

RECESSIONS AND REVENUES:

The Case of the MTA

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Economic recessions pose multiple problems for public budgets: Their timing is difficult to predict; their severity and impact on revenues vary; and the tools for coping with them are limited by the scarcity of political will to husband reserves during good times.

Because of the difficult challenges raised by recessions, the Citizens Budget Commission (CBC) is focusing on how well public entities in New York are preparing for the next economic downturn. In April 2015 a staff analysis of the then-current four-year financial plan of the City of New York found the plan anticipated continued economic growth and significant revenue expansion; a simulation of a recession in that period similar to each of the last three recessions (1989, 2001, and 2007) found potential cumulative four-year revenue shortfalls relative to the plan ranging from \$6.1 billion to \$15.8 billion.¹ The reserves anticipated by the City would likely cover less than the shortfall in just the first year of the recession. The clear implications are a need for cautious revenue projections and greater attention to building reserves.

This policy brief considers the implications of a recession for the Metropolitan Transportation Authority's (MTA's) current financial plan. It addresses three issues:

- Do the financial plan's revenue projections rely on an economic scenario that is too optimistic?
- If a recession should come, how great might the revenue shortfall be?
- What tools might MTA leaders use to address a shortfall?



Are revenue assumptions too optimistic?

The MTA's most recent financial plan, released in November 2015 and spanning the period 2016 to 2019, assumes the regional economy will continue to grow for four more years, but at a rate notably slower than in the past five years. Based on this economic growth and planned biennial 4 percent fare and toll increases, MTA revenues are projected to increase an average of 2.2 percent annually for a cumulative increase of nearly 10 percent or more than \$1.3 billion.² This is a substantial rise, but a slower annual rate than in the previous five years (5.8 percent), when fares and tolls were increased twice by 7.5 percent.³ In September the New York State Comptroller warned that continued substantial increases in tax collections may be unrealistic and that the risk of a slowing economy ought to prompt more modest estimates.⁴

The possibility of an economic downturn is worth contemplating for two reasons. First, the nation and region are in the midst of a long, if moderate, expansion. From 1945 to 2009 the United States experienced 11 business cycle expansions. More recent expansions tended to be longer than earlier ones. From 1945 to 1990 the average length of an economic expansion was 49 months, and over the full period since World War II the average was 60 months. In the four expansions since 1990 the economy has grown for 92 months, 120 months, 73 months, and the current period has reached 79 months.⁵ If growth continues through the end of the MTA financial plan, then the expansion would reach 127 months, making it the longest ever recorded; a downturn within or soon after the financial plan period must be considered likely.

Second, MTA revenues rely on taxes, tolls, and fares that are sensitive to economic booms and busts. For example, the 1990 recession saw MTA real estate tax receipts fall 27 percent, the 2001 recession led to a 21 percent decrease in receipts from the surcharge on corporate

franchise tax revenue, and real estate tax receipts fell 35 percent during the 2007 recession.⁶ Increased fare and toll revenue mitigated these decreases but were not themselves immune to the economic downturn. Following the 2007 recession toll revenue remained virtually flat despite a 9 percent increase in the average toll, and commuter railroad fare revenue stagnated despite a 5 percent increase in the average fare.

While an outlier in many ways, the latest business cycle demonstrates the MTA's susceptibility to the economy. In 2007 the MTA received nearly \$4.6 billion in taxes and subsidies; in 2008 that figure fell more than 10 percent. By 2010 the MTA needed fare and toll increases of 10 percent along with \$1.5 billion from the newly instituted Payroll Mobility Tax (PMT) and MTA Aid Trust to balance its budget.⁷ Most public agencies suffer during an economic slowdown, but the Great Recession highlighted the MTA's reliance on real estate taxes and spurred the creation of new dedicated taxes and fees. With estimated revenue of \$15 billion for 2015, the MTA has recovered previous highs for most sources.

How great a danger is a future recession?

The MTA's financial plan expects total revenues to increase at an annual average of 2.2 percent through 2019. As shown in Table 1, growth varies by revenue source with average annual increases in corporate surcharge receipts (4.5 percent), sales tax receipts (3.4 percent), and PMT receipts (4.3 percent) exceeding the rates for fares and tolls (2.9 percent and 2.5 percent).⁸

A recession would derail these projections. How big is the downside risk? This analysis addresses the question by examining the sensitivity of each of the major revenue sources identified in Table 1 to changing economic conditions during the previous three recessions beginning in 1990, 2001, and 2007.⁹ Each recession is different. For example, the 2001 recession did

Table 1: Selected MTA Revenues, 2015 to 2019
(dollars in millions)

<u>Region</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>CAGR</u>
Fare and toll revenue	\$7,424	\$7,580	\$7,882	\$7,985	\$8,285	2.8%
Transit fare revenue	4,264	4,375	4,552	4,605	4,775	2.9%
Commuter railroad fare revenue	1,368	1,396	1,456	1,477	1,533	2.9%
Toll revenue	1,792	1,809	1,874	1,903	1,977	2.5%
Dedicated tax and subsidy revenue	\$4,427	\$4,421	\$4,541	\$4,703	\$4,891	2.5%
Metropolitan Mass Transportation Operating Assistance	1,715	1,787	1,854	1,934	2,007	4.0%
Sales tax (see note)	935	968	997	1,031	1,069	3.4%
Corporate surcharge (see note)	1,096	1,148	1,199	1,260	1,307	4.5%
Real estate transaction taxes	1,390	1,278	1,250	1,270	1,318	-1.3%
Payroll mobility tax	1,323	1,357	1,438	1,499	1,566	4.3%
All other revenue	\$3,156	\$3,114	\$3,151	\$3,131	\$3,178	0.2%
Total revenue	\$15,007	\$15,115	\$15,574	\$15,819	\$16,354	2.2%

CAGR = Compound Annual Growth Rate

Note: Metropolitan Mass Transportation Operating Assistance only includes the studied components, sales tax and corporate surcharge. This row assumes 84.45 percent of gross receipts from these sources flow to the MTA as an operating subsidy.

Source: Metropolitan Transportation Authority, 2016 Final Proposed Budget, November Financial Plan 2016-2019 (November 2015).

not slow real estate tax receipt growth; rather these sources grew an estimated 171 percent from 2001 to 2005. On the other hand the 2007 recession was particularly hard on the MTA. The scenario presented is not intended to provide a separate forecast or to posit a most-likely scenario, but rather represents an “illustrative case” based on the mean revenue change among these three recessions. Details of the method and data sources are presented in the Appendix.

In the event of such an illustrative case recession, the MTA would experience a \$1.5 billion or 2.4 percent cumulative shortfall of revenue over a four-year period. (See Figure 1.) The largest variance between the plan assumptions and the recession scenario is in Year Three, when the recession scenario produces a \$616 million loss, or a 3.9 percent shortfall relative to the plan assumptions.

Because it was particularly hard on the MTA the 2007 recession can be viewed as a “worst-case” scenario. Based on the 2007 recession experience rather than the illustrative case

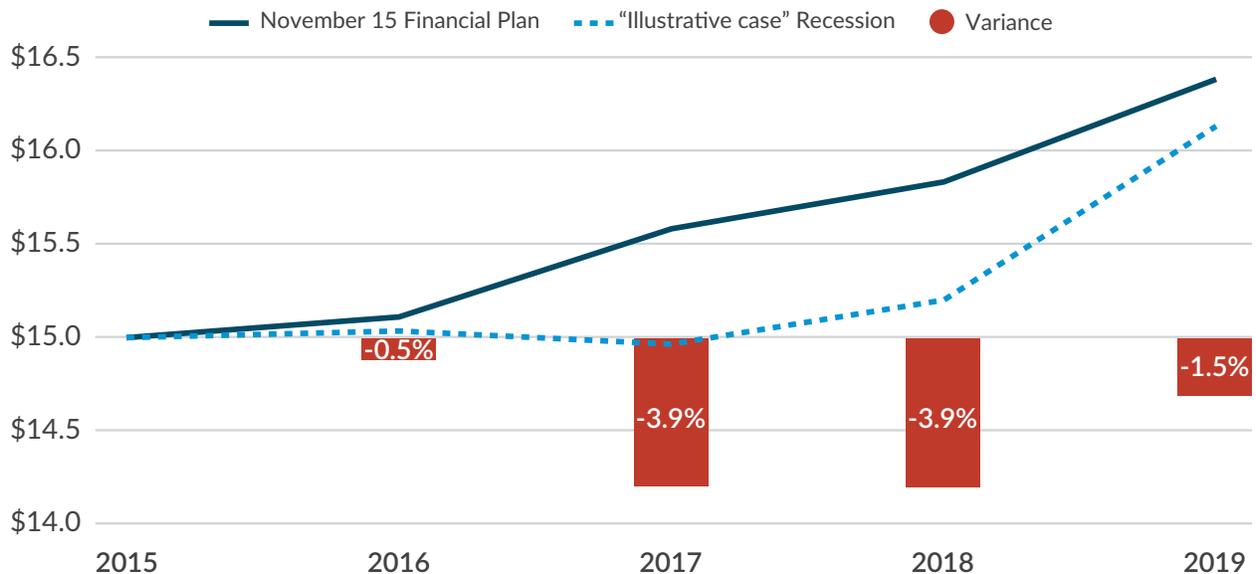
scenario, the revenue shortfall would be 7.3 percent or \$4.6 billion over the financial plan and 9.8 percent or \$1.6 billion in Year Three alone.

The impact of a recession on revenues is less severe for the MTA than was found for the City of New York. Depending on the earlier recession used as a model, the City’s revenue losses over a four-year period ranged from 2.8 percent to 7.2 percent, each greater than the 2.7 percent loss for the MTA under the illustrative scenario.¹⁰

Mechanisms for coping with a shortfall

The options for coping with a revenue shortfall are limited. Like most organizations the MTA would be obliged to rely on some combination of three types of actions—seeking new revenues, cutting expenditures, and drawing on reserves.

Figure 1: MTA Revenue, Financial Plan Comparison with Recession Scenario, 2015 to 2019
(dollars in billions)



Source: For details of the method and data sources, see Appendix.

Raising revenues

The MTA could cope with shortfalls by raising tolls and fares. The budgeted fare and toll increase for 2017 will bring average revenue per transit ride to \$1.85 and average commuter rail revenue per ride to \$8.38.¹¹ For bridge and tunnel crossings, average toll revenue will be \$6.28.¹² Filling the revenue gap created by an illustrative case recession in Year Three would require an additional 7.9 percent increase for all three categories: transit trips, commuter rail trips, and bridge and tunnel crossings. Assuming this magnitude of increase, the current subway single-ride fare of \$2.75 would rise to \$3.09 and the Triborough Bridge cash car toll would rise from \$8.00 to \$8.98.

The State could help address MTA deficits through a dedicated tax collected statewide or regionally; through a motor vehicle cross-subsidy such as congestion pricing proceeds; or, through a vehicle-miles traveled user fee. However, for a large shortfall these are unlikely solutions. A source generating the revenue needed to cover a \$616 million deficit would become the MTA's fifth largest

dedicated tax or subsidy source behind PMT, corporate surcharge, sales tax, and urban taxes—a real estate mortgage and transfer tax on certain commercial properties in New York City. Alternatively, state or local general fund subsidies could increase, although this aid would come at a time when both state and local revenues would also fall below planned levels.

Reducing expenses

The MTA is already engaged in a significant and largely successful initiative to curb its expenditure growth. Since the program began in 2009 it has grown to achieve savings valued at \$1.3 billion annually in 2015.¹² Moreover, new initiatives are planned with the additional savings included in the financial plan valued at \$73 million in 2016, \$115 million in 2017, \$165 million in 2018, and \$182 million in 2019.¹⁴

By 2018, or Year Three of the financial plan and the worst year for lost revenue in a illustrative case recession scenario, the MTA expects operating expenses and debt service will total

\$15.8 billion.¹⁵ Covering a revenue shortfall of 3.9 percent would require \$616 million in spending cuts beyond those already budgeted.

Cuts might be made to debt service expense through refinancing outstanding bonds at lower interest rates, but the MTA's debt portfolio underwent significant restructuring from 2007 to 2009. Interest rates are not likely to fall significantly in the near term, limiting these opportunities.

Employee compensation accounts for about three-fifths of the operating budget. Significant portions of this expense are governed by collective bargaining agreements—including covered worker raises and fringe benefits—which make wage and benefit reductions difficult. Even if the MTA could make changes to fringe benefits to help cover this deficit, the total fringe benefit budget accounts for \$3.9 billion in Year Three; a 15.6 percent reduction would be needed to eliminate the deficit from this source alone. Overtime, an expense the MTA perennially attempts to lower, would need to be reduced 81 percent below planned levels in Year Three to close the gap.¹⁶

A blunter approach to lowering labor expense would be to reduce the number of workers. The MTA expects its headcount to increase from 70,027 in 2015 to 71,138 in 2018, when compensation costs are expected to be nearly \$129,000 per employee.¹⁷ Assuming the MTA could save this amount per employee per year through headcount reductions, the agency would need to lay off 4,780 employees in that year, or 6.7 percent of the workforce, to cover projected shortfalls from an illustrative case recession. This staff reduction would be difficult to achieve without highly unpopular service reductions. Service reductions in 2010 eliminated two subway routes, decreased service on four subway routes, and discontinued 32 bus routes, affecting 1 in 12 riders.¹⁸ Net savings from these cuts were approximately \$70 million, or less than one-half of 1 percent of the budget and only about 11 percent of what would be needed in Year Three of the illustrative case recession scenario.

Drawing on reserves

Drawing on reserves created in better times is typically preferable to more draconian spending cuts. The MTA financial plan has no explicit rainy day fund, but it includes a general reserve. Current board-approved policy allows the MTA to dedicate unused reserves to payments towards long-term obligations that reduce recurring annual expenses rather than seeking to accrue reserves over multiple years.¹⁹ Even if this policy were modified, the MTA's budgeted general reserve equals only 1 percent of one year's budget. The 1 percent reserve could mitigate the initial revenue losses during a recession, but the cumulative losses of an illustrative case scenario overwhelm this sum, \$630 million in reserves from 2016 to 2019 versus a \$1.6 billion shortfall.

Although lacking an explicit rainy day fund, the MTA's financial plan has some flexibility that in the past has enabled it to adjust to abrupt changes requiring new resources. A major example is the 2014 labor settlements for commuter railroad and transit workers, which added to the MTA's labor expense beyond what had previously been budgeted. The commuter railroad worker settlement, reached following arbitration as part of two separate Presidential Emergency Boards, added \$319 million to labor expense spanning 2014 to 2018. The transit worker settlement, reached after an intervention by Governor Andrew Cuomo, resulted in \$1.2 billion in additional labor expense from 2014 to 2018. While some of these increases were paid for by better-than-expected financial results, the MTA also reallocated \$80 million annually from 2015 to 2018 that had been previously designated for pay-as-you-go (PAYGO) capital investments and also reallocated \$787 million previously set aside to reduce future retiree health benefit costs (known as "other post-employment" or OPEB benefits).²⁰

These two items—PAYGO capital and OPEB funding—could serve as flexible resources in a future recession. The board-approved 2015-2019 capital plan includes more than \$1.8

billion in PAYGO capital.²¹ The MTA could fund these investments by borrowing with long-term bonds; this would require a substantially lower amount of annual debt service in the short run and permit remaining funds to be reallocated to operations. For example, it is feasible for the MTA to bond \$1.5 billion of this over 2015-2019; this would require a total of \$327 million in debt service over that period, creating a potential liquidity of \$1.2 billion.²²

With respect to OPEB funding, the MTA currently has \$246 million in a fund for that purpose, and the latest financial plan adds modest increments totaling \$28 million in the coming years.²³ These funds could be diverted to other operating purposes during difficult times. Together the flexible resources from PAYGO capital and OPEB, combined with the previously noted \$630 million in general reserves, could make up for the revenue shortfall from an illustrative case recession.

While it is feasible to use these flexible resources to avoid more draconian measures in hard times, doing so would have expensive, long-term consequences. Borrowing to replace PAYGO capital increases the cost of capital projects by adding interest expenses over multiple years and only defers rather than reduces the agency's expenditures. Increased borrowing will increase future debt service putting pressure on other operating expenses; debt service without added borrowing already is scheduled to reach 19.4 percent of total revenue in 2019 compared to 13.7 percent 10 years earlier.²⁴

Reducing or eliminating funds for OPEB obligations is also a risky strategy. The current unfunded OPEB liability of the MTA already exceeds \$20 billion and would grow about \$1.5 billion annually without any future funding.²⁵ While it is desirable and feasible to reduce the OPEB liability by reforming retiree health benefits, deferring the day of reckoning for OPEB liabilities creates future risks of large jumps in required annual expenditures.

Conclusion

The MTA's proposed financial plan has notable positive features. It includes initiatives to achieve savings from efficiencies and to increase revenues from reasonable and predictable fare and toll increases. However, like other public entities in New York, its plans may be too optimistic in assuming economic growth, albeit relatively modest, will continue without a downturn for the longest period in modern history.

The impact of a recession on the MTA is less severe than that estimated for the City of New York, but is still significant. The agency could face a loss of about \$1.5 billion or 2.4 percent of its revenues in an illustrative scenario compared to a minimum of 4.2 percent shortfall estimated for the City.

Based on the MTA's response to recent budget gaps created by mandates for higher labor costs, the likely response would not be politically unpopular service cuts or fare increases. Instead resources in its financial plan related to capital funds and retiree benefits would be reallocated to cover operating expenses. This will increase future costs, create risks, and ultimately impose a greater burden for future transit riders and taxpayers.

A wiser strategy is to take other actions sooner to anticipate a future recession. More cautious economic and revenue assumptions seem appropriate, and new policies regarding reserves would be a constructive step. Accumulation of general reserves should be permitted, and an explicit rainy day fund established covering a larger share of total expenses before releasing future reserves to reduce other long-term liabilities. Greater restrictions on diversion of OPEB funding and a firmer commitment to PAYGO capital allocations would reduce the risks associated with reallocation of those items. Finally, continuing to increase planned efficiency gains beyond current targets for future years would help bring expenditures in line with the revenues available when a downturn occurs.

APPENDIX

To gauge the effects of a recession on MTA revenues, this policy brief analyzes the performance of the major MTA revenue sources during previous recessions. Revenue sources studied are transit fares; commuter railroad fares; tolls; regional sales tax; regional surcharge on corporate franchise tax receipts; real estate transaction taxes generated in the region (Mortgage Recording Tax) and New York City (Urban Taxes); and regional withholding taxes generated from the Payroll Mobility Tax. In 2014 these sources accounted for approximately 79 percent of total MTA revenues. Other sources of revenue are not included because they constitute a small share of total receipts, are not volatile, or both.

In order to estimate performance during a hypothetical recession, this analysis compares performance during the last three recessions, beginning in 1990, 2001, and 2007. The mean performance for each source for each recession is used as an “illustrative case” scenario.

Table A shows the illustrative case recession performance of each revenue source relative to the MTA’s November 2015 financial plan. This analysis considers 2015 the base year and 2016 the year of onset of the recession with subsequent years reaching to 2019. This analysis uses variance as a share of expected totals because it is intended to compare the financial plan’s growth assumptions with an

illustrative case recession; it is not intended to critique the MTA’s current economic assumptions and financial forecast.

If these variances were applied to the MTA’s November financial plan, the agency would see a cumulative shortfall of 2.4 percent, or more than \$1.5 billion. The largest variance would be in Year Three, when revenues are 3.9 percent, or \$616 million, lower.

The next sections describe the data and assumptions used to calculate an illustrative case recession scenario for each revenue source. These sections are organized in two categories: user fees and tax revenues.

User fees

The analysis considers three user fees—transit fares, commuter railroad fares, and tolls. The utilization of each of these services for periods spanning 1988 to 1992, 2001 to 2005, and 2007 to 2011 gauge their performance prior to and during the recessions of 1990, 2001, and 2007, respectively. Utilization, that is, ridership and bridge and tunnel crossings, was used, rather than gross revenue from the user fee because each source saw fee increases over the period: increases in 1990 and 1992, an increase in 2003, and increases in 2009 and 2010. Factors other than the recession, including these fare and toll increases, may have affected utilization in these periods; however, the MTA plans biennial fare and toll

Table A: Selected MTA Revenues, “Illustrative Case” Variance from Financial Plan, 2016 to 2019

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>Total</u>
Transit Fare Revenue	0.4%	-1.7%	-1.3%	-1.1%	-1.0%
Commuter Railroad Fare Revenue	0.4%	-2.6%	-3.6%	-3.8%	-2.5%
Toll Revenue	-0.4%	-2.0%	-2.4%	-4.2%	-2.3%
Sales Tax	-1.2%	-3.3%	-8.3%	-4.8%	-4.5%
Corporate Surcharge	-9.0%	-16.7%	-20.0%	-12.1%	-14.5%
Real Estate Taxes	2.8%	-10.3%	1.5%	23.1%	4.5%
Payroll Mobility Tax	-1.9%	-8.2%	-12.6%	-11.3%	-8.7%

Source: CBC Staff analysis of Metropolitan Transportation Authority, 2016 Final Proposed Budget, November Financial Plan 2016-2019 (November 2015).

increases in its financial plan for future years. While publicly available data make it difficult to tell the differences between past recessions and future utilization, this seemed to be an appropriate calculation considering data limitations.

Table B below shows utilization changes for each of the three user fees during each period studied, as well as the mean change over the three periods. The mean change is in bold in the table. To determine the impact of utilization change on revenue, forecasted average transit fare, average commuter railroad fare, and

average toll were multiplied by the difference in utilization and identified as “variance” in Table B.

Tax revenues

The analysis considers four tax revenues—sales tax, surcharge on corporate franchise tax (“corporate surcharge”), payroll mobility tax (PMT), and real estate transaction taxes. The first two sources, sales tax and corporate surcharge, are components of a larger subsidy appropriated by the legislature known as

Table B: Transit, Commuter Railroad, and Bridge and Tunnel Utilization During Selected Recession Periods and "Illustrative Case" Recession

	<u>Base Year</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Transit utilization					
1988 to 1992	Base	2.5%	0.3%	0.3%	0.3%
2001 to 2005	Base	1.4%	-2.6%	2.7%	1.4%
2007 to 2011	Base	3.2%	-2.7%	-0.1%	-0.1%
Mean	Base	2.4%	-1.7%	1.0%	0.5%
2015 to 2019 utilization (000,000)	2,415	2,463	2,472	2,485	2,492
"Illustrative case" recession (000,000)	2,415	2,472	2,431	2,454	2,467
Forecasted average fare	\$1.77	\$1.78	\$1.84	\$1.85	\$1.91
Revenue variance		0.4%	-1.7%	-1.3%	-1.1%
Commuter railroad utilization					
1988 to 1992	Base	1.3%	0.9%	0.7%	0.7%
2001 to 2005	Base	-1.0%	-2.3%	-1.1%	0.5%
2007 to 2011	Base	4.4%	-5.5%	-0.3%	-0.3%
Mean	Base	1.6%	-2.3%	-0.2%	0.3%
2015 to 2019 utilization (000,000)	172	174	175	177	178
"Illustrative case" recession (000,000)	172	174	170	170	170
Forecasted average fare	\$7.97	\$8.04	\$8.33	\$8.38	\$8.66
Revenue variance	Base	0.4%	-2.6%	-3.6%	-3.8%
Bridge and tunnel utilization					
1988 to 1992	Base	0.7%	0.7%	0.8%	0.9%
2001 to 2005	Base	2.3%	-0.9%	1.1%	0.1%
2007 to 2011	Base	-2.8%	-1.5%	0.2%	-2.9%
Mean	Base	0.1%	-0.6%	0.7%	-0.6%
2015 to 2019 utilization (000,000)	295	296	298	301	304
"Illustrative case" recession (000,000)	295	295	294	296	294
Forecasted average toll	\$6.07	\$6.10	\$6.25	\$6.28	\$6.44
Revenue variance		-0.4%	-2.0%	-2.4%	-4.2%

Source: Metropolitan Transportation Authority, *Preliminary Budget, November Financial Plan* (annual editions 2007 to 2015), *Consolidated Utilization, and Annual Report* (annual editions 1989 to 2006), Operating Statistics.

Metropolitan Mass Transportation Operating Assistance (MMTOA). Though these two are levied only in the 12-county MTA service region, a share flows to other downstate transit agencies. PMT is also levied only in the MTA service region, but flows wholly to the MTA. The last source consists of the mortgage recording tax, a levy on residential property mortgages in the MTA service region, and urban taxes, a levy on certain commercial property mortgages in New York City.

Sales tax

The State collects and remits to the MTA a 0.375 percent tax on certain sales within the MTA region. Owing to data limitations the 1988 to 1992 period was not included in this analysis. The MTA's financial statements in those years do not break out revenues generated specifically from this tax and documents from the New York State Department of Taxation and Finance (NYSDTF) do not show regional sales tax collections for this period.

For the 2000 to 2005 period, MTA sales tax collections as measured by NYSDTF are the only consistent data available and are used in the analysis. For the 2007 to 2011 period data on MTA sales tax collections are available from the NYSDTF and from MTA financial plans; however, the figures differ. Accordingly for this period, this analysis uses the mean of collections reported in the two sources. In both periods the MTA sales tax base and rate were essentially stable. (See Table C.)

For each recession period an adjustment is made to reflect the difference between the actual inflation rate during the recession period and the projected inflation rate during the financial plan period. For the period 2002 to 2005 actual inflation was 2.2 percent, 2.9 percent, 3.3 percent, and 3.7 percent; for the period 2008 to 2011 actual inflation was 3.4 percent, 2.3 percent, 1.1 percent, and 1.9 percent. For the 2016 to 2019 period projected inflation is 2.2 percent, 2.3 percent, 2.5 percent, and 2.6 percent. After adjusting for the difference in inflation rates, year-over-year change is

Table C: Sales Tax Revenue During Selected Recession Periods and "Illustrative Case" Recession Calculations

	<u>Base Year</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Sales tax revenue					
NYS Taxation and Finance					
2001 to 2005	Base	2.2%	0.7%	2.9%	9.2%
<i>Inflation-adjusted, indexed</i>	100.0	102.2	102.4	104.5	113.0
2007 to 2011	Base	1.8%	0.2%	-6.9%	8.6%
<i>Inflation-adjusted, indexed</i>	100.0	100.6	100.8	95.3	104.1
MTA financial plan					
2007 to 2011	Base	5.2%	2.6%	-7.7%	4.6%
<i>Inflation-adjusted, indexed</i>	100.0	104.1	106.8	100.0	105.3
Mean of Data Sources					
2001 to 2005	Base	102.2	102.4	104.5	113.0
2007 to 2011	Base	102.3	103.8	97.6	104.7
"Illustrative case" recession					
MTA forecast	Base	102.3	103.1	101.1	108.9
Variance	Base	100.0	103.5	106.6	110.3
	Base	-1.2%	-3.3%	-8.3%	-4.8%

Source: New York State Department of Taxation and Finance, *New York State Tax Collections* (annual editions 2001 to 2011), Table 24: Sales and Compensating Use Tax; and Metropolitan Transportation Authority, *Preliminary Budget, July Financial Plan* (annual editions 2008 to 2012), Consolidated Subsides

indexed to the base year. The mean of the two indexed change rates is used as the illustrative case. The resulting revenue variance (shortfall) in the respective years is 1.2 percent, 3.3 percent, 8.3 percent, and 4.8 percent.

To determine the revenue impact on the MTA's financial plan, the sales tax component is multiplied by 84.45 percent reflecting the amounts of MMTOA gross receipts that flow to the MTA. Though this calculation does not affect the year-over-year change in receipts for these two sources, it does moderate the effect on the MTA's bottom line.

Corporate surcharge

The Corporate Surcharge is a 17 percent surcharge tax on the portion of the business franchise tax attributable to activity in the MTA region.

Complete and consistent data for the corporate surcharge revenues are not available for all three periods. For the earliest recession the only relevant data are statewide business franchise tax collections from the NYSDTF, and this is used as a proxy for the MTA region surcharge. For the 2001 to 2005 period this statewide data and corporate surcharge collections as reported by NYSDTF are available, and the mean of these

Table D: Corporate Surcharge Revenue During Selected Recession Periods and "Illustrative Case" Recession Calculations

	<u>Base Year</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Corporate surcharge revenue					
NYS Taxation and Finance - statewide corporate franchise tax					
1988 to 1992	Base	-2.9%	-1.7%	-1.4%	18.9%
<i>Inflation-adjusted, indexed</i>	100.0	94.1	89.4	85.1	100.4
2001 to 2005	Base	-11.6%	-7.6%	0.2%	19.0%
<i>Inflation-adjusted, indexed</i>	100.0	88.4	81.2	80.7	95.2
2007 to 2011	Base	-1.8%	-7.2%	-1.3%	-0.3%
<i>Inflation-adjusted, indexed</i>	100.0	97.0	90.0	90.1	90.4
NYS Taxation and Finance - corporate surcharge receipts					
2001 to 2005	Base	-2.4%	5.5%	10.2%	26.8%
<i>Inflation-adjusted, indexed</i>	100.0	97.6	102.3	112.0	140.9
2007 to 2011	Base	10.8%	-12.6%	0.9%	5.1%
<i>Inflation-adjusted, indexed</i>	100.0	109.6	95.8	98.0	103.7
MTA financial plan					
2007 to 2011	Base	-8.8%	0.4%	3.5%	-1.9%
<i>Inflation-adjusted, indexed</i>	100.0	90.1	90.5	94.9	93.7
Mean of data sources					
1988 to 1992	Base	94.1	89.4	85.1	100.4
2001 to 2005	Base	93.0	91.8	96.4	118.0
2007 to 2011	Base	98.9	92.1	94.3	96.0
"Illustrative case" recession	Base	95.3	91.1	91.9	104.8
MTA forecast	100.0	104.7	109.4	115.0	119.3
Variance	Base	-9.0%	-16.7%	-20.0%	-12.1%

Note: All rates are adjusted for common rate change in revenues.

Source: New York State Department of Taxation and Finance, 2014-2015 *New York State Tax Collections* (August 2015), Table 5: New York State Corporation and Business Taxes, Fiscal Years 1986-2015, p. 17; New York State Department of Taxation and Finance, Office of Tax Policy Analysis, *Monthly Gross and Net Tax Collections* (monthly editions 2001 to 2011); and Metropolitan Transportation Authority, *Preliminary Budget, July Financial Plan* (annual editions 2008 to 2012). Consolidated Subsidies.

two figures is used in the analysis. For the 2007 to 2011 period the two previous sources and corporate surcharge collections as reported in MTA financial plans are available, and the mean of these three figures is used in the analysis.

The data are adjusted for inflation and indexed in the same manner as with the sales tax. The resulting shortfalls relative to the MTA baseline are 9.0 percent, 16.7 percent, 20.0 percent, and 12.1 percent in the respective years.

To determine the revenue impact on the MTA's financial plan, the corporate surcharge component is multiplied by 84.45 percent reflecting the amounts of MMTOA gross receipts that flow to the MTA. Though this calculation does not affect the year-over-year change in receipts for these two sources, it does moderate the effect on the MTA's bottom line.

Real estate transaction taxes

This analysis combines the real estate transaction taxes dedicated to the MTA. Mortgage recording taxes are levied in New York City and the other seven counties in the MTA region: a 0.3 percent tax on the amount of debt imposed on the borrower; and a 0.25 percent tax on certain mortgages for buildings with one to six dwelling units imposed on the lender. The Urban Tax consists of two taxes applying to commercial properties with mortgages exceeding \$500,000 in New York City. This Urban Tax is 0.625 percent on mortgages and a Real Property Transfer Tax (RPTT) of 1.0 percent.

Complete and consistent data for these revenues are not available for all three periods. Accordingly multiple proxy measures are used and the mean of the changes in the multiple sources is used in the analysis. For the 1988 to 1992 period this exercise uses four data sources: MTA annual reports on mortgage recording tax revenues, common-rate, common-base growth rates in New York City mortgage recording taxes and real property transfer taxes provided by City of New York Office of Management

and Budget (OMB), and statewide mortgage tax collections as reported by NYSDTF. For the 2001 to 2005 period four sources are also used: common-rate, common-base growth rates in New York City mortgage recording taxes and real property transfer taxes provided by OMB, statewide mortgage tax collections as reported by NYSDTF, and 12-county mortgage tax collections as reported by NYSDTF. For the 2007 to 2011 period this analysis uses six sources: common-rate, common-base growth rates in New York City mortgage recording taxes and real property transfer taxes, and statewide mortgage tax collections, 12-county mortgage tax collections, and MTA mortgage recording tax and urban tax revenue as reported in the agency's financial plans. For 2007 to 2011 mortgage tax revenues are measured for year-over-year change in gross collections. As the MTA's mortgage recording tax and urban tax rates did not change over the studied periods, no common rate adjustment was needed for these taxes. The data are adjusted for inflation and indexed in the same manner as with the sales tax. (See Table E.)

The illustrative case recession scenario growth rates show an expected favorable adjustment of 2.8 percent in Year One followed by a shortfall of 10.3 percent in Year Two. Years Three and Four show favorable adjustments of 1.5 percent and 23.1 percent, respectively.

Payroll mobility tax

The PMT is a 0.34 percent payroll tax on all employers in the MTA service region with a payroll expense greater than \$437,500 in any calendar quarter, with reduced rates for employers with payroll expenses less than \$375,000 in any quarter (0.11 percent) and \$375,000 or more but less than \$437,500 in any quarter (0.23 percent). Public and private elementary and secondary schools are exempt from the tax, as are individuals with net earnings from self-employment attributable to the MTA region that do not exceed \$50,000 per year.

As previously mentioned, the PMT was enacted in 2009; 2010 was the first full year the tax was

**Table E: Real Estate Tax Revenue During Selected Recession Periods and
"Illustrative Case" Recession Calculations**

	<u>Base Year</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Real estate tax revenue					
NYS Taxation and Finance - Statewide Mortgage Tax					
1988 to 1992	Base	-2.0%	-20.9%	-16.9%	-12.8%
<i>Inflation-adjusted, indexed</i>	100.0	95.0	72.0	57.4	49.5
2001 to 2005	Base	27.5%	14.0%	38.1%	36.7%
<i>Inflation-adjusted, indexed</i>	100.0	127.6	144.7	198.6	269.5
2007 to 2011	Base	-15.7%	-52.0%	-31.6%	3.6%
<i>Inflation-adjusted, indexed</i>	100.0	83.1	39.9	27.9	29.1
NYS Taxation and Finance - MTA Region Mortgage Tax					
2001 to 2005	Base	35.8%	28.4%	34.9%	28.2%
<i>Inflation-adjusted, indexed</i>	100.0	135.8	173.6	232.8	296.0
2007 to 2011	Base	-19.1%	-47.1%	-24.3%	-1.2%
<i>Inflation-adjusted, indexed</i>	100.0	79.8	42.2	32.6	32.4
MTA Annual Report - Mortgage Recording Tax					
1988 to 1992	Base	-17.2%	-7.7%	-6.1%	2.1%
<i>Inflation-adjusted, indexed</i>	100.0	79.8	71.0	64.2	65.0
NYC Office of Management and Budget - Mortgage Recording Tax					
1988 to 1992	Base	6.1%	-30.0%	-33.5%	-25.5%
<i>Inflation-adjusted, indexed</i>	100.0	103.1	68.7	43.4	31.9
2001 to 2005	Base	17.3%	10.3%	53.0%	55.8%
<i>Inflation-adjusted, indexed</i>	100.0	117.3	128.7	195.9	303.0
2007 to 2011	Base	-27.6%	-55.0%	-29.2%	18.8%
<i>Inflation-adjusted, indexed</i>	100.0	71.2	32.1	23.2	27.7
NYC Office of Management and Budget - Real Property Transfer Tax					
1988 to 1992	Base	1.1%	-32.4%	-25.0%	-32.6%
<i>Inflation-adjusted, indexed</i>	100.0	98.1	63.1	45.2	30.0
2001 to 2005	Base	-10.0%	20.3%	47.9%	37.0%
<i>Inflation-adjusted, indexed</i>	100.0	90.1	107.8	158.6	215.7
2007 to 2011	Base	-18.4%	-47.2%	-17.2%	29.2%
<i>Inflation-adjusted, indexed</i>	100.0	80.5	42.5	35.8	46.5
MTA Financial Plan - Mortgage Recording Tax					
2007 to 2011	Base	-40.5%	-42.2%	-2.4%	3.7%
<i>Inflation-adjusted, indexed</i>	100.0	58.3	33.7	33.4	34.9
MTA Financial Plan - Urban Tax					
2007 to 2011	Base	-40.7%	-71.3%	33.8%	75.2%
<i>Inflation-adjusted, indexed</i>	100.0	58.1	16.7	22.6	39.8
Mean of Data Sources					
1988 to 1992	Base	94.0	68.7	52.5	44.1
2001 to 2005	Base	117.7	138.7	196.5	271.0
2007 to 2011	Base	71.8	34.5	29.2	35.1
"Illustrative Case" Recession					
MTA forecast	100.0	91.9	89.9	91.4	94.9
Variance	Base	2.8%	-10.3%	1.5%	23.1%

Source: New York State Department of Taxation and Finance, 2014-2015 *New York State Tax Collections* (August 2015), Table 22: Local Taxes Collected by the Department of Taxation and Finance, *New York State Tax Collections* (annual editions 2001 to 2011), Table 26: Mortgage Tax Collections by County; Metropolitan Transportation Authority, *Annual Report* (annual editions 1989 to 1992), Consolidated Statements of Revenues, Expenses and Changes in Net Position, *Preliminary Budget, July Financial Plan* (annual editions 2008 to 2012), Consolidated Subsidies; and data provided by City of New York Office of Management and Budget.

collected. This analysis uses two proxy measures to gauge the impact of recession in the earlier periods. The first is gross salaries and wages for the 12-county MTA service region, as reported by the U.S. Bureau of Economic Analysis, which covers all three recession periods. The second is personal income tax withholding in New York City as provided by OMB. Given that an estimated four-fifths of all payroll mobility tax revenue is generated by employers in New York City, this indicator is an appropriate proxy; it covers the

2001 to 2005 and 2007 to 2011 recession periods. The mean of the two measures is used in the analysis, and the data are adjusted for inflation and indexed in the same manner as with the sales tax. (See Table F.)

Comparing the illustrative case scenario and the MTA financial plan assumptions shows expected shortfalls of 1.9 percent, 8.2 percent, 12.6 percent, and 11.3 percent in the respective years.

Table F: Payroll Mobility Tax Revenue During Selected Recession Periods and "Illustrative Case" Recession Calculations

	<u>Base Year</u>	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>
Payroll mobility tax revenue					
Bureau of Economic Analysis, 12-county salaries and wages					
1988 to 1992	Base	3.8%	5.1%	-1.0%	6.2%
<i>Inflation-adjusted, indexed</i>	100.0	100.8	102.7	98.2	103.4
2001 to 2005	Base	-3.5%	1.4%	7.0%	5.5%
<i>Inflation-adjusted, indexed</i>	100.0	96.6	97.3	103.4	108.0
2007 to 2011	Base	1.8%	-8.4%	5.1%	4.3%
<i>Inflation-adjusted, indexed</i>	100.0	100.6	92.1	98.1	103.0
NYC Office of Management and Budget - personal income tax withholding					
2001 to 2005	Base	-3.1%	-7.1%	4.7%	11.3%
<i>Inflation-adjusted, indexed</i>	100.0	96.9	89.5	93.0	102.5
2007 to 2011	Base	9.2%	5.6%	-10.9%	5.6%
<i>Inflation-adjusted, indexed</i>	100.0	108.0	114.1	103.3	109.8
Mean of data sources					
1988 to 1992	Base	100.8	102.7	98.2	103.4
2001 to 2005	Base	96.7	93.4	98.2	105.2
2007 to 2011	Base	104.3	103.1	100.7	106.4
"Illustrative case" recession	Base	100.6	99.7	99.0	105.0
MTA forecast	100.0	102.6	108.7	113.3	118.4
Variance	Base	-1.9%	-8.2%	-12.6%	-11.3%

Source: U.S. Department of Commerce, Bureau of Economic Analysis, "Regional Data" (updated November 2014), C34 Wage and Salary Summary: Wages and Salaries, Selected Counties 1988-2011; and data provided by City of New York Office of Management and Budget.

ENDNOTES

¹ Michael Dardia and Rachel Bardin, “How Much to Bank on? When it Comes to Revenue Forecasting, Better Safe Than Sorry,” Citizens Budget Commission Blog (April 13, 2015), www.cbcny.org/cbc-blogs/blogs/how-much-bank-when-it-comes-revenue-forecasting-better-safe-sorry.

² Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), MTA Consolidated Statement of Operations by Category and Adjustments, pp. II-2 and II-3, <http://web.mta.info/mta/budget/november2015.html>.

³ Metropolitan Transportation Authority, *Preliminary Budget, July Financial Plan* (2011 to 2015 editions), Consolidated Statement of Operations by Category, <http://web.mta.info/mta/budget>.

⁴ State of New York Comptroller, Office of the State Comptroller, *Financial Outlook for the Metropolitan Transportation Authority* (September 2015), p. 2, www.osc.state.ny.us/osdc/mta4-2016.pdf.

⁵ Expansion began in June 2009; December 2015 is the 79th month. See: National Bureau of Economic Research, “U.S. Business Cycle Expansions and Contractions” (updated September 20, 2015; accessed September 22, 2015), www.nber.org/cycles.html.

⁶ All figures are for four-year periods used to chart revenue changes for the last three recessions in the Appendix. For the 1990 recession the years are 1988 to 1992; for the 2001 recession the years are 2001 to 2005; for the 2007 recession the years are 2007 to 2011. See: New York State Department of Taxation and Finance, Office of Tax Policy Analysis, *Monthly Gross and Net Tax Collections* (monthly editions 2001 to 2011), www.tax.ny.gov/research/collections/monthly_tax_collections.htm; Metropolitan Transportation Authority, *Annual Report* (a1989 to 1991 editions), Operating Statistics, and *Adopted Budget, February Financial Plan* (2008 to 2011 editions), Consolidated Subsidies, Accrual Basis, <http://web.mta.info/mta/budget/>.

⁷ Metropolitan Transportation Authority, *Adopted Budget, February Financial Plan* (2008 to 2011 edi-

tions), Consolidated Subsidies, <http://web.mta.info/mta/budget/>.

⁸ The MTA’s assumptions for the corporate surcharge and sales tax are based on guidance provided by the New York State Division of the Budget. Payroll Mobility Tax receipts are based on forecast Wage and Salary Disbursements from IHS, Inc. See: Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume I, Consolidated Subsidies, p. II-2 and Volume 2, MTA Consolidated Utilization, p. II-15, <http://web.mta.info/mta/budget/november2015.html>.

⁹ Though a recession could affect other operating and non-operating revenues, the analysis does not compare historical performance to agency forecasts for these sources because they constitute a small share of total receipts, are not volatile, or both.

¹⁰ CBC staff analysis of data provided by City of New York, Office of Management and Budget. See: Michael Dardia and Rachel Bardin, “How Much to Bank on? When it Comes to Revenue Forecasting, Better Safe Than Sorry,” Citizens Budget Commission Blog (April 13, 2015), www.cbcny.org/cbc-blogs/blogs/how-much-bank-when-it-comes-revenue-forecasting-better-safe-sorry.

¹¹ Revenue per transit trip includes subway and bus ridership and fare revenue. Commuter rail revenue per trip includes Long Island Rail Road and Metro-North ridership and fare revenue.

¹² Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 2, MTA Consolidated Utilization, <http://web.mta.info/mta/budget/november2015.html>.

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¹⁴ Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, Plan Adjustments, p. II-3, <http://web.mta.info/mta/budget/november2015.html>.

[html](#).

¹⁵ Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, MTA Consolidated Statement of Operations by Category, p. II-2, <http://web.mta.info/mta/budget/november2015.html>.

¹⁶ Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, MTA Consolidated Statement of Operations by Category, p. II-2, <http://web.mta.info/mta/budget/november2015.html>.

¹⁷ Compensation costs include payroll, overtime, health and welfare, pensions, and other fringe benefits expenses. See: Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, MTA Consolidated Statement of Operations by Category, p. II-2, and Volume 2, Total Position Changes at a Glance, p. II-75, <http://web.mta.info/mta/budget/november2015.html>.

¹⁸ The MTA has restored some of these cuts, incrementally. See: Metropolitan Transportation Authority, New York City Transit, *Evaluation of 2010 Service Reductions* (September 23, 2011), p. 1, http://web.mta.info/mta/news/books/docs/NYCT_2010_Service_Reduction_Evaluation.pdf.

¹⁹ The MTA policy is rooted in the calculation that liquidation of the general reserve to reduce long-term liabilities provides annually recurring savings that outweigh the unavailability of the reserve in future years. See: Metropolitan Transportation Authority, *2015 Adopted Budget, February Financial Plan 2015-2018* (February 2015), Volume 1, p. I-2, <http://web.mta.info/mta/budget/pdf/MTA%202015%20Adopted%20Budget%20February%20Financial%20Plan%202015-2018.pdf>.

²⁰ The MTA also decreased supplemental pension fund contributions, which are contributions made to shore up pension funds with large unfunded liabilities. Short-run savings from these decreased supplemental contributions were offset by the need for higher future pension fund contributions because of the loss of pension fund investment earnings on the foregone contributions. See: Metropolitan Transpor-

tation Authority, *2015 Preliminary Budget, July 2015-2018 Financial Plan* (July 2014), Volume I, pp. I-2 and I-3, <http://web.mta.info/mta/budget/july2014.html>.

²¹ Metropolitan Transportation Authority, *2015-2019 Capital Program, Renew, Rebuild, Enhance* (October 2015), Table 2: MTA 2015-2019 Capital Program Funding Sources, p. 40, <http://web.mta.info/capital>.

²² Robert E. Foran, Chief Financial Officer, Metropolitan Transportation Authority, Letter to Carol Kellermann, President, Citizens Budget Commission (December 3, 2015).

²³ Metropolitan Transportation Authority, *Consolidated Interim Financial Statements as of the Six-Month Period Ending June 30, 2015* (September 2015), Schedule of Funding Progress for the MTA Postemployment Benefit Program, p. 100, and *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, MTA Consolidated Statement of Operations, p. II-2, <http://web.mta.info/mta/budget>.

²⁴ Metropolitan Transportation Authority, *2016 Final Proposed Budget, November Financial Plan 2016-2019* (November 2015), Volume 1, MTA Consolidated Statement of Operations, p. II-2, and *2011 Final Proposed Budget, November Financial Plan 2011-2014* (November 2010), Volume 1, p. II-2, <http://web.mta.info/mta/budget>.

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