Executive Office of the President
Office of Management and Budget

In consultation with the Council of Economic Advisers, the U.S. Department of the Treasury, and the U.S. Small Business Administration

The Economic Impact of Coronavirus Response Funds

Seventh and Eighth Quarterly Reports

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THE ECONOMIC IMPACT OF CORONAVIRUS RESPONSE FUNDS
SEVENTH AND EIGHTH QUARTERLY REPORTS

Contents

Introduction

As part of the accountability and transparency provisions included in the Coronavirus Aid, Relief, and Economic Security (CARES) Act, the Office of Management and Budget (OMB), in consultation with the U.S. Department of the Treasury (Treasury), the Council of Economic Advisers (CEA), and the U.S. Small Business Administration, is charged with providing quarterly reports on the effects of certain Coronavirus response funds to the Congress and the public.[1] This report provides evidence regarding the effects of these funds through the first quarter of 2022 that are important to assessing the economic impact of the covered relief funds.

Evaluating the impact of Coronavirus response funds is fundamentally difficult due to the unprecedented nature and magnitude of the crisis. Moreover, as time goes on, it is generally not possible to disentangle the economic impacts of the 2020 pandemic legislation such as the CARES Act from the economic impacts of subsequent legislation such as the American Rescue Plan Act of 2021 (ARP) and from unrelated economic developments. Isolating the economic impact of the CARES Act will prove more and more difficult as time passes.

Prior iterations of this report provided two types of analysis covering the economic impact of the CARES Act and related pandemic-response legislation: they (1) used the most recent quarterly data to detail the cumulative state of the economic recovery, and (2) analyzed related research and academic findings. As of November 2021, GDP has surpassed its pre-pandemic level, and economic impacts of 2020 pandemic legislation have become even harder to distinguish from impacts of other developments. At the same time, the passage of time has enabled researchers to develop new findings on the impact of pandemic legislation. As a result, this report steps back from the quarterly data updates to focus on reviewing and synthesizing the relevant research as it is made available.

Background

The Coronavirus Aid, Relief, and Economic Security (CARES) Act, along with related legislation, was enacted at the end of March 2020 to counteract the economic crisis resulting from the COVID-19 pandemic, which led to nearly 21 million jobs lost in April 2020 and a second-quarter contraction in real GDP of over 31 percent at an annual rate. This legislation aimed to help counter the economic impact of the pandemic by providing relief to businesses dealing with the temporary closing of their businesses, and providing security for households while employees face furloughs, school and childcare closings, and other

[1] The mandate for this report includes all 2020 pandemic-related legislation: Coronavirus Preparedness and Response Supplemental Appropriations Act; Families First Coronavirus Response Act; Coronavirus Aid, Relief, and Economic Security (CARES) Act; PPP and Health Care Enhancement Act; Consolidated Appropriations Act. See Appendix for details.

effects of stay-at-home and quarantine orders. Combined with monetary policy support, this legislation formed a necessary policy response to the economic damage resulting from the pandemic.

The economic recovery progressed through the second and third quarters of 2020. After the unemployment rate spiked to 14.7 percent in April, it fell to 7.9 percent by the end of September.[2] Nonfarm payrolls fell by 22 million from February to April, of which nearly 50 percent were recovered through the end of the third quarter. By September, real retail sales were 4.4 percent above their February level.

At the end of December 2020, the Congress passed roughly $900 billion of relief legislation to extend several key CARES Act provisions and support vaccine production and distribution. January's economic data partially reflected this additional stimulus. The unemployment rate fell to 6.4 percent in January of 2021, paired with a modest increase in payroll employment.[3] Real retail sales during the first quarter of 2021 appear to track the disbursement of Economic Impact Payments. After the Economic Impact Payments (EIP) from the December legislation, real retail sales grew 5.2 percent in January. Real retail sales then proceeded to decline through February as the effect of that stimulus waned, and then spiked again in March following the impact payments incorporated in the ARP.

Real GDP increased 6.3 percent at an annual rate during the first quarter of 2021 and 6.7 percent during the second quarter. Notably, during the second quarter of 2021 the economic recovery reached an important milestone, as the level of real GDP reached a new high, surpassing the pre-pandemic size of the economy from the end of 2019. However, the unemployment rate decreased only 0.1 percentage point between March and June of 2021, consistent with mild gains in the labor force participation rate (from 61.5 to 61.6 percent between March and June) and modest overall declines in the number of unemployed (from 9.7 to 9.5 million between March and June).

The potential for a jobless recovery – one in which GDP recovers faster than key labor market indicators – suggested there was strong need for additional support, which the economy received in the form of the ARP passed by Congress in March. The ARP contained various provisions for supporting households and businesses while advancing critical pandemic-related challenges in public health and education. For example, provisions such as child tax credits and funding for education are essential for getting Americans back to work, while funding on vaccination efforts will speed up the process by which consumers can return to restaurants and retail shopping establishments, thus boosting spending in the economy. In fact, in a July 2021 survey of 50 professional forecasters, the Blue Chip Economic Survey found that 45 percent of respondents believed that uneven vaccination rollout and further virus mutations was the greatest threat to global economic stability, while 50% of respondents believed that faster than expected vaccination rollouts were the greatest source of upside risk for the global economic recovery.

As part of the accountability and transparency provisions included in the CARES Act, OMB, in consultation with the CEA, Treasury, and SBA, is charged with providing to the Congress, and the public, quarterly

[2] While we cite official statistics here, the Bureau of Labor Statistics (BLS) clearly states that measurement of these statistics has been biased by their ability to conduct the survey during the pandemic, including a persistent misclassification of certain unemployed workers as employed.

[3] The headline unemployment rate could be as much as 3 percentage points higher after adjusting for misclassification and labor force dropout. See https://www.whitehouse.gov/briefing-room/blog/2021/04/02/the-employment-situation-in-march/

reports on the effects of certain Coronavirus response funds, specifically "large covered funds."[4] This report will provide estimates of the effects of certain Coronavirus response funds through the second quarter on employment, estimated economic growth, and other key economic indicators, including information about impacted industries.

As we outlined in previous reports, without direct evidence of what would have happened in the absence of the Coronavirus response funds, we cannot say with certainty the precise impact the funds had on the economy. Additionally, the difference between local responses and decisions by some states to maintain restrictions on some small businesses or the difference in vaccination rates across different parts of the country impacts the overall data for the Nation. Therefore, results presented in this paper should be regarded as preliminary and subject to substantial margins of error. It should also be noted that this report details the state of the economic recovery before, during, and after the passage of each pandemic response legislation. This report's analysis, however, generally cannot disentangle the incremental impact of the CARES Act on the overall recovery from the incremental impacts of the Consolidated Appropriations Act (CAA) or ARP. As more time passes, it will become more and more important to interpret the current state of the recovery as the combined result of the pandemic response legislations in their entirety and of unrelated economic developments.

In this report, we find that the policy responses enacted during 2020 were a necessary part of the ensuing economic recovery. In particular, efforts to ensure income replacement and cost mitigation helped to cushion the shock to household incomes and thereby facilitate a stabilization and recovery in consumer spending, which alone comprises nearly 70 percent of the U.S. economy. With large parts of the relief funds supporting UI extensions and expansions, we assess that relief was targeted toward households that were more vulnerable to an adverse income shock.

However, as of early 2021, economic indicators continued to suggest that households and businesses needed additional support. More than one in ten adults were experiencing food insufficiency in early February, while one in five renters were behind on their rent. Small business support measures designed to maintain employment played an important role in allowing firms to remain solvent, but small business bankruptcies had picked up over the last quarter of 2020. Moreover, according to a U.S. Census Household Pulse Survey from April 2021, more than 4 million Americans reported that the primary reason for not working was concern about getting or spreading the coronavirus.

We begin by surveying the academic literature related to two pillars of the CARES Act: Economic Impact Payments (EIP) and the Paycheck Protection Program (PPP). We then employ high-frequency economic data, as well as real-time forecasts, to quantify the magnitude of the economic disruption and situate it within its historical context, with comparisons to past economic and financial crises. We then proceed, in the next section, to analyze the effects of the Coronavirus response funds on output, unemployment and financial markets. Two more sections go on to describe how the Coronavirus response funds worked to attenuate some of the negative effects of the pandemic on households and small businesses.

[4] CARES Act § 15011.

This report will satisfy both the seventh and eighth quarterly reports – covering the fourth quarter of 2021 and first quarter of 2022, respectively – in a series that the OMB will produce, in consultation with CEA, Treasury, and SBA, on the effect of Coronavirus response funds.

Review of Leading Research Findings

Since March 2021, data have become available that have enabled researchers to rigorously study economic impacts of 2020 pandemic legislation. This section spotlights several of those studies and synthesizes their methods and findings.

Many have asked how much worse GDP would have been in the absence of the Coronavirus relief legislation. This question is inherently difficult to answer because it requires a method for estimating the counterfactual – i.e., the alternative path of the virus and of the economy in the absence of response legislation. The primary challenge is that key factors of interest, such as the trajectory of the virus and state-level containment measures, are known to have varied in non-random ways across the country. Those confounding factors impede a researcher's ability to disentangle legislative impacts from the impacts of non-legislative factors.

Despite the difficulty, there are several external estimates of the economic impact of the Coronavirus response legislation. For example, the Congressional Budget Office (CBO) produced its own estimate of the economic impact of pandemic-related legislation in September 2020, estimating that second and third quarter GDP growth improved 11.6 and 13.1 percentage points, respectively. However, the CBO analysis relies on assumed fiscal multipliers for different parts of the relief legislation, which are uncertain in this unique macroeconomic environment.

Gourinchas, Kalemi-Özcan, Penciakova, and Sander (2021) study the global effects of COVID-19 and produce several relevant findings for this report. First, the authors develop a theoretical model that represents the COVID-19 shock as a combination of supply and demand shocks and that characterizes business failures as stemming from liquidity shortfalls. Using firm-level data from 27 countries and real-time country-specific data on lockdown policies, they are able to present several findings related to the average relief policy across the countries in their dataset. For example, they find that fiscal support during the pandemic helped prevent the failure of small to medium-sized firms and that this reduced failure rate was sustained even after the fiscal support waned. Their analysis further suggests that fiscal support for businesses was often poorly targeted to the firms who needed it the most. The authors conclude, therefore, that the large magnitude of the fiscal response, which served to cast a wide net of access to relief funds, that compensated for the lack of targeted allocation and was a primary impetus for reducing the number of business failures.

A second finding from Gourinchas et al. (2021) relates to government transfer payments. The authors find that a large share of the global economy – as much as 31 percent of global GDP – occurred in "demand-constrained" sectors. A demand-constrained sector in this context refers to an industry in which the demand for labor is less than the available supply of labor, perhaps due to lockdowns or other pandemic-related restrictions, for example. The prevalence of output that occurred in these sectors suggests that

there was a large role for transfer payments to preserve employment. Transfer payments served, in effect, to preserve existing employment relationships until conditions could normalize and demand for labor could rebound. Lastly, due to what Gourinchas et al. (2021) find to be a very low fiscal multiplier of 0.06, the authors suggest that fiscal support helped offset about 8 percent of the downturn from COVID-19. The low fiscal multiplier is partially a consequence of the large proportion of demand-constrained sectors, which limits the turnover of each dollar of fiscal support and reduces the overall expansionary effect. Recall, however, that these results refer to the average fiscal response across the 27 countries in their dataset, and are not U.S.-specific.

Expanded unemployment insurance during the pandemic was intended to help households weather the unprecedented economic shock. However, as the recovery improved, questions arose about whether those benefits reduced labor supply. Early unpublished studies have predominately found no impact of supplemental unemployment insurance (UI) benefits on employment outcomes.

The first wave of related papers looks specifically at the effect of the $600 increase in weekly UI benefits implemented by the CARES Act. For example, Altonji et al. (2020) measure the variation in pre- and post-COVID replacement rates – i.e., the ratio of UI benefits to prior employment earnings – and thus the incremental benefit that recipients received from the CARES Act's UI expansion. Using data from Homebase, the authors leverage this measure of treatment intensity within an event study analysis. They find that workers who experienced larger increases in UI generosity did not experience larger declines in employment when the benefits expansion went into effect and that those individuals returned to their previous jobs at similar rates as others.

Bartik et al. (2020a) address a similar question by sorting states into groups according to their state-level median replacement rate and then comparing the early 2020 employment collapse and subsequent rehires across groups. Replacement rates differ by state due to differences in the wage distribution and due to variation in the pre-existing UI benefits formula. The authors find that relative to a January 2020 reference period, the states with the lowest replacement rates saw a steeper decline in employment and a slower recovery. This finding is the opposite of what one would expect to find if additional UI benefits had reduced labor supply. However, the authors caveat their findings by noting that they are unable to control for certain potential confounding factors and that their results are meant to be suggestive.

Another way to measure a potential employment disincentive is to examine evidence on the ability of firms to fill open positions. To this end, Marinescu, Skandalis and Zhao (2020) examine data on job applications and vacancy listings between January and June 2020 from online jobs platform Glassdoor. With respect to the possibility that firms had difficulty hiring during the early stages of the pandemic, the authors observe that the number of applications per vacancy actually increased during the onset of the pandemic, as the number of vacancies fell by more than the number of applications. Using the same state-level variation in treatment intensity used in Bartik et al. (2020a), Marinescu et al. (2020) find that larger increases in replacement rates were associated with fewer applications and fewer applications per vacancy. Although this pattern is consistent with the hypothesis that enhanced UI benefits reduced the number of applications, the magnitude of the effect was not large enough to offset the general increase in applications per vacancy that is observed at the onset of the pandemic.

Other studies have looked more specifically at the $300 Federal Pandemic Unemployment Compensation (FPUC) benefit during 2021. For example, Dube (2021) examines labor market outcomes among states that terminated early during June 2021 either the $300 FPUC, the extended term of (PEU), or the UI exception for self-employed and gig-economy workers (PUA). By utilizing data from the Census Bureau's Household Pulse Survey (HPS) – which asks respondents about their employment status, whether they are receiving UI, and whether they are experiencing financial hardship – Dube is able to compare the outcomes of these survey measures across states that did and did not terminate the enhanced benefits. The study finds that "opt-out" states during June and July of 2021 experienced mild decreases in UI enrollments relative to non-opt-out states but did not experience corresponding increases in employment. The results are consistent with enhanced UI benefits increasing UI enrollments but not reducing employment. Additionally, the results show that survey participants in opt-out states reported increases in financial security relative to those in other states.

Two important caveats accompany Dube's analysis. The first is that roughly three-quarters of the workers who were receiving UI prior to the benefit termination were on either PEUC or PUA. This means that the enhanced UI benefits for such individuals were ended mechanically, and not as the result of an increased incentive to find employment. The second caveat is that the conditions needed for this analysis to warrant a causal interpretation are unlikely to be satisfied. Specifically, employment trends in opt-out and non-opt-out states differed prior to the June UI termination in opt-out states. This second caveat implies that the post-termination difference in employment is likely to differ for reasons other than UI participation alone.[5]

As a point of contrast, Ganong et. al (2021) do estimate a non-zero disincentive effect of enhanced UI benefits on employment during 2020 and 2021. Their analysis focuses on both the $600 weekly supplement that expired at the end of July 2020 and the $300 weekly supplement which started January 2021. The authors are able to measure UI participation by using account-level data from the JPMorganChase Institute between January 2020 and May 2021. The authors leverage variation in replacement rates among individuals in order to estimate the effect of replacement rates on job finding rates. The authors find a small negative impact on the job finding rate, while concluding that the policy of enhanced UI benefits was effective from the point of view of preventing income loss during the pandemic while having minimal effects on employment.

In addition to UI benefits for households, support for small businesses likely helped businesses maintain employment throughout 2020. By August of 2020, SBA had approved more than 5.2 million PPP loans for a total of more than $525 billion by nearly 5,500 lenders, helping to preserve employment relationships for millions of workers and businesses. Moreover, Bartik et al. (2020b) find that PPP loans led to a 14-22 percentage point increase in a business's expected self-reported survival rate – albeit only in the very short-term – with the largest impacts on survival for businesses with more employees. The authors explain that the effect of PPP loans on firm survival is likely to be confounded by additional factors that are correlated with receiving PPP but also related to firm survival, which would bias their estimate of PPP on firm survival. They attempt to address this by controlling for businesses' pre-existing banking

[5] In a subsequent and related analysis, Coombs et al. (2021) use data from Earnin, a financial services company that links to users' bank accounts. Coombs et al. find a substantial reduction in UI recipiency, and a relatively small (4.4%) increase in employment relative to the control group. However, this study suffers from similar methodological issues as Dube (2021), and the results should not be interpreted as causal.

relationships, noting that individual banks had varying approval rates. To corroborate the findings related to business closure, the authors conducted a phone survey during July 2020 and concluded that the results were consistent with the primary findings of increased survival expectations.

After funds for additional PPP loans were appropriated in December, another 6.7 million loans were approved for a total of $278 billion by 5,242 lenders in 2021. Of the 6.7 million loans approved, 2.9 million were second draw loans ($209 billion) and 3.8 million were first draw loans ($69 billion). These funds include specific set-asides that ensure equitable access of PPP funds, including for businesses with 10 or fewer employees or those in low- and moderate-income (LMI) areas. Despite the unprecedented scale of PPP, evidence from Neilson, Humphries and Ulyssea (2020) showed the limitations of the first-come first-served lending policy. The authors used daily survey data to show that small businesses during 2020 were less aware of the PPP and less likely to apply than larger businesses. Likewise, among businesses who applied for PPP loans, smaller businesses applied later, faced longer processing times, and were less likely to have their applications approved. Data from subsequent episodes of PPP lending, however, have shown to be more successful at reaching smaller and underserved businesses, an effort which was aided by the efforts of non-bank lenders.[6]

Based on Census tract matching of first-draw PPP loans, along with summary data provided by SBA (see footnote 6), Treasury's Office of Economic Policy estimated that approximately 28 percent of PPP funds went to businesses in LMI areas—a figure proportionate to the LMI share of the U.S. population. The PPP has provided funds to a wide variety of industries in all sectors of the economy, including construction (12.4 percent), manufacturing (10.3 percent), food and hospitality services (8.1 percent), health care (12.9 percent), and retail (7.7 percent), among others.

In addition to the broad take-up rate across the economy, early research shows that PPP prevented job loss during the pandemic as well. For example, Autor et al. (2020) use administrative payroll data from Automatic Data Processing, Inc. (ADP) to compare payroll employment across PPP-eligible and PPP-ineligible businesses. The authors find that the PPP saved between 1.4 and 3.2 million jobs through the first week of June 2020. When restricting the analysis to only the firms where they can observe loan take up, the results were closer to the high end of the initial range. Likewise, Chetty, Friedman, Hendren, and Stepner (2020) found PPP effects of a similar magnitude when using firm level data from the companies Paychex and Earnin. Similar to Autor et al. (2020), Chetty et al. (2020) compare employment outcomes across firms based on their eligibility for PPP loans. Both studies suggest a relatively small number of jobs saved per dollar spent, due in part to the inability to target funds directly to the companies who needed it most. That said, the total effect of PPP on employment over the long run remains uncertain, as it is likely that PPP had an indirect effect on employment through the impact it had on preventing business closures. The total employment effect could be considerably larger over time as those salvaged businesses re-hired furloughed workers. Treasury's Office of Economic Policy produced a December 2020 working paper that studied the impact of regional banking differences, which varied the timing of PPP rollout, on UI claims. The study concluded that an aggregate of 18.6 million jobs may have been preserved through the program.

[6] The basis for this comparison is SBA data on loan size and demographics from the first wave (https://www.sba.gov/sites/default/files/2021-09/PPP_Report%20-%202020-08-10-508.pdf) and second wave (https://www.sba.gov/sites/default/files/2021-06/PPP_Report_Public_210531-508.pdf) of PPP lending.

In a related and more recent working paper, Autor et al. (2022) argue that between 23 and 34 percent of PPP dollars went to workers who would have lost their jobs in the absence of the program. The authors argue that the remainder flowed to firm owners and, thus, the program was largely regressive, especially when compared to other programs such as UI expansion. If the number of jobs saved is closer to the 18 million found in the Treasury working paper, then the program was likely more progressive than Autor et al. (2022) find. Additional work is needed to understand the distributional and job-preserving effects of the PPP.

As part of a collaboration that took an expansive approach to analyzing the COVID-19 economic policy response, Edelberg, Furman, and Geithner (2022) provide several big picture examples of "lessons learned." Based on their reading of the available evidence, they conclude that fiscal support has the potential to buffer most households from negative income shocks during a downturn, as evident by the reduction in poverty rates even as GDP was falling during 2020.

Edelberg et al. (2022) also stress that some of the most important lessons we can learn from the COVID-19 pandemic pertain to the value of proactively improving our policy toolkit in advance of the next crisis. For example, the authors suggest that automatic stabilizers are especially well-suited to buffer household incomes. They suggest that tying expanded UI benefits to economic conditions could make the economy more resilient to the next economic shock. The authors also suggest that the principle of automatic stabilizers could be applied to state and local relief as well, reducing policy uncertainty and improving targeting efficiency.

Evidence of the Effect on the Macroeconomy

The following section presents an analysis of macroeconomic data that compares the COVID-19 pandemic to previous economic shocks, as well as details how key macroeconomic indicators unfolded in response to the virus and to pandemic-related legislation. Note that analyses such as these – which, for example, display how a variable of interest changed prior to or following a new piece of legislation – are correlative and not necessarily causal. As noted in the Introduction of this report, this report presents these analyses with data updated through the second quarter of 2021.

Comparison to Prior Shocks

While the long-term effects of COVID-19 on the economy are uncertain and depend on how the virus progresses, the initial negative shock was the largest since the Great Depression. Due to their short reporting lag, initial claims for unemployment insurance (UI) provide timely information on how the COVID-19 pandemic and containment measures are affecting the labor market.[7] In March 2020, job losses occurred at a level not seen since the Great Depression, with weekly initial UI claims spiking from 256,000

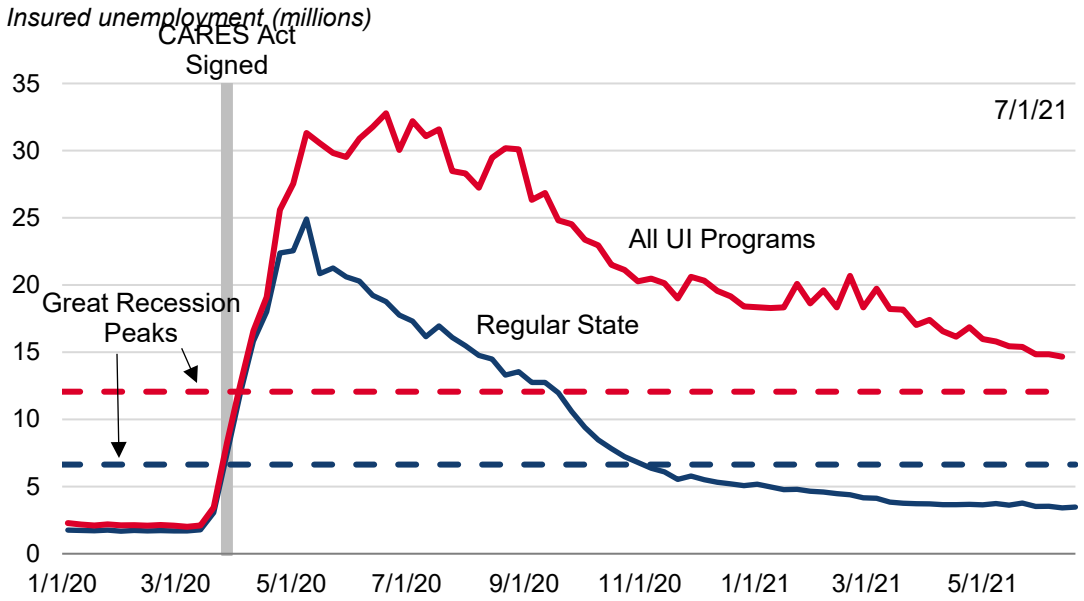
[7] We recognize there are well-documented shortcomings with this data during the pandemic, as highlighted in a November 2020 GAO report. This includes a divergence between the number of claims and the number of individuals claiming benefits, and inconsistencies in state reporting frequencies which may have a significant impact on the changes in claims numbers from week to week.

the week ending March 14 to 6.0 million two weeks later. This rapid peak in UI claims dwarfs the Great Recession's peak. However, UI claims during the Great Recession rose much more gradually, taking more than a year after the recession began to peak and several years after to return to pre-crisis levels. During the pandemic, the total number of regular UI benefit weeks claimed peaked at 23.1 million on May 9, representing about 15 percent of the 155 million non-self-employed civilian labor force reported in February 2020, and has since fallen to 3.4 million as of the end of June 2021, slightly below their Great Recession peak (Figure 1). Notably, however, the declines in regular State UI enrollments during this time did not reflect that some of these claims were moved on to Pandemic Emergency Unemployment Compensation (PEUC) or Extended Benefits (EB), both of which provide additional weeks of compensation for unemployment insurance filers. The regular State program data also do not include individuals receiving assistance through Pandemic Unemployment Assistance (PUA) in the CARES Act. As of May 2022, the majority of PEUC claims had been phased out following the expiration of that program in September of 2021.

Although the unemployment rate reached 14.7 percent in April 2020, the highest rate since official data were first collected in 1948, the unemployment rate declined to 13.2 percent in May despite expectations of an increase. The unemployment rate proceeded to decline steadily during the remainder of the year, falling to 6.7 percent in December 2020. The recovery continued unabated into 2021, and as of June there remained about 6.8 million fewer jobs relative to February 2020, while the unemployment rate was 5.9 percent. Despite the modest declines in the unemployment rate during the first half of the year, the economy added 1.3 million payroll jobs between April and June of 2021, and averaged 422,000 new jobs per month over the second quarter of 2021.

It should be noted that month-to-month unemployment rates can be noisy due to rates of labor force re-entry, the reimplementation of some mobility restrictions, as well as a slowdown in the recovery of temporary unemployment. There was additional confusion created during that time by the classification of workers on temporary vs. permanent payoff. For example, approximately 70 percent of the unemployed workers between February to May of 2020 were recorded as temporary rather than permanent layoffs, though this number itself does not reflect that many workers were likely uncertain as to whether they should report their layoff as temporary or permanent. As of March 2021, 21 percent of remaining unemployed workers were still on temporary layoff. Notably, this corresponds with higher levels of permanent unemployment, as there were over 4.0 million workers in March 2021 who lost their jobs and were not on temporary layoff, up from 2 million in February of 2020. Similarly, 4.2 million unemployed workers as of March 2021 had been unemployed for 27 weeks or more, roughly 43 percent of all unemployed workers.

Figure 1. Insured Unemployment by Week, 2020-21



Source: Department of Labor; CEA calculations.

Data on total economic output also reflect the enormous negative shock the pandemic had on the economy. Second quarter GDP in 2020 declined 31.2 percent (annualized rate), which followed the first quarter fall in GDP of 5.1 percent (annualized rate). While a rebound occurred in the third and fourth quarter, real GDP fell 3.4 percent from 2019 to 2020 – greater than the decline experienced in 2008 or 2009 during the Great Recession.

The COVID-19 pandemic dealt the economy a significant blow. Compared to other large U.S. recessions, the 3.4 percent decline is near the midpoint between the 8.5 percent decline in GDP at the onset of the Great Depression in 1930 and the more modest 0.1 percent increase experienced in 2008 at the onset of the Great Recession (Table 1). Unlike during previous economic crises, however, GDP recovered to its pre-COVID-19 level in only four quarters after the large early pandemic (2020:Q2) declines. The relatively rapid pace of the recovery by historical standards, including a 5.7% real GDP growth rate in 2021, can be considered an overall success for the pandemic related legislation passed during 2020 and 2021.

Table 1. GDP Growth Impacts of Previous Shocks, 1919–2022

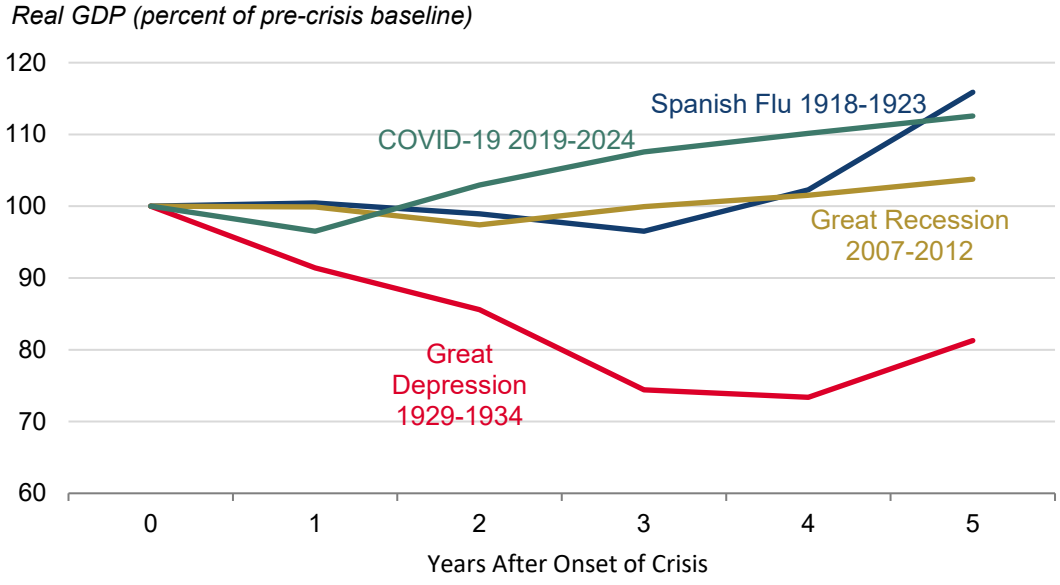
Event	*First year considered*	*Real GDP growth*		
		Year 1	*Year 2*	*Year 3*
Spanish Flu	1919	0.4%	-1.5%	-2.4%
Great Depression	1930	-8.5%	-6.4%	-12.9%
Great Recession	2008	-0.1%	-2.6%	2.7%
COVID-19	2020	-3.4%	5.7%	--

Sources: FRED; HISTSTAT; CEA calculations.

The recession induced by COVID-19 is fundamentally different from the Great Recession and the Great Depression because it had a non-economic cause. The closest epidemiological analogue, the 1918 Spanish Flu, had a much smaller effect on GDP, with growth rates of 0.4 percent and -1.5 percent in 1919 and 1920, respectively (Figure 2). Further comparisons to the Spanish Flu are complicated by the context of World War I and the changes that the U.S. economy has undergone in the past century. For example, the increase in women's labor force participation has increased the proportion of dual-earner households, which, for example, exacerbates the economic impact of small business closings and a lack of childcare. The composition of jobs in the economy has also shifted dramatically, away from goods-producing and towards service-sector jobs. This shift has meant that the disruption to non-essential businesses has had a much larger negative impact on the economy than the closing of retail during the Spanish Flu.

In terms of the public health response, the non-pharmaceutical interventions in 1918 and 1919 were in many ways similar to those of today. Action was primarily taken at a local rather than a national level, with cities as the primary actors. In an analysis of 43 cities' responses, Markel et al. (2007) find that all cities adopted some form of intervention, including 79 percent that implemented concurrent school closures and bans on public gatherings. That combination of policies was in place for between one and 10 weeks with a median duration of four weeks, which is shorter on average than the duration of similar policies put in place for COVID-19. Such interventions were associated with reductions in excess deaths in 1918 and 1919, with cities that implemented policies earlier and kept them in place longer experiencing fewer deaths.

Figure 2. GDP Recovery from Previous Crises



Source: FRED; HISTSTAT; Blue Chip; CEA calculations.
Note: COVID-19 projection is based on the January Blue Chip consensus forecast.

The preceding sections show that the immediate U.S. economic losses of COVID-19 were concentrated in the second quarter of 2020. One way that short-term damage could stretch into the longer term is if what began as a liquidity crisis becomes a solvency crisis for many U.S. businesses, resulting in waves of firm

bankruptcies, a stubbornly higher level of unemployment, and, ultimately, a lower level of production. The initial Congressional response to provide liquidity to households and firms through the passage and implementation of the CARES Act was designed to address this risk, and evidence presented in this section suggests that it has mitigated some of the damage to GDP and ultimately the livelihoods of Americans. In December, the Congress acted to provide additional necessary liquidity for workers and small businesses. Recognizing that the economy was still not on the track to a robust economic recovery, Congressional leaders passed an additional stimulus bill in March 2021 by way of the ARP.

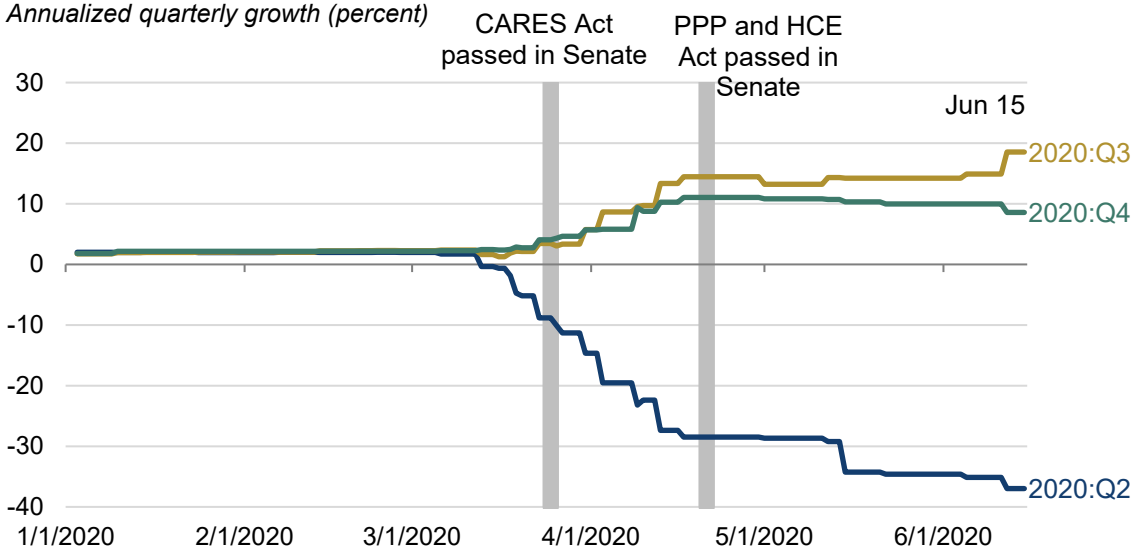
Evidence on effect on GDP

A growing economics literature is studying the impact of the COVID-19 pandemic on the U.S. economy. Some of this literature seeks to project the impact on 2020 GDP, in light of social distancing and other mitigation measures. Economic models include predictions for the impact on end-of-year GDP that range broadly depending on modeling assumptions. See, for example, Alvarez, Argente and Lippi (2020); Baker, Bloom, Davis and Terry (2020); and Eichenbaum, Rebelo, and Trabandt (2021). Eichenbaum, Rebelo, and Trabandt (2021) develop a model that predicts GDP losses of anywhere from 7 percent to 22 percent that increase with the severity of containment measures.

While the aforementioned academic studies did not incorporate the impact of the CARES Act in their projections, market forecasts do and are frequently revised to reflect changes in policies. Figure 3 shows the weekly evolution of these market forecasts around the passage of Coronavirus relief legislation. The outlook for the second quarter of 2020 deteriorated throughout the spring, and forecasts were continually revised down after mid-March as social distancing practices became prevalent and as analysts considered new information provided by high-frequency economic indicators pointing to the steeper depth of the downturn. On the other hand, market analysts continued to revise the forecasts for the third quarter, the fourth quarter, and 2021 upward, particularly after the passage of the CARES Act (Figures 3 and 4). A similar jump in both 2021 and 2022 GDP forecasts occurred after the passage of the Appropriations Act at the end of December and the ARP in March (Figure 4). Notably, Figure 4 also shows an early-January acceleration in near-term growth forecasts, likely reflecting the incorporation of higher assigned-probabilities for ARP passage.

Figure 3. Evolution of Median Forecasts for 2020 Quarterly

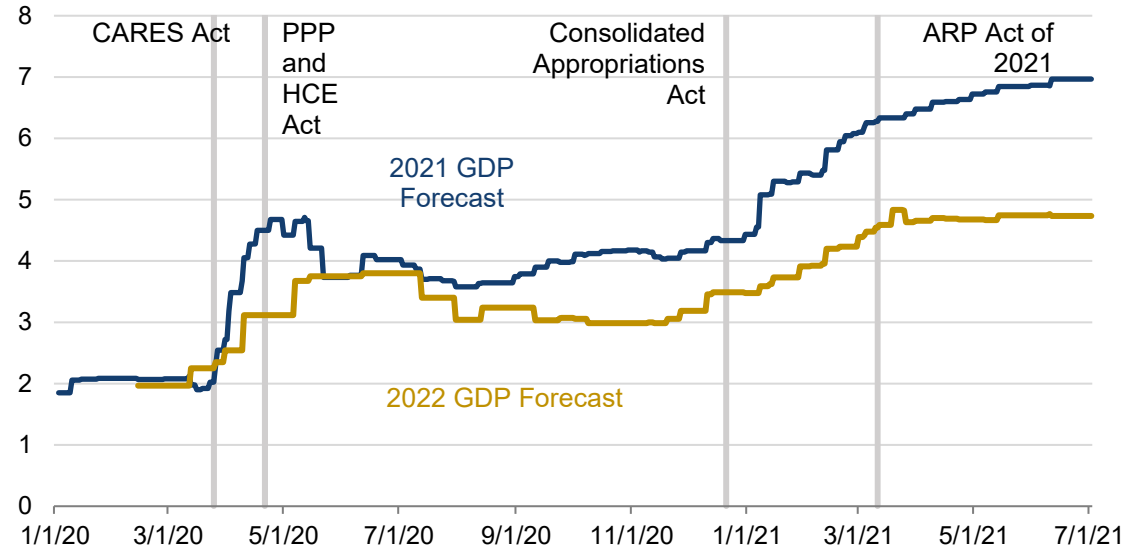
Annualized quarterly growth (percent)



Source: Bloomberg.
Note: PPP and HCE Act = Paycheck Protection Program and Health Care Enhancement Act.

Figure 4. Evolution of Forecasts for GDP in 2021 and 2022

Year-over-year growth (percent)



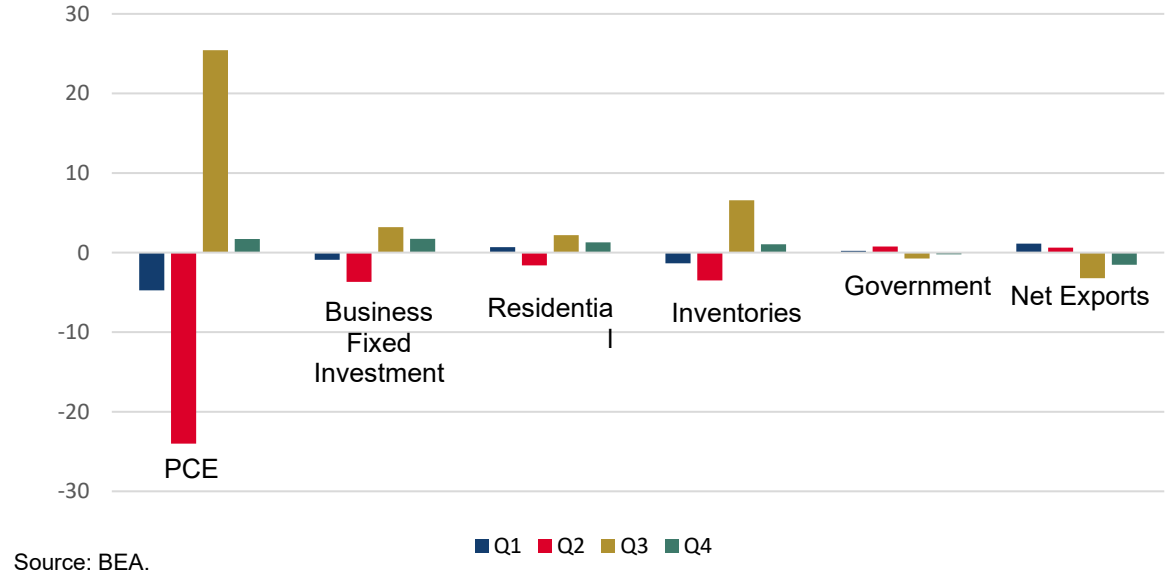
Source: Bloomberg. Median of major forecasters.

An examination of the contributions to the percentage change in real GDP suggests that pandemic-induced mitigation strategies had the greatest impact on the largest component of real GDP, personal consumption expenditures (Figure 5). The impact of the Coronavirus response legislation can be seen in the rebound in personal consumption expenditures in the third quarter. American workers utilized the

Economic Impact Payments and expanded unemployment insurance to bring about a large third-quarter increase in retail spending as the labor market recovered. Consumer spending on both durable and nondurable goods purchases also increased dramatically during the middle months of 2020 after sharp declines in March and April, surpassing their pre-pandemic levels. However, consumer spending on services declined by $635 billion during 2020 overall, or 7.5 percent relative to 2019. Lower spending on services overall has been driven by decreased activity in healthcare, transportation, recreation, and food and accommodation, all industries disproportionately impacted by the pandemic.

Figure 5. Contributions to Percent Change in Real GDP, 2020

Percentage points

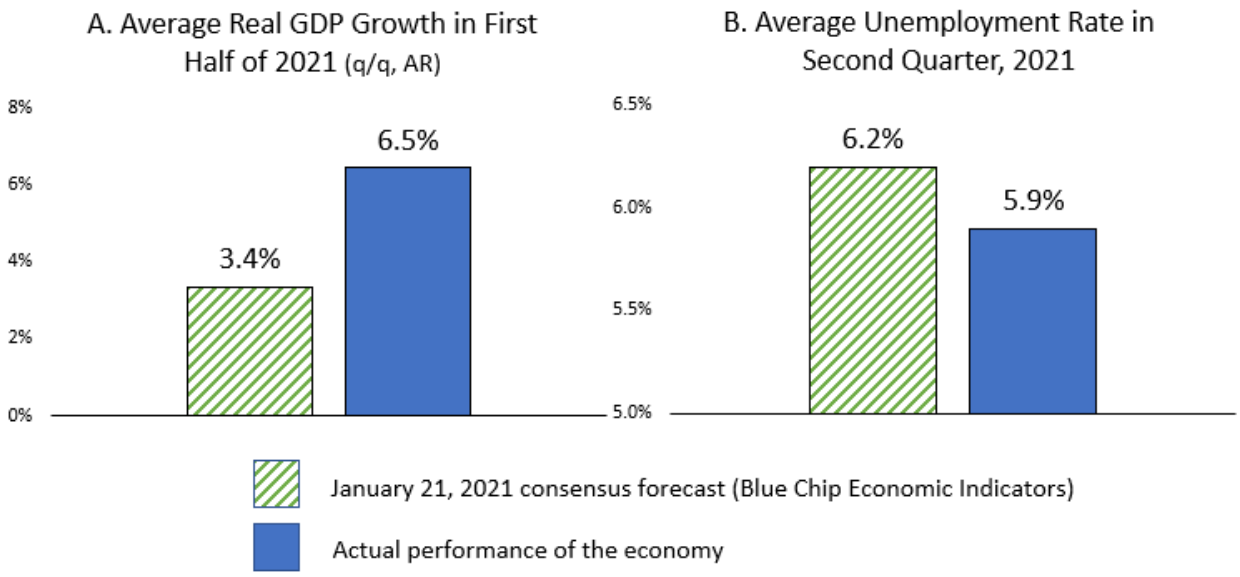


Source: BEA.

In total, an examination of topline spending data during 2020 paints a picture of an economy that was buoyed by stimulus legislation but that had yet to make the necessary progress to set the stage for a full and equitable recovery.

Real GDP during the first quarter of 2021 increased 6.3 percent (q/q) at an annual rate, an improvement from the 4.5 percent growth rate of real GDP during the fourth quarter of 2020. The first quarter increase in real GDP was supported in large part by consumer spending, which grew 11.4 percent an at annual rate, and contributed 7.4 percentage points to the overall percent change in real GDP. Consumer spending represents roughly 70 percent of GDP, and has been shown to be responsive to economic stimulus throughout the COVID-19 pandemic, particularly Economic Impact Payments. The economy then continued its rapid recovery into the second quarter of 2021 posting 6.7 percent growth (q/q, AR). Overall, the economy averaged 6.5 percent over the first half of the 2021 – a rate of expansion much faster than many forecasters anticipated as recently as January of that year (Figure 6).

Figure 6: 2021 Actual Economic Performance vs. Consensus Forecast



Impact on Unemployment

After the early-pandemic jobs report in March 2020 showed evidence for a labor market collapse, the unemployment rate spiked to 14.7 percent in April. During May, however, the unemployment rate declined to 13.2 percent.[8] This is consistent with the notion that the CARES Act helped workers stay connected to firms and helped those firms be in a position to hire workers back as the economy adopted social distancing precautions. In the first five months of recovery, 11.1 million jobs lost were regained, per the BLS' Current Employment Statistics.

The pace of the recovery then varied over the second half of 2020 and early 2021. For example, during the last three months of 2020 only an additional 865,000 jobs were added, 647,000 of which were in October. Moving into 2021, the jobs recovery started to pick up momentum; the economy added 520,000 jobs in January and another 1.4 million over February and March. Despite the gains made during the first quarter of 2021, as of April there were roughly 8 million fewer jobs than before the onset of the pandemic. The economy continued to add jobs during the second quarter of 2021, adding an average of 422,000 jobs per month during April, May, and June.

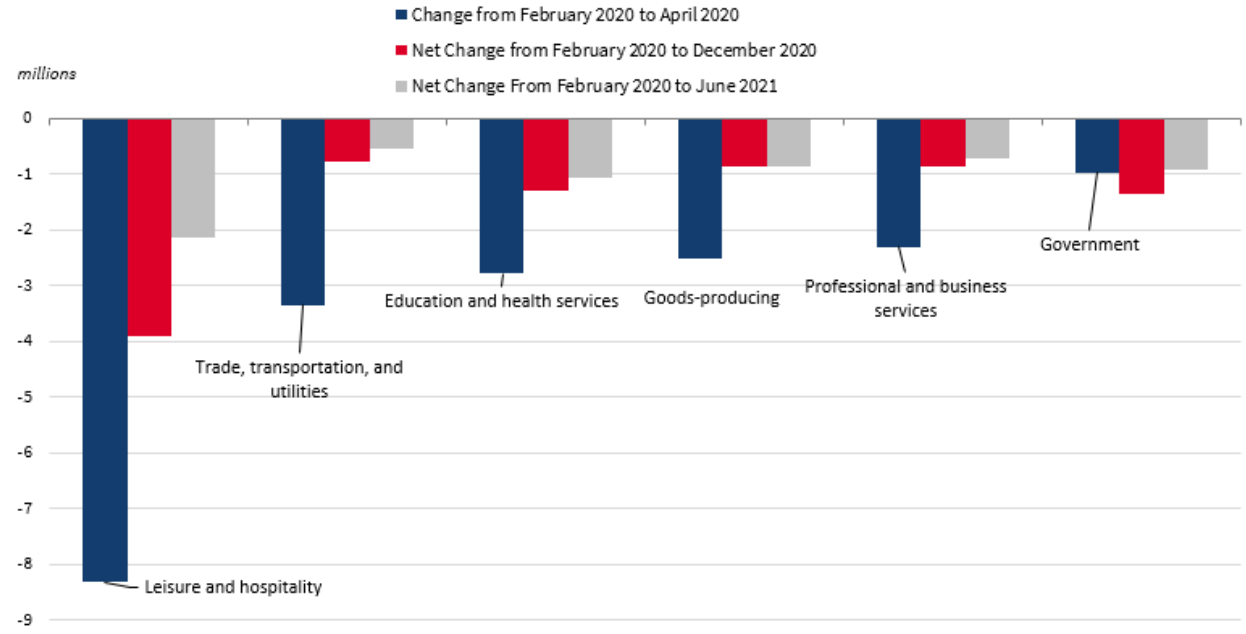
The unemployment rate fell to 7.9 percent by the end of the third quarter in 2020, and fell again to 6.7 by the end of the year. Through the first three months of 2021 however, the rate of improvement slowed, and the unemployment rate sat at 6.0 percent as of March. During the second quarter of 2021, the unemployment rate fell an additional one-tenth of one percentage point, to 5.9 percent. Nonetheless, the unemployment rate as of June was still 0.3 percentage points lower than forecasters projected as of January 2021 (Figure 6). The combination of accelerated month-to-month job growth and a stagnant

[8] We believe the impact was actually even larger, when correcting for a misclassification of workers in the BLS reports. The decline from April to May would have been from 19.5 percent to 16.4 percent, a drop of 3.1 percentage points.

unemployment rate suggests that more workers were rejoining the labor force. Though the topline labor force participation rate has increased only 0.1 percentage point over the first and second quarter in 2021 (from 61.5 to 61.6), the prime-age (25-54) participation rate rose 0.7 percentage points during this period.

Employment Situation reports also highlight the degree to which the pandemic has had sector-specific employment effects. Over 8 million jobs in the leisure and hospitality industry were lost in March and April of 2020, with only half being recovered from May to December (Figure 7). The same is true for the nearly 3 million jobs lost in the education and health services industries and 3.4 million jobs lost in trade, transportation, and utilities.

Figure 7. Payroll Job Losses by Sector Since February 2020



Sources: Bureau of Labor Statistics; CEA calculations.
Note: All other services is the sum of the financial activities, information, and "other services" categories.

Pandemic job losses have not only been felt differently across sectors of the economy, but across different demographic groups of the workforce as well. A report by Brookings (2020) suggests that industry composition by geographic regions, and the correlation of employment in certain industries with race and ethnicity are channels through which the effects of the pandemic have been felt unequally. In particular, the report finds that industries susceptible to COVID-19 tend to be in metropolitan areas with large Hispanic and Latino populations. This geographic component of the pandemic's economic impact magnifies existing disparities, and exacerbates the racial wealth gap for Hispanic and Latino families.

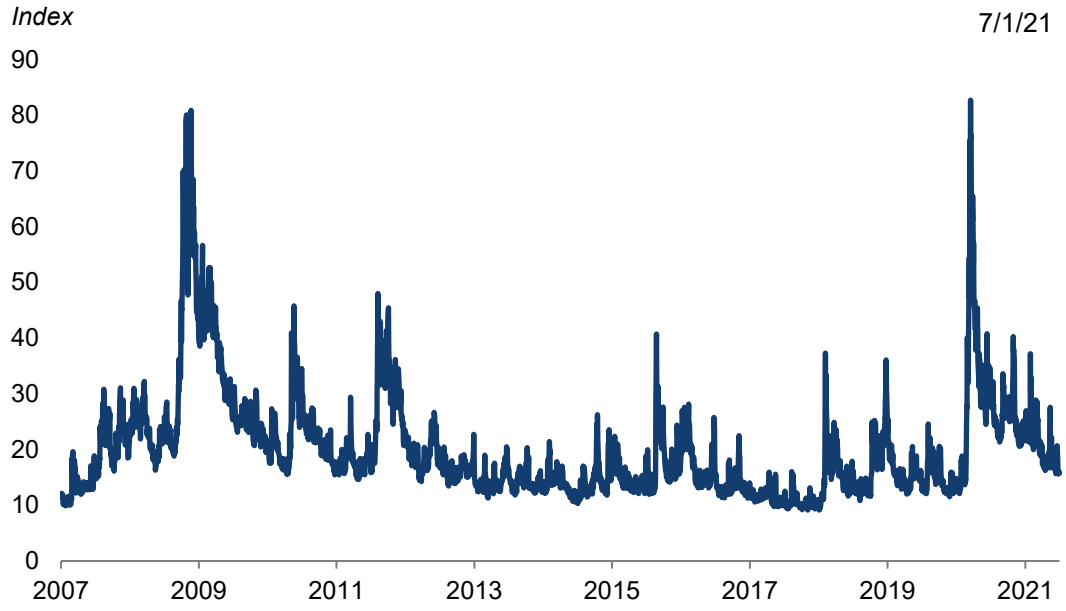
Impact on the Financial Sector

A variety of indicators of financial market stress increased significantly early in the COVID-19 pandemic period but have since receded. Preliminary findings indicate that the monetary and public policy responses have mitigated the epidemic's impact on financial markets.

The extraordinary Federal Reserve response to the COVID-19 pandemic attempted to improve liquidity and restore market function of the economy. The Federal Reserve, with the approval and financial support of Treasury, quickly announced plans for the Commercial Paper Funding Facility (CPFF), Money Market Mutual Fund Liquidity Facility (MMLF), the Primary Market Corporate Credit Facility (PMCCF), the Secondary Market Corporate Credit Facility (SMCCF), the Term Asset-backed Securities Loan Facility (TALF), the Municipal Liquidity Facility (MLF), and the Main Street Lending Program (MSLP). These emergency lending facilities were established under section 13(3) of the Federal Reserve Act and include equity or credit protection provided by Treasury to protect the Federal Reserve from losses. Treasury also authorized the creation of the Primary Dealer Credit Facility (PDCF) and Paycheck Protection Program Liquidity Facility (PPPLF). The CPFF, MMLF, and PDCF functioned as backstops for these critical short-term funding markets by providing liquidity for commercial paper issuers, market intermediaries, and buyers of money market fund assets, reversing the fear-driven outflows that occurred in March. The PMCCF, SMCCF, TALF, PPPLF, MLF and MSLP aimed to support longer-term funding and credit markets, preventing otherwise-solvent borrowers from facing financing pressures because of a broader downturn in liquidity and thereby underpinning employment and the broader economy.

The VIX, an index of expected stock market volatility derived from options prices, spiked from 27 in late February 2020 to a peak of 83 on March 16, 2020 (Figure 8). It has fallen since then back to pre-pandemic levels.

Figure 8. Market Volatility Index (VIX), 2007–21



Source: Wall Street Journal.

Similarly, corporate bond spreads such as the spread between Baa bonds relative to Treasury notes show a similar pattern peaking around March 23 and then receding (Figure 9). The trends in these indicators, and others, suggest that these Federal Reserve lending facilities have played a necessary role in easing market strain and ensuring access to liquidity for businesses, households, and communities.

Figure 9. Baa Corporate Bond and 10-Year Treasury Note Spread, 2006–21

Basis points

Source: Moody's.

Evidence of the Effect on Households

U.S. households have benefited from various forms of pandemic-related stimulus and support, including direct payments to individuals and families, expanded unemployment benefits, and efforts to address food insecurity and challenges in education.

To ensure sufficient liquidity for households in light of the crisis, the Congress put forward sources of cash support targeted at those who are the most vulnerable and those who lost their jobs because of the pandemic. The unemployment rate declined from a high of 14.7 percent in April 2020 to 6.7 percent in December 2020. The unemployment rate fell further to 6.0 percent over the first quarter of 2021, and to 5.9 percent by the end of the second quarter. In parallel, there was a continuing decline in the number of regular UI benefit weeks claimed, falling from 23.1 million during the week ending May 9, 2020 to 9.8 million for the week ending March 27, 2021.[9] Similar to the unemployment rate, the rate of decline in the

[9] These totals reflect the sum of regular state-program insured employment, Pandemic Emergency Unemployment Compensation (PEUC), and Extended Benefits (EB). For the week ending June 27, a reporting lag requires PEUC and EB to be from the week ending June 20. These numbers do not include self-employed and gig-economy workers on the PUA program but align closely with the number of unemployed workers reported in the monthly BLS Employment Report. With the recent extension in PEUC eligibility, these figures should remain comparable over the coming months.

number of UI benefit weeks claimed tapered over the second quarter, falling to 8.0 million as of the week ending June 27, 2021. We estimated the improvement in the unemployment rate from May 2020 to June 2021 was largely due to some of those on temporary layoff returning to work.[10] As the recovery progressed, however, permanent job losers composed a greater fraction of the unemployed, with the number of unemployed on temporary leave outpacing the number not on temporary leave. Moreover, nearly 4 million workers dropped out of the labor force as of June 2021.

The Congress provided additional benefits to Americans to protect against economic insecurity. Workers at firms with fewer than 500 employees (though firms who employ health care providers and emergency responders and those with fewer than 50 employees may exclude such employees) were provided paid sick days and expanded family and medical leave benefits for COVID-19 related reasons so that they could take time off to quarantine due to the illness, look after those in their family who needed to quarantine, or care for children whose childcare programs or schools were closed. In short, numerous aspects of the relief bills were aimed at helping households cushion the economic impact of the pandemic.

Increased Aggregate Disposable Personal Income

Absent a strong policy response, the COVID-19 recession would have likely caused a dramatic reduction in disposable personal income as workers lost jobs and businesses shut down. The April 2020 unemployment rate was 14.7 percent, the highest it has been since the Great Depression, and the rate for May was 13.3 percent.[11] In surveys, households reported high levels of concern about their financial security, with nearly half reporting significant losses of both income and wealth (Coibion, Gorodnichenko, and Weber 2020).

Employee compensation fell drastically in March and April of 2020. Despite large gains being made over the course of May and June, compensation remained below pre-pandemic levels through the third quarter of 2020. By looking at data from the Bureau of Economic Analysis (BEA) on aggregate real disposable personal income, however, we see that after initial declines during the early pandemic, disposable income had risen above pre-pandemic levels by April 2020 and remained elevated throughout 2020. The discrepancy between employee compensation and personal income is evidence that stimulus measures passed throughout 2020 helped put a floor on household income during the pandemic. During May of 2020, Treasury and IRS announced that nearly 130 million Americans had received Economic Impact Payments, worth more than $218 billion, in less than five weeks. In total, approximately 166 million Economic Impact Payments totaling about $277 billion were delivered in round one, with more appropriated in late December. The ARP also included direct payment to individuals of up to $1,400 for individuals and $2,800 for families.

The expansions to the unemployment insurance program have also propped up incomes. As of the beginning of July 2021, over $620 billion has been received by households, $275 billion of which has come

[10] We estimated that 23.4 million temporary layoffs were reversed from April 2020 to June 2021, after incorporating those workers who were classified by the BLS as *employed but not at work* who may have actually been on temporary layoff. The total number of unemployed fell 20.8 million over the same period, suggesting the addition of 2.6 million more permanent unemployed workers.

[11] Some estimates put the rate at higher than the official U-3 rate. See, for example, Fairlie, Couch, and Xu (2020).

since the start of the fourth quarter 2020. Outlays since October have been dominated by $64 billion for PUA benefits for self-employed and gig-economy workers, $62 billion for PEUC benefit extensions for workers who have exhausted their regular State benefits, and $133 billion in Federal Pandemic Unemployment Compensation (FPUC) provided through an additional $300 in weekly benefits that was added in the Appropriations Act in December 2020 and extended in the ARP. The pace of these expenditures should slow moving forward, reflecting the recovering labor market, improved vaccination rates, and the opting-out of some States from these UI programs.

As the income side of households' balance sheets have also been propped up by economic relief payments, aggregate data show that the spending side has followed the ebb and flow of disbursements for Economic Impact Payments from the CAA and ARP. Real personal consumption saw a dramatic downturn at the onset of the pandemic, and in April 2020 experienced the largest one-month decline on record.[12] Despite generally trending towards recovery during 2020, progress had slowed by the end of 2020, with consumer spending increasing only 1.9 percent between June and December. Of note, however, was the elevated levels of spending observed in February, March, and April of 2021, which reflected the distribution of Economic Impact Payment from the CAA during January, and the ARP in March and April. Data on real disposable personal income followed a similar pattern over this period, demonstrating the ability of stimulus measures to provide an immediate boost to the economy.

In addition to extending a lifeline to vulnerable households and individuals, a successful vaccination campaign paid immediate dividends for workers in sectors most affected by social distancing. The Bureau of Economic Analysis' credit card transaction data on industry-level spending showed accelerated growth rates in spending on food services and drinking places, accommodation, and gasoline stations starting in January 2021 (BEA, 2021). Payroll employment data for the leisure and hospitality sector as well as the restaurant industry both show accelerated rates of improvement during the first two quarters of 2021.

The decline in overall spending led to an increase in the savings rate over 2020 and into 2021. Personal saving saw its largest one-month increase on record in April 2020, pushing personal saving as a percentage of aggregate real disposable income to 33 percent, a record high. Personal savings saw decreases between May and November but ticked up in December and January and remained elevated into March 2021. As gathering restrictions eased during the first half of 2021, savings rates declined from 27.6 percent in March to 9.4 percent as of June. While still above the pre-pandemic saving rate of 8.3 percent from February 2020, the unwinding of accumulated pandemic-related savings as the economy has reopened is a positive sign for the economy and suggests a prominent role for vaccinations and direct stimulus payments.

Supplemental Nutrition Assistance Program

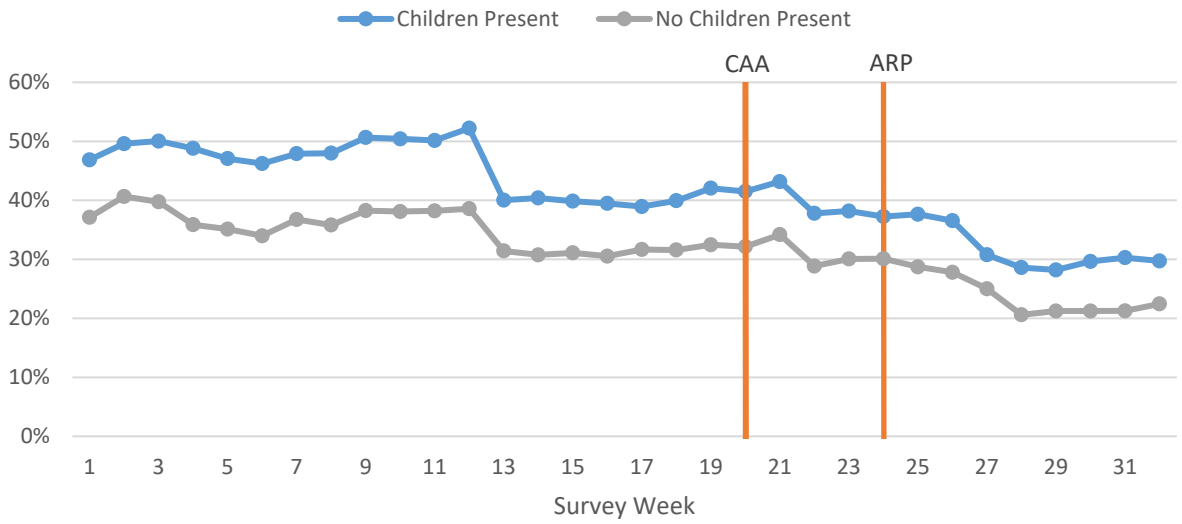
The Families First Coronavirus Response Act (FFCRA), which passed in March 2020, provided temporary benefit increases up to the maximum allotment for households not already receiving the maximum. The CARES Act provided over $15 billion in additional contingency funding for increased costs associated with

[12] A recent paper by Chetty et al. (2020) shows that the largest declines in consumption spending came from the richest income households. As of June 10, high income households cut spending by 17 percent while those in low income households cut spending by only 4 percent.

the FFCRA provisions, as well as anticipated increased participation in the Supplemental Nutrition Assistance Program (SNAP). As provided by the FFCRA and CARES Act, the U.S. Department of Agriculture (USDA) also provided waivers of certain requirements so that nutrition programs could reach families and children while social distancing restrictions were in place. The FFCRA also suspended work requirements for non-disabled, childless adults through the month after the end of the COVID-19 public health emergency. Funding for SNAP was expanded and increased in the December Appropriations Act, and these measures were extended in the ARP.

Recent data have shown that Americans struggled with food hardship during the pandemic. According to the Census Bureau Household Pulse Survey from early February 2021, nearly 11 percent of all adults in the U.S. reported that their household sometimes or often didn't have enough to eat in the prior week. As of late March, however, after the passage of the ARP, this fraction had fallen to 7.4 percent, and remained near 8 percent at the end of June. Still, both adults in households with children and Black and Latino adults were more likely to report not having enough to eat. The most common reason given by these households for not having enough to eat was not being able to afford to buy more food.

Figure 10. Food Insufficiency Last 7 Days, by Child Presence



Note: Food insufficiency defined as those reporting "Often not enough to eat," "Sometimes not enough to eat," and "Enough food, but not always the types wanted."
Source: Census Household Pulse Survey.

Education

Between the first and third week of March 2020, close to 100 percent of kindergarten, primary, and secondary schools closed. These closures have had a substantial negative effect both on the U.S. economy and on children themselves. Academic literature finds that without additional investments in education, children are likely to experience a persistent 2.3 – 3.7 percent decline in future earnings as a result of

lower human capital accumulation from the shortened school year.[13] The loss of human capital accumulation will also have deleterious effects on long-term growth for the country.

Meanwhile, the absence of parents from workplaces due to remote schooling and lack of childcare results in lost economic output. Those parents could experience a persistent 1 percent drop in lifetime earnings because of lost job experience, as well.[14] We estimate that 18 percent of the workforce may fall into this category. Overall, data indicate that only about 30 percent of workers are likely to be able to telecommute.

Assuming that school closures and distance learning reduce work experience for even just four months, affected workers—as a lower bound, 70 percent of the one-quarter of the workforce with young children at home—are estimated to lose 1 percent of lifetime earnings. Furthermore, mothers—and single mothers especially—are less able to telecommute. The effects are likely to be particularly severe for early-career single mothers, who will experience not just lower earnings but also less secure job prospects. Moreover, keeping schools closed and implementing distance learning disproportionately harms lower-income families, who are less able to obtain additional help with childcare, are less able to obtain additional tutoring or instruction to supplement distance learning, and are less likely to have internet access and laptops required for distance learning. These families are the most vulnerable to shocks, since they are the least likely to be able to work from home and least likely to have accumulated savings.

Evidence of the Effect on Businesses

In this section, we focus on provisions specifically aimed at improving the access of businesses to financial resources and allowing them to weather the crisis. We explore how the availability of forgivable loans and grants has allowed small businesses to retain employment, re-open, and recover revenues. While the small business optimism index compiled by the National Federation of Independent Business (NFIB) showed a 13.1 point improvement in September, relative to April, the index fell 8.1 points in the fourth quarter of 2020. The NFIB index then rebounded during the first and second quarter of 2021, but remained 4.7 percent below its pre-pandemic level as of May 2021.

The combined NFIB index is an aggregation of several sub-indexes, of which most followed a similar pattern. The net percent (i.e. increase minus decrease) of firms who report planning to hire workers in the next three months averaged 21 percent over the first five months of 2021, an improvement from the 16 percent average during 2020 and on track to exceed to the 19 percent average from 2019. The increase in hiring plans is also consistent with the positive trend in the net percent of businesses who report increases in sales over the past three months (relative to the prior three months). Plans to hire workers, however, are met with challenges in finding qualified applicants, as 48 percent of firms in May reported having job openings they are currently not able to fill. We see this reflected in both the net percent of

[13] The range of decline in future earnings is derived from prorating full-year earnings declines to the three-month reduction in the school year caused by COVID-19. Sources for the range are Angrist and Krueger (1992) and Bhuller et al. (2017).

[14] Estimate derived from prorating the drop in lifetime earnings for each one year of lost job experience, as estimated in Altonji and Williams (2005).

firms who report over the first two quarters of 2021 that they have increased actual compensation or plan to do so over the next three months.

Impact on Small Business Bankruptcies

A concern in any crisis is the impact on business bankruptcies and failures, which can then lead to even higher levels of sustained unemployment. Small business bankruptcies for the second quarter of 2020 as a whole decreased by 1.8 percent (Figure 11). In the third and fourth quarter, the change in year-over-year bankruptcies accelerated to 68.2 percent and 74.1 percent, respectively. By the first quarter of 2021, this pace had slowed significantly, with a year-over-year decrease in bankruptcies of 4.8 percent. Small business bankruptcies declined even further in the second quarter with a year-over-year decline of 25 percent.

Figure 11. Chapter 11 Small Business Bankruptcy Filings, 2008-21

Year-over-year change (percent)

Source: Justice Department; CEA calculations.

Bankruptcies data from 2020 could be biased by a number of factors. First, the social distancing mechanisms may have affected filing rates, both for the court systems and debtors. If business owners were unable to connect with lawyers or face difficulties submitting electronic filings, this could have led to filing delays that show up as higher filings later in the data. At the same time, courts' ability to take on cases might have been affected by State restrictions.

How Small Businesses Have Responded to the Coronavirus Response Legislation

Small Business Expectations of Near-term Economic Conditions

The sentiments of small businesses are an important lens through which to view the recovery, and the Census Small Business Pulse survey provides a high-frequency way to gauge the current climate for these businesses. For example, in a survey taken between March 29th and April 4th of 2021, respondents were asked if their business had made any changes to their proposed capital spending since March 2020; the survey found that 45 percent of businesses either decreased, canceled, or postponed capital expenditures over the last year. These results were indicative of an economy that still had an upward climb to recover lost economic potential due to the pandemic recession.

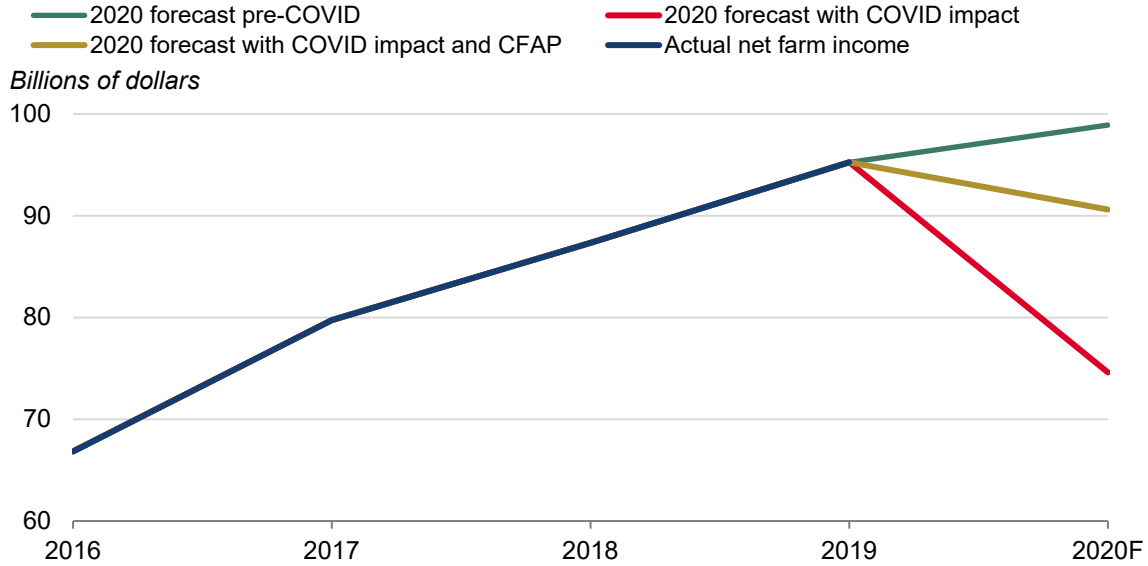
Looking toward the future, the Small Business Pulse survey also asked respondents how much time they think will pass before they return to a normal level of operations. A plurality of respondents (37%) in March answered that it will take more than six months for conditions to normalize. The results of this question are consistent with those of another survey question from March in which more than half of respondents whose business typically involves travel did not plan to do so over the next six months. As of June, however, only 32 percent believed the economy would take more than six months to return to normal, and more firms now report plans to increase travel in the next six months. This suggests that it is not just consumers who responded to increased rates of vaccination, but businesses as well.

The Small Business Pulse survey also suggested that firms were increasingly looking to hire workers. Of the businesses polled in March, 31 percent suggested they planned to identify and hire new employees over the next six months; as of June, 36 percent of firms planned to hire workers in the next six months.

Impact of the Coronavirus Food Assistance Program on Farm Incomes

The CARES Act authorized provisions to support farmers who were harmed by the consequences of the COVID-19 epidemic. These provisions took the form of USDA's Coronavirus Food Assistance Program (CFAP). The COVID-19 epidemic and the associated economic response disrupted food and agricultural markets, resulting in a dramatic drop in farm income for a wide array of agricultural products. CFAP makes available $16 billion of financial assistance for producers of affected commodities, including $9.5 billion to compensate for losses due to commodity price reductions between mid-January and mid-April 2020, and another $6.5 billion for ongoing market disruptions. In early February 2020, before the extent of the impact on agricultural markets was understood, U.S. net farm income for 2020 was forecast to be $99 billion, which would have been a 4 percent increase over 2019 and the highest net farm income since 2014. By June, as the magnitude of the epidemic became apparent, analysts had revised the forecast of 2020 net farm income down by more than $24 billion (25 percent) when CFAP payments are excluded. Including the $16 billion in CFAP payments raises forecasts for net farm income to $91 billion (Figure 12). It is important to note that the pandemic affected all of agriculture, but that many farmers did not benefit from previous rounds of pandemic-related assistance. CFAP has been modified under the ARP in order to better reach underserved producers and small to medium sized farmers.

Figure 12. U.S. Net Farm Income, 2016–20



Sources: U.S. Department of Agriculture; Food and Agricultural Policy Research Institute; CEA calculations.
Note: "F" denotes a forecast. CFAP = Coronavirus Food Assistance Program.

Conclusion

The COVID-19 pandemic caused a sharp and deep contraction of economic activity. Congress responded with substantial legislation. This report reviewed the impacts of 2020 pandemic legislation by synthesizing the relevant academic literature as of the first quarter of 2022, as well as providing detailed analysis of publicly available economic data immediately following this legislation and during the height of the economic downturn. Overall, 2020 pandemic legislation addressed public health challenges, provided economic relief, and facilitated economic recovery. Economic and public health challenges remain, many of which predate the pandemic. The Federal Government remains committed to taking the necessary steps needed to protect and improve the lives and livelihoods of all Americans.

Appendix

Coronavirus Response Funding Overview

Phase 1: Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (P.L. 116-123)

In total, this act provided $7 billion in emergency funding for Federal agencies' response. Highlights include:

- Public Health and Social Services Emergency Fund, to fund countermeasures and support for emergency response and healthcare entities.
- CDC-wide public health response activities, including some global health efforts. In addition, the act provided funds for CDC's Infectious Diseases Rapid Response Reserve Fund.
- National Institutes of Health research and development of therapeutics, vaccination, and diagnostics for COVID-19.
- State and international assistance programs to prevent, prepare for, and respond to the virus.

Phase 2: Families First Coronavirus Response Act (P.L. 116-127)

In total, provided $192 billion. Highlights include:

- Refundable tax credits for private-sector employers who provide required paid sick and family leave.
- Public Health and Social Services Emergency Fund, to pay claims of providers to provide COVID-19 testing and related services for uninsured individuals.
- Emergency transfers to State agencies for unemployment compensation administration expenses.
- Farmers to Families Food Box donation and distribution program.
- Nutrition programs, including Women, Infants, and Children (WIC) nutrition benefits and State and local agency operations, food banks through The Emergency Food Assistance Program (TEFAP), territory nutrition assistance grants, and such sums authority for the SNAP P-EBT program to support families while schools are closed.
- Emergency Medicaid Federal Medical Assistance Percentage (FMAP) increase of 6.2 percentage points for States that meet certain requirements, to provide fiscal relief and help States manage increased enrollment and health care costs. This increase will also support other Federal/State programs including the Children's Health Insurance Program, as well as foster care and adoption assistance programs.
- Department of Veterans Affairs (VA), to provide support for the VA medical care and information technology response, along with small amounts for other VA needs, chiefly personal protective equipment (PPE).

Phase 3: Coronavirus Aid, Relief, and Economic Security (CARES) Act (P.L. 116-136)

In total, provided $2.1 trillion to respond to the COVID-19 outbreak and its impact on the economy, public health, State and local governments, individuals, and businesses. Highlights include:

- Economic stabilization, supporting trillions in Federal Reserve lending to business and State/local governments, including loans to airlines, related businesses, and businesses critical to national security.

- PPP loans to small businesses, and certain non-profits, veterans' organizations, and Tribal business concerns, that can be fully forgiven if the funds are used for approved payroll and non-payroll costs (such as utilities and rent).
- Economic Impact Payments for individuals to provide $1,200 per eligible individual plus $500 per qualifying child. These amounts phase out for higher-income taxpayers.
- Coronavirus Relief Fund to provide general economic support to States, localities, and tribal governments. These funds can be used to address medical or public health needs related to COVID-19, as well as unemployment or business closures.
- Tax provisions, including,
    - Increases deductibility of charitable contributions through calendar year 2020;
    - Modifies limitation on losses for taxpayers other than corporations;
    - Establishes temporary refundable employee retention tax credit, to encourage businesses to keep employees on payroll;
    - Increases utilization of net operating losses arising in tax years 2018 through 2020;
    - Increases deductibility of business interest expenses for tax years 2018 through 2020;
    - Accelerates refundability of corporate minimum tax credits;
    - Suspends aviation excise taxes through the rest of calendar year 2020;
    - Delays payment of certain employer payroll taxes through the end of calendar year 2020 and allows employers to pay them over the next two years; and
    - Retroactively permits 100-percent bonus depreciation for qualified improvement property acquired and placed in service after September 17, 2017.
- Pandemic unemployment assistance and other emergency unemployment compensation measures.
- Public Health and Social Services Emergency Fund for countermeasures and support for emergency response and healthcare entities.
- Emergency increase in unemployment compensation.
- Disaster Relief Fund for emergency protective measures including: PPE and medical supplies, temporary medical facilities and personnel, sheltering, and 100 percent of National Guard Title 32 costs until June 24, 2020.
- Transportation: Transit Infrastructure Grants and Grants in Aid for Airports. The transit grants cover capital and operating expenses to maintain service, and to reimburse lost revenue due to the public health emergency. The airport grants cover operating and capital expenses at over 3,000 airports. Both grants reflect nearly three times the level of funding provided for these programs in FY 2020.
- Payroll support to the airline industry to maintain employment and avoid job cuts.
- Education Stabilization Fund to support States, school districts, and institutions of higher education to prevent, prepare for, and respond to COVID-19, as well as direct financial assistance to students that can be used to cover education, food, housing, healthcare, and childcare expenses.
- Temporary relief for most Federal student loan borrowers, by pausing payments, with 0 percent interest, for all Department of Education-held student loans.
- Nutrition Programs: Supplemental Nutrition Assistance Programs (SNAP), the Food Distribution Program on Indian Reservations (FDPIR), nutrition assistance block grants to territories, Child Nutrition programs, Older Americans Nutrition Programs, and TEFAP funding for food banks. Support for these programs has been expanded to serve more individuals and to fund innovative ways to deliver meals to children while schools are closed.

- Department of Veterans Affairs, to provide support for the VA medical care and information technology response, along with small amounts for other VA needs, chiefly PPE.
- Coronavirus Food Assistance Program, a package of assistance to specialty crop, dairy, livestock, and row crop producers that includes funds provided through both the CARES Act and the Commodity Credit Corporation.
- Department of Defense (DOD), including for: medical care for service members, dependents, and retirees; diagnostics and medical research; PPE for medical and non-medical personnel; procurement of vaccines and antivirals; National Guard and Reserve support for DOD missions; DOD private sector care costs; and Defense Production Act purchases.
- Funding for Economic Injury Disaster Loan (EIDL) Advances (grants), a new program that provided interim funding to EIDL lending program applicants, could be used for a wide range of obligations such as rent, payroll, debt payments, and healthcare benefits.
- Additional borrowing authority for the United States Postal Service. The funds are to be extended by Treasury if the Postal Service determines that it is unable to fund operating expenses due to COVID-19 related changes.
- Department of Justice grants to support State, local, and tribal law enforcement in the response to COVID-19.

Phase 3.5: PPP and Health Care Enhancement Act (P.L. 116-139)

In total, provided $493 billion in additional funding for small business loans, health care providers, and testing. Highlights include:

- Additional funds for the PPP.
- Additional funds for the Public Health and Social Services Emergency Fund.
- Additional funds for the Small Business Administration EIDL lending program, and additional funds for EIDL Advances (grants).

Phase 4: Consolidated Appropriations Act (P.L. 116-260), Divisions M and N

In total, provided $868 billion in additional funding for small businesses, individuals, state and local governments, and vaccinations. Highlights include:

- Additional funds for the PPP, including a provision for the deductibility of expenses paid for by PPP loans.
- Additional funds for SBA EIDL Advances (grants).
- Small business funds for businesses in low-income communities.
- Emergency grants for live music venues, movie theaters and museums.
- Additional funds for a $600 Economic Impact Payment, available for most Americans with adjusted gross incomes below $75,000.
- Extensions of increased Federal unemployment benefits for an additional 11 weeks, including an additional $300 per week until mid-March.
- Additional funds for education, including grants for K-12 education, higher education (including for HBCUs and for-profit college financial aid), and funds for the Governor's Emergency Education Relief Fund.
- Funding to States for testing, tracing and COVID mitigation.

- Funding to States and the CDC to assist with vaccine procurement and distribution, including building a strategic stockpile.
- Other health funding, including for mental health, additional health care provider grants, an increase in the physician pay schedule, and a repeal of the Medicare sequester through March 2021.
- Additional funds for a second round of payroll support for airline workers.
- Funding to States for transit infrastructure and State highway funding.
- Grants and funding to additional public transit providers, such as buses, ferries, airports, and Amtrak.
- Additional funds to expand and increase nutrition and agriculture programs, including a 15 percent increase in monthly SNAP benefits through the end of June 2021 and direct payments to the farming and ranching industry.
- Funds to States to continue to provide rental assistance programs, which also includes rent arrears, utilities, and home energy costs. There is also an extension of the eviction moratorium for tenants with annual incomes below $99,000 to the end of January 2021.
- Funds to support the Child Care Development Block Grant program.
- Support for community lenders, including through Community Development Block Grants.
- Funds to provide grants and investment in broadband technology to support remote learning.
- An amendment to financial support for the U.S. Postal Service provided in the CARES Act.
- An extension and expansion of the Employee Retention Tax Credit.
- A reinstatement of the 100 percent deductibility of business meals for 2021 and 2022.
- An increase in the Earned Income and Child Tax Credit, facilitated by allowing taxpayers to use their 2019 income if they experienced job loss in 2020.
- An extension of the Families First paid leave credits through March 2021.
- Extensions of The CARES Act provisions for charitable donations and employer-paid student loan exclusions.
- Included in this package was a reduction in previous budget authority, which offsets new budget authority for Divisions M and N of this Act.

Phase 5: American Rescue Plan Act of 2021 (P.L. 117-2)

In total, the ARP provided $1.9 trillion for supporting individuals, households, businesses, and various public health measures. Highlights include:

- Funding to support the food supply-chain and agriculture pandemic response.
- Funding to state, local, and tribal governments to bridge budget shortfalls.
- Direct payments for individuals earning up to $75,000 per year and couples earning up to $150,000 per year.
- Extension of an additional $300 per month in unemployment insurance benefits through Sept. 6, 2021.
- A temporary expansion of the child tax credit, including monthly payment through the end of 2021.
- An extension of the tax credit available to employers who offer paid sick leave and paid family leave benefits through the end of fiscal year 2021.
- An extension and expansion of the Employee Retention Tax Credit.

- Additional $7.25 billion in funds for supporting small-businesses in the form of the Paycheck Protection Program.
- Grants to state educational agencies and institutions of higher education, including funds directed to a Child Care & Development Block Grant program.
- A provision to make any student loan forgiveness passed between Dec. 31, 2020, and Jan. 1, 2026, tax-free — rather than having the forgiven debt be treated as taxable income.
- Funding for the Low-Income Home Energy Assistance Program, known as LIHEAP, to help families with home heating and cooling costs.
- Funding to temporarily boost the value of cash vouchers for the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) up to $35 per month for women and children for a four-month period during the pandemic.
- Funding for programs authorized under the Older Americans Act, including support for nutrition programs, community-based support programs and the National Family Caregiver Support Program.
- Allocation of $37 million to the Commodity Supplemental Food Program for low-income seniors.
- Allocation of $7.5 billion to track, administer and distribute COVID-19 vaccines.
- Another $46 billion will go toward diagnosing and tracing coronavirus infections, and $2 billion will go toward buying and distributing various testing supplies and personal protective equipment.
- Funding for specific industries, including to the Small Business Administration to support "restaurants and other food and drinking establishments," as well as funds for the Shuttered Venue Operators Grant.
- Funding for the Small Business Administration EIDL program, with some funds prioritized for businesses with fewer than 10 employees.
- Funding to support the transportation sector, including allocations for transit, airports, and temporary payroll support for the aerospace manufacturing industry.
- Allocation of funds for emergency rental assistance, including $5 billion for emergency housing vouchers for people experiencing homelessness, survivors of domestic violence and victims of human trafficking.
- Funding to preserve the solvency of multiemployer pension funds.
- Cybersecurity funding to be used for technology modernization.

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