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

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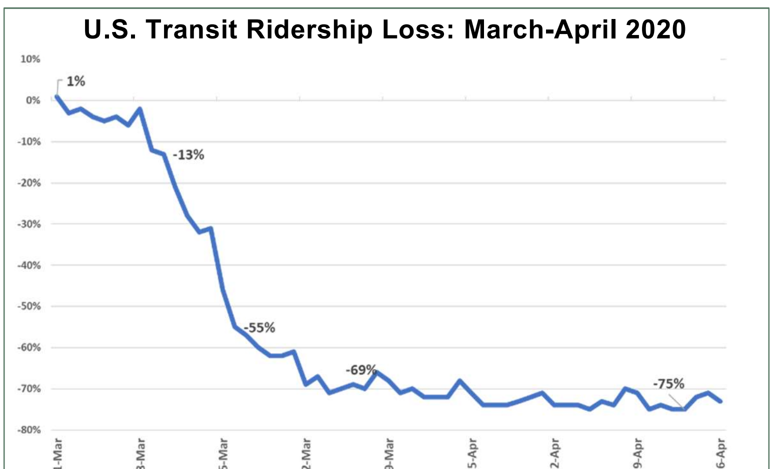
EXECUTIVE SUMMARY. Due to the virtual shutdown of the nation's economy caused by the COVID-19 pandemic, US transit agencies are facing an overall funding shortfall of $48.8 billion between CY 2020 Q2 and the end of CY 2021. Even with the infusion of $25 billion provided by the Congress in April through the CARES Act, transit agencies will still face a shortfall of $23.8 billion through the end of CY 2021. Nationally, transit ridership and fare revenues were down in April 2020 from April 2019 by 73% and 86%, respectively. Further, decreased transit capital spending across the country may result in the loss of 37,000 construction jobs in CY 2020 and 34,000 jobs in 2021 due to project delays and cancellations. When the economy begins to recover, transit agencies will still be challenged with severe fiscal constraints. These constraints stem from social distancing requirements that reduce vehicle capacity, increased costs of facility and vehicle cleaning and disinfection, and some displacement of ridership resulting from greater acceptance of decentralized work locations adopted during the pandemic. For these reasons, assuming the economy recovers in line with current epidemiological projections and related unemployment level forecasts, ongoing depressed ridership translates to quarterly transit revenue gaps ranging between $4.2 billion and $8.1 billion through the end of CY 2021.

KEY FINDINGS.[1]

- The 2020 COVID-19's virus pandemic's effects on the nation's economy and day-to-day living have been profound. Well over 200 million people have been required to live under some form of social distancing rules, with thousands of workplaces and businesses either closing indefinitely or implementing remote work arrangements. Through the fourth week of April, over 30 million new unemployment claims were filed in 2020, a historic high, with the national unemployment rate projected to remain above 10% through CY 2021.

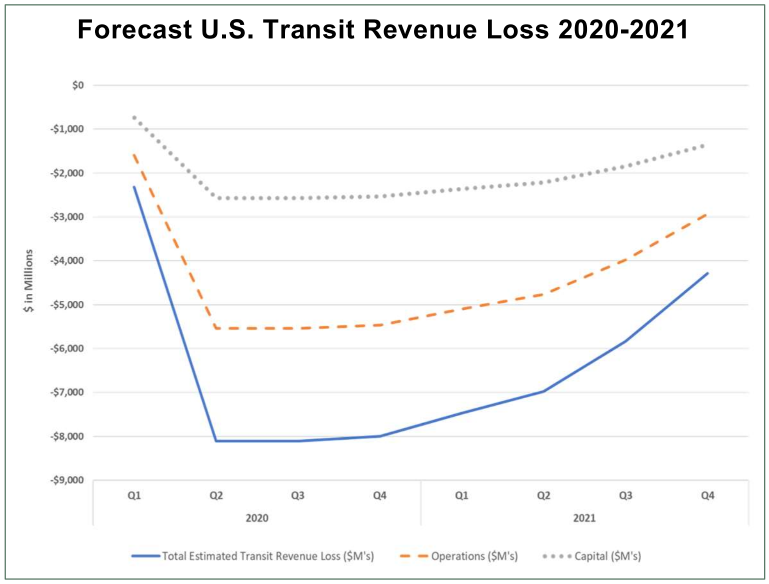


Source: Day by day comparisons to 2019, derived from https://transitapp.com/coronavirus.

- As of April 30, although the overwhelming majority of the population remains under stay-at-home orders, states are on their own individual schedules for phasing in reopening of

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

businesses and activities over the coming months. Based on interpolation of several objective models and forecasts that also recognize continued persistence and possible case increases starting in late 2020, the GDP is forecast to contract by 5.6% in 2020 before a gradual recovery starting in 2021.



- Public health and safety concerns associated with the pandemic have dramatically reduced overall travel and precipitated large and historic declines in public transit ridership. Compared to April 2019, ridership across all transit agencies and modes nationally is down by 73%, with some systems experiencing declines of nearly 90%. Ridership drop-offs have resulted in fare revenue declines and decreased economic activity due to social distancing. Stay-at-home orders have also depressed sales and use tax revenue designated for transit funding.
- 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, as well as motor fuel tax revenues, which closely track vehicle miles of travel (VMT), down in April by 66% nationally. In addition, as a means of minimizing contact between riders and transit operators, many transit systems stopped collecting fares in March 2020. Cumulatively, declines in all of these sources translate to projected transit increased costs and revenue losses of over $26 billion in 2020 (including Q1) and over $24 billion in 2021. Even after accounting for the $25 billion in transit funding provided by the CARES Act, transit agencies' net revenue gap through the end of CY 2021 is still projected to be $23.8 billion (between CY 2020 Q2 and CY 2021 Q4).
- Revenue declines will also have impacts on transit capital project development and construction. It is estimated that transit agencies nationally will likely need to decrease capital spending by $8.4 billion in 2020 and $7.8 billion in 2021. Moreover, the cost of capital spending is increasing because credit rating agencies have downgraded public transit agencies' revenue bond ratings. Nationally, this projected reduced capital spending equates to a loss of 37,000 construction jobs in CY 2020 and 34,000 construction jobs in CY 2021. Reduced capital spending may also delay some of the largest transit investments in the nation. Several major transit agencies have identified $17 billion of capital projects slated for implementation starting in 2020 that are now at risk of delay or cancellation.

APPENDIX

METHODOLOGY.

Peak transit ridership losses were estimated based on transit use data from Transit App,[2] which showed declines in demand through late April 2020. Potential revenue losses were estimated using NTD transit revenue data[3], and data from national reporting on revenue shifts for Q1 and Q2 of 2020 (see *Table 1: Revenue Risk Table*). In addition, the modeling accounts for fare revenue losses from rear-door boarding policies.

Once the peak losses for each revenue stream were identified, the next step was to determine the duration of the impacts of COVID-19 on the economy and transit. After a range of economic and epidemiological forecasts were reviewed, the 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 2021.[4] In addition, this forecast[5] provided a timeline and magnitude of economic recovery that captured the lag effects within the economy and new public health practices that could limit both transit ridership and revenues. Importantly, CBO's projections also include the possibility of a reemergence of the pandemic. To account for that possibility, social distancing is projected to continue, although to a lesser degree, through the first half of next year. In particular, the degree of social distancing is projected to diminish by roughly 75 percent, on average, during the second half of this year relative to the degree in the second quarter and then to further diminish in the first half of next year.

The peak loss and duration of the transit revenue recovery used in this analysis are based on the timing of the CBO unemployment forecasts. 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 the MBTA's COVID-19 expense reporting ($25.5 million) through April 20th, these monthly costs were scaled to the national level ($653 million per month) using ridership as a proxy[6]. These costs were compared to other transit agency spending for COVID-19 related responses, which had similar spending magnitudes. These costs include labor, materials, and equipment related to additional cleaning and personal protective equipment.

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[2] Day by day comparisons to 2019, derived from https://transitapp.com/coronavirus

[3] NTD, "2018 National Transit Summaries and Trends: Appendix"

[4] 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

[5] CBO forecast acknowledges: "The economy will experience a sharp contraction in the second quarter of 2020 stemming from factors related to the pandemic, including the social distancing measures put in place to contain it. In the third quarter, economic activity is expected to increase, as concerns about the pandemic diminish and state and local governments ease stay-at-home orders, bans on public gatherings, and other measures restraining economic activity. However, challenges in the economy and the labor market are expected to persist for some time."

[6] MBTA unlinked passenger trips represent 4% of national unlinked passenger trips. APTA Factbook

Figure 1: Overall Method for Estimating Revenue Gap

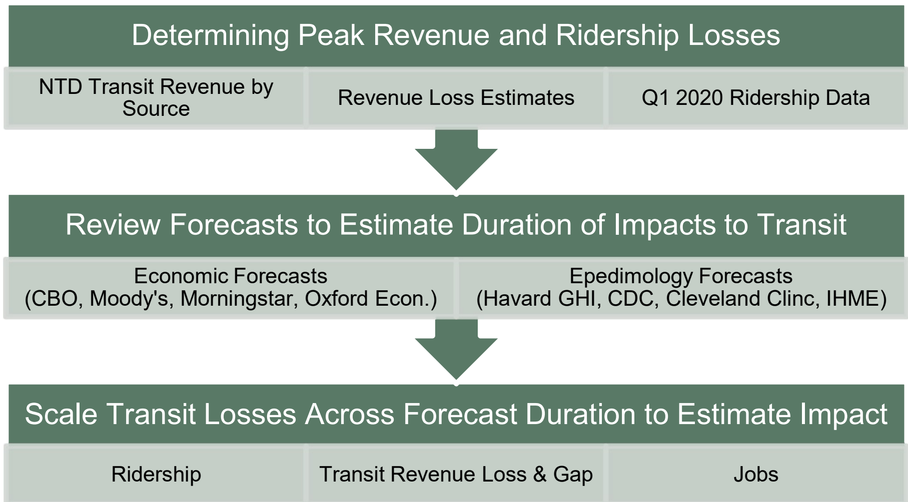

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Table 1: Revenue Risk Tables

Source	Type	Share of total Funding	Peak Decline	Sourcing and Assumptions
Directly Generated	Fares & Other Non- Farebox	29.5%	-86%	Transit App user data for April 2020, APTA, review of transit agency fare collection policies.
Federal	Federal	15.8%	0%	$25B increase with CARES Act
Local	Income Tax	0.3%	-24%	Based on monthly BLS unemployment claims: 30 million additional claims through fourth week of April.
Local/State	General Fund & Other	18.9%	-25%	Center on Budget and Policy Priorities: Monthly decline in state revenues.
State	Transportation Fund	14.3%	-66%	Drop in traffic as measured by cellphone and GPS traffic change from StreetLight.
Taxes Levied/Local	Sales Tax	18.0%	-26%	Estimate based on Census Monthly Retail Reporting, and adjusted for April based on interim reporting from Kiplinger's, Bloomberg, and Morningstar.
	Property Tax	2.8%	-10%	No impact 2020, 10% decline in 2021 based on projected demand for office and commercial space.
	Fuel Tax	0.3%	-66%	Drop in traffic as measured by cellphone and GPS traffic change from StreetLight. Proportional decline in fuel consumption.

DATA SOURCES.

Ridership & Revenue:

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

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

Transit App Data, April 2020, https://transitapp.com/coronavirus

Forecasts and Q1 Data:

BLS, “Unemployment Insurance Weekly Filings” April 2020

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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/

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World Economic Forum, “Coronavirus: 5 predictions for how the economy might recover“ April 14, 2020 https://www.weforum.org/agenda/2020/04/alphabet-soup-how-will-post-virus-economic-recovery-shape-up/