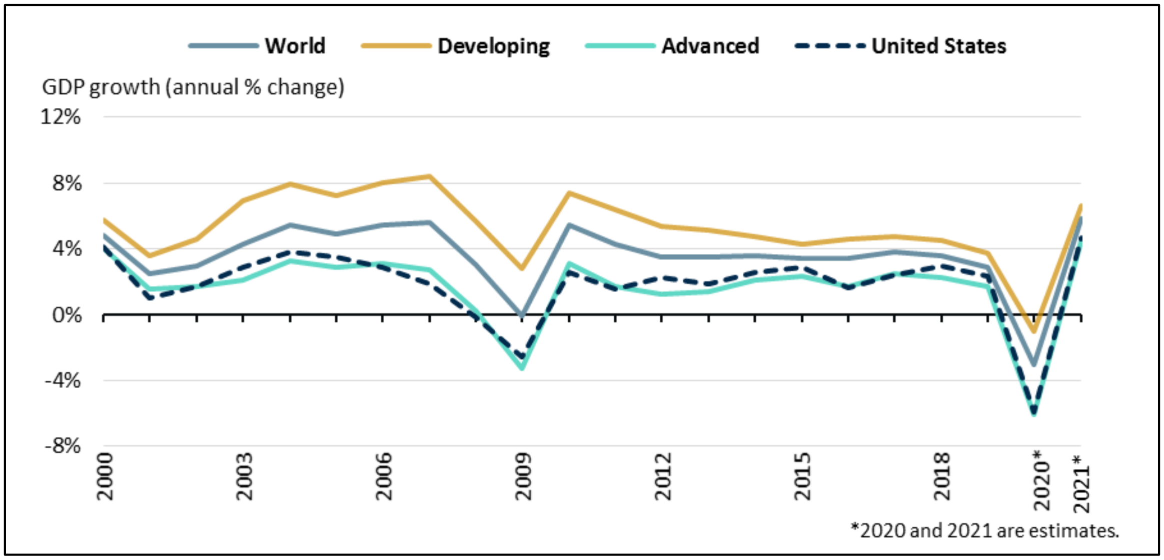
Percentage change in Real GDP Growth

		OECD March 2020 Projections				IMF April 2020 Projections	
	2019	2020	2021		2019	2020	2021
World	2.9%	2.4%	3.3%	World	2.9%	–3.0%	5.8%
G20	3.1	2.7	3.5	Adv. Economies	1.7	–6.1	4.5
Australia	1.7	1.8	2.6	United States	2.3	–5.9	4.7
Canada	1.6	1.3	1.9	Euro Area	1.2	–7.5	4.7
Euro area	1.2	0.8	1.2	Germany	0.6	–7.0	5.2
Germany	0.6	0.3	0.9	France	1.3	–7.2	4.5
France	1.3	0.9	1.4	Italy	0.3	–9.1	4.8
Italy	0.2	0.0	0.5	Spain	2.0	–8.0	4.3
Japan	0.7	0.2	0.7	Japan	0.7	–5.2	3.0
Korea	2.0	2.0	2.3	United Kingdom	1.4	–6.5	4.0
Mexico	-0.1	0.7	1.4	Canada	1.6	–6.2	4.2
Turkey	0.9	2.7	3.3	China	6.1	1.2	9.2
United Kingdom	1.4	0.8	0.8	India	4.2	1.9	7.4
United States	2.3	1.9	2.1	Russia	1.3	–5.5	3.5
Argentina	-2.7	-2.0	0.7	Latin America	0.1	–5.2	3.4
Brazil	1.1	1.7	1.8	Brazil	1.1	–5.3	2.9
China	6.1	4.9	6.4	Mexico	–0.1	–6.6	3.0
India	4.9	5.1	5.6	Middle East	1.2	–2.8	4.0
Indonesia	5.0	4.8	5.1	Saudi Arabia	0.3	–2.3	2.9
Russia	1.0	1.2	1.3	Sub-Saharan Africa	3.1	–1.6	4.1
Saudi Arabia	0.0	1.4	1.9	Nigeria	2.2	–3.4	2.4
South Africa	0.3	0.6	1.0	South Africa	0.2	–5.8	4.0
				World Trade Volume	0.9	–11.0	8.4
				Oil prices ($)	–10.2	–42.0	6.3

Source: *OECD Interim Economic Assessment: COVID-19: The World Economy at Risk*, Organization for Economic Cooperation and Development. March 2, 2020, p. 2; *World Economic Outlook,* International Monetary Fund, April 14, 2020, p. ix.

Advanced economies as a group are forecast to experience an economic contraction in 2020 of 7.8% of GDP, with the U.S. economy projected by the IMF to decline by 5.9%, about twice the rate of decline experienced in 2009 during the financial crisis, as indicated in **Figure 2.** The rate of economic growth in the Euro area is projected to decline by 7.5% of GDP. Most developing and emerging economies are projected to experience a decline in the rate of economic growth of 2.0%, reflecting tightening global financial conditions and falling global trade and commodity prices. In contrast, China, India, and Indonesia are projected to experience small, but positive rates of economic growth in 2020. The IMF also argues 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.[27]

Figure 2. Gross Domestic Product, Percentage Change



Source: *World Economic Outlook*, International Monetary Fund, April 14, 2020. 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.[28]

Before the COVID-19 outbreak, the global economy was struggling to regain a broad-based recovery as a result of 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. In this environment, COVID-19 could have an outsized impact. While the level of economic effects will eventually become clearer, the response to the pandemic could have a significant and enduring impact on the way

[27] *World Economic Outlook*, p. 9.

[28] Ibid., p. v.

businesses organize their work forces, on global supply chains, and how governments respond to a global health crisis.[29]

The OECD estimates 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."[30] 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.[31]

According to the OECD's updated forecast:

- The greatest impact of the containment restrictions will be on retail and wholesale trade, and in professional and real estate services, although there are notable differences between countries.
- Business closures could reduce economic output in advanced and major emerging economies by 15% or more; other emerging economies could experience a decline in output of 25%.
- Countries dependent on tourism could be affected more severely, while countries with large agricultural and mining sectors could experience less severe effects.
- Economic effects likely will vary across countries reflecting differences in the timing and degree of containment measures.[32]

In addition, the OECD argues that China's emergence as a global economic actor marks 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.[33] China's global economic role and globalization mean that trade is playing a role in spreading the economic effects of COVID-19. More broadly, the economic effects of the pandemic are being spread through three trade channels: (1) directly through supply chains as reduced economic activity is spread from intermediate goods producers to finished goods producers; (2) as a result of a drop overall in economic activity, which reduces demand for goods in general, including imports; and (3) through reduced trade with commodity exporters that supply producers, which, in turn, reduces their imports and negatively affects trade and economic activity of exporters.

[29] 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.

[30] *World Economic Outlook*, p. 2.

[31] Ibid., p. 4.

[32] *Evaluating the Initial Impact of COVID Containment Measures on Activity*, Organization for Economic Cooperation and Development, March 27, 2020.

[33] 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.

Global Trade

According to an April 8, 2020, forecast by the World Trade Organization (WTO), global trade volumes are projected to decline between 13% and 32% in 2020 as a result of the economic impact of COVID-19, as indicated in **Table 2**. The WTO argues that the wide range in the forecast represents the high degree of uncertainty concerning the length and economic impact of the pandemic and that the actual economic outcome could be outside this range, either higher or lower. The WTO's more optimistic scenario assumes that trade volumes recover quickly in the second half of 2020 to their pre-pandemic trend, or that the global economy experiences a V-shaped recovery. The more pessimistic scenario assumes a partial recovery that lasts into 2021, or that global economic activity experiences more of a U-shaped recovery. The WTO concludes, however, that the impact on global trade volumes could exceed the drop in global trade during the height of the 2008-2009 financial crisis.[34]

Table 2. WTO Forecast: Merchandise Trade Volume and Real GDP 2018-2021

Annual percentage change

	Historical		Optimistic scenario		Pessimistic scenario	
	2018	2019	2020	2021	2020	2021
Volume of world merchandise trade	2.9%	-0.1%	-12.9%	21.3%	-31.9%	24.0%
Exports						
North America	3.8	1.0	-17.1	23.7	-40.9	19.3
South and Central America	0.1	-2.2	-12.9	18.6	-31.3	14.3
Europe	2.0	0.1	-12.2	20.5	-32.8	22.7
Asia	3.7	0.9	-13.5	24.9	-36.2	36.1
Other regions	0.7	-2.9	-8.0	8.6	-8.0	9.3
Imports						
North America	5.2	-0.4	-14.5	27.3	-33.8	29.5
South and Central America	5.3	-2.1	-22.2	23.2	-43.8	19.5
Europe	1.5	0.5	-10.3	19.9	-28.9	24.5
Asia	4.9	-0.6	-11.8	23.1	-31.5	25.1
Other regions	0.3	1.5	-10	13.6	-22.6	18.0
Real GDP at market exchange rates	2.9	2.3	-2.5	7.4	-8.8	5.9
North America	2.8	2.2	-3.3	7.2	-9.0	5.1
South and Central America	0.6	0.1	-4.3	6.5	-11	4.8
Europe	2.1	1.3	-3.5	6.6	-10.8	5.4
Asia	4.2	3.9	-0.7	8.7	-7.1	7.4
Other regions	2.1	1.7	-1.5	6.0	-6.7	5.2

Source: *Trade Set to Plunge as COVID-19 Pandemic Upends Global Economy*, World Trade Organization, April 8, 2020.

[34] *Trade Set to Plunge as COVID-19 Pandemic Upends Global Economy*, World Trade Organization, April 8, 2020. https://www.wto.org/english/news_e/pres20_e/pr855_e.htm.

Note: Data for 2020 and 2021 are projections; GDP projections are based on scenarios simulated with the WTO Global Trade Model.

The estimates indicate that all geographic regions will experience a double-digit drop in trade volumes, except for "other regions," which consists of Africa, the Middle East, and the Commonwealth of Independent States. North America and Asia could experience the steepest declines in export volumes. The forecast also projects that sectors with extensive value chains, such as automobile products and electronics, could experience the steepest declines. Although services are 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, are growing to satisfy the demand of employees who are working from home.

The pandemic is also raising questions concerning the costs and benefits of the global supply chains businesses 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. In some cases, businesses are reassessing their exposure to the risks posed by extensive supply chains that potentially are vulnerable to numerous points of disruption. Also, some governments are assessing the risks supply chains pose to national supplies of items considered to be of importance to national security as a result of firms shifting production offshore. For multinational businesses, changing suppliers and shifting production locations can be especially costly for some firms and can introduce additional risks.[35] In addition, businesses may be reluctant to relocate from production locations, such as China, that not only serve as production platforms, but are also important markets for their output. For instance, the Bureau of Economic Analysis 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 such sales are shipped to the U.S. parent, while 82% is sold in China and another 12% is shipped to other foreign countries.[36]

Economic Policy Challenges

The challenge for policymakers has been one of 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. Policymakers, however, are being overwhelmed by the quickly changing nature of the global health crisis that appears to be turning into a global trade and economic crisis whose effects on the global economy are escalating. As the economic effects of the pandemic grow, policymakers are giving more weight to policies that address the immediate economic effects at the expense of longer-term considerations such as debt accumulation. During the early stages of the crisis, 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 that had developed prior to the viral outbreak. The pandemic is also affecting global politics as world leaders are cancelling international meetings,[37]

[35] 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.

[36] *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.

[37] Taylor, Adam, Teo Armus, and Rick Noak, "Live updates: COVID-19 Turmoil Widens as U.S. Death Toll Mounts;

competing for medical supplies, and some nations reportedly are stoking conspiracy theories that shift blame to other countries.[38]

Initially, the economic effects of the virus were expected to be 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 economic activity, initially in China, has had international repercussions as firms experienced delays in supplies of intermediate and finished goods through supply chains. Concerns are growing, however, that virus-related supply shocks are creating more prolonged and wide-ranging demand shocks as reduced activity by consumers and businesses leads to a lower rate of economic growth. As demand shocks unfold, businesses experience reduced activity and profits and potentially escalating and binding credit and liquidity constraints. While manufacturing firms are experiencing supply chain shocks, reduced consumer activity through social distancing is affecting the services sector of the economy, which accounts for two-thirds of annual U.S. economic output. In this environment, manufacturing and services firms have tended to hoard cash, which affects market liquidity. In response, central banks have lowered interest rates where possible and expanded lending facilities to provide liquidity to financial markets and to firms potentially facing insolvency.

The longer the economic effects persist, the greater the economic impacts are likely to be as the effects are spread through trade and financial linkages to an ever-broadening group of countries, firms and households. These growing economic effects potentially increase liquidity constraints and credit market tightening in global financial markets as firms hoard cash, with negative fallout effects on economic growth. At the same time, financial markets are factoring in an increase in government bond issuance in the United States, Europe, and elsewhere as government debt levels are set to rise 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, has led to corporate credit issues and potential insolvency. These market dynamics have led some observers to question if these events mark the beginning of a full-scale global financial crisis.[39]

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

In the initial stages of the health crisis, households did not experience the same kind of wealth losses they saw during the 2008-2009 financial crisis when the value of their primary residence dropped sharply. However, with unemployment numbers rising rapidly, job losses could result in

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Xi Cancels Japan Trip, *Washington Post*, March 5, 2020, https://www.washingtonpost.com/world/2020/03/05/COVID-19-live-updates/.

[38] Shih, Gerry, "China Is Subtly Stoking COVID-19 Conspiracy Theories That Blame the U.S. for Outbreak," *Washington Post*, March 5, 2020. https://www.washingtonpost.com/world/2020/03/05/COVID-19-live-updates/.

[39] Foroohar, Rana, "How COVID-19 Became a Corporate Credit Run," *Financial Times*, March 15, 2020. https://www.ft.com/content/f1ea5096-6531-11ea-a6cd-df28cc3c6a68.

defaults on mortgages and delinquencies on rent payments, unless financial institutions provide loan forbearance or there is a mechanism to provide financial assistance. In turn, mortgage defaults could negatively affect the market for mortgage-backed securities, the availability of funds for mortgages, and negatively affect the overall rate of economic growth. Losses in the value of most equity markets in the U.S., Asia, and Europe could also affect household wealth, especially that of retirees living on a fixed income and others who own equities. Investors that trade in mortgage-backed securities reportedly have been reducing their holdings while the Federal Reserve has been attempting to support the market.[40] In the current environment, even traditional policy tools, such as monetary accommodation, apparently have not been processed by markets in a traditional manner, with equity market indices displaying heightened, rather than lower, levels of uncertainty following the Federal Reserve's cut in interest rates. Such volatility is adding to uncertainties about what governments can do to address weaknesses in the global economy.

Economic Developments

Between late February and late May, 2020, financial markets from the United States to Asia and Europe have been 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 may be.[41] Investors have 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.[42] 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).[43]

Reflecting investors' uncertainties, the Dow Jones Industrial Average (DJIA) lost about one-third of its value between February 14, 2020, and March 23, 2020, as indicated in **Figure 3**. 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 by18%, paring its initial losses by half. Since then, the DJIA has moved erratically as investors have weighed news about the human cost and economic impact of the pandemic and the prospects of various medical treatments. For some policymakers, the drop in equity prices has raised concerns that foreign investors might attempt to exploit the situation by increasing their

[40] Armstrong, Robert, "Mortgage Investment Funds Become 'Epicenter' of Crisis," *Financial Times*, March 24, 2020. https://www.ft.com/content/18909cda-6d40-11ea-89df-41bea055720b.

[41] 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.

[42] 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.

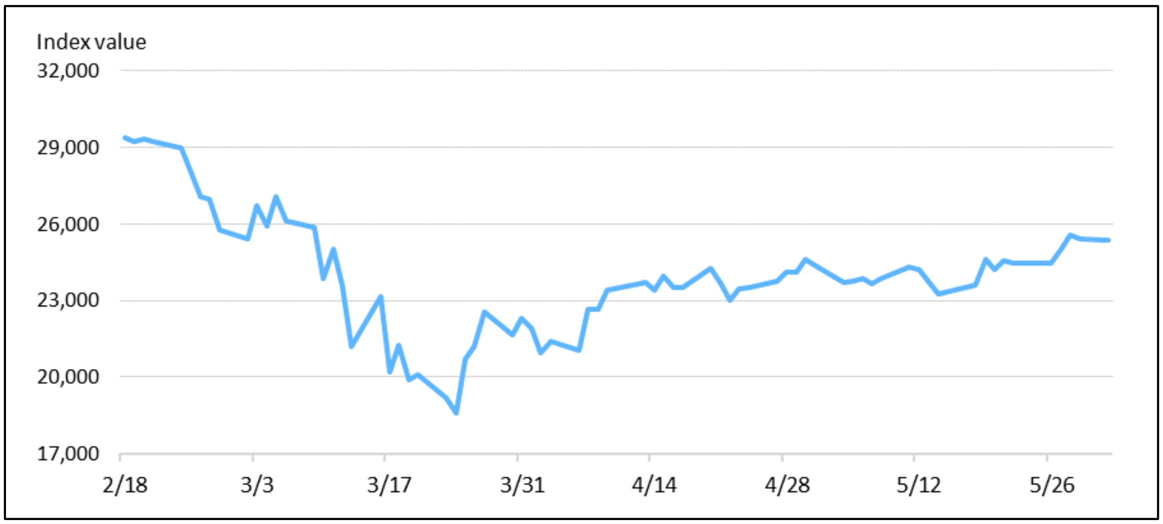
[43] Georgieva, Kristalina, "Potential Impact of the COVID-19 Epidemic: What We Know and What We Can Do," *International Monetary Fund*, March 4, 2020. https://blogs.imf.org/2020/03/04/potential-impact-of-the-COVID-19-epidemic-what-we-know-and-what-we-can-do/.

purchases of firms in sectors considered important to national security. For instance, Ursula von der Leyen, president of the European Commission, urged EU members to better screen foreign investments, especially in areas such as health, medical research, and critical infrastructure.[44]

Similar to the 2008-2009 global financial crisis, central banks have 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 are similar to those employed during the 2008-2009 financial crisis, despite the fact that the current and previous crisis are 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 current environment, central banks are attempting to address financial market volatility and prevent large-scale corporate insolvencies that reflect the underlying economic uncertainty caused by the pandemic.

Figure 3. Dow Jones Industrial Average Index

February 14, 2020 to June 1, 2020



Source: Financial Times. Created by CRS.

Similar to conditions during the 2008-2009 financial crisis, the dollar has emerged as the preferred currency by investors, reinforcing its role as the dominant global reserve currency. As indicated in **Figure 4**, 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 dollar has given up some of its value against other currencies, but has remained about 10% higher than it was at the beginning of the year. According to a recent survey by the Bank for International Settlements (BIS),[45] 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. It also accounts for two-thirds of central bank foreign exchange holdings, half of non-U.S. banks foreign currency deposits, and two-thirds of non-U.S. corporate borrowings

[44] Chazan, Guy and Jim Brunsden, "COVID-19 Crisis Pushes Europe into Nationalist Economic Turn," *Financial Times*, March 26, 2020. https://www.ft.com/content/79c0ae80-6df1-11ea-89df-41bea055720b.

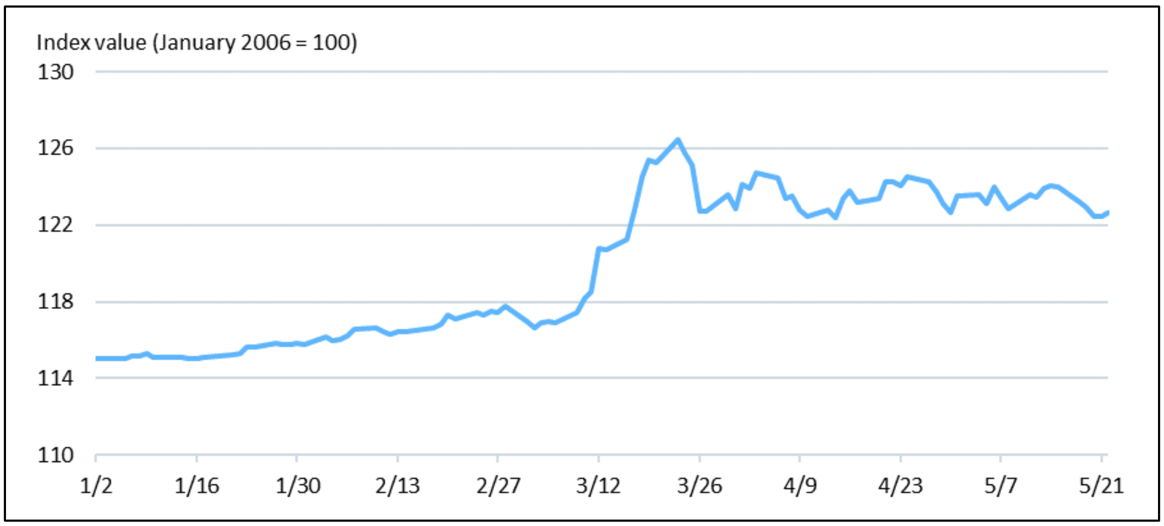
[45] *Foreign Exchange Turnover in April 2019*, Bank for International Settlements, September 16, 2019. https://www.bis.org/statistics/rpfx19_fx.htm.

from banks and the corporate bond market.[46] As a result, disruptions in the smooth functioning of the global dollar market can have wide-ranging repercussions on international trade and financial transactions.

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. Reminiscent of the financial crisis, the global economy has 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.[47] 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.

Figure 4. U.S. Dollar Trade-Weighted Broad Index, Goods and Services

January 2, 2020 through May 22, 2020



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

Notes: January 2006 = 100.

March 2020

The yield on U.S. Treasury securities dropped to historic levels on March 6, 2020, and March 9, 2020, as investors continued to move 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.[48] On March 5, the U.S. Congress passed a $8

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

[47] 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.

[48] 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.

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.[49] 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.[50]

Ahead of a March 12, 2020, scheduled meeting of the European Central Bank (ECB), the German central bank (Deutsche Bundesbank) announced a package of measures to provide liquidity support to German businesses and financial support for public infrastructure projects.[51] At the same time, the Fed announced that it was expanding its repo market transactions (in the repurchase market, investors borrow cash for short periods in exchange for high-quality collateral like Treasury securities) after stock market indexes fell sharply, government bond yields fell to record lows (reflecting increased demand), and demand for corporate bonds fell. Together these developments raised concerns for some analysts that instability in stock markets could threaten global financial conditions.[52]

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. European Central Bank (ECB) President Christine Lagarde in a conference call to EU leaders warned that without coordinated action, Europe could face a recession similar to the 2008-2009 financial crisis.[53] 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 also proposed a budget that would appropriate £30 billion (about $35 billion) for fiscal stimulus spending, 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.

President Trump imposed restrictions on travel from Europe to the United States on March 12, 2020, surprising European leaders and adding to financial market volatility.[54] At its March 12

[49] 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.

[50] 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.

[51] Chazan, Guy, David Keohane, and Martin Arnold, "Europe's Policymakers Search for Answers to Virus Crisis," *Financial Times*, March 9, 2020. https://www.ft.com/content/d46467da-61e1-11ea-b3f3-fe4680ea68b5.

[52] Smith, Colby and Brendan Greeley, "Fed Pumps Extra Liquidity Into Overnight Lending Markets," *Financial Times*, March 9, 2020. https://www.ft.com/content/e8c7b5f0-6200-11ea-a6cd-df28cc3c6a68.

[53] O'Brien, Fergal, "ECB's Lagarde Warns of 2008-Style Crisis Unless Europe Acts," *Washington Post*, March 11, 2020. https://www.bloomberg.com/news/articles/2020-03-11/ecb-s-lagarde-warns-of-2008-style-crisis-without-urgent-action.

[54] 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-

meeting, the ECB announced €27 billion (about $30 billion) in stimulus funding, combining measures to expand low-cost loans to Eurozone banks and small and medium-sized businesses and implement an asset purchase program to provide liquidity to firms. Germany indicated that it would provide tax breaks for businesses and "unlimited" loans to affected businesses. The ECB's Largarde roiled markets by stating that it was not the ECB's job to "close the spread" between Italian and German government bond yields (a key risk indicator for Italy), a comment reportedly interpreted as an indicator the ECB was preparing to abandon its support for Italy, a notion that was denied by the ECB.[55] The Fed also announced that it would further increase its lending in the repo market and its purchases of Treasury securities to provide liquidity. As a result of tight market conditions for corporate bonds, firms turned to their revolving lines of credit with banks to build up their cash reserves. The price of bank shares fell, reflecting sales by investors who reportedly had grown concerned that banks would experience a rise in loan defaults.[56] Despite the various actions, the DJIA fell by nearly 10% on March 12, recording the worst one-day drop since 1987. Between February 14 and March 12, the DJIA fell by more than 8,000 points, or 28% of its value. Credit rating agencies began reassessing corporate credit risk, including the risk of firms that had been considered stable.[57]

On March 13, President Trump declared a national emergency, potentially releasing $50 billion in disaster relief funds to state and local governments. The announcement moved financial markets sharply higher, with the DJIA rising 10%.[58] Financial markets also reportedly moved higher on expectations the Fed would lower interest rates. House Democrats and President Trump agreed to a $2 trillion spending package to provide paid sick leave, unemployment insurance, food stamps, support for small businesses, and other measures.[59] The EU indicated that it would relax budget rules that restrict deficit spending by EU members. In other actions, the People's Bank of China cut its reserve requirements for Chinese banks, potentially easing borrowing costs for firms and adding $79 billion in funds to stimulate the Chinese economy; Norway's central bank reduced its key interest rate; the Bank of Japan acquired billions of dollars of government securities (thereby increasing liquidity); and the Reserve Bank of Australia injected nearly $6 billion into its financial system.[60] The Bank of Canada also lowered its overnight bank lending rate.

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blindsided-by-trumps-travel-restrictions-with-many-seeing-political-motive/2020/03/12/42a279d0-6412-11ea-8a8e-5c5336b32760_story.html.

[55] 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.

[56] Morris, Stephen, Laura Noonan, Henny Sender, and Olaf Storbeck, "Banks Scramble as Companies Rush to Tap Back-up Credit Lines," *Financial Times*, March 12, 2020. https://www.ft.com/content/a3513a54-6486-11ea-b3f3-fe4680ea68b5.

[57] Edgecliffe-Johnson, Andrew, Peggy Hollinger, Joe Rennison, and Robert Smith, "Will the COVID-19 Trigger a Corporate Debt Crisis?" *Financial Times*, March 12, 2020. https://www.ft.com/content/4455735a-63bc-11ea-b3f3-fe4680ea68b5. Sectors most exposed to debt financing issues include automotive, insurance, capital goods, utilities, oil and gas, technology, aerospace and defense, real estate, telecoms, consumer products, metals, mining and steel, healthcare, retail/restaurants, chemicals, packaging, transportation, media and entertainment, and forest products.

[58] 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.

[59] Werner, Erica, Mike DeBonis, Paul Kane, Jeff Stein, "White House, House Democrats Reach Deal on COVID-19 Economic Relief Package, Pelosi Announces," *Washington Post*, March 13, 2020. https://www.washingtonpost.com/us-policy/2020/03/13/paid-leave-democrats-trump-deal-COVID-19/.

[60] Georgiadis, Philip, Hudson Lockett, and Leo Lewis, "European Stocks and US Futures Soar After Historic Rout," *Financial Times*, March 13, 2020. https://www.ft.com/content/3bab76ac-64cd-11ea-a6cd-df28cc3c6a68.

The Federal Reserve lowered its key interest rate to near zero on March 15, 2020, arguing that the pandemic had "harmed communities and disrupted economic activity in many countries, including the United States" and that it was prepared to use its "full range of tools."[61] It also announced an additional $700 billion in asset purchases, including Treasury securities and mortgage-backed securities, expanded repurchase operations, activated dollar swap lines with Canada, Japan, Europe, the UK, and Switzerland, opened its discount window to commercial banks to ease household and business lending, and urged banks to use their capital and liquidity buffers to support lending.[62]

Despite the Fed's actions the previous day to lower interest rates, interest rates in the U.S. commercial paper market, where corporations raise cash by selling short-term debt, rose on March 16, 2020, to their highest levels since the 2008-2009 financial crisis, prompting investors to call on the Federal Reserve to intervene.[63] The DJIA dropped nearly 3,000 points, or about 13%. Most automobile manufacturers announced major declines in sales and production;[64] similarly, most airlines reported they faced major cutbacks in flights and employee layoffs due to diminished economic activity.[65] Economic data from China indicated the economy would slow markedly in the first quarter of 2020, potentially greater than that experienced during the global financial crisis.[66] The Bank of Japan announced that it would double its purchases of exchange traded funds and the G-7 countries[67] issued a joint statement promising "a strongly coordinated international approach," although no specific actions were mentioned. The IMF issued a statement indicating its support for additional fiscal and monetary actions by governments and that the IMF "stands ready to mobilize its $1 trillion lending capacity to help its membership." The World Bank also promised an additional $14 billion to assist governments and companies address the pandemic.[68]

Following the drop in equity market indexes the previous day, the Federal Reserve unveiled a number of facilities on March 17, 2020, in some cases reviving actions it had not taken since the financial crisis. It announced that it would allow the 24 primary dealers in Treasury securities to borrow cash collateralized against some stocks, municipal debt, and higher-rated corporate bonds; revive a facility to buy commercial paper; and provide additional funding for the overnight repo market.[69] The UK government proposed government-backed loans to support business; a three-

[61] *Federal Reserve Releases FOMC Statement*, Board of Governors of the Federal Reserve System, March 15, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200315a.htm.

[62] Greeley, Brendan, Colby Smith, Adam Samson, Joe Rennison, Katie Martin, and Jennifer Ablan, "Fed Cuts Rates to Zero as Part of Sweeping Crisis Measures," *Financial Times*, March 15, 2020. https://www.ft.com/content/a9a28bc0-66fb-11ea-a3c9-1fe6fedcca75.

[63] Rennison, Joe Rennison and Colby Smith, "Investors Call for Fed Help in 'Frozen' Commercial Paper Market," *Financial Times*, March 16, 2020. https://www.ft.com/content/34213560-677b-11ea-a3c9-1fe6fedcca75.

[64] Campbell, Peter, Joe Miller, and David Keohane, "European Car Plants Close as Industry Crisis Deepens," *Financial Times*, March 16, 2020. https://www.ft.com/content/dd76d42a-678b-11ea-a3c9-1fe6fedcca75.

[65] Smyth, Jamie Smyth, Andrew Edgecliffe-Johnson, Peggy Hollinger, Myles McCormick, David Keohane, and Richard Milne, "Most Airlines Face Bankruptcy by End of May, Industry Body Warns," *Financial Times*, March 16, 2020. https://www.ft.com/content/30a3a26e-674f-11ea-800d-da70cff6e4d3.

[66] Weinland, Don and Xinning Liu, "Chinese Economy Suffers Record Blow from COVID-19," *Financial Times*, March 16, 2020. https://www.ft.com/content/318ae26c-6733-11ea-800d-da70cff6e4d3.

[67] The G-7 is comprised of Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States.

[68] Wheatley, Jonathan, "Surging Dollar, Coronavirus and Oil Slump Hit Emerging Economies," *Financial Times*, March 18, 2020. https://www.ft.com/content/69fc6e2a-69d3-11ea-a3c9-1fe6fedcca75.

[69] Politi, James, Brendan Greeley, Colby Smith, and Joe Rennison, "Fed to Lend Against Stocks and Bonds in Bid to Stabilize Markets," *Financial Times*, March 17, 2020. https://www.ft.com/content/cf485398-689d-11ea-800d-

month moratorium on mortgage payments for homeowners; a new lending facility with the Bank of England to provide low-cost commercial paper to support lending; and loans for businesses.

In an emergency session on March 18, the ECB announced a temporary, non-standard asset purchase program, the Pandemic Emergency Purchase Program (PEPP), to acquire an additional €750 billion (over $820 billion) in public and private sector bonds to counter the risks posed by the pandemic crisis (as of May 5, the ECB had purchased about $180 billion in securities).[70] The ECB also broadened the types of assets it would accept as collateral to include non-financial commercial paper, eased collateral standards for banks, and waived restrictions on acquiring Greek government debt.[71] The program was expected to end no later than yearend 2020.

The Federal Reserve broadened its central bank dollar swap lines to include Brazil, Mexico, Australia, Denmark, Norway, and Sweden. Automobile manufacturers announced they were suspending production at an estimated 100 plants across North America, following similar plant closures in Europe.[72] Major U.S. banks announced a moratorium on share repurchases, or stock buy-backs, denying equity markets a major source of support and potentially amplifying market volatility.[73] During the week, more than 22 central banks in emerging economies, including Brazil, Turkey, and Vietnam, lowered their key interest rates.

By March 19, 2020, investors were selling sovereign and other bonds as firms and other financial institutions attempted to increase their cash holdings, although actions central banks took during the week appeared to calm financial markets. Compared to previous financial market dislocations in which stock market values declined while bond prices rose, stock and bond values fell at the same time in March 2020 as investors reportedly adopted a "sell everything" mentality to build up cash reserves.[74] Senate Republicans introduced the Coronavirus Aid, Relief, and Economic Security Act to provide $2 trillion in spending to support the U.S. economy.

By the close of trading on March 20, the DJIA index had fallen by 17% from March 13. At the same time, the dollar continued to gain in value against other major currencies and the price of Brent crude oil dropped close to $20 per barrel on March 20, as indicated in **Figure 5.** The Federal Reserve announced that it would expand a facility to support the municipal bond market. Britain's Finance Minister announced an "unprecedented" fiscal package to pay up to 80% of an employee's wages and deferring value added taxes by businesses.[75] The ECB's Largarde justified actions by the Bank during the week to provide liquidity by arguing that the "coronavirus pandemic is a public health emergency unprecedented in recent history." Market indexes fell again on March 23 as the Senate debated the parameters of a new spending bill to support the economy. Oil prices also continued to fall as oil producers appeared to be in a standoff over cuts to production.

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da70cff6e4d3.

[70] "ECB Announces €750 Billion Pandemic Emergency Purchase Program (PEPP)," European Central Bank, March 18, 2020. https://www.ecb.europa.eu/press/pr/date/2020/html/ecb.pr200318_1~3949d6f266.en.html.

[71] Arnold, Martin, "ECB to Launch €750 Billion Purchase Program in Response to Coronavirus," *Financial Times*, March 18, 2020. https://www.ft.com/content/5919c6fb-1f5f-315d-8353-94f04afcf340.

[72] Campbell, Peter and Claire Bushey, "Ford, General Motors and Fiat Chrysler Agree Widespread Shutdown," *Financial Times*, March 18, 2020. https://www.ft.com/content/feae3808-6949-11ea-800d-da70cff6e4d3.

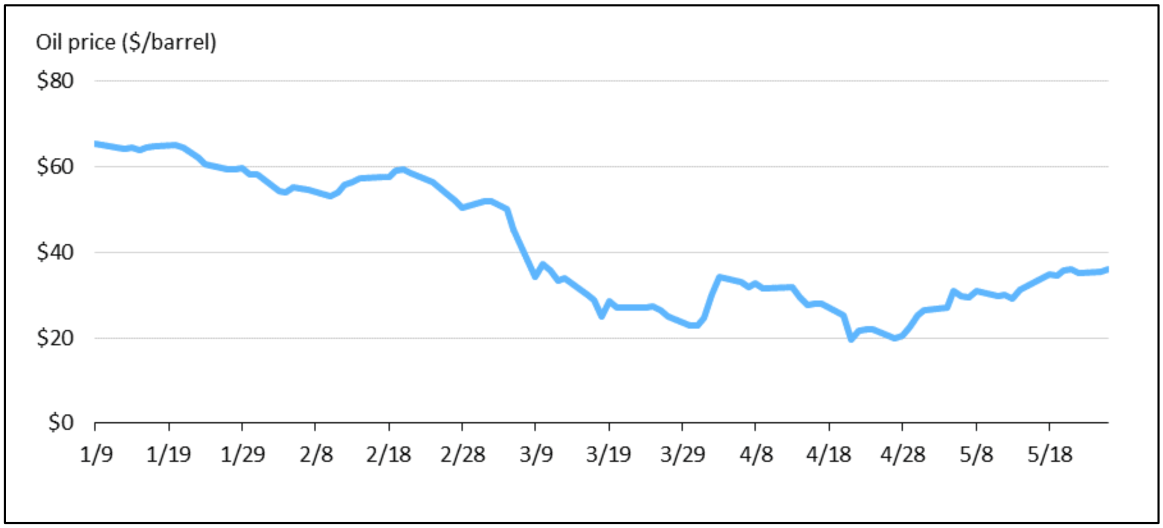
[73] Henderson, Richard, "Bank-Led Freeze on Stock Buybacks Could Spread Across US Market," *Financial Times*, March 18, 2020. https://www.ft.com/content/b1fa1688-68f6-11ea-a3c9-1fe6fedcca75.

[74] Stubbington, Tommy and Colby Smith, "Investment Veterans Try to Get to Grips With 'Broken' Markets," *Financial Times*, March 20, 2020. https://www.ft.com/content/97186440-6aa0-11ea-800d-da70cff6e4d3.

[75] Parker, George Parker, 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.

Figure 5. Brent Crude Oil Price per Barrel in Dollars

January 9, 2020 to May 29, 2020



Source: Markets Insider. Created by CRS.

Financial markets continued to fall on March 23, 2020, as market indexes reached their lowest point since the start of the pandemic crisis. The Federal Reserve announced a number of new facilities to provide an unlimited expansion in bond buying programs. The measures included additional purchases of Treasury and mortgage-backed securities; additional funding for employers, consumers, and businesses; establishing the Primary Market Corporate Credit Facility (PMCCF) to support issuing new bonds and loans and the Secondary Market Corporate Credit Facility (SMCCF) to provide liquidity for outstanding corporate bonds; establishing the Term Asset-Backed Securities Loan Facility (TALF), to support credit to consumers and businesses; expanding the Money Market Mutual Fund Liquidity Facility (MMLF) to provide credit to municipalities; and expanding the Commercial Paper Funding Facility (CPFF) to facilitate the flow of credit to municipalities.[76] The OECD released a statement encouraging its members to support "immediate, large-scale and coordinated actions." These actions included (1) more international cooperation to address the health crisis; (2) coordinated government actions to increase spending to support health care, individuals, and firms; (3) coordinated central bank action to supervise and regulate financial markets; and (4) policies directed at restoring confidence.[77]

Reacting to the Fed's announcement, the DJIA closed up 11% on March 24, marking one of the sharpest reversals in the market index since February 2020. European markets, however, did not follow U.S. market indexes as various indicators signaled a decline in business activity in the Eurozone that was greater than that during the financial crisis and indicated the growing potential for a severe economic recession.[78] U.S. financial markets were buoyed on March 25 and 26 over passage in Congress of a $2.2 trillion economic stimulus package.

[76] *Federal Reserve Announces Extensive New Measures to Support the Economy*, Board of Governors of the Federal Reserve System, March 23, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200323b.htm.

[77] Gurria, Angel, *COVID-19: Joint Actions to Win the War*, Organization for Economic Cooperation and Development, March 23, 2020. https://www.oecd.org/coronavirus/#op-ed.

[78] Arnold, Martin Arnold and Valentina Romei, "Business Activity Crashes to Record Low in Eurozone," *Financial Times*, March 24, 2020. https://www.ft.com/content/f5ebabd4-6dad-11ea-89df-41bea055720b.

On March 27, leaders of the G-20 countries announced through a video conference they had agreed to inject $5 trillion into the global economy and to do "whatever it takes to overcome the pandemic." Also at the meeting, the OECD offered an updated forecast of the viral infection, which projected that the global economy could shrink by as much as 2% a month. Nine Eurozone countries, including France, Italy, and Spain called on the ECB to consider issuing "coronabonds," a common European debt instrument to assist Eurozone countries in fighting COVID-19.[79] The ECB announced that it was removing self-imposed limits that it had followed in previous asset purchase programs that restricted its purchases of any one country's bonds.[80] Japan announced that it would adopt an emergency spending package worth $238 billion, or equivalent to 10% of the country's annual GDP.[81] Despite the various actions, global financial markets turned down March 27 (the DJIA dropped by 900 points) reportedly over volatility in oil markets and concerns that the economic effects of the COVID-19 pandemic were worsening.[82]

By March 30, central banks in developing countries from Poland, Columbia, South Africa, the Philippines, Brazil, and the Czech Republic reportedly had begun adopting monetary policies similar to that of the Federal Reserve to stimulate their economies.[83] In commodity markets, Brent crude oil prices continued to fall, reaching a low of $22.76. Strong global demand for dollars continued to put upward pressure on the international value of the dollar. In response, the Federal Reserve introduced a new temporary facility that would work with its swap lines to allow central banks and international monetary authorities to enter into repurchase agreements with the Fed.[84] From mid-March to mid-April, U.S. workers' claims for unemployment benefits reached over 17 million as firms faced a collapse in demand and requirements for employees to self-quarantine caused them to begin furloughing or laying off employees. Financial markets began to recover somewhat in early April in response to the accumulated monetary and fiscal policy initiatives, but remained volatile as a result of uncertainty over efforts to reach an output agreement among oil producers and the continued impact of the viral health effects.

April 2020

The Federal Reserve announced on April 8 that it was establishing a facility to fund small businesses through the Paycheck Protection Program. Japan also announced that it was preparing to declare areas around Tokyo to be in a state of emergency and that it would adopt a $989 billion funding package.[85]

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79 Dombrey, Daniel, 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.

80 Arnold, Martin and Tommy Stubbington, "ECB Shakes Off Limits on New €750bn Bond-Buying Plan," *Financial Times*, March 27, 2020. https://www.ft.com/content/d775a99e-13b2-444e-8de5-fd2ec6caf4bf.

81 Kajimoto, Tetsushi, Izumi Nakagawa, "Japan Plans Huge Stimulus Package to Cushion Blow from Coronavirus," *Reuters*, March 27, 2020, https://www.reuters.com/article/us-health-coronavirus-japan-stimulus/japan-plans-huge-stimulus-package-to-cushion-blow-from-coronavirus-idUSKBN21E0UW.

82 Georgiadis, Philip, Hudson Lockett, and Leo Lewis, "Global Stocks Falter After Two Days of Big Gains," *Financial Times*, March 27, 2020. https://www.ft.com/content/bc33c31c-f019-4ef8-85df-0014a5406ac1.

83 Wheatley, Jonathan, "Emerging Market Central Banks Embark on Radical Stimulus Policies," *Financial Times*, March 30, 2020. https://www.ft.com/content/70398316-3fd5-4428-88ab-6f898ee42fd5.

84 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.

85 Takeo, Yuko and Yoshiaki Nohara, "Japan's Virus Stimulus Package to Come in Two Phases," *Bloomberg*, April 5, 2020. https://www.bloomberg.com/news/articles/2020-04-06/japan-s-virus-stimulus-package-to-come-in-two-phases-documents-k8nuj552.

On April 9, OPEC and Russia agreed to cut oil production by 10 million barrels per day.[86] On April 15, G-20 finance ministers and central bank governors announced their support for the proposed agreement by Saudi Arabia and Russia to reduce oil production.[87] They also announced an agreement to freeze government loan payments until the end of the year to help low-income developing countries address the pandemic and asked international financial institutions to do likewise.[88] G-7 finance ministers and central bank governors agreed to support the G-20 proposal to suspend debt payments by developing countries.[89] Eurozone finance ministers announced a €500 billion (about $550 billion) emergency spending package to support governments, businesses, and workers. Reportedly, the measure will provide funds to the European Stability Mechanism, the European Investment Bank, and for unemployment insurance.[90]

In other policy areas, the IMF announced that it was doubling its emergency lending capability to $100 billion, in response to requests from more than 100 countries for assistance.[91] The Bank of England announced that it would take the unprecedented move of temporarily directly financing UK government emergency spending needs through monetary measures rather than through the typical method of issuing securities to fight the effects of COVID-19.[92] Secretary-General of the United Nations Guterres declared on April 9, 2020, before the United Nations Security Council that the pandemic poses a significant threat to the maintenance of international peace and security and outlined eight specific risks, including the erosion of trust in public institutions, increased risks from terrorism and bioterrorism, and worsening existing human rights abuses.[93]

Federal Reserve Chairman Jerome Powell, stating that the U.S. economy was deteriorating "with alarming speed," announced on April 10 that the Fed would provide an additional $2.3 trillion in loans, including a new financial facility to assist firms by acquiring shares in exchange traded funds that own the debt of lower-rated, riskier firms that are among the most exposed to deteriorating economic conditions associated with COVID-19 and low oil prices.[94] On April 16, the U.S. Labor Department reported that 5.2 million Americans filed for unemployment insurance

[86] Sheppard, David, Anjli Raval, Derek Brower, and Henry Foy, "G20 Ministers Meet to Endorse OPEC-Russia Deal to Slash Oil Production," *Financial Times*, April 10, 2020. https://www.ft.com/content/c7a1e2e6-8c17-48d5-8c16-edce911b5cbb.

[87] Sheppard, David, Anjli Raval, Derek Brower. and Henry Foy, G20 Backs Largest Oil Supply Agreement in History, *Financial Times*, April 15, 2020. https://www.ft.com/content/16ac91d8-42bf-4190-88de-f3d89b2b36f4.

[88] England, Andrew, Jonathan Wheatley and James Politi, G20 Agrees Debt Relief for Low Income Nations, *Financial Times*, April 15, 2020. https://www.ft.com/content/5f296d54-d29e-4e87-ae7d-95ca6c0598d5.

[89] Politi, James and Jonathan Wheatley, G7 Countries Back Debt Relief For Poorest Nations, *Financial Times*, April 14, 2020. https://www.ft.com/content/c384ed59-1ca3-476f-9b89-eaf5cf31e42c.

[90] 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.

[91] Politi, James, "IMF Boosts Emergency Lending Capacity to $100bn," *Financial Times*, April 9, 2020. https://www.ft.com/content/e46faadc-456b-4cf8-a2fd-2017702747ab.

[92] Giles, Chris and Philip Georgiadis, "Bank of England to Directly Finance UK Government's Extra Spending," *Financial Times*, April 9, 2020. https://www.ft.com/content/664c575b-0f54-44e5-ab78-2fd30ef213cb.

[93] *Secretary-General's Remarks to the Security Council on the COVID-19 Pandemic* [as delivered], United Nations, April 9, 2020. https://www.un.org/sg/en/content/sg/statement/2020-04-09/secretary-generals-remarks-the-security-council-the-covid-19-pandemic-delivered.

[94] Rennison, Joe, Robin Wigglesworth, and Colby Smith, "Federal Reserve Enters New Territory with Support for Risky Debt," *Financial Times*, April 10, 2020. https://www.ft.com/content/c0b78bc9-0ea8-461c-a5a2-89067ca94ea4. Heather Long, "Fed Chair Powell Says U.S. Economy Deteriorating 'With Alarming Speed,'" *Washington Post*, April 9, 2020. https://www.washingtonpost.com/business/2020/04/09/federal-reserve-unveils-over-2-trillion-new-lending-small-businesses-city-governments-big-firms/.

during the previous week, raising the total claims since mid-March to over 22 million.[95] According to Chinese official statistics, the Chinese economy shrank by 6.8% on an annual basis during the first quarter of 2020, reportedly the first such contraction in 40 years.[96]

Financial market indicators rose on April 17, reportedly on an upbeat sentiment that actions taken by the Federal Reserve and other central banks would stabilize conditions in the corporate credit market.[97] The price of futures contracts for oil delivery in May 2020 for the U.S. West Texas Intermediate (WTI) fell to $18 per barrel, the lowest it had been since 2002, reportedly reflecting rising inventories and low global demand.[98] Leaders of emerging economies in Latin America and Africa argued that the G-20 call for suspension of interest payments fell short of what is needed. National leaders from Columbia, Brazil, Mexico, and Chile encouraged the World Bank, the InterAmerican Development Bank and the IMF to double their net lending to Latin America, arguing that, "The Covid-19 pandemic is a shock of unprecedented magnitude, uncertain duration and catastrophic consequences that, if not properly addressed, could lead to one of the most tragic episodes in the history of Latin America and the Caribbean."[99]

The price of oil fell to its lowest level in two decades on April 19, reportedly reflecting a significant drop in global demand for energy and rising inventories.[100] Some Eurozone members reportedly argued for the ECB to create a Eurozone "bad bank" to remove billions of euros in non-performing debts from banks' balance sheets to provide more capacity for Eurozone banks at a potentially critical time when banks could see an increase in non-performing loans.[101] The World Bank confirmed that its "pandemic bonds" would pay out $133 billion to the poorest countries affected by the pandemic.[102]

On April 21, Agricultural Ministers of the G-20 countries released a joint statement that supported measures to "ensure the health, safety, welfare, and mobility of workers in agriculture and throughout the food supply chain." The joint statement also indicated that the G-20 countries would adopt measures that are "targeted, proportionate, transparent, and temporary, and that they do not create unnecessary barriers to trade or disruption to global food supply chains." The statement also indicated that the G-20 would, "guard against any unjustified restrictive measures that could lead to excessive food price volatility in international markets and threaten the food security and nutrition of large proportions of the world population, especially the most vulnerable living in environments of low food security."[103]

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[95] *Unemployment Insurance Weekly Claims*, Department of Labor, April 16, 2020. https://www.dol.gov/ui/data.pdf.

[96] Hale, Thomas, Xinning Liu, and Yuan Yang, China's Economy Shrinks for First Time in Four Decades, *Financial Times*, April 17, 2020. https://www.ft.com/content/8f941520-67ad-471a-815a-d6ba649d22ed.

[97] Smith, Colby, Myles McCormick, Tommy Stubbington, and Hudson Lockett, US Stocks Extend Rally With Central Bank Safety Net, *Financial Times*, April 17, 2020. https://www.ft.com/content/5ebbc2d8-ade3-4d5c-86f5-49b9478fe03d.

[98] Sheppard, David, US Crude Tumbles to 18-year Low as Supply Overwhelms Demand, *Financial Times*, April 17, 2020. https://www.ft.com/content/d0a0cfc3-765c-4b55-ada7-11e0d378d406.

[99] Wheatley, Jonathan, Michael Stott, and David Pilling, Emerging Economies Call for More Financial Help After G20 Deal, *Financial Times*, April 17, 2020. https://www.ft.com/content/203ed8f5-6bb2-4016-80a9-dd99269bfa26.

[100] Lockett, Hudson Lockett and David Sheppard, US Oil Price Plunges to 20-year Low as Coronavirus Hits Demand, *Financial Times*, April 19, 2020. https://www.ft.com/content/a5292644-958d-4065-92e8-ace55d766654.

[101] Arnold, Martin and Javier Espinoza, ECB Pushes for Eurozone Bad Bank to Clean up Soured Loans, *Financial Times*, April 19, 2020. https://www.ft.com/content/15d17d1d-8e1b-4f84-97b4-b62e6ae8f962.

[102] Gross, Anna, World Bank Pandemic Bonds to Pay $133m to Poorest Virus-hit Nations, *Financial Times*, April 19, 2020. https://www.ft.com/content/c8556c9f-72f7-48b4-91bf-c9e32ddab6ff.

[103] *G20 Extraordinary Agriculture Ministers Meeting: Statement on COVID-19*, G-20, April 21, 2020. https://g20.org/

On April 23, the House 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 will provide $484 billion for small business loans, health care providers, and COVID-19 testing. The U.S. Labor Department reported that 4.4 million Americans filed for unemployment insurance in the previous week, raising the total that have applied to over 26 million.[104] Indicators of manufacturing and services activity in Europe dropped to their lowest level since 1990, reflecting the impact of the pandemic on the European economy.[105] The Bank of England indicated that 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 to fight the pandemic.[106] The Saudi Presidency of the G-20 called on international organizations on April 24 to fund an emergency response to the pandemic. The Bank of Japan announced on April 27 that 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.[107]

At its April 29 scheduled meeting, the U.S. Federal Open Market Committee left its main interest rates unchanged, but reiterated its commitment to use "its full range of tools to support the U.S. economy." The policy statement concluded that, "The ongoing public health crisis will weigh heavily on economic activity, employment, and inflation in the near term, and poses considerable risks to the economic outlook over the medium term."[108] The Federal Reserve also announced a change in its eligibility requirements for a $500 billion lending program for municipalities. The statement followed the release of the preliminary estimate of U.S. first quarter GDP, which indicated that the economy had contracted by an annualized rate of 4.8% (revised to 5.0%).[109]

On April 30, the Department of Labor released its weekly data on applications for unemployment insurance, which indicated that an additional 3.8 million people had filed for unemployment insurance during the week, raising the total number who have applied to 30 million.[110] The Federal Reserve also announced an expansion in its medium-size business loan program by allowing firms with up to 15,000 employees or with revenues up to $5 billion to access a new $600 billion program. In addition, the Fed lowered the minimum loan amount for small businesses and announced a loan program to assist riskier businesses.[111] At the same time, the ECB expanded a record low-interest rate loan program for Eurozone banks to support economic activity, while warning that the Eurozone economy could contract between 5% and 12% in 2020 as it faces, "an economic contraction of a magnitude and speed that are unprecedented in

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en/media/Pages/pressroom.aspx.

[104] *Unemployment Insurance Weekly Claims*, Department of Labor, April 23, 2020. https://www.dol.gov/ui/data.pdf.

[105] Arnold, Martin and Valentina Romei, European Business Activity Crashes Under Coronavirus Lockdowns, *Financial Times*, April 23, 2020. https://www.ft.com/content/8520895f-3249-4a8b-b0e5-881a64e77971.

[106] 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.

[107] 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.

[108] *Federal Reserve Issues FOMC Statement*, Board of Governors of the Federal Reserve System, April 29, 2020. https://www.federalreserve.gov/newsevents/pressreleases/monetary20200429a.htm.

[109] *Gross Domestic Product, First Quarter 2020 (Advance Estimate)*, Bureau of Economic Analysis, April 29, 2020. https://www.bea.gov/.

[110] *Unemployment Insurance Weekly Claims*, Department of Labor, April 30, 2020. https://www.dol.gov/ui/data.pdf.

[111] Politi, James, Colby Smith and Robert Armstrong, Federal Reserve Extends $600bn Main Street Lending Program. *Financial Times*, April 30, 2020. https://www.ft.com/content/46fdc853-1d7d-49af-93e8-f12e0d006fc2.

peacetime."[112] The ECB also announced a new non-targeted low-interest rate pandemic emergency longer-term refinancing operation (PELTROs) to complement its Pandemic Emergency Refinance Operations announced in March.[113] House Speaker Pelosi stated that House Democrats were considering a $1 trillion spending bill to support state and local governments.[114] In a development that seemed incongruous with the broader economic situation, between April 1, 2020, and April 30, 2020, the DJIA rose more than 3,400 points, or 16%, marking the strongest monthly increase since 1987.[115]

May 2020

On May 5, Germany's Constitutional court issued a ruling that could prevent the German central bank, the Bundesbank, from making additional bond purchases under the Pandemic Emergency Purchase Program (PEPP). The ECB's program is intended to ease borrowing costs across the Eurozone to stimulate economic growth.

The U.S. Census Bureau reported on May 5 that U.S. exports and imports fell in March; exports fell by a greater amount than imports, thereby increasing the monthly U.S. goods and services trade deficit. The trade balance for March was -$44.5 billion, an increase of about $4.6 billion over the trade deficit in February. The decline in export and import values reflected lower imports and exports of both goods and services.

On May 6, the European Commission released its economic forecast, which indicated that economic activity in the EU would decline by 7.4% in 2020 as a result of measures to contain the pandemic. The Commission forecast that economic growth would advance by 6.0% in 2021, assuming the containment measures can be lifted gradually, the viral effects remain contained, and that the fiscal and monetary measures implemented by the EU members are effective in blunting the negative effects on economies.[116] On May 7, the Labor Department announced that 3.2 million Americans had filed for unemployment insurance during the week, raising the total that had filed over the previous seven weeks to 33 million.[117]

On May 8, the U.S. Department of Labor announced that 20.5 million Americans had lost their jobs in April, pushing the national unemployment rate to 14.5%. Despite the rise in the unemployment rate, the DJIA rose by 2.0%, reportedly based on optimism that the monetary policy actions the Federal Reserve, the ECB, and the Bank of Japan have taken to support financial markets would stabilize and stimulate the markets and optimism that the health crisis is ebbing.[118]

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[112] *Introductory Statement*, European Central Bank, April 29, 2020. https://www.ecb.europa.eu/press/pressconf/2020/html/ecb.is200430~ab3058e07f.en.html.

[113] Arnold, Martin and Tommy Stubbington, ECB Launches Fresh Push to Lend to Banks at Ultra-low Rates, *Financial Times*, April 30, 2020. https://www.ft.com/content/cef090d0-97dc-4e75-a4b1-deebfd4afacf.

114 Werner, Erica, Pelosi Points to $1 Trillion Need for State and Local Governments in Next Coronavirus Bill, *The Washington Post*, April 30, 2020. https://www.washingtonpost.com/us-policy/2020/04/30/congress-coronavirus-economy/.

[115] Henderson, Richard Henderson, Robin Wigglesworth, and Katie Martin, U.S. Stocks Close Out Best Month Since 1987 in Global Rebound, *Financial Times*, April 30, 2020. https://www.ft.com/content/88e57ec9-42d4-455d-a045-293a6a54837d.

[116] *European Economic Forecast Spring 2020*, European Commission, May 2020. https://ec.europa.eu/commission/presscorner/detail/en/ip_20_799.

[117] *Unemployment Insurance Weekly Claims*, Department of Labor, May 5, 2020. https://www.dol.gov/ui/data.pdf.

[118] Platt, Eric, Colby Smith, Adam Samson, and Hudson Lockett, Wall Street closes higher despite dire US jobs data,

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 and for other purposes. The measure passed the House on May 15 and was sent to the Senate for consideration. On May 13, the UK Office of National Statistics reported that UK GDP contracted by 2.0% in the first quarter, the largest decline in the UK's GDP since 2008 with all major economic sector affected.[119] On May 14, the U.S. Department of Labor announced that an additional 3.0 million Americans had filed for unemployment insurance during the previous week, increasing the total number filing for unemployment insurance over the previous eight weeks to 36 million.[120]

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 EU fiscal response to the pandemic.[121]

The Department of Labor announced on May 21 that an additional 2.4 million Americans had filed for Unemployment Insurance, raising the total to 38.4 million over the previous nine weeks.[122]

On May 27, European Commission President Ursula von der Leyen proposed a €750 billion (about $825 billion) coronavirus recovery plan to provide loans and grants to the hardest hit EU economies and changes to the EU budget. The Japanese Cabinet proposed a second supplemental appropriation measure that includes $296 billion in spending and a total value of about $1.1 trillion in loans and guarantees, funded through new bonds.[123]

On May 28, the Department of Labor announced that an additional 2.1 million Americans filed for Unemployment Insurance, raising the ten-week total to 40.8 million.[124]

Financial Times, May 8, 2020. https://www.ft.com/content/a9999ef1-1373-41b7-8d55-d780fd06825d.

[119] *GDP Monthly Estimate, UK: March 2020*, Office for National Statistics, May 13, 2020. https://www.ons.gov.uk/economy/grossdomesticproductgdp/bulletins/gdpmonthlyestimateuk/march2020.

[120] *Unemployment Insurance Weekly Claims*, Department of Labor, May 14, 2020. https://www.dol.gov/ui/data.pdf.

[121] 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.

[122] *Unemployment Insurance Weekly Claims*, Department of Labor, May 21, 2020. https://www.dol.gov/ui/data.pdf.

[123] 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.

[124] *Unemployment Insurance Weekly Claims*, Department of Labor, May 29, 2020. https://www.dol.gov/ui/data.pdf.

Comparing the Current Crisis and the 2008 Crisis

Sharp declines in the stock market and broader financial sector turbulence; interest rate cuts and large-scale Federal Reserve intervention; and discussions of massive government stimulus packages have led some observers to compare the current market reaction to that experienced a little over a decade ago. There are similarities and important differences between the current economic crisis and the global financial crisis of 2008/2009. Foremost, the earlier crisis was rooted in structural weakness in the U.S. financial sector. Following the collapse of the U.S. housing bubble, it became impossible for firms to identify demand and hold inventories across many sectors (construction, retail, etc.). This led to massive oversupply and sharp retail losses which extended to other sectors of the U.S. economy and eventually the global economy. Moreover, financial markets across countries were linked together by credit default swaps. As the crisis unfolded, large numbers of banks and other financial institutions were negatively affected, raising questions about capital sufficiency and reserves. The crisis then quickly engulfed credit-rating agencies, mortgage lending companies, and the real estate industry broadly. Market resolution came gradually with a range of monetary and fiscal policy measures that were closely coordinated at the global level. These were focused on putting a floor under the falling markets, stabilizing banks, and shoring up investor confidence to get spending started again. Starting in September 2007, the Federal Reserve cut interest rates from over 5% in September 2007 to between 0 and 0.25% before the end of the 2008. Once interest rates approached zero, the Fed turned to other so-called "unconventional measures," including targeted assistance to financial institutions, encouraging Congress to pass the Troubled Asset Relief Program (TARP) to prevent the collapse of the financial sector and boost consumer spending. Other measures included swap arrangements between the Federal Reserve and the European Central Bank and smaller central banks, and so-called "quantitative easing" to boost the money supply. On a global level, the United States and other countries tripled the resources of the IMF (from $250 billion to $750 billion) and coordinated domestic stimulus efforts.

Unlike the 2008 crisis, the current crisis began as a supply shock. As the global economy has become more interdependent in recent decades, most products are produced as part of a global value chain (GVC), where an item such as a car or mobile device consists of parts manufactured all over the world, and involving multiple border crossings before final assembly. The earliest implications of the current crisis came in January as plant closures in China and other parts of Asia led to interruptions in the supply chain and concerns about dwindling inventories. As the virus spread from Asia to Europe, the crisis switched from supply concerns to a broader demand crisis as the measures being introduced to contain the spread of the virus (social distancing, travel restrictions, cancelling sporting events, closing shops and restaurants, and mandatory quarantine measures) prevent most forms of economic activity from occurring. Thus, unlike the 2008 crisis response, which involved liquidity and solvency-related policy measures to get people spending again, the current crisis did not start as a financial crisis, but could evolve into one if a recovery in economic activity is delayed. While larger firms may have sufficient capital to wait out a crisis, many aspects of the economy (such as restaurants or retail operations) operate on very tight margins and would likely not be able to pay employees after closures lasting more than a few days. Many people will also need to balance child care and work during quarantine or social distancing measures. During this type of crisis, while monetary policy measures play a part—and the Federal Reserve has once again cut rates to near zero—they cannot compensate for the physical interaction that the global economy is dependent upon. As a result, fiscal stimulus will likely play a relatively larger role in this crisis in order to prevent personal and corporate bankruptcies during the peak crisis period. Efforts to coordinate U.S. and foreign economic policy measures will also have an important role in mitigating the scale and length of any global economic downtown.

Policy Responses

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 will "use all appropriate policy tools" to sustain economic growth.[125] The Finance Ministers also pledged fiscal support to ensure health systems can sustain efforts to fight the outbreak.[126] In most cases,

[125] *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/.

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

however, countries have 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."[127] At the time, the cut was the largest one-time reduction in the interest rate by the Fed since the global financial crisis.

After a delayed response, other central banks have begun to follow the actions of the G-7 countries. Most central banks have lowered interest rates and acted to increase liquidity in their financial systems through a combination of measures, including lowering capital buffers and reserve requirements, creating temporary lending facilities for banks and businesses, and easing loan terms. In addition, national governments have adopted various fiscal measures to sustain economic activity. In general, these measures include making payments directly to households, temporarily deferring tax payments, extending unemployment insurance, and increasing guarantees and loans to businesses.

See the **Appendix** to this report for detailed information about the policy actions by individual governments.[128]

The United States

Recognizing the growing impact the pandemic is having on financial markets and economic growth, the Federal Reserve (Fed) has taken a number of steps to promote economic and financial stability involving the Fed's monetary policy and "lender of last resort" roles. Some of these actions are intended to stimulate economic activity by reducing interest rates and others are intended to provide liquidity to financial markets so that firms 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.[129]" 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.[130]

On April 29, the Bureau of Economic Analysis released first quarter U.S. GDP data indicating that the U.S. economy had contracted by 4.8% at an annual rate, as indicated in **Figure 6**. A decline in economic activity of 30% or more was recorded in motor vehicles and parts, recreation, food services and accommodation and transportation sectors, reflecting the quarantine measures adopted across the country. In contrast to the other sectors of the economy, food and beverage consumption increased by 25% as a result of the switch by individuals from eating at restaurants and other commercial food service establishments to preparing and eating food at home.

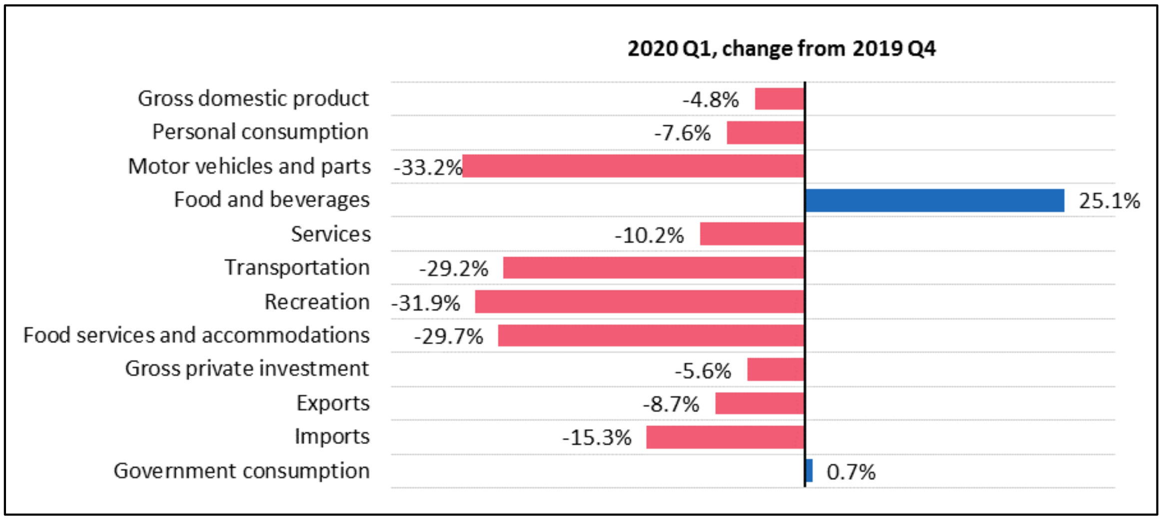
[127] *Federal Reserve Releases FOMC Statement*, March 3, 2020, https://www.federalreserve.gov/newsevents/pressreleases/monetary20200303a.htm.

[128] *Stage Three Proposal*, U.S. Department of the Treasury, March 17, 2020. https://www.washingtonpost.com/context/department-of-treasury-proposal-for-COVID-19-response/6c2d2ed5-a18b-43d2-8124-28d394fa51ff/?itid=lk_inline_manual_3.

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

[130] 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.

Figure 6. U.S. GDP, Percent Change From Preceding Quarter, 1st Quarter 2020

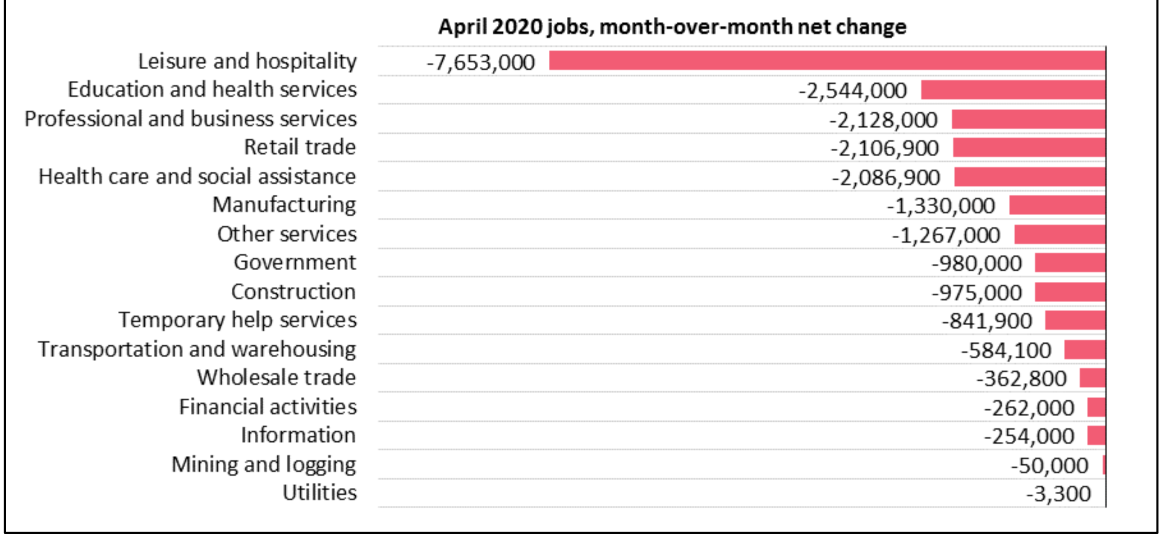


Source: Bureau of Economic Analysis. Created by CRS.

On May 5, the U.S. Census Bureau reported an increase in the overall U.S. trade deficit on a month-to-month basis of $4.5 billion, reflecting lower amounts of exports and imports of both goods and services. Exports and imports of both goods and services fell from the previous month, although the deficit in goods trade imports increased from $61 billion in February to $65.6 billion in March; the surplus in services trade fell from $21.23 billion to $21.18 billion.

On May 8, the Department of Labor reported that the U.S. non-farm unemployment rate in April increased by 20 million, raising the total number of unemployed Americans 23 million, or an unemployment rate of 14% of a total civilian labor force of 156 million. The unemployment rate does not include approximately 10 million workers who are involuntarily working part-time and another 9 million individuals seeking employment. As indicated in **Figure 7**, 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 non-farm sector and all labor groups.

Figure 7. Change in U.S. Employment by Major Industrial Sector



Source: *The Employment Situation*, Bureau of Labor Statistics, April 2020. Created by CRS.

In a speech on May 13, Federal Reserve Chairman Jerome Powell stated that the Federal Reserve's analysis indicated that of individuals working in February, "almost 40 percent of those in households making less than $40,000 a year had lost a job in March."[131] Chairman Powell also indicated that given the extraordinary nature of the current economic downturn that 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 current situation, Chairman Powell said,

> The overall policy response to date has provided a measure of relief and stability, and will provide some support to the recovery when it comes. But the coronavirus crisis raises longer-term concerns as well. The record shows that deeper and longer recessions can leave behind lasting damage to the productive capacity of the economy. Avoidable household and business insolvencies can weigh on growth for years to come. Long stretches of unemployment can damage or end workers' careers as their skills lose value and professional networks dry up, and leave families in greater debt. The loss of thousands of small- and medium-sized businesses across the country would destroy the life's work and family legacy of many business and community leaders and limit the strength of the recovery when it comes. These businesses are a principal source of job creation—something we will sorely need as people seek to return to work. A prolonged recession and weak recovery could also discourage business investment and expansion, further limiting the resurgence of jobs as well as the growth of capital stock and the pace of technological advancement. The result could be an extended period of low productivity growth and stagnant incomes.[132]

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

[132] Ibid.

Monetary Policy[133]

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

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133 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.

foreign central banks to convert their U.S. Treasury holdings into U.S. dollars on an overnight 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.[134]

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.

[134] 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 provides paid sick leave and free COVID-19 testing, expands food assistance and unemployment benefits, and requires employers to provide additional protections for health care workers. Other countries have indicated they will also provide assistance to workers and to some businesses. Congress also is considering 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,[135] and extended of the tax filing deadline.[136] President Trump has taken additional actions, including:

[135] 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/.

[136] 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.[137]
- Declaring on March 13, a state of emergency that frees 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.[138]
- Invoking on March 18, 2020, the Defense Production Act (DPA) that gives him the authority to require some U.S. businesses to increase production of medical equipment and supplies that are in short supply.[139]

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:

- Provides 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).
- Assists small businesses by providing funding for, forgivable bridge loans; and additional funding for grants and technical assistance; authorizes emergency loans to distressed businesses, including air carriers, and suspends certain aviation excise taxes.
- Creates a $367 billion loan program for small businesses, establishes a $500 billion lending fund for industries, cities and states, a $150 billion for state and local stimulus funds, and $130 billion for hospitals.
- Increases unemployment insurance benefits, expands eligibility and offer workers an additional $600 a week for four month, in addition to state unemployment programs.[140]
- Establishes special rules for certain tax-favored withdrawals from retirement plans; delays due dates for employer payroll taxes and estimated tax

[137] 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.

[138] 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/.

[139] 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.

[140] 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.

payments for corporations; and revises other provisions, including those related to losses, charitable deductions, and business interest.

- Provides additional funding for the prevention, diagnosis, and treatment of COVID-19; limits liability for volunteer health care professionals; prioritizes Food and Drug Administration (FDA) review of certain drugs; allows emergency use of certain diagnostic tests that are not approved by the FDA; expands health-insurance coverage for diagnostic testing and requires coverage for preventative services and vaccines; and revises 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 suspends payments for federal student loans and revises provisions related to campus-based aid, supplemental educational-opportunity grants, federal work-study, subsidized loans, Pell grants, and foreign institutions.
- Authorizes the Department of the Treasury temporarily to guarantee money-market funds.

On April 23, 2020, the House 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 provides $484 billion for small business loans, health care providers, and COVID-19 testing. In particular, the law:

- Provides additional lending authority for certain Small Business Administration (SBA) programs in response to COVID-19 increases 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) advances on emergency economic injury disaster loans made in response to COVID-19. The division also expands eligibility for such disaster loans and advances to include agricultural enterprises.
- Provides $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 are 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.
- Allocates 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:

- Appropriate $200 billion in hazard pay to essential workers.
- Extend additional payments to individuals, for nutrition and housing assistance, and provide funding for additional testing and contact tracing.
- Restore the tax deduction for state and local taxes.

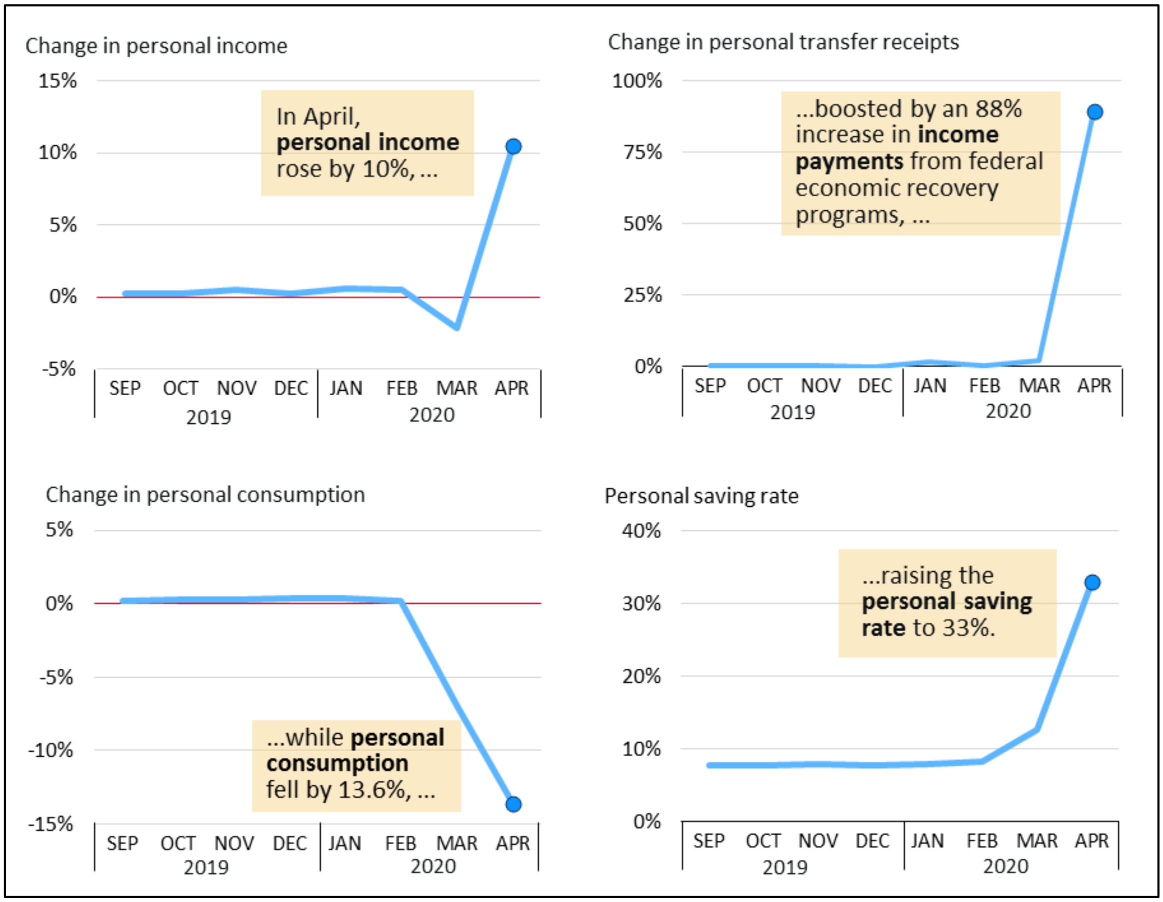
- Provide FY2020 emergency supplemental appropriations to federal agencies.
- Provide payments and other assistance to state, local, tribal, and territorial governments.
- Provide additional direct payments of up to $1,200 per individual.
- Expand paid sick days, family and medical leave, unemployment compensation, nutrition and food assistance programs, housing assistance, and payments to farmers.
- Modify and expand the Paycheck Protection Program, which provides loans and grants to small businesses and nonprofit organizations.
- Expand several tax credits and deductions.
- Provide funding and establish requirements for COVID-19 testing and contact tracing.
- Eliminate cost-sharing for COVID-19 treatments;
- Extend and expand the moratorium on certain evictions and foreclosures; and
- Require employers to develop and implement infectious disease exposure control plans.

On May 27, the Federal Reserve released its "Beige Book"- a mostly qualitative assessment of the U.S. economy produced eight 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 to mid-May had fallen sharply in each of the districts.[141] The Bureau of Economic Analysis (BEA) reported on May 29 that U.S. personal income rose by 10.5% in April, primarily reflecting an 88% increase in government payments to individuals from federal economic recovery programs, as indicated in **Figure 8**. During the same period, personal consumption fell by more than 13% as consumers curtailed spending. The lower level of spending combined with income transfers, which households apparently deposited into saving accounts, raising the personal savings rate to 33% in April at an annual rate, compared to an annual rate of 8.2% in February. During May, the price of Brent crude oil increased by 33.5%, rising from $26.44 per barrel to $35.31 per barrel.

[141] *The Beige Book: Summary of Commentary on Current Economic Conditions by Federal Reserve District*, May 17, 2020, the Federal Reserve System.

Figure 8. U.S. Personal Income, Consumption, and Saving

At annual rate



Source: *Personal Income and Outlays, April 2020*, Bureau of Economic Analysis, May 29, 2020.

For additional information about the impact of COVID-19 on the U.S. economy see CRS Insight IN11235, *COVID-19: Potential Economic Effects*.[142]

Europe

To date, European countries have not displayed a synchronized policy response similar to the one they developed during the 2008-2009 global financial crisis. Instead, they have used a combination of national fiscal policies and bond buying by the ECB to address the economic impact of the pandemic. Individual countries have 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 has 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. Various EU and ECB officials are attempting to negotiate a coordinated fiscal response by the Eurozone and broader EU.

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

In its May 2020 economic forecast, the European Commission forecasted that EU GDP in 2020 would fall by 7.4% and the unemployment rate would rise to 9.0%, as indicated in **Table 3**. The Commission stated that, "Given the severity of this unprecedented worldwide shock, it is now quite clear that the EU has entered the deepest economic recession in its history." In addition, the Commission forecasted that EU GDP would rise rapidly in 2021, although not fast enough to erase all the 2020 decline, but would exhibit a distinct "V" shaped recession and recovery. Greece, Spain, France, and Italy are forecasted to experience the largest declines in GDP in 2020 as a result of their dependence on tourism, which is expected to experience a slow economic recovery. Germany and other Northern European countries are 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.[143] To address 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."[144]

Table 3. European Commission Economic Forecast May 2020

(percent change)

	Real GDP			Unemployment rate		
	2019	2020	2021	2019	2020	2021
EU	1.5	-7.4	6.1	6.7	9.0	7.9
Euro area	1.2	-7.7	6.3	7.5	9.6	8.6
Belgium	1.4	-7.2	6.7	5.4	7.0	6.6
Germany	0.6	-6.5	5.9	3.2	4.0	3.5
Ireland	5.5	-7.9	6.1	5.0	7.4	7.0
Greece	1.9	-9.7	7.9	17.3	19.9	16.8
Spain	2.0	-9.4	7.0	14.1	18.9	17.0
France	1.3	-8.2	7.4	8.5	10.1	9.7
Italy	0.3	-9.5	6.5	10.0	11.8	10.7
Luxembourg	2.3	-5.4	5.7	5.6	6.4	6.1
Malta	4.4	-5.8	6.0	3.4	5.9	4.4
Netherlands	1.8	-6.8	5.0	3.4	5.9	5.3
Austria	1.6	-5.5	5.0	4.5	5.8	4.9
Portugal	2.2	-6.8	5.8	6.5	9.7	7.4
Finland	1.0	-6.3	3.7	6.7	8.3	7.7
Denmark	2.4	-5.9	5.1	5.0	6.4	5.7
Sweden	1.2	-6.1	4.3	6.8	9.7	9.3
United Kingdom	1.4	-8.3	6.0	3.8	6.7	6.0

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

[144] *European Economic Forecast spring 2020*, European Commission, May 5, 2020.

Source: European Economic Forecast Spring 2020, European Commission, May 6. 2020,

Pandemic-related economic effects reportedly are having a significant impact on business activity in Europe, with some indexes falling farther then they had during the height of the financial crisis and others indicating that Europe may well experience a deep economic recession in 2020.[145] France, Germany, Italy, Spain, and the UK reported steep drops in industrial activity in March 2020. EU countries have issued travel warnings, banning all but essential travel across borders, raising concerns that even much-needed medical supplies could stall at borders affected by traffic backups.[146] The travel bans and border closures reportedly are causing shortages of farm laborers in Germany, the UK, and Spain, which has caused growers to attempt to recruit students and workers laid off because of the pandemic.[147]

In previous actions, the European Commission had announced that it was relaxing 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 Netherland, among other Eurozone members.[148] 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.[149] 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.[150] In other actions:

- 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.[151]

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[145] Arnold, Martin and Valentina Romei, "Business Activity Crashes to Record Low in Eurozone," *Financial Times*, March 24, 2020. https://www.ft.com/content/f5ebabd4-6dad-11ea-89df-41bea055720b.

[146] Birnbaum, Michael, "Europe Is Closing Borders amid Covid-19 Outbreak. They May be Hard to Reopen," *Washington Post*, March 17, 2020. https://www.washingtonpost.com/world/europe/europe-closing-borders-Covid-19/2020/03/17/131a6f56-67c8-11ea-b199-3a9799c54512_story.html.

[147] Evans, Judith Evans, Emiko Terazono, and Leila Abboud, "Farmers Warn over Food Supply with Harvest Workers Shut Out," *Financial Times*, March 27, 2020. https://www.ft.com/content/e27a9395-db47-4e7b-b054-3ec6ba4cbba3.

[148] 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.

[149] "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.

[150] 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.

[151] *Monetary Policy Decisions*, The European Central Bank, March 12, 2020. https://www.ecb.europa.eu/press/pr/date/

- 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 indexes on March 12, 2020.[152] 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.[153]
- 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,[154] and export credits and guarantees.[155]
- 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.[156] 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.[157] 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.[158]
- 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.[159]

2020/html/ecb.mp200312~8d3aec3ff2.en.htm.

[152] 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.

[153] 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.

[154] 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/.

[155] 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.

[156] *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.

[157] 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.

[158] "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.

[159] 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.

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 ECB about various aspects of the PSPP program that the court argued might exceed the ECB's legal mandate. The German government has not yet indicated how it will formally respond to the ruling, but many analysts contend that 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 could potentially include challenges to the ECB's Pandemic Emergency Purchase Program (PEPP) initiated in March. The PEPP is a temporary program that authorizes 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 has 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, the PSPP program held €2.2 trillion (about $2.5 trillion) with another €600 billion (about $700 billion) held under other asset purchase programs.[160] Various groups in Germany challenged the legality of the ECB bond-buying programs before the German Constitutional Court arguing that 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 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 that 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.

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 EU fiscal response to the pandemic.[161] Reportedly, the funds would be 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 that the Bank 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

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

[161] 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.

called for a €500 billion (about $620 billion) stimulus package.[162] 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.[163] Questions remain 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.[164] 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.[165] 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.[166]

The United Kingdom

The United Kingdom has taken a number of steps to support economic activity. These steps are 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. The Bank of England has 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

[162] 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.

163 Birnbaum, Michael, and Loveday Morris, E.U. Proposes $825 Billion Coronavirus Rescue Plan Giving Brussels Power to Raise Money for First Time, *The 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.

[164] 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.

[165] 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.

[166] 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.

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.[167]

- 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 non-financial investment-grade corporate bonds.[168]
- 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).
- 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.[169]

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 provides affected workers up to 80% of their salary, or up to £2,500 a month (about $2,800) if they are laid off. Some estimates indicate that UK spending to support its economy could rise to about $60 billion in 2020.[170] 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.[171] Part of the fiscal spending package includes 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.[172]

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

[168] 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.

[169] 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.

[170] Parker, George Parker, 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.

[171] Ibid.

[172] Payne, Sebastian and Chris Giles, "Budget 2020: Sunak Unveils £30bn Stimulus to Counter UK Covid-19 Shock,"

Japan

The Bank of Japan, with already-low interest rates, injected $4.6 billion in liquidity into Japanese banks 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.[173] On March 24, 2020, Japan announced that the Summer Olympics set to take place in Tokyo would be postponed by a year, delaying an expected boost to the Japanese economy that was expected from the event. Japan reportedly is considering an emergency fiscal package of about $515 billion, 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.[174]

The Japanese Cabinet proposed a second supplemental appropriation measure that includes $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 are comparable to 40% of Japan's GDP and include 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.[175]

China

According to a recent CRS In Focus,[176] China's economic growth could go negative in the first quarter of 2020 and fall below 5% for the year, with more serious effects if the outbreak continues. In early February, China's central bank pumped $57 billion into the banking system, capped banks' interest rates on loans for major firms, and extended deadlines for banks to curb shadow lending. The central bank has been setting the reference rate for China's currency stronger than its official close rate to keep it stable. On March 13, 2020, The People's Bank of China announced that it would provide $78.8 billion in funding, primarily to small businesses, by reducing bank's reserve requirements.[177]

The International Monetary Fund (IMF) is providing funding to poor and emerging market economies that are short on financial resources.[178] If the economic effects of the virus persist,

Financial Times. https://www.ft.com/content/f7b27264-6384-11ea-a6cd-df28cc3c6a68.

[173] 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.

[174] 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.

[175] 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.

[176] For additional information about China's response, see CRS In Focus IF11434, *COVID-19: U.S.-China Economic Considerations,* by Karen M. Sutter and Michael D. Sutherland.

[177] Weinland, Don, "China's Central Bank Launches $79bn Stimulus for Virus-Hit Companies," *Financial Times,* March 13, 2020. https://www.ft.com/content/deb56f86-6515-11ea-b3f3-fe4680ea68b5.

[178] 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.

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.

Multilateral Response

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,[179] and IMF Managing Director Kristalina Georgieva has stated that 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.[180] 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.[181]

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.[182] 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.

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, 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.

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

[180] 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.

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

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

World Bank and Regional Development Banks

Multilateral Response[183]

International Monetary Fund

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

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

[185] 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.

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

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

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.[188] 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.[189] 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.[190]

Over the next 15 months, the World Bank Group estimates 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 Fund (HEPRF).[191] 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.[192] 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.[193]

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

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

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

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

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

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

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

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."[194] 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 Group, as well as other international organizations, to support countries worldwide as part of a coordinated global response.[195]

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.[196] The G-20 is a broader group of economies, including the G-7 countries and several major emerging markets.[197] 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.[198]

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.[199] 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.[200] 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.[201] Their concerns focus on the Trump Administration's prioritization of an

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

[195] Ibid

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

[197] 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).

[198] For more information about the G-20, see CRS Report R40977, *The G-20 and International Economic Cooperation: Background and Implications for Congress*, by Rebecca M. Nelson.

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

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

[201] Matthew Goodman and Mark Sobel, "Time to Pull the G-20 Fire Bell," Center for Strategic and International

"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.[202] 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.

Estimated Effects on Developed and Major Economies

Among most developed and major developing economies, economic growth at the beginning of 2020 was tepid, but still was estimated to be positive. Countries highly dependent on trade—Canada, Germany, Italy, Japan, Mexico, and South Korea—and commodity exporters are now projected to be the most negatively affected by the slowdown in economic activity associated with the virus.[203] In addition, travel bans and quarantines are taking a heavy economic toll on a broad range of countries. The OECD notes that production declines in China have 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.[204] 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.[205]

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.[206] 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

Studies, March 18, 2020.

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

203 *OECD Interim Economic Assessment*, p. 7.

204 Ibid., p. 5.

205 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.

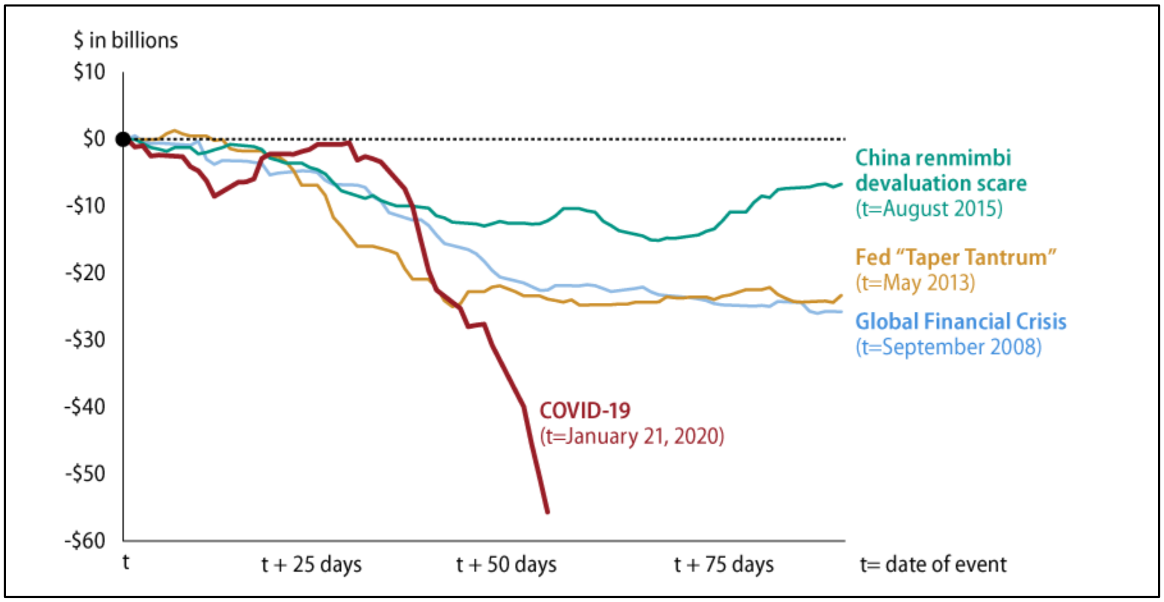
206 *Tentative Stabilization, Sluggish Recovery? World Economic Outlook Update*, January 20, 2020, The International Monetary Fund. https://www.imf.org/en/Publications/WEO/Issues/2020/01/20/weo-update-january2020.

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.

Emerging Markets

The combined impact of COVID-19, an increase in the value of the dollar, and an oil price war between Saudi Arabia and Russia are hitting developing and emerging economies hard. Not all of these countries have the resources or policy flexibility to respond effectively. According to figures compiled by the Institute for International Finance (IIF), cumulative capital outflows from developing countries since January 2020 are double the level experienced during the 2008/2009 crisis and substantially higher than recent market events (**Figure 9**).[207]

Figure 9. Capital Flows to Emerging Markets in Global Shocks



Source: Original graphic and data from International Institute for Finance using data from Haver. Edited by CRS for clarification.

The impact of the price war and lower energy demand associated with a COVID-19-related economic slowdown is especially hard on oil and gas exporters, some of whose currencies are at record lows (**Figure 10**). Oil importers, such as South Africa and Turkey, have also been hit hard; South Africa's rand has fallen 18%[208] against the dollar since the beginning of 2020 and the Turkish lira has lost 8.5%.[209] Some economists are concerned that the depreciation in currencies

[207] These include concerns in 2015 over China's renminbi devaluation and the so-called "Taper Tantrum" in 2013 when the Federal Reserve announced that it would slow down the pace of its post global financial crisis asset purchases. Sergei Lanau and Jonathan Fortun, "Economic Views—The COVID-19 Shock to EM Flows," Institute for International Finance, March 17, 2020.

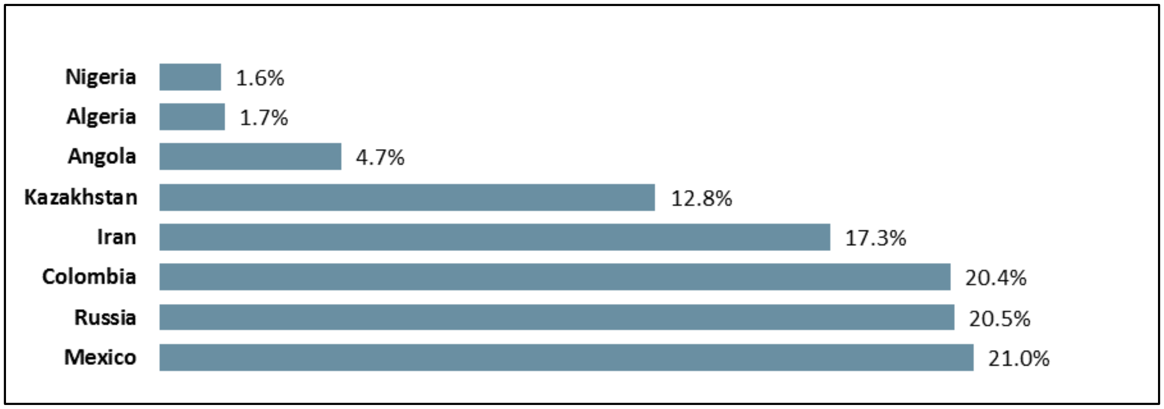
[208] Paul Wallace, "Here's How the Oil Crash is Hitting Emerging Market Currencies," *Bloomberg*, March 17, 2020, https://www.bloomberg.com/news/articles/2020-03-17/here-s-how-the-oil-crash-is-hitting-emerging-market-currencies.

[209] Nevzat Devranoglu, "Turkish Lira Hits Weakest Level Since 2018 Currency Crisis Due to Covid-19," *Nasdaq*, March 17, 2020, https://www.nasdaq.com/articles/turkish-lira-hits-weakest-level-since-2018-currency-crisis-due-to-Covid-19-2020-03-17.

could lead to rising rates of inflation by pushing up the prices of imports and negatively economic growth rates in 2020.[210]

Depending on individual levels of foreign exchange reserves and the duration of the capital flow slowdown, some countries may have sufficient buffers to weather the slowdown, while others will likely need to make some form of current account adjustment (reduce spending, raise taxes, etc.). Several countries, such as Iran and Venezuela, have already asked the IMF for financial assistance and others are likely to follow.[211] (Venezuela's request was quickly rebuffed due to disagreement among the IMF membership over who is recognized as Venezuela's legitimate leader: Nicolás Maduro or Juan Guaidó.[212])

Figure 10. Depreciation Against the Dollar Since January 1, 2020



Source: Created by CRS. Data from Bloomberg.

International Economic Cooperation

Initial efforts at coordinating the economic response to the COVID-19 pandemic across countries have been uneven. Governments are 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. 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 been hoping for, and U.S. and European stock markets fell sharply after the meeting.[213] 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

[210] Johnson, Steve, "Currency Sell-Off Threatens Emerging Market Response to Covid-19," *Financial Times*, March 3, 2020. https://www.ft.com/content/94ad9d70-2ca2-4490-96fb-5b01b509ed37.

[211] "COVID-19-Hit Iran Asks IMF for Aid amid US Sanctions," *Deutsche Walle*, March 13, 2020, https://www.dw.com/en/covid-19-hit-iran-asks-imf-for-aid-amid-us-sanctions/a-52763114. Iran is currently under U.S. sanctions, which include, among other things, prohibitions on the ability of the United States to vote in favor of lending IMF or World Bank assistance to Iran. The United States, however, cannot unilaterally block lending to a particular country. Approving an IMF or World Bank loan requires a majority of the total voting power and the U.S. voting power is 16.5% of the total voting power at the IMF and 15.4% at the World Bank. Iran has not borrowed from the IMF since 1962, but did borrow from the World Bank between 2003 and 2005 over U.S. opposition.

[212] Joshua Goodman, "IMF Rejects Maduro's Bid for Emergency Loan to Fight Virus," *StarTribune*, http://www.startribune.com/venezuela-seeks-emergency-5-billion-imf-loan-to-fight-virus/568868442/.

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

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."[214] 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 Group, as well as other international organizations, to support countries worldwide as part of a coordinated global response.[215] G-7 coordination has not been unproblematic however, including 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.[216] The United States is chairing the G-7 in 2020, and while the June summit at Camp David had been canceled due to concerns about COVID-19, on May 20, President Trump indicated that the summit may be held after all.

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.[217] Even though G-20 coordination is 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 current 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, is embroiled in its own domestic political issues and oil price war; and U.S.-China tensions make G-20 consensus more difficult.[218] 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.[219] However, G-20 coordination appears 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, 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.[220] 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,

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

[215] Ibid

[216] "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.

[217] 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).

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

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

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

while noting that many FSB members have already 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.[221] 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.[222] 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 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 are ceasing production, brick-and-mortar retail stores and restaurants are closing, commodity prices have plunged (Bloomberg commodity price index—a basket of oil, metals, and food prices—has dropped 27% since the start of the year and is now at its lowest level since 1986), and overseas and in some cases domestic travel is being curtailed.[223] Some governments, including Argentina and Lebanon, were already experiencing debt pressures, which have been exacerbated by the pandemic. Other countries are facing new debt pressures created by the pandemic, while some countries, such as Abu Dhabi and Egypt, have completed successful sovereign bond sales since the outbreak of the pandemic.[224]

Households are facing a rapid increase in unemployment and, in many developing countries, a decline in remittances. With fewer resources, corporations and households may default on their debts, absent government intervention. These defaults will result in a decline in bank assets, making it difficult for banks to extend new loans during the crisis or, more severely, creating solvency problems for banks. Meanwhile, many governments are dramatically increasing spending to combat the pandemic, and are likely to 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 denominated in foreign currencies (usually U.S. dollars). Many emerging market currencies have 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 have 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

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

[222] 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.

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

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

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 could quickly become overloaded are 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-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.[225] 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.[226] 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.[227]

Other Affected Sectors

Public concerns over the spread of the virus have led to self-quarantines, reductions in airline and cruise liner travel, the closing of such institutions as the Louvre, and the rescheduling of theatrical releases of movies, including the sequel in the iconic James Bond series (titled, "No Time to

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

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

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

Die").[228] School closures are affecting 1.5 billion children worldwide, challenging parental leave policies.[229] Other countries are limiting the size of public gatherings.

Some businesses are considering 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 are adopting an open-leave policy to ensure employees receive sick pay if they are, or suspect they are, infected. Other firms are adopting paid sick leave policies to encourage sick employees to stay home and are adopting remote working policies.[230] Microsoft and Amazon have instructed all of their Seattle-based employees to work from home until the end of March 2020.[231]

The drop in business and tourist travel is causing a sharp drop in scheduled airline flights by as much as 10%; airlines are estimating they could lose $113 billion in 2020 (an estimate that could prove optimistic given the Trump Administration's announced restrictions on flights from Europe to the United States and the growing list of countries that are similarly restricting flights),[232] while airports in Europe estimate they could lose $4.3 billion in revenue due to fewer flights.[233] Industry experts estimate that many airlines will be in bankruptcy by May 2020 under current conditions as a result of travel restrictions imposed by a growing number of countries.[234] The loss of Chinese tourists is another economic blow to countries in Asia and elsewhere that have benefitted from the growing market for Chinese tourists and the stimulus such tourism has provided.

The decline in industrial activity has reduced demand for energy products such as crude oil, causing prices to drop sharply, which negatively affects energy producers, renewable energy producers, and electric vehicle manufacturers, but generally is positive for consumers and businesses. Saudi Arabia is pushing 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, support the move to raise prices.[235] 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 has driven oil prices below $25 per barrel at times, half the estimated $50 per barrel break-even point

[228] Rosenberg, Alyssa, "Covid-19 Shut Down Mona Lisa and James Bond. We Can't Let it Isolate Us," *Washington Post*, March 4, 2020. https://www.washingtonpost.com/opinions/2020/03/04/Covid-19-shut-down-mona-lisa-james-bond-we-cant-let-it-isolate-us/.

[229] 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/.

[230] 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.

[231] 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/.

[232] 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/.

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

[234] Smyth, Jamie Smyth, Andrew Edgecliffe-Johnson, Peggy Hollinger, Myles McCormick, David Keohane, and Richard Milne, "Most Airlines Face Bankruptcy by End of May, Industry Body Warns," *Financial Times*, March 16, 2020.

[235] 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.

for most oil producing countries.[236] Rising oil supplies and falling demand are combining to create an estimated surplus of 25 million barrels a day and could soon overwhelm storage capacity and challenge the viability of U.S. shale oil production.[237] 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.[238] 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.[239]

Disruptions to industrial activity in China reportedly are causing delays in shipments of computers, cell phones, toys, and medical equipment.[240] Factory output in China, the United States, Japan, and South Korea all declined in the first months of 2020.[241] Reduced Chinese agricultural exports, including to Japan, are leading to shortages in some commodities. In addition, numerous auto producers are facing shortages in parts and other supplies that have been sourced in China. Reductions in international trade have also affected ocean freight prices. Some freight companies argue that they could be forced to shutter if prices do not rebound quickly.[242] Disruptions in the movements of goods and people reportedly are causing some companies to reassess how international they want their supply chains to be.[243] According to some estimates, nearly every member of the Fortune 1000 is being affected by disruptions in production in China.[244]

Conclusions

The quickly evolving nature of the COVID-19 crisis creates a number of issues that make it difficult to estimate the full cost to global economic activity. These issues include, but are not limited to:

- How long will the crisis last?
- How many workers will be affected both temporarily and permanently?

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[236] 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.

[237] 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.

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

[239] Ibid.

[240] 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.

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

[242] 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

[243] Ibid.

[244] Ibid.

- How many countries will be infected and how much economic activity will be reduced?
- When will the economic effects peak?
- How much economic activity will be lost as a result of the viral outbreak?
- What are the most effective monetary and fiscal policies at the national and global level to address the crisis?
- What temporary and permanent effects will the crisis have on how businesses organize their work forces?
- Many of the public health measures taken by countries such as Italy, Taiwan, South Korea, Hong Kong, and China have sharply impacted their economies (with plant closures, travel restrictions, and so forth). How are the tradeoffs between public health and the economic impact of policies to contain the spread of the virus being weighed?

Appendix. Table A-1. Select Measures Implemented and Announced by Major Economies in Response to COVID-19

United States	*U.S. Federal Reserve* **March 3:** Cut the target range for the federal funds rate by 0.5 percentage point. **March 12:** Expanded reverse repo operations, adding $1.5 trillion of liquidity to the banking system. **March 15:** Cut the target range for the federal funds rate by a full percentage point to a range of 0.00% to 0.25% and restarted quantitative easing with the purchase of at least $500 billion in Treasury securities and $200 billion in mortgage-backed securities. **March 16:** Increased reverse repo operations by another $500 billion. **March 17:** U.S. Treasury Secretary Mnuchin approved the Federal Reserve's creation of a "Commercial Paper Funding Facility," (CPFF) through March 17, 2021, which will allows the Fed to create a corporation which can purchase commercial paper, short-term, unsecured loans made by businesses for everyday expenses and authorized up to $10 billion from the Treasury to help cover loan losses incurred under this program. **March 17:** Relaunched the Primary Dealer Credit Facility (PDCF) for at least six months. Starting March 20, the PDCF will offer short-term loans to banks secured by collateral such as municipal bonds or investment-grade corporate debt. **March 18:** Launched the Money Market Mutual Fund Liquidity Facility (MMLF) through the end of September, a new program to lend money to banks so they can purchase assets from money market funds. Treasury is offering up to $10 billion to cover loan losses the Fed incurs from the program. **March 23:** Announced a series of measures designed to stabilize markets, enhance liquidity and stimulate growth. The measures included the roll out of 2 new facilities, the Primary Market Corporate Credit Facility (PMCCF) for new bond and loan issuance and the Secondary Market Corporate Credit Facility (SMCCF) to provide liquidity for outstanding corporate bonds. The FOMC removed its caps on planned QE purchases and will now purchase Treasuries and agency mortgage-backed securities "in the amounts needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions and the economy." *U.S. Congress* **March 5:** Passed, and the President signed, a bill providing $8.3 billion in emergency funding for federal agencies to respond to the COVID-19 outbreak (H.R. 6074: COVID-19 Preparedness and Response Supplemental Appropriations Act 2020). **March 13:** The House of Representatives passed a COVID-19 response package (H.R. 6201; P.L. 116-127, Families First COVID-19 Response Act); measure was signed by President Trump on March 18, 2020. The measure appropriates about $100 billion and includes tax credits for employers offering paid sick leave and increases to unemployment benefits and food assistance. **March 19**: The Senate introduced the COVID-19 Aid, Relief, and Economic Security Act (S. 3548) to provide $2.0 trillion in assistance to businesses and workers. **March 27:** Passed, and the President signed, the COVID-19 Aid, Relief, and Economic Security Act (CARES Act, H.R. 748, P.L. 116-136), a $2.1 trillion fiscal stimulus package. It includes $454 billion in loans for businesses, $349 billion in loans for small businesses, $300 billion for direct payments of $1,200 each for lower- and

	middle-income individual taxpayers (and $500 for each child), $250 billion for unemployment insurance, and $221 billion in tax deferrals, among other measures. **March 30:** Some Members of the House of Representatives announced they had begun work on a fourth COVID-19 bill targeting a number of issues, including short supplies of medical equipment and protective gear to enhance worker protections, infrastructure needs, and additional payments to individuals. *Trump Administration* **March 13:** President Trump declared a state of emergency, allowing the Federal Government to distribute up to $50 billion in aid to states, cities, and territories. **March 17:** The Internal Revenue Service postponed the April 15 tax-payment deadline for 90 days and will waive interest and penalties. (The extension and waiver is available only to individuals and corporations that owe $1 million or $10 million or less, respectively.) **March 17:** Administration officials begin negotiations with Members of Congress on a third stimulus package. **March 31:** President Trump calls for $2 trillion infrastructure spending, possibly as part of fourth COVID-19 stimulus bill.
Albania	*The Bank of Albania* **March 25:** Cut its benchmark interest rate to a record-low 0.5% and its one-day lending rate to 0.9% on to help lending in the economy affected by the COVID-19 outbreak. It also announced that it would inject unlimited liquidity into the banking sector, ensure the normal functioning of the electronic payments system, and that, together with the government, it had agreed to postpone until the end of May all loan repayments by businesses and individuals facing difficulties due to the outbreak. *Government of Albania* **March 20:** Passed measures totaling $370 million in its budget to soften the impact from the COVID-19 crisis, including $25 million for the health sector; guarantees worth $100 million to companies unable to pay their employees; and $65 million to help the needy, small businesses, and those unable to work because of stay-at-home orders. It also announced that it would write off penalties on delayed electricity bill payments worth some $150 million, postpone taxes on company profits, and cut the wages of government ministers and lawmakers by half for the duration of the crisis.
Argentina	*Central Bank of Argentina* **March 19:** Indicated that it would lower reserve requirements for banks that extended special credit lines to small and medium-sized enterprises at a maximum annual interest rate of 24% in a bid to offset the impact of COVID-19. *Government of Argentina* **March 19:** Announced a fiscal stimulus package of 700 billion pesos ($11.3 billion) to mitigate the impact of the COVID-19 and support the economy. The main measures include providing credit to productive activities (350 billion pesos), increasing public investments (100 billion pesos), and waiving payroll taxes for firms affected by the COVID-19.
Armenia	**March 17:** The Central Bank of Armenia cut its key refinancing rate by 25 basis points to 5.25% from 5.5% due to the effects of the COVID-19 outbreak on the economy.
Australia	*Reserve Bank of Australia* **March 3:** Cut its benchmark interest rate by 25 basis points to 0.5% due to the significant effect of the COVID-19 outbreak on the Australian economy. **March 19:** Cut its cash rate by 25 basis points to 0.25% and and introduced a series of measures: (1) targeting the 3-year government bond yield at 0.25% via purchases in

	the secondary market, (2) providing a three-year term funding facility to authorized deposit-taking institutions worth at least AU$90 billion at a fixed rate of 0.25%, aiming to support credit to small and medium-sized enterprises, (3) fixing the exchange settle balances at the central bank at 10 basis points. It will also continue to provide liquidity by conducting one-month and three-month repo operations until further notice. Longer-term repo operations of six-month maturity or longer would be undertaken at least weekly. The central bank also set out forward guidance, saying that it will not increase the cash rate until progress is made towards full employment and confident that inflation is sustainably within its target band. **March 19:** Through its daily money market operation, it has injected cash into the banking system (through repurchasing agreements), aiming to ease liquidity constraints in the stressed bond market: AU$12.7 billion (March 19), AU$10.7 billion (March 18), AU$8.8 (March 17), AU$5.9 billion (March 16), and AU$8.8 (March 13). *Government of Australia* **March 12:** Announced a AU$17.6 billion ($11.4 billion) stimulus package that includes support for business investment, cash flow assistance for small and medium sized business and employees, and household stimulus payments. **March 16:** The Australian Securities and Investments Commission ordered large equity market participants to reduce their number of executed trades by 25% from the levels executed on March 13, 2020, until further notice. **March 19:** Announced that the Australian Office of Financial Management (AOFM) will be provided with an investment capacity of $15 billion to enable smaller lenders to continue supporting Australian consumers and small businesses. (AOFM will be able to purchase residential mortgage backed securities and invest in a range of other asset backed securities and warehouse facilities over the next 12 months.) **March 22:** Announced an additional AU$66.4 billion ($38.5 billion) fiscal package, which extends income support measures for existing welfare and newly unemployed workers, and boosted previously announced measures for businesses such as cash flow and wage subsidies. The government is also expected to give local businesses AU$100,000 if the company has a turnover of less than AU$50 million each year and underwrite 50% of up AU$40 billion in loans offered by local lenders to small and medium sized companies. **March 30:** Unveiled an economic package of AU$130 billion ($79.85 billion) to subsidize the wages of an estimated 6 million people, marking a third tranche of stimulus designed to limit the fallout of the COVID-19 pandemic on the country's economy. The "job keeper" allowance, which would bring the country's COVID-19-related stimulus so far to A$320 billion (about 15% of Australia's gross domestic product), will provide eligible companies with AU$1,500 every fortnight for six months for each employee. Any company that lost 30% of its revenue can apply for the funds.
Austria	*Government of Austria* **March 14:** Set up an initial 4 billion euro ($4.4 billion) "corona crisis fund" to cover, among other things, benefits for affected workers, as well as bridge loans and credit guarantees to shore up businesses' liquidity. **March 18:** Announced that it will spend up to 38 billion euros ($42 billion) to secure jobs and keep companies afloat, and it will provide another 9 billion euros in guarantees and warranties, 15 billion euros in emergency aid, and 10 billion euros in tax deferrals.
Bosnia and Herzegovina	**March 17:** The prime minister met with the IMF Resident Representative in Bosnia to request assistance from the IMF. The IMF indicated that it may extend a 165 million euros ($181 million) loan to Bosnia under a Rapid Financing Instrument (RFI) to finance the increasing costs sustained by the country's health system in combating COVID-19.

Brazil	*Central Bank of Brazil* **March 18:** Cut its benchmark interest rate by 50 basis points to 3.75% to cushion the economic blow of the COVID-19 pandemic. It also sold $830 million in two rounds of spot foreign exchange intervention and announced a repurchase program for dollar-denominated sovereign bonds held by Brazilian banks, which will be carried out in conjunction with the Treasury. **March 23:** Announced that it planned to inject 1.2 trillion reais ($233.81 billion) into the country's financial system to counteract the effects of the COVID-19 outbreak, with more than half that amount comprising loans to banks. Under the program, lenders will be able to package their loan portfolios into long-term deposits to be acquired by the central bank in a move aimed at freeing up 670 billion reais for fresh loans. It also (1) cut long-term reserve requirements to 17% from 25%, freeing up 68 billion reais currently in compulsory deposits with the central bank to banks, (2) announced measures allowing small and mid-sized lenders to issue up to 2 billion reais in special long-term bonds guaranteed by a privately held deposit insurance fund, limited to an amount equivalent to its shareholders' equity, and (3) will extend loans backed by corporate bonds to financial institutions between March 23 and April 30 to add liquidity to their investment funds. *Government of Brazil* **March 16:** Announced a fiscal stimulus package of 147.1 billion reais ($28.6 billion) to mitigate the impact of the COVID-19 and boost the economy. It does not contain new money, but is a range of measures that aim to protect the most vulnerable population through social assistance payments (83.4 billion reais), support domestic companies and defer business taxes (59.4 billion reais), and increase investments in healthcare to combat the COVID-19 (4.5 billion reais). The government also announced a 3.1 billion reais boost to the "Bolsa Família" assistance for some of Brazil's poorest families. **March 16:** The National Monetary Council (CMN) approved the measures that will allow banks to (1) increase loans and offer better terms to firms and households over the next six months and (2) extend certain loan maturities for the next six months. It also lowered capital requirements for banks. **April 1:** Announced that it will cut the IOF financial tax for 90 days. It will be temporary and cost 7 billion reais. It will also extend the deadline for submitting the 2019 base year net income report to June 30 from April 30 and allow companies to postpone payment of certain tax contributions for two months and reduce wages by up to 70% (or the minimum wage) for three months, among other measures.
Bulgaria	*Government of Bulgaria* **March 30:** Announced it will spend more than 1 billion levs ($566 million) to pay part of workers' salaries in companies whose operations have been hit by the COVID-19 crisis, part of part of an overall 4.5 billion-lev package. **March 31:** Announced plans to raise the ceiling on new debt it can raise to 10 billion levs due to the COVID-19 pandemic.
Cambodia	*Government of Cambodia* **March 5:** Announced that it would allocate $30 million to finance Cambodia's COVID-19 screening and monitoring efforts. **March 10:** Allocated between $800 million to $2 billion to address the economic impacts of the novel COVID-19 outbreak.
Canada	*Bank of Canada* **March 4:** Lowered its target for the overnight rate by 50 basis points to 1.25% (setting the bank rate to 1.5% and the deposit rate to 1%). **March 12:** Announced that it will broaden the scope of the current Government of Canada bond buyback program and temporarily add new Term Repo operations.

	March 13: Lowered its benchmark overnight rate to 1.25% from 1.75% in response to the epidemic. **March 13:** Announced its intention to launch the Bankers' Acceptance Purchase Facility (BAPF), starting the week of March 23, 2020, in an effort to support the continuous functioning of financial markets; it will conduct secondary market purchases of one-month Bankers' Acceptances issued and guaranteed by any Canadian bank and of sufficiently high quality. BAPF operations will be conducted weekly with the purchase amount and reserve rate being adjusted to reflect market conditions. (For the first operation, the Bank of Canada will purchase up to $10 billion of one-month Bankers' Acceptances with a reserve rate of the overnight index swap rate plus 20 basis points.) **March 16:** Announced that it will broaden eligible collateral for its term repo facility and increase purchases of mortgage-backed securities (Canada Mortgage Bonds). **March 27:** Cut its overnight interest rate by 50 basis points to 0.25%, its lowest level since June 2010 and the third cut in March, to support an economy hit hard by the outbreak of COVID-19. It also announced that it would begin purchases of CA$5 billion per week of Government of Canada securities in the secondary market. *Canadian Government* **March 6:** Announced an investment of CA$27 million to fund COVID-19 research and accelerate the development, testing, and implementation of measures to deal with the COVID-19 outbreak. **March 11:** Unveiled CA$1 billion ($750 million) in funding for vaccine research and health measures. **March 13:** Established a Business Credit Availability Program (BCAP) to support financing in the private sector through the Business Development Bank of Canada (BDC) and Export Development Canada (EDC); it will allow BDC and EDC to provide more than $10 billion of additional support to businesses. **March 13:** The Office of the Superintendent of Financial Institutions (OSFI) lowered the Domestic Stability Buffer requirement for domestic systemically important banks by 1.25% of risk weighted assets; it will increase the lending capacity of Canada's large banks and support the supply of credit to the economy by more than CA$300 billion. **March 25:** Almost doubled the value of an aid package previously announced to help people and businesses deal with losses from the COVID-19 outbreak, from CA$27 billion to CA$52 billion ($36.6 billion). It will give people affected by the outbreak CA$2,000 a month, delay student loan repayments, and defer tax payments, among other measures to boost the economy.
Chile	*Central Bank of Chile* **March 16:** Cut its benchmark rate by 75 basis points to 1% and announced measures to inject liquidity, including allocating $4 billion to purchase inflation-linked bank bonds and providing additional credit to banks. **March 31:** Cut its benchmark interest rate by 50 basis points to 0.50% amid the COVID-19 pandemic. *Government of Chile* **March 19:** Announced a stimulus package of $11.75 bn to mitigate the negative economic impact of the outbreak of COVID-19 and civil unrest. The measures include extending unemployment insurance to those who are sick or unable to work from home, delaying tax payments for small businesses, a cash bonus for approximately 2 million workers who lack formal employment, and emergency funds for municipalities.
China	*People's Bank of China (PBOC)* **February 3:** Expanded reverse repo operations by $174 billion; added another $71 billion on February 4.

	February 16: Cut the one-year medium-term lending facility rate by 10 basis points. **February 20:** Cut the one-year and five-year prime rates by 10 and 5 basis points, respectively. **March 13:** Lowered bank reserve requirements, freeing up about $79 billion to be loaned out. **March 30:** Lowered the interest rate on reverse repurchase agreements to 2.20% from 2.40%, as authorities stepped up easing measures to relieve pressure on the economy that has been hit hard by the epidemic. *PRC Government* **February:** Asked banks to extend the terms of business loans and commercial landlords to reduce rents. **February 24:** The Asian Infrastructure Investment Bank (AIIB) contributed $1 million in medical equipment to help China control the spread of COVID-19. **February 27:** Announced a number of tax relief measures to tackle COVID-19 disruption, including a temporary reduction its value-added tax (VAT) and the elimination of VAT on medical, catering, accommodation, hairdressing, and laundry services as well as on masks and protective clothing. **March:** Earmarked $15.9 billion to fight the epidemic. **March 21:** Announced that it would cut fees on a large scale to stimulate private-sector investment and also accelerate the development of "new infrastructure" to help spur the economy. **March 19:** Reportedly is considering a fiscal stimulus package worth trillions of yuan to revive the economy amid the COVID-19 pandemic. The ramped-up spending will aim to spur infrastructure investment, backed by as much as 2.8 trillion yuan ($394 billion) of local government special bonds. **March 27:** The Communist Party's Politburo announced that it would step up macroeconomic policy changes and pursue more proactive fiscal policy. It called for expanding the budget deficit, issuing more local and national bonds, guiding interest rates lower, delaying loan repayments, reducing supply-chain bottlenecks and boosting consumption.
Colombia	*Central Bank of Colombia* **March 18:** Announced a $400 million dollar to peso swap to take place on March 19, and that it would increase the resources available to financial institutions and ease rules on which institutions can have access to funds. **March 27:** Cut its benchmark interest rate by 50 basis points to 3.75% in an effort to boost economic growth amid fall-out from COVID-19. *Government of Colombia* **March 18:** Announced that it has 14.8 trillion pesos ($3.65 billion) to spend on emergency measures to ease the economic fallout from COVID-19, but it will not take on additional debt to finance the efforts (12.1 trillion pesos will come from the country's savings programs). It will initially spend 1 trillion pesos on the healthcare system and 500 billion pesos on additional payments to social welfare programs for families, young people and the elderly, accelerate a plan to return value added tax to the neediest Colombians from April, and make 48 trillion pesos available to give credit guarantees to small and medium-sized businesses and households.
Congo-Kinshasa (Democratic Republic of the Congo)	**March 24:** The Central Bank of the Congo cut its base interest rate to 7.5% from 9.0% in order to cushion the economic impact of the COVID-19 outbreak. It will also cut mandatory reserve requirements and provide liquidity to banks.
Cyprus	*Government of Cyprus* **March 15:** Unveiled a 700 million euro support package for companies and workers to deal with the impact of the spread of COVID-19, which includes a temporary VAT

	reduction, support for individuals and companies affected, additional paid sick leave, and 100 million euro for the public health sector. **March 23:** Announced that it is revising the economic package announced on March 15. It will amount to at least 1.5 billion euro and include direct support, deferred government income in the form of payment suspension of direct and indirect taxes and other fees, as well as government guarantees (which would not incur a fiscal impact unless they materialize).
Czech Republic	*Czech National Bank* **March 16:** The Czech National Bank lowered its main two-week repo rate by 50 basis points to 1.75%, reversing its February rate hike to combat the hit from the virus outbreak. It also raised the number of repo operations that provide liquidity to banks to three times a week from once, noting that bids would be met with zero spread to the repo rate. **March 17:** Revised the countercyclical capital buffer for exposures located in the Czech Republic to 1.75 %. **March 26:** Cut its main two-week repo rate by 75 basis points to 1.00% and announced that it was ready to cut interest rates further if needed. *Government of the Czech Republic* **March 9:** Adopted a number of economic measures, which will include providing 100 billion CZK ($3.9 billion) in direct support and 900 billion CZK ($34.8 billion) in indirect in the form of guarantees to maintain the employment rate, paying out (through the respective employers) 60% of the average contribution base to employees affected by the quarantine, supporting employers who continue, despite their businesses being shut down, to pay out 100% of the salary to affected employees by covering 80% of salary costs (up to 1.2 billion CZK), and allocating 10 billion CZK ($390 million) to the Czech-Moravian Guarantee and Development Bank for immediate granting of interest-free loans with a one-year deferral with the possibility of a two-year extension for businesses affected by the COVID-19 ("COVID Loans Program"). (On March 16, the government earmarked another 1 billion CZK to the COVID Loans Program.) **March 13:** Extended the deadline for the filing of tax returns until 1 July and waived fines stemming from the late submission of tax declarations or reports. **March 13:** The Czech Banking Association (ČBA) will allow banks to voluntarily extend the deadlines on loan and mortgage payments. **March 23:** Approved a five-fold rise in this year's budget deficit, as it offers help to businesses hit hard by the COVID-19 outbreak. **April 1:** Announced that it had approved a scheme for a moratorium of up to six months on consumer, company, and mortgage loan payments to help the country through the COVID-19 crisis.
Denmark	*Danmarks Nationalbank* **March 12:** Released banks' emergency buffer and will be offering low interest rate loans to banks. **March 26:** Injected $2.85 billion in loans to Danish banks and financial institutions by auctioning off U.S. dollars in two loans with a maturity date on April 8 and June 19 and a cut-off rate of 0.32 and 0.34, respectively. **April 1:** Sold $750 million worth of its mint 30-year government bonds in an auction that was held a month early to expedite funding of aid packages due to COVID-19 that is expected to cost the state more than 60 billion Danish crowns ($8.8 billion). *Government of Denmark* **March 10:** Will grant tax breaks to businesses affected by the COVID-19 as part of a series of measures worth $20 billion. Large businesses will be given an additional 30 days to pay value added tax, while all companies will be granted four additional

	months to pay their labor contributions. The government is also lifting the ceiling on businesses' tax accounts, so that corporations can avoid paying the negative interest rates they are charged when placing cash in the bank. **March 12:** Indicated that it would release banks' counter-cyclical capital buffer, freeing about 200 billion Danish crowns ($30 billion) for lending. Other fiscal measures, worth 2.8 billion Danish crowns ($416 million), include compensation to companies for salary payments to employees who have fallen ill or been quarantined due to the COVID-19. **March 18:** Proposed an economic aid package worth 40 billion kroner ($5.8 billion) to help small businesses cover (for three months) most of the losses in revenue and some of their fixed expenses as a result of the COVID-19 outbreak. Under the program, companies who have seen their revenues decline by 40% or more will receive government grants to help cover between 25% to 80% of their fixed costs, and self-employed and small firms who see their revenues fall more than 30% will also be offered government compensation worth 75% of their normal monthly income. **March 31:** Announced that it will postpone by three months around 200,000 companies' deadline of end-May to submit their annual reports in an effort to help companies affected by the COVID-19 outbreak.
Egypt	*Central Bank of Egypt* **March 16:** Cut by 300 basis points both the overnight lending rate (from 13.25% to 10.25%) and the overnight deposit rate (from 12.25% to 9.25%) in what it described as a "preemptive" move to support the economy in the face of the COVID-19 outbreak. **March 23:** Told commercial banks to cut interest on dollar deposits to 1% above the London Interbank Offered Rate (Libor) instead of 1.5% above Libor, starting March 23, in order to control the exchange market and reduce the expected dollarization operations after cutting interest rates on March 16. **March 29:** Instructed Egyptian banks to apply temporary limits on daily withdrawals and deposits in a move seemingly designed to control inflation and hoarding during the coronavirus' spread, after 30 billion Egyptian pounds ($1.91 billion) were withdrawn from banks in the past three weeks. The daily limit for individuals would be 10,000 Egyptian pounds ($635) and 50,000 pounds for companies. *Government of Egypt* **March 14:** Indicated that the government will allocate 100 billion Egyptian pounds ($6.4 billion) to finance a "comprehensive" state plan for combating the COVID-19 outbreak. **March 22:** Announced that the government would allocate 20 billion Egyptian pounds ($1.27 billion) to support the stock exchange. **March 30:** Ordered relevant authorities to boost strategic reserves of staple goods, as global concerns about food security rise amid the COVID-19 crisis.
Eswatini (Swaziland)	**March 21:** The Central Bank of Eswatini cut its main lending rate by 100 basis points to 5.5%, citing global and domestic economic developments and the impact of COVID-19. The reduction was to ensure the equal pegging of the local currency with the South African rand after the South African Reserve Bank (SARB) cut its main lending rate by 100 basis points to 5.25% on March 19.
European Union	*European Central Bank (ECB)* **March 12:** Announced that it would provide banks with loans at a rate as low as minus 0.75%, below the-0.5% deposit rate, increase bond purchases by 120 billion euros ($135.28 billion) this year (with a focus on corporate debt), and allow euro zone banks to fall short of some key capital and cash requirements (in order to keep credit flowing to the economy). **March 18:** Launched a new, 750 billion euro ($818 billion) temporary asset purchase program of private and public sector securities to counter the risks posed by the outbreak and escalating diffusion of COVID-19 (the Pandemic Emergency Purchase

	Programme). Purchases will be conducted until the end of 2020 and will include all the asset categories eligible under the existing asset purchase program. It will also support commercial debt markets by expanding the range of eligible assets under the corporate sector purchase program to nonfinancial commercial paper of sufficient credit quality, and by easing collateral standards by expanding the scope of Additional Credit Claims to include claims related to the financing of the corporate sector. **March 26:** Announced that under the new 750 billion euro ($818 billion) temporary bond purchase Pandemic Emergency Purchase Program (PEPP), it would not apply self-imposed limits on how many bonds it could buy from any single euro zone country. Under its long-running asset purchase scheme, the ECB has capped bond buys at 33% of each euro zone state's debt. *European Commission* **March 11:** Announced a 37 billion euro ($41 billion) "Corona Investment Fund" that would use "spare" money from the EU budget to help businesses, health-care systems, and sectors in need; additionally, the EU's own investment fund will guarantee 8 billion euros ($8.9 billion) of loans to 100,000 small- and medium-sized enterprises and affected companies may be able to delay the payment of their existing loans. **March 19:** Adopted a Temporary Framework to enable Member States to use the full flexibility foreseen under state aid rules to support the economy in the context of the COVID-19 outbreak. It provides for five types of aid: (1) direct grants, selective tax advantages and advance payments (Member States will be able to set up schemes to grant up to 800,000 euros to a company to address its urgent liquidity needs); (2) state guarantees for loans taken by companies from banks; (3) subsidized public loans to companies; (4) safeguards for banks that channel state aid to the real economy; and (5) short-term export credit insurance.
Fiji	**March 18:** The Reserve Bank of Fiji cut its Overnight Policy Rate by 25 basis points to 0.25% in order to stimulate demand and cushion the blow to its important tourism industry from the global spread of COVID-19.
France	*Government of France* **March 12:** Pledged more generous guarantees on loans made to small businesses, more cash for firms struggling to hold on to workers, and a solidarity fund to help companies cushion the blow from the COVID-19 outbreak; it also announced that the government would be ready to increase funds available to help companies reduce workers' hours, instead of laying them off. **March 16:** Announced that the government would guarantee 300 billion euros in bank loans for small and medium-sized businesses. **March 17:** The Autorité des Marchés Financiers (AMF), France's financial-markets authority, stated that it would forbid short selling of stock in 92 companies during the March 17 session. **March 17:** Announced that it would spend 45 billion euros ($50 billion) to help small businesses and employees struggling with the COVID-19 outbreak, including through an expanded partial-unemployment package in which the state pays the salaries of employees who are not needed during the crisis.
Gambia	**February 28:** The Central Bank of The Gambia lowered its policy rate by 50 basis points to 12.0% amid risks from the COVID-19 outbreak and uncertainty surrounding global food prices.
Georgia	**April 1:** The government announced that it will put 2 billion lari ($606 million) from its state budget toward helping the economy through the COVID-19 pandemic, in addition to 351 million lari that will be allocated for the healthcare system from the state budget. The government will fund three months' payments for electricity and gas consumption to Georgians who used less than 200 kilowatts of electricity and 200 cubic meters of gas a month in March, April, and May.

Germany	*Government of Germany* **March 13:** Pledged to provide unlimited liquidity assistance to German companies hit by the pandemic. (The measure envisages an expansion of loans provided by KfW, the state development bank, and will allow companies to defer billions of euros in tax payments.) The Bundestag also expanded the Kurzarbeit or short-time work scheme, under which companies that put their workers on reduced hours can receive state support. The government also indicated that it would boost investments by €3.1 billion per year (about $3.5 billion) between 2021 and 2024. **March 23:** Agreed to a package worth more than 750 billion euros ($808 billion) to mitigate the damage of the COVID-19 outbreak. It includes 156 billion euros in debt to finance higher social spending, 50 billion-euro liquidity fund for self-employed people, 600 billion-euro rescue fund (400 billion euros in guarantees,100 billion euros in loans through state-run development bank KfW, and 100 billion euros earmarked for equity stakes in companies). Additionally, the state's KfW bank has 500 billion euros available to boost liquidity of German companies. **March 30:** Announced that, in response to COVID-19, it would expand export loan guarantees on short-term payments to include transactions within the EU and with Australia, Canada, Iceland, Japan, New Zealand, Norway, Switzerland, Britain, and the United States.
Ghana	**March 18:** The Bank of Ghana (Ghana's central bank) cut its interest rate to 14.5% from 16% due to the negative economic impacts it anticipates from the spread of the COVID-19.
Greece	*Government of Greece* **March 9:** Will suspend the payment of sales taxes due at the end of March (for four months) of social security contributions by companies (until June 30). **March 17:** Announced a package of up to 2 billion euros ($2.20 billion) to support businesses following the COVID-19 outbreak **March 17:** The Hellenic Bank Association will offer businesses hit by the COVID-19 crisis a six-month freeze on loan payments as part of relief efforts to help borrowers deal with the economic shutdown. **March 30:** Announced new tax breaks and economic assistance to thousands of businesses and workers to buffer its economy from a national lockdown triggered by the COVID-19 pandemic. The support measures include a one-off benefit for 1.7 million, or 81% of private sector workers whose jobs are temporarily suspended and payment of their social security contributions for 45 days, extend financial aid for the self-employed, and suspend VAT and tax arrear payments for 800,000 businesses.
Guatemala	**March 29:** The government announced that it would use nearly $26 million from an emergency fund to help the country's neediest families, as measures to combat the spread of a COVID-19 impact on the economy and jobs, It plans to withdraw 200 million quetzals ($25.8 million) from the emergency fund and give families 1,000 quetzals ($129) to help pay for electricity, water and supplies.
Hong Kong	*Hong Kong Monetary Authority* **March 3:** Lowered its base rate charged through the overnight discount window by 50 basis points to 1.5% after the U.S. Federal Reserve delivered a rate cut of the same margin. **March 16:** Lowered its base rate charged through the overnight discount window to 0.86%, after the U.S. Federal Reserve delivered a rate cut. It also cut the level of capital buffers it requires financial institutions to hold to 1% from 2% of their risk-weighted assets to help companies and lenders weather the impact of the COVID-19 outbreak. *Government of Hong Kong* **February 26:** Announced a HK$120 billion ($15.4 billion) relief package as part of its 2020-2021 budget, including a payment of HK$10,000 ($1,200) to each permanent

	resident of the city 18 or older, paying one month's rent for people living in public housing, cutting payroll, income, property, and business taxes, low-interest, government-guaranteed loans for businesses, and an extra month's worth of payments to people collecting old-age or disability benefits.
Hungary	*Hungarian National Bank* **March 16:** Announced emergency steps to help businesses, boosting the range of collateral it accepts from banks and calling on lenders to apply a loan repayment moratorium for firms hit by the coronavirus economic fallout. (It said in a statement that performing corporate loans in domestic banks' balance sheets totaled close to 3.6 trillion forints, and that it would apply a 30% haircut on those, boosting the range of collaterals that can be used and thus also lifting banks' lending potential by more than 2.5 trillion forints ($8.10 billion)). It also offered to inject forint liquidity into the banking system via foreign exchange swaps. **March 18:** Urged domestic banks to introduce a moratorium on household loan repayments considering the "extraordinary situation" due to the coronavirus crisis, and that if banks did not bring in the measure, the Bank would ask the government to pass a decree enforcing it. It also announced that it was considering restarting its mortgage note buying program to provide more long-term liquidity for the banking system and reduce the financing costs of household loans. **March 24:** Launched new measures to boost liquidity and flagged further steps if needed to prevent long-term damage to the economy from the coronavirus pandemic. It moved to pump more money into the banking system by introducing a massive fixed-rate collateralized loan instrument. Lending will be provided to banks at a fixed interest rate in unlimited quantity, to support bank lending and also government bond purchases. It also released domestic lenders from the requirement to hold a certain level of cash as reserves. **April 1:** Announced its collateralized loan tenders, offering liquidity to banks at a fixed rate of 0.9% on various maturities, and that it would offer them to domestic open-ended investment funds, in order to support the government securities market and the real estate market and help offset the fallout from the coronavirus pandemic. *Government of Hungary* **April 4:** Created a $2 billion special fund to aid the fight against COVID-19 and it will include contributions from banks and foreign retailers. Hungarian banks will be expected to pay 55 billion forints ($163 million) in the fund this year, with multinational retailers adding 36 billion forints. Local governments will have to divert vehicle taxes amounting to a total of 34 billion forints to the fund, while political parties will pay half of their central budget revenue to the fund for a total of 1.2 billion forints. **April 6:** Announced a stimulus package, which includes subsidized loans to Hungarian companies and funds to preserve jobs. It would amount to 18%-20% of gross domestic product (GDP), including National Bank of Hungary programs. The prime minister said that the government was ready to pay some of the wage costs of companies forced to cut working hours, would support investments with 450 billion forints ($1.3 billion), and would provide targeted support for sectors such as tourism, the food industry, and construction. Subsidized loans to companies will total more than 2 trillion forints, while pensioners will get one month's extra pension to be disbursed in four tranches from early 2021.
Iceland	*The Central Bank of Iceland* **March 11:** Cut its benchmark interest rate by 50 basis points to 2.25%, as it tries to alleviate the potential impact of the COVID-19 on its tourism-dependent economy. It will also lower deposit institutions' average reserve requirement to 0% from 1% to ease banks' liquidity positions. **March 18:** Cut its key interest rate for the second time in a week by 50 basis points to 1.75% and reduced the banks' countercyclical capital buffer to 0% from 2%.

	March 23: Announced that it would start buying up treasury bonds in order to boost liquidity and support government plans to increase spending to help the economy weather the COVID-19 outbreak. *Government of Iceland* **March 10:** Announced an action plan to respond to the economic impact of COVID-19, which includes deferring taxes and levies, providing temporary relief to the tourism industry, and accelerating ongoing and planned infrastructure projects. **March 21:** Announced a 230-billion-krona ($1.6 billion) package (8% of gross domestic product) to cushion the impact of COVID-19 on the economy. It includes state guarantees on bridge loans to businesses and the payment of as much as 75% of an employee's lost salaries over the next two-and-a-half months. In addition, public projects worth 20 billion krona will be moved forward to this year and tax breaks for banks will be implemented sooner than originally planned.
India	*Reserve Bank of India* **March 12:** Announced a $2 billion injection into the foreign-exchange market to support the rupee. **March 13:** Announced a plan to add liquidity through short-term repurchase operations. **March 14:** Plans to infuse 250 billion rupees ($3.4 billion) into the system through short-term repurchase operation. **March 19:** Announced that it will buy bonds on the open market for a total of 100 billion Indian rupees ($1.35 billion) due to mature between 2022 and 2025 to try to keep all market segments liquid and stable. **March 27:** Lowered its benchmark repo rate by 75 basis points to 4.40% and announced several other steps to tackle the impact of COVID-19 on various industries from the lockdown, some of which include cutting banks' cash reserve ratio and targeted long term repos operations. The reverse repo rate was reduced by 90 basis points to 4%. *Government of India* **March 15:** Pledged $10 million towards South Asian Association for Regional Cooperation (SAARC) "COVID-19 emergency fund." **March 15:** Is reportedly "pushing" state-run banks to approve new loans amounting to 500 billion-600 billion rupees by the end of March. **March 26:** Announced a 1.7-trillion-rupee ($22.6 billion) economic stimulus plan providing direct cash transfers and food security measures to give relief to millions of poor people hit by a nationwide lockdown over COVID-19. It will provide direct cash transfers to 200 million women and the elderly, hand out free cooking gas cylinders to 83 million poor families, and help feed about 800 million poor people over the next three months by distributing 5 kilograms of staple food-grains wheat or rice for each person free of cost, with a kilogram of pulses for every low-income family. The government outlined plans for medical insurance cover of 5 million rupees ($66,000) for every frontline health worker, from doctors, nurses and paramedics to those involved in sanitary services.
Indonesia	*Bank Indonesia (Bank Sentral Republik Indonesia)* **February 20:** Cut the seven-day reverse repurchase rate by 25 basis points to 4.75%. **March 19:** Cut the seven-day reverse repurchase rate by 25 basis points to 4.50% and indicated that it will intensify intervention to ensure market confidence and liquidity. It has purchased government bonds to combat capital outflows amid the COVID-19 epidemic, including 27 trillion rupiah ($2 billion) on February 20 and 6 trillion rupiah ($405 million) on March 13, adding to 8 trillion rupiah of bonds purchased March 12.

	March 25: Announced with the country's financial regulator that currency market and stock trading hours will be limited next week as part of efforts to contain the spread of COVID-19. *Government of Indonesia* **February 25:** Announced a stimulus package worth 10.3 trillion rupiah ($742.6 million) to protect its economy from the impact of the COVID-19 outbreak. It includes 4.6 trillion rupiah in subsidies for basic needs for poor households, 1.5 trillion rupiah for the state property financing program, 443.4 billion rupiah for airlines and travel agents, 298.5 billion rupiah to bring in foreign tourists, 3.3 trillion rupiah cover for shortfalls in regional budgets, and fiscal transfers (147 billion rupiah). **March 13:** Announced a 120 trillion rupiah ($8.1 billion) stimulus package to support the economy, of which 22.9 trillion rupiah will be tax breaks, lasting six months starting in April. The government is also exempting companies in 19 manufacturing sectors from having to pay import taxes, while giving them a 30% corporate tax discount, relaxing rules for exports (e.g., fisheries and forestry products) and imports (e.g., steel, sugar, flour and salt), and easing rules on loan restructuring for small- and medium-sized companies. **March 17:** Ordered the Finance Minister to divert 40 trillion rupiah ($2.7 billion) from the non-urgent government budget to increase spending in programs that could provide direct support to household consumption or increase people's purchasing power. **March 31:** Announced a national public health emergency and that it would spend 405.1 trillion rupiah ($24.85 billion) more on COVID-19 response, social welfare programs, and economic stimulus, including a 3 percentage point cut in corporate tax rates to 22%.
Iran	*Central Bank of Iran* **February/March:** Indicated that it would help small businesses affected by the COVID-19 outbreak by providing tax breaks and allowing defaults on bank loans for several months. **March 12:** Requested $5 billion emergency funding from the International Monetary Fund's Rapid Financing Instrument to help Iran fight the COVID-19 outbreak. **March 17:** Allocated at least 250 million euro to import medicine and medical equipment required to fight COVID-19. *Government of Iran* **March 12:** Asked the United Nations to allocate resources to help it tackle COVID-19 and facilitate imports as a way of boosting the country's sanctions-hit healthcare system. **March 15:** Announced a series of banking, welfare and tax relief measures to support businesses and families as the COVID-19 outbreak puts severe strain on the economy. Employees will be able to defer health insurance, tax and utility bill payments for the next three months, while the 3 million poorest Iranians will receive an additional cash subsidy starting March 17, 2020. **March 23:** The European Union's High Representative of the Union for Foreign Affairs and Security Policy (Josep Borrell) announced that the EU would provide 20 million euros in humanitarian aid to Iran to help alleviate the COVID-19 and support Iran's request for IMF financial help. **March 26:** President Hassan Rouhani wrote to Supreme Leader Ayatollah Ali Khamenei requesting permission to withdraw $1 billion from the country's sovereign wealth fund (the National Development Fund) to support the healthcare system, which is overstretched by the COVID-19 outbreak. **March 28:** Announced that it would allocate 20% of its annual state budget to fighting the pandemic in the country. The budget allocation, amounting to about 1,000 trillion rials, would include grants and low-interest loans to those affected by COVID-

	19, Rouhani said. While the allocated amount is worth some $6.3 billion at the rial's free market exchange rate of about 160,000 rials per dollar, the government may decide to allocate some of the funds at the official rate of 42,000 (which is used to subsidize food and medicine).
Ireland	**March 9:** The government announced that it will set aside 3 billion euros ($3.44 billion) to provide additional funding to the health service (435 million euros), boost workers' sick pay and benefits (2.4 billion euros), and offer liquidity assistance to businesses affected (200 million euros).
Israel	*Bank of Israel* **March 18:** Announced it would allocate up to $15 billion for swap transactions between currencies for domestic banks, part of a move aimed at shoring up the Israeli economy amid the COVID-19 pandemic. **April 6:** Cut its benchmark interest rate to 0.1% from 0.25%, its first rate cut in five years, expanded its repo transactions so that the agreements can include corporate bonds—in addition to government bonds—as security, and will provide loans to banks for a term of three years (with a fixed interest rate of 0.1%) with the goal of increasing the supply of bank credit to small businesses. The size of the plan will be 5 billion shekels. *Government of Israel* **March 9:** The Finance Ministry announced that it was opening a 4 billion-shekel credit line for banks to lend money to small and medium-sized businesses facing a cash crisis with a high-level government guarantee. **March 11:** Will expand an aid package (for a second time) to help the country deal with the COVID-19 outbreak by 6 billion shekels to a total of 10 billion shekels ($2.8 billion). Of that, 8 billion shekels will be in a fund to provide cheap loans to businesses, 1 billion shekels will boost the health system by increasing medicine stocks and preparing hospitals to receive a larger number of patients, and 1 billion will be earmarked for needs such as the police force. **March 16:** Will expand its aid package (for a third time) to help businesses hurt by the COVID-19 crisis by another 5 billion shekels ($1.3 billion). **March 30:** Announced that it will spend 80 billion shekels ($22 billion) to help the economy weather the COVID-19 crisis—70 billion shekels in addition to 10 billion already promised to boost welfare services for those who have lost their jobs or are on unpaid leave and to assist the private sector. It includes a 20-billion-shekel social safety net, with stipends for those who lost income; 40 billion shekels earmarked to assist businesses with tax breaks, loans, and other services; about 10 billion for the healthcare system; and nearly 8 billion will be spent to speed up the recovery.
Italy	*Government of Italy* **March 11:** Announced two packages worth 25 billion euros ($28.3 billion): A package worth 12 billion euros will provide extra funding for the health system as well as a mix of measures to help companies and households, including freezing tax and loan payments and boosting unemployment benefits to ensure no jobs were lost. The remainder will be a reserve to pay for any further measures. The government also indicated that payments on mortgages will be suspended across Italy. ABI, Italy's banking lobby, said lenders would offer debt moratoriums to small firms and households grappling with the economic fallout from the virus. **April 6:** Announced a new emergency decree aimed at granting liquidity and bank loans worth more than 400 billion euros to companies hit by COVID-19. The new legislation, combined with a previous stimulus package in March, would allow banks to offer credit totaling over 750 billion euros ($809.78 billion).
Japan	*Bank of Japan* **March 16:** Announced that it would (1) double its upper limit of annual purchases of exchange traded funds to 12 trillion yen ($112.46 billion) and of real-estate investment trusts to 180 billion yen ($1.7 billion) per year, (2) expand its upper limit

	of its corporate bond balance and commercial paper balance by 1 trillion yen ($9.5 billion) each, and (3) start a lending program for commercial banks, providing them with one-year loans in exchange for corporate collateral worth 8 trillion yen ($75.6 billion). *Government of Japan* **February 13:** Unveiled a set of measures worth 15.3 billion yen ($140 million) to fight the spread of COVID-19; secured 500 billion yen ($4.7 billion) for emergency lending and loan guarantees at the Japan Finance Corporation and other institutions for small businesses hit hard by the virus outbreak. **March 10:** Unveiled a second package of measures totaling 430.8 billion yen ($4.1 billion) in spending to cope with the fallout of the COVID-19 outbreak (focusing on support to small and mid-sized firms) and boosted to 1.6 trillion yen ($15.1 billion) its special financing for small- and mid-size firms hit by the virus, up from 500 billion yen. **March 23:** Announced that it is working on a package of measures to combat the widening economic fallout from the COVID-19 that will involve direct fiscal spending exceeding 15 trillion yen ($137 billion). Including loans and other steps that does not include direct spending, the size of the package may exceed 30 trillion yen. **April 6:** Announced a 108 trillion yen ($989 billion, equivalent to 20% of gross domestic product) stimulus package, Japan's largest ever, to rescue the COVID-19-hit economy. It will include cash handouts worth 6 trillion yen for households and small businesses hit by the virus and offers businesses deferrals on tax and social service costs worth 26 trillion yen. The first phase of the package aims to stop job losses and bankruptcies, while a second round of aid, after the virus is contained, will try to support a V-shaped economic recovery.
Kazakhstan	*National Bank of Kazakhstan* **April 3:** Cut its policy rate to 9.5% from 12.0% in an unscheduled move aimed at boosting economic growth. *Government of Kazakhstan* **March 23:** The president ordered state-owned companies to start selling part of their foreign currency revenue on the domestic market to support the local tenge currency (and to pay out up to 100% of last year's profits in dividends) in order to soften the impact of the oil price crash and the COVID-19 outbreak on the economy. He also ordered a standstill on bank loan repayments by individuals and small- and medium-sized businesses for the duration of the state of emergency, announced that the government would pay 42,500 tenge ($95) per month to people who have lost their source of income, was delaying tax payments for small businesses, and stood ready to more than triple spending on a program to provide temporary employment through infrastructure maintenance and construction projects. Together with soft loan program and other spending, the volume of the stimulus package is expected to reach $10 billion. **April 2:** Announced that it plans to borrow $3 billion on foreign capital markets to finance its budget deficit this year, due to the collapse in energy prices and the additional stimulus spending amid the COVID-19 outbreak.
Kenya	*Central Bank of Kenya* **March 23:** Cut its benchmark lending rate by 100 basis points to 7.25% and lowered the cash reserve ratio for commercial banks to 4.25% from 5.25%. The move to lower the cash ratio is expected to release an extra 35.2 billion shillings ($330.83 million) for banks to lend to customers trying to deal with the outbreak. *Government of Kenya* **March 16:** The World Bank announced that it is making $60 million available to Kenya's health sector to help it deal with the COVID-19 outbreak. **March 24:** Announced that it will seek emergency assistance from the IMF of up to $350 million, and $750 million from the World Bank, release 49 billion shillings ($460

	million) to pay pending bills to suppliers, and expedite the payment of close to 10 billion ($94 million) shillings in value-added tax refunds to businesses in the next two to three months. **March 25:** Announced that the value-added tax rate would be cut to 14% from 16% and corporation tax would be reduced to 25% from 30% under plans scheduled to come into force by April, and that there would be 100% tax relief for Kenyans earning a monthly income of up to 24,000 Kenyan Shillings ($226) to increase their disposable income.
Kuwait	*Central Bank of Kuwait* **March 16:** Cut by 100 basis points its deposit rate to 1.5% and its overnight, one-week, and one-month repo rates to 1%, 1.25%, and 1.75%, respectively. **April 2:** Announced a stimulus package to support vital sectors and small and medium enterprises (SMEs) amid the fallout from the COVID-19 pandemic. It cut capital adequacy requirements by 2.5%, eased the risk weighting for SMEs to 25% from 75%, raised the maximum lending limit to 100% from 90%, and increased the maximum financing for residential real estate developments to the value of the property or the cost of development. The measures are expected to raise banks' lending capacity by 5 billion dinars ($16 billion). *Government of Kuwait* **April 1:** Announced measures aimed at shoring up its economy against the pandemic, including soft long-term loans from local banks to provide liquidity for small and medium-sized enterprises and directing government agencies to pay obligations to the private sector as soon as possible.
Malaysia	*Government of Malaysia* **February 27:** Announced the "Economic Stimulus Package 2020" to mitigate the economic impact of COVID-19, improve the cash flow of affected businesses, stimulate private consumption, and accelerate domestic investment activities. It includes exempting accommodation services from services tax, providing sales tax exemptions, and lifting duties on certain imports. **March 27:** Announced a stimulus package worth 250 billion ringgit ($58.28 billion), its second in a month, to help cushion the economic blow from the pandemic. It includes a 25 billion ringgit direct fiscal injection by the government aimed at helping families and business owners; one-off payments and discounts on utilities for people whose livelihoods have been affected; 1 billion ringgit for a food security fund; and a 50 billion ringgit loan scheme for larger companies, which will offer guarantees of up to 80% of the sum borrowed to shore up working capital in the corporate sector.
Mauritius	**March 10:** The Bank of Mauritius cut its key repo rate by 50 basis points to 2.85% amid the COVID-19 outbreak, which is expected to have a significant impact on the domestic economy.
Mexico	*Banxico (Bank of Mexico)* **February 13:** Cut its key rate by 25 basis points to 7.0%. **March 19:** Lowered its benchmark interest rate by 50 basis points to 6.50% in an out-of-cycle cut in a bid to support the country's financial markets, reduced the rates on its additional ordinary liquidity facility, and cut by 50 billion pesos ($2.06 billion) the monetary regulation deposit that private banks must observe.
Moldova	*National Bank of Moldova* **March 4:** Cut its main interest rate by 100 basis points to 4.50%, citing the domestic disinflationary trend and global economic concerns related to the COVID-19 outbreak. **March 20:** Cut its main interest rate for the second time in March to 3.25% from 4.50% in order to support banking system amid markets volatility due to the COVID-19 spread.

Mongolia	**March 11:** The Central Bank of Mongolia cut its policy rate 100 basis points to 10.0% in response to increased uncertainties in connection with the spread of COVID-19. It also lowered the reserve requirement on banks..
Morocco	**March 15:** Morocco's King Mohammed VI ordered the creation of a 10 billion-dirham ($1 billion) fund to upgrade health infrastructure, help vulnerable economic sectors such as tourism, maintain jobs, and mitigate the social repercussions of the outbreak. **March 17:** Bank Al-Maghrib (Central Bank of the Kingdom of Morocco) cut its benchmark interest rate by 25 basis points to 2% in order to help shore up economic activity following a drought and the outbreak of COVID-19.
Netherlands	*Government of the Netherlands* **March 12:** Announced that it would expand loan guarantees for small and medium sized enterprises, from 50% to 75%. **March 12:** The Tax Authority will allow companies affected by COVID-19 to defer income, corporate, turnover, and wage taxes for the time being. **March 17:** Announced measures to support companies, ranging from tax exemptions to having up to 90% of wages lost for work hour reductions paid by the government.
New Zealand	*Reserve Bank of New Zealand* **March 16:** Cut the official cash rate by 75 basis points to a record low of 0.25%, and pledged to keep it at this level for at least 12 months. **March 22:** Announced that it will purchase up NZ$30 billion ($17 billion) of government bonds in the secondary market over the next 12 months. It will seek to buy NZ$750 million bonds a week across a range of maturities, via an auction process. **March 24:** Reduced banks' core funding ratios to 50% from 75% to help banks make credit available. **March 30:** Announced that it was deploying more tools to provide additional liquidity to the corporate sector and support market functioning to offset the impact of the pandemic. A new weekly Open Market Operation—to be held each Tuesday—will provide liquidity in exchange for eligible corporate and asset-backed securities by offering up to NZ$500 million ($300 million) for terms out to approximately three months, starting on March 31. The bank also will offer to purchase government bonds maturing on May 15, 2021, for liquidity management purposes. *Government of New Zealand* **March 16:** Announced a spending package of NZ$12.1 billion ($7.3 billion), equivalent to 4% of GDP in an attempt to fight the effects of COVID-19 on the economy; approximately NZ$5 billion will go toward wage subsidies for businesses, NZ$2.8 billion toward income support, NZ$2.8 billion in business tax relief, and NZ$600 million toward the airline industry. **March 24:** Announced that retail banks will offer a six-month principal and interest payment holiday for mortgage holders and small business customers whose incomes have been affected by the economic disruption from COVID-19. The government and the banks will also implement a NZ$6.25 billion ($3.62 billion) Business Finance Guarantee Scheme for small and medium-sized businesses. It will include a limit of NZ$500,000 per loan and will apply to firms with a turnover of between NZ$250,000 and NZ$80 million per annum (the government will carry 80% of the credit risk, with the other 20% to be carried by the banks).
Norway	*Norges Bank* **March 13:** Cut its key interest rate to 1% from 1.5%, as it seeks to counter the economic impact of the COVID-19 pandemic. It indicated that it would offer funding to banks to help counter the volatility in financial markets and announced that banks'

	countercyclical capital buffer would be reduced from 2.5% to 1%, to help banks continue to lend money. **March 20:** Cut its key policy rate by 75 basis points to 0.25% from 1.0% in a bid to alleviate the economic impact from the COVID-19 outbreak. It also offered a third batch of extraordinary loans to the banking industry to ensure it has enough for the months ahead. **March 30:** Increased its planned issuance of government bonds this year to between 70 billion and 85 billion Norwegian crowns ($6.68 billion-$8.11 billion) from an original plan of 55 billion crowns, following the government's decision to offer loans worth tens of billions of crowns in emergency funding to companies hurt by the coronavirus outbreak. **March 31:** Will increase further its daily purchase of Norwegian currency to 2 billion crowns ($190 million) per day from 1.6 billion crowns in order to make funds available for the government's fiscal budget. (On March 18, it announced that it would increase it to 1.6 billion Norwegian crowns per day from 500 million crowns.) *Government of Norway* **March 13:** Announced that it would pay a greater part of the bill for all companies seeking to make temporary layoffs, suspended all airport fees for the first six months of 2020, and lifted for a period of 10 months the tax charged for each passenger. **March 15:** Announced that it would offer companies at least 100 billion Norwegian crowns ($9.7 billion) in funding in the form of loan guarantees (50 billion crowns to small and medium sized companies seeking bank loans) and bond issues (50 billion crowns to large firms issuing corporate bonds). In addition, payments of payroll taxes will be postponed. **March 20:** Presented legislation that would temporarily reduce the value-added tax, postpone tax filing deadlines and add worker and business protections under a 280 billion kroner ($24 billion) plan to boost the economy amid the pandemic. Along with the tax provisions, the legislative package includes two previously announced lending programs that the government said would provide up to 100 billion kroner in support for Norwegian businesses, improving their access to credit to ensure liquidity. **March 27:** Proposed new measures to support businesses hit by the viral outbreak and a sharp fall in the price of oil. They include, among other things, covering fixed costs for companies affected by the coronavirus outbreak at a cost of 10 billion to 20 billion Norwegian crowns ($958 million to $1.92 billion) per month for two months.
Oman	**March 18:** The Central Bank of Oman announced that it will provide about 8 billion Omani rials ($20.8 billion) in extra liquidity to banks as one of several measures aimed at supporting the economy. It also asked banks to cut banking fees, adjust capital and credit ratios, allow repayment postponements for up to six months, and facilitate lending, particularly in sectors affected by the COVID-19, including healthcare, travel and tourism.
Pakistan	*State Bank of Pakistan* **March 17:** Cut its key interest rate by 75 basis points to 12.50% in response to the anticipated slowdown due to COVID-19, provided additional support to investment, offering a new package of 100 billion rupees ($630.5 million) for investment in the manufacturing sector to fund investors at 7% for 10 years., and announced that it would refinance banks to provide 5 billion rupees ($31.5 million) at a maximum of 3% for the purchasing of equipment used to fight the COVID-19. **March 24:** Cut its benchmark interest rate for the second time in a week, lowering it by 150 basis points to 11% amid considerable uncertainty about how the COVID-19 outbreak would impact the global economy and Pakistan. *Government of Pakistan* **March 24:** Announced a financial-relief package of more than 1 trillion rupees ($6.3 billion) to support the economy and poorer workers. It will include help to the

	export and industry sectors, tax breaks, procurement of medical and other equipment required to fight the pandemic, and the distribution of a monthly cash stipend among the poor.
Paraguay	*Central Bank of Paraguay* **March 13:** Cut its benchmark interest rate by 25 basis points to 3.75%, as part of a series of measures aimed at dealing with the impact of the COVID-19 outbreak. Banks' reserve requirements will also be reduced to help the financial sector refinance debts. *Government of Paraguay* **March 13:** Announced tax relief measures, as well as $150 million of credit lines in state banks and loans from multilateral agencies.
Peru	*Central Reserve Bank of Peru* **March 19:** Cut its benchmark interest rate by 100 basis points to 1.25%, from 2.25% to counter the economic impact of the COVID-19 pandemic and announced that, if necessary, could employ other additional liquidity injection instruments to alleviate the crisis. **March 29:** Announced that that as part of the 90 billion soles stimulus plan announced on March 29, the Bank would inject 30 billion soles into banks for loans to mainly smaller companies to help cover their working capital. **April 2:** Announced that it is preparing a major bond issuance to help underwrite an unprecedented stimulus package to counter the economic impact of the fast-spreading pandemic. *Government of Peru* **March 29:** Announced that it is planning an economic stimulus package worth around 90 billion soles ($26.41 billion or 12% of gross domestic product) to support citizens and the key mining sector that have been impacted by COVID-19. It will have three phases of 30 billion soles each: containing the disease, ensuring companies' payment chains by granting credit guarantees, and reactivating production, particularly in the copper industry.
Philippines	*Central Bank of the Philippines (Bangko Sentral ng Pilipinas)* **March 19:** Cut the rate on its overnight reverse repurchase facility by 50 basis points to 3.25%, authorized a temporary relaxation of regulations on compliance reporting by banks, calculations of penalties on required reserves and single borrower limits, and approved a temporary reduction to zero of the term spread on rediscounting loans relative to the overnight lending rate. **March 23:** Revealed it would purchase up to 300 billion Philippine peso ($5.9 billion) worth of short-term securities under a repurchase agreement with the Bureau of the Treasury in a bid to inject a fresh round of liquidity into the market and to keep a lid on interest rates in the process. **March 24:** Announced a 200 basis points reduction in the reserve requirement ratio (RRR) to calm financial markets and boost lending. The cut, effective March 30, will bring the ratio to 12% and ensure there is sufficient liquidity to counter the economic impact of the COVID-19 outbreak. *Government of the Philippines* **March 13:** Instructed the Government Service Insurance System and the Social Security System "to take advantage of the low stock prices" and "support the stock market by at least doubling their daily average purchase volumes" from 2019. **March 16:** The government announced a 27.1-billion peso package to help fight the COVID-19 pandemic and provide economic relief to affected sectors.

	March 17: The Philippine Stock Exchange halted all stock, bond and currency trading until further notice, after President Rodrigo Duterte placed Luzon, the country's economic powerhouse, under "enhanced community quarantine". **March 22:** The Philippine Congress is reportedly drafting a stimulus package of at least 200 billion pesos ($3.9 billion) as part of a supplemental budget to shore up the economy from the impact of the COVID-19 outbreak. **March 19:** The Philippine Stock Exchange reopened with shortened hours.
Poland	*National Bank of Poland* **March 17:** Cut its benchmark interest rate by 50 basis points to 1.0% from 1.5% in response to the COVID-19 pandemic; it also lowered its lombard rate to 1.50% from 2.50% and the rediscount rate to 1.05% from 1.75%, reduced banks' required reserve ratios to 0.5% from 3.5%, announced plans to boost banking sector liquidity (through the extension of repo operations), and offered "large-scale" purchases of government bonds as part of its open-market operations. *Government of Poland* **March 18:** Announced an economic stimulus package of 212 billion zloty ($52 billion, or approximately 9% of gross domestic product) to assist entrepreneurs and employees during the COVID-19 crisis. It consists of 5 pillars: employee safety, company financing, health protection, strengthening the financial system, and a public investment program. Specific measures include holidays in debt repayments and social contributions, loan guarantees, as well as payments of salaries to those unable to work. **March 26:** Announced that the state bank BGK will issue bonds worth around 16 billion zlotys ($3.9 billion) in 2020-2021 as part of a wider plan to combat the coronavirus impact on the economy. The state will buy the bonds back in 2021-2025, spending around 2.5 billion zlotys a year in the first year and then around 3.7 billion zlotys annually.
Portugal	*Government of Portugal* **March 13:** Announced a 2.3 billion-euro package that will include delaying some tax payments and granting soft loans. Companies will be allowed to suspend social security payments and maintain employees' contracts with payments equal to two-thirds of salaries, funded largely by the state, and workers who have to stay at home to care for school children of up to 12 years of age will receive 66% of their base salaries. **March 18:** Announced a 9.2 billion-euro package to support workers and provide liquidity for companies affected by the COVID-19 outbreak. It consists of 5.2 billion euros in fiscal stimulus, 3 billion in state-backed credit guarantees, and 1 billion related to social security payments. (Just over half of the 3 billion euros in credit lines announced is aimed at companies working in tourism, hotels and restaurants. The other half goes to industries like textiles, clothing and wood. Around a third is set aside for micro and small enterprises.)
Qatar	*Qatar Central Bank* **March 16:** Cut the deposit rate by 50 basis points to 1%, lending rate by 100 basis points to 2.50%, and repurchase rate (repo) by 50 basis points to 1%. *Government of Qatar* **March 15:** The Emir of Qatar announced several measures to shield the economic and financial sectors in the country from the impact of the COVID-19, including: (1) allocating 75 billion Qatari riyals ($20.6 billion) to support and provide financial and economic incentives in the private sector, (2) directing the Central Bank of Qatar to provide additional liquidity to banks operating in the country and putting in place the appropriate mechanism to encourage banks to postpone loan installments and obligations of the private sector with a grace period of six months, (3) directing the Qatar Development Bank to postpone the installments for all borrowers for a period

	of six months, (4) directing the government to increase its investments in the stock exchange by 10 billion Qatari riyals ($2.75 billion), (5) exempting food and medical goods from customs duties for a period of six months, and (6) exempting the various sectors of the economy from electricity and water fees for a period of 6 months.
Romania	**March 20:** The National bank of Romania cut its benchmark interest rate by 50 basis points to 2.0% in order to curb the economic fallout from the COVID-19 outbreak. It also cut its lending rate facility to 2.50% from 3.50% and will provide liquidity to banks via repo transactions and purchase leu-denominated debt on the secondary market.
Saudi Arabia	*Saudi Arabian Monetary Authority* **March 15:** Announced that it had prepared a 50 billion riyal ($13.32 billion) package to help small and medium-sized enterprises cope with the economic impacts of COVID-19; it also lowered by 75 basis points both its repo rate to 1%, and its reverse repo rate to 0.5%. *Government of Saudi Arabia* **March 20:** Introduced an additional stimulus package worth 120 billion riyals ($32 billion) to aid businesses, including the postponement of value-added tax (VAT), excise tax, and income tax payments for a period of three months and exemptions of various government levies and fees. **March 30:** Announced that it will finance treatment for anyone infected with COVID-19 in the country, and took steps to boost wheat and livestock supplies amid global fears of a food shortage.
Serbia	*National Bank of Serbia* **March 11:** Cut its reference interest rate by 50 basis points to 1.75% to help minimize economic disruption caused by the COVID-19 outbreak. *Government of Serbia* **March 29:** Announced that it plans to offer about 5 billion euros ($5.54 billion) in loans and subsidies to businesses to help them cope with the economic impact of COVID-19 and make a one-time payment of 100 euros to every citizen older than 18. The president indicated that the state would use 700 million euros to pay minimum wages of 30,367 dinars ($288.58) and allow tax delays for micro and small enterprises for the three months after the end of the state of emergency to avoid job loss.
Seychelles	**March 24:** The Central Bank of Seychelles cut its monetary policy rate by 100 basis points to 4.0%, indicating that this was the first phase of its response to the challenge from the spread of the COVID-19, which is expected to lower this year's earnings from tourism by 70% and trigger a double-digit drop in economic growth.
Singapore	*Monetary Authority of Singapore* **March 30:** Announced that it would adopt a 0% per annum rate of appreciation of the policy band starting at the prevailing level of the Singapore Dollar Nominal Effective Exchange Rate (S$NEER), currently slightly below the mid-point of the policy band. *Government of Singapore* **February 18:** Announced around $4.5 billion in financial packages to help contain the COVID-19 outbreak, including $575 million to fight and contain the disease, mainly through healthcare funding, and 4 billion in economic stimulus measures to manage its impact on businesses, jobs and households. **March 26:** Unveiled stimulus plan worth around S$48 billion ($33.7 billion) to deal with the economic fallout from COVID-19 (of which S$17 billion will be drawn from the national reserves). A key part of the stimulus package involves ramping up a jobs support scheme first announced in February. The government will now offset up to

	25% of the first S$4,600 of workers' monthly wages for a nine-month period (up from the 8% quantum and S$3,600 cap announced in February), while self-employed workers will be eligible to receive monthly payments of S$1,000 for nine months. Some hard-hit sectors will receive additional support: the government would offset up to 50% of wages in the food services sector and up to 75% of wages in the aviation and tourism sectors. A previously announced cash payout to all adult Singaporeans would be tripled and low-income families will also receive grocery vouchers.
Slovakia	*Government of the Slovak Republic* **March 29:** Announced plans for an aid package of up to 1 billion euros a month to help firms and employees hurt by the pandemic. Under the plan, the state would (1) pay 80% of wages for employees at firms forced to shut, (2) help self-employed people and employees in firms that suffer falling revenue, with payments linked to the size of the revenue drop, (3) allow employers to postpone their contributions to state social and health systems and delay some tax payments if they suffer a 40% drop in revenue; (4) allow firms to offset accumulated losses from past years going back to 2014 against corporate income tax, and (5) offer firms bank guarantees of up to 500 million euros a month.
South Africa	*South African Reserve Bank* **March 19:** Cut its main lending rate by 100 basis points to 5.25% as it sought to offset the drag from the COVID-19 outbreak and the plunge in oil prices. **March 20:** Announced measures to inject liquidity into local markets, including intraday overnight supplementary repos to provide liquidity support to clearing banks, lowering the standing facilities' borrowing rate by 100 basis points to 200 basis point below the benchmark repo rate, and lowering the standing facilities' lending rate to the repo rate from the previous rate of repo plus 100 basis points. **March 25:** Announced that it would begin buying an unspecified amount of government bonds as part of additional emergency policy measures aimed at easing a severe liquidity crunch triggered by the COVID-19.
South Korea	*Bank of Korea* **March 16:** Cut the seven-day repurchase rate by 50 basis points to 0.75% in an effort to soften the impact of the COVID-19 pandemic on the Korean economy. It also lowered borrowing costs for the bank's low interest rate loan programs and relaxed collateral rules of its repurchasing operations, to ensure companies can easily and cheaply access credit. **March 19:** Announced that it will buy government bonds worth 1.5 trillion won ($1.2 billion) to bolster liquidity in the bond market and back short-term liquidity in banks under increased loan demand due to fallout from COVID-19. *Government of the Republic of Korea* **March 3:** Announced a 11.7 trillion won ($9.8 billion) stimulus package that includes funding for medical institutions and quarantine efforts, assistance to small- to medium-sized businesses struggling to pay wages to their workers, and subsidies for child care. **March 17:** The National Assembly approved a supplementary budget worth 11.7 trillion won ($9.4 billion) to help contain COVID-19 and cushion the economic fallout. The government has indicated that it plans to execute at least 75% of its spending within the next two months. **March 18:** Pledged 50 trillion won ($40 billion) in emergency financing for small businesses and other stimulus measures to help the economy. Some highlights of the package include 12 trillion won in low-interest financing for small firms, 5.5 trillion won in loan guarantees, easing loan terms and suspending interest payments for small businesses. The Bank of Korea reportedly will actively provide liquidity support for around half of the new package.

	March 20: South Korea's financial authorities and local banks agreed to set up a bond market stabilization fund worth more than 10 trillion won ($7.9 billion) as part of the country's efforts to calm financial markets roiled by the spread of COVID-19. **March 24:** Announced that it would double the planned economic rescue package announced on March 18 to 100 trillion won ($80 billion) to save companies hit by the COVID-19 and put a floor under crashing stocks and bond markets. It includes 29.1 trillion won in loans to small- and medium-sized companies and 20 trillion won will be used to buy corporate bonds and commercial paper of companies facing a credit crunch. As part of the rescue package, the Financial Services Commission will establish a 10.7 trillion won facility set up to stabilize stock markets. It will also commence a bond buying facility in April that will be funded by 84 institutions, including the Bank of Korea, commercial banks and insurers. **March 29:** Announced that an "emergency disaster relief payment" of up to 1 million won ($820) would be made to all households (except the top 30% by income), totaling some 9.1 trillion won ($7.44 billion). It is also preparing another extra budget worth 7.1 trillion won ($5.80 billion) for parliamentary approval in April, and will exempt some small and medium-sized companies from paying utility bills.
Spain	*Government of Spain* **March 12:** Approved the creation of a 2.8 billion euro ($3 billion) aid package to help regional authorities mitigate the economic impact from COVID-19, and announced a 1 billion euro contribution to the health ministry's budget and 14 billion euros ($15.1 billion) in liquidity for small and medium companies (e.g., small businesses affected by the outbreak would be exempt from paying taxes for six months). It also announced that it would open a 400 million euro credit line to aid the tourism industry. **March 17:** Unveiled a package of 200 billion euros ($219 billion) to mitigate the effects of COVID-19 (117 billion euros will be mobilized by the state, with the rest coming from private companies). It will include state-backed credit guarantees for companies, loans and aid for vulnerable people, a moratorium on mortgage payments and evictions; the government will also guarantee water, electricity and internet to for people adversely affected.
Sri Lanka	**March 16:** The Central Bank of Sri Lanka cut the Standing Deposit Facility Rate (SDFR) and the Standing Lending Facility Rate (SLFR) by 25 basis points to 6.25% and 7.25%, respectively, and the Statutory Reserve Ratio (SRR) on all rupee deposit liabilities of licensed commercial banks was reduced by 1 percentage point to 4% **March 16:** The Colombo Stock Exchange was closed until March 19, as the government extended the public holiday in a bid to halt the spread of COVID-19 in the country. **April 3:** The Central Bank of Sri Lanka cut by a further 25 basis points its benchmark interest rates (the Standing Deposit Facility Rate and Standing Lending Facility Rate to 6.00% and 7.00%, respectively), its second such reduction in three weeks, in a move to support the economy amid the coronavirus pandemic.
Sweden	*Sveriges Riksbank* **March 13:** Stated that it would lend up to 500 billion crowns ($51 billion) to Swedish companies via banks to shore up credit flows as the epidemic wreaks havoc on financial markets. **March 16:** Announced that it would buy securities for up to an additional 300 billion Swedish crowns ($31 billion) in 2020 to facilitate credit supply and mitigate the downturn in the economy caused by the COVID-19, reduced the overnight lending rate to banks to 0.2 percentage point above its repo rate (from 0.75 percentage point), and indicated that it would be flexible with the collateral banks can use when they borrow money from the Riksbank, giving lenders more scope to use mortgage bonds as collateral.

	Government of Sweden **March 16:** Presented a package worth more than 300 billion Swedish crowns ($31 billion) to support the economy in the face of the COVID-19 pandemic. It included measures such as the central government assuming the full cost for sick leave from companies through the months of April and May 2020 and for temporary redundancies due to the crisis, and allowing companies to put off paying tax and VAT for up to a year (retroactive to the start of 2020).
Switzerland	*Swiss National Bank* **March 23:** Hiked its foreign currency interventions to their highest level since the Brexit referendum in 2016 in an effort to stem the rise in the franc, which has appreciated as investors sought safe assets while stock markets have plunged during the coronavirus pandemic. *Government of Switzerland* **March 13:** Unveiled an emergency economic-aid package of roughly 10 billion francs ($10.5 billion) for workers and small businesses. It includes 8 billion francs for "Kurzarbeit," or short-time work, and 580 million francs in guaranteed bank loans. **March 20:** Announced a new 32 billion franc ($32.56 billion) aid package to support companies and workers hit by the widening COVID-19 outbreak. The bulk of the cash (20 billion francs) will go into guarantees for bank loans to companies at "very modest" interest rates. Firms will be able to get loans worth up to 10% of their revenue, to a maximum of 20 million francs. Amounts of 500,000 francs will be paid out immediately and guaranteed by the government. The government's short-time working scheme would also be extended to fixed-term, temporary workers, and trainees. The package follows one worth 10 billion francs announced on March 13, bringing the total stimulus to 42 billion francs ($42.8 billion). **March 31:** Announced that it is stepping up its funding plans in response to government measures to cushion the economic impact of the pandemic, doubling the volume of outstanding short-term money market instruments. The Federal Finance Administration (FFA) will increase the outstanding volume of short-term money market instruments, from around 6 billion francs ($6.24 billion) to 12 billion francs, and will once again step up sales of its own Confederation bond holdings.
Taiwan	*Central Bank of the Republic of China (Taiwan)* **March 19:** Cut its benchmark rate by 25 basis points to 1.125%, and announced that it would expand the scope of repurchase facility operations and provide banks with T$200 billion ($6.6 billion) of financing to support small and medium sized companies which have been hard hit by the COVID-19 outbreak. *Government of Taiwan* **February 25:** Approved a T$60 billion ($2 billion) package to help cushion the impact of the COVID-19 outbreak on its export-reliant economy, including loans for small businesses, subsidies for hard-hit tour agencies, tax cuts for tour bus drivers, and vouchers to spend on food in night markets. **March 12:** Announced that an additional T$40 billion ($1.33 billion) from the Employment Stabilization Fund and the Tourism Development Fund would be available to stimulate Taiwanese economy. **March 19:** The president said that the government would help its hard-hit airline industry access T$50 billion in financing, and did not rule out further economic stimulus. **March 19:** Authorized its National Stabilisation Fund to intervene and buy stocks on the market, as the island's bourse continues to fall on COVID-19 worries.
Thailand	*Bank of Thailand* **March 20:** Cut its key interest rate by 25 basis points to 0.75%, as the spread of COVID-19 exerted further pressure on the Thai economy.

	March 22: Together with the Ministry of Finance and the Securities and Exchange Commission, announced three measures to address liquidity concerns and ensure the functioning of local financial markets: (1) setting up a special facility that allows commercial banks that purchase units in high-quality money market funds or daily fixed-income funds to use them as collateral for liquidity support (initial estimate is 1 trillion baht); (2) creation of a 70-100 billion baht "Corporate Bond Stabilization Fund" that invests in high-quality, newly issued bonds by corporates that cannot fully rollover maturing corporate bonds, and (3) Bank of Thailand will continue to purchase government bonds to provide liquidity to the market. *Government of Thailand* **March 10:** Approved a stimulus package worth an estimated 400 billion baht ($12.74 billion) to help alleviate the impact of the COVID-19 outbreak. It includes 150 billion baht of soft loans, a 20 billion baht fund to help firms and workers affected, and tax benefits and support for utilities costs. **March 24:** Approved a package of stimulus measures worth at least 117 billion baht ($3.56 billion) to try to mitigate the impact of the coronavirus outbreak. The measures include cash handouts worth 45 billion baht for 3 million workers outside the social security system; soft loans worth 60 billion baht; and tax breaks. Separately, small firms will be offered 10 billion baht of loans and business tax payments will be delayed. **March 30:** Announced that it is preparing a third stimulus package, worth more than 500 billion baht ($15.3 billion), to alleviate the impact of the coronavirus crisis. **March 31:** Agreed to triple the number of workers receiving cash handouts to nine million to help ease the impact of the spreading coronavirus. It had previously planned to provide cash handouts of 15,000 baht ($458) each to 3 million workers, taking the total to 45 billion baht ($1.38 billion). Now its total handout will reach 135 billion baht ($4.13 billion).
Tunisia	*Central Bank of Tunisia* **March 17:** Cut its key interest rate by 100 basis points to 6.75%, as it responded to the negative impact of the COVID-19 on the global growth outlook. **April 1:** Asked banks and financial institutions to suspend the distribution of 2019 dividends and allow customers to defer loan payments for three months as part of a package to ease the social and economic effects of the coronavirus. *Government of Tunisia* **March 21:** Announced that it would allocate 2.5 billion dinars ($850 million) to combat the economic and social effects of the COVID-19 health crisis. Among new measures, the government will delay tax debts, postpone taxes on small- and medium-sized businesses, delay repayment of low-income employee loans, and provide financial assistance to poor families and those who have lost their jobs due to the crisis and loans and aid to help companies affected. **March 23:** The finance minister announced that the International Monetary Fund will disburse $400 million to help the country face the effects of COVID-19. **March 28:** The European Union granted Tunisia 250 million euros in aid to help it cope with the economic and social effects of the viral outbreak.
Turkey	*Central Bank of Turkey* **March 17:** Lowered its benchmark one-week repo rate by 100 basis points to 9.75%, as it responded to the negative impact of the COVID-19 on the global growth outlook. **March 31:** Announced emergency measures to stem the fallout from a growing pandemic. It would (1) allow primary dealers to sell to the Bank (for a temporary period) debt they purchased from the Unemployment Insurance Fund, (2) extend 60 billion lira ($9 billion) worth of rediscount credits, (3) add more lending options well below its 9.75% policy rate, (4) hold swap auctions with six-month maturities for lira

	against dollars, euros, or gold at an interest rate 125 basis points lower than the policy rate, and (5) allow lenders to use mortgage- and asset-backed securities as collateral for foreign exchange operations. *Government of Turkey* **March 18:** Unveiled a 100 billion-lira ($15.4 billion) plan to help businesses affected by the COVID-19 pandemic. It includes measures from tax cuts and payment deferrals for businesses to an increase in minimum pension payouts.
Ukraine	**March 19:** The government published a new law that will exempt taxpayers from paying the land and property taxes from March 1 to April 30, introduced a moratorium on tax audits from March 18 to May 31, and suspended some tax-related penalties from March 1 to May 31.
Uganda	*Bank of Uganda* **March 24:** Sold dollars in the interbank market to support the local currency, which has been experiencing sharp depreciation due to COVID-19-related disruptions. **April 6:** Cut its policy rate by 100 basis points to 8.0% to support the economy which has been hit by the impact of COVID-19. It also announced that it had "directed" commercial banks to defer all discretionary payments, such as dividends and bonus payments, for at least 90 days from March.
United Arab Emirates (UAE)	*Central Bank of the UAE* **March 15:** Announced a 100 billion dirham ($27 billion) stimulus package to deal with the economic effects of the COVID-19 pandemic; it cut the rate on one-week certificates of deposit by 75 basis points and will also ease regulatory limits on loans. **April 5:** Announced new measures to guarantee liquidity in the banking system in the face of the pandemic, boosting its stimulus to a total of 256 billion dirhams ($70 billion) from a previously announced 100 billion dirhams ($27 billion) package. It also halved banks' reserve requirements for demand deposits to 7% from 14%, which will inject about 61 billion dirhams of liquidity to support banks' lending and liquidity management, extended the duration of a previously announced deferral of loan principal and interest payments for customers until the end of the year, and said banks participating in the scheme can benefit from a capital buffer relief of 50 billion dirhams until December 2021, among other measures. *Government of the UAE* **March 30:** Announced that it would inject funding into state-owned Emirates Airlines to help it deal with the impact of COVID-19 on its business. **April 5:** Announced that it would reinforce its stockpile of strategic goods and waive residency visa fines for the rest of the year in response to the viral outbreak.
United Kingdom	*Bank of England* **March 11:** Cut its benchmark interest rate by half a percentage point, to 0.25%, revived a program to support lending to small and midsize businesses, and reduced bank capital requirements to further boost credit. **March 19:** Cut its benchmark rate by 15 basis points to 0.1% to try to mitigate the impact of COVID-19 on the British economy, added 200 billion pounds ($232 billion) to its asset purchase program (including sovereign and private debt), increased its banks' borrowing allowance under the Term Funding Scheme for Small and Medium Enterprises from 5% to 10% of participants' stock of real economy lending, and cancelled its 2020 stress test of the 8 major UK banks. **April 2:** Announced that it will double the size of its corporate bond purchase program to at least 20 billion pounds ($24.7 billion), part of a previously announced stimulus package to help the economy. It will begin ramping up its corporate bond purchases through a series of reverse auctions starting on April 7, holding three a week, and it will be able to buy 20 million pounds of any single bond—double the previous amount.

	UK Government **March 11:** Announced a stimulus package totaling 30 billion pounds ($39 billion). It will include 7 billion pounds ($8.6 billion) available to support the labor market, 5 billion pounds ($6.1 billion) to help the health-care system, and 18 billion pounds ($22 billion) to support the UK economy, bringing the total fiscal stimulus to 30 billion pounds ($39 billion). (Among the specific measures, there will be a tax cut for retailers, cash grants to small businesses, a mandate to provide sick pay for people who need to self-isolate, subsidies to cover the costs of sick pay for small businesses, and expanded access to government benefits for the self-employed and unemployed.) **March 17:** Unveiled a package of 350 billion pounds ($424 billion) to support the economy; it includes 330 billion pounds of guaranteed loans for businesses that need cash to pay rent or suppliers, 20 billion pounds of tax cuts and grants for businesses in 2020, a three-month mortgage payment holiday for borrowers affected by the virus, and a one-year "business rates" holiday for businesses in the retail, leisure, and hospitality industry. **March 28:** Will ease regulations for affected businesses, including simplifying the insolvency system to keep companies trading, easing administrative requirements and barriers to the import of personal protective equipment, and helping new companies produce and distribute hand sanitizer within a matter of days.
Vietnam	*State Bank of Vietnam* **February 24:** Ordered commercial banks to eliminate, cut, or delay interest payments on loans to companies facing losses due to the coronavirus outbreak. **March 16:** Cut by 100 basis points both its refinance rate (to 5%) and the overnight lending rate in the inter-bank market (to 6%), and by 50 basis points its discount rate (to 3.5%). *Government of Vietnam* **March 3:** Announced measures worth 27 trillion dong ($1.16 billion) to help businesses cope with the coronavirus epidemic and help the economy stick to its 6.8% growth target this year. They include tax breaks, delayed tax payments, and a reduction in land lease fees. The government will also speed up state spending on infrastructure projects.
Zimbabwe	*Reserve Bank of Zimbabwe* **March 26:** Cut its main lending rate to 25% from 35% and set a fixed exchange rate (at 25 Zimbabwe dollars to the U.S. dollar) as part of measures to support the economy. It indicated that it had suspended the managed floating exchange rate system to provide for greater certainty in the pricing of goods and services in the economy. *Government of Zimbabwe* **March 29:** Published new exchange control regulations making it legal for Zimbabweans to use electronic and cash foreign currencies in domestic transactions, as the country readies for a 21-day lockdown to prevent the spread of COVID-19.

Multi-Country and International Institutions' Responses	**March 4:** The **International Monetary Fund (IMF)** made $50 billion in loans available to deal with the COVID-19 through its rapid-disbursing emergency financing facilities, including $10 billion of zero-interest loans to the poorest IMF member countries. On March 16, the IMF announced that it "stands ready to mobilize its $1 trillion lending capacity to help our membership" and that it has "40 ongoing arrangements—both disbursing and precautionary—with combined commitments of about $200 billion," some of which could be used for this crisis, and that it is aiming to boost its debt relief fund to $1 billion from its current level of $400 million. **March 3:** The **World Bank** announced an initial package of up to $12 billion in loans for countries to help countries cope with the effects of the COVID-19 outbreak. Specifically, it comprises up to $2.7 billion new financing from IBRD, $1.3 billion from IDA, complemented by reprioritization of $2 billion of the Bank's existing portfolio, and $6 billion from IFC, as well as policy advice and technical assistance ($8 billion is new funding and the remaining $4 billion is redirected from current lines of credit). **March 11:** The **Inter-American Development Bank (IADB)** announced that it has up to $2 billion in resources that can be programmed to countries requesting support for disease monitoring, testing and public health services, and that it could work with countries that have undisbursed loan balances to redirect resources to pandemic-response efforts. **March 13:** The **European Bank for Reconstruction and Development (EBRD)** unveiled an emergency €1 billion "Solidarity Package" of measures to help companies across its regions deal with the impact of the COVID-19 pandemic. Under the emergency program, the EBRD will set up a "resilience framework" to provide financing for existing EBRD clients with strong business fundamentals experiencing temporary credit difficulties, comprising emergency liquidity, working capital and trade finance. **March 15:** The Bank of Canada, the Bank of England, the Bank of Japan, the European Central Bank, the **U.S. Federal Reserve**, and the Swiss National Bank agreed to lower the pricing on the standing US dollar liquidity swap arrangements by 25 basis points, so that the new rate will be the US dollar overnight index swap (OIS) rate plus 25 basis points. **March 16:** The **European Investment Bank Group (EIBG)** proposed a 40 billion euro financing package consists of dedicated guarantee schemes to banks based on existing program for immediate deployment (20 billion euros), liquidity lines to banks to ensure additional working capital support for SMEs and mid-caps (10 billion euros), and asset-backed securities purchasing programs to allow banks to transfer risk on portfolios of SME loans (10 billion euros). **March 16:** The **Islamic Development Bank (IsDB)** Group announced that it is setting-up a special "Strategic Preparedness and Response Facility" of $730 million to mitigate the negative health and socio-economic impact of the COVID-19 pandemic. It will include $280 million from the Bank and Islamic Solidarity Fund for Development (ISFD) for sovereign projects and programs, $300 million from International Islamic Trade finance Corporation (ITFC) for trade finance and $150 million from the Islamic Corporation for the Insurance of Investment and Export Credit (ICIEC) for insurance coverage. **March 16:** The **Central American Bank for Economic Integration (CABEI)** granted a nonreimbursable financial package worth $8 million to the eight countries of the Central American Integration System in order to combat the widening economic fallout from the COVID-19 (Guatemala, El Salvador, Honduras, Nicaragua, Costa Rica, Panama, Belize, and the Dominican Republic will each receive $1 million). **March 18:** The **Asian Development Bank (ADB)** announced a $6.5 billion initial package to address the immediate needs of its developing member countries (DMCs) as they respond to the COVID-19 pandemic. The initial package includes approximately $3.6 billion in sovereign operations for a range of responses to the health and economic consequences of the pandemic, $1.6 billion in non-sovereign operations for micro, small, and medium-sized enterprises, domestic and regional trade, and firms directly impacted, about $1 billion in concessional resources through

	reallocations from ongoing projects and assessing possible needs for contingencies, and $40 million in technical assistance and quick-disbursing grants. (Since February 2020, ADB has provided more than $225 million to meet urgent needs of both governments and businesses in DMCs.) **March 19:** The **U.S. Federal Reserve** announced the establishment of temporary U.S. dollar liquidity arrangements (swap lines) with 9 central banks to help lessen strains in global U.S. dollar funding markets. These new facilities will support the provision of U.S. dollar liquidity in amounts up to $60 billion each for the Reserve Bank of Australia, the Banco Central do Brasil, the Bank of Korea, the Banco de Mexico, the Monetary Authority of Singapore, and the Sveriges Riksbank, and $30 billion each for the Danmarks Nationalbank, the Norges Bank, and the Reserve Bank of New Zealand. **March 19:** The Board of Directors of the **New Development Bank** approved RMB 7 billion ($1 billion) Emergency Assistance Program Loan to the People's Republic of China. The Program will help finance urgent and unexpected public health expenditures in Hubei, Guangdong, and Henan. **March 20:** The **Development Bank of Latin America (CAF)** announced that it has opened an additional $2.5 billion line of credit to support the measures that member countries are taking to mitigate the effects of COVID-19. On March 3, it approved a credit line worth $300 million to manage emergencies related to COVID-19 and the possibility of granting technical help of up to $5 million for initiatives related to the outbreak in countries across the region. **March 26:** The **Group of 20 (G20)** announced that it would inject "over $5 trillion into the global economy, as part of targeted fiscal policy, economic measures, and guarantee schemes to counteract the social, economic and financial impacts" of COVID-19.

Source: Congressional Research Service based on information from news articles and press releases.

Author Information

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

Andres B. Schwarzenberg
Analyst in International Trade and Finance

Martin A. Weiss
Specialist in International Trade and Finance

Rebecca M. Nelson
Specialist in International Trade and Finance

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