The Impact of the COVID-19 Pandemic on Public Transit Funding Needs in the U.S.

Prepared by EBP US, Inc.

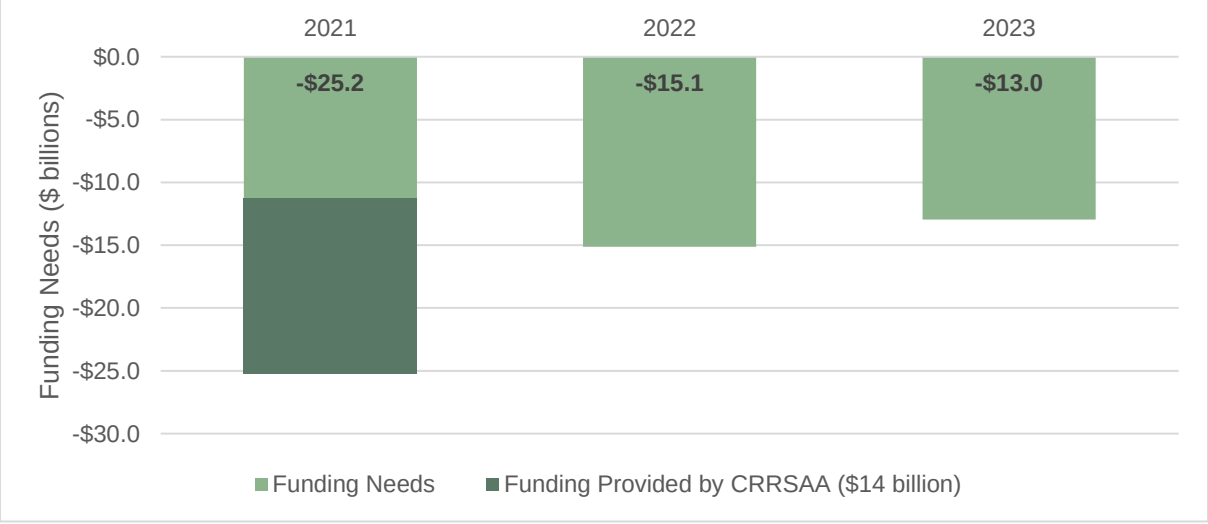
Prepared for the American Public Transportation Association

January 27, 2021

EXECUTIVE SUMMARY. The Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSAA), enacted in December 2020, marks the second round of emergency public transit funding following the onset of the COVID-19 pandemic. It provided $14 billion for transit agencies in 2021, following the infusion of $25 billion provided by Congress in March 2020 through the CARES Act.

The analysis summarized in this document found that, even with the two rounds of emergency funding, public transit agencies still face a projected shortfall of $39.3 billion through the end of calendar year (CY) 2023.[1] While the two rounds of funding provided transit agencies across the nation with needed relief, gaps in transit funding continue to grow due to ongoing losses of ridership, fare revenue, and tax revenue. Nationally, transit ridership in 2020 dropped by 79% compared to 2019 levels at the start of the pandemic. While some riders have returned to public transit, ridership from June through December 2020 remained about 65% below pre-pandemic levels. In addition, transit providers are coping with higher costs related to training, personal protective equipment (PPE), personnel absences, and growing labor costs.

Figure 1 Public Transit Emergency Funding Needs by Year



[1] The public transit emergency funding needs are based on revenue and expense forecasts, as detailed in the *Appendix*. We modeled different scenarios reflecting uncertainty about transit ridership levels in the three-year period. Depending on when and to what extent transit ridership returns, funding needs may range from $37.4 billion to $41.3 billion.

Although forecasts early in the pandemic suggested a possible “V-shaped” economic recovery, conditions worsened as the pandemic endured and public health measures intended to control the virus have prolonged negative financial impacts on transit agencies. Even with the phased release and distribution of the COVID-19 vaccine beginning in late December 2020, most forecasts suggest the economy will not reach pre-pandemic employment levels again until 2025. The depressed economy is expected to impact transit revenue through reduced ridership and reductions in other revenue sources, such as fuel taxes.

Nationally, reduced revenues will impede the ability of transit agencies to continue providing service for essential workers and make necessary capital investments to preserve a state of good repair. Some transit agencies may be forced to reallocate capital budgets to cover operations costs, although not all capital funding sources can be reallocated. While impacts will vary across transit agencies, the projected budget shortfall is expected to result in significant reductions in transit capital spending if funding needs are not met. Transit capital spending has a direct effect on the economy and generates both construction jobs and additional jobs through supplier purchases.[2]

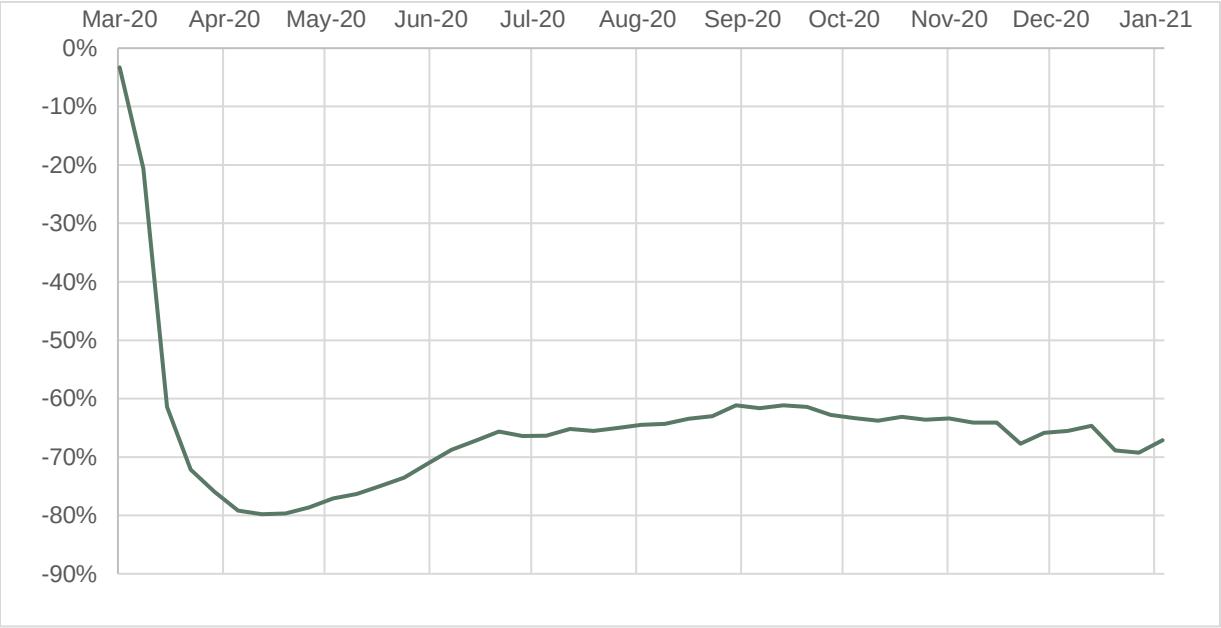
When the economy does begin to recover, transit agencies will still be challenged with severe fiscal constraints. Such constraints stem from physical distancing requirements that reduce vehicle capacity, increased costs of facility and vehicle cleaning and disinfection, and some displacement of ridership due to remote work options adopted during the pandemic being made permanent for many workers. For these reasons, assuming the economy recovers in line with current epidemiological projections and related long-run unemployment level forecasts, ongoing depressed transit revenue and expenses translates to annual funding shortfalls ranging between $13.0 billion and $15.1 billion per year for CYs 2021 through 2023.

[2] *See* APTA Economic Impact of Public Transportation Investments, 2020 Update.

KEY FINDINGS.[3]

- The 2020 COVID-19 pandemic's effects on the nation's economy and day-to-day living have been profound. Since early 2020, more than 200 million people have been required to live under some form of physical distancing rules, with thousands of workplaces and businesses either closing indefinitely or implementing remote work arrangements. Public transit ridership dropped by nearly 80% in April 2020 and remained more than 60% below 2019 levels through the rest of the year.

Figure 2 Public Transit Ridership Losses and Projections

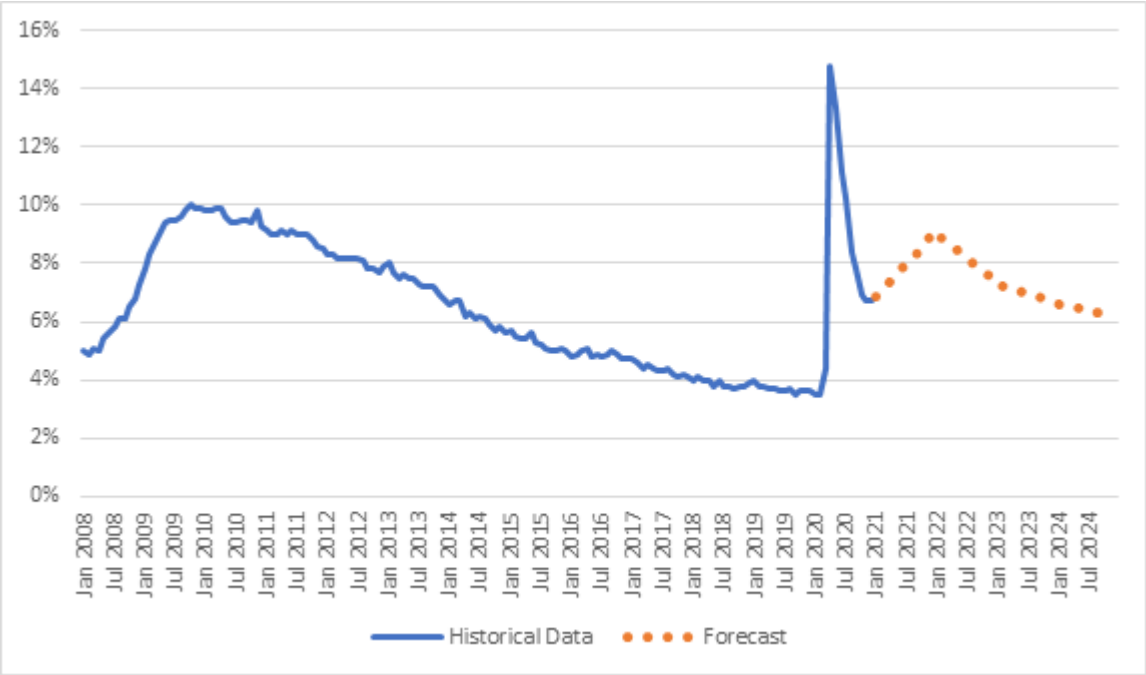


Source: APTA Ridership Trends Dashboard powered by Transit, January 2021, https://transitapp.com/APTA.

- Public health and safety concerns associated with the pandemic have dramatically reduced overall travel and precipitated large and historic declines in public transit ridership. It is anticipated that ridership will remain at this level through the third quarter of 2021 and slowly grow as the vaccine roll out continues. Ridership in 2022 and 2023 is expected to remain lower than 2019 levels due to continued unemployment and increased remote work.
- Peak monthly unemployment in April 2020 was 14.8%, greater than any month during the Great Recession of 2007-2009. Although unemployment rates began to recover in the third and fourth quarters of 2020, monthly unemployment claims began to increase again in December 2020. From March through December 2020, more than 72 million new unemployment claims were filed, a historic high, with the national unemployment rate projected to remain above 9% through the end of CY 2021, and above 7% through the end of 2022.

[3] *See Appendix* for details of methodology and data sources used in this analysis.

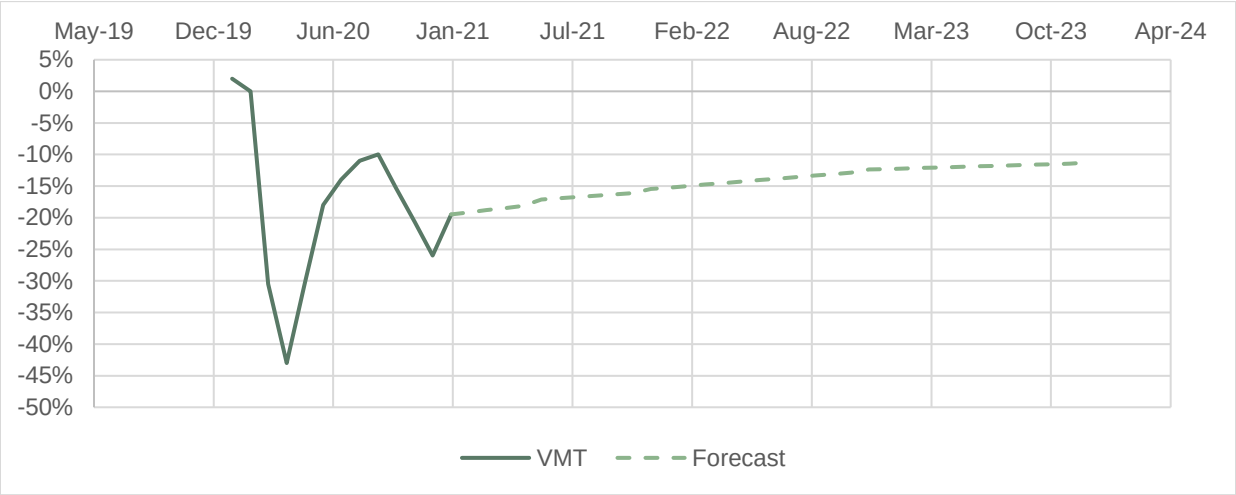
Figure 3: Unemployment Rate and Projections



Sources: Bureau of Labor Statistics, U.S. Department of Labor, "Current Population Survey," January 2021; Congressional Budget Office, "10-Year Economic Projections," July 2020.

- Transit revenue was further compromised during the pandemic due to many systems halting fare collection starting in March 2020 to help minimize contact between riders and transit operating personnel. By the third quarter of 2020, however, most systems returned to collecting fares, although at least five large and small operators were still not doing so as of December 2020. Fare revenue losses have also been amplified because ridership declines for higher-fare rail services (including subway and commuter rail) have been about 1.3 times higher than ridership declines on lower-fare bus services.
- While fares and other ridership-related funds are transit agencies' largest sources of revenues, accounting for almost 40% of annual budgets, other key sources are also forecast to decline significantly due to underlying economic conditions. These include revenues from state and local taxes, which may see a 25% decline in the early months of 2021 followed by a gradual return to normal. Transit agencies have also expressed concerns that states will allocate less of their budgets to transit. Because of uncertainty surrounding these decisions, this analysis does not account for these potential funding losses.
- Vehicle miles of travel (VMT), the major driver of motor fuel tax revenues, saw a sharp decline in April 2020. Although vehicular traffic increased in the later months of 2020, VMT in December 2020 dipped to only 74% of 2019 levels.

Figure 4 VMT Loss and Forecast



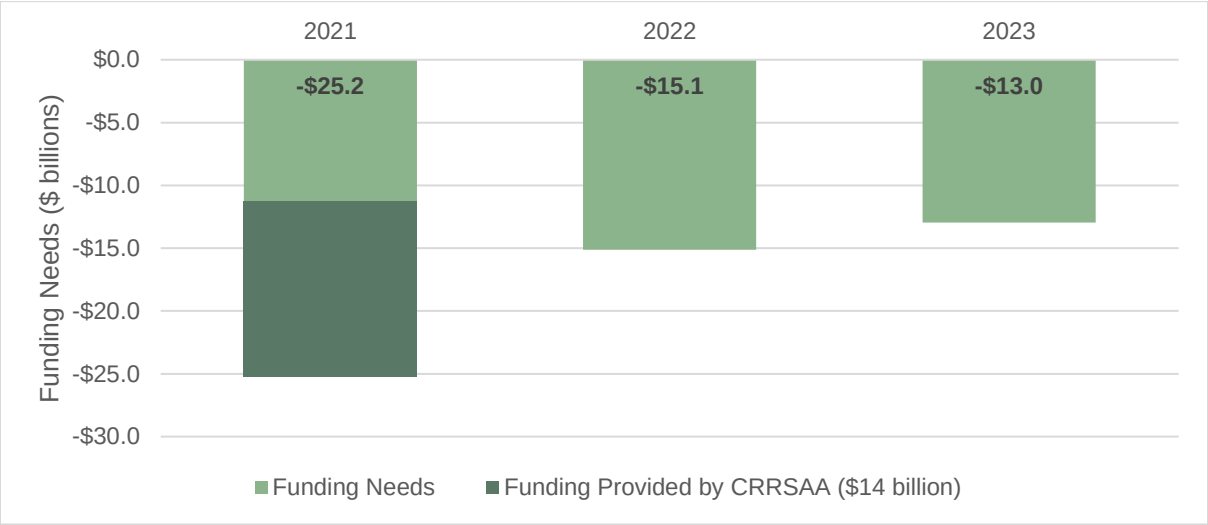
Sources: StreetLight VMT Monitor and U.S. Department of Transportation, Federal Highway Administration, Traffic Volumes and Trends http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm. Forecasts based on Congressional Budget Office employment forecast.

- Overall retail sales growth for the second half of 2020 returned to normal levels, despite a slight dip in December 2020 of 0.7% from November 2020. There were shifts in retail spending across different retail sectors away from tourism and restaurants toward e-commerce,[4] grocery stores, and home improvement/hardware. Given that total retail spending was up in 2020 compared to 2019 and 2018, this analysis assumes that the sales tax funding component of the total transit funding stream returns to normal levels in 2021. We acknowledge that the shift may affect the mix of taxable goods and that local and county sales tax collections (where applicable) may be affected disproportionately compared to state sales taxes due to the shift in retail spending toward e-commerce. Therefore, some transit agencies may see reductions in sales tax revenues. However, the total volume of retail sales, despite poor economic conditions, is strong nationwide.
- Transit agency expenses have escalated during the pandemic. PPE, additional cleaning and disinfecting, and high personnel absence rates have increased operational expenses at many agencies. Further, as agencies look ahead to supporting vaccination of their staff in 2021, they expect to incur additional costs.
- Cumulatively, declines in revenue sources and increased expenses translate to projected transit funding needs of $25.2 billion in 2021, $15.1 billion in 2022, and $13.0 billion in 2023, as shown in Figure 5 below. Even after accounting for the $14 billion of emergency transit funding provided by CRRSAA, transit agencies' net revenue gap through the end of 2023 is still projected to be $39.3 billion (+/- 5%).[5]

[4] E-commerce sales grew 32% in 2020-Q2 at the start of the pandemic to $211 billion (an increase of $51 billion from the prior quarter). Sources: U.S. Census Bureau, "Quarterly E-Commerce Report," January 2020; and U.S, Census Bureau, "Monthly Retail Trade Report," January 2020.

[5] We modeled different scenarios reflecting uncertainty about transit ridership levels in the three-year period. Depending on when and to what extent transit ridership returns, funding needs may range from $37.4 to $41.3 billion.

Figure 5 Public Transit Emergency Funding Needs by Year



- Revenue declines will also have impacts on transit capital project development and construction. For many transit agencies, funding shortfalls will directly affect capital budgets. In addition, some transit agencies may be forced to reallocate capital budgets to cover operating costs to maintain critical services for essential workers. Across all transit agencies, the projected budget shortfall is expected to result in significant reductions in transit capital spending. Transit capital spending, which accounts for over 50 percent of transit agency spending nationally, has a direct effect on the economy and generates both construction jobs and additional jobs through supplier purchases.[6]

[6] *See* APTA Economic Impact of Public Transportation Investments, 2020 Update.

APPENDIX

METHODOLOGY.

Potential revenue losses were estimated using NTD transit revenue data[7], and data from national reporting on revenue shifts in 2020, including data on declines in ridership, VMT, and tax revenue streams (see *Table 1: Revenue Risk Table*).

Revenue stream forecasts reflect assumptions about the duration of the impacts of COVID-19 on the economy and transit. After a range of economic and epidemiological forecasts were reviewed, the July long-term CBO unemployment forecast was determined as the most suitable for this analysis because it was the most comprehensive reporting of forecast assumptions and provided estimates through the end of calendar year 2030.[8] Importantly, CBO's projections also include the possibility of a reemergence of the pandemic and the shift in economic conditions. Additionally, the analysis assumes that widespread vaccinations will have occurred by the third quarter of 2021.

Transit ridership losses were informed by observed ridership losses in 2020, as reflected in transit use data from the APTA Ridership Trends dashboard, based on data from Transit app,[9] which showed declines in demand through late December 2020. In addition, the modeling accounts for fare revenue losses from rear-door boarding policies. The decline in transit revenue was used to estimate the potential job losses for capital spending.

Additional COVID-related expenses for agencies were included in the cost analysis using an estimated COVID-19 expense factor derived from agency interviews. These monthly costs were scaled to the national level ($653 million per month) using ridership as a proxy[10]. These costs include labor, materials, and equipment related to additional cleaning and personal protective equipment.

[7] National Transit Database, "2018 National Transit Summaries and Trends: Appendix"

[8] CBO forecast included estimates of GDP, unemployment, and interest rate on Treasury Notes. "CBO's Current Projections of Output, Employment, and Interest Rates and a Preliminary Look at Federal Deficits for 2020 and 2021" April 24, 2020

[9] APTA Ridership Trends Transit Dashboard powered by Transit, January 2021, https://transitapp.com/APTA

[10] Expenses were scaled using national unlinked passenger trips. APTA 2020 Public Transportation Factbook

Figure 6: Overall Method for Estimating Revenue Gap

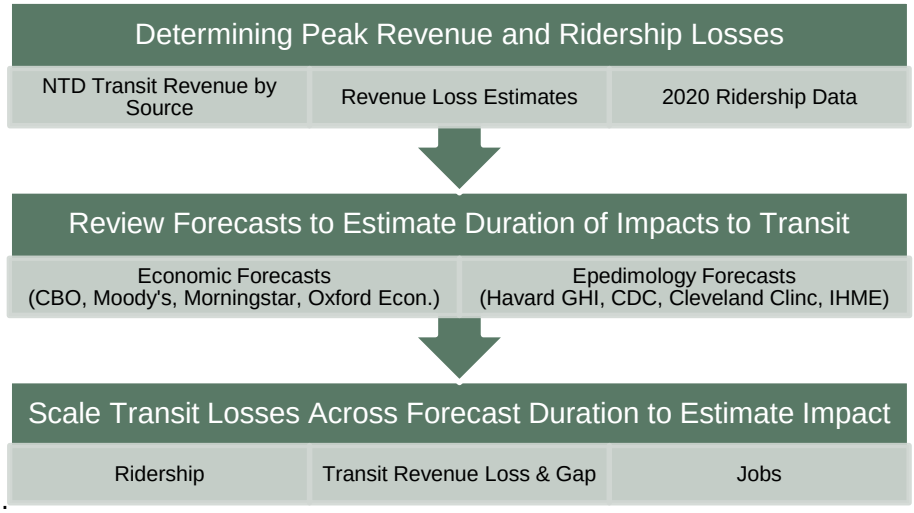


Table 1: Revenue Risk Table

Source	Type	Share of total Funding	Decline CY 2021	Sourcing and Assumptions
Directly Generated	Fares & Other Non- Farebox	29.5%	-68%	Transit app user data through December 2020, APTA, review of transit agency fare collection policies, assumed correlation of ridership return with CBO employment forecast after widespread vaccination.
Federal	Federal	15.8%	0%	$14B in CY 2021 under CRRSA
Local	Income Tax	0.3%	-21%	Based on monthly BLS unemployment claims and CBO employment forecast.
Local/State	General Fund & Other	18.9%	-21%	Center on Budget and Policy Priorities: Monthly decline in state revenues.
State	Transportation Fund	14.3%	-17%	Drop in traffic as measured by cellphone and GPS location data from StreetLight; projections assume correlation with employment forecast.
Taxes Levied/Local	Sales Tax	18.0%	0%	Estimate based on Census Monthly Retail Reporting, and Advance Monthly Retail Trade Report. Sales taxes return to historic levels at end of 2020 and do not impact transit funding starting in 2021.
	Property Tax	2.8%	0%	Property tax impacts are expected to be mixed; analysis assumes no impact.
	Fuel Tax	0.3%	-17%	Drop in traffic as measured by cellphone and GPS location data from StreetLight; projections assume correlation with employment forecast.

DATA SOURCES.

Ridership & Revenue:

NTD, ”2018 National Transit Summaries and Trends: Appendix” December 2019

APTA, "PUBLIC TRANSPORTATION RIDERSHIP REPORT, Fourth Quarter 2019"

APTA Ridership Trends Dashboard powered by Transit, January 2021, https://transitapp.com/APTA

StreetLight VMT Monitor, April - December 2020

U.S. Department of Transportation, Federal Highway Administration, Traffic Volumes and Trends http://www.fhwa.dot.gov/policyinformation/travel_monitoring/tvt.cfm

Forecasts and Historical Data:

BLS, “Labor Force Statistics from the Current Population Survey: Unemployment” January 2021

Federal Reserve Economic Data (FRED), “4-Week Moving Average of Initial Claims, Number, Weekly, Seasonally Adjusted” January 2021

CBO, "CBO’s Current Projections of Output, Employment, and Interest Rates and a Preliminary Look at Federal Deficits for 2020 and 2021," April 24, 2020 https://www.cbo.gov/publication/56335

CBO, “Long-Term Budget Projections” September 2020 (July Forecast)

CDC, “COVID-19 Forecasts” https://www.cdc.gov/coronavirus/2019-ncov/covid-data/forecasting-us.html#anchor_1587397564229

Harvard Global Health Institute , “Global Pandemics Explained: US Hospital Capacity ” https://globalepidemics.org/our-data/hospital-capacity/

US Census Bureau, “Monthly Retail Trade Report,” January 2021

US Census Bureau, “Advance Monthly Retail Trade Report,” January 2021

US Census Bureau, “Quarterly E-Commerce Report,” January 2021