

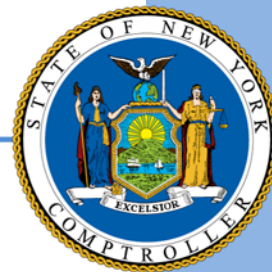
Financial Outlook for the Metropolitan Transportation Authority

Report 6-2020

OFFICE OF THE NEW YORK STATE COMPTROLLER

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September 2019



Contents

Executive Summary	1
Utilization Trends	3
Selected Performance Measures	4
Projected Budget Gaps	5
Balancing the 2020 Budget	7
Budget Reduction Program	8
MTA Transformation Plan.....	9
Fare and Toll Increases	10
Other Actions.....	10
Staffing Levels	11
Potential Risks and Offsets	12
Status of the 2015-2019 Capital Program	14
Other Issues	17
Overtime	17
Health and Welfare Costs.....	17
Pension Contributions	18
Other Post-Employment Benefits	18
Fare Evasion	18
Credit Rating	18
Positive Train Control	19
Service Guideline Adjustments.....	19
2020-2024 Capital Program	19
Appendix A: Revenue and Expenditure Trends	21
Appendix B: MTA Staffing Levels	22



Executive Summary

The Metropolitan Transportation Authority (MTA) is facing its greatest challenge in decades. Over the past few years, service has deteriorated and the MTA has faced increased competition from for-hire vehicles, such as Uber, resulting in declining subway and bus ridership.

These developments have exacerbated the structural imbalance between recurring revenues and spending. The MTA's latest financial plan shows budget gaps that grow from \$392 million in 2020 to nearly \$1.6 billion in 2023.

These gap estimates already assume successful implementation of the MTA's proposed budget reduction program. Excluding that program, the gaps are much larger, totaling \$705 million in 2020, \$1.2 billion in 2021, \$1.5 billion in 2022 and \$1.9 billion in 2023.

The MTA's strategy to balance the 2020 budget and to narrow the out-year budget gaps relies heavily on three main elements: the budget reduction program; a transformation plan; and higher fares and tolls.

With less than four months before the start of its new fiscal year, the MTA is counting on the budget reduction program and the transformation plan to generate \$543 million in 2020 (\$848 million in 2021 and more than \$900 million annually thereafter). In total, the MTA intends to reduce staffing levels by as many as 3,886 positions, which could require layoffs.

The transformation plan would refocus the operating agencies on safety, reliability and service, and centralize common support services. It also promises to improve capital planning, development and construction so projects are completed on time and on budget.

The MTA, however, has not yet hired a chief transformation officer (or other critical staff) or estimated the total cost of implementation. It is also counting on the transformation plan to yield \$535 million annually by 2022, which was the top

end of the range provided by AlixPartners, the consultant that developed the plan.

In addition, \$70 million in savings are expected to come from initiatives that are not yet fully developed. The program would also eliminate more than 400 subway maintenance positions. In total, the July Plan assumes that the number of subway maintenance employees funded by the operating budget will decline by 967 between the end of 2018 and 2023. This would reduce the work force to a level only slightly higher than before the Subway Action Plan in 2016. It remains to be seen whether the planned reduction will affect service reliability.

The current round of collective bargaining offers opportunities and risks for both the MTA and its unions. As of August 2019, more than three-quarters of the MTA's unionized employees were working with expired or amendable contracts. AlixPartners has recommended that the MTA negotiate changes to union work rules and seek changes in the civil service system. These actions will require the cooperation of the unions and, in certain cases, changes to State law.

The third element of the MTA's gap-closing program calls for increasing fares and tolls by 4 percent in March 2021 and by another 4 percent in March 2023. Since 2007, the average subway and bus fare has grown by 62 percent, three times faster than inflation and the growth in wages in the metropolitan area. Fares on the commuter railroads have increased by more than half since 2007.

Even if the transformation plan and the budget reduction program are both successful, the MTA still projects a small budget gap in 2021 that grows to \$433 million by 2023.

The MTA also has to show that it can more effectively manage its capital program. As of June 2019, the MTA had committed 65 percent of the funds allocated for its 2015-2019 capital

program, but had completed only 25 percent of the projects.

The MTA has large unfunded capital needs and the State has taken a number of actions, including the authorization of congestion pricing, to generate new sources of capital funding for the MTA. The combination of new State resources and anticipated federal capital grants are expected to contribute \$32 billion to the 2020-2024 capital program, but additional funding will still be needed to modernize the subway system.

Although the MTA is scheduled to release its proposed capital program for 2020-2024 by the end of September, it has not indicated when its 20-year needs assessment will be made public. The needs assessment will help determine whether the proposed capital program is adequate to maintain and modernize the system, and whether the MTA is making progress in restoring the system to good repair.

The cumulative impact of the 2015-2019 program and prior capital programs has placed a heavy burden on the operating budget. Even before taking into consideration the next capital program, debt service will increase by 31 percent, exceeding \$3.5 billion by 2023. By 2023, debt service will represent nearly 20 percent of total revenue.

Another concern is the potential for an economic setback during the financial plan period. The MTA's financial plan assumes that the current economic expansion will continue uninterrupted through 2023, but the risk of a recession has grown because of increased trade tensions and slower global economic growth.

Given the risk of an economic downturn, the MTA should boost its reserves to avoid service cuts or unplanned fare hikes such as those experienced during the Great Recession. The 2020 general reserve represents just 1 percent of planned spending.

Despite record job growth in New York City, subway and bus ridership has fallen over the past three years. If the MTA continues to improve service and limits future fare increases, it may encourage riders to return, increasing revenue beyond the current forecast. The MTA also does not anticipate any additional revenue from its efforts to reduce fare evasion.

The MTA could use any unanticipated fare revenue to build up its reserves. These resources would then be available to lessen the impact of an economic setback, fund service improvements or mitigate future fare increases, but should not be used to reduce the MTA's savings target. The Office of the State Comptroller (OSC) estimates that the decline in subway and bus ridership since 2016 has cost more than \$250 million annually in lost revenue.

The MTA faces unprecedented challenges at a time when the regional economy is booming. It needs to achieve planned savings, transform the way it operates, avoid unplanned spending and increase its reserves, while at the same time improving reliability and modernizing the transit system with limited resources.

The transformation plan and the budget reduction program both require close monitoring to ensure that planned savings materialize and that unintended consequences, such as reductions in service reliability, are avoided. The MTA must be transparent in its efforts and should keep the public informed of its progress.

While the transformation plan lays out a road map to reform the MTA, it is only the first step. The MTA still needs to hire critical staff, confirm the consultant's recommendations and fill in the details before implementation can begin. While reforming the MTA and changing the way it does business is long overdue, it will not be easy. If the MTA falls short, riders could face unplanned fare hikes and service cuts.

Utilization Trends

Annual subway ridership grew without interruption for six years since the end of the Great Recession, peaking at nearly 1.763 billion riders in 2015. Since then, ridership has fallen for three consecutive years (see Figure 1) despite continued job growth in New York City. According to the MTA, the decline in ridership is due to fare evasion, planned service disruptions from maintenance and repairs, poor service and competition from ride-hailing services.

While the MTA assumes subway ridership will decline slightly in 2019, there was a small gain through May 2019 (0.3 percent). The MTA expects no change in ridership during the next few years.

In 2017, ridership on the Long Island Rail Road (LIRR) declined slightly as the railroad experienced its worst on-time performance in 18 years. Ridership resumed growing in 2018, reaching 89.8 million, the highest level since 1949 (see Figure 2). The MTA expects ridership to increase by 1.4 percent in 2019, but it was on pace to increase by 3.3 percent through May 2019, creating the potential for higher-than-anticipated fare revenue.

Figure 2 also shows ridership trends for Metro-North Railroad. Ridership grew by 51.6 percent between 1991 and 2018, reaching a record of 86.6 million. The MTA expects ridership to increase by 1 percent in 2019 and to continue growing slowly in subsequent years. As of May 2019, ridership trends were in line with the MTA's expectations.

After falling sharply during the recession, bridge and tunnel crossings increased by 14 percent between 2012 and 2018 to a record of 322 million (see Figure 3) in response to robust economic growth and lower gas prices. As of May 2019, crossings were up 4.4 percent despite a 6.3 percent increase in tolls, and the MTA expects continued growth.

Ridership on the MTA's buses fell by 20.4 percent between 2008 and 2018 to 691 million, and is expected to decline by another 4.6 percent in 2019. According to the MTA, riders are abandoning slow bus routes for other modes of transportation, and fare evasion has increased.

FIGURE 1
Annual Subway Ridership

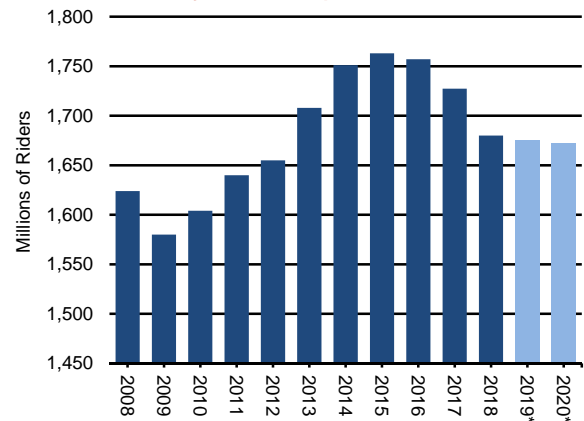


FIGURE 2
Commuter Rail Ridership

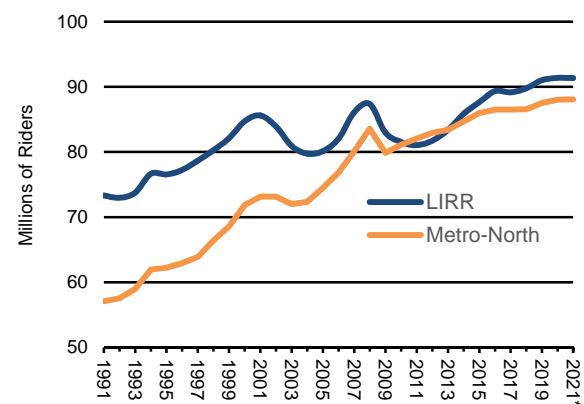
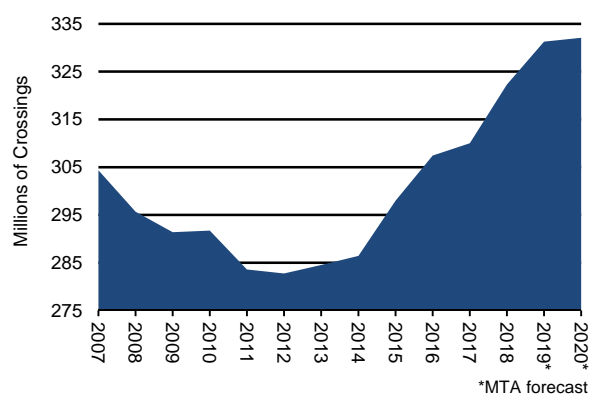


FIGURE 3
Bridge and Tunnel Crossings



Source: Metropolitan Transportation Authority

Selected Performance Measures

At the depth of the transit crisis in 1981, the mean distance between failures (MDBF) for subway cars fell to 6,600 miles.¹ As new rolling stock was purchased and trains were better maintained, the MDBF reached a record of 178,000 miles in 2005. The MDBF fell for three straight years after that, although by 2011 it had recovered to near the 2005 level as new subway cars were brought into service.

The MDBF fell sharply between 2011 and 2016 (see Figure 4) as new subway cars were delayed and maintenance cycles were extended. This was the longest and largest decline since the capital program was started in 1982. By 2016, the MDBF had fallen to 112,000 miles, the lowest level since 2001. It rose to 121,000 miles in 2017, a level that was maintained in 2018, and improved in the first seven months of 2019, averaging 130,400 miles.

Weekday on-time subway performance fell from 87.7 percent in 2010 to 63.5 percent in 2017 (see Figure 5), the lowest level since at least 1991. As a result of the Subway Action Plan and the Save Safe Seconds campaign, on-time performance has improved, averaging 79 percent through July 2019.² However, on-time performance on the lettered lines has lagged behind the numbered lines.

After peaking at 80.3 percent in 2013, weekday wait assessment fell steadily, falling to 70.8 percent in 2018.³ In 2019, it has improved in tandem with general subway on-time performance, averaging 74.6 percent through July 2019.

The on-time performance of the commuter railroads has also shown improvement after several years of decline (see Figure 6). The LIRR's on-time performance, which peaked at 95.2 percent in 2009, slipped to 90.4 percent in 2018, its worst level in 22 years. On-time performance has improved in 2019, averaging 93 percent through July.

Metro-North's on-time performance has generally been better than the LIRR's, but has followed similar trends. Metro-North's on-time performance fell from 97.8 percent in 2009 to 90.1 percent in 2018. On-time performance has improved in 2019, averaging 94.8 percent through July.

FIGURE 4
Subway Mean Distance Between Failures

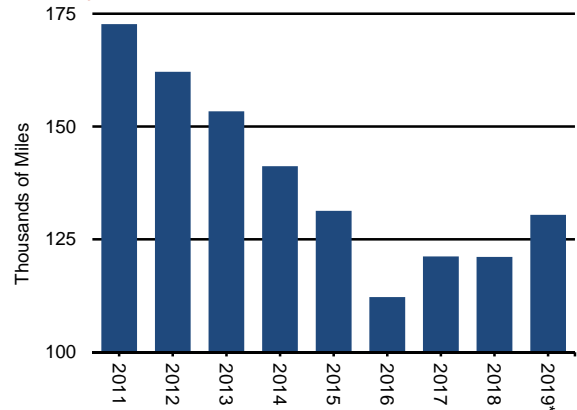


FIGURE 5
Weekday Subway On-Time Performance

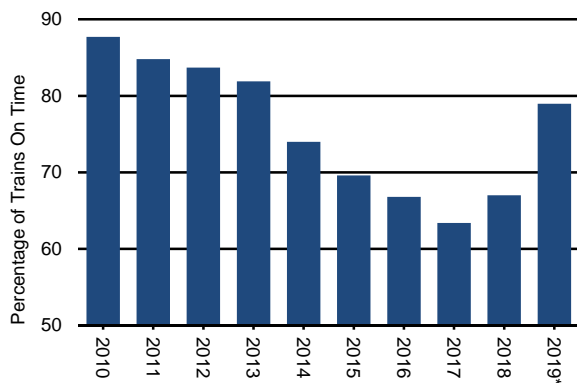
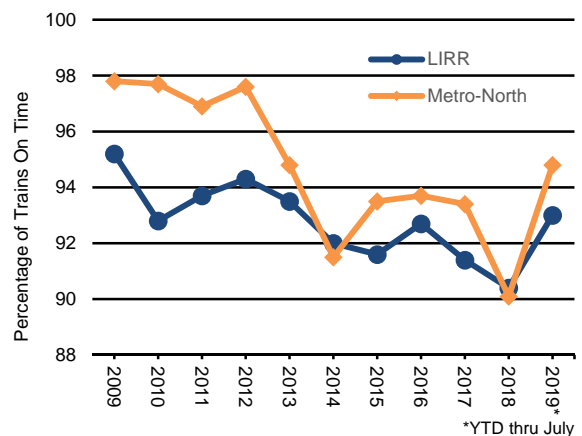


FIGURE 6
Commuter Railroad On-Time Performance



Source: Metropolitan Transportation Authority

Projected Budget Gaps

On July 24, 2019, the MTA released a mid-year update to its 2019 budget and a four-year financial plan based on the preliminary budget for 2020 (the “July Plan”). The operating budget is projected to total nearly \$16.8 billion in 2020, including debt service on bonds issued to finance the capital program.

As shown in Figure 7, more than half of the MTA’s revenues come from fare and toll revenue (38 percent and 13 percent, respectively). Dedicated taxes enacted by the State account for more than one-third of total revenue (37 percent), and State and local subsidies contribute another 7 percent. Other operating revenues, such as advertising income, make up 5 percent.

Nearly two-thirds of the operating budget is devoted to personnel, including fringe benefits (see Figure 8). Debt service represents 17 percent of the budget, while other non-labor costs, such as maintenance contracts, materials and supplies, and energy costs, make up 21 percent of the budget.

On an accrual basis of accounting and excluding MTA-proposed gap-closing actions, baseline spending is projected to increase at an average annual rate of 3 percent between 2019 and 2023, faster than the projected inflation rate (2.3 percent annually) and two and one-half times faster than the projected growth in revenues (1.2 percent annually). Appendix A shows revenue and expenditure trends during calendar years 2019 through 2023.

A number of factors contribute to the structural imbalance between recurring revenues and expenditures (see Figure 9). Health and welfare costs for active employees and retirees are projected to increase at an average annual rate of 7 percent between 2019 and 2023, three times faster than the projected inflation rate. Debt service, which has grown slowly in recent years because of low interest rates, is projected to increase at an annual rate of 7 percent as borrowing for the capital program increases.

FIGURE 7
Sources of Revenue (2020)

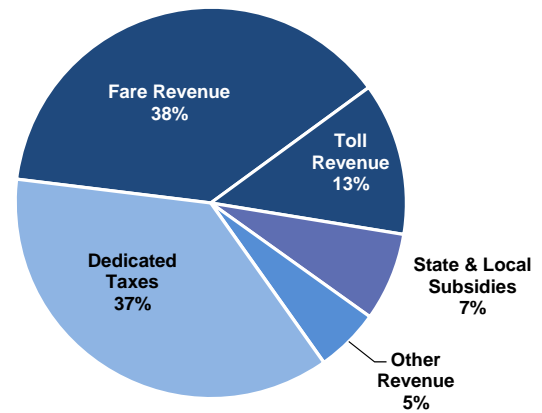


FIGURE 8
Planned Spending (2020)

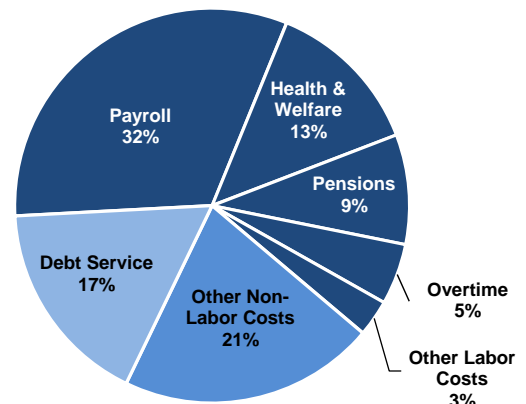
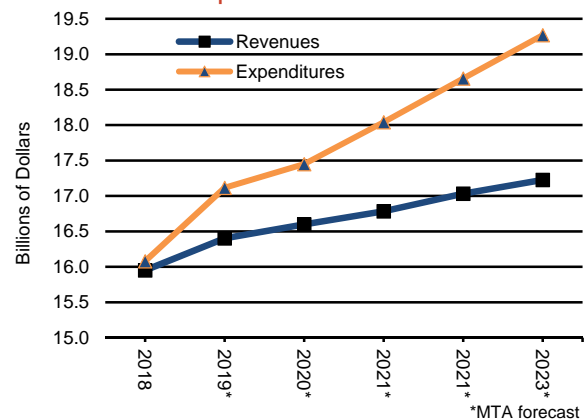


FIGURE 9
Revenue and Expenditure Trends



Source: Metropolitan Transportation Authority

Also contributing to the structural imbalance is the relatively slow rate of growth in State-authorized dedicated taxes (2.5 percent annually), which are projected to grow only slightly faster than the projected inflation rate during this period.

Revenue from the payroll mobility tax and from the Metropolitan Mass Transportation Operating Assistance Account ⁴ is expected to grow by nearly 4 percent annually, but the overall growth in dedicated taxes is expected to be held down by weakness in petroleum business taxes and real estate transaction taxes.

Collections from petroleum business taxes are projected to decline, while those from real estate transaction taxes are projected to remain relatively flat during the financial plan period.⁵ In addition, the July Plan does not anticipate an increase in State and local subsidies during the financial plan period, and the MTA's baseline budget estimates do not assume fare and toll increases beyond 2019.

Another factor contributing to the structural imbalance is the East Side Access project. Service is now expected to begin in mid-2022, six months earlier than previously planned. The cost of operations and maintenance is expected

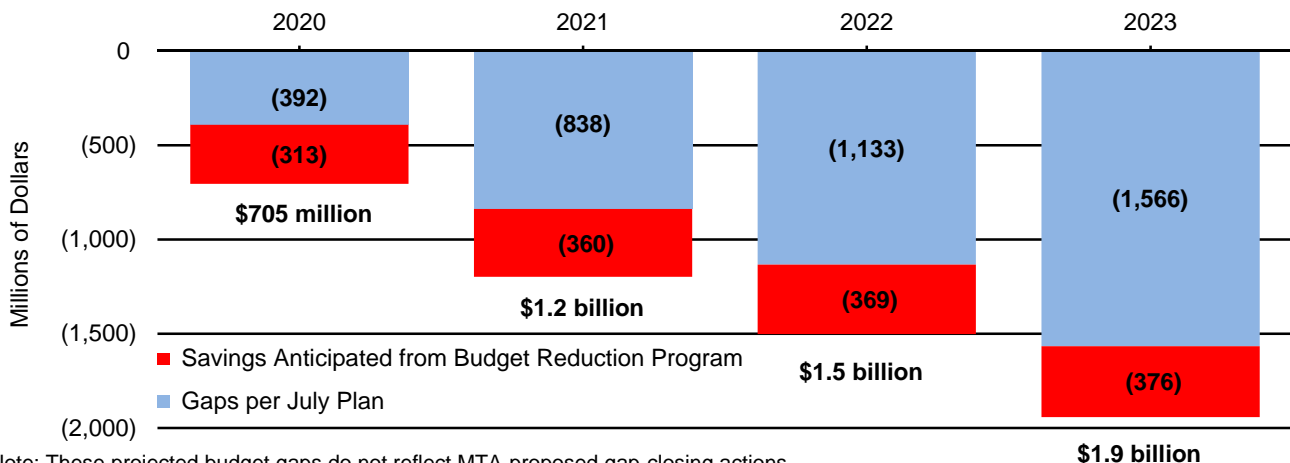
to ramp up, reaching \$205 million by 2023, but the project is expected to increase fare revenue by only \$14 million in 2023.

Although the MTA projects a small cash balance at the end of 2019, it projects budget gaps that grow from \$392 million in 2020 to nearly \$1.6 billion in 2023 because of the structural imbalance between recurring revenue and spending.

These gap estimates assume successful implementation of the MTA's budget reduction program. Excluding that program, the baseline budget gaps are much larger, totaling \$705 million in 2020, \$1.2 billion in 2021, \$1.5 billion in 2022 and \$1.9 billion in 2023 (see Figure 10).⁶

These larger gap estimates provide a better measure of the magnitude of the challenge that the MTA is facing. The budget gaps represent 4.2 percent of total revenue in 2020, growing to 11.3 percent by 2023. Although the gaps are smaller as a share of total revenue than the gaps projected by the MTA at this point in the financial planning process during the Great Recession, they are still large by historical standards.

FIGURE 10
Projected Budget Gaps



Note: These projected budget gaps do not reflect MTA-proposed gap-closing actions.
Sources: Metropolitan Transportation Authority; OSC analysis

Balancing the 2020 Budget

The MTA's strategy to balance the 2020 budget and to narrow the out-year budget gaps relies heavily on three main elements: a budget reduction program; the transformation plan; and higher fares and tolls (see Figure 11).

Together, the budget reduction program and the transformation plan would generate savings of \$543 million in 2020, growing to more than \$900 million annually by 2022. The two programs would reduce staffing by as many as 3,886 positions and could require layoffs.

Even if both initiatives are successful, the MTA projects a budget gap in 2021 that grows to \$433 million by 2023. Failure to achieve planned savings could lead to a combination of unplanned fare and toll increases, and cuts in service.

The transformation plan, as well as the budget reduction program, will both require close monitoring. In 2003, OSC promulgated regulations (Section 202.5) that require the MTA to report quarterly on the status of each gap-closing initiative with a projected value equal to or greater than \$1 million in any given fiscal year.

Pursuant to OSC regulations, the MTA must report on the status of milestones, impact on staffing, current implementation status, actual savings or revenues to date, and projected savings or revenues in comparison to those planned.

FIGURE 11
MTA Gap-Closing Program
 (in millions)

	2020	2021	2022	2023
Projected Baseline Cash Deficit	\$ (705)	\$ (1,198)	\$ (1,502)	\$ (1,942)
Fare/Toll Increases:				
March 2021	---	275	322	323
March 2023	---	---	---	<u>286</u>
Subtotal:	---	275	322	609
Budget Reduction Program	313	360	369	376
MTA Transformation Plan	230	488	535	538
Drawdown of 2019 General Reserve	165	---	---	---
All Other	(9)	(6)	(5)	(14)
Total Gap-Closing Program	699	1,117	1,221	1,509
Prior Year Carry-Over	61	55	---	---
Residual Cash Surplus/(Deficit)	\$ 55	\$ (26)	\$ (281)	\$ (433)

Source: Metropolitan Transportation Authority

Budget Reduction Program

The budget reduction program is intended to generate \$101 million in 2019 and more than three times that amount in 2020 (\$313 million). When fully implemented in 2023, the program would produce recurring savings of \$376 million and would eliminate 1,186 positions.

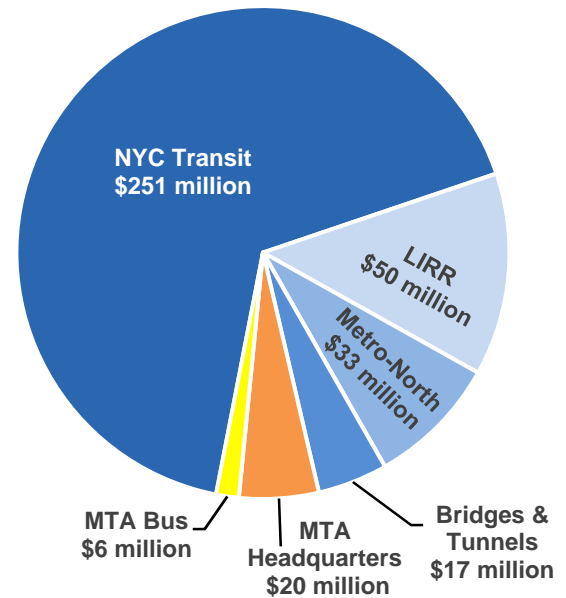
Figure 12 shows that more than half of the 2023 savings would come from initiatives that reduce administrative costs (\$197 million); more than one-quarter would reduce maintenance costs (\$97 million); and 8 percent would come from actions that would affect service or customer convenience (\$29 million in total). The balance would come from other actions, including those that are not fully specified.

New York City Transit

As shown in Figure 13, New York City Transit (NYCT) is responsible for two-thirds of the savings (\$251 million) from the budget reduction program, as well as three-quarters of the positions (883) to be eliminated. A new contract for prescription drug coverage for NYCT employees (which was implemented in 2018) accounts for 60 percent of the MTA-wide savings from administrative actions.

More than one-quarter of the savings (\$70 million) are expected to come from initiatives that remain unspecified. NYCT is still

FIGURE 13
Budget Reduction Program by Agency
2023 Savings Estimate



Sources: Metropolitan Transportation Authority; OSC analysis

reviewing its administrative functions so it can eliminate 240 positions and save \$33 million annually beginning in 2020. It is also reviewing its subway and bus operations so it can eliminate 305 positions and save \$34 million annually beginning in 2021. NYCT had planned to save \$2.5 million annually by eliminating Wi-Fi service on its buses, but it has since rescinded the proposal without identifying an alternative source of savings.

FIGURE 12
Budget Reduction Program by Function (Nonreimbursable)
(in millions)

	2019	2020	2021	2022	2023	Positions
Administrative	\$ 91.4	\$ 170.7	\$ 180.5	\$ 188.9	\$ 197.2	323
Customer Convenience/Amenities	7.5	16.4	16.8	16.9	17.0	23
Maintenance/Inventory	8.7	91.2	98.2	98.1	97.4	444
Revenue Enhancement	0.0	2.5	2.5	2.5	2.5	- - -
Safety/Security	0.0	1.0	1.0	1.0	1.0	1
Service	(8.0)	12.2	12.2	12.2	12.2	25
Service Support	0.0	5.2	5.3	5.4	5.5	37
MTA Bus – Other/Maintenance	0.8	5.4	5.5	5.6	5.6	27
Other	0.5	8.4	37.8	38.1	37.8	305
Total Adjustments	\$ 100.8	\$ 313.0	\$ 359.8	\$ 368.6	\$ 376.3	1,186

Sources: Metropolitan Transportation Authority; OSC analysis

NYCT will reduce maintenance costs by a total of \$35 million in 2020 (\$39 million by 2023) and eliminate 297 positions. Planned actions include: shifting track maintenance to overnight and weekends to coincide with other work; reducing bus painting by 25 percent; replacing plumbers with lower-paid vent and drain helpers; and eliminating 30 track cleaners (the MTA believes that three new vacuum trains will keep the tracks clear of trash).

Long Island Rail Road

The LIRR will reduce maintenance costs by \$39 million annually beginning in 2020, mostly by eliminating 136 positions. It has also lowered its cost estimate for maintenance, operations and other costs associated with East Side Access by a net of \$21 million annually. In addition, it will extend fleet maintenance cycles to save \$9 million annually, reduce funding for LIRR Forward (\$2 million), and take a number of other smaller actions.

A number of other initiatives will affect customers, including reducing hours at two ticket windows, eliminating seven other ticket offices and no longer accepting cash for tickets bought on board trains. These initiatives will save \$2.3 million annually.

Metro-North

Metro-North will reduce administrative costs by \$12 million in 2020 (\$13 million annually beginning in 2022) by eliminating 63 authorized positions and consolidating office space. It will also reduce maintenance costs by \$9 million in 2020 (\$11 million annually beginning in 2021), mostly by extending fleet maintenance cycles.

Metro-North will eliminate special trains that run during the holiday season on the Hudson and New Haven lines, and increase parking fees. It had planned to eliminate bus service between the Metro-North stations of Spuyten Duyvil and Riverdale and the local neighborhoods, but will now take other actions instead.

MTA Transformation Plan

On July 17, 2019, the MTA released its transformation plan, which was approved by the MTA board on July 24, 2019. The plan was mandated by Section 1279-e of the Public Authorities Law and was developed by AlixPartners, a global consulting firm.

The plan recommends that the MTA:

- refocus its agencies on core safety, operations and maintenance, and centralize core functions by consolidating more than 40 functional groups within the agencies to six departments;
- centralize all capital-related functions across its agencies into a new department;
- create a new central engineering function reporting to a new chief engineering officer;
- create a new central customer communications function to unify its agencies' communications activities;
- centralize all operating standards and service design functions;
- centralize all of its human resources functions to reduce redundancies; and
- hire a chief operating officer who will oversee all agency presidents and report to the chairman and the MTA board, and a chief transformation officer who will be responsible for implementing the plan and report directly to the MTA board. The MTA should also appoint an MTA accessibility officer reporting directly to the chairman to help accelerate the creation of a fully accessible system.

AlixPartners also recommends that the MTA refocus bus operation responsibilities on safety, operations and maintenance, and consider consolidating its three bus operations, which would necessitate separating NYCT bus operations from subways. The transformation plan does not recommend consolidating operations of the MTA's commuter railroads.

AlixPartners estimates that the transformation plan will eliminate between 1,900 and 2,700 positions and reduce costs by a net of \$370 million to \$530 million annually when fully implemented. It estimates that full implementation will take two to three years.

AlixPartners notes that there are constraints on full implementation of the transformation plan. For example, the MTA will need to negotiate changes with its unions to implement some elements. Since most of the employees at NYCT and Bridges and Tunnels are civil servants, AlixPartners notes civil service reforms may be needed.

The MTA expects to have a chief transformation officer, as well as a detailed reorganization plan, in place by October 15, 2019. By February 2020, it expects all critical management staff to be in place.

As required by State law, the MTA also hired a consultant to complete a review of fraud, waste, abuse or conflicts of interest at the MTA; the 2015-2019 capital program; development of capital metrics; and cash flow.

Fare and Toll Increases

The July Plan assumes biennial fare and toll increases of 4 percent in March 2021 and 4 percent in March 2023, lower than the projected inflation rate during the four-year

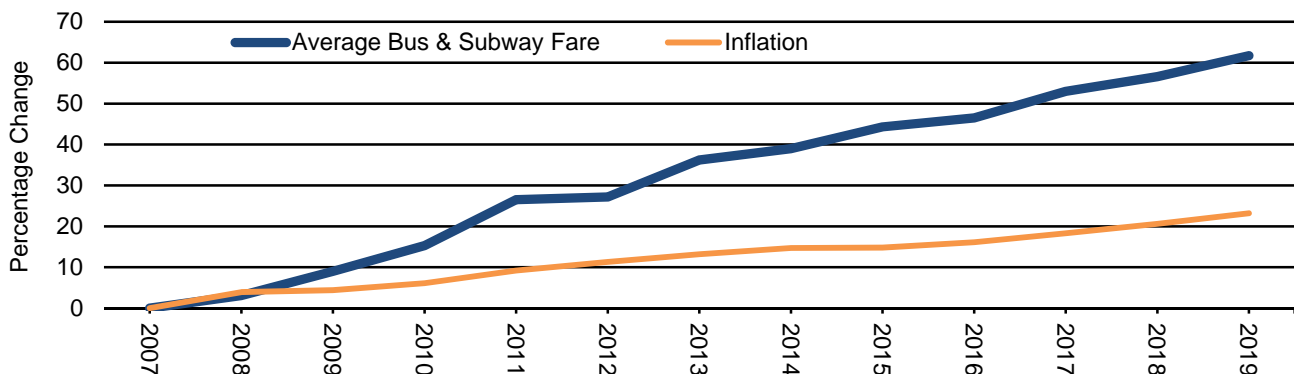
period. These planned increases are expected to generate a net of \$275 million in 2021, rising to \$609 million beginning in 2023.

The MTA raised fares and tolls by less than the inflation rate between 1996 and 2007, but since then they have risen at a faster pace. The average subway and bus fare rose by 62 percent between 2007 and 2019 (see Figure 14), almost three times faster than the inflation rate and wage growth in the metropolitan region.⁷ Fares rose by 53 percent on the LIRR and by 52 percent on the Metro-North's East of Hudson lines between 2007 and 2019.⁸

Other Actions

The 2019 budget is balanced with \$376 million in nonrecurring resources. In addition to the 2018 general reserve (\$160 million), which was unused in that year, the MTA imposed a hiring freeze on nonoperational and nonessential vacancies (\$68 million), restricted nonessential spending (\$44 million), and drew down excess fuel hedge collateral (\$40 million). It will also reduce its pay-as-you-go contribution to its capital program (\$64 million) and use these funds to balance the operating budget. The MTA is counting on the 2019 general reserve (\$165 million) to help balance the 2020 budget.

FIGURE 14
Cumulative Growth in Average Subway/Bus Fare Compared to Inflation, 2007-2019



Sources: Metropolitan Transportation Authority; U.S. Bureau of Labor Statistics; OSC analysis

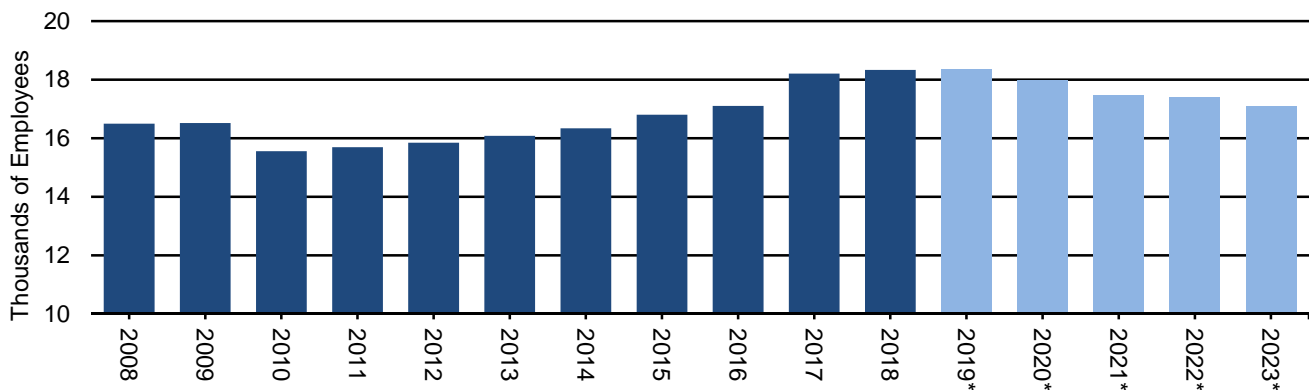
Staffing Levels

Between 2008 and 2011, the MTA cut its work force by 5,234 employees to offset a sharp drop in revenues because of the Great Recession. Since then, the work force has increased by 8,278 (mostly operations and maintenance personnel), peaking at 72,800 in December 2018 (see Figure 15 and Appendix B). As of May 2019, the work force totaled 72,448 employees, 352 fewer than at the end of 2018.

The July Plan anticipates a reduction of 1,500 in the number of operations and maintenance personnel across its agencies between May 2019 and December 2023. Despite the budget reduction program, the number of administrative employees is projected to increase by 227 (5.3 percent). The MTA's staffing forecasts do not reflect the potential impact of the transformation plan, which could reduce staffing by up to 2,700 positions.

The addition of 1,549 subway maintenance employees between 2010 and 2016 was not enough to prevent the system from deteriorating. Another 1,229 were added by the end of 2018 as part of the Subway Action Plan (SAP). NYCT also increased spending on outside contractors that perform subway maintenance (\$49 million more in 2019 than before the SAP).

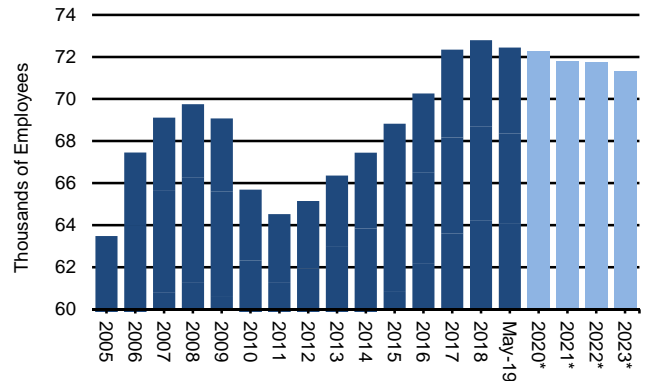
FIGURE 16
Subway Maintenance Employees
 Full-Time Equivalents



Note: Includes positions funded by the capital budget.
 Sources: Metropolitan Transportation Authority; OSC analysis

*MTA forecast

FIGURE 15
MTA Staffing Levels



Note: Includes positions funded by the capital budget.
 Sources: Metropolitan Transportation Authority; OSC analysis

*MTA forecast

The July Plan assumes that the total number of subway maintenance employees will decline by 1,230 between the end of 2018 and 2023 (see Figure 16). This would reduce the number of subway maintenance employees to 17,106, virtually the same as before the SAP in 2016.

By 2023, the number of subway maintenance employees funded by the operating budget would decline by 967 positions to 15,522, only slightly higher than the level before the Subway Action Plan. The number of positions funded by the capital budget is projected to decline by 263 to 1,584, but the MTA has indicated that the reduction could be smaller with the start of new capital projects.

Potential Risks and Offsets

The MTA is counting on its budget reduction program and transformation plan to reduce costs by \$543 million in 2020 and more than \$900 million annually by 2022. However, there are risks that the two programs will not generate the needed resources or could have unintended consequences.

The budget reduction program includes initiatives that are not fully developed, and the transformation plan is still under development. In addition, the July Plan assumes the transformation plan will yield \$535 million annually by 2022, which is the top end of the range provided by AlixPartners (\$370 million to \$530 million). The MTA has also not estimated the cost of implementation, including the cost of consultants to assist with the implementation.

Moreover, the budget reduction program would sharply reduce subway maintenance, which could adversely affect service reliability. There is not enough information regarding the transformation plan to assess its operational impact.

Another concern is the potential for an economic setback during the financial plan period. The MTA's financial plan assumes that the current economic expansion will continue uninterrupted through 2023, but the risk of a recession has grown because of increased trade tensions and slower global economic growth. The MTA is already facing budget gaps that approach \$2 billion by 2023 (before the implementation of MTA-proposed gap-closing actions), even though the local economy is booming.

As evidenced by the sharp drop in revenues during the Great Recession, the MTA's revenues are sensitive to changes in the economy. New York City is currently experiencing the largest and longest job

expansion in the post-World War II period, but the expansion is in its tenth year and changes in the business cycle are inevitable. The July Plan includes an annual general reserve of just 1 percent (\$170 million in 2020).

Another uncertainty is the outcome of collective bargaining negotiations, which could become protracted. As of August 2019, more than 80 percent of the MTA's represented employees were working under contracts that have expired or become amendable. The share of expired or amendable contracts will exceed 90 percent by the end of 2019. The contract with the Transport Workers Union (TWU), the MTA's largest union, expired on May 15, 2019, and the contract with all LIRR employees became amendable on April 16, 2019.

The July Plan assumes that the net cost of collective bargaining will equate to annual wage increases of 2 percent, including any offsetting savings. The actual cost could be higher or lower than anticipated by the MTA.

AlixPartners has recommended that the MTA negotiate changes to union work rules, and has indicated that reforms to the civil service system will be needed to support the implementation of the transformation plan. These changes will require the cooperation of the unions and, in certain cases, changes to State law.

Under State labor law, employees of the MTA, other than the commuter railroads, are prohibited from striking. The TWU and the MTA are required to seek binding arbitration from the New York State Public Employment Relations Board (PERB) in the event that they are unable to reach agreement on a contract. The unions representing other non-commuter-railroad employees may petition the PERB for binding arbitration, but are not required to do so.

Commuter railroad employees, who are governed by federal railroad employment statutes, may strike but only after a lengthy dispute resolution process has concluded. These efforts could include mediation by a federal board, voluntary binding arbitration and nonbinding recommendations of a presidential emergency board.

Nearly all MTA employees belong to one of five pension systems. The MTA's three pension systems and the New York City Employees' Retirement System assume a 7 percent annual return on their investments. The New York State Local Retirement System recently lowered its investment earnings assumption to 6.8 percent. With increased volatility in the financial markets, increased trade tensions, slower global economic growth and historically low interest rates, investment earnings could fall short of target. In that event, the MTA could be required to increase planned contributions to the pension systems. Alternatively, planned contributions could be lower than planned if earnings exceed expectations.

In the past, subway ridership has increased in tandem with job growth in New York City. Despite record job growth, subway and bus ridership has fallen over the past three years. The MTA attributes the decline to fare evasion, service disruptions from planned maintenance, poor service and competition from for-hire vehicles, such as Uber and Lyft.

OSC estimates that lost ridership will cost more than \$250 million annually beginning in 2020 compared with the forecasts made by the MTA in July 2016. If the MTA can improve service reliability and limit future fare hikes, it may encourage riders to return, increasing revenue beyond planned levels. The MTA also does not anticipate any additional revenue from its efforts to reduce fare evasion.

Unanticipated fare revenue should be held in reserve to soften the impact of an economic setback (should one occur), improve service or mitigate future fare increases. OSC cautions against using unanticipated fare revenue to reduce the MTA's savings target.

There is also the potential for debt service to grow more slowly than assumed in the July Plan. The MTA's debt service estimates are based on conservative interest rate assumptions, and the Federal Reserve recently lowered short-term interest rates. Any debt service savings should be used to fund capital projects on a pay-as-you-go basis or to increase the MTA's reserves.

Status of the 2015-2019 Capital Program

The 2015-2019 capital program totals \$33.3 billion, \$3.8 billion more than when it was first approved in May 2016. Three-quarters of the program's value is devoted to maintenance and modernization (\$25.6 billion), with the balance devoted to expansion projects (\$7.7 billion).

Half of the program has been dedicated to maintaining and modernizing NYCT (\$16.7 billion). Of this amount, the largest shares will be used for subway station renovations (including compliance with the Americans with Disabilities Act) and to install new fare-payment technology (28 percent or \$4.6 billion); to upgrade subway signals and communications (18 percent or \$3.1 billion); and to replace aging subway cars and buses (\$2.7 billion) as well as tracks and switches (\$1.9 billion).

The LIRR has been allocated \$2.9 billion for maintenance and modernization, with more than one-quarter of that devoted to continuing track improvements and completion of the Double Track project between Farmingdale and Ronkonkoma.⁹ The LIRR will also upgrade stations (\$679 million), including Penn Station, and purchase new rolling stock (\$369 million) to complete the replacement of the older M-3 fleet.

Metro-North has been allocated \$2.5 billion, with the largest amounts devoted to stations (including Grand Central Terminal) and parking lots (\$537 million), shops and yards (\$470 million), tracks and structures (\$437 million), rolling stock (\$394 million) and communications and signal work (\$310 million). Both the LIRR and Metro-North are expected to complete the implementation of positive train control by December 31, 2020.

Bridges and Tunnels has been allocated \$2.9 billion, with the largest amounts devoted to the Throgs Neck Bridge (\$681 million), the Robert F. Kennedy Bridge (\$613 million) and the Verrazano-Narrows Bridge (\$553 million) for the installation of open-road cashless tolling and deck replacement.

Expansion projects have been allocated nearly one-quarter of the program's total funding (\$7.7 billion), with the largest amounts devoted to the LIRR's East Side Access (\$2.7 billion) and Third Track (\$2.1 billion) projects.¹⁰ East Side Access, which will bring the LIRR directly to Grand Central Terminal, is now expected to cost \$11.6 billion (\$7.2 billion more than planned) and to begin passenger service in 2022.¹¹

The MTA has also allocated \$1.7 billion to Phase 2 of the Second Avenue Subway. The project, with an estimated cost of \$6 billion, will extend the subway line in Manhattan from 96th Street to 125th Street along Second Avenue.

The largest share of the 2015-2019 capital program (44 percent) will be funded by the MTA itself. The MTA's contribution of \$14.7 billion is the largest in its history. Of this amount, \$10.4 billion will come from borrowing, with most of the rest from pay-as-you-go funds from the operating budget. The State has agreed to contribute \$8.6 billion (26 percent of the program's total cost) and the City has agreed to contribute \$2.7 billion (8 percent). The balance is expected to come from the federal government.

The State has disbursed nearly \$1 billion for the Subway Action Plan and other projects from the first \$1.3 billion of its commitment. The State is required to begin making payments on the remaining \$7.3 billion only after the MTA has effectively exhausted all other MTA sources of capital funding, or when MTA capital resources planned for the capital program are unavailable, but no later than State fiscal year (SFY) 2025-26 or the completion of the 2015-2019 capital program.¹²

The State may elect to meet its commitment through direct payments, or it could authorize the MTA to issue its own bonds backed by an existing or new State revenue source. As a result, it is not yet possible to assess the impact on taxpayers, the State budget or the MTA.

The MTA has committed all of its own capital resources and has begun to commit up to \$3 billion against the State’s obligation. According to the MTA, it will require State funding beginning in the next State fiscal year to cover costs associated with these projects.

The City has agreed to provide \$2.7 billion for the 2015-2019 capital plan, but has only funded \$821 million so far. The City has indicated that another \$600 million will be funded through as-yet unidentified “alternative non tax levy revenue sources.” The remaining \$1.2 billion will be provided concurrently with State funds.

The cumulative impact of the 2015-2019 program and prior capital programs has placed a heavy burden on the MTA’s operating budget, as well as on those who use the transit system, in the form of ever-increasing fares and tolls. Even before taking into consideration the 2020-2024 capital program, debt outstanding (excluding bond anticipation notes) will increase by \$6.8 billion between 2019 and 2022 to reach \$41.8 billion (see Figure 17), an increase of 19 percent in just three years.

Debt service is projected to increase by 31 percent over the next four years, exceeding \$3.5 billion by 2023 (see Figure 18). Debt service has been growing rapidly since the early 2000s because the MTA has been required to fund a larger share of its capital program.

The debt burden has also been rising. After averaging about 16 percent of total revenue for 10 years, the burden is projected to gradually rise, reaching 19.7 percent by 2023 (see Figure 19). This forecast assumes biennial fare and toll increases of 4 percent in 2021 and 2023, but does not factor in the impact of the 2020-2024 capital program.

Debt service as a share of fare and toll revenue is much higher than the burden on total revenue, and it is projected to grow much faster. The debt burden on fare and toll revenue increased slowly over 10 years between 2007 and 2017, rising

FIGURE 17
MTA Debt Outstanding

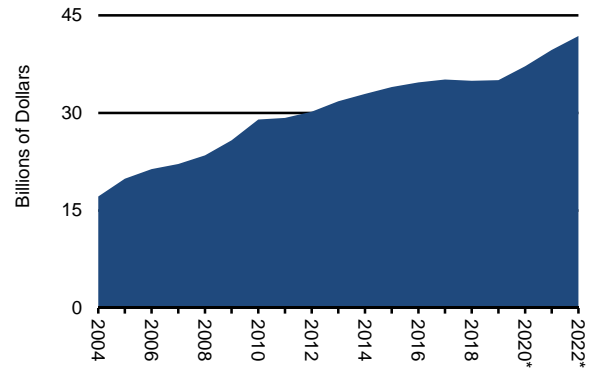


FIGURE 18
MTA Debt Service

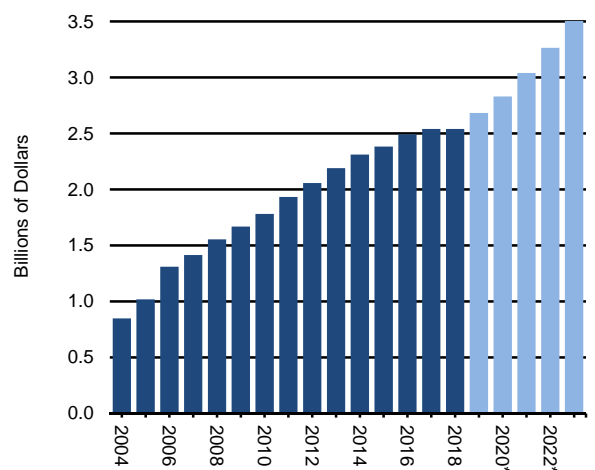
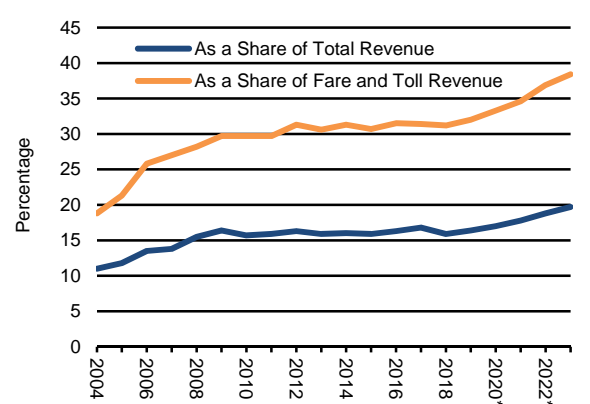


FIGURE 19
MTA Debt Burden



*MTA forecast
Sources: Metropolitan Transportation Authority; OSC analysis

four percentage points to 31 percent. However, the July Plan assumes the burden will increase sharply during the current financial plan period, reaching 38.4 percent by 2023. This forecast also assumes biennial fare and toll hikes.

The MTA will propose its 2020-2024 capital program in September 2019. While it has not yet determined the size of the program, it will likely be considerably larger than the current program. Whether the MTA can successfully manage a capital program of the size under consideration for 2020-2024 remains to be seen.

During the past three capital programs, the MTA committed less than 80 percent of the allocated resources in each five-year period.¹³ Of the resources allocated to the 2000-2004 capital program, the MTA committed 78 percent in five years; for the 2005-2009 program, it committed 79 percent (see Figure 20). It took 10 years to commit 98 percent of the 2000-2004 program and 96 percent of the 2005-2009 program.

The 2010-2014 program was adversely affected by Superstorm Sandy. On October 29, 2012, toward the end of the third year of the program, Sandy struck New York City and caused extensive damage to transit assets. In the aftermath of the storm, the MTA added \$7.6 billion (mostly federal funds) to the capital

program to repair damaged transit assets and make them more resilient to future storms.

At the end of five years, only 57 percent of the 2010-2014 program's resources had been committed (75 percent excluding storm-related projects). That share had grown to 88 percent as of December 2018.

The 2015-2019 program was not approved by the Capital Program Review Board until May 2016 because of delays in obtaining agreement on State and City funding.¹⁴ After four years, the MTA had committed 61 percent of the \$33.3 billion planned for the 2015-2019 capital program, a smaller share than after four years of the 2000-2004 capital program (68.8 percent) and virtually the same share as for the 2005-2009 capital program and the 2010-2014 program, excluding Sandy-related projects (59.6 percent).

The MTA reports that, as of June 2019, it had committed 65 percent of the funds for the 2015-2019 capital program. In addition, it has completed 25 percent of planned projects, which represents 14 percent of the program's total dollar value. Recent legislation requires the MTA to use design-build contracting in all projects costing more than \$25 million, which could accelerate the capital program.

FIGURE 20
Pace of Capital Commitments
 (Cumulative Share of Total Commitments by Capital Program)

Capital Program By Year	Capital Program			
	2000-2004	2005-2009	2010-2014	2015-2019
1	14.1%	9.9%	7.3%	0.6%
2	33.5%	24.2%	20.8%	15.5%
3	61.2%	48.8%	31.7%	38.0%
4	68.8%	61.2%	41.6%	61.1%
5	77.6%	79.2%	57.1%	NA

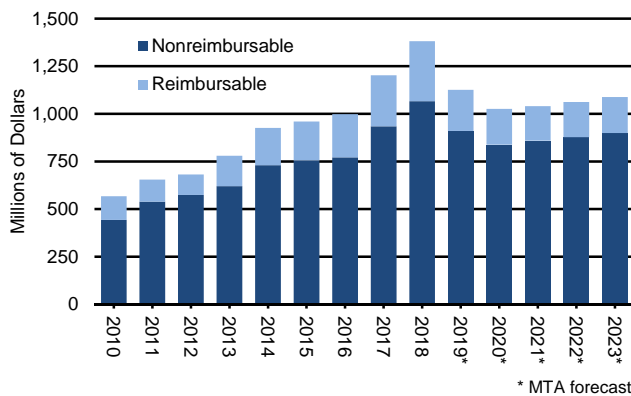
Sources: Metropolitan Transportation Authority; OSC analysis

Other Issues

Overtime

Overtime grew by 143 percent between 2010 and 2018, reaching a record of nearly \$1.4 billion (including costs reimbursed by the capital budget; see Figure 21). In 2018, overtime exceeded the initial forecast by more than one-third, or \$396 million, driven by the Subway Action Plan (SAP), the LIRR's corrective action plan and coverage requirements. The SAP accounted for \$117 million of overtime in 2018.

FIGURE 21
MTA Overtime



Sources: Metropolitan Transportation Authority; OSC analysis

According to data collected by the Empire Center, one employee at the LIRR worked a total of 3,864 overtime hours, earning \$344,000 in overtime in 2018. Of the top 100 MTA earners, pay averaged more than \$300,000 per employee and overtime averaged nearly \$180,000. A total of 883 employees earned more than \$200,000 in 2018.

Union leaders noted that most of the increase in overtime came in response to initiatives developed by the MTA to address deteriorating conditions in the subways and to improve the performance of the commuter railroads.

The Governor and the MTA Chairman called for an investigation into fraud and overtime abuse. The law firm hired by the MTA to examine its usage of overtime found that the MTA is unable

to determine whether there is possible widespread overtime fraud because it lacks many of the basic systems necessary to track overtime. By September 2019, the MTA expects to complete the installation of biometric time clocks across its agencies in an effort to eliminate abuse. All agency personnel will use these clocks beginning on January 15, 2020.

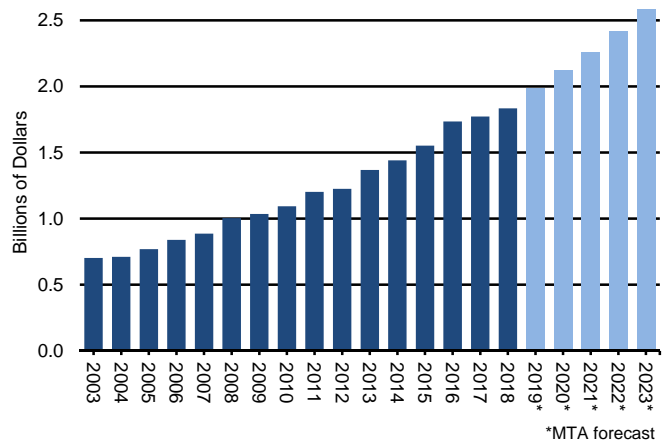
The July Plan assumes overtime will fall by \$255 million to \$1.1 billion in 2019, but that is \$123 million more than projected at the beginning of the fiscal year. NYCT is responsible for three-quarters of the unplanned spending.

Next year, the MTA expects overtime to decline by another \$99 million, but it would still exceed \$1 billion, higher than the level before the Subway Action Plan in 2016, and would then resume growing in 2021 (see Figure 21).

Health and Welfare Costs

Health and welfare costs for both active employees and retirees rose 34 percent to \$1.8 billion between 2013 to 2018 (see Figure 22), and the MTA expects these costs to increase by another 41 percent by 2023, based on the historical annual growth in premiums and a growing retiree population.

FIGURE 22
Health & Welfare Costs



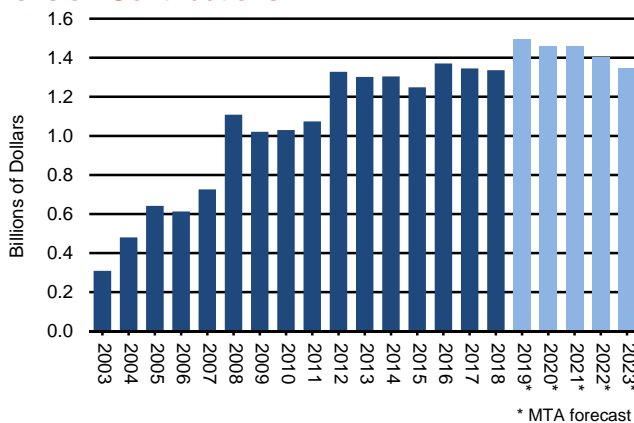
Sources: Metropolitan Transportation Authority; OSC analysis

Pension Contributions

Nearly all MTA employees belong to one of five pension systems. In 2018, about 79 percent of the liabilities were funded on an actuarial basis. The MTA Defined Benefit Pension Plan was funded at the highest level (80 percent) while the LIRR Pension Plan was the least well-funded (65 percent). Combined, the pension plans had unfunded liabilities of \$6.5 billion.

After rising rapidly between 2003 and 2012, pension contributions averaged \$1.3 billion annually through 2018. The July Plan assumes that contributions will increase sharply in 2019 (see Figure 23), largely reflecting higher contributions to the New York City Employees' Retirement System because of a previous calculation error and lower mortality rates. The July Plan assumes contributions will decline over the balance of the financial plan period.

FIGURE 23
Pension Contributions



Sources: Metropolitan Transportation Authority; OSC analysis

Other Post-Employment Benefits

The MTA, like most public sector entities, funds post-employment benefits other than pensions (OPEBs), such as health insurance, on a pay-as-you-go (PAYGO) basis. The MTA estimates that these costs will grow by 51 percent between 2018 and 2023 to \$910 million.

The amount paid by the MTA on a PAYGO basis is one-quarter of the contribution that would be required if these costs were funded on an actuarial basis (estimated at \$2.6 billion in 2018). The total unfunded OPEB liability has grown by more than 68 percent to \$20.3 billion between 2014 and 2018. While the MTA established a Retiree Welfare Benefits Trust to help fund future OPEB costs, it represents only a fraction (\$377 million) of the liability.

Fare Evasion

The MTA estimates that revenue lost from subway and bus fare evasion totals about \$260 million annually. In response, the Governor and the MTA have assigned a total of 500 uniformed officers (including MTA Police Department, New York City Police Department, and MTA Bridges and Tunnels officers) to patrol 50 subway stations and 50 bus routes where fare evasion and assaults occur at elevated levels. The MTA is also redesigning subway station exit gates to reduce instances of fare avoidance, and is increasing video surveillance.

These actions are estimated to cost \$62 million during the financial plan period, and are being partially funded by a \$40 million grant from the Manhattan District Attorney's forfeiture fund. The July Plan, however, does not anticipate an increase in fare revenue from these efforts.

Credit Rating

The MTA's capital program is financed primarily through transportation revenue bonds secured by and payable from transit and commuter revenues and by certain State and local operating subsidies. The MTA's credit ratings contribute to its ability to access the credit markets to meet its financing needs, and to keep its borrowing costs at reasonable rates.

Twice during 2018, the MTA's revenue transportation bonds were downgraded one notch by Standard & Poor's, from AA- to A with a negative outlook.

In December 2018, the MTA's bond rating of A1 was affirmed by Moody's Investors Service but the outlook was revised from stable to negative. (The MTA's transportation revenue bond credit continues to be rated AA- by Fitch Ratings since it was upgraded from a rating of A in June 2017.)

The credit rating agencies attributed the downgrade and negative outlook to factors such as lower-than-expected ridership and debt service coverage. However, the agencies cite as strengths the MTA's management, political and financial support from the State and the City, and its willingness and ability to generate savings to reduce out-year budget deficits.

Positive Train Control

Although the LIRR and Metro-North missed the deadline of December 31, 2018, to implement positive train control (PTC),¹⁵ both met the federal statutory criteria to receive a two-year extension to December 31, 2020. The MTA requires an additional \$42 million to complete the project because of the extension.

In February 2019, the MTA announced that Siemens, one of its PTC contractors (along with Bombardier), recalled hundreds of installed undercar scanner antennas required for implementation. Subsequently, in the process of reinstalling antennas, Siemens discovered another error in a related component, further risking the project's timeline and budget.

Representatives from Siemens and Bombardier attended the May 2019 MTA board meeting. According to Siemens, the antenna issue will be fixed at the company's expense and without impact to the project's schedule. Through June 2019, actual undercar antenna deliveries were close to schedule. The MTA has indicated that it is in the process of reaching an agreement that would require the contractors to pay any damages incurred by the MTA from missing the deadline because of their actions.

The next major milestone for both railroads is to submit their PTC safety plans to the Federal Railroad Administration (FRA) for approval. According to the MTA, FRA approval could take up to one year. The LIRR submitted its safety plan in July 2019, and Metro-North plans to submit its plan in September 2019.

Service Guideline Adjustments

As part of the 2019 budget adoption process, the MTA board approved new bus and subway service guidelines that will take effect in 2020. These guidelines are used to determine the level of service based on actual ridership on a route.

As subway and bus ridership declined in recent years, the MTA deferred implementation of the service reductions. While there has been a small gain in subway ridership through May 2019, bus ridership has continued to decline.

The MTA now plans to reduce service on underutilized routes (and, where applicable, to increase service on overutilized routes) starting in 2020. These changes, which have been incorporated into the MTA's baseline estimates, are expected to reduce costs by \$39 million annually once fully implemented.

2020-2024 Capital Program

The MTA also has large unfunded capital needs, although the magnitude of the funding required is unknown since the MTA has not yet released its 20-year capital needs assessment. The president of NYCT has estimated that about \$40 billion will be needed over the next 10 years to modernize the subway and bus systems.

In recent months, the State has taken a number of actions to generate new sources of capital funding for the MTA. For example, the State authorized the MTA to establish a congestion-tolling program for cars and trucks in Manhattan's Central Business District.¹⁶ Implementation cannot begin before December 31, 2020.

The MTA is required to establish a six-member traffic mobility review board to make recommendations to the MTA board on the congestion toll amounts (including a variable pricing structure), and on any credits and discounts that will be available to drivers. The review board will be required to ensure that net revenues will be sufficient to generate \$15 billion for the MTA's 2020-2024 capital program, with any remainder available for successor capital programs.

The State also approved an increase in the real estate transfer tax on sales of residential properties in New York City of \$3 million or more and sales of other properties in the City of \$2 million or more. In addition, the State enacted a progressive supplemental transfer tax on sales of residential properties in the City totaling \$2 million or more (referred to as the "mansion tax"). These initiatives, which became effective on July 1, 2019, are expected to generate \$374 million in 2020 and higher amounts in subsequent years.

In addition, internet marketplace providers are now required to collect State and local sales taxes from third-party sellers that use their platforms. The State budget calls for the State and the City to direct a portion of their sales tax collections to the MTA's capital program (\$240 million in SFY 2019-20, \$320 million in SFY 2020-21 to be increased by an additional one percent in subsequent years).

The State estimates that these new taxes will support another \$10 billion in bonding. Thus, together with congestion pricing, the State has authorized new sources of funding that are expected to generate \$25 billion for the 2020-2024 capital program.

The revenues from congestion pricing, the higher real estate transfer tax, the supplemental mansion tax and the sales taxes will be deposited in a lockbox. The resources in the lockbox can be used to fund the MTA's capital program, as well as the capital, operational and other costs associated with electronic tolling.

Under State law, 80 percent of the capital project costs paid from the lockbox will be devoted to projects that benefit NYCT, Staten Island Railway and MTA Bus; 10 percent will go to LIRR projects; and 10 percent will go to Metro-North projects.

The combination of new State resources and anticipated federal capital grants are expected to contribute \$32 billion to the 2020-2024 capital program. However, until the MTA releases its proposed capital program and a 20-year needs assessment, it remains to be seen how much more funding will be needed. The MTA is expected to submit a proposed 2020-2024 capital program to the CPRB by the end of September 2019.

APPENDIX A

Revenue and Expenditure Trends (in millions)

	Forecast					Average Four-Year Growth Rate
	← 2019	2020	2021	2022	→ 2023	
Revenues						
Farebox Revenue						
New York City Transit	\$ 4,539	\$ 4,599	\$ 4,581	\$ 4,584	\$ 4,580	0.2%
Metro-North Railroad	768	778	780	782	786	0.6%
Long Island Rail Road	771	779	780	786	795	0.8%
MTA Bus Company	221	224	224	224	223	0.3%
Staten Island Railway	7	7	7	7	7	-0.1%
Subtotal – Farebox Revenue	6,305	6,388	6,372	6,383	6,391	0.3%
Toll Revenue	2,088	2,121	2,129	2,129	2,131	0.5%
Dedicated Taxes						
Payroll Mobility Tax	1,839	1,907	1,976	2,048	2,121	3.6%
Metro. Mass Trans. Operating Asst.	1,824	1,888	1,962	2,045	2,132	4.0%
Petroleum Business Tax	640	627	619	616	616	-0.9%
Urban Tax	636	625	603	613	609	-1.1%
Mortgage Recording Tax (net)	414	426	443	448	454	2.3%
Other	657	705	706	707	709	1.9%
Subtotal – Dedicated Taxes	6,009	6,178	6,310	6,478	6,639	2.5%
State and Local Subsidies	1,648	1,613	1,655	1,710	1,715	0.5%
Other Revenue	696	683	703	718	736	1.4%
Total Revenues (Baseline)	\$ 16,403	\$ 16,598	\$ 16,784	\$17,032	\$17,227	1.2%
Fare and Toll Increases	---	---	276	322	609	NA
Adjusted Revenues	\$ 16,403	\$ 16,598	\$ 17,060	\$ 17,354	\$17,836	2.1%
Expenditures						
Payroll	5,329	5,502	5,596	5,725	5,811	2.2%
Debt Service	2,683	2,830	3,041	3,265	3,513	7.0%
Health and Welfare	2,069	2,217	2,361	2,533	2,708	7.0%
Pensions	1,494	1,463	1,465	1,406	1,351	-2.5%
Overtime	910	845	866	880	901	-0.2%
Other Fringe Benefits	869	925	970	997	1,018	4.0%
Maintenance and Other Contracts	858	836	871	874	891	0.9%
Professional Service Contracts	613	522	513	522	532	-3.5%
Energy (Fuel and Electric)	634	657	670	707	744	4.1%
Claims	388	394	396	402	410	1.4%
Paratransit Service Contracts	487	497	514	544	577	4.4%
Other	914	925	967	987	991	2.1%
Reimbursable Overhead	(471)	(430)	(412)	(397)	(395)	NA
General Reserve	165	170	175	180	185	NA
Other Adjustments	175	96	47	33	34	NA
Total Expenditures (Baseline)	\$ 17,117	\$ 17,450	\$ 18,042	\$ 18,658	\$ 19,270	3.0%
2019 Budget Reduction Plan	(101)	(313)	(360)	(369)	(376)	NA
MTA Transformation Plan	(11)	(230)	(488)	(535)	(538)	NA
Other	(62)	(156)	6	5	14	NA
Adjusted Expenditures	\$ 16,943	\$ 16,751	\$ 17,201	\$ 17,759	\$ 18,369	2.0%
Net Surplus (Deficit)	(540)	(152)	(140)	(406)	(535)	NA
Conversion to Cash Basis	229	147	60	125	101	NA
Cash Balance	(311)	(5)	(80)	(281)	(433)	NA
Prior Year Carryover	372	60	55	0	0	NA
Net Cash Surplus (Deficit)	\$ 61	\$ 55	\$ (26)	\$ (281)	\$ (433)	NA

Sources: Metropolitan Transportation Authority; OSC analysis

APPENDIX B

MTA Staffing Levels (Full-Time and Full-Time Equivalents)

	Actual	Actual	Projected for the End of the Calendar Year				
	Dec. 2018	May 2019	2019	2020	2021	2022	2023
Administration	4,446	4,308	4,997	4,591	4,572	4,555	4,535
NYC Transit	1,300	1,256	1,429	1,087	1,070	1,062	1,052
Long Island Rail Road	473	472	524	512	520	518	514
Metro-North Railroad	508	486	602	555	555	544	544
Bridges & Tunnels	79	69	96	96	96	96	96
Headquarters	1,913	1,865	2,155	2,155	2,147	2,146	2,146
Staten Island Railway	28	25	28	28	28	28	28
Capital Construction Company	18	18	19	19	19	19	19
Bus Company	127	117	144	139	137	142	136
Operations	31,553	31,700	31,988	31,078	31,208	31,145	31,082
NYC Transit	24,142	24,071	24,302	23,468	23,468	23,406	23,341
Long Island Rail Road	2,620	2,655	2,651	2,635	2,756	2,755	2,752
Metro-North Railroad	2,011	2,123	2,242	2,219	2,228	2,228	2,228
Bridges & Tunnels	87	89	99	99	99	99	99
Headquarters	---	---	---	---	---	---	---
Staten Island Railway	110	115	119	119	119	119	119
Capital Construction Company	---	---	---	---	---	---	---
Bus Company	2,583	2,647	2,575	2,538	2,538	2,538	2,543
Maintenance	32,684	32,357	32,668	32,233	31,748	31,773	31,475
NYC Transit	22,670	22,481	22,477	21,999	21,437	21,378	21,106
Long Island Rail Road	4,290	4,277	4,308	4,380	4,492	4,486	4,562
Metro-North Railroad	3,937	3,878	4,169	4,163	4,153	4,118	4,118
Bridges & Tunnels	410	392	396	396	396	396	402
Headquarters	---	---	---	---	---	---	---
Staten Island Railway	191	191	173	173	173	173	173
Capital Construction Company	---	---	---	---	---	---	---
Bus Company	1,186	1,138	1,145	1,122	1,097	1,222	1,114
Engineering/Capital	2,022	1,962	2,283	2,125	2,024	2,004	1,974
NYC Transit	1,375	1,325	1,468	1,310	1,221	1,202	1,183
Long Island Rail Road	188	187	227	226	214	213	202
Metro-North Railroad	114	112	136	133	133	133	133
Bridges & Tunnels	202	196	255	261	261	261	261
Headquarters	---	---	---	---	---	---	---
Staten Island Railway	9	9	16	16	16	16	16
Capital Construction Company	107	105	144	144	144	144	144
Bus Company	27	28	37	35	35	35	35
Public Safety	2,095	2,121	2,232	2,264	2,251	2,251	2,251
NYC Transit	629	660	667	631	618	618	618
Long Island Rail Road	---	---	---	---	---	---	---
Metro-North Railroad	---	---	---	---	---	---	---
Bridges & Tunnels	610	597	653	653	653	653	653
Headquarters	843	851	897	967	967	967	967
Staten Island Railway	---	---	---	---	---	---	---
Capital Construction Company	---	---	---	---	---	---	---
Bus Company	13	13	15	13	13	13	13
Baseline Total Positions	72,800	72,448	74,168	72,291	71,802	71,727	71,316

Source: Metropolitan Transportation Authority



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- ¹ The mean distance between failures (MDBF) for subway cars is calculated by dividing the number of miles cars travel while in service by the number of incidents that result from car-related problems.
 - ² The Subway Action Plan is intended to stabilize and improve subway service, and to lay the foundation for modernizing the system. The Save Safe Seconds campaign, which is part of the Subway Action Plan, is intended to speed up subway service by correcting antiquated speed limits and fixing faulty speed-regulating signals.
 - ³ Wait assessment is the percentage of intervals between trains that is no more than the scheduled interval plus 25 percent.
 - ⁴ The Metropolitan Mass Transportation Operating Assistance Account is funded from the petroleum business tax, the corporate franchise tax surcharge, a regional sales tax, and corporate franchise tax on transportation and transmission companies.
 - ⁵ These tax estimates exclude newly authorized taxes for the capital program.
 - ⁶ These projected budget gaps do not reflect the impact of MTA-proposed gap-closing actions.
 - ⁷ On January 4, 2019, New York City launched a pilot program known as Fair Fares NYC to provide half-fares to low-income New Yorkers who use the subway or bus systems.
 - ⁸ Excludes the Connecticut portion of the New Haven line.
 - ⁹ The Double Track project was completed in September 2018.
 - ¹⁰ The Third Track project entails constructing a third track along the mainline corridor from Floral Park to Hicksville, and removing seven street-level crossings.
 - ¹¹ The cost of East Side Access includes rail cars. According to the MTA, East Side Access (ESA) completion will lag behind the beginning of revenue service, possibly by several years. A number of regional investments, budgeted separately from ESA, were deferred to the 2020-2024 capital program, including the eastbound re-route and the westbound bypass. These investments, while not required to meet ESA project objectives, are necessary to increase operational flexibility.
 - ¹² The MTA is authorized to issue bond anticipation notes backed by expected State funding when the MTA has exhausted its own funding sources for the 2015-2019 capital program.
 - ¹³ Generally, capital commitments are made when a contract for work or service is entered into.
 - ¹⁴ The MTA Capital Program Review Board (CPRB) consists of four voting members appointed by the Governor, including three recommended by the Speaker of the Assembly, the Temporary President of the Senate, and the Mayor of New York City. The CPRB does not approve the Bridges and Tunnels portion of the capital program, and the Mayor's representative votes only on New York City Transit projects.
 - ¹⁵ Positive Train Control is an advanced system designed to prevent collisions, derailments, incursions into work zones, and the movement of trains through switches left in the wrong position.
 - ¹⁶ The congestion pricing zone covers 60th Street and below in Manhattan, excluding the FDR Drive and State Route 9A, known as the West Side Highway.