

November 2017

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ISSUE BRIEF



NOT BY MONEY ALONE: RETHINKING THE MTA'S INFRASTRUCTURE

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Contents

Executive Summary3

Background3

Is the MTA Investing Enough Overall?4

Is the MTA Investing in the Right Projects?5

The Case for Better Strategic Planning...7

... and Better Project Execution8

Financial Clouds Threaten Future
MTA Capital Investments8

Conclusion9

Endnotes10

Executive Summary

As New York's deteriorating mass-transit system grabbed the attention of state and local leaders this past summer, elected officials nodded their heads in agreement that the state-controlled Metropolitan Transportation Authority (MTA) needs more money for capital improvements. The officials disagreed only on which level of government—the state or the city—should provide these new resources, and through what mechanism.

True enough, the MTA does need additional financial resources. But neither the state nor the city should provide these resources until the MTA can prove that it can perform better in choosing, executing, and financing capital projects for the benefit of New York City residents, visitors, and workers.

For more than a decade, the MTA has failed to demonstrate that it can invest existing resources wisely. First, the authority has favored the improvement and expansion of commuter-rail lines over subways, even as ridership growth on subways has exceeded ridership growth on commuter-rail lines. Second, the MTA has failed to efficiently manage its large projects, with cost overruns and schedule delays overwhelming the downstate region's ability to plan for the future. Finally, the MTA has failed to demonstrate success with new ways to deliver projects to save money and time, as well as new ways to finance projects to better reflect who benefits from them.

Background

The MTA is responsible for New York City's subway and bus system as well as for the region's two commuter-rail systems: Metro-North Railroad and the Long Island Rail Road (LIRR). The MTA is an independent nonprofit corporation, but New York's governor appoints the largest share of MTA board members as well as the authority's chairman.

To fulfill its responsibilities, the MTA has two budgets: a \$15.6 billion annual operating budget for day-to-day expenses; and a five-year capital plan through which it invests in long-term physical assets. Since 1982, under successive capital plans, the MTA has invested nearly \$160 billion in such assets.¹ Over the full 35 years, the MTA has consistently replaced track and equipment, replaced and refurbished aging subway cars and railcars, rehabilitated stations and maintenance buildings, and upgraded select signal systems. Over the past 15 years, it has also embarked on expansion projects, including the Second Avenue Subway, along Manhattan's Upper East Side; and the East Side Access project, to connect the LIRR to Grand Central Terminal.

The MTA's current \$32.5 billion capital plan covers the years 2015 through 2019. Under this plan, to which the city and state agreed in 2015, the federal government is expected to provide \$7.6 billion in funding, the state of New York has committed \$8.5 billion, and the city of New York will provide \$2.5 billion. The MTA itself will raise \$9.9 billion by issuing long-term bonds and \$4 billion from "other MTA sources," including real-estate sales.²

As MTA service slipped during this year's so-called summer of hell, the authority said that its capital plan was not sufficient and that the city of New York was not doing its fair share. In July, MTA officials said that the authority likely would require "additional capital investment of approximately \$8 billion" to invest in a new signaling system, new subway cars, and "modern communications technology."³ The MTA, backed by Governor Andrew Cuomo, wants the city to pay more for these upgrades. Neither the MTA nor the governor specified a figure.⁴

New York City's leadership agrees that residents should pay more, but differs on how, and it also requests that the MTA change its priorities. Mayor Bill de Blasio has proposed a millionaires' tax that would require the approval of the governor; the governor, on the other hand, has said that he is considering a congestion-pricing plan. De Blasio's administration has also



suggested that the MTA “re-allocate resources from less critical investments” so that “New York City subway and bus riders get a larger share of resources already available to the MTA.”⁵

This paper explores two questions: Does the MTA need more money, as the governor and the mayor agree that it does? And should the MTA undergo significant reforms before it receives such resources, as the mayor would like to see?

Is the MTA Investing Enough Overall?

One key question is whether the current capital plan is sufficient. That is, without regard to priorities, is the MTA investing enough money to keep up with the natural physical depreciation of its infrastructure over time and with population and ridership growth?

The answer is no, for several reasons. The MTA began its capital plans 35 years ago, facing an infrastructure deficit. It had made only minimal investments for more than two decades prior to 1982. The MTA has not fully closed that deficit over the ensuing decades. The MTA estimates that it should spend \$27 billion to \$32.5 billion over five years to continue to bring the transit system into a “state of good repair” as well as to replace assets that it started buying or building in the early 1980s but have since become obsolete.⁶ Yet the MTA will spend just \$19.3 billion over five years on such repairs and replacements, a 29%–41% shortfall (**Figure 1**).

Yet the MTA cannot cut back on improvements and expansions in order to fund more repairs and replacements. Many of the MTA’s system improvements are modest. They do not result in more passenger capacity but are upgrades to obsolete payment and safety systems.

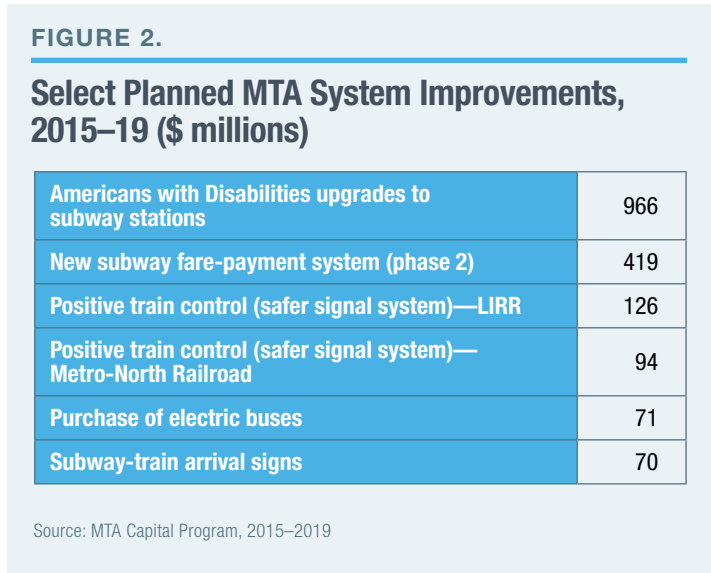
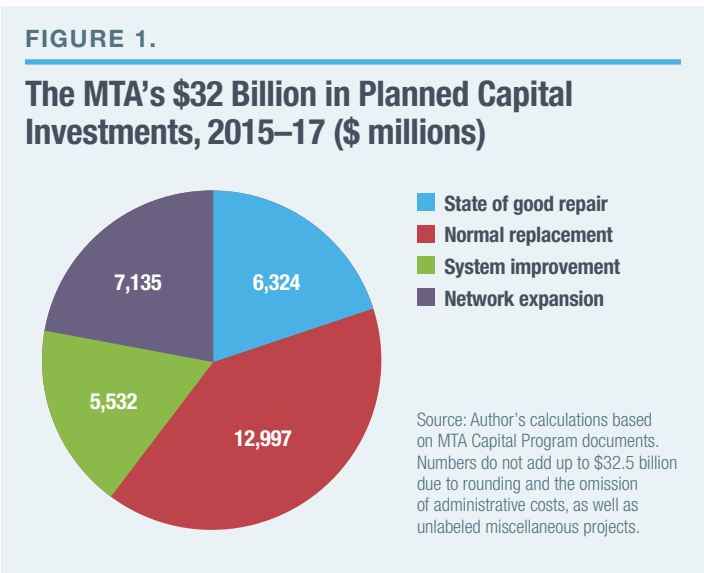
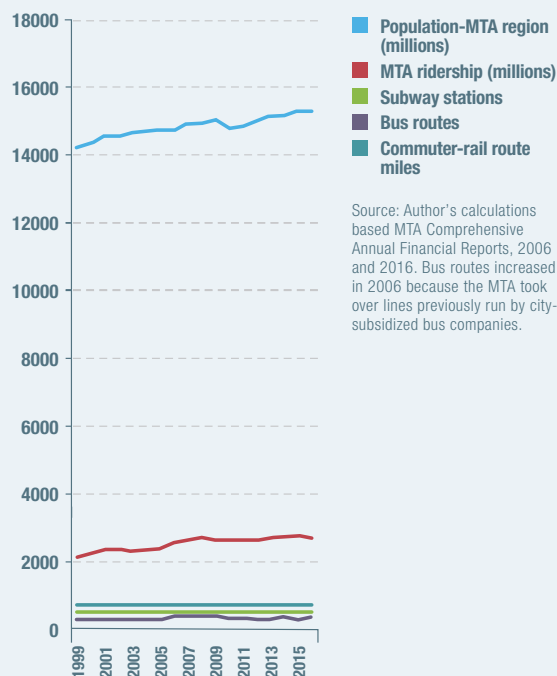


FIGURE 3.

MTA Ridership and Population Growth vs. Asset Growth, 1999-2016



During the current capital plan, for example, the MTA will spend more than \$400 million to upgrade its fare cards and fare-collection system. Such upgrades will bring New York only up to the technology that other global cities, including London, Paris, and Hong Kong, have been using for more than a decade. Similarly, purchasing electric buses will not result in passenger improvements; rather, it is a gradual upgrade to a superior technology. Examples of MTA system upgrades that are necessary but that do not result in superior service for the majority of passengers are listed in **Figure 2**.

The system improvements that do result in more passenger capacity are long overdue. For example, the MTA continues to modernize signals on the subways, upgrading from a mechanical to a digital system, allocating \$2 billion for this purpose in the current capital plan. These upgrades allow the MTA to run more trains per hour, resulting in additional rush-hour passenger capacity. Yet over more than a decade, the MTA has completed such upgrades on only two of 25 subway lines: the L and the No. 7 (the latter will go into service in 2018). This work cannot be put off for another generation.

Moreover, the MTA's major expansion projects—such as the Second Avenue Subway—have not kept pace with the MTA region's population growth and ridership over nearly two decades (**Figure 3**).

The answer to the MTA's current woes, then, is not to cut back on the financial resources that it devotes to capital investment. In fact, under the right conditions, the MTA should increase such investments.

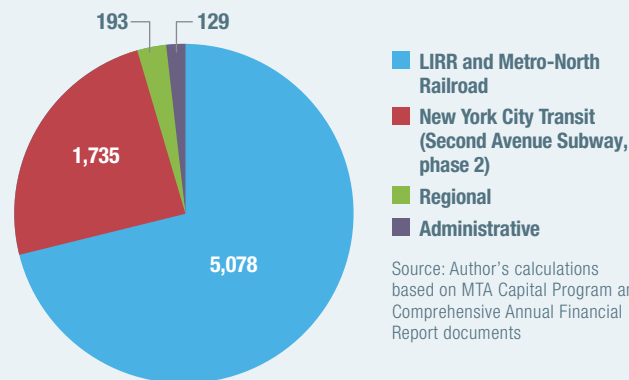
Is the MTA Investing in the Right Projects?

The answer to this question, unfortunately, is no. The MTA is investing its money in the wrong projects relative to ridership and population growth. The current five-year capital plan devotes 71% of its expansion budget to the region's two commuter railroads (**Figure 4**), 10 times the commuter railroad's 7% share of MTA ridership (**Figure 5**). Under this plan, the MTA will invest a further \$2.4 billion in the \$10.2 billion East Side Access project to connect LIRR trains to Grand Central Terminal rather than to Penn Station, as well as \$2 billion in building a third track on the LIRR's main line, for example.

Both are worthy projects. Yet in an era of scarce resources, ridership levels do not justify the vast imbalance among the MTA's priorities. East Side Access will make commutes easier for 162,000 commuters. A smaller, yet significant, investment to upgrade the signals on the Nos. 4, 5, and 6 subway lines would improve reliability for the 160,000 people who take a subway from Grand Central Terminal each day. Accelerating the second phase of the Second Avenue Subway, too, to extend it farther south would take ridership pressure from

FIGURE 4.

MTA Expansion Project Investments, 2015–19 (\$ millions)



the Nos. 4, 5, and 6 trains nearby; already, nearly 200,000 people are using the first three stations of the Second Avenue Subway each day.⁷

This disparity in expansion funding relative to ridership is not a recent phenomenon. Since the MTA entered its expansion era at the turn of the 21st century, it has undertaken five major projects: the first phase of the Second Avenue Subway, East Side Access, the No. 7 subway extension, and the Fulton Street and South Ferry subway stations (**Figure 6**). Though four of these projects are and were New York City initiatives, they constitute just half of the five projects' total funding. Moreover, the city itself paid directly for the No. 7 subway extension, and federal funds paid for South Ferry as well as for \$847 million of the Fulton Street project, both post-9/11 recovery initiatives.

Nor do subways and buses get a disproportionate share of capital funding for repairs, replacements, and modest improvements. With 93% of the MTA's ridership, subways and buses garner 75% of such funding (**Figure 7**).

These allocations are contrary not only to ridership figures but also to recent growth in ridership. Over two decades, subway ridership has grown 55%, while commuter-rail ridership is up 36% (**Figure 8**). Both figures justify investment in upgrades and expansion but also help demonstrate that subways required relatively more attention and dollars.

The MTA's capital priorities also do not reflect its funding sources (**Figure 9**). The MTA funds its operating budget, including its annual debt-service costs for capital expenditures, with fare, toll, and tax revenues. It gets 76% of its fare funding from New York City subway and bus riders (as well as a small portion, \$7 million annually, from Staten Island Railway riders).

The MTA gets 61% of its tax funding from New York City sources.⁸ In addition, New York City taxpayers provide nearly half of New York State income and sales taxes, with which the state indirectly pays for its own contribution to the MTA capital plan as well as for similar transportation-investment projects outside the downstate region.⁹ New York City residents also constitute a majority of the drivers over MTA's most lucrative tolled bridges, making up 74% of drivers on the Verrazano-Narrows Bridge, 71%–73% on the Triborough Bridge, and 56% on the Bronx-Whitestone Bridge.¹⁰

These fare and tax dollars do not tell the whole story. Suburban workers use New York City subways as part of their commute, and New York City employers pay payroll taxes to

FIGURE 5.

MTA Ridership, 2016 (millions of passengers)

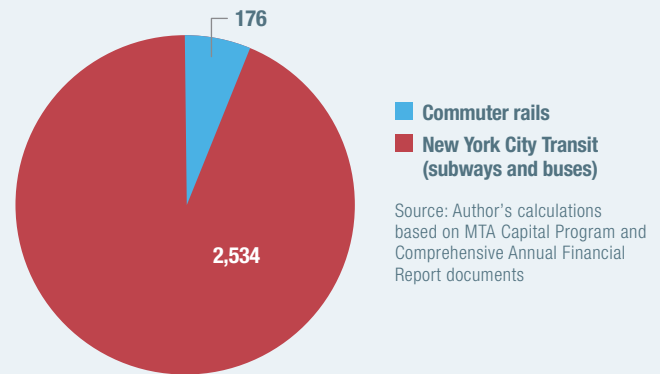


FIGURE 6.

MTA Expansion Projects, 2003–19 (\$ millions)

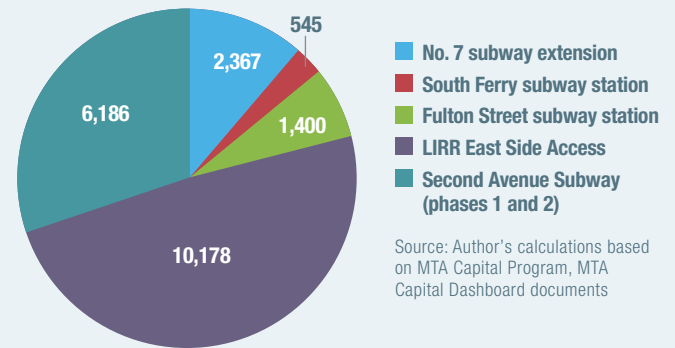
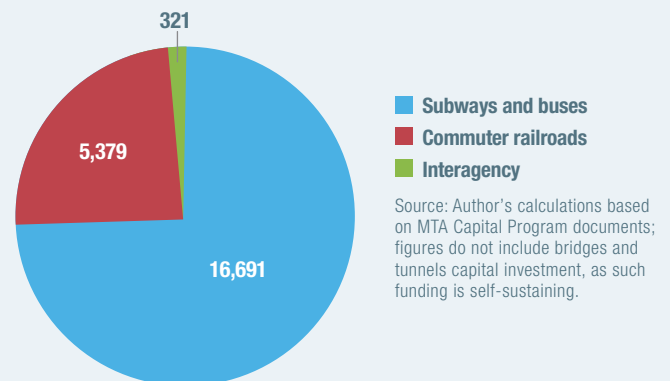


FIGURE 7.

Funding for Repair, Replacement, and Improvement Projects, 2015–19 (\$ millions)



the MTA on behalf of workers who have commuted from the suburbs. Still, such payments do not justify the vast disparity in capital funding. Nor do commuter-rail riders pay a higher percentage of upgrade and expansion costs through the portion of their fares that goes toward debt service. The subway and bus systems' farebox-recovery ratio, or the percentage of annual costs covered by fare payments, as opposed to by tax and other subsidy payments, is higher than the LIRR's, and not substantially lower than Metro-North's (Figure 10).

The Case for Better Strategic Planning...

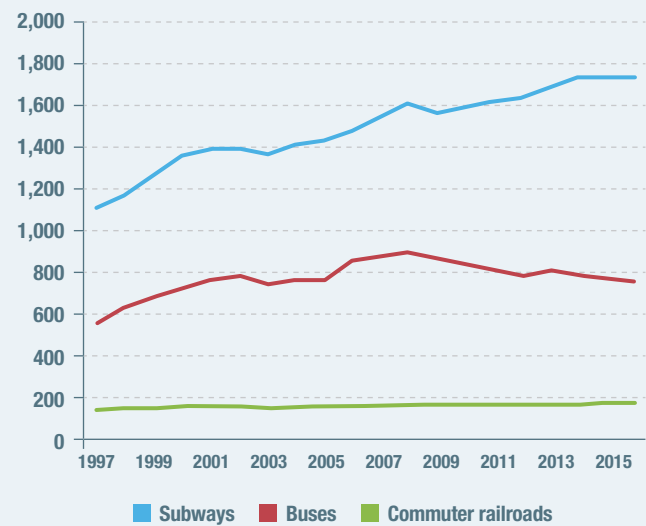
Much of New York City's subway system now suffers from a lack of capacity for existing riders, particularly at peak hours; the MTA attributed 42% of its 57,164 train delays in July 2017 to overcrowding.¹¹ Capital investments to ease such overcrowding, including modern signal systems, are worthy and necessary but are also extremely expensive. The subway system will require cumulative billions of dollars in investment and years of work for still-marginal improvements in system capacity.

In the meantime, the MTA could ease its capacity issues at a much lower price with more strategic investment in bus service. The MTA could begin to provide a parallel service aboveground to its most busy subway routes, just as London has done over the past two decades. In London, bus ridership has grown 69% since 2000, even as ridership in New York, after increasing steadily, has fallen by 15% since its 2008 peak.¹² In its current capital plan, the MTA plans to spend \$169 million on 190 articulated buses.¹³ Increasing this investment by \$80 million, along with smaller-scale investments in depot and maintenance capacity, could support continuous bus service on protected express lanes along Madison, Fifth, and Lexington Avenues. Designating express lanes on these three thoroughfares would supplement subway capacity on busy lines by up to 10% at a much lower cost than large-scale subway constructions and upgrades entail. (Such a capacity increase would require the cooperation of New York City, which manages the streets.)

...and Better Project Execution

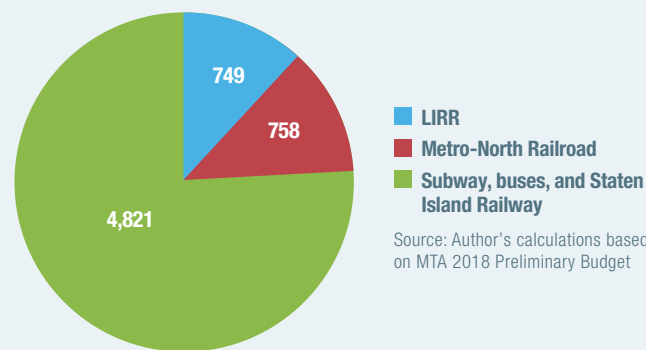
Just as the MTA prioritizes its projects poorly, it manages design, engineering, and construction poorly, resulting in wasted money and time. The more than tripling of East Side Access's original budget, for example, has left less money and management resources for critical projects such as the Second Avenue Subway.

FIGURE 8.
MTA Ridership Growth, 1997–Present
(millions of annual passengers)



Source: Author's calculations based on MTA Comprehensive Annual Financial Reports

FIGURE 9.
MTA Fare Sources, 2017 (\$ millions)



Source: Author's calculations based on MTA 2018 Preliminary Budget

FIGURE 10.
Farebox Recovery Ratio, 2017

New York City Transit	38.2%
Long Island Rail Road	32.3%
Metro-North Railroad	41.2%

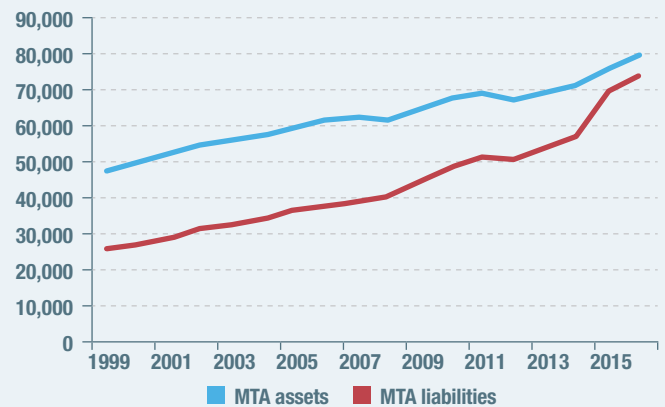
Source: Author's calculations based on MTA budget

Cost overruns also plague projects that get far less attention. The MTA's project to modernize the signals on the No. 7 subway line from Queens to Manhattan, for example, was initially projected to cost \$266 million when the MTA began it in 2007. As the MTA finishes the project over the next several months, the final cost will be \$394 million. The project is also more than a year past its original November 2016 completion date. Similarly, the MTA's project to rebuild the Cortlandt Street subway station, closed since 9/11, is now projected to cost \$182 million, compared with an initial \$115 million estimate. The project likely won't be ready until well more than a year after its initial February 2018 projected completion date.

Over the past several years, the MTA consistently missed the goals that it set for itself on starting and completing projects. As **Figure 11** shows, the MTA regularly completes only 65%–75% of the construction projects that it plans to begin or complete in any given year, raising concerns about how effectively it could spend a new influx of resources.

FIGURE 11.**MTA Project Goals Met, 2010–16**

Source: Author's calculations based on MTA Capital Program Oversight Committee board materials

FIGURE 12.**The MTA's Liabilities vs. Asset Growth, 1999–2016 (\$ millions)**

Source: Author's calculations based on MTA Comprehensive Annual Financial Reports, 1999–2016

Financial Clouds Threaten Future MTA Capital Investments

Under its state stewardship, the MTA has increasingly relied on debt to fund its capital investments, and the current capital plan will raise the MTA's existing \$37.9 billion debt burden by 26%. Meanwhile, the MTA has failed to manage its other liabilities, including future burdens for pensions and retiree health care.¹⁴ The MTA's growing debt and retiree burden harms its flexibility to invest in physical infrastructure in the future. Should the MTA continue on its current trajectory, its liabilities will exceed its assets in the near future, even as its asset base, accounting for normal depreciation of physical infrastructure, has increased (**Figure 12**).

Conclusion

If New York City's population and tax base continue to grow, the city and regional transit system also will need to grow. Yet before the state and city allocate more resources to the state-run MTA, they should change the way the MTA approaches its capital investments.

First, the MTA needs to better order its projects for the benefit of city residents, visitors, and workers. As it stands, the MTA prioritizes commuter-rail projects that have value but improve service for fewer people, dollar for dollar, than a more assertive capital plan for subways and buses would. Such a plan can give priority to projects that ease capacity constraints for a lesser cost, including reliable bus service along the most crowded subway routes.

Second, the MTA needs to better execute its capital projects. Aware of the problem, the MTA has begun to follow the lead of other entities such as the Port Authority of New York and New Jersey by experimenting with project-delivery methods such as "design-build," under which a single contractor team bears responsibility both for designing and constructing a project. This method can reduce the problem of contractor coordination, a problem that has plagued many MTA projects, including East Side Access.¹⁵ On bus service, the MTA should consider contracting out service on its heavily subsidized express bus routes, using any savings to provide additional service to defray subway crowding on busier corridors.¹⁶

Additionally, state lawmakers and the governor should consider ways to better match the financing of a project to the beneficiaries of that project. East Side Access, for example, can encourage denser construction of housing along the Long Island commuting corridor; a special MTA assessment on new property could capture some of that value to defray construction costs over time. Finally, the MTA must better control its long-term liabilities to ensure that any capital-investment dollars, whether provided by the state or the city, are not crowded out by growing debt-service and retiree-benefit costs.

Endnotes

The author thanks Manhattan Institute policy analyst Connor Harris for his research assistance on Figure 1 and Endnote 9.

- ¹ Permanent Citizens Advisory Committee to the MTA, "The Road Back: A Historic Review of the MTA Capital Program," May 2012; Metropolitan Transportation Authority, MTA Capital Construction Program, 2010–2014, July 2013. All figures throughout are adjusted for inflation.
- ² Metropolitan Transportation Authority, MTA Capital Program, 2015–2019, July 2017.
- ³ MTA, NYC Subway Action Plan, July 2017.
- ⁴ Jillian Jorgensen and Dan Rivoli, "Gov. Cuomo Still Claims NYC Is Obligated to Fund Subway Upgrades," *New York Daily News*, July 20, 2017.
- ⁵ "What New York City Riders Deserve from Governor Cuomo's Subway Turnaround Plan," New York City Office of the Mayor, July 24, 2017.
- ⁶ MTA, MTA Twenty-Year Capital Needs Assessment 2015–2034, Oct. 2013.
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- ⁹ Total Income and Tax Liability by Place of Residence, New York State Dept. of Taxation and Finance, 2014 data. Taxable Sales and Purchases by Geography and Industry Through February 2017, New York State Dept. of Taxation and Finance.
- ¹⁰ Charles Komanoff, transportation economist, Sept. 2017 (analysis requested by the author).
- ¹¹ MTA, Transit & Bus Committee Meeting, Sept. 25, 2017.
- ¹² Transport for London, "Facts and Figures"; Transport for London, "Annual Passenger Journeys on London's Buses Top 2.4 Billion," May 14, 2014; MTA, MTA Comprehensive Annual Financial Reports.
- ¹³ MTA, MTA Capital Program Dashboard.
- ¹⁴ Nicole Gelinas, "The MTA's Escalating Cost Crisis," Manhattan Institute, July 26, 2017.
- ¹⁵ Nicole Gelinas, "Fifteen Stories Under," *City Journal*, Autumn 2015.
- ¹⁶ See Alex Armlovich, "New York, Pave the Way for Uberized Bus Companies Like Chariot," *New York Daily News*, May 3, 2017.



