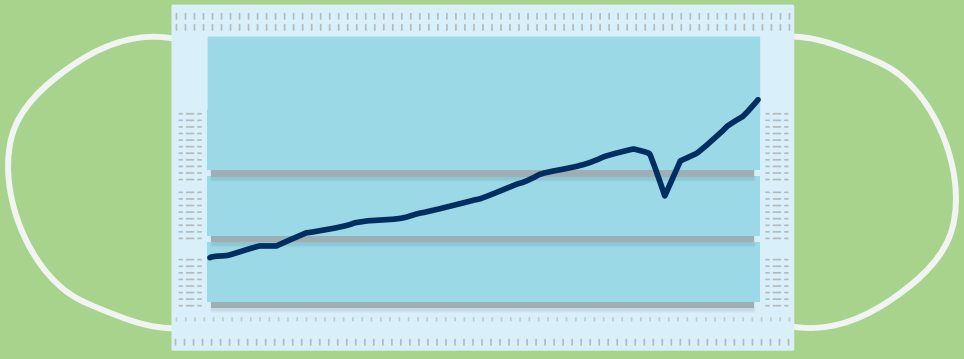
RECESSION REMEDIES

Lessons Learned from the U.S. Economic Policy Response to COVID-19



Edited by

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CHAPTER 1

Lessons Learned from the Breadth of Economic Policies during the Pandemic

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Introduction

The emergence of COVID-19 and the policy and public response to it led to the fastest, sharpest, and most synchronized reduction in global economic activity in history. The United States shed 22 million jobs in just two months and the U.S. economy was 10 percent smaller in the second quarter of 2020 than it had been just two quarters earlier.

The pandemic unleashed an enormous amount of human suffering and disruption, including a U.S. death toll of approximately one million (Centers for Disease Control and Prevention [CDC] n.d.). The economic policy response was largely successful in protecting households from the economic impacts of the pandemic, however, and also helped foster a strong economic recovery. Real disposable personal income actually rose in 2020 and 2021 as transfer payments from the government vastly exceeded lost incomes from other sources. As a result, poverty, after accounting for taxes and transfers, fell in 2020 to the lowest level since the data series began in 1967. Even more notable, child poverty rates fell to their lowest level, despite the sharp economic downturn.

Financial markets were very strained in February and March 2020. Observers and policymakers worried that a cascade of bankruptcies and defaults could precipitate a financial crisis. But improvements to make the financial system more resilient in the wake of the global financial crisis and the policy response

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to the COVID-19 crisis quickly addressed potential issues. Financial conditions during the pandemic were marked by low interest rates, an absence of funding strains, a soaring stock market, and virtually no bank failures.

The U.S. economy experienced a V-shaped recovery of a type not seen in recent recessions. Real Gross Domestic Product (GDP) exceeded its pre-pandemic level by the second quarter of 2021 and was close to pre-pandemic estimates of potential by the fourth quarter of 2021. The unemployment rate ended 2021 below 4.0 percent, just slightly above where it was two years earlier, prior to the pandemic.

The rapid recovery was due to two factors. The first factor is that the recession itself was caused by a transitory shock associated with COVID-19; as that shock retreated—and people learned to better live with the pandemic—the economy was poised to recover quickly, just as it typically does after natural disasters and appears to have done after the 1918–19 influenza pandemic. The second factor is the policy response that protected household incomes and kept many businesses intact so that they were in a position to resume more normal levels of economic activity when it was safe to do so.

Overall, the United States' fiscal response appears to have been much larger than the response undertaken by any other country; this was especially true in 2021, when fiscal policy was as supportive as it was in 2020. The U.S. GDP recovery has been among the strongest of any of the advanced economies, but the U.S. employment recovery has been among the weakest; this suggests that both the size of the response and, perhaps, its character and preexisting institutions all matter.

The COVID-19 pandemic is not over, and additional surges and mutations are likely as it transitions to being endemic. As of this writing, there are more than 900 COVID-related deaths every day in the United States and cases are trending upwards (CDC n.d.). The economy is not yet normal: there is a shortfall in the workforce of about two million workers relative to pre-pandemic projections (adjusted for changes in population growth), and spending is still restrained in pandemic-sensitive areas like travel and in-person events.

The economy experienced major side effects from the pandemic and associated policy response, most notably the highest inflation rate in 40 years, far outpacing the increase in wages and leading to the largest real wage declines in decades. In addition, the U.S. government incurred substantial debt during the pandemic. With the expiration of most forms of fiscal support, real household income is likely to be lower in 2022 than in 2021 and could well be below its pre-pandemic trend. As a result, poverty is on track to rise in 2022. Moreover, inflationary pressures and the efforts to moderate those pressures might bring an end to the expansion.

Ultimately, the economic policy response to the COVID-19 recession should be judged not just by its consequences in the spring of 2020, not what happened over the next two years, but also by the longer-term effects, and whether the response will prove to have contributed to a stronger and more sustainable economy going forward.

Even though the book is not yet closed on COVID-19 and the longer-term consequences of the economic policy response, the significant fiscal policy responses to the pandemic are probably behind us. This is a good time to reflect on the overall response: on the successes, the mistakes, and, most importantly, on what lessons we can learn for the future.

This chapter concentrates on the economic response to the crisis. It does not address the health response to the crisis, which itself had important economic implications, in some cases helping to strengthen the economy (e.g., vaccinations and masks) and in other cases deliberately reducing economic activity in order to save lives (e.g., shutdowns). Our focus is to mostly set aside issues specific to what hopefully will be a once-in-a-lifetime pandemic to extract broader lessons that can be generalized to more typical economic downturns.

The Pandemic and the Policy Response

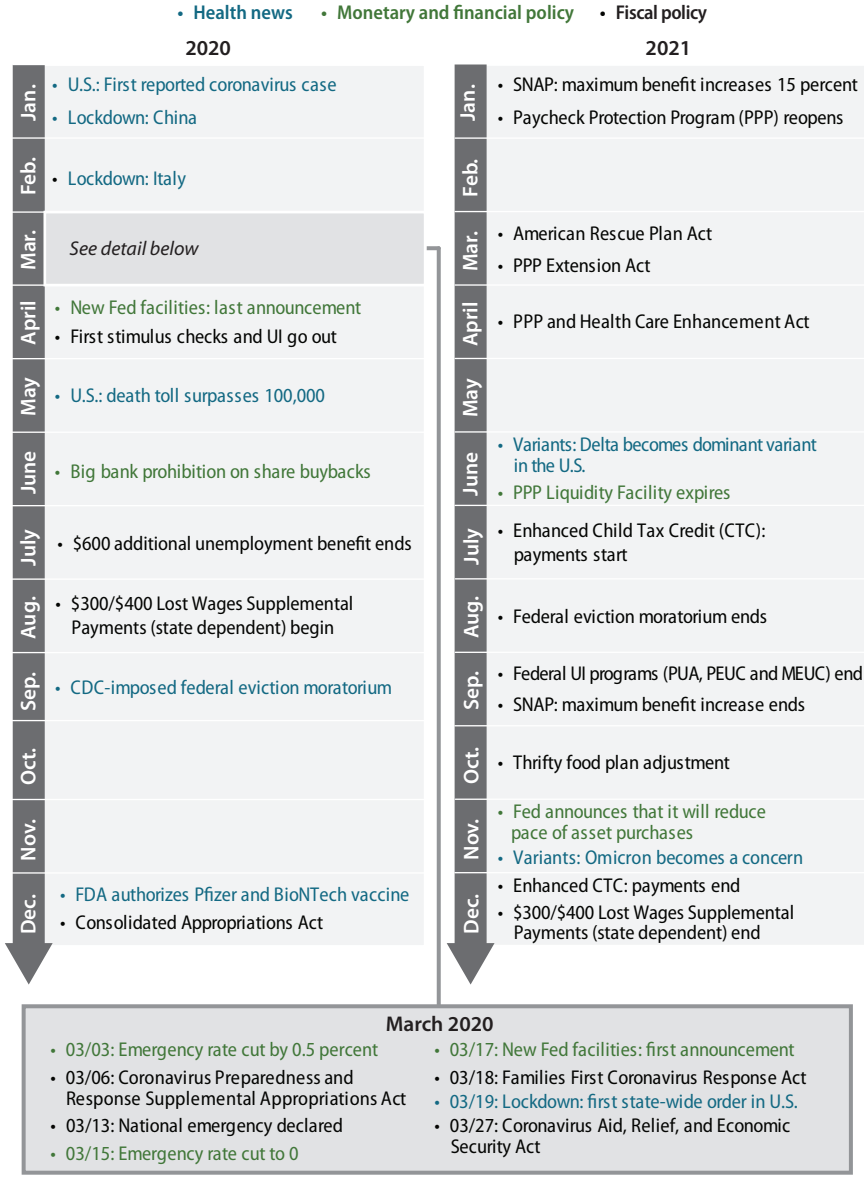
The first COVID-19 cases were reported in the United States in January 2020. The stock market started declining rapidly in February as it responded to the global economic news and the significant increase in risk. By mid-March 2020—when there had been only a few dozen confirmed COVID-19 deaths in the United States—the widespread public reaction to COVID-19 led to rapid and dramatic pullbacks in consumer and business economic activity, many of which preceded the government's social distancing rules (Chetty et al. 2020). Over the next two years, dramatic changes in the health consequences of the pandemic, fiscal responses, and public attitudes all affected the economy. After the initial wave of the pandemic, the Delta variant took hold in the summer of 2021 and the Omicron variants later in the fall of 2021 and the winter of 2021–22.

The initial fiscal response in the U.S. was large. It waned in mid-2020 and then surged again in late 2020 and early 2021. In 2020 the response was bipartisan, with both parties coming together in March and December 2020 to pass COVID-related legislation. These responses were complemented by actions of the Federal Reserve (Fed) and other parts of the government: the Federal Open Market Committee (FOMC) lowered the federal funds rate to zero, new Fed facilities were opened to help stabilize financial markets, President Trump declared a national emergency, and the first statewide lockdowns were ordered (Figure 1.1). This economic response did not just help the economy. It also likely helped save lives by supporting and enabling health measures that restricted face-to-face economic activity in order to limit the spread of the virus.

In addition, attitudes toward the pandemic have shifted significantly, with some countries and U.S. states returning close to pre-pandemic patterns and others still experiencing social distancing and reductions in economic activity. Overall, the effect of COVID-19 on the U.S. economy waned even in the midst of the pandemic: in January 2022, even as the seven-day average of daily COVID-19 cases topped 800,000 and daily COVID-19 deaths topped 3,000, the economy added 481,000 jobs.

FIGURE 1.1

Major Policy Actions, 2020 and 2021



Source: AP News 2021; Ballotpedia 2020–2022; Board of Governors of the Federal Reserve System 2021; Centers for Disease Control and Prevention 2020; Cox 2020; Federal Register 2020; Giuffrida and Cochrane 2020, McCarty and Perl 2021; Milstein and Wessel 2021; Lane 2020; Liesman 2020; Lorenzo 2020; Reinicke 2021; Sablik 2020; State of California 2020; U.S. Department of Agriculture 2021a and 2021b; Wade 2021.

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The COVID-induced economic crisis was unlike any other U.S. recession. The sharp decline and rebound in activity had the hallmarks of the response to a natural disaster, such as a hurricane or blizzard. But, in the case of COVID-19, the disaster was not localized to any one part of the country and is ongoing more than two years later. Nonetheless, the comparison is helpful for understanding the forces underlying the economic recovery and the goals of policy. At least initially, and to some degree for the year and a half following the onset of the pandemic, the principal goal of policy was not to stimulate economic activity, but rather to allow people to forgo the activities that spread the virus. For example, a principal goal of Unemployment Insurance (UI) early in the crisis was to keep people from working in face-to-face industries, a policy deliberately designed to complement and reinforce other efforts to limit economic activities that were spreading the virus (House Committee on Ways and Means 2020).

The Fiscal Policy Response

In March 2020 fiscal policymakers took significant action. Two pieces of legislation related to the pandemic were enacted by March 18, increasing federal spending and lowering tax revenues by a total of $200 billion. At the end of March, the Coronavirus Aid, Relief and Economic Security Act (CARES Act) was enacted, with increases in spending and reductions in revenues totaling $1.721 trillion.

Several other major pieces of legislation also provided substantial fiscal support. On December 27, 2020, the Consolidated Appropriations Act of 2021 provided an additional $868 billion in fiscal support. On March 11, 2021, the American Rescue Plan provided $1.92 trillion. In addition, the Paycheck Protection Program and Health Care Enhancement Act, enacted on April 24, 2020, provided up to $483 billion in support for businesses and health-care providers. Together, all the pandemic-related legislation increased the deficit over the next decade by more than $5.2 trillion (Table 1.1). Given the expected timing of the increases in federal spending and decreases in revenues at the time that legislation was enacted, the effect of the fiscal support on the federal deficit was estimated to total 10.4 percent of GDP in fiscal year 2020 and 11.0 percent of GDP in fiscal year 2021.

That fiscal support was far more significant and much more front-loaded than the support enacted in the wake of the Great Recession, which was at the time the largest discretionary fiscal response to an economic crisis. As shown in Figure 1.2, legislation enacted in 2008 and 2009 increased the deficit by a relatively modest amount as a share of GDP—by less than 2 percent. In fiscal years 2010 and 2011, the fiscal support provided to the economy by legislation was larger, averaging roughly 3 percent. In retrospect, the fiscal support in the wake of the Great Recession is widely considered to have been too small—a conclusion that was often discussed in debating how much support should be provided to the economy in response to the COVID-19 crisis.

Legislation enacted since March 2020 offered substantial support to households, businesses, and state and local governments through a wide variety of

TABLE 1.1

Deficit Impact of Legislation Related to COVID-19

Date	Law	Estimated Effect on Deficit Over 10 Years (in billions)	Deficit Effect as a Share of GDP	
			2020	2021
3/6/2020	Coronavirus Preparedness and Response Supplemental Appropriations Act	8	0.01%	0.02%
3/18/2020	Families First Coronavirus Response Act	192	0.64%	0.25%
3/27/2020	Coronavirus Aid, Relief, and Economic Security (CARES) Act	1,721	7.67%	2.00%
4/24/2020	Paycheck Protection Program and Health Care Enhancement Act	483	2.07%	0.19%
12/27/2020	Consolidated Appropriations Act	868	N/A	3.29%
3/11/2021	American Rescue Plan	1,921	N/A	5.20%
3/30/2021	PPP Extension Act of 2021	15	N/A	0.07%
Total		**5,208**	**10.39%**	**11.03%**

Source: Congressional Budget Office 2020b, 2020c, 2020d, 2020e, 2021a, 2021c, and 2021d; Bureau of Economic Analysis n.d.a; authors' calculations.

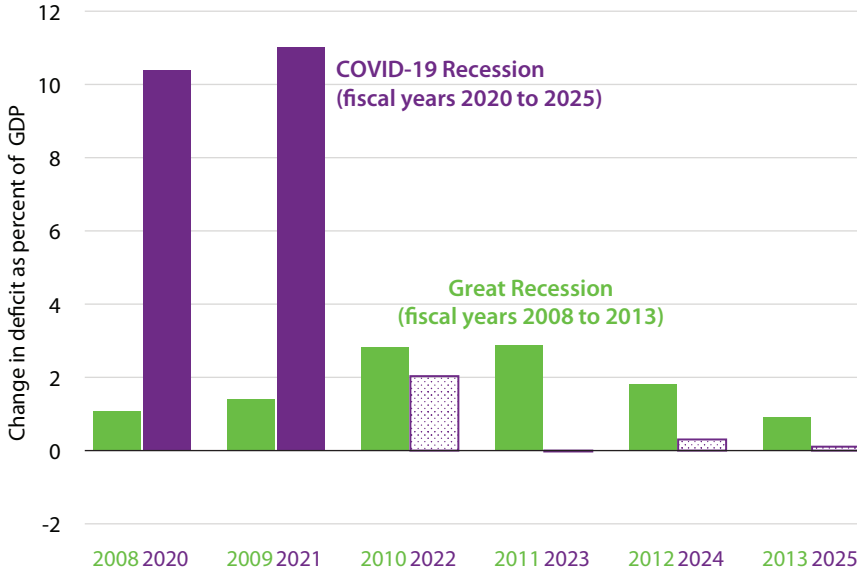
Note: N/A indicates the legislation was enacted after fiscal year 2020. Deficit effects as share of GDP are the fiscal year deficit effects as scored by CBO as a share of actual Gross Domestic Product (GDP) for each fiscal year.

programs. Using estimates that largely rely on analysis provided by the Committee for a Responsible Federal Budget (CRFB), households and individuals received more than one-third of the COVID-19-related legislated funds through expanded UI benefits and other income support, direct payments, and other programs, such as forbearance programs that paused existing debt payments on federally backed mortgages and student loans. Businesses received a little less than one-third (largely through grants and subsidized loans), and state and local governments, health providers, federal agencies, and a collection of other recipients received roughly one-third (CRFB n.d.).

In addition to fiscal support through increases in federal spending and reductions in federal revenues, the federal government put in place other changes that supported households. For example, one was a foreclosure moratorium on federally backed mortgages, which was largely extended by the private sector to other mortgages as well. Another was a federal eviction moratorium for renters that was in place through August 2021 (see Chapter 5).

FIGURE 1.2

Fiscal Policy Responses to COVID-19 Recession and Great Recession



Source: Bureau of Economic Analysis n.d.a; Congressional Budget Office 2008a, 2008b, 2008c, 2008d, 2015, 2020b, 2020c, 2020d, 2020e, 2021c, and 2021d, and 2021e; Council of Economic Advisors 2014; authors' calculations.

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Note: GDP for fiscal years 2020 and 2021 are as reported. Patterned bars are based on values for GDP projections from CBO in July 2021. For the COVID-19 recession, the legislation included is as shown in Table 1. The legislation included in response to the Great Recession are the Economic Stimulus Act of 2008, the Housing and Economic Recovery Act of 2008, the Unemployment Compensation Extension Act of 2008, the American Recovery and Reinvestment Act of 2009 (net of the Alternative Minimum Tax "patch" which is treated as routine policy), and various bills outlined in Council of Economic Advisors (2014). Data do not include the Troubled Assets Relief Program or certain other provisions included in pre-Recovery Act stimulus bills.

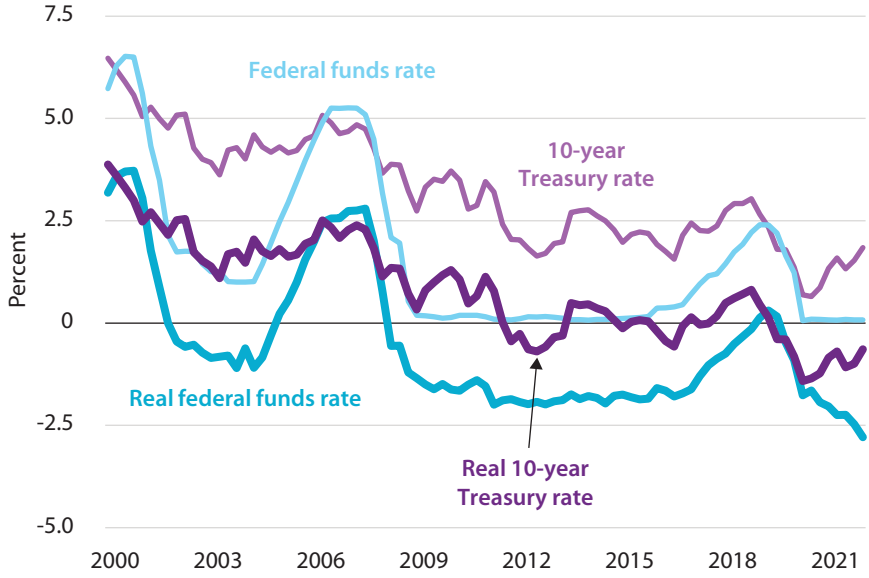
The Monetary Policy Response and Interest Rates

The Fed took a wide array of actions to make monetary policy very accommodative and to stabilize financial markets and credit markets. Those actions are summarized here; for much more detail, see Chapter 8.

The FOMC announced emergency rate reductions following meetings on March 3 and March 15, bringing its policy rate to zero, where it stayed until mid-March 2022. Although the nominal rate remained unchanged throughout this period, an increase in the rate of inflation meant that the real federal funds

FIGURE 1.3

Real and Nominal Interest Rates, 2000Q1–2022Q1



Source: Federal Reserve Bank of New York 2022; Federal Reserve Bank of Philadelphia 2022; U.S. Department of the Treasury 2022; authors' calculations.

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Note: Figure presents quarterly average rates for all series; the first quarter of 2022 is approximated based on data through mid-March 2022. The real federal funds rate is the nominal rate less expected inflation in the year ahead according to the median response of the Survey of Professional Forecasters (SPF). The real 10-year Treasury rate is the nominal rate less the median SPF inflation projection for the next 10 years.

rate declined sharply, as shown in Figure 1.3. To the degree that households and businesses are responsive to the lower real costs of short-term borrowing, monetary policy was effectively more expansionary at the beginning of 2022 than it was as the economy was going through the worst of the COVID-19 crisis in the spring of 2020.

At the same time, the FOMC significantly expanded its purchases of U.S. Treasury securities and, to a lesser degree, mortgage-backed securities. Initially, the primary effect was to stabilize financial markets in March 2020. Over time, the effect was to put downward pressure on longer-term interest rates, over and above the sharp reduction in longer-term rates on Treasury securities owing to an increase in investor demand for low-risk assets. (See Chapter 8 for a discussion of the effect of asset purchases on interest rates.) Taken together, the result was that the 10-year Treasury rate fell to an all-time

low of 0.6 percent in the summer of 2020. With a taper of asset purchases by the Fed, greater optimism about future economic growth, and an increase in inflation, by mid-March 2022 the nominal 10-year Treasury rate had largely recovered to pre-pandemic levels. However, given the increase in expected inflation, real rates went from roughly zero prior to the pandemic to solidly negative after early 2020.

The Fed also opened a number of facilities to support the flow of credit. Although terms were set so that the facilities were unlikely to lose money in aggregate, in most cases they were backstopped by money appropriated by Congress. For the most part, the terms of the credit facilities were stringent enough that they were not highly used. The evidence, however, suggests that some facilities were constructive in restoring enough confidence to revive credit markets. (See Chapter 4 and Chapter 6 for more discussion.) In addition, the Fed took supervisory and regulatory actions to support credit markets. For example, federal bank supervisors indicated that COVID-19-related loan modifications would not trigger the usual reporting requirements that follow troubled debt restructurings. In addition, some regulatory capital requirements were eased. Only four banks failed in 2020 (the same number as in 2019) and none failed in 2021—a testament both to the policy response and to the overall health of the banking system going into the crisis; the health of the banking system reflected both business changes prior to the pandemic and policy reforms like the Dodd-Frank Act and greater capital requirements.

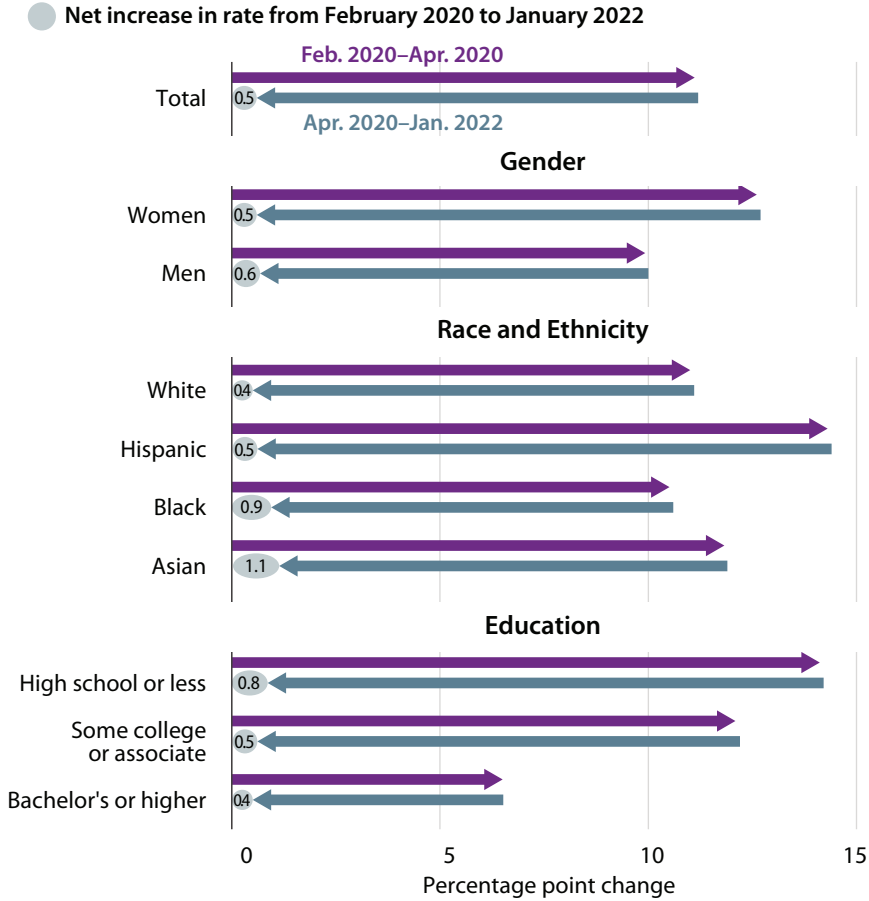
As a result of the Fed's actions and the quick improvement in the economic outlook, the flow of credit generally continued. For example, banks reported tightening standards on commercial and industrial loans from the second quarter of 2020 through the first quarter of 2021. But, since then, loan standards have eased (Board of Governors of the Federal Reserve System 2022). At the same time, the demand for such loans fell over 2020 but has improved since the second half of 2021. In addition, the spread between the Baa corporate bond yield and the 10-year Treasury rate jumped in March 2020 from 2 percentage points to 4 percentage points, but recovered far more quickly than after the Great Recession and was at or below pre-pandemic levels from April 2021 to February 2022.

Recent Trends in Income and Poverty Rates

The economic fallout of the COVID-19 recession disproportionately affected lower-income households and certain racial and ethnic groups. Unemployment rates rose more dramatically for workers with a high school diploma or less and those with some college experience or an associate's degree than they did for workers with a bachelor's degree or higher. College graduates with a bachelor's degree were more likely to be able to shift to remote work and continue their jobs (Figure 1.4). In addition, the unemployment rate rose most for Hispanic workers among all racial and ethnic groups, and rose more for women than

FIGURE 1.4

Increase and Subsequent Decrease in Unemployment Rates, February 2020 to January 2022



Source: Bureau of Labor Statistics n.d.a; authors' calclulations.

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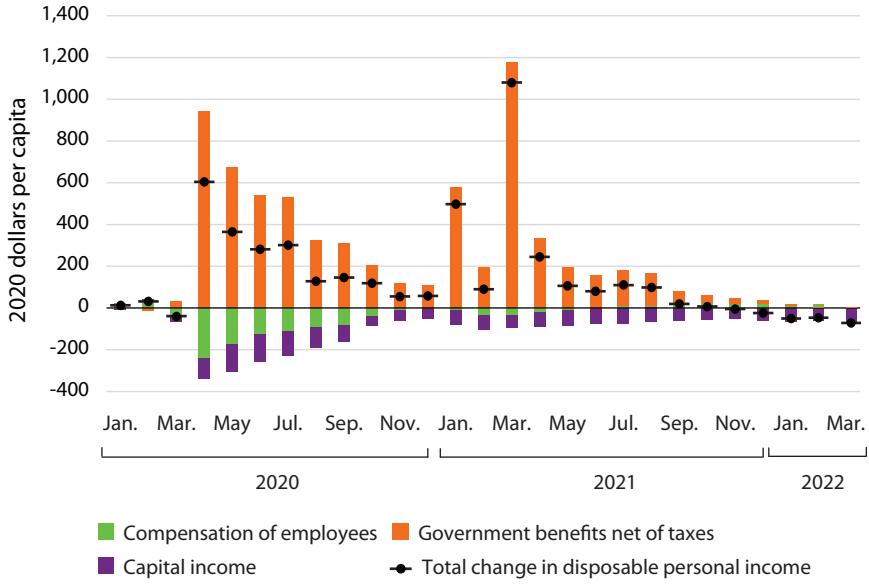
for men. Although unemployment rates have come down significantly from their peaks in the spring of 2020, rates remain relatively elevated for Black and Asian workers and for workers with less formal education.

Although the increase in unemployment in 2020 meant sharp declines in labor income, the policy response more than cushioned the decline for most workers, leading to increases in disposable personal incomes (which includes

FIGURE 1.5

Components of Per Capita Real Disposable Income Relative to 2018–19 Trend



Source: Bureau of Economic Analysis n.d.b; authors' calculations.

Note: Bars denote change in per capita disposable personal income (DPI) components while circle-studded line denotes overall monthly change in net DPI per capita relative to pre-pandemic trends. Government benefits net of taxes include income from Social Security, Medicare, Medicaid, Unemployment Insurance, Child Tax Credits, Economic Impact Payments, the value of Paycheck Protection Program forgivable loans to proprietors and non-profit institutions, and other federal and state social benefits, less personal taxes and contributions to social insurance. Capital income includes proprietors' income, rental income, income from assets, and net transfer receipts from businesses. Pre-pandemic trends are computed separately for each component shown, based on log-linear regression for January 2018 to December 2019.

taxes and transfers) for the average household. The gains were particularly large for low- and moderate-income households and brought poverty rates down to the lowest level ever recorded.

As shown by the black circles in Figure 1.5, real disposable personal income per capita was well above recent trends in most months since March 2020 but has recently fallen increasingly below trend as benefits have ended and inflation has risen. The contribution of government benefits net of taxes is shown by the orange bars. The cumulative above-trend benefits from March 2020 through March 2022 totaled nearly $6,900 for the average person (and about twice that for the average household), which is about 2.5 times larger than the cumulative total $2,800 loss in compensation and other income.

But those benefits came in waves. Indeed, after significant fiscal support early in the pandemic, government benefits fell dramatically in the fall of 2020, significantly dampening aggregate disposable income, and leaving some households in much the same or even worse financial straits than before the pandemic. In December 2020 legislation once again provided support, namely through another round of Economic Impact Payments (EIPs; i.e., payments to households) and increased UI generosity, leading to a surge in aggregate disposable income in January 2021. In March 2021 the American Rescue Plan provided the third round of EIPs, maintained expanded UI, and made the Child Tax Credit (CTC) fully refundable and more generous, significantly increasing after-tax income for low-income families with children under the age of 18 in the household.

Some programs boosted household resources but are not reflected in disposable income. Those include forbearance programs that paused existing debt payments on federally-backed mortgages and the allowance of penalty-free early withdrawals from retirement plans.

Survey data through the end of 2020 show that people with less formal education benefited the most from the enormous fiscal support. Money income—which includes cash income from work, UI benefits, pension disbursements, investments, and the like, but does not include other kinds of income such as EIPs or in-kind benefits—fell more for lower-educated workers; this reflects the regressive nature of the job and income losses associated with the pandemic. But posttax income—which includes EIPs—rose more for lower-educated workers than for higher-educated workers (see Figure 1.6) according to survey data, since the fiscal response more than compensated for reported market income losses.

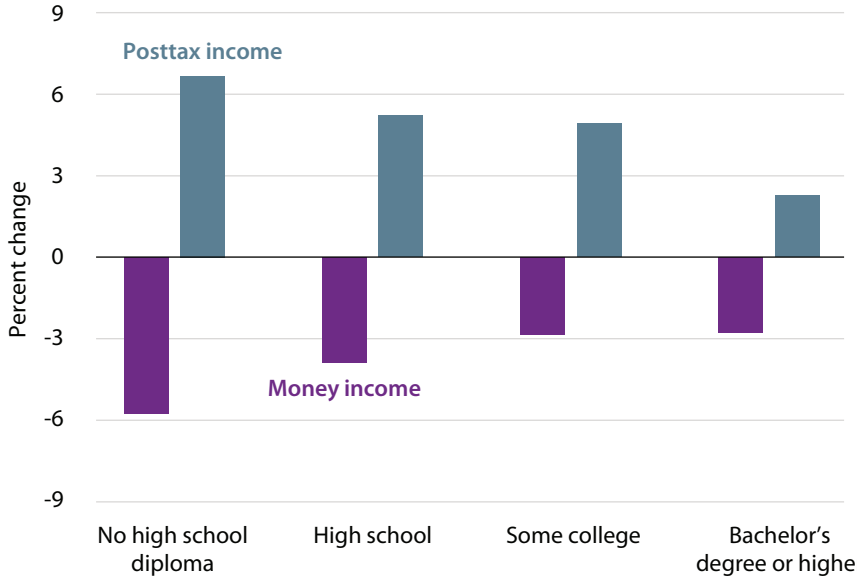
As a result, the increase in government benefits led to a large reduction in poverty rates in 2020. The percentage of the U.S. population in poverty, as measured by the Supplemental Poverty Measure, which incorporates the effect of benefits, fell from 12 percent in 2019 to 9 percent in 2020 (Figure 1.7). For some demographic groups, the reductions were even larger. For example, the share of Black people in poverty fell by 4 percentage points in 2020 and the share of Hispanic people in poverty fell by 5 percentage points. In addition, the share of children under age 18 and adults over age 65 in poverty fell by more than the share of adults between 18 and 64 years old who are in poverty.

The two new policies in 2020 that had the most significant effects on poverty relative to earlier years were the expansion of UI and the EIPs. In particular, the U.S. Census Bureau (2021) estimates that, rather than falling to 9 percent, the Supplemental Poverty Measure poverty rate would have risen to 13 percent in the absence of the EIPs that were issued in the spring of 2020 and the winter of 2020–21, and to 14 percent if, in addition, UI benefits had not increased (assuming that labor market income remained unchanged despite a significantly different amount of fiscal support) (Chen and Shrider 2021; Fox and Burns 2021).

Continued fiscal support in 2021—particularly the full refundability of and increase in the CTC and increases to the Supplemental Nutrition Assistance

FIGURE 1.6

Change in Real Median Household Income by Educational Attainment of Householder, 2019–2020



Source: Shrider et al. 2021.

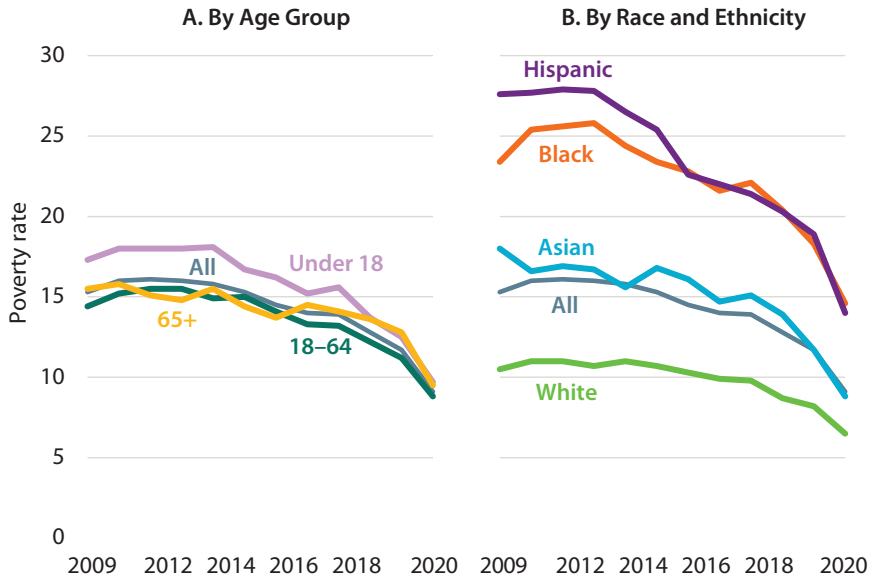
Note: Income is reported by Current Population Survey respondents and is inflation adjusted using the Consumer Price Index for all urban consumers retroactive series (CPI-U-RS). Money income is total pretax cash income, including Unemployment Insurance benefits, and excluding imputed income and in-kind transfers. Posttax income is money income plus Economic Impact Payments, net of all federal and state taxes and credits and payroll taxes. A householder is the person in whose name the housing unit is owned or rented.

Program (SNAP) maximum benefit—as well as the continued labor market recovery, likely helped lift additional households out of poverty. Indeed, researchers find that poverty rates continued to fall in 2021, particularly for children (Macartney et al. 2022).

Many of the favorable outcomes for disposable incomes and poverty rates in 2020 and 2021 were the result of temporary fiscal support that raised income above pre-pandemic levels. With lapsing of that support, real disposable personal income per capita is on track to fall sharply in 2022 relative to 2020 and 2021, and could even fall short of its pre-pandemic trend. Poverty rates, especially for children, are likely to rise sharply in 2022. Some of that increase would be mitigated by the extension of the full refundability of the CTC being

FIGURE 1.7

Poverty Rates after Taxes and Transfers, 2009–2020



Source: U.S. Census Bureau 2021.

Note: Poverty rates shown as the Supplemental Poverty Measure, which reflects government benefits not included in the official poverty measure.

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considered by lawmakers, a change that would be particularly effective at reducing child poverty.

The Economic Recovery

The COVID-19 shock to the economy was sharp and short. Real GDP recorded its steepest quarterly drop in economic output on record, with a decrease of 10.1 percent in the first half of 2020. The recession as formally defined lasted only two months (February and March 2020), the shortest on record. Nevertheless, the economy remained below its pre-COVID-19 projections through the end of 2021, with elevated unemployment and reduced labor force participation. Overall, however, the recovery was much faster than in other recent recessions. That likely reflects both the fact that the recession was caused by a pandemic, creating the sharp decline and quick partial rebound, and the significant fiscal and monetary support.

Although the enormous fiscal support certainly provided a significant boost to real GDP, any effort to quantify that boost is subject to great uncertainty.

Nonetheless, some calculations are informative. For example, in September 2020 the Congressional Budget Office (CBO) estimated that the pandemic-related legislation enacted at that point would boost the level of real GDP by 6.4 percent at the end of 2020 and by an average of 3.2 percent in 2021 (CBO 2020h). Those effects primarily reflected boosts to spending by individuals, firms, state and local governments, and health-care providers. At that time, CBO expected inflation to remain muted. That analysis did not incorporate any effects on consumer or business confidence from the legislation, although it notes those effects were positive. It is a difficult exercise, however, to contemplate economic conditions in 2020 had no pandemic-related legislation been enacted. Arguably, the absence of any fiscal or monetary policy response in the spring of 2020 would have been catastrophic—either for the economy or by forcing a premature economic reopening that would have been even more devastating, with even more lives lost.

The fiscal support enacted at the end of 2020 and in March 2021 also boosted real GDP, but (as was expected by some at the time and as is clearer in retrospect) that later fiscal support contributed to an increase in demand that was not matched by an increase in supply; the result of this mismatch was greater inflation. In reports released in February and July 2021, CBO estimated that pandemic-related legislation enacted in December 2020 and in March 2021 would boost the level of real GDP by 2.8 percent in 2021, such that late in the year GDP would surpass its pre-pandemic projected path (CBO 2021b; CBO 2021e). Then the level of GDP would be boosted by 3.8 percent in 2022. At the same time, CBO noted the resulting inflationary pressures, and projected Consumer Price Index (CPI) inflation of 3.3 percent in 2021. In a similar vein, Edelberg and Sheiner (2021) analyzed the economic effects of a package similar to the one enacted in March 2021, and estimated that it would boost real GDP in 2021 by 1.9 percent, pushing real GDP above its pre-pandemic projected path; they also noted that the package would create inflationary pressure.

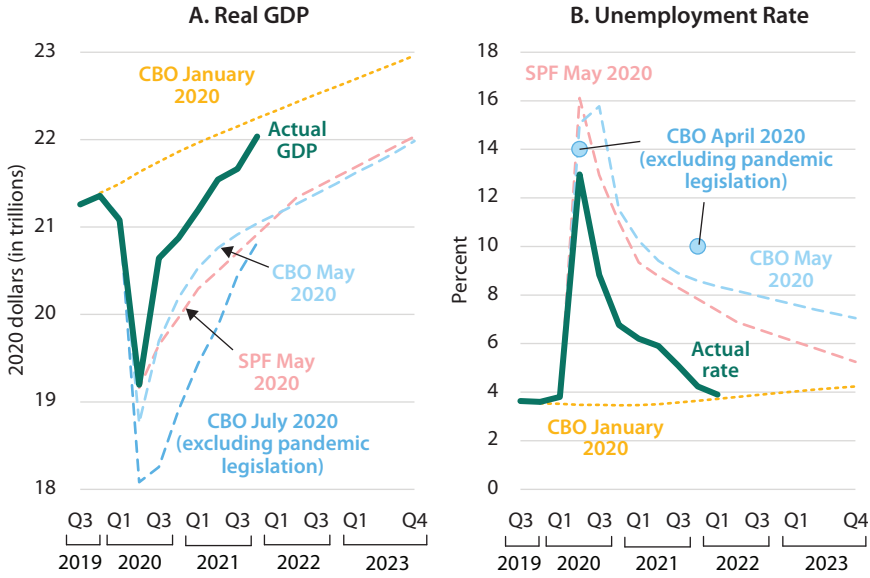
Nonetheless, although those analyses cited substantial uncertainty, their baseline estimates assumed a more rapid expansion in the supply of goods and services that were being demanded than came to pass. As outlined below, very strong consumer demand was concentrated in the goods sector, which could not keep pace. Costs of inputs went up, exacerbated by pandemic-related supply constraints and weakness in labor supply. The result has been higher inflation than the United States has seen in decades; inflation is expected to remain higher than before the pandemic at least through 2022.

Output and Employment Beat Early Expectations—Even Factoring in the Policy Response

Even after the initial substantial fiscal assistance, observers generally expected a much slower economic recovery from the second-quarter trough than actually came to pass. This is evident in Figure 1.8a, comparing the path of actual GDP to projections early in the pandemic from CBO and the Survey of Professional

FIGURE 1.8

Real Gross Domestic Product (GDP) and Unemployment, Actual and 2020 Projections



Source: Bureau of Economic Analysis n.d.a, Bureau of Labor Statistics 2022b; Congressional Budget Office (CBO) 2020a, 2020e, 2020f, and 2020h; Federal Reserve Bank of Philadelphia 2020.

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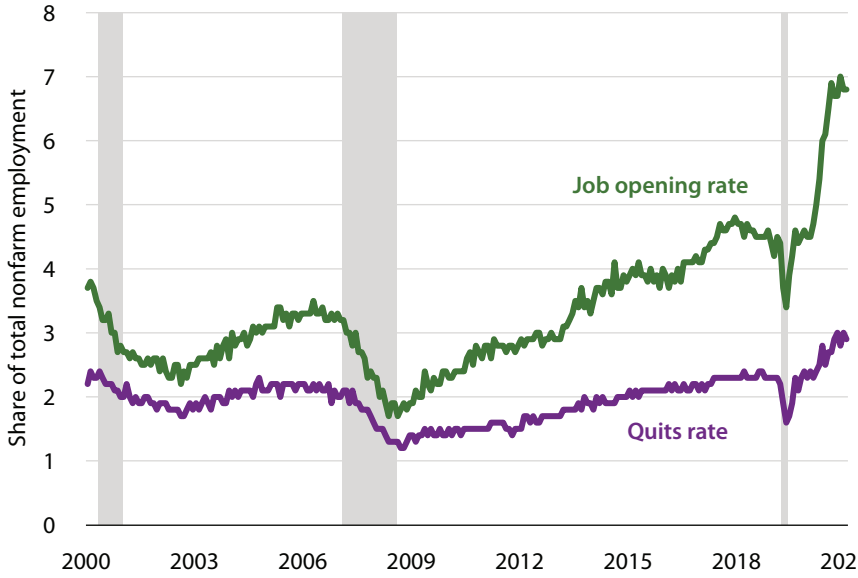
Note: Actual GDP is as reported through the fourth quarter of 2021. Actual unemployment rate is the quarterly average of monthly rates from 2019-2021, while the first quarter of 2022 is estimated using the average of January and February .reported rates. SPF May 2020 is the release date of the second quarter Survey of Professional Forecasters (SPF) report by the Federal Reserve Bank of Philadelphia. Dates listed Dates listed refer to forecast publication months from CBO and SPF, with one exception. In September 2020, CBO published the agency's projection as of July 2020 excluding the pandemic-related legislation enacted between March and July 2020.

Forecasters. Real GDP rebounded strongly in the third quarter of 2020, recovering two-thirds of the output lost in the two preceding quarters. As a result, the level of GDP was 4.8 percent above the projection that CBO published in May, which incorporated the CARES Act. Real GDP surpassed its pre-pandemic peak in mid-2021; in the fourth quarter of 2021, real GDP edged within 1 percent of CBO's pre-pandemic forecast for the quarter. Still, cumulative real GDP across 2020 and 2021 was 4 percent below CBO's pre-pandemic projection, or $1.7 trillion (in 2020 dollars).

Similar to aggregate output, the labor market began to recover much faster than initially expected. After employment had fallen by a staggering 22.4 million

FIGURE 1.9

Monthly Job Openings and Quits as a Share of Total Employment



Source: Bureau of Labor Statistics 2021.

Note: Shaded areas indicate recessions. Rates of job openings and quits are defined as the share of total nonfarm job openings and quits relative to total nonfarm employment.

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by April 2020, it had recovered almost half of that decline by December 2020. In contrast, when the unemployment rate spiked 11 percentage points at the onset of the pandemic, many observers expected it to remain high and for employment to remain significantly depressed for some time. For example, in May 2020 the Survey of Professional Forecasters projected the unemployment rate at the end of 2020 would remain elevated at 11 percent and CBO projected it to rise above 15 percent (Figure 1.8b). Instead, it fell to below 9 percent in the third quarter.[2] Unemployment has continued to decline, reflecting very strong labor demand among firms, as evidenced by the unprecedentedly high rate of job openings (shown in Figure 1.9).

2. Since March 2020, the BLS-reported unemployment rate has undercounted unemployed workers due to misclassification of workers on temporary layoff; BLS estimates the degree of misclassification was highest in early 2020 (4.8 percentage points in April 2020) and has dissipated over time (0.1 percentage points in December 2021) (BLS 2020, BLS 2022c).

Much of the recovery in employment has been centered in the leisure and hospitality sector. From February to April 2020 employment declines in the leisure and hospitality sector accounted for about 40 percent of the total 22 million jobs that were lost in that period. A partial recovery in that sector has fueled employment growth since early 2020. Nonetheless, employment in leisure and hospitality in February 2022 remains 9 percent below its level in February 2020.

In contrast to the surprisingly swift recovery in unemployment, the recovery in labor force participation has generally been weaker than expected. The labor force participation rate plummeted 3.2 percentage points between February 2020 and April 2020 as firms shut and people left the labor force in the face of uncertain health risks, sudden increases in care responsibilities, and the suspension of in-person schooling. Swift and dramatic expansions of UI, as well as the issuance of the first EIPs, allowed people to prioritize their and their families' health over labor market income. At the same time, the Paycheck Protection Program (PPP) may have damped the measured decline in labor force participation to the degree it was a reason that some participating firms kept workers on payrolls even in the midst of shutdowns. (See Chapter 4 for a discussion of the effects of that program on employment.) Although the participation rate recovered a bit more in May and June than CBO had projected early in the pandemic, relative to CBO's projections published in July 2020, the rate was lower than expected through the remainder of 2020 and throughout 2021 (Figure 1.10a).[3]

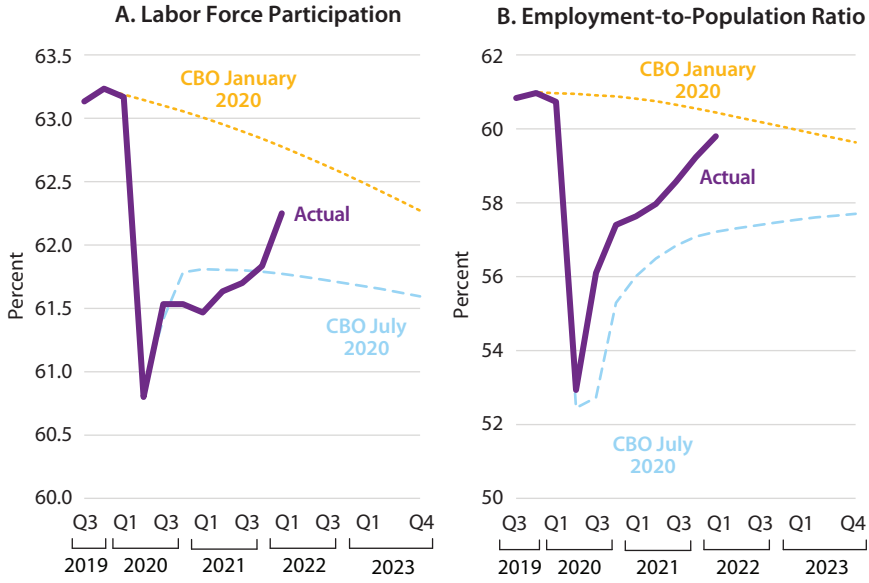
The reasons that labor force participation fell so much and has not yet recovered are not clear. Declines were similar for both prime-age workers (25–54) and older workers (55 and over), and for both men and women. No doubt, different factors mattered more or less for different groups. For example, health risks of in-person work during the pandemic have been higher for older workers than for prime-age workers. And women are more likely than men to work in the service sector, where risks are higher. At the same time, UI benefits were likely higher relative to pre-pandemic wages for younger workers with lower wages. Other advanced economies similarly affected by the pandemic have not seen anything like the same decline in labor force participation; that suggests that the U.S. policy response and preexisting U.S. institutions might have played an important though not fully understood role.

People infected with COVID-19, taking care of sick family members, or at high risk of getting sick were less likely to participate in the labor market; they might also meet the technical definition of participating but be unable

3. The increase in the published participation rate in early 2022 is almost completely due to an upward revision that affects historical data in a way that is not reflected in the published series. The published data show that the shortfall in the rate from February 2019 shrank from 1.5 percentage points in December 2021 to 1.1 percentage points by February 2022. However, analysis by economists at the Federal Reserve Bank of Atlanta (2022) suggests the upward revision should be similarly applied to 2019, such that the shortfall in participation in February 2022 from two years earlier was 1.4 percentage points.

FIGURE 1.10

Labor Force Participation and Employment-Population Ratio, Actual and 2020 Projections



Source: Bureau of Labor Statistics n.d.a; Congressional Budget Office 2020a, 2020g.

Note: Actual labor force participation rate and employment-population ratio are each quarterly averages of monthly rates from 2019–2021, while the first quarter of 2022 is estimated using the average of January and February reported rates. Dates listed refer to projections from the CBO released in each specified month.

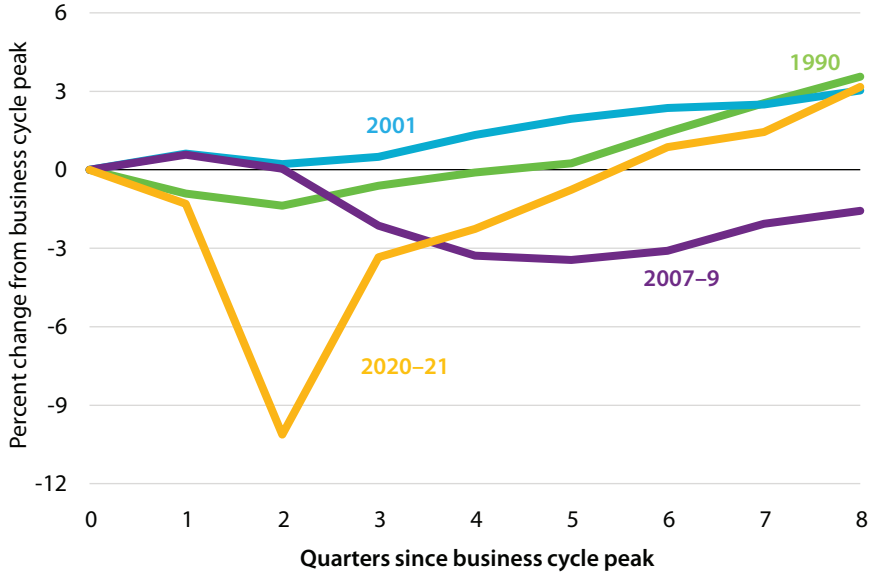
or unwilling to work at a given time. The effect of the pandemic on labor force participation was particularly large in the first half of January 2022. According to the Household Pulse Survey, during the Omicron wave in early 2022, the number of people who said they were unemployed because they were sick or caring for someone who was sick was double the previous peak in September 2021 during the Delta wave (U.S. Census Bureau n.d.).

Despite considerable focus on the challenges being faced by women who are caregivers of children and other family members in the wake of widespread closures of child-care facilities and continued school disruptions, labor force participation among prime-age women has continued to recover. In contrast, men's participation began stagnating in the summer of 2021.

We find ourselves revisiting some of the same discussions about the decline in men's labor force participation in the five years after the Great Recession. One factor present now but not in the aftermath of the Great Recession is the

FIGURE 1.11

Percent Change in Real GDP from Business Cycle Peaks, 1990–2021



Source: Bureau of Economic Analysis n.d.a; National Bureau of Economic Research n.d.; authors' calculations.

Note: The figure shows the quarterly percent change in Real Gross Domestic Product (GDP) from the peak of a business cycle, as determined by the National Bureau of Economic Research Business Cycle Dating Committee.

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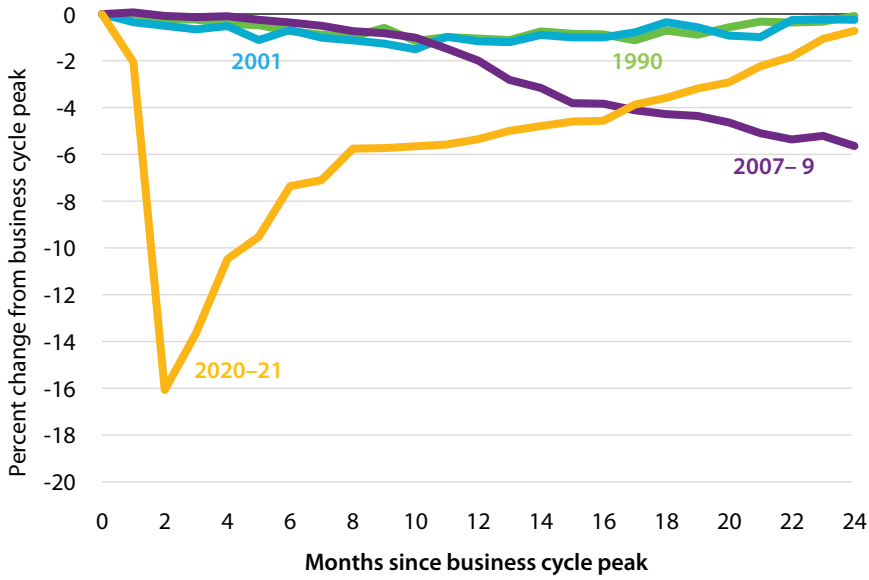
substantial wealth built up by those with real estate and stock market assets and the savings out of income that many people have accumulated as a result of the significant fiscal support. For anyone less inclined to work, particularly in the midst of the difficulties created by the pandemic, those financial resources helped buffer the absence of labor market income. Worryingly, the longer people remain out of the labor force, the less likely it is that they will regain stable employment.

Taking together the developments in labor force participation and the unemployment rate, the recovery in the employment-to-population ratio has been incomplete. For prime-age workers, that ratio was about 1½ percentage points below its pre-pandemic value, despite the unemployment rate being only 0.3 percentage points higher. The incomplete recovery in employment against the backdrop of the very high rate of job openings (and high rates of quits among workers who appear to be looking for new employment opportunities) has meant significant wage pressure, which is discussed below.

FIGURE 1.12

Percent Change in Total Employment from Business Cycle Peaks, 1990–2022



Source: Bureau of Labor Statistics 2022b; National Bureau of Economic Research n.d.; authors' calculations.

Note: Figure shows the percent change in total nonfarm employment from the peak of each business cycle.

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Output and Employment Have Recovered Much Faster than after the 2008 Recession

Real GDP and employment have rebounded more quickly than after the 2008 recession. Even after the very sharp 9 percent decline in output early in 2020, real GDP recovered to its prerecession peak after just six quarters (Figure 1.11). In contrast, in the Great Recession, real GDP did not recover to its precrisis level until 10 quarters after the initial downturn, even though the decline from the peak was slower and only about 3½ percent in total. Those different paths partly reflect the different natures of the recessions, one being caused by a pandemic and the other by a financial crisis. In addition, as shown in Figure 1.2, the fiscal response was very different after the two recessions.

Similarly, the recovery in overall employment, roughly two years after the onset of the recession, has been much faster than after the 2008 recession (Figure 1.12). As of February 2022, employment is roughly 1 percent below its

pre-pandemic level. In contrast, two years after the 2008 recession, employment was about 5½ percent below its pre-recession level; it took several more years to fully recover.

In contrast to previous recessions, the COVID-19 recession has been worse for the service sector than the goods sector. Consider the average outcomes across the three recessions from 1990 to 2019, 24 months after each recession began: employment in the service sector was 2 percent below its pre-recession peak and employment in the goods sector was 12 percent below its peak. In contrast, as of January 2022 employment in the service sector was still 1 percent below its February 2020 level and employment in the goods sector was just 1 percent below. Because women are disproportionately employed in the service sector, they saw disproportionately large swings in their employment.

Inflation and Real Wages

Despite the enormous monetary and fiscal support, the United States experienced unusually low inflation in 2020 because the pandemic reduced demand even more than it limited supply (Figure 1.13). Some catch-up inflation to return to its trend was widely expected as the economy normalized in 2021 but, surprising many forecasters, inflation rapidly surpassed its pre-COVID-19 trend; over the course of the year, inflation both broadened to a wider range of goods and services and increased somewhat in pace. As of this writing, forecasters are increasingly expecting high inflation to persist in 2022 (with inflationary pressures exacerbated by the increase in energy and other commodity prices in the wake of the invasion of Ukraine).

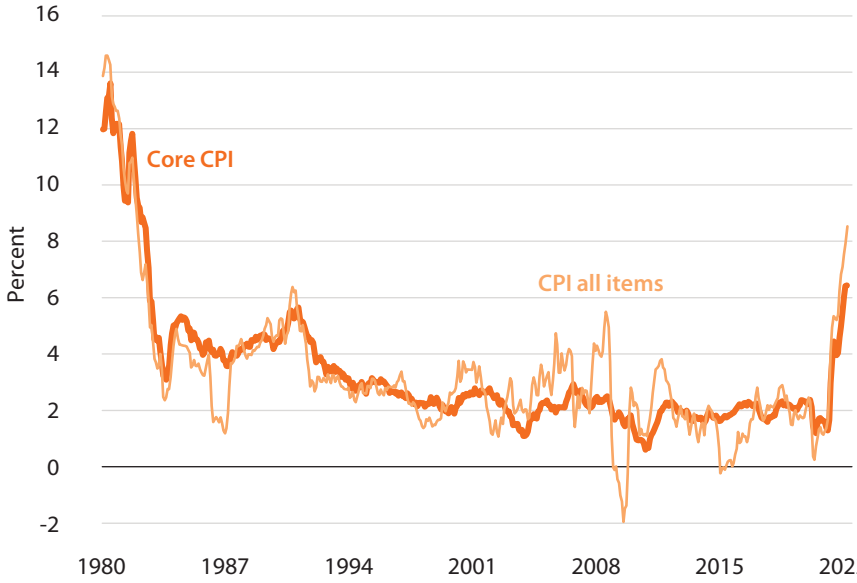
Overall, the surge in inflation in 2021 appeared to reflect both enormous pent-up demand from forgone consumer spending the previous year and significant financial resources to support that demand. At the outset of 2021, those resources reflected above-trend disposable income, accumulated savings from below-trend spending in 2020, rising asset prices, and historically low interest rates. Households then received significant additional fiscal support that further improved their finances.

Household spending far outstripped production and the ability to import, with the difference manifesting itself as inflation. The shortfall in supply was exacerbated by the shift in the pattern of consumption and constraints on production and supply chains. Inflation in the core goods sector (meaning goods excluding food and energy) as measured by CPI was 11.7 percent through March 2022, the highest pace since 1975 (with the exception of last month; Figure 1.14). Over the course of 2021, service inflation picked up, especially for housing; the pandemic led to increased demand for single-family homes probably because people spending more time at home desired more space.

A shift of consumption from services to goods likely played a role in exacerbating inflation. In the months following the onset of the pandemic, goods

FIGURE 1.13

Year-Over-Year Inflation, Consumer Price Index (CPI) Measures, 1980–February 2022



Source: Bureau of Labor Statistics 2022a; authors' calculations.

Note: Core CPI excludes food and energy prices.

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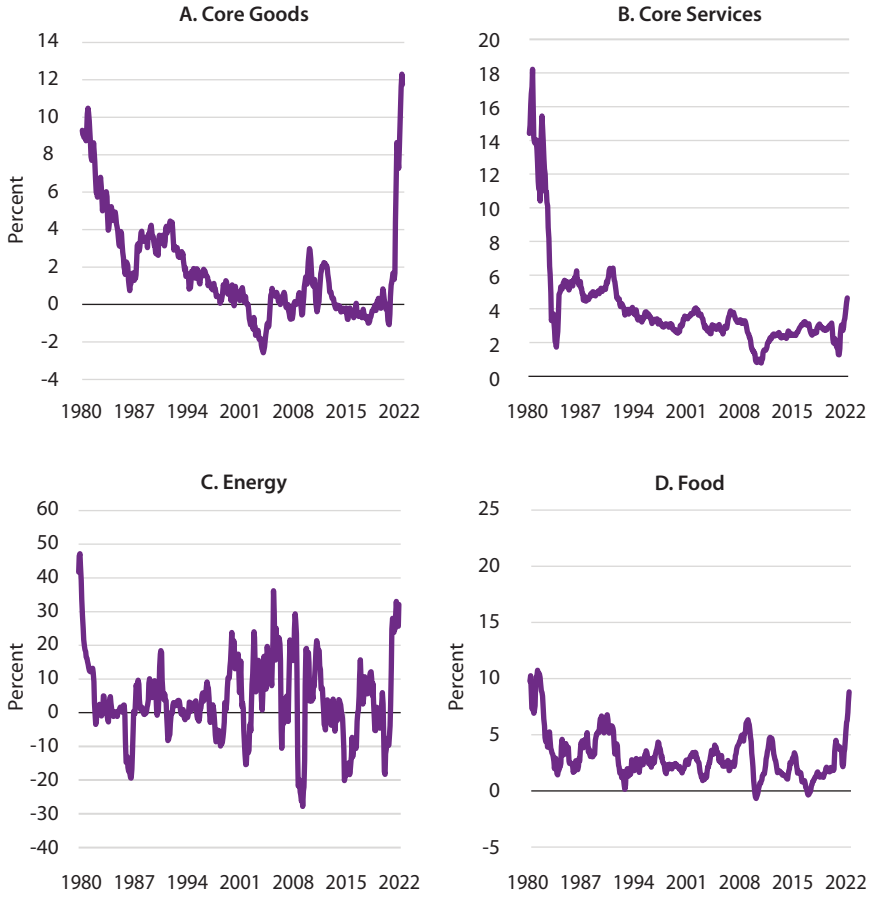
spending rose above trend while services spending remained well below trend. Goods spending then grew rapidly following the fiscal support in the beginning of 2021, reaching new highs in the spring of 2021 even as COVID-19 cases and deaths were dropping rapidly. To the degree that goods demand reached such heights that producers and importers had little ability to further increase supply beyond an already stretched level, and to the degree that services producers were reluctant to lower prices in the face of weak demand, this shift in consumption patterns raised inflation. Note that, while it is likely that inflation would have been lower absent this consumption shift, at least some of the lower inflation in goods would have been offset by additional services inflation.

Pandemic-related supply chain constraints also played a role in exacerbating inflation, but the extent of that effect is uncertain. For example, some ports have had to temporarily curtail activity because of the pandemic, but ports in 2021 were processing more imports than ever before. In addition, the supply of microprocessor chips has not kept up with demand, but microprocessor

FIGURE 1.14

Year-Over-Year Inflation, Consumer Price Index (CPI), by Type, 1980–February 2022



Source: Bureau of Labor Statistics 2022a; authors' calculations.

Note: Core Goods refers to CPI: Commodities less Food and Energy Commodities, while Core Services refers to CPI: Services less Energy Services.

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production was higher in 2021 than it was in 2019. The increase in nominal spending by U.S. households, which was largely on par with what one would have expected given macroeconomic policies and household financial conditions, resulted in a persistent surge in demand for goods. Many supply chain problems probably reflected suppliers straining but being unable to keep up. Inflation was effectively the wedge between consumers' desire and willingness

to greatly increase their spending on goods and the limits on what the economy could produce. Even if the pandemic had not disrupted supply chains in the goods sector (for example through port closures), inflation probably still would have jumped. Nevertheless, both rebuilding the economy from the stresses of 2020 and the new waves of the pandemic in 2021 created challenges for supply chains. And, new waves point to continued problems in 2022.

The increase in consumer spending sharply increased the demand for labor. Because that increase has outpaced the recovery of labor supply, many firms have raised wages to entice workers back to the labor market. Before the expansion of UI benefits ended in the summer of 2021, many workers were getting as much or more from UI than they were from their previous jobs and that affected some workers' incentives to take job offers at their previous wages (see Chapter 2). Some demographic groups have responded to the increase in wages by increasing labor supply. For example, labor force participation has been remarkably strong among young adults (16–24 years old), for whom paid work looked relatively attractive compared to being enrolled in school during the pandemic. However, as discussed above, labor force participation is still depressed overall, particularly for prime-age men.

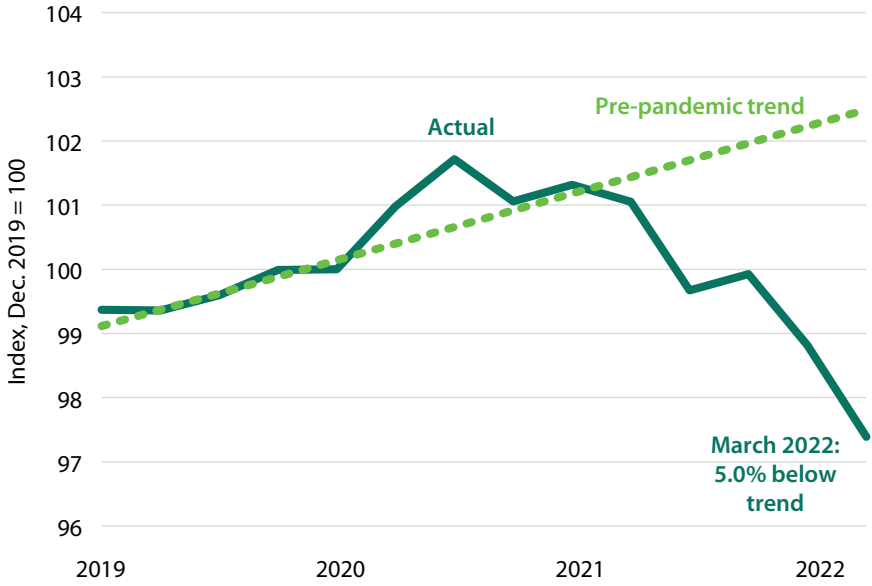
Initially, the increase in wages outpaced the increase in prices and real wages rose (Figure 1.15). Since mid-2021, however, real wages have been below their pre-pandemic level. Indeed, real wages are even further below where they would be if they continued along their pre-pandemic trend, with a shortfall of 5.0 percent relative to trend in March 2022.

The strong labor market has led to particularly strong real wage growth for workers in low-wage industries that were disproportionately affected by the pandemic. As a result, workers in the leisure and hospitality sector and the retail sector have seen real wage gains. Even so, those gains have been smaller than in the two years prior to the pandemic (Figure 1.16). For example, workers in the leisure and hospitality sector saw real wage gains of roughly one-and-a-half percent a year on average in 2020 and 2021, below the 2 percent pace in 2018 and 2019. At the same time, higher-wage sectors generally saw declines in their average real wage.

The big question going forward is what will happen to inflation and real wages. If the burst of inflation and decline in real wages lasts only two or three years, then history may evaluate it as a reasonable price to have paid for a more rapid recovery. Most professional forecasters expect this to be the case, citing anchored long-run inflation expectations as well as an easing of supply-chain constraints and a shift of spending from goods to services (Federal Reserve Bank of Philadelphia 2022; Reifschneider and Wilcox 2022). On the other hand, it is a distinct possibility that the high level of inflation could persist and be very painful to tackle. After all, short-run inflation expectations are higher, wage increases are leading firms to raise prices, price increases are leading workers to demand wage increases, the unemployment rate is already relatively low, and the Fed expects to take at least a year to move interest rates from an expansionary

FIGURE 1.15

Real Employment Cost Index, Wages and Salaries for All Civilian Workers



Source: Bureau of Labor Statistics n.d.b; authors' calculations.

Note: Pre-pandemic trend based on log-linear regression for March 2018 to December 2019. Deflated by Consumer Price Index for all urban consumers.

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setting to a fully neutral setting (Blanchard 2022; Furman 2022). This chapter of the recovery from the COVID-induced recession has not finished.

Consumer Spending

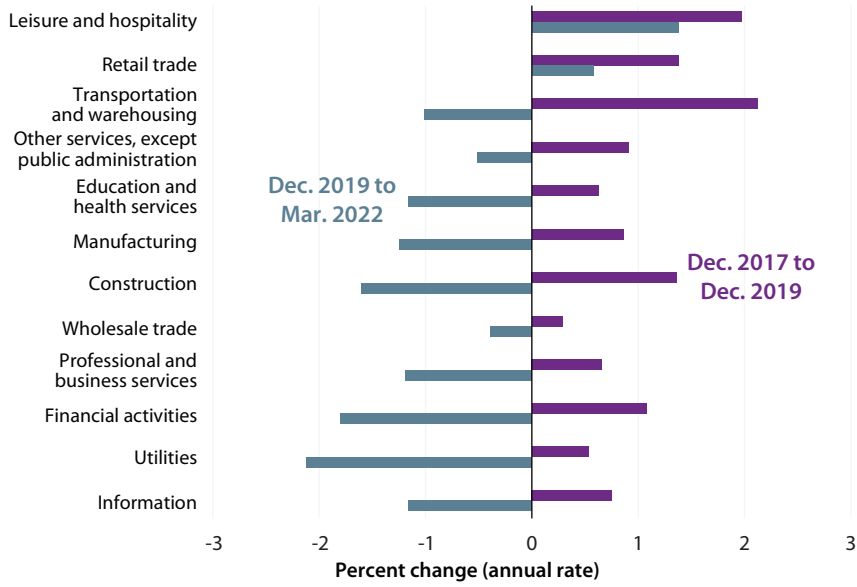
Overall, the recovery in aggregate consumer spending was extraordinarily swift (Figure 1.17a). After falling a stunning 18 percent from February to April 2020, real consumer spending had rebounded almost 15 percent by June. Moreover, real spending recovered to its pre-pandemic level less than one year after the start of the recession, a much faster recovery than occurred after the Great Recession.

Because the pandemic depressed demand for face-to-face services, such as those in healthcare, and in leisure and hospitality, the composition of consumer demand has been unusually concentrated in goods (Figure 1.17b). Real goods spending was more than 15 percent higher in January 2022 than pre-pandemic, and there were a couple of months in 2021 when it was 20 percent higher. At

FIGURE 1.16

Real Private Employment Cost Index Wage Growth by Industry

Ranked by Dec. 2019 Average Hourly Earnings with Information Being the Highest



Source: Bureau of Labor Statistics n.d.b; authors' calculations.

Note: Employment Cost Index wages and salaries for private industries deflated by Consumer Price Index for all urban consumers.

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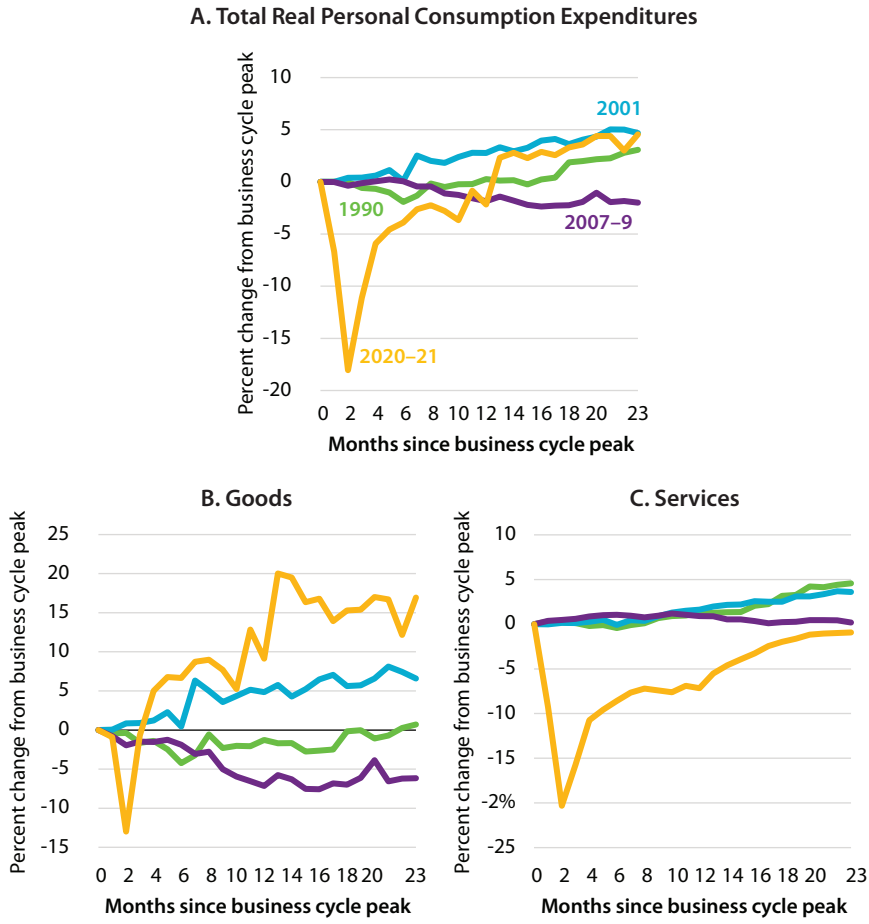
the same time, real services spending has not yet recovered to its pre-pandemic level (Figure 1.17c). In contrast, in most other recessions spending on durable goods has remained subdued for an extended period. In addition, spending on services in most other recessions plateaued in the first year of recovery before resuming growth, and services did not fall below its pre-recession level for any sustained period.

The patterns in consumer spending closely mirror the patterns in inflation. In line with very strong demand in the goods sector, goods inflation has been far higher over the past year than it was in the decades since the early 1980s. As demand for services has slowly recovered, services inflation has come up but remains within the range of U.S. experience in recent decades. As demand pivots from consumer goods to services that are more labor intensive, the

FIGURE 1.17

Percent Change in Real Personal Consumption Expenditures from Business Cycle Peaks, 1990–2022



Source: Bureau of Economic Analysis 2022; National Bureau of Economic Research n.d.; authors' calculations.

Note: The figures show the monthly percent change from the peak of a business cycle, as determined by the National Bureau of Economic Research Business Cycle Dating Committee.

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question remains as to whether labor supply will be sufficient to expand services quickly enough to meet that growing demand. If it does not, wage pressure in the services sector will likely be strong and will lead to greater inflationary pressure in that sector—even as goods demand and goods prices wane.

Households in aggregate have had significant resources to finance consumer spending, initially because of the extraordinary income support provided by the federal government and later from the rebound in labor-market income, as well as a significant run-up in stock and house prices. As detailed in Chapters 2 and 3, a burgeoning literature shows that fiscal support was an important source of financing of the recovery in consumer spending. Indeed, spending patterns show that recipients of expanded UI benefits increased their spending on average in the spring and early summer of 2020 relative to pre-pandemic levels, whereas those who remained employed generally maintained their spending.

Although the initial burst of fiscal support in March 2020 was essential to the early economic recovery, the timing of fiscal support after that did not correlate well with the financial needs of households. For example, in the spring of 2020 unemployed people began receiving an extra $600 a week in supplemental payments, resulting in most recipients receiving more in total UI benefits than their prior compensation. (The median replacement rate was 145 percent; see Chapter 2.) But those supplements expired at the end of July 2020; in their place a small portion of unemployed people were able to collect weekly supplements of between $300 and $400. This abrupt change in policy occurred when the rate at which employers were laying off workers was still elevated, the number of people applying for initial UI claims was still elevated, and the employment-to-population ratio was still well below its pre-pandemic level (Figure 1.18). As a result of these gyrations in policy, the total amount of weekly supplements to unemployed people fell from $75 billion to roughly $20 billion in the course of a month, and then declined to near zero by the end of 2020.

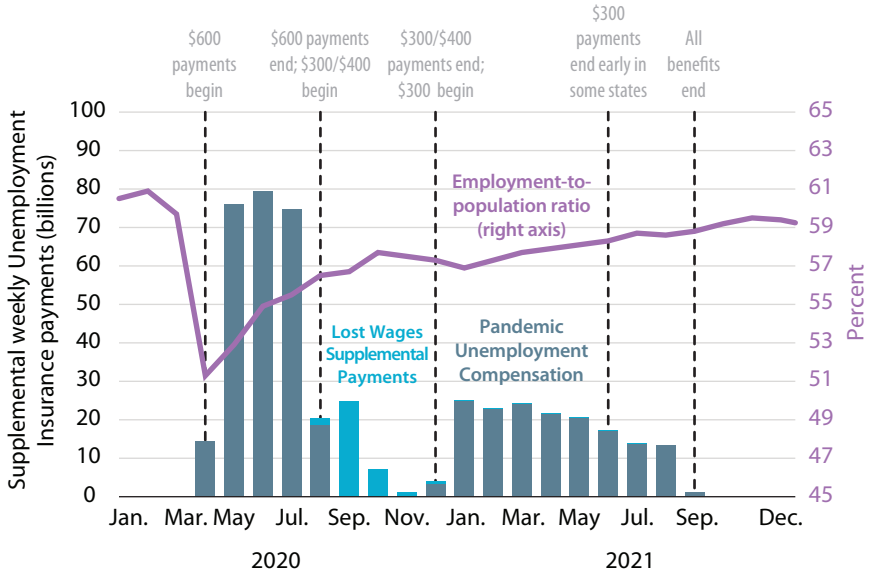
Legislation at the end of 2020 reinstated a weekly supplement at a rate of $300, which provided much-needed fiscal support to the unemployed. But there, too, the timing of that support had little to do with the recovery of the labor market. Between June and September 2021 some states curtailed benefits early, and then in September the weekly supplements and other enhanced UI benefits sunset nationwide. At the same time, the rate of job openings peaked in July in the South, the Northeast, and the West before falling modestly for two months as the surging Delta variant increased the health risks of in-person services and employment. Consistent with the large swings in fiscal support to households over the past two years, consumer spending recovered quickly, though just partially, through the early fall of 2020, and then languished some until early 2021.

International Comparison

Overall, the United States has had a more successful GDP recovery, but a less successful employment and inflation outcome, than other advanced economies. This combination meant that the United States produced its comparatively higher level of GDP with comparatively higher hours and productivity. The

FIGURE 1.18

Supplemental Unemployment Benefits During COVID-19



Source: Bureau of Economic Analysis n.d.b; Bureau of Labor Statistics n.d.a.

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Note: Congress enacted Pandemic Unemployment Compensation payments (PUC) of $600 per week from March 28, 2020 to July 31, 2020. A PUC payment of $300 was put in place from December 26, 2020 to September 6, 2021, when all enhanced Unemployment Insurance policies (including Pandemic Unemployment Assistance, Pandemic Emergency Unemployment Compensation, and Mixed Earners Unemployment Compensation) expired. Starting in June 2021, some states began ending PUC early. Also between August 1, 2020 and December 27, 2020, President Trump authorized states to apply to provide Lost Wages Supplemental Payments, expending up to $44 billion from the Disaster Relief Fund. Payments could be $300 or $400 per week depending on state policy.

different economic trajectories are the result of different economic policies, preexisting institutions, and governmental and societal responses to COVID-19. The United States had a less sharp initial downturn in its GDP than occurred in the euro area and in most other advanced economies apart from the Asia-Pacific region, which was less affected by COVID-19. The economies with deeper downturns in the first half of 2020 also generally had more rapid partial bounce-backs in GDP in the second half of 2020, but remained behind the United States in terms of the level of economic output at the end of 2020 relative to the pre-pandemic peak.

The overall economic outcomes of the different countries can be shown by comparing GDP in the fourth quarter of 2021 to either the Organisation of Economic Co-Operation and Development's (OECD) last forecasts made before the pandemic, the trend prior to the pandemic, or the level of real GDP in the fourth quarter of 2019 (Figure 1.19). All three comparisons tell a similar story: the United States is not fully back to where it was expected to be before the pandemic, but it is much closer than any of the other Group of Seven (G7) economies and the euro area as a whole. In addition, several smaller economies performed better than the United States.

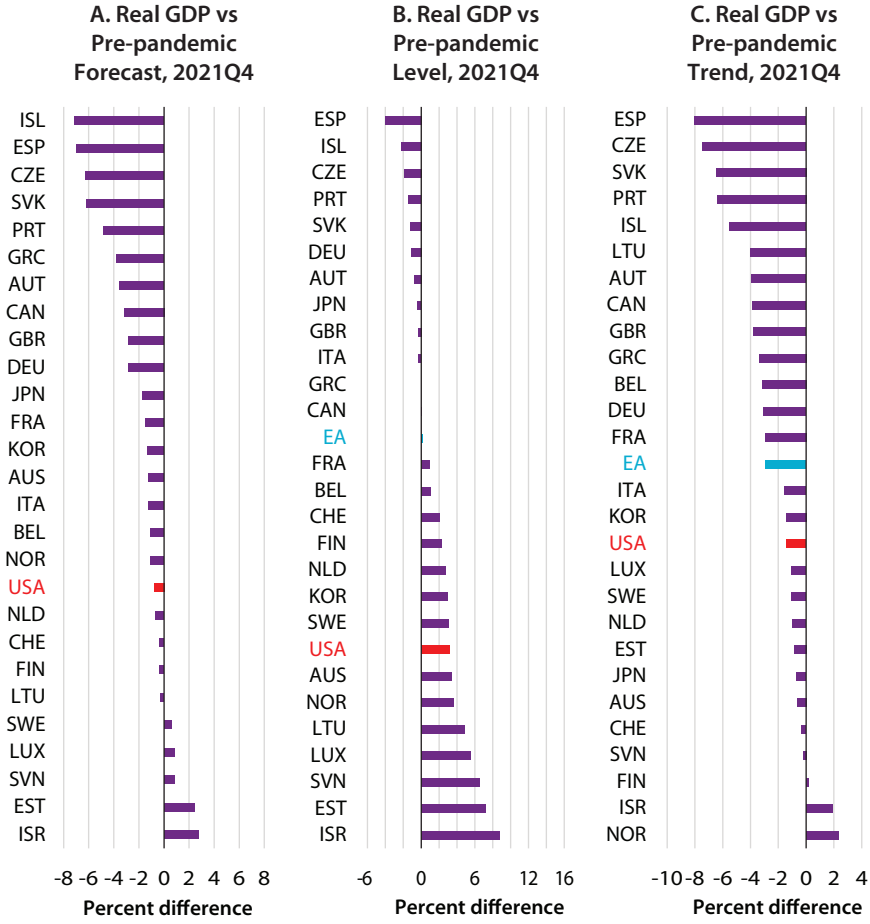
The United States' faster GDP recovery is likely attributable to three differences from other economies: a comparatively looser set of social distancing rules, a population that appears more willing to engage in activity even in the face of COVID-19, and a larger fiscal response, especially in 2021. European countries, for example, had much more extensive lockdowns that barred even socializing with friends outdoors or virtually any activity other than essential trips, steps that were never taken in the United States. This was a main reason why the initial decline in GDP was so much larger in Europe. After initial lockdowns and other major restrictions put in place in early 2020 were eased in the summer, they were reinstated toward the end of 2020 and ultimately lasted much longer than they did in the United States. At the same time, the pace of vaccination was initially much slower in Europe. Many of these differences can be seen in the comparison of spending on services shown in Figure 1.20, with the initial gap that widened in the face of increased lockdowns in Europe but then narrowed as COVID-19 policies and behavior converged between the United States and Europe.

There are no apples-to-apples comparisons of the magnitude of fiscal stimulus in different countries. Some published measures tell very different stories, and the actual deficit numbers are also distorted by reporting and accounting differences. One clean way to estimate differences in one critical aspect of the initial fiscal stimulus is to compare the increase in social benefits to households across countries, as shown in Figure 1.21. The United States is a large outlier with a much larger increase in social benefits in 2020. Moreover (and not shown), the United States expanded the level of social benefits still further in 2021. Although comparable data for 2021 are scarce, it appears that social benefits decreased in other countries. This is consistent with data on disposable personal income that show a large increase in the United States, while it appears that income stayed only on trend in major economies like France, Germany, and the United Kingdom. The United States also appears to have had larger stimulus in other respects; for example, the PPP program is much larger than anything we are aware of in other countries.

The comparative story of the employment trajectory is almost the exact opposite of GDP. The United States had a larger decline in employment than most of the advanced economies and a faster partial bounce-back in employment; the decline remains larger than all the other major advanced economies

FIGURE 1.19

Real Gross Domestic Product (GDP) in 2021Q4 vs Pre-pandemic Forecast, Level and Trend in the United States and Advanced OECD Economies

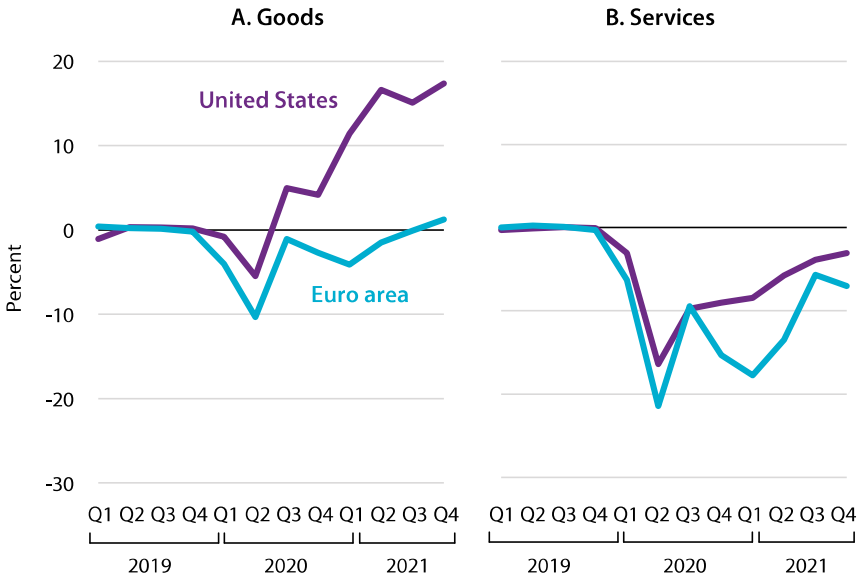


Source: Organisation for Economic Co-operation and Development (OECD) 2019 and 2022b; authors' calculations.

Note: Pre-pandemic trend is based on log-linear regression of values from 2018Q1 to 2019Q4. Pre-pandemic level is value in 2019Q4. Pre-pandemic forecast is from November 2019 OECD Economic Outlook. EA is the euro area average. Ireland is excluded due to differences in the treatment of foreign-owned multinational enterprises in GDP calculations.

FIGURE 1.20

Difference in Consumption Relative to Recent Trends in United States and Euro Area, 2019Q1–2021Q3



Source: Eurostat 2022b; Bureau of Economic Analysis 2022; authors' calculations.

Note: Euro area calculated for countries with available data (Austria, Estonia, Finland, France, Germany, Ireland, Italy, Latvia, Luxembourg, Malta, Netherlands). Differences are calculated relative to pre-pandemic log-linear trend from 2018Q1 to 2019Q4.

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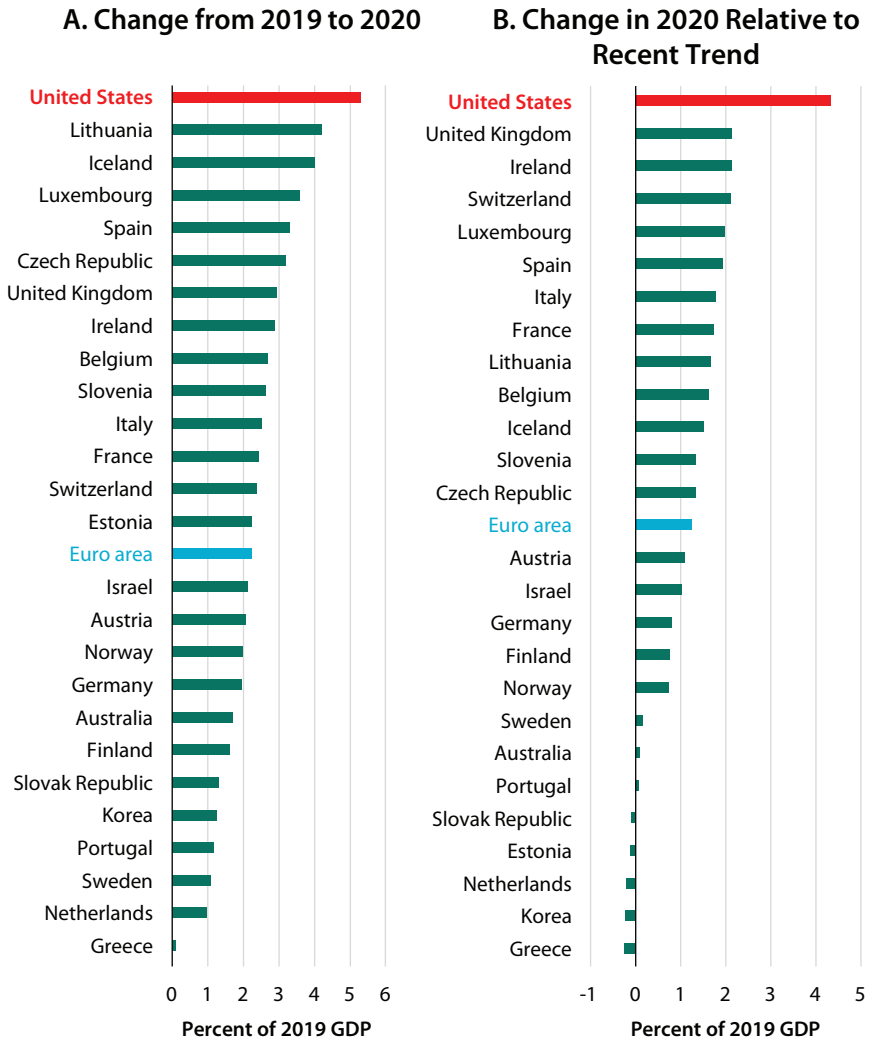
(as shown in Figure 1.22). Overall, the employment rate in the United States was down 2.4 percentage points in 2021 Q4 relative to its pre-pandemic rate as compared to the roughly unchanged employment rate for the median OECD advanced economy.

There is no definitive explanation for the comparative performance of employment. Part of the difference between the U.S. and other countries, especially in 2020 and the first half of 2021, is definitional. In the U.S. furloughed workers were generally not counted as employed while in many other countries they continued their formal employment with their wages at least partially paid by the government. Nevertheless there were also real economic disparities. Those are unlikely to reflect different trends in COVID-19 or vaccinations because employment was stronger in other countries even when they

FIGURE 1.21

Change in Social Benefits to Households, Advanced OECD Countries



Source: Organisation for Economic Co-operation and Development 2021; authors' calculations.

Note: Social benefits to households include cash and in-kind transfers primarily by government (but also by non-profit institutions) to meet financial needs in case of unexpected events, such as sickness, or unemployment. Trend social benefits for 2020 based on average growth rate for 2018 and 2019.

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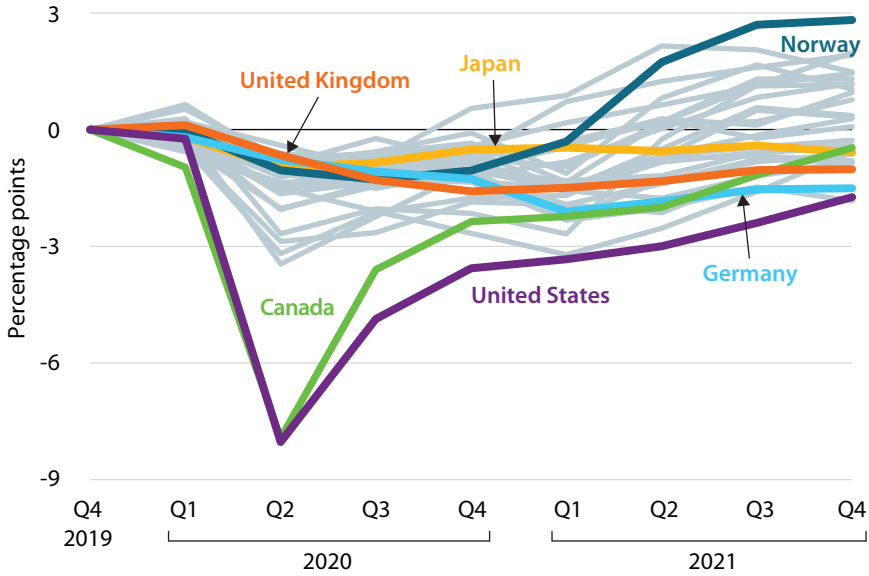
FIGURE 1.22

Change in Employment–Population Ratio, Advanced OECD Countries, 2019Q4–2021Q4



Source: Organisation for Economic Co-operation and Development (OECD) 2022a; authors' calculations.

Note: Iceland has been removed due to an apparent trend break in the OECD data.

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had higher COVID-19 caseloads or a slower pace of vaccination. Some of the earlier differences are more definitional than economic, since people who were unable to work in Europe and in many other countries were kept on payroll and counted as employed, with the government reimbursing employers. In the United States, those same workers would have been on temporary furlough, counted as unemployed, and would have received assistance from UI. This difference, however, faded over time as employment retention programs lapsed in Europe and temporarily furloughed workers in the United States were recalled to their jobs.

It is likely that two major differences between the U.S. response and the response in other countries played an important role in the differential employment outcomes. The first is the form of support. Many other countries, especially but not only those in Europe, primarily relied on employment retention while the United States relied much more on UI. Employment retention may have

better preserved job matches (although temporary furloughs onto UI also preserved these matches in the United States). In addition, job retention gave employers more leverage to force employees to return to work, while the U.S. system gave employees more leverage to say "no" to returning to work. This interpretation is consistent with the fact that nominal wage growth has been stronger in the United States than it has been in many other major economies.

The second major difference was that the level of generosity of support in the United States was considerably higher than in other countries. This might have made a difference either through income effects (people had enough money that they did not need to return to work) or substitution effects (it was more costly to return to work). (See Chapter 2 for a discussion of the evidence on how benefits in the U.S. affected employment.) The United States was one of the few major economies to provide nearly universal cash support. Moreover, European systems often replaced around 70-90 percent of wages as compared to more than 100 percent in the United States for the majority of workers from March 2020 through late July 2020 and for many workers from January 2021 through early September 2021.

One consequence of the larger fiscal support, faster GDP recovery, but slower jobs recovery in the United States has been considerably higher inflation than in most other countries. For example, the United States and Europe were both hit by many of the same supply shocks. Some were worse in the United States (e.g., the increase in the price of used cars) and others were worse in Europe (e.g., the increase in the price of natural gas). Nevertheless, inflation over the past two years has been running at about a two-percentage-point faster annual rate in the United States—or 4 percent cumulative. This is shown in Figure 1.23, which uses comparable inflation measures for the two economies.

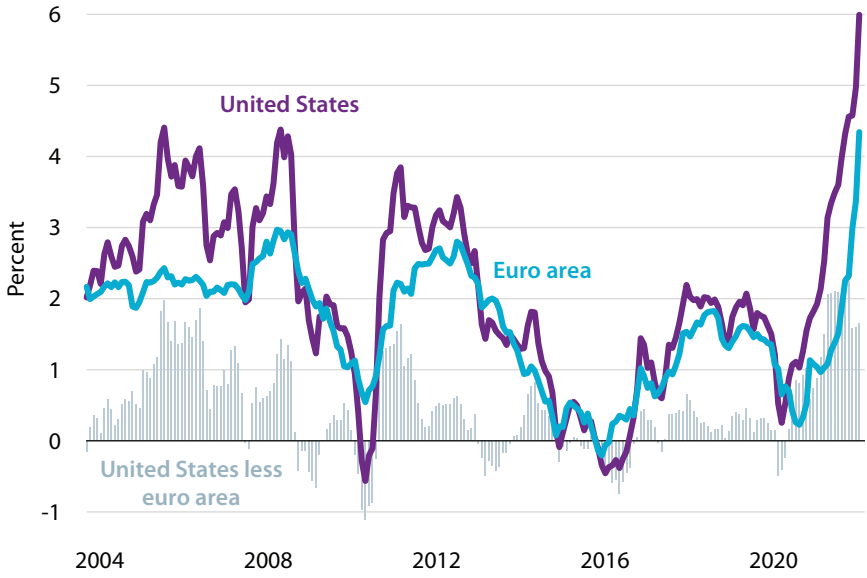
Lessons Learned

The COVID-19 economic crisis and the economic policy response are still unfinished. As of this writing, the shortfall of workers in the labor force is roughly two million, prices are rising at the fastest rate in 40 years, and real wages are falling at the fastest rate in decades (Furman and Powell 2022). How these challenges are handled and how they affect the economy over the coming years will be an integral part of how the overall policy response to COVID-19 is evaluated. Also, although a flood of rapid research already has evaluated different aspects of the policy response—and the authors of this volume have tried to synthesize and advance what is known—many pandemic-era programs have still not been evaluated and our understanding of others could change with further research.

Nevertheless, it is not too soon to draw some broad lessons from the COVID-19 recession experience. In many ways, some of the lessons from the Great Recession were helpful in ensuring that some mistakes were not repeated. One reason policymakers went so big this time around was a widespread

FIGURE 1.23

Consumer Price Inflation in the United States and Euro Area, 24-Month Annualized Percent Change



Source: Eurostat 2022a; Bureau of Labor Statistics 2022a; authors' calculations.

Note: Data reflect harmonized indices of consumer prices for comparability across regions. Bars showing difference between United States and Euro Area inflation rates are in percentage points.

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perception that the previous fiscal policy response was too small. Similarly, state and local budget cutbacks undermined the overall response in the wake of the Great Recession, but a much higher level of aid in the COVID-19 crisis ensured that this problem did not repeat. In other ways those lessons were misapplied because a natural-disaster-like crisis is very different from a financial crisis. Moreover, in many cases policies lurched from too small to too large, leading to excessive inflation and setting unfortunate or inappropriate precedents for how to deal with future economic setbacks. Finally, the response to the COVID-19 crisis was truly impressive when done so quickly and in such difficult conditions; nevertheless, policymakers should use the time before the next crisis to prepare better so that less improvisation is needed.

We propose six lessons that policymakers can draw on in planning for any crises to come. These lessons are based on the experience to date, all of which

generalize beyond pandemic policy responses to other types of recessions or even to normal times. The reason to point to lessons learned is not to apportion blame for decisions made under extremely difficult circumstances, but instead to offer a framework for building a better response for future recessions.

Lesson 1: A Vigorous Fiscal Response Can Buffer Most Households from the Effects of an Economic Downturn

The fiscal support enacted in 2020 and 2021 boosted income for most households and disproportionately for lower-income households, resulting in a large reduction in poverty rates even as real GDP was diminished. Future recessions will invariably cause some pain, with economic downturns disproportionately hurting the most vulnerable, but policymakers should appreciate that quick and decisive action to bolster the safety net can mitigate much of that pain.

Automatic stabilizers already help to buffer the effects of economic downturns. For example, households with reduced incomes pay less in taxes and in some cases become eligible for government benefits such as nutrition assistance through SNAP; in addition, if workers lose their jobs, they could become eligible for UI. This preexisting social safety net is, however, inadequate in the face of recessions: it is not generous enough and has too many gaps, which is why it needed to be supplemented by policy action both in the Great Recession and to a much greater degree in the COVID-19 recession. Additional automatic stabilizers are likely part of the answer, as discussed in lesson 4 below, but are unlikely to be sufficient to avoid the need for well-timed and wise discretionary fiscal responses in the future.

This lesson also applies when the economy is doing well. Idiosyncratic shocks to family incomes or persistent inequality could be better insured by the fiscal system. The experience of 2020 and 2021 shows that fiscal policy can significantly lower poverty in bad times; this lesson also applies to better times.

Lesson 2: A Vigorous Fiscal and Monetary Response Can Speed Economic Recovery

The economic recovery was much faster than in past recessions, and the GDP recovery in the United States was much faster than it was in other large economies. The precise degree to which this is the result of the way the United States experienced the pandemic or the result of the policy response is unknown. Likely it is a combination of the two. In the end, the business sector and the household sector have remained remarkably strong, and real GDP is nearly back to the path that was projected before the pandemic.

The initial, robust response by monetary policymakers was critical to keeping the financial sector on an even keel. It is important to draw lessons

not just from what happened, but also from what did not happen: for example, there was no financial crisis in the United States or worldwide. Initially, equity markets plummeted, and interest rates soared even on very safe securities. Vigorous actions by the Fed to cut interest rates were not enough; it needed to and quickly did make much more liquidity available, targeted both to individual markets and to the financial system as a whole. This worked, and the economic experience of households and businesses was better as a result. Better preparation in the form of more robust and stress-tested balance sheets for banks prior to the recession also helped.

Policymakers are unlikely to ever be able to fully predict and thus prevent recessions. Some types of recessions, like financial crises, are more likely to have longer-term deleterious consequences. But policymakers should take the lesson from the past two years that vigorous fiscal and monetary policy speeds economic recoveries.

Lesson 3: Policymakers Can Respond Too Vigorously to an Economic Downturn

A common statement in crafting policy responses is, "It is better to err on the side of too much than on the side of too little." The statement is useful in thinking about asymmetric risks if one is thinking whether *somewhat too much* is better than *somewhat too little*, or if *significantly too much* is better than *significantly too little*. That is because policy is generally better at mitigating the negative side effects of doing too much rather than the negative side effects of doing too little. Unfortunately, the statement provides no useful guidance on how large a response should be. In the face of a downturn, should the response be $100 billion or $1 trillion or $10 trillion? Moreover, sometimes observers go further and argue, "You can never do too much." Taken literally, that is clearly wrong. Over the course of the crisis, particularly in 2021, the increase in fiscal support was too large, and it is worth exploring to what degree this was knowable at the time and to what degree this is clear only in retrospect.

Doing too much can have serious downsides that might be difficult to mitigate. Macroeconomic support for an economy deep in recession with many underused resources can increase output and employment with little effect on inflation. But as the economy gets closer to its capacity, additional macroeconomic support will feed increasingly into inflation instead of improvements in output and employment. The trade-off of increased output at the expense of inflation may become increasingly undesirable the further macroeconomic policy pushes.

Doing too much not only affects inflation but also how workers are doing and the longer-term health of the economy. As we have seen in the past year, when wages adjust less frequently than prices, a bout of surprise inflation can raise prices more than wages, making workers worse off. Moreover, the

employment gains can be more transitory than the inflation costs if expectations of higher inflation are built into pricing decisions. Ultimately, the cost of treating these side effects can be very high and may lead the recovery itself to be unsustainable, jeopardizing the very gains for employment and output that policy was designed to produce.

From a macroeconomic perspective, the timing and extent of monetary and fiscal support should be matched to the economy's ability to provide the goods and services financed by that support. From a bottom-up perspective, relief should be targeted to achieve various goals: for example, to help households avoid having to cut back their consumption in the face of temporary shocks or to help state and local governments avoid budget cutbacks. Assessing those needs in real time can be very difficult and uncertain. In 2020 such an assessment was nearly impossible. In 2021, however, the dimensions of the shortfalls in output and in household incomes were clearer, and yet no clear economic justification was offered for the overall magnitude of the response, the size of the EIPs, the magnitude of expanded UI, or the amount of state and local fiscal assistance.

Lesson 4: Fortified Automatic Stabilizers Would Help Reduce Both Errors of Doing Too Little and Errors of Doing Too Much

Much of the debate over the fiscal response to COVID-19 was about whether it was too large or too small. This debate misses the point because it frames the problem incorrectly. Much of the legislation delivered aid in specified amounts for specified periods, instead of amounts and timing that were automatically calibrated to the size of the need. For example, the CARES Act distributed a lot of dollars per month, but most of its programs had ended by the summer of 2020, so it was not sufficient to meet the continued challenges of COVID-19. The support was then too small going into the fall as Congress dithered on passing additional assistance. Similarly, the American Rescue Plan distributed a lot of dollars per month, but the assistance ended while the economy still had some challenges.

Getting the magnitudes and timing right is not a new problem. Many of the policy responses ended too soon in the wake of the Great Recession. Extended UI expired even while long-term unemployment was still high, and state and local fiscal relief ended while budgets were still strained. Monetary policy shifted from maximalist response mode when the economy was still many years away from a full recovery.

The errors made in the pandemic response were often of the opposite sign. The third round of stimulus checks went to households that were generally in better financial shape than before the pandemic. UI was greatly expanded

in January 2021, but the magnitude and breadth of the expansion remained unchanged through the summer even as the unemployment rate and COVID-19 rates fell and job openings rose rapidly.

Policy will always make errors when viewed in hindsight, but many of these errors, like the ones in the wake of the Great Recession, were evident based on the data available to policymakers at the time.

These considerations only reinforce the importance of automatic stabilizers. UI benefit generosity and duration should be a function of economic conditions. Similarly, if state and local fiscal relief were determined using an automatic stabilizer approach, relief would have been larger and more prolonged in the Great Recession and smaller and more rapidly tapering in this one. However, automatic stabilizers are only a default; policymakers might still need to bolster them—if the stabilizers do not provide enough or sufficiently targeted support—or even in some cases to turn them off more quickly.

Lesson 5: We Still Have a Lot to Learn about How to Create and Protect Jobs in the Wake of an Economic Downturn

In the global financial crisis, Germany had a similar reduction in GDP to the United States without a very large increase in unemployment. Many other countries adopted German-style job retention and job sharing (or part-time unemployment insurance) in the wake of that crisis, or improvised such systems when the COVID-19 crisis hit. Such policies may help explain why those countries experienced smaller employment losses and now have much more fully recovered employment rates.

It is still not clear what policies would work better in the United States to lessen the impact of a GDP decline on employment and preserve worker attachment to their employers. In the COVID-19 crisis, the federal government encouraged states to adopt or expand work-sharing programs that provided prorated UI benefits to workers whose hours were reduced in lieu of a layoff (i.e., short-time compensation) but these programs were little used (von Wachter 2021).

Of course, it might not be possible to better insulate the job market from recessions, or perhaps doing so could have other negative side effects, like inhibiting productivity-increasing reallocation. But, given the significant and long-lasting impact that unemployment has on workers, solving this problem is worth significantly more work by the economic policy community.

Lesson 6: Policies Need to Be Better Targeted in Future Crises—and That Will Require Improving Systems and Policies in Advance

A total of $5 trillion was spent responding to the COVID-19 crisis. It would be impossible to spend at anything resembling this scale as a response to a crisis once every decade. Moreover, the large scale of the response contributed to substantial inflation. Just as the magnitude and timing of the response should be improved through more automatic stabilizers, the targeting of the response should be as well.

The good news is that many of the most important benefits could have been achieved at much lower cost, especially if the policies had been developed in advance of the crisis. To give a sense of magnitudes, outside of a recession, the amount of additional income necessary to pull all households out of poverty is about $175 billion. That suggests that preventing poverty from increasing in recessions and reducing poverty in good times can be done at a comparatively modest cost. In addition, improving UI systems in advance would ensure that benefits go out quickly, and would allow benefits to be better tailored so that they can rise during downturns but not exceed prior income. Similarly, better-targeted support for businesses without access to credit markets and in danger of failing would enable business continuity at a much lower cost.

Over the past two years, achieving those goals was hard to do in the rush of events. That is why it is important that policymakers not wait until the next crisis to improve such systems. It is essential that policymakers use this time to figure out how to provide support in a manner that does not unnecessarily benefit those who are already financially secure and those with access to credit markets.

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The COVID-19 pandemic posed an extraordinary threat to lives and livelihoods. In the United States, the pandemic triggered a sharp downturn. Yet, the ensuing economic recovery was faster and stronger than nearly any forecaster anticipated due in part to the swift, aggressive, sustained, and creative response of U.S. fiscal and monetary policy. But when the next recession arrives, it most likely won't be triggered by a pandemic.

Recession Remedies examines and evaluates the breadth of the economic-policy response to COVID-19. Chapters address Unemployment Insurance, Economic Impact Payments, loans and grants to businesses, assistance to renters and mortgage holders, aid to state and local governments, policies that targeted children, Federal Reserve policy, and the use of non-traditional data to monitor the economy and guide policy. These chapters provide evidence and lessons to apply to the next recession.

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