Audit Committee Meeting

February 2023

Committee Members

- J. Barbas, Chair
- F. Borelli, Vice Chair
- S. Soliman
- L. Sorin

Audit Committee Meeting

Tuesday, 2/21/2023 12:00 - 12:45 PM ET MTA Board Room - 20th Floor

2 Broadway

1. PUBLIC COMMENTS

2. APPROVAL OF MINUTES

Minutes of October 24, 2022 Meeting - Page 3

3. AUDIT COMMITTEE WORK PLAN

2023 WORKPLAN - Condensed - Page 8 2023 WORKPLAN - Detailed - Page 10

4. QUARTERLY FINANCIAL STATEMENTS - 3RD QUARTER 2022

Draft - MTA Consolidated Financial Statements - Q3 - 2022 - Page 15

5. ENTERPRISE RISK MANAGEMENT AND INTERNAL CONTROL GUIDELINES

Enterprise Risk Management Status Report - Page 149 Enterprise Risk Management and Internal Controls Guidelines - Page 157

6. COMPLIANCE WITH THE INTERNAL CONTROL ACT

7. 2022 AUDIT PLAN STATUS AND 2023 AUDIT PLAN

2022 Year-End and Proposed 2023 Audit Plan - Audit Committee Presentation - Page 170

8. INFORMATION TECHNOLOGY REPORT

MTA IT CTO Report - Audit Committee Presentation - Page 185

9. OPEN AUDIT RECOMMENDATIONS

Remediation Plans Monitoring - Six Months Past Due Report - Page 205

MINUTES OF MEETING AUDIT COMMITTEE OF THE BOARD MONDAY, OCTOBER 24, 2022 – 12:00 P.M. RONAN BOARD ROOM – 20TH FLOOR 2 BROADWAY

The following were present (either in person or virtual):

Honorable:

Jamey Barbas Sherif Soliman Robert Mujica, Jr.

Lisa Sorin

-MTA

K. Willens - MTA

J. Strohmeyer - Deloitte

M. Woods L. Kearse

- MTA

J. McGovern - MTA

K. Makiakis - Deloitte

Also in attendance were:

P. Graves

- MTA

L. Camilo

- MTA

J. Patel - MTA

1. PUBLIC COMMENTS PERIOD

There was one speaker: Jason Anthony, ALU. Refer to the video recording of the meeting produced by the MTA and maintained in MTA records for the content of their statements. https://new.mta.info/transparency/board-and-committee-meetings/october-2022.

2. APPROVAL OF MINUTES

The minutes of the July 25th Audit Committee meeting were approved.

3. AUDIT COMMITTEE WORK PLAN

The Auditor General (Michele Woods) noted that this is the fourth and final Audit Committee for 2022, and there were no changes to the Work Plan. The proposed 2023 Work Plan is included in the committee materials for information purposes and any proposed changes will be presented for approval at the January meeting.

4. <u>INDEPENDENT ACCOUNTANT'S REVIEW REPORT - 2nd QUARTER 2022</u>

Jill Strohmeyer (Deloitte) presented to the Committee the results of their review of the MTA's Consolidated Financial Statements for the second quarter of 2022. Jill stated that Deloitte is in the process of completing its quarterly review procedures of the MTA's consolidated interim financial statements, as of, and for the six-month period ending June 30, 2022. A review of the interim financial information consists primarily of analytical procedures and making inquiries of management responsible for financial and accounting matters. A review is substantially less in scope than an audit, the objective of which is the expression of an opinion on the financial information. Deloitte is not issuing an audit opinion on the financial statements. Based on their review, they are not aware of any material modifications that should be made to the interim financial statements for them to be in accordance with Accounting Principles

Generally Accepted (GAAP) in the United States of America. These financial statements are consistent with prior quarters and with prior year financial statements.

A motion was made and seconded to accept the 2nd Quarter 2022 MTA Consolidated Financial Statements.

Refer to the video recording of the meeting, produced by the MTA and maintained in MTA records for the details.

5. APPOINTMENT OF EXTERNAL AUDITORS

In her opening remarks, the Audit Committee Chair (Jamey Barbas) stated that this is the first year of the new External Audit Contract between the MTA and Deloitte that was awarded earlier this month. As part of the annual re-appointment process, the Committee requires the auditors to present to the Committee the results of the most recent inspection of the firm that was conducted by the PCAOB or the Public Company Accounting Oversight Board. Jamey noted that the Board has a copy of the 2020 report that was issued in September 2021. Jill Strohmeyer (Deloitte) then briefed the Committee on the PCAOB comments. She stated that since Deloitte is registered with the PCAOB and that they perform audits of publicly traded companies, every year the PCAOB is required to inspect the audit working papers prepared by Deloitte in support of those audits. The PCAOB reviews the workpapers to determine whether Deloitte has followed the appropriate auditing standards, PCAOB rules, as well as Deloitte's own internal policies and procedures. During the 2020 Inspection, 53 public issuers were reviewed by the PCAOB and two of those 53 audits were awarded comments. These comments related to the testing and controls over revenue and related accounts. Jill noted that the 2020 results from the PCAOB showed an improvement from 2019 in which there were six audits that had comments.

A motion was made and seconded to reappoint Deloitte as the MTA's external auditor for the 2022 year-end financial statements.

Refer to the video recording of the meeting, produced by the MTA and maintained in MTA records for the details.

6. AUDIT APPROACH PLAN/COORDINATION WITH EXTERNAL AUDITOR

In her opening remarks, the Audit Committee Chair (Jamey Barbas) stated that Jill Strohmeyer (Deloitte) will tell the Committee about Deloitte's audit approach to the 2022 year-end audits of the MTA financial statements. Jill will also discuss any new or proposed changes in accounting principles, regulations or financial reporting practices and its impact to the financial statements. In presenting Deloitte's audit approach plan, Jill referred to the "Audit Work Plan" that was previously distributed to the Committee and went through the presentation starting with Deloitte's leadership team. She introduced Kostas Makrakis, Audit Managing Director, who will lead several agency audits including MTA Bus, Metro-North, and LIRR. Jill then proceeded to mention other key members of the Deloitte audit team: Darshan Patel, Senior Manager who will serve as the Single Audit Compliance Specialist and is responsible for testing federal award monies; John Frey and Casey Smith, both Managers, who will be responsible for the audits of the MTA's employee benefit programs; and, Patricia Zurita, John Hughes and Mike Tartaglia - key Managers/Senior Managers who will oversee the agencies' financial statement audits. Jill also mentioned other members of the audit team: Kevin Richards (Advisory Partner), Kathleen Candela and Elaine Reyes (second level concur and review partners). She noted that all these team members have either served the MTA either in a prior year or for several years.

Jill then briefed the Committee on Deloitte's Audit Work Plan for the MTA and referenced the discussion of Risk Assessment which included a "Pyramid" (Risk Assessment Pyramid) that illustrated the varying

levels of risk and where Deloitte will spend their time. Deloitte has identified management override of controls as the one significant risk area (which is at the top of the Risk Assessment Pyramid) which is consistent with prior years. She explained that the reason that management override is a significant risk is due to management being in the unique position to potentially perpetuate fraud or to direct that a fraudulent entry be recorded. As a result, for every audit that Deloitte performs, management override of controls is considered a significant risk. Therefore, some of the key procedures that they apply to address this significant risk include testing journal entries, asking questions of management, understanding any unusual transactions, and assessing whether there was any bias on the part of management in developing key estimates. Jill then referenced the second layer of the Risk Assessment Pyramid which listed items that are considered higher areas of risk but not significant risks. These areas relate to COVID 19 funding and areas that have judgements or where management uses an expert (e.g., pensions, OPEB liabilities and accrued judgments and claims) and Jill noted that Deloitte will use specialists to help test these areas. Other items in the second layer of the Risk Assessment Pyramid include Construction Work in Progress and Leases. In regards to Construction Work in Progress, they will ensure that any completed projects get transferred to capital assets and that depreciation begins timely. Regarding Leases, she noted that the MTA is going through a rather significant accounting pronouncement adoption related to GASB #87 (Leases). This GASB for the first time will bring certain lease agreements to the Balance Sheet. As a result, lease assets, lease liabilities, lease receivables, and some deferred inflows all will be recorded for the first time on the MTA's financial statements. In regard to the lower risk area (the third layer of the Risk Assessment Pyramid), Deloitte will spend time on the following: revenues, cash and investments, long-term debt, other capital assets, and accrued expenses. For the last risk layer (the fourth layer of the Risk Assessment Pyramid), Deloitte will perform inquiries with management and analytical procedures, but will not likely go into detailed testing because in their professional judgement there is little to no risk in these areas. Jill explained that they came up with the Risk Assessment Pyramid based on their understanding of the business, having conversations with management, their industry knowledge, understanding macroeconomic and the political environment. In regards to internal audits, they do not plan to rely on the work of Internal Audit, but they do have conversations with internal audit; they review internal audit reports, and use them as part of their risk assessments program to determine where they will spend time. Jill noted that they will also use thirdparties this year as part of their engagement. These third-parties relate to minority owned, woman owned, and service-disabled veteran owned businesses. These third-parties will be part of Deloitte's audit team and will assist in testing various account balances. In addition to the previously mentioned specialists (e.g., Pension, OPEB and claims), Deloitte will also use data analytic specialists who will help them review journal entries and a specialist who will help with the lease implementation. With respect to the audit timeline, it is similar with prior years with May 2023 being their anticipated issuance of its auditor's report on the MTA's financial statements. Jill then referenced page #11 of the Audit Work Plan which outlined all the reports that will be issued by Deloitte in 2023 and she noted that this is the same as with prior years. Lastly, Jill referred to page #16 of the Audit Work Plan which addressed Deloitte's latest Peer Review Report (which is from 2020) which is required to be shared with the Committee per Government Auditing Standards. Grant Thornton is Deloitte's peer reviewer and every three years, Grant comes in and reviews Deloitte's audits of private companies (in contrast, earlier Jill discussed publicly traded companies and the PCAOB). Jill noted that Deloitte received the highest rating of "passed." Grant Thornton will perform its next peer review this year on Deloitte's private company audits, and that report is expected to be issued within the next year.

Committee member Lisa Sorin inquired as to whether Accounts Payable and Expenses would also fall under the risk of management override of controls (since these accounts were listed in tier three of the Risk Assessment Pyramid). In response, Jill stated that management override of controls is persuasive and covers all areas of the financial statements because management has the ability to override any type of entries made for any account balance which would include accounts payable and accrued expenses.

However, the actual testing of these line items (accounts payable and accrued expense) in the financial statements have been assessed as a lower level of risk.

Refer to the video recording of the meeting, produced by the MTA and maintained in MTA records for the details.

7. AUDIT COMMITTEE CHARTER

The Committee reviewed and assessed the Charter, and based on their review there were no proposed changes to the Charter.

8. OPEN AUDIT RECOMMENDATIONS

The Chief Compliance Officer (Lamond Kearse) briefed the Committee on the implementation status of prior audit recommendations. Kearse referenced the presentation in the Audit Committee Book and noted that MTA Corporate Compliance continues to monitor the implementation of recommendations pursuant to the request of this Committee. They monitor the "trending closures" by quarter and noted that there was a slight decline during the third quarter of 2022 in the number of remediation plans that were closed, but they are not overly concerned and it appears to be a "blip." However, if this trend continues then Corporate Compliance will bring it to the attention of this Committee. In regards to Remediation Plans, there are 124 Remediation Plans that the agencies and their various departments have indicated that they have implemented and are awaiting approval on the closure of those Remediation Plans by Compliance and MTA Audit Services. Kearse referenced a slide in the presentation that shows Remediation Plans that are six-months past due by agency and priority, and noted that many of those are pending with MTA Headquarters and MTA C&D. He also referenced a slide that breaks down the 32 high priority Remediation Plans that are six-months passed due, and noted that the majority reside with MTA HQ (IT) as well as MTA C&D and Delivery. Compliance continues to work with both areas to close these Remediation Plans as quickly as possible.

Committee member Lisa Sorin inquired about what happens next with those Remediations Plans that are both high priority and six-months passed due. In response, Kearse stated that they work with both the departments and MTA Audit Services to try and get the recommendations implemented. They also provide them with "encouragement" that they will bring these issues to this Committee, and Compliance will continue to provide this Committee with a report on Remediation Plans that are continually passed due. Kearse further noted that there are a variety of reasons, such as Transformation, that has impacted the implementation of recommendations. Additionally, some of the recommendations are technology issues and things have changed since issuance of the audit. The Auditor General (Michele Woods) added that for every internal audit recommendation, the auditors work with management to determine a date whereby they believe they can implement the recommendation (as opposed to creating an arbitrary date). However, she noted that especially during COVID, a lot of actions were put on hold, therefore management is a little behind in implementing certain recommendations. She added that for every recommendation, especially with Transformation, they review to make sure that it is still applicable and are assigned to the appropriate parties. Woods added that they will continue to follow up, and if an open recommendation is no longer applicable, they will close out. Kearse further noted that a two-party approval process has been established whereby both Compliance and Audit must agree that a recommendation has been implemented. Additionally, he noted that they always remind the departments to be reasonable and honest in their expectation as to when they can implement a recommendation. Committee member Sherif Soliman inquired about the 15 outstanding Technology recommendations and asked how we assess the severity of these recommendations. In response, Kearse has been working with Technology and the departments to establish ownership and get these outstanding recommendations implemented. Kearse commented that he does not believe that any of these recommendations involve signficant risks (such as cyber security, etc.) and he agreed to provide the Committee with a list of these 15 recommendations along with thier status.

Refer to the video recording of the meeting, produced by the MTA and maintained in MTA records for the details.

9. ANNUAL AUDIT COMMITTEE ACTIVITY REPORT

Chair Barbas noted the four-page report that covered the activities of the Audit Committee during the 12-month period ended July 31, 2022, and indicated that a draft had been previously circulated among the Committee members for review and comment.

A motion was made and seconded to approve the year-end Activity Report for submission to the full Board.

10. EXECUTIVE SESSION

Pursuant to Section 105 (1) of the New York State Public Officers Law, upon motion duly made and seconded, the Committee voted to convene an executive session in order to receive a briefing from MTA IT on the Security of Sensitive Data.

11. MOTION TO ADJOURN

The Committee returned to regular session, at which time a motion was made and seconded to adjourn the meeting.

Respectfully submitted,

Michel & Wood

Michele Woods Auditor General

2023 AUDIT COMMITTEE WORK PLAN

I. RECURRING AGENDA ITEMS

Responsibility

Each Meeting:

Approval of Minutes Audit Work Plan Committee Chair & Members Committee Chair & Members

As Appropriate:

Pre-Approval of Audit and Non-Auditing Services Follow-Up Items Status of Audit Activities Committee Chair & Members

Auditor General
Auditor General/MTA IG/
CCO/CFO/
Controllers/External Auditor/
Committee Chair & Members

Executive Sessions

II. SPECIFIC AGENDA ITEMS

February 2023

Quarterly Financial Statements – 3rd Quarter 2022 Enterprise Risk Management Update and Internal Control Guidelines Compliance with the Internal Control Act 2022 Audit Plan Status Report 2023 Audit Plan Information Technology Report Open Audit Recommendations

External Auditor
Chief Compliance Officer

Chief Compliance Officer Auditor General Auditor General Chief Technology Officer Chief Compliance Officer

May 2023

2022 Audited Financial Statements
Management's Review of Consolidated
Financial Statements
Investment Compliance Report
Open Audit Recommendations
Contingent Liabilities/Third Party
Lawsuits (Executive Session)

External Auditor/CFO
Deputy Chief, Controller's Office

External Auditor
Chief Compliance Officer
General Counsels/External Auditor

July 2023

Quarterly Financial Statements – 1st Quarter 2023

Pension Audits (2022)

Management's Review of Pension Audits

Single Audit Report

Management Letter Reports

Review of MTA/IG's Office (FY 2022) Enterprise Risk Management Update Ethics and Compliance Program

Financial Interest Reports

MTAAS 2023 Audit Plan Status Report

Open Audit Recommendations

External Auditor

External Auditor/Deputy Chief, Controller

Deputy Chief, Controller's Office

External Auditor/CFOs

External Auditor/CFOs/Controllers

External Auditor

Chief Compliance Officer Chief Compliance Officer Chief Compliance Officer

Auditor General

Chief Compliance Officer

October 2023

Quarterly Financial Statements – 2nd Quarter 2023

Appointment of External Auditors Audit Approach Plans/Coordination Review of Audit Committee Charter Security of Sensitive Data & Systems

(Executive Session)

Open Audit Recommendations Annual Audit Committee Report **External Auditor**

Committee Chair & Members

External Auditor

CCO and Committee Chair Chief Technology Officer

Chief Compliance Officer

Committee Chair

2023 AUDIT COMMITTEE WORK PLAN

I. RECURRING AGENDA ITEMS

Each Meeting

Approval of Minutes

Approval of the official proceedings of the previous month's Committee meeting.

Audit Work Plan

A monthly update of any edits and/or changes in the work plan.

As Appropriate

Pre-Approval of Audit and Non-Auditing Services

As appropriate, all auditing services and non-audit services to be performed by external auditors will be presented to and pre-approved by the Committee.

Follow-Up Items

Communications to the Committee of the current status of selected open issues, concerns or matters previously brought to the Committee's attention or requested by the Committee.

Status of Audit Activities

As appropriate, representatives of MTA's public accounting firm or agency management will discuss with the Committee significant audit findings/issues, the status of on-going audits, and the actions taken by agency management to implement audit recommendations.

Executive Sessions

Executive Sessions will be scheduled to provide direct access to the Committee, as appropriate.

II. SPECIFIC AGENDA ITEMS

FEBRUARY 2023

Quarterly Financial Statements - 3rd Quarter 2022

Representatives of the MTA public accounting firm, in conjunction with appropriate agency management, will discuss the interim financial statement that was prepared for the third quarter of 2022.

Enterprise Risk Management Update and Internal Control Guidelines

These MTA-wide guidelines, which were adopted by the Board in 2011 pursuant to Public Authority Law Section 2931, are required to be reviewed by the Committee annually. The MTA Chief Compliance Officer will brief the Committee on the agency compliance with these guidelines and answer any questions and offer additional comments, as appropriate. The MTA Chief Compliance Officer will also brief the Committee on the status of agency compliance with the ERM guidelines and any new or emerging risk.

Compliance with the Internal Control Act

The Committee will be briefed by the MTA Chief Compliance Officer on the results of the All-Agency Internal Control Reports issued to the NYS Division of the Budget as required by the Government Accountability, Audit and Internal Control Act.

MTAAS 2022/2023 Audit Plans

i. 2022 Audit Plan Status

A briefing by Audit Services that will include a status of the work completed, a summary of the more significant audit findings, and a discussion of the other major activities performed by the department in 2022.

ii 2023 Audit Plan

A discussion by Audit Services of the areas scheduled to be reviewed in 2023 as well as the guidelines and policies that were used to assess audit risk and their application in the development of the audit work plan.

Information Technology Report

The MTA Chief Technology Officer will brief the Committee on the activities of the MTA IT for the past year, including its accomplishments, strategies and plans for the current year.

Open Audit Recommendations

The MTA Chief Compliance Officer will report to the Committee on the status of audit recommendations previously accepted by their respective agency.

MAY 2023

2022 Financial Statements

The MTA public accounting firm will review the results and conclusions of their examination of the 2022 Financial Statements. The CFO/Deputy Chief, Controller's Office will be available to the Committee to answer any questions regarding the submission of their audit representation letters to the external audit firm.

Management's Review of MTA Consolidated Financial Statements

The Deputy Chief, Controller's Office will present a management's review of the 2022 MTA consolidated financial statements, including changes in capital, net assets, other assets and operating revenues and expenses.

Investment Compliance Report

Representatives of the MTA's public accounting firm will provide a review of MTA's compliance with the guidelines governing investment practices.

Open Audit Recommendations

The MTA Chief Compliance Officer will report to the Committee on the status of audit recommendations previously accepted by their respective agency.

Contingent Liabilities and Status of Third-Party Lawsuits

The General Counsels from each agency, along with representatives from the independent accounting firm, will review in Executive Session the status of major litigation that may have a

material effect on the financial position of their agency, or for which a contingency has been or will be established and/or disclosed in a footnote to the financial statements. In addition, the Committee will be briefed on the status of third-party lawsuits for which there has been minimal or sporadic case activity.

JULY 2023

Quarterly Financial Statements – 1st Quarter 2023

Representatives of MTA's public accounting firm, in conjunction with appropriate agency management, will discuss the interim financial statement that was prepared for the first quarter of 2023.

Pension Audits

i Management's Review of MTA-Managed/Controlled Pension Plan Financial Statements

The Deputy Chief, Controller's Office will present a management's review of the 2022 MTA-managed and controlled Pension Plan financial statements, including changes in the plan's net position, the required supplementary information and any new GASB statements or statutory regulations affecting the financial statements.

ii Audit of the Pension Plans Financial Statements

Representatives of the MTA public accounting firm will provide the results of their audits of the pension plans that are managed and controlled by MTA HQ, Long Island Rail Road, Metro-North and NYC Transit.

Single Audit Report

Representatives of MTA's public accounting firm will provide the results of their Federal-and Statemandated single audits of MTA and NYC Transit.

Management Letter Reports

Reports will be made by the MTA's public accounting firm on the recommendations made in the auditors' Management Letter for improving the accounting and internal control systems of the MTA and its agencies. The report will also include management's response to each Management Letter comment. The response will describe the plan of action and timeframe to address each comment. In addition, the report will contain a follow-up of prior years' open recommendations conducted by the external audit firm.

Review of the MTA Inspector General's Office

Representatives of MTA's public accounting firm will provide the results of their 2022 "agreed-upon" review procedures on the MTA/IG's operating expenses to ensure compliance with applicable policies and procedures.

Enterprise Risk Management Update

These MTA-wide guidelines, which were adopted by the Board in 2011 pursuant to Public Authority Law Section 2931, are required to be reviewed by the Committee annually. The MTA Chief Compliance Officer will brief the Committee on the agency compliance with these guidelines and answer any questions and offer additional comments, as appropriate. The MTA Chief Compliance Officer will also brief the Committee on the status of agency compliance with the ERM guidelines and any new or emerging risk.

Ethics and Compliance Program

The MTA Chief Compliance Officer will brief the Committee (i) on the status of agency compliance with the ERM guidelines and any new or emerging risk and (ii) selected aspects of the MTA Ethics and Compliance Program.

Financial Interest Reports

The MTA Chief Compliance Officer will brief the Committee on the agencies' compliance with the State Law regarding the filing of Financial Interest Reports (FIRs), including any known conflicts of interest.

MTAAS 2023 Audit Plan Status Report

A briefing by Audit Services that will include a status of the work completed as compared to the audits planned for the year, a summary of the more significant audit findings, results of audit follow-up, and a discussion of the other major activities performed by the department.

Open Audit Recommendations

The MTA Chief Compliance Officer will report to the Committee on the status of audit recommendations previously accepted by their respective agency.

OCTOBER 2023

Quarterly Financial Statements – 2nd Quarter 2023

Representatives of MTA's public accounting firm, in conjunction with appropriate agency management, will discuss the interim financial statement that was prepared for the second quarter of 2023.

Appointment of External Auditors

The Audit Committee will review the appointment of the independent auditor for MTA HQ and all the agencies. As part of this process, the Auditor General has reviewed and provided to the Committee, and will retain on file, the latest report of the firm's most recent internal quality control review.

Audit Approach Plans/Coordination

Representatives of MTA's public accounting firm will review their audit approach for the 2023 yearend agency financial audits. This review will describe the process used to assess inherent and internal control risks, the extent of the auditor's coverage, the timing and nature of the procedures to be performed, and the types of statements to be issued. In addition, the impact of new or proposed changes in accounting principles, regulations, or financial reporting practices will be discussed.

Review of Audit Committee Charter

The Committee Chair will report that the Committee has reviewed and assessed the adequacy of the Audit Committee Charter and, based on that review, will recommend any changes. The review will also show if the Committee's performance in 2023 adequately complied with the roles and responsibilities outlined in its Charter (i.e. monitoring and overseeing the conduct of MTA's financial reporting process; application of accounting principles; engagement of outside auditors; MTA's internal controls; and other matters relative to legal, regulatory and ethical compliance at the MTA).

Security of Sensitive Data & Systems

The MTA Chief Technology Officer will make a presentation to the Committee on the security of sensitive data and systems at the MTA.

Open Audit Recommendations

The MTA Chief Compliance Officer will report to the Committee on the status of audit recommendations previously accepted by their respective agency.

Annual Audit Committee Report

As a non-agenda information item, the Audit Committee will be provided with a draft report which outlines the Audit Committee's activities for the 12 months ended July 2023. This report is prepared in compliance with the Audit Committee's Charter. After Committee review and approval, the Committee Chair will present the report to the full MTA Board.



Metropolitan Transportation Authority

(A Component Unit of the State of New York)

Independent Auditor's Review Report

Interim Financial Statements as of and for the Nine-Month Period Ended September 30, 2022





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MANAGEMENT'S DISCUSSION AND ANALYSIS

AS OF SEPTEMBER 30, 2022 AND DECEMBER 31, 2021 AND FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

(\$ In Millions, except as noted)

FINANCIAL REPORTING ENTITY

The Metropolitan Transportation Authority ("MTA" or "MTA Group") was established under the New York Public Authorities Law and is a public benefit corporation and a component unit of the State of New York whose mission is to continue, develop, and improve public transportation and to develop and implement a unified public transportation policy in the New York metropolitan area. The financial reporting entity consists of subsidiaries and affiliates, considered component units of the MTA, because the Board of the MTA serves as the overall governing body of these related entities.

The Reporting entity includes:

- (1) the MTA is comprised of the following:
 - Metropolitan Transportation Authority Headquarters ("MTAHQ") provides support in budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services to the related groups listed below.
 - The Long Island Rail Road Company ("MTA Long Island Rail Road") provides passenger transportation between New York City ("NYC") and Long Island.
 - Metro-North Commuter Railroad Company ("MTA Metro-North Railroad") provides passenger transportation between NYC and the suburban communities in Westchester, Dutchess, Putnam, Orange, and Rockland counties in New York State ("NYS") and New Haven and Fairfield counties in Connecticut.
 - Staten Island Rapid Transit Operating Authority ("MTA Staten Island Railway") provides passenger transportation on Staten Island.
 - First Mutual Transportation Assurance Company ("FMTAC") provides primary insurance coverage for certain losses, some of which are reinsured, and assumes reinsurance coverage for certain other losses.
 - MTA Construction and Development Company ("MTA Construction and Development"), formerly called MTA Capital Construction Company, provides oversight for the planning, design and construction of current and future major MTA system-wide expansion projects.
 - MTA Bus Company ("MTA Bus") operates certain bus routes in areas previously served by private bus operators pursuant
 to franchises granted by the City of New York.
 - MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA Capital Construction, and MTA Bus, collectively are referred to herein as MTA. MTA Long Island Rail Road and MTA Metro-North Railroad are referred to collectively as the Commuter Railroads.
 - New York City Transit Authority ("MTA New York City Transit") and its subsidiary, Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA"), provide subway and public bus service within the five boroughs of New York City.
 - Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels") operates seven toll bridges, two tunnels, and the Battery Parking Garage, all within the five boroughs of New York City.

The MTA provides transportation services in the New York metropolitan area, operations of seven bridges and two tunnels within New York City and primary insurance coverage. The MTA engages in Business-Type Activities.

- (2) Fiduciary Funds comprised of Pension and Other Employee Benefit Trust Funds:
 - Pension Trust Funds:
 - MTA Defined Benefit Pension Plan
 - The Long Island Railroad Company Plan for Additional Pensions ("Additional Plan")
 - Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA Plan")
 - Metro-North Commuter Railroad Cash Balance Plan ("MNR Cash Balance Plan")

- Other Employee Benefit Trust Funds
 - MTA Other Postemployment Benefits Plan ("OPEB Plan")

The financial results of the MTA are reported as consolidated financial statements.

OVERVIEW OF THE CONSOLIDATED INTERIM FINANCIAL STATEMENTS

Introduction

This report consists of: Management's Discussion and Analysis ("MD&A"), Consolidated Interim Financial Statements, Fiduciary Funds Financial Statements, Notes to the Consolidated Interim Financial Statements, Required Supplementary Information, Supplementary Information - Combining Fiduciary Fund Financial Statements, and Supplementary Information.

Management's Discussion and Analysis

This MD&A provides a narrative overview and analysis of the financial activities of the Metropolitan Transportation Authority and its consolidated subsidiaries and affiliates (the "MTA" or "MTA Group") as of September 30, 2022 and December 31, 2021 and for the nine-month periods ended September 30, 2022 and 2021. For financial reporting purposes, the subsidiaries and affiliates of the MTA are blended component units. This management discussion and analysis is intended to serve as an introduction to the MTA Group's consolidated interim financial statements. It provides an assessment of how the MTA Group's position has improved or deteriorated and identifies the factors that, in management's view, significantly affected the MTA Group's overall financial position. It may contain opinions, assumptions, or conclusions by the MTA Group's management that must be read in conjunction with, and should not be considered a replacement for, the consolidated interim financial statements.

The Consolidated Interim Financial Statements

The Consolidated Interim Statements of Net Position, which provide information about the nature and amounts of resources with present service capacity that the MTA Group presently controls (assets), consumption of net assets by the MTA Group that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the MTA Group has little or no discretion to avoid (liabilities), and acquisition of net assets by the MTA Group that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position.

The Consolidated Interim Statements of Revenues, Expenses and Changes in Net Position, which provide information about the MTA's changes in net position for the period then ended and accounts for all of the period's revenues and expenses, measures the success of the MTA Group's operations during the year and can be used to determine how the MTA has funded its costs.

The Consolidated Interim Statements of Cash Flows, which provide information about the MTA Group's cash receipts, cash payments and net changes in cash resulting from operations, noncapital financing, capital and related financing, and investing activities.

The Fiduciary Funds Financial Statements

Fiduciary funds are used to account for resources held in a trustee capacity for the benefit of parties outside of a government entity. Fiduciary funds are not reported in the MTA's consolidated financial statements because the resources of those funds are not available to support the MTA's own programs. The MTA's fiduciary funds are collectively reported as Pension and Other Employee Benefit Trust Funds.

The Statements of Fiduciary Net Position presents financial information about the assets, liabilities, and the fiduciary net position held in trust of the fiduciary funds of the MTA.

The Statements of Changes in Fiduciary Net Position presents fiduciary activities of the fiduciary funds as additions and deductions to the fiduciary net position.

Notes to the Consolidated Interim Financial Statements

The notes provide information that is essential to understanding the consolidated interim financial statements, such as the MTA Group's accounting methods and policies, details of cash and investments, employee benefits, long-term debt, lease transactions, future commitments and contingencies of the MTA Group, and information about other events or developing situations that could materially affect the MTA Group's financial position.

Required Supplementary Information

The required supplementary information provides information about the changes in the net pension liability and net other postemployment benefits ("OPEB") liability, employer contributions for the OPEB and pension plans, actuarial assumptions used to calculate the net pension liability and net OPEB liability, historical trends, and other required supplementary information related to the MTA Group's cost-sharing multiple-employer defined benefit pension plans.

Supplementary Information - Combining Fiduciary Funds Financial Statements

The supplementary information combining fiduciary funds financial statements includes the combining statements of fiduciary net position and the combining statements of changes in fiduciary net position which provides financial information on each fiduciary fund in which the MTA is functioning as a trustee for another party. The MTA's fiduciary funds are categorized as Pension and Other Employee Benefit Trust Funds.

Supplementary Information

The supplementary information provides a series of reconciliations between the MTA Group's financial plan and the consolidated statements of revenues, expenses and changes in net position.

CONDENSED CONSOLIDATED INTERIM FINANCIAL INFORMATION AND CONDENSED CONSOLIDATED INTERIM FINANCIAL INFORMATION

The following sections discuss the significant changes in the MTA Group's financial position as of September 30, 2022 and December 31, 2021 and for the nine-month periods ended September 30, 2022 and 2021. An analysis of major economic factors and industry trends that have contributed to these changes is provided. It should be noted that for purposes of the MD&A, the information contained within the summaries of the consolidated interim financial statements and the various exhibits presented were derived from the MTA Group's consolidated interim financial statements.

Total Assets and Deferred Outflows of Resources, Distinguishing Between Capital Assets, Other Assets and Deferred Outflows of Resources

Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives.

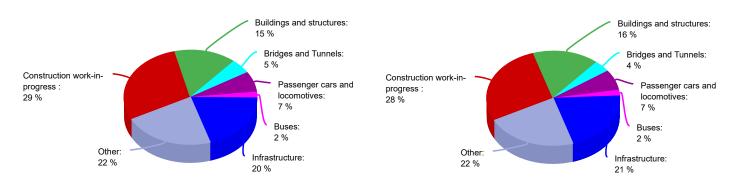
Other assets include, but are not limited to: cash, restricted and unrestricted investments, State and regional mass transit taxes receivables, and receivables from New York State.

Deferred outflows of resources reflect: changes in fair market values of hedging derivative instruments that are determined to be effective, unamortized loss on debt refunding, deferred outflows from pension activities, and deferred outflows from OPEB activities.

(In millions)	Sept	2022 December 31, 2021		(Decrease)	
Capital assets — net (see Note 6)	\$	85,094	\$	83,759	\$ 1,335
Other assets		21,193		19,998	1,195
Total Assets		106,287		103,757	2,530
Deferred outflows of resources		7,429		7,863	(434)
Total assets and deferred outflows of resources	\$	113,716	\$	111,620	\$ 2,096

Capital Assets, Net - September 30, 2022

Capital Assets, Net - December 31, 2021



Significant Changes in Assets and Deferred Outflows of Resources Include: September 30, 2022 versus December 31, 2021

- Net capital assets increased on September 30, 2022 by \$1,335, or 1.6%. There was an increase in construction in progress of \$1,340, an increase in other capital assets of \$824, an increase in infrastructure of \$739, an increase in buildings and structures of \$283, an increase in bridges and tunnels of \$174, an increase in buses of \$72, and an increase in passenger cars and locomotives of \$36. The increases were offset by a net increase in accumulated depreciation of \$2,133. See Note 6 to the MTA's Consolidated Interim Financial Statements for further information. Some of the more significant projects contributing to the net increase included:
 - Continued progress on the East Side Access, Second Avenue Subway and the subway action plan.
 - Infrastructure work including:
 - Repairs and improvements of all MTA Bridge and Tunnels' facilities.
 - o Construction of a third track between Floral Park and Hicksville by MTA Long Island Railroad.
 - o Improvements to MTA Long Island Railroad's road-assets, replacement of signal power lines, various right-of-way enhancements and upgrades of radio communications.
 - o Continued improvements to MTA Metro-North Railroad stations, tracks and structures, power rehabilitation of substations, and security.
 - Subway and bus real-time customer information and communications systems.
 - Continued structural rehabilitation and repairs of the ventilation system at various facilities.
 - o Continued passenger station rehabilitation for Penn Station and East Side Access Passenger station.
 - Ongoing work by MTA New York City Transit to make stations fully accessible and structurally reconfigured in accordance with the Americans with Disability Act ("ADA") standards.
- Other assets increased by \$1,195 or 6.0%. The major items contributing to this change include:
 - An increase in investments of \$4,219, primarily due to FTA grants received in 2022 offset by the redemption of MTA Grant Anticipation Notes.
 - A net increase in cash of \$520 from net cash flow activities, including timing of New York State's funding towards the MTA Capital Program and processing of capital payments.

Offsetting these increases were:

- A decrease of \$3,417 in federal and state government receivables primarily due to Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") funds received during 2022 which were accrued for in 2021.
- A net decrease in various other current and noncurrent assets of \$127.
- Deferred outflows of resources decreased by \$434 or 5.5%, primarily attributed to changes in the fair value of derivative instruments of \$274, amortization of loss on debt refunding of \$138, and a decrease in deferred outflows related to pensions and other post-employment benefits of \$22.

Total Liabilities and Deferred Inflows of Resources, Distinguishing Between Current Liabilities, Non-Current Liabilities and Deferred Inflows of Resources

Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, capital lease obligations, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities.

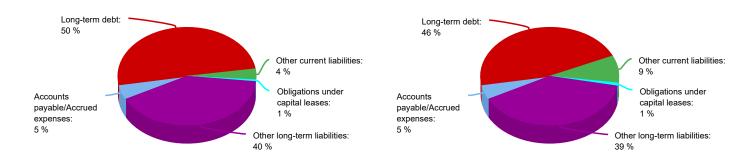
Non-current liabilities include: long-term debt, capital lease obligations, claims for injuries to persons, post-employment benefits and other non-current liabilities.

Deferred inflows of resources reflect unamortized gains on debt refunding, pension related deferred inflows, and deferred inflows from OPEB activities.

	September 30, Dece		ecember 31,		Increase /	
(In millions)	2022		2022 20		(Decrease	
Current liabilities	\$	8,565	\$	13,559	\$	(4,994)
Non-current liabilities		85,623		84,160		1,463
Total liabilities		94,188		97,719		(3,531)
Deferred inflows of resources		4,753		4,758		(5)
Total liabilities and deferred inflows of resources	\$	98,941	\$	102,477	\$	(3,536)

Total Liabilities - September 30, 2022

Total Liabilities - December 31, 2021



Significant Changes in Liabilities and Deferred Inflows of Resources Include: September 30, 2022 versus December 31, 2021

- Current liabilities decreased by \$4,994 or 36.8%. The decrease was primarily due to:
 - A decrease in the current portion of long-term debt of \$6,103, primarily from the redemption of MTA Grant Anticipation Notes and MTA Bond Anticipation Notes.
 - A decrease in capital accruals of \$278.
 - A net decrease of \$17 in employee related accruals.
 - A decrease of \$14 in obligations under capital lease due to a payment.

Offsetting increases were as follows:

- An increase in unearned revenue of \$752 due to timing of New York State's funding towards the MTA Capital Program and processing of capital payments.
- An increase in interest payable of \$506, mainly due to timing of interest payments on long-term debt.
- An increase in accounts payable due to vendors of \$158.
- A net increase in other current liabilities of \$2
- Non-current liabilities increased by \$1,463 or 1.7%. This increase was mainly due to:
 - An increase in the non-current portion of long-term debt of \$1,496, which includes a \$700 increase from the issuance of MTA Bridges and Tunnels Sales Tax Revenue Bonds, \$400 from issuance of MTA Bridges and Tunnels General Revenue Bonds, and a net increase of \$396 in other long-term debt activity.
 - An increase of \$248 in estimated liability arising from injuries to persons.

Offsetting decreases were:

- Decreases in derivative liabilities of \$246 resulting mainly from changes in market valuation and a reduction in the notional amount of derivative contracts.
- A net decrease in other various non-current liabilities of \$35.
- Deferred inflows of resources decreased by \$5 or 0.1%.

Total Net Position, Distinguishing Between Net Investment in Capital Assets, Restricted Amounts, and Unrestricted Amounts

(In millions)	Sept 	September 30, 2022			Increase / (Decrease)		
Net investment in capital assets	\$	33,128	\$	29,899	\$	3,229	
Restricted for debt service		1,623		1,039		584	
Restricted for claims		151		225		(74)	
Restricted for other purposes		4,908		1,346		3,562	
Unrestricted		(25,035)		(23,366)		(1,669)	
Total Net Position	\$	14,775	\$	9,143	\$	5,632	

Significant Changes in Net Position Include:

September 30, 2022 versus December 31, 2021

At September 30, 2022, total net position increased by \$5,632 or 61.6%, when compared with December 31, 2021. This change is a result of an increase in net non-operating revenues of \$10,926, an increase in appropriations, grants and other receipts externally restricted for capital projects of \$2,570, offset by operating losses of \$7,864.

The net investment in capital assets increased by \$3,229 or 10.8%. Funds restricted for debt service, claims and other purposes increased by \$4,072 or 156.0% in the aggregate, mainly due to scheduled debt service payments. Unrestricted net position decreased by \$1,669 or 7.1%.

Condensed Consolidated Interim Statement of Revenues, Expenses and Changes in Net Position

(In millions)	Nine-Month Period Ended September 30,					rease /
(III IIIIIIOIIS)	2	2022	2021		(Decrease)	
Operating revenues						
Passenger and tolls	\$	4,674	\$ 3,6	55	\$	1,019
Other		461	4	15		46
Total operating revenues		5,135	4,0	70		1,065
Non-operating revenues						
Grants, appropriations and taxes		5,677	5,3	39		338
Other		6,854	8	17		6,037
Total non-operating revenues		12,531	6,1	56		6,375
Total revenues		17,666	10,2	26		7,440
Operating expenses		_				
Salaries and wages		4,834	4,5	69		265
Retirement and other employee benefits		2,544	2,5	14		30
Postemployment benefits other than pensions		564	4	95		69
Depreciation and amortization		2,405	2,3	18		87
Other expenses		2,652	2,3	10		342
Total operating expenses		12,999	12,2	06		793
Non-operating expenses						
Interest on long-term debt		1,601	1,3	63		238
Other net non-operating expenses		4		4		-
Total non-operating expenses		1,605	1,3	67		238
Total expenses		14,604	13,5	73_		1,031
Gain / (Loss) before appropriations, grants and other receipts						
externally restricted for capital projects		3,062	(3,3	47)		6,409
Appropriations, grants and other receipts						
externally restricted for capital projects		2,570	2,4	12		158
Change in net position		5,632	(9	35)		6,567
Net position, beginning of period		9,143	4,9	83_		4,160
Net position, end of period	\$	14,775	\$ 4,0	48_	\$	10,727

Revenues and Expenses, by Major Source:

Period ended September 30, 2022 versus 2021

Total operating revenues increased by \$1,065, or 26.2%. The increase was mainly due to increased ridership on trains and subways, as well as increased tolls from vehicle crossings. Fare and toll revenue had increases of \$841 and \$178, respectively. Other operating revenues increased by \$46 when compared with the same period in 2021 due to higher advertising revenues and higher paratransit reimbursement subsidy.

- Total non-operating revenues increased by \$6,375, or 103.6%.
 - Other subsidies increased by \$6,037, primarily due to an increase of \$6,201 in funds from the Federal government's American Rescue Plan Act ("ARPA") to support operations and an increase in Station maintenance of \$7. This was offset by a decrease in other net non-operating expenses of \$69, a decrease in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of \$68, and a decrease in operating subsidies from New York City of \$34 for MTA Bus and MTA Staten Island Railway.
 - Grants, appropriations, and taxes increased by \$338 primarily due to an increase in Urban Tax of \$235, an increase in Payroll Mobility Tax of \$153, an increase in New York City Assistance Fund of \$80, an increase in Mansion Tax of \$58, an increase in Mortgage Recording Tax of \$38, and an increase in Mass Transportation Trust Fund from New York State of \$5. This was offset by a decrease in Aid Trust subsidies of \$126, a decrease in Metropolitan Mass Transportation Operating Assistance of \$74, due to timing of cash receipts, a decrease in Operating Assistance of \$29, and a decrease in Internet Sales Tax of \$2.
- Labor costs increased by \$364, or 4.8%, due to a \$142 increase in overtime, a \$123 increase in salaries, and a net increase of \$99 in employee benefits, including post-retirement benefits.
- Non-labor operating costs increased by \$429, or 9.3%. The variance was primarily due to:
 - An increase in electric power of \$102 and fuel of \$97 due mainly to increased service levels and rates.
 - An increase in depreciation of \$87 primarily due to more assets placed in service in the current year.
 - An increase in claims arising from injuries to persons of \$65 based on changes in estimated claim provisions.
 - An increase in material and supplies of \$40, mainly due to higher maintenance and repairs requirements.
 - A net increase in other non-labor expenses of \$38.
- Total net non-operating expenses increased by \$238, or 17.4%, due to an increase in interest on long-term debt.
- Appropriations, grants and other receipts externally restricted for capital projects increased by \$158, or 6.6% mainly due to timing of requisitioning for Federal and State grants.

OVERALL FINANCIAL POSITION AND RESULTS OF OPERATIONS AND IMPORTANT ECONOMIC CONDITIONS

Economic Conditions

Metropolitan New York is the most transit-intensive region in the United States, and a financially sound and reliable transportation system is critical to the region's economic well-being. The MTA consists of urban subway and bus systems, suburban rail systems, and bridge and tunnel facilities, all of which are affected by a myriad of economic forces. To achieve maximum efficiency and success in its operations, the MTA must identify economic trends and continually implement strategies to adapt to changing economic conditions.

After preliminary MTA system-wide utilization through the fourth quarter of 2021 rebounded past the depths experienced in 2020, with ridership up by 257.3 million trips (27.0%) over the 2020 ridership level, year-over-year improvements continued with ridership during the first quarter of 2022 up 118.6 million trips (53.9%) compared with the first quarter of 2021. Year-over-year ridership continued to improve in the second quarter and was up 108.7 million trips (37.8%) compared with the second quarter of 2021. Improvement continued in the third quarter, with ridership up 63.1 million trips (19.2%) compared with the third quarter of 2021. For the third quarter compared with the third quarter of 2021, MTA New York City Transit subway ridership increased by 47.9 million trips (23.2%), MTA New York City Transit bus increased by 5.1 million trips (6.2%), MTA Long Island Rail Road ridership increased by 4.0 million trips (39.4%), MTA Metro-North Railroad increased by 4.2 million trips (47.2%), MTA Bus increased by 1.8 million trips (9.4%), and MTA Staten Island Railway increased by 85 thousand trips (22.1%). Vehicle traffic at MTA Bridges and Tunnels facilities in 2021 increased by 54.1 million crossings (21.4%) compared with crossings during 2020. In the first quarter of 2022, crossings were up 9.2 million (14.5%) compared with the first quarter of 2021, and in the second quarter crossings were up 5.5 million (7.0%) compared with the second quarter of 2021. Third quarter B&T traffic, compared with the third quarter of 2021, was up 2.9 million crossings (3.4%).



The Central Business District Tolling Program (CBDTP) was authorized by the MTA Reform and Traffic Mobility Act and enacted in April 2019. The CBDTP will impose a toll for vehicles entering or remaining in the Central Business District (CBD), which is defined as Manhattan south of and inclusive of 60th Street, not including the FDR Drive or the West Side Highway (which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street). If implemented, changes in travel patterns are predicted as drivers to the CBD may avoid the toll by switching to transit or other modes, taking alternative routes, or not making the trip. The required Environmental Assessment was released on August 10, 2022, and public hearings and feedback concluded on September 9, 2022. The MTA anticipates the program to receive a decision from the Federal Highway Administration in the first quarter of 2023, at which time construction can begin if approval is granted.

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Seasonally adjusted non-agricultural employment in New York City for the third quarter was higher in 2022 than in 2021 by 269.7 thousand jobs (6.3%). On a quarter-to-quarter basis, New York City employment gained 65.2 thousand jobs (1.5%), the ninth consecutive quarterly increase. These increases were preceded by the steep decline of 891.4 thousand jobs (19.0%) during the second quarter of 2020.

National economic growth, as measured by Real Gross Domestic Product ("RGDP"), increased at an annualized rate of 2.6% in the third quarter of 2022, according to the most recent advance estimate released by the Bureau of Economic Analysis; in the second quarter of 2022, the revised RGDP decreased 0.6 percent. The increase in third quarter real GDP reflected increases in exports, consumer spending, nonresidential fixed investment, federal government spending, and state and local government spending. These were partially offset by decreases in residential fixed investment and private inventory investment. Imports, which are a subtraction in the calculation of GDP, decreased. The increase in exports reflected increases in both goods and services; the leading contributors to the increase were industrial supplies and materials, other nondurable goods, nonautomotive capital goods, and travel and financial services. Within consumer spending, an increase in services was led by health care and other services, and was partly offset by a decrease in goods, led by motor vehicles and parts as well as food and beverages. Within nonresidential fixed investment, increases in equipment and intellectual property products were partly offset by a decrease in structures. The increase in federal government spending was led by defense spending, while the increase in state and local government spending primarily reflected an increase in employee compensation. Within residential fixed investment, the leading contributors to the decrease were new single-family construction and brokers' commissions. The decrease in private inventory investment primarily reflected a decrease in retail trade. Within imports, a decrease in imports of goods, notably consumer goods, was partly offset by an increase in services imports, mainly travel.

The New York City metropolitan area's price inflation rate, as measured by the Consumer Price Index for All Urban Consumers ("CPI-U"), was lower than the national average in the third quarter of 2022, with the metropolitan area index increasing 6.4% while the national index increased 8.3% when compared with the third quarter of 2021. Regional prices for energy products increased 24.7%, and national prices of energy products also rose 25.5%. In the metropolitan area, the CPI-U exclusive of energy products increased by 5.3%, while nationally, inflation exclusive of energy products increased 7.0%. The New York Harbor spot price for conventional gasoline increased more steeply, by 35.1%, from an average price of \$2.26 per gallon to an average price of \$3.05 per gallon between the third quarters of 2021 and 2022.

In its announcement on November 2, 2022, the Federal Open Market Committee ("FOMC") raised its target for the Federal Funds rate to the 3.75% to 4.00% range, the sixth increase since March 2022. The Federal Funds rate target had been in the 0.00% to 0.25% range from March 15, 2020 through March 16, 2022, when the FOMC increased the target to the 0.25% to 0.50% range. The target was further increased to the 0.75% to 1.00% range on May 4, 2022, to the 1.50% to 1.75% range on June 15, 2022, to the 2.25% to 2.50% range on July 27, 2022, to the 3.00% to 3.25% range on September 21, 2022, and most recently to the 3.75% to 4.00% range on November 2, 2022. In support of its actions, FOMC noted that job gains have remained robust, the unemployment rate has remained low, and inflation remains elevated and reflects supply and demand imbalances related to the pandemic, higher food and energy prices, and broader price pressures. Russia's war in Ukraine, in addition to the tremendous human and economic hardship it is causing, has created additional upward pressure on inflation and is weighing on global economic activity. In addition to increases in the Federal Funds rate target, the FOMC since May has been reducing its holdings of Treasury securities and agency mortgage-backed securities. The FOMC seeks to achieve maximum employment, with achieving a two percent inflation rate over the longer term and is prepared to adjust the stance of its monetary policy as appropriate if risks emerge that could impede its employment and inflation goals based on assessments of the economic outlook, considering information on public health, labor market conditions, inflation pressures and expectations, and financial and international developments.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was signed into law and provided \$4.0 billion in funding to the MTA. The Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") became law on December 27, 2020, and provided the MTA with \$4.1 billion in aid. On March 11, 2021, the American Rescue Plan Act of 2021 ("ARPA") was signed in law, and MTA received \$6.9 billion in aid from ARPA.

The influence of the Federal Reserve's monetary policy on the mortgage market is a matter of interest to the MTA, since variability of mortgage rates can affect real estate transactions and thereby impact receipts from the Mortgage Recording Taxes ("MRT") and the Urban Taxes, two important sources of MTA revenue. While real estate transaction activity initially was severely impacted by social distancing and the economic disruption caused by the COVID-19 pandemic, demand for suburban

residential real estate, along with mortgage rates that were historically low until recently, significantly strengthened mortgage activity and refinancing of existing mortgages. Mortgage Recording Tax collections in the third quarter of 2022 were higher than the third quarter of 2021 by \$52.3 million (10.8%). Average monthly receipts in the third quarter of 2022 were \$3.9 million (6.1%) lower than the monthly average for 2006, just prior to the steep decline in Mortgage Recording Tax revenues during the Great Recession. MTA's Urban Tax receipts during the third quarter of 2022—which are derived from commercial real estate transactions and mortgage recording activity within New York City and can vary significantly from quarter to quarter based on the timing of exceptionally high-priced transactions—were \$309.9 million (102.1%) higher than receipts during the third quarter of 2021. Average monthly receipts in the third quarter of 2022 were \$5.4 million (7.4%) lower than the monthly average for 2007, just prior to the steep decline in Urban Tax revenues during the Great Recession.

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Results of Operations

MTA Bridges and Tunnels - For the nine months ended September 30, 2022, operating revenue from tolls totaled \$1,743, which was \$179, or 11.4%, higher than the nine months of 2021. Paid traffic for the third quarter of 2022 totaled 244.0 million crossings, which was 17.6 million, or 7.8% above the third quarter of 2021. Traffic continued to recover from the impacts of the Covid-19 pandemic but is still below pre-pandemic levels. September traffic was 28.1 million vehicles, which was 4.0% higher than in the same period in 2021, which is mainly due to improvement in the regional economy and the rebound of traffic as Covid-19 pandemic impact eases.

MTA New York City Transit - For the nine months ended September 30, 2022, revenue from fares was \$2,157, an increase of \$540, or 33.4%, compared to September 30, 2021. For the same comparative period, total operating expenses were higher by \$501, or 6.4%, totaling \$8,367 for the nine months ended September 30, 2022.

MTA Long Island Rail Road - Total operating revenue for the nine months ended September 30, 2022 was \$357, which was higher by \$137, or 62.3%, compared to nine months ended September 30, 2021. For the same comparative period, operating expenses were higher by \$118, or 8.2%, totaling \$1,556 for the nine months ended September 30, 2022.

MTA Metro-North Railroad – For the nine months ended September 30, 2022, operating revenues totaled \$338, an increase of \$152, or 81.7%, compared to September 30, 2021. During the same period, operating expenses increased by \$114, or 9.7%, to \$1,289. For the nine months ended September 30, 2022, fare revenue increased by 85.4% to \$317 compared to September 30, 2021. Passenger fares accounted for 93.8% and 91.9% of operating revenues in 2022 and 2021, respectively. The remaining revenue represents collection of rental income from stores in and around passenger stations and revenue generated from advertising.

The MTA receives the equivalent of four quarters of Metropolitan Mass Transportation Operating Assistance ("MMTOA") receipts each year, with the state advancing the first quarter of each succeeding calendar year's receipts in the fourth quarter of the current year. This results in little or no Metropolitan Mass Transportation Operating Assistance receipts being received during the first quarter of each calendar year. The MTA has made other provisions to provide for cash liquidity during this period. During April 2022, the State appropriated \$2.6 billion in MMTOA funds. There has been no change in the timing of the State's payment of, or MTA's receipt of, Dedicated Mass Transportation Trust Fund ("MTTF") receipts, which MTA anticipates will be sufficient to make monthly principal and interest deposits into the Debt Service Fund for the Dedicated Tax Fund Bonds. The total MRT for the period ended September 30, 2022 was \$525 compared to \$487 at September 30, 2021.

Capital Programs

At September 30, 2022, \$10,362 had been committed and \$3,201 had been expended for the 2020- 2024 MTA Bridges and Tunnels Capital Program, \$29,734 had been committed and \$22,437 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and \$29,057 had been committed and \$27,419 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and \$24,120 had been committed and \$23,940 had been expended for the combined 2005-2009 MTA Capital Programs and the 2005-2009 MTA Bridges and Tunnels Capital Program.

The MTA Group has ongoing capital programs, which except for MTA Bridges and Tunnels are subject to the approval of the Metropolitan Transportation Authority Capital Program Review Board ("CPRB"), and are designed to improve public transportation in the New York Metropolitan area.

2020-2024 Capital Program – Capital programs totaling \$54,799 covering the years 2020-2024 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro- North Railroad (the "2020-2024 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2020–2024 Transit Capital Program") were originally approved by the MTA Board on September 25, 2019. The capital programs were subsequently submitted to the Capital Program Review Board ("CPRB") on October 1, 2019 and approved on January 1, 2020. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the "2020-2024 MTA Bridges and Tunnels Capital Program") was approved by the MTA Board on September 25, 2019 and was not subject to CPRB approval. On December 15, 2021, the MTA Board approved an amendment to increase the 2020-2024 Capital Program by \$535 million to support the Penn Station Access project. On July 27, 2022 the MTA Board approved an amendment to increase the 2020-2024 Capital Program by \$108 million to reflect addition of new projects, additional support for existing projects and changes to existing project budgets. The capital programs were subsequently submitted to the CPRB on August 1, 2022 and approved on August 30, 2022. The revised 2020-2024 MTA Bridges and Tunnels Capital Program totaling \$3,327 as approved by the MTA Board on July 27, 2022, was not subject to CPRB approval.

By September 30, 2022, the revised 2020-2024 Capital Programs provided \$55,442 in capital expenditures. The combined funding sources for the 2020-2024 MTA Capital Programs and the 2020-2024 MTA Bridges and Tunnels Capital Program, include \$15,000 in Central Business District tolling sources, \$10,000 in new revenue sources, \$8,037 in MTA bonds and PAYGO, \$3,327 in MTA Bridges and Tunnels bonds, \$12,429 in Federal funds, \$3,100 in State of New York funding, \$3,007 in City of New York funding, and \$542 in other contributions.

2015-2019 Capital Program — Capital programs covering the years 2015-2019 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the "2015-2019 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2015-2019 Transit Capital Program") were originally approved by the MTA Board in September 2014. The capital programs were subsequently submitted to the Capital Program Review Board ("CPRB") in October 2014. This plan was disapproved by the CPRB, without prejudice, in October 2014. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the "2015-2019 MTA Bridges and Tunnels Capital Program") was approved by the MTA Board in September 2014 and was not subject to CPRB approval.

On April 20, 2016, the MTA Board approved revised capital programs for the years covering 2015-2019. The revised capital programs provided for \$29,456 in capital expenditures. On May 23, 2016, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program, was approved by the MTA Board on April 20, 2016. On February 23, 2017, the MTA Board approved a revision to the CPRB portion of the capital programs for the years covering 2015-2019, adding \$119 transferred from prior capital programs to support additional investment projects. On March 30, 2017, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. On May 24, 2017, the MTA Board approved a full amendment to the 2015-2019 Capital Programs to reflect updated project estimates and rebalanced programs to address budgetary and funding needs of priority projects that include Second Avenue Subway Phase 2, MTA Long Island Rail Road regional mobility, station enhancement work, investments at Penn Station, and new Open Road Tolling at MTA Bridges and Tunnels. On July 31, 2017, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems totaling \$29,517, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling \$2,940, as approved by the MTA Board in May 2017, was not subject to CPRB approval. On December 13, 2017, the MTA Board approved an amendment adding \$349 to the 2015-2019 Capital Program for the Transit system in support of the NYC Subway Action Plan. On April 25, 2018, the MTA Board approved a full amendment to increase the 2015-2019 Capital Programs to \$33,270 reflecting updated project cost estimates, emerging new needs across the agencies, and reallocation of funds within the East Side Access and Regional Investment programs, among others. On May 31, 2018, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems totaling \$30,334, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling \$2,936, as approved by the MTA Board in April 2018, was not subject to CPRB approval. On September 25, 2019, the MTA Board approved a full amendment to increase the 2015-2019 Capital Program to \$33,913 reflecting updated project timing and cost estimates, new needs, and changing priorities. On February 21, 2020, the CPRB deemed approved the revised 2015-2019 Capital Program for the Transit and Commuter systems totaling \$30,977, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling \$2,936, as approved by the MTA Board in September 2019, was not subject to CPRB approval.

By September 30, 2022, the revised 2015-2019 Capital Programs provided \$33,969 in capital expenditures, of which \$16,749 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$6,142 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$7,507 relates to the expansion of existing rail networks for both the transit and commuter systems; \$258 relates to Planning and Customer Service; \$376 relates to MTA Bus Company initiatives; and \$2,935 in capital expenditures for ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities.

The combined funding sources for the revised 2015–2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, include \$8,398 in MTA bonds, \$2,942 in MTA Bridges and Tunnels dedicated funds, \$9,196 in State of New York funding, \$7,638 in Federal funds, \$2,669 in City of New York funding, \$2,156 in pay-as-you-go ("PAYGO") capital, \$804 from asset sale/leases, and \$165 from other sources.

2010-2014 Capital Program — Capital programs covering the years 2010-2014 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the "2010–2014 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2010–2014 Transit Capital Program") were originally approved by the MTA Board in September 2009. The capital programs were subsequently submitted to the CPRB in October 2009. This plan was disapproved by the CPRB, without prejudice, in December 2009 allowing the State Legislature to review funding issues in their 2010 session. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the "2010–2014 MTA Bridges and Tunnels Capital Program") was approved by the MTA Board in September 2009 and was not subject to CPRB approval. The MTA Board approved the revised plan for the Transit and Commuter systems on April 28, 2010 and CPRB approval of the five- year program of projects was obtained on June 1, 2010. The approved CPRB program fully funded only the first two years (2010 and 2011) of the plan, with a commitment to come back to CPRB with a funding proposal for the last three years for the Transit and Commuter Programs. On December 21, 2011, the MTA Board approved an amendment to the 2010-2014 Capital Program for the Transit, Commuter, and Bridges and Tunnels systems that fund the last three years of the program through a combination of self-help (efficiency improvements and real estate initiatives), participation by our funding partners, and innovative and pragmatic financing arrangements. On March 27, 2012, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted.

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On December 19, 2012, the MTA Board approved an amendment to the 2010-2014 Capital Programs for the Transit, Commuter, and Bridges and Tunnels systems to add projects for the repair/restoration of MTA agency assets damaged as a result of Superstorm Sandy, which struck the region on October 29, 2012. On January 22, 2013, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted. On July 22, 2013, the MTA Board approved a further amendment to the 2010-2014 Capital Programs for the Transit, Commuter, and Bridges and Tunnels systems to include specific revisions to planned projects and to include new resilience/mitigation initiatives in response to Superstorm Sandy.

On August 27, 2013, the CPRB deemed approved those amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted. On July 28, 2014, the MTA Board approved an amendment to select elements of the Disaster Recovery (Sandy) and MTA New York City Transit portions of the 2010- 2014 Capital Programs, and a change in the funding plan. On September 3, 2014, the CPRB deemed approved the amended 2010-2014 Capital Programs for the Transit and Commuter systems as submitted.

In May 2017, the MTA Board approved an amendment to the 2010-2014 Capital Programs to reflect scope transfers and consolidation between the approved capital programs, and to reflect reductions to the MTA Superstorm Sandy capital projects to match current funding assumptions. This amendment, which provided \$29,237 in capital expenditures for the Transit and Commuter systems, was deemed approved by the CPRB as submitted on July 31, 2017. The amended 2010-2014 MTA Bridges and Tunnels Capital Program, which provided \$2,784 in capital expenditures, was not subject to CPRB approval. On September 25, 2019, the MTA Board approved an amendment to decrease the 2010-2014 Capital Programs to \$31,704 reflecting administrative budget adjustments and updated project cost and timing assumptions. On February 21, 2020, the CPRB deemed approved the revised 2010-2014 Capital Programs for the Transit and Commuter systems totaling \$28,917, as submitted. The revised 2010-2014 MTA Bridges and Tunnels Capital Program totaling \$2,787, as approved by the MTA Board in September 2019, was not subject to CPRB approval.

By September 30, 2022, the 2010-2014 MTA Capital provided \$31,701 in capital expenditures, of which \$11,371 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$3,921 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$5,861 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; \$256 relates to a multi-faceted security program including MTA Police Department; \$216 relates to MTA Interagency; \$297 relates to MTA Bus Company initiatives; \$2,022 relates to the ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities; and \$7,757 relates to Superstorm Sandy recovery/mitigation capital expenditures.

The combined funding sources for the CPRB-approved 2010–2014 MTA Capital Programs and 2010–2014 MTA Bridges and Tunnels Capital Program include \$11,701 in MTA Bonds, \$2,022 in MTA Bridges and Tunnels dedicated funds, \$7,325 in Federal Funds, \$132 in MTA Bus Federal and City Match, \$719 from City Capital Funds, and \$1,275 from other sources. Also included is \$770 in State Assistance funds added to re-establish a traditional funding partnership. The funding strategy for Superstorm Sandy repair and restoration assumes the receipt of \$6,697 in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), \$171 in pay-as-you- go capital, supplemented, to the extent necessary, by external borrowing of up to \$889 in additional MTA and MTA Bridges and Tunnels bonds.

2005-2009 Capital Program — Capital programs covering the years 2005-2009 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the "2005–2009 Commuter Capital Program"), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the "2005–2009 Transit Capital Program") were originally approved by the MTA Board in April 2005 and subsequently by the CPRB in July 2005. The capital program for the toll bridges and tunnels operated by MTA Bridges and Tunnels (the "2005–2009 MTA Bridges and Tunnels Capital Program") was approved by the MTA Board in April 2005 and was not subject to CPRB approval. The 2005–2009 amended Commuter Capital Program and the 2005-2009 Transit Capital program (collectively, the "2005-2009 MTA Capital Programs") were last amended by the MTA Board in July 2008. This latest 2005-2009 MTA Capital Program amendment was resubmitted to the CPRB for approval in July 2008, and was approved in August 2009.

As last amended by the MTA Board, the 2005-2009 MTA Capital Programs and the 2005-2009 MTA Bridges and Tunnels Capital Program, provided for \$24,353 in capital expenditures. By September 30, 2022, the 2005-2009 MTA Capital Programs budget increased by \$634 primarily due to the receipt of new American Recovery and Reinvestment Act ("ARRA") funds and additional New York City Capital funds for MTA Capital Construction work still underway. Of the \$23,353 provided in capital expenditures, \$11,515 relates to ongoing repairs of, and replacements to the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$3,723 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$166 relates to certain interagency projects; \$7,671 relates generally to the expansion of existing rail networks for both the transit and commuter systems to be managed by the MTA Capital Construction Company (including the East Side Access, Second Avenue Subway and No.7 subway line) and a security program throughout MTA's transit network; \$1,127 relates to the ongoing repairs of, and replacements to, bridge and tunnel facilities operated by MTA Bridges and Tunnels; and \$152 relates to capital projects for the MTA Bus.

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The combined funding sources for the MTA Board-approved 2005–2009 MTA Capital Programs and 2005–2009 MTA Bridges and Tunnels Capital Program include \$11,189 in MTA and MTA Bridges and Tunnels Bonds (including funds for LaGuardia Airport initiative), \$1,450 in New York State general obligation bonds approved by the voters in the November 2005 election, \$7,803 in Federal Funds, \$2,810 in City Capital Funds, and \$1,100 from other sources.

CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

The 2022 MTA November Financial Plan

The 2022 MTA November Financial Plan (the "November Plan"), which includes the 2022 November Forecast, the 2023 Final Proposed Budget and a Financial Plan for the years 2023 to 2026, updates the 2022 July Financial Plan (the "July Plan").

The July Plan - The July Plan projected annual balanced budgets through 2024, with unfunded deficits of approximately \$2.5 billion in both 2025 and 2026. The balanced budgets were only achieved with the federal COVID relief funds awarded to the MTA, which totaled \$15.1 billion since the start of the pandemic. MTA received \$4.0 billion in 2020 from the Coronavirus Aid, Relief and Economic Security (CARES) Act, \$4.1 billion in 2021 from the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSAA) and \$7.0 billion in 2022 from the American Rescue Plan Act of 2021 (ARPA).

This federal funding covers the structural imbalance in MTA's finances in the near-term. Without federal COVID relief funds, each year of the Plan would be in substantial deficit. In addition, the deficits in the July Plan would have been higher without the assumed 4% fare and toll increases in 2023 and 2025 that were built into the Plan. The 2026 annual deficit would have reached approximately \$3 billion without such increases being implemented.

Since the July Plan, ridership recovery remained steady at about 61% of the pre-pandemic level through the summer, and then moved upwards to 63% in September and 64% in October and is tracking the midpoint projection based on the recent McKinsey updated analysis.

The November Plan - Before the use of federal COVID relief funds to offset deficits, the July Plan had projected deficits of \$2.6 billion in 2022, \$2.4 billion in 2023, \$2.3 billion in 2024, \$2.6 billion in 2025, and \$2.6 billion in 2026. These deficits included the favorable impacts from two actions proposed in the July Plan: fare and toll yield increases of four percent effective in both March 2023 and March 2025, which were expected to generate \$1.5 billion through 2026; and operating efficiency savings ("Fiscal Baseline Reset") expected to generate \$400 million in lower expenses through 2026. The November Plan will use the same ridership forecast that was set forth in the July Plan based on the midpoint ridership recovery derived from the McKinsey analysis dated July 2022. The November Plan, before the use of federal COVID aid, shows improvement in 2022, but worsening deficits in the out-years of the Plan.

At the start of 2023, approximately \$5.6 billion of COVID funds will remain. This funding will cover only a portion of the deficits projected for 2023 through 2026, which total \$11.4 billion. The November Plan proposes to lower these deficits through a series of MTA actions, including applying COVID funds to offset MTA liabilities and cover a portion of the deficits in each year of the Plan. Alternatively, the remaining federal COVID funds could be spent to fully cover deficits in 2023 and 2024. This would result in much larger deficits starting in 2025. To close the 2023 deficit, and reduce the deficits in the out-years, several actions are being proposed beyond the actions proposed in the July Plan:

MTA Operating Efficiencies - MTA operating agencies are engaged in an ambitious effort to identify innovative ways of doing business more efficiently and as a result reduce expenses and improve service to customers. Operating Agency and Headquarters leadership have identified concrete initiatives to generate sizeable savings and help address the fiscal cliff. The operating efficiency initiatives will generate \$100 million in 2023, increasing to \$400 million in 2024, \$408 million in 2025 and \$416 million in 2026.

Savings from Deficit Note Repayment - MTA will use a portion of federal COVID aid to repay, rather than long-term bond, the Federal Reserve Municipal Liquidity Facility Bond Anticipation Note at maturity, eliminating debt service costs of \$558 million during the Plan period.

Increase 2023 Fare and Toll Revenue Targets - MTA is proposing a 2023 fare and toll increase yielding approximately 5.5% in additional fare and toll revenue. This action is estimated to generate a total of \$1,309 million, which includes an additional \$350 million over the Plan period and is reflected in Other Below-the-Line Adjustments in the Plan Adjustments section.

Applying federal COVID funds to reduce debt and operating costs through 2026 - MTA is proposing to use the remaining federal COVID funds to both offset a portion of the deficits in 2023 and reduce debt and liability costs throughout the entire financial plan period.

New Government Funding or Additional MTA Actions - The 2023 budget assumes \$600 million in additional government funding and/or additional MTA actions, both of which have not yet been specified. If no additional government funding is made available, MTA actions could include further expense reduction, additional revenues, or acceleration of federal COVID aid to achieve balance for 2023 that would have otherwise been used to reduce deficits in the years after 2023.

More detailed information on the November Plan can be found in the MTA 2023 Final Proposed Budget – November Financial Plan 2023-2026 Volumes 1 and 2 at www.MTA.info.

Impacts from Global Coronavirus Pandemic

On March 12, 2020, the World Health Organization declared the current novel coronavirus ("COVID-19") outbreak to be a pandemic in the face of the global spread of the virus. By order of Governor Cuomo ("New York State on PAUSE"), effective March 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a severe decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. Social distancing mandates have eased, and the region moved into a late-pandemic phase. A significant development has been the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. Ridership levels continue to show improvement, although ridership remains significantly below pre-pandemic levels. MTA New York City Subway resumed 24 hours a day service on May 17, 2021, after subway service was shut down overnight for over a year to allow for thorough disinfecting of the system and other enhancements. MTA Long Island Rail Road currently operates on an 87% pre-pandemic service level during the week and 100% on weekends relative to pre-pandemic levels.

- Ridership and Traffic Update. Daily ridership on MTA facilities continues to be well-below 2019 levels. While ridership
 has been steadily increasing, ridership compared to the pre-pandemic equivalent day in 2019 is down 38 percent on the
 subways, 45 percent for bus (combined NYCT bus and MTA Bus Company), 32 percent on MTA Metro-North Railroad,
 and 33 percent on the MTA Long Island Rail Road. Traffic crossings at MTA Bridges and Tunnels facilities are nearly
 at pre-pandemic levels.
- Federal Legislative Actions. Three major pieces of federal emergency legislation have provided and will provide incremental federal aid to the MTA. The first was the CARES Act, which was signed into law on March 27, 2020. The CARES Act, through the Federal Transit Administration's ("FTA") formula funding provisions provided \$4.0 billion to MTA. The second major COVID-19 pandemic aid bill was the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA"), which became law on December 27, 2020. The MTA received \$4.1 billion in aid from the CRRSAA between December 2021 (\$0.6 billion) and January 2022 (\$3.5 billion). The third major COVID-19 pandemic aid bill is the \$1.9 trillion "American Rescue Plan Act of 2021 ("ARPA") which was signed into law by President Biden on March 11, 2021. On November 9, 2021, an agreement was reached on the allocation of the CRRSAA and ARPA monies among the states of New York, New Jersey, and Connecticut. MTA received \$6.1 billion in federal aid from ARPA in 2022. In September of 2021, additional ARPA Assistance funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received \$769 million in such additional aid in the fourth quarter of 2022.
- FEMA Reimbursement. The MTA is eligible for Federal Emergency Management Agency ("FEMA") payments in addition to the CARES Act, CRRSAA and ARPA funding, which are expected to cover expenses related to the COVID-19 pandemic, over and above normal emergency costs that are not covered by other federal funding. An estimated \$795.4 of direct COVID-19 related expenses incurred from the start of the pandemic through July 1, 2022 was submitted by MTA to the New York State Department of Budget ("DOB"), which is the agency managing COVID-19-related expense reimbursement from FEMA. An additional estimated \$80 million is expected to be submitted for the period ended September 30, 2022.

For additional information, refer to Note 14 to the MTA's Consolidated Interim Financial Statements for more information regarding the impact from the COVID-19 pandemic.

This financial report is designed to provide our customers and other interested parties with a general overview of MTA finances and to demonstrate MTA's accountability for the funds it receives. If you have any questions about this report or need additional financial information, contact Metropolitan Transportation Authority, Deputy Chief, Controller's Office, 2 Broadway, New York, NY 10004.

Tropical Storm Sandy Update

The total allocation of emergency relief funding from the Federal Transit Administration ("FTA") to MTA in connection with Superstorm Sandy to date is \$5.83 billion, including \$1.599 billion allocated on September 22, 2014, through a competitive resiliency program. A total of \$5.81 billion in FTA Emergency Relief Funding has been executed: seven repair/local priority resiliency grants totaling \$4.55 billion and seventeen competitive resiliency grants totaling \$1.26 billion. As of September 30, 2022, MTA has drawn down a total of \$3.80 billion in grant reimbursement for eligible operating and capital expenses. The balance of funds to be drawn down from all twenty-four grants is available to MTA for reimbursement of eligible expenses as requisitions are submitted by MTA and approved by FTA. Additional requisitions are in process. At MTA and Amtrak's request, in April 2018, FTA transferred \$13.5 of MTA's emergency relief allocation to the Federal Railroad Administration ("FRA") to allow Amtrak to execute a portion of MTA Long Island Rail Road's Competitive Resilience scope.

All MTA-allocated Superstorm Sandy FTA emergency relief funding/grants have been executed.

Labor Update

Since the resumption of labor negotiations in the first quarter of 2021, after a lengthy pause interposed by the emergence of COVID-19, the MTA has sought labor agreements, both equitable and financially prudent, whose economic provisions would be patterned after those contained in the 2019-2023 TWU deal. Throughout 2021 and through the second quarter of 2022, the MTA has continued to pursue a collective bargaining strategy that recognizes both the dedication of our represented workforce and the significant financial uncertainty cast by pandemic.

As previously reported, successful negotiations through the second quarter of 2022 produced labor agreements covering more than 90% of represented employees at Long Island Railroad and more than 60% at Metro-North. These agreements awarded general wage increases of 2.0% and 2.25% for 2019 and 2020, respectively, truncating the four-year pattern established in the 2019-2023 deal between New York City Transit and its largest union, TWU Local 100; and deferring its later wage increases (2.5% for 2021 and 2.75% for 2022) until negotiations on further provisions would proceed with improved estimates of the long-term effects of COVID on MTA's finances.

Beginning in the third quarter of this year, since most of the two-year railroad agreements described above had already lapsed upon Board approval, the MTA began to advance successor agreements that would correspond to the remaining two years of the pattern-setting TWU agreement. These agreements included wage increases of 2.5% and 2.75% for 2021 and 2022, respectively. As a partial offset and to match the net going-out costs of the TWU agreement (relative to variable base labor costs), the agreements included a two-month contract extension, covering 26 months between 2021 and 2023, depending on contract start dates.

Additionally, and in parallel with this collective bargaining effort, through the third quarter of 2022 the MTA has been able to settle terms with several non-railroad unions that follow either the TWU pattern or other recognized agreement patterns.

The ensuing paragraphs describe in greater detail the terms of new labor agreements, as well as the status of collective bargaining at each MTA agency through September 30, 2022.

MTA Long Island Rail Road - As of September 30, 2022, MTA Long Island Rail Road had approximately 7,202 employees. Approximately 6,415 of the railroad's employees are represented by 8 different unions in 19 bargaining units. Collective bargaining efforts in the first and second quarters of 2021 produced several agreements that were ratified and approved by the MTA Board in June of that year. These agreements, reached separately with all MTA Long Island Rail Road unions other than the Brotherhood of Locomotive Engineers and a small group of Supervisors in the International Railway Supervisors Association, covered more than 90% of the represented workforce at MTA Long Island Rail Road. Spanning the two-year period from April 16, 2019 through April 15, 2021, the agreements included identical provisions. They each awarded the same wage increases as the first two years of the current 4-year TWU Local 100 agreement: that is, 2.0% on the first day of the new agreement and an additional 2.25% one year later. They included no other financial terms.

Because virtually all these agreements had expired upon ratification by the MTA Board, the MTA has advanced successor deals that would mirror the remaining two years of the TWU agreement. In July 2022, seven 2-year, 2-moth agreements were ratified by the MTA Board. These were, as follows: an agreement covering approximately 2,702 employees represented by the Sheet Metal, Air, Rail and Transportation Workers International Association-Transportation Division (SMART-TD); an agreement covering approximately 1,061 members of the Transportation Communications Union (TCU); an agreement with the Independent Railway Supervisors Association (IRSA), representing around 265 Gang Foremen; an agreement with the Brotherhood of Railroad Signalmen (BRS), representing 751 Signalmen and Communications employees; an agreement with 44 Yardmasters, represented by the Sheet Metal, Air, Rail and Transportation Workers International Association, Local 1978 (SMART-Y); an agreement with approximately 96 Plumbers and Sheet Metal Workers, represented by the Sheet Metal, Air, Rail and Transportation Workers International Association, Local 149 (SMART); and an agreement with 252 Machinists represented by the International Association of Machinists (IAM). The aforementioned agreements all span the period from April 16, 2021 through June 15, 2023. They all provide general wage increases of 2.5% and 2.75% for 2021 and 2022, respectively, and include a two-month contract extension.

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An identical agreement between LIRR and 78 members of the National Conference of Firemen and Oilers (NCF&O) was approved by the MTA Board in September.

MTA Metro-North Railroad - As of September 30, 2022, Metro-North Railroad employs approximately 5,956 people. Among these are around 5,186 employees represented by ten different unions. At the start of the third quarter of 2022, Metro-North Railroad had reached 2-year labor agreements with more than 60% of its represented population. These deals, spanning 24-month periods between 2019 and 2021, depending upon varying contract start dates, provided the first two general wage increases common to all earlier railroad agreements: 2.0% for 2019 and 2.25% for 2020.

In July 2022, the MTA Board approved another such agreement between Metro-North Railroad and approximately 385 Locomotive Engineers represented by the Association of Commuter Rail Employees Division 9 (ACRE-9). Like most of the other MNR agreements reached between June 2021 and the end of June 2022, the ACRE-9 agreement covered a lapsed period. However, the July Board also approved the first of Metro-North's successor agreements. Like those reached with the unions at LIRR, this agreement with more than 600 members of the Transportation Communications Union (TCU), follows the TWUpattern wage increases (2.5% and 2.75%, respectively, for 2021 and 2022); and it includes, as a partial offset, a two month contract extension.

In September of 2022, the MTA Board approved four additional successor agreements with unions at Metro-North. These covered more than 1,100 employees represented by the following unions: approximately 200 employees in the American Airway and Railway Supervisor Association, Maintenance of Equipment Division (ARSA MoE); approximately 70 employees represented by the American Airway and Railway Supervisor Association, Maintenance of Equipment Division (ARSA MoW); approximately 750 employees represented by the International Brotherhood of Teamsters, (IBT Local 808); and approximately 90 employees represented by the National Conference of Firemen and Oilers (NCF&O). Except for contract start and end dates, the terms of these deals are identical to those reached with the other railroad unions for 2021-2023.

MTA Headquarters – As of September 30, 2022, nearly all the 3,425 represented MTA Headquarters' employees were under expired labor agreements. Labor agreements with MTA Police members of the Police Benevolent Association ("PBA") and of the Commanding Officers Association ("COA") expired in October 2018. Negotiations to establish new terms with the PBA, currently covering more than 1,000 employees-- or around 31% of MTA Headquarters' represented population-- progressed towards conclusion throughout the quarter; but at the close of the third quarter, a new deal with the PBA remained a prospect for the next quarter.

Similarly, agreements with the Transportation Communications Union ("TCU"), currently representing approximately 841 employees who work at MTA Headquarters, were also all beyond term. These include IT employees of TCU Local 982, whose agreement expired on December 31, 2019; and Business Service Center, Pensions and Procurement employees, represented by TCU Local 643, whose agreement expired March 31, 2020.

MTA New York City Transit/Manhattan and Bronx Surface Transit Operating Authority -- MTA New York City Transit and MaBSTOA currently employ approximately 46,255 people, 45,084 of whom are represented by 12 unions with 19 bargaining units. Aside from the TWU Local 100 agreement, which covers approximately 33,000 current hourly employees, resumption of collective bargaining since 2021 has produced several pattern-following agreements, as detailed in previous editions of this report. These include separate agreements with individual bargaining units of TWU Local 106, whose agreements had expired prior to 2019 and whose new terms corresponded to the TWU Local 100 pattern established for that union's 2017-2019 round of bargaining; a 2017-2019 pattern-based agreement for a small unit of supervisory employees represented by Special Inspectors Supervisors Employee Association ("SISEA"); an agreement with the Doctors Council-- a small unit of the Service Employees International Union ("SEIU")-- patterned after the 2017-2021 agreement between New York City and its Doctors Council bargaining unit.

In December 2021, the MTA Board approved the implementation of a collective bargaining agreement between New York City Transit, the Manhattan and Bronx Surface Transit Operating Authority, MTA Bus Company, MTA Headquarters and the United Transit Leadership Organization ("UTLO"). The agreement with approximately 877 employees in first line managerial titles covers the period from July 1,2019 through December 31, 2021. The agreement does not follow the TWU-based pattern, but rather provided 2% wage increases for 2019 and 2020, like those received by MTA Managers.

In 2020, in response to the COVID-related necessity of delaying collective bargaining, the Amalgamated Transit Unions (Locals

726 and 1056), which represent approximately 3,400 operational employees at MTA New York City Transit, began impasse mediation proceedings to compel a new agreement. The union sought delivery of a full four-year agreement matching the 2019-23 TWU pattern. In December, the Arbitrator of the case issued a decision that upholds the economic provisions of the full four-year TWU agreement. Accordingly, approximately 3,400 members of ATU's 1056 and 726 will receive annual wage increases, retroactive to 2019, of 2.0%, 2.25%, 2.50% and 2.75%. At the end of the third quarter, it remained to negotiate the other costs and savings of the TWU-based settlement.

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In September 2022, the MTA Board approved four labor agreements between NYCT/MaBSTOA and more than 1,000 represented employees. All of them are directly patterned after the 2019-2023 TWU Local 100 agreement. As distinct from the railroad agreements described above, they cover the full four-year period from 2019-2023 all at once. They provide the same wage increases of 2.0% for 2019, 2.25% for 2020, 2.5% for 2021 and 2.75% for 2022, as well as certain provisions analogous to those received by the employees in the large TWU group. The September Board approved agreements with the Transport Workers Union, Local 100 (TWU L.100, Analysts Unit, NYCT/MaBSTOA), covering approximately 578 employees for the period July 14. 2019 through September 30, 2023; the Transport Workers Union, Local 100 (TWU L.100, Career & Salary Unit, NYCT/ MaBSTOA), covering approximately 60 employees for the period July 14, 2019 through September 30, 2023; the Transport Workers Union, Local 100 (TWU L.100, Computer Titles Unit, NYCT/MaBSTOA), covering approximately 358 employees for the period July 14. 2019 through September 30, 2023; and the Special Inspectors Supervisor Employees Association (SISEA, NYCT), covering approximately 39 employees for the period May 9, 2020 through September 8, 2024.

MTA Bus Company - As of September 30, 2022, MTA Bus Company has 3,851 employees, approximately 3,732 of whom are represented by three different unions (now including UTLO) and five bargaining units. The largest of these is TWU Local 100, whose members were co-parties to the agreement approved by the MTA Board in January 2020 and whose current agreement will run through May 14, 2023.

As described above, in June 2021 the MTA Board had approved agreements with separate bargaining units with TWU Local 106 ("TSO"), including approximately 304 employees in the MTA Bus Company. That agreement spanned from September 1, 2018 to December 31, 2020.

The operational employees represented by the Amalgamated Transit Union (Local 1179) were party to the arbitration proceedings described above. As a result of the December ruling, they will also be covered by a TWU-based agreement that will run through October 31, 2023. Meanwhile, the ATU's other bargaining unit (ATU Local 1181) continued negotiations with the Bus Company toward a new labor agreement.

In September, the MTA Board approved an agreement between MTA Bus Company and the Transport Workers Union, Local 100 (TWU L.100, Administrative Unit, MTA Bus Company), covering approximately 100 employees for the period July 14, 2019 through September 30, 2023. The four-year agreement is identical to those between NYCT/MaBSTOA and its TWU Local 100 units described above, all of which were also approved by the September 2022 Board.

MTA Bridges and Tunnels – As of September 30, 2022, MTA Bridges and Tunnels has 919 employees, approximately 735 of whom were represented by three different labor unions (four bargaining units).

At the start of the third quarter, labor agreements with the agency's Maintainers (represented by District Council, Local 1931), with Administrative and Clerical titles (represented by District Council 1655), with Bridge and Tunnel Officers (represented by the Bridge and Tunnel Officers Benevolent Association), and with Superior Officers (represented by the Superior Officers Benevolent Association) had all expired.

Negotiations with the Superior Officers Benevolent Association ("SOBA"), representing approximately 114 Sergeants and Lieutenants, continued throughout the second quarter of 2022. Since agreement expiration on March 14, 2012, several factors complicated labor negotiations with SOBA, leading to an extraordinarily sustained and arduous collective bargaining process. Chief among these was the full-scale advent of Open Road Tolling, which has essentially eliminated many of the duties and responsibilities of the SOBA membership while expanding their law enforcement duties.

However, after a new settlement was finally reached in the third quarter of this year and was approved by the September 2022 Board. The agreement covers the 126-month (ten and a half year) period from March 15, 2012 through September 14, 2022. During this timeframe, New York City Transit has enacted three agreements with its largest, pattern-setting union, TWU Local 100. The SOBA agreement includes the same schedule of wage increases that were present in these TWU covenants. Members' wages will increase by a compounded 21.6%, relative to 2012 levels: 1.0% for 2012; 1.0% for 2013; 2.0% for 2014; 2.0% for 2015; 2.0% for 2016; 2.5% for 2017; 2.5% for 2018; 2.0% for 2019; 2.25% for 2020; and 2.5% for 2021. Because the three TWU agreements reached since 2012 have covered 136 months, whereas the proposed SOBA agreement covers 126 months, the SOBA deal does not include the final TWU wage increase of 2.75%.

In recognition that the Superior Officers will now principally perform Law Enforcement duties, the new agreement also includes the \$6,033 wage adjustment that was provided in the agreement between the Authority and BTOBA members. Accordingly, the parties have agreed on the functional and geographic expansion of law enforcement duties, including whatever enforcement duties are assumed by the Employer as part of the imposition of a congestion zone, subject to 'impact' bargaining obligations imposed by the law. The agreement provides that the employer may assign up to 50% of Sergeants and 50% of Lieutenants to the Fare Evasion Task Force and allows Sergeants and Lieutenants the flexibility to be deployed to different locations from where they start tours. Also included are other measures designed to produce savings: new entrant contributions to health care coverage and a newly structured wage progression for new entrants to the bargaining unit.

MTA Staten Island Railway – During the third quarter of 2022, MTA Staten Island Railway had 345 employees, approximately 329 of whom were represented by four different unions. At the beginning of the quarter, labor agreements with all four unions were expired, and all represented employees at MTA Staten Island Railway were seeking new terms going forward.

In July, Staten Island Railway's proposed agreement with the Sheet Metal, Air, Rail and Transportation Workers – Local 1440 (SMART-Local 1440), was approved by the MTA Board. The new agreement, covering 235 employees, will run the period from February 16, 2017 through August 31, 2023. It has been designed to correspond to the patterns established in the 2017-2019 and 2019-2021 TWU agreements, providing identical wage increases and matching the overall net cost of these agreements. As such, it provides the following annual wage increases: 2.5% for 2017; 2.5% for 2018; 2.0% for 2019; 2.25% for 2020; 2.5% for 2021; and 2.75% for 2022. In total, this represents a 15.4% wage increase. The agreement also includes other benefits and offsetting savings provisions that were elements of the two TWU agreements.

In September, the Board passed a similar agreement between the Railway and approximately 16 employees represented by the Subway Surface Supervisors Association (SSSA), a relatively new bargaining unit to SIRTOA. Their first collective bargaining agreement, establishing rates of pay and certain rules and conditions of employment, had gone into effect on February 15, 2017. The new agreement covers the period from February 16, 2017 through July 15, 2023. Like the SMART-Local 1440 agreement ratified by the Board in July, the new settlement includes the 2017-2019 and the 2019-2023 schedule of wage increases, as well as other cost and savings provisions that were present in the 2017-2019 and 2019-2023 TWU agreements.

CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF SEPTEMBER 30, 2022 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2021

	Business-	tivities		
	September 30, 2022	Dec	December 31, 2021	
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES				
CURRENT ASSETS:				
Cash unrestricted (Note 3)	\$ 43	5 \$	526	
Cash restricted (Note 3)	86	7	256	
Unrestricted investments (Note 3)	8,52	7	6,111	
Restricted investments (Note 3)	3,16	0	5,451	
Restricted investments held under capital lease obligations (Notes 3 and 8)	10	4	151	
Receivables:				
Station maintenance, operation, and use assessments	6	6	116	
State and regional mass transit taxes	24	3	167	
Mortgage recording tax receivable	6	1	63	
State and local operating assistance	1	2	11	
Other receivable from New York City and New York State	12	8	244	
Due from Build America Bonds		3	1	
Capital project receivable from federal and state government	13	8	3,555	
Other	68	2	720	
Less allowance for doubtful accounts	(36	9)	(333)	
Total receivables — net	96	4	4,544	
Materials and supplies	67		675	
Prepaid expenses and other current assets (Note 2)	14	7	173	
Total current assets	14,87	4	17,887	
NON-CURRENT ASSETS:				
Capital assets (Note 6):				
Land and construction work-in-progress	24,96	6	23,626	
Other capital assets (net of accumulated depreciation)	60,12	8	60,133	
Unrestricted investments (Note 3)	2,24	8	1,001	
Restricted investments (Note 3)	3,62	1	739	
Restricted investments held under capital lease obligations (Notes 3 and 8)	26	4	252	
Other non-current receivables	10	0	100	
Receivable from New York State	1	0	10	
Other non-current assets	7	6	9	
Total non-current assets	91,41	3	85,870	
TOTAL ASSETS	106,28	7	103,757	
DEFERRED OUTFLOWS OF RESOURCES:				
Accumulated decreases in fair value of derivative instruments (Note 7)	11	0	384	
Loss on debt refunding (Note 7)	60	2	740	
Deferred outflows related to pensions (Note 4)	2,68	9	2,706	
Deferred outflows related to OPEB (Note 5)	4,02	8	4,033	
TOTAL DEFERRED OUTFLOWS OF RESOURCES	7,42		7,863	
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	\$ 113,71	6 \$	111,620	
See Independent Auditor's Review Report and notes to the consolidated interim financial statements.		(C	Continued)	

CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF SEPTEMBER 30, 2022 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2021

(\$ In millions)

	Business-Ty	e Activities	
	tember 30, 2022		ember 31, 2021
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION			
CURRENT LIABILITIES:			
Accounts payable	\$ 536	\$	378
Accrued expenses:			
Interest	823		317
Salaries, wages and payroll taxes	519		575
Vacation and sick pay benefits	1,136		1,113
Current portion — retirement and death benefits	54 550		37 543
Current portion — estimated liability from injuries to persons (Note 10) Capital accruals	233		511
-			
Accrued expenses	512		589
Other	 574		499
Total accrued expenses	 4,401		4,184
Current portion — loan payable (Note 7)	11		14
Current portion — long-term debt (Note 7)	1,966		8,069
Current portion — obligations under capital lease (Note 8)	-		14
Current portion — pollution remediation projects (Note 12)	28		29
Derivative fuel hedge liability (Note 15)	-		-
Unearned revenues	 1,623		871
Total current liabilities	 8,565		13,559
NON-CURRENT LIABILITIES:			
Net pension liability (Note 4)	4,899		4,899
Estimated liability arising from injuries to persons (Note 10)	4,805		4,557
Post-employment benefits other than pensions (Note 5)	24,409		24,409
Loan payable (Note 7)	75		82
Long-term debt (Note 7)	49,927		48,431
Obligations under capital leases (Note 8)	425		423
Pollution remediation projects (Note 12)	114		116
Contract retainage payable	418		416
Derivative liabilities (Note 7)	146		392
Other long-term liabilities	 405		435
Total non-current liabilities	 85,623		84,160
TOTAL LIABILITIES	94,188		97,719
DEFERRED INFLOWS OF RESOURCES:	 	-	
Gain on debt refunding	26		31
Deferred Inflows related to pensions (Note 4)	2,994		2,994
Deferred inflows related to OPEB (Note 5)	1,733		1,733
TOTAL DEFERRED INFLOWS OF RESOURCES	 4,753		4,758
NET POSITION:			
Net investment in capital assets	33,128		29,899
Restricted for debt service	1,623		1,039
Restricted for claims Restricted for other purposes (Note 2)	151		225
Restricted for other purposes (Note 2) Unrestricted	4,908		1,346
	 (25,035)		(23,366)
TOTAL NET POSITION	 14,775		9,143
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	\$ 113,716	\$	111,620
See Independent Auditor's Review Report and notes to the consolidated interim financial statements.		(Con	cluded)



CONSOLIDATED INTERIM STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

(\$ In millions)

	Busin	Business-Type Activities			
	September 3 2022	30,	September 30, 2021		
OPERATING REVENUES:					
Fare revenue	\$	2,931 \$	2,090		
Vehicle toll revenue]	1,743	1,565		
Rents, freight, and other revenue		461	415		
Total operating revenues		5,135	4,070		
OPERATING EXPENSES:					
Salaries and wages	4	1,834	4,569		
Retirement and other employee benefits		2,544	2,514		
Postemployment benefits other than pensions (Note 5)		564	495		
Electric power		413	311		
Fuel		212	115		
Insurance		6	13		
Claims		281	216		
Paratransit service contracts		296	257		
Maintenance and other operating contracts		520	516		
Professional service contracts		342	374		
Pollution remediation projects (Note 12)		1	2		
Materials and supplies		406	366		
Depreciation (Note 2)	2	2,405	2,318		
Other		175	140		
Total operating expenses	12	2,999	12,206		
OPERATING LOSS		7,864)	(8,136)		
NON-OPERATING REVENUES (EXPENSES):					
Grants, appropriations and taxes:					
Tax-supported subsidies — NYS:					
Mass Transportation Trust Fund subsidies		443	438		
Metropolitan Mass Transportation Operating Assistance subsidies	1	1,207	1,281		
Payroll Mobility Tax subsidies]	1,530	1,377		
MTA Aid Trust Account subsidies		190	316		
Internet sales tax subsidies		249	251		
Tax-supported subsidies — NYC and Local:					
Mortgage Recording Tax subsidies		525	487		
Urban Tax subsidies		539	304		
Mansion Tax		420	362		
Other subsidies:					
Operating Assistance - 18-B program		278	307		
Build America Bond subsidy		44	44		
NYC Assistance Fund		252 _	172		
Subtotal grants, appropriations and taxes	\$	5,677 \$	5,339		

See Independent Auditor's Review Report and

notes to the consolidated interim financial statements.

(Continued)





CONSOLIDATED INTERIM STATEMENTS OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

(\$ In millions)

	Business-Type Activities				
	September 30, 2022			ember 30, 2021	
NON-OPERATING REVENUES (EXPENSES):					
Connecticut Department of Transportation	\$	182	\$	250	
Subsidies paid to Dutchess, Orange, and Rockland Counties		(4)		(4)	
Interest on long-term debt (Note 2)		(1,601)		(1,363)	
Station maintenance, operation and use assessments		140		133	
Operating subsidies recoverable from NYC		389		423	
Federal Transit Administration reimbursement related ARPA		6,201		-	
Other net non-operating expenses		(58)		11_	
Net non-operating revenues		10,926		4,789	
GAIN / (LOSS) BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS					
EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS		3,062		(3,347)	
APPROPRIATIONS, GRANTS AND OTHER RECEIPTS					
EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS		2,570		2,412	
CHANGE IN NET POSITION		5,632		(935)	
NET POSITION— Beginning of period		9,143		4,983	
NET POSITION — End of period	<u>\$</u>	14,775	\$	4,048	
See Independent Auditor's Review Report and notes to the consolidated interim financial statements.			(Co	oncluded)	





CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

(\$ In millions)

	Business-Ty	pe Activities
	September 30, 2022	September 30, 2021
CASH FLOWS FROM OPERATING ACTIVITIES:		
Passenger receipts/tolls	\$ 4,662	\$ 3,678
Rents and other receipts	659	487
Payroll and related fringe benefits	(7,890)	(7,559)
Other operating expenses	(2,238)	(2,288)
Net cash used by operating activities	(4,807)	(5,682)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:		
Grants, appropriations, and taxes	5,102	5,582
Operating subsidies from CDOT	156	248
Subsidies paid to Dutchess, Orange, and Rockland Counties	(20)	(12)
Federal Transit Administration reimbursement related to COVID-19	9,805	
Net cash provided by noncapital financing activities	15,043	5,818
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
MTA bond proceeds	675	1,646
MTA Bridges and Tunnels bond proceeds	5,869	3,604
MTA bonds refunded/reissued	(1,750)	(1,489)
MTA Bridges and Tunnels bonds refunded/reissued	(53)	(1.250)
MTA anticipation notes redeemed	(7,139)	(1,250)
MTA credit facility proceeds MTA credit facility refunded	(1,196)	720
Capital lease payments and terminations	(1,190)	(1) 2
Federal and local grants	1,146	457
Other capital financing activities	1,903	1,197
Payment for capital assets	(4,211)	(3,925)
Debt service payments	(1,111)	(1,135)
Internet and Mansion Tax	622	520
Net cash (used by) / provided by capital and related financing activities	(5,245)	346
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of long-term securities	(15,749)	(10,033)
Sales or maturities of long-term securities	5,774	6,797
Net sales or maturities of short-term securities	5,451	3,389
Earnings on investments	53	21
Net cash (used by) / provided by investing activities	(4,471)	174
NET INCREASE IN CASH	520	656
CASH — Beginning of period	782	1,026
CASH — End of period	\$ 1,302	\$ 1,682
See Independent Auditor's Review Report and		
notes to the consolidated interim financial statements.		(Continued)
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CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

18	In	millions)
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	l	Business-Type Activities			
	Sept	September 30, 2021			
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY					
OPERATING ACTIVITIES:					
Operating loss (Note 2)	\$	(7,864)	\$	(8,136)	
Adjustments to reconcile to net cash used in operating activities:					
Depreciation and amortization		2,405		2,319	
Net increase (decrease) in payables, accrued expenses, and other liabilities		117		(35)	
Net (increase) decrease in receivables		487		147	
Net decrease in materials and supplies and prepaid expenses		48		23	
NET CASH USED BY OPERATING ACTIVITIES	<u>\$</u>	(4,807)	\$	(5,682	
NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:					
Noncash investing activities:					
Interest expense includes amortization of net (premium) / discount (Note 2)	\$	259	\$	321	
Total Noncash investing activities		259		321	
Noncash capital and related financing activities:					
Capital assets related liabilities		233		260	
Capital leases related liabilities		425		429	
Total Noncash capital and related financing activities		658		689	
TOTAL NONCASH INVESTING, CAPITAL AND RELATED					
FINANCING ACTIVITIES	\$	917	\$	1,010	

See Independent Auditor's Review Report and

notes to the consolidated interim financial statements.

(Concluded)



STATEMENTS OF FIDUCIARY NET POSITION PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS **AS OF DECEMBER 31, 2021 AND 2020**

(\$ In thousands)

		Fiduciary	Activit	ies	
	Dece	December 31, 2020			
ASSETS:					
Cash	\$	39,379	\$	20,258	
Receivables:					
Employee loans		26,082		30,744	
Participant and union contributions		(20)		(6)	
Investment securities sold		5,671		4,671	
Accrued interest and dividends		4,882		4,438	
Other receivables		3,770		21,784	
Total receivables		40,385		61,631	
Investments at fair value		10,144,509		9,009,691	
Total assets	<u>\$</u>	10,224,273	\$	9,091,580	
LIABILITIES:					
Accounts payable and accrued liabilities	\$	8,315	\$	5,777	
Payable for investment securities purchased		14,759		8,780	
Accrued benefits payable		74		115	
Accrued postretirement death benefits (PRDB) payable		5,405		4,204	
Accrued 55/25 Additional Members Contribution (AMC) payable		3,847		4,643	
Other liabilities		2,987		353	
Total liabilities		35,387		23,872	
NET POSITION:					
Restricted for pensions		10,188,803		9,067,578	
Restricted for postemployment benefits other than pensions		83		130	
Total net position		10,188,886		9,067,708	
Total liabilities and net position	<u>\$</u>	10,224,273	\$	9,091,580	

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.



STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS FOR THE YEARS ENDED DECEMBER 31, 2021 AND 2020

(\$ In thousands)

		riduciary	Activitie	S
	Decer	December 31, 2020		
ADDITIONS:				
Contributions:				
Employer contributions	\$	1,362,952	\$	941,094
Non-Employer contributions		-		-
Implicit rate subsidy contribution		52,933		69,472
Participant rollovers		-		-
Member contributions		58,840		56,856
Total contributions		1,474,725		1,067,422
investment income:				
Net (depreciation) / appreciation in fair value of investments		1,112,770		39,569
Dividend income		115,369		76,709
Interest income		20,453		27,059
Less:				
Investment expenses		85,192		60,561
Investment income, net		1,163,400		82,776
Other additions:				
Total additions		2,638,125		1,150,198
DEDUCTIONS:				
Benefit payments and withdrawals		1,456,931		1,339,727
implicit rate subsidy payments		52,933		69,472
Transfer to other plans		474		(645)
Distribution to participants		2,175		-
Administrative expenses		4,434		4,725
Other deductions				-
Total deductions		1,516,947		1,413,279
Net (decrease) / increase in fiduciary net position		1,121,178		(263,081)
NET POSITION:				
Restricted for Benefits:				
Beginning of year		9,067,708		9,330,789
End of year	\$	10,188,886	\$	9,067,708

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.

NOTES TO CONSOLIDATED INTERIM FINANCIAL STATEMENTS AS OF SEPTEMBER 30, 2022 AND DECEMBER 31, 2021 AND FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2022 AND 2021

(\$ In millions, except as noted)

1. BASIS OF PRESENTATION

Reporting Entity — The Metropolitan Transportation Authority ("MTA") was established in 1965, under Section 1263 of the New York Public Authorities Law, and is a public benefit corporation and a component unit of the State of New York ("NYS") whose mission is to continue, develop and improve public transportation and to develop and implement a unified public transportation policy in the New York metropolitan area.

These consolidated interim financial statements are of the Metropolitan Transportation Authority ("MTA"), including its related groups (collectively, the "MTA Group"), which are listed below. The Business-Type activities in these consolidated financial statements purport the operations of the MTA Group.

Metropolitan Transportation Authority and Related Groups (Component Units)

- Metropolitan Transportation Authority Headquarters ("MTAHQ") provides support in budget, cash management, finance, legal, real estate, treasury, risk and insurance management, and other services to the related groups listed below.
- The Long Island Rail Road Company ("MTA Long Island Rail Road") provides passenger transportation between New York City ("NYC") and Long Island.
- Metro-North Commuter Railroad Company ("MTA Metro-North Railroad") provides passenger transportation between NYC and the suburban communities in Westchester, Dutchess, Putnam, Orange, and Rockland counties in NYS and New Haven and Fairfield counties in Connecticut.
- Staten Island Rapid Transit Operating Authority ("MTA Staten Island Railway") provides passenger transportation on Staten Island.
- First Mutual Transportation Assurance Company ("FMTAC") provides primary insurance coverage for certain losses, some of which are reinsured, and assumes reinsurance coverage for certain other losses.
- MTA Construction and Development ("MTA Construction and Development") provides oversight for the planning, design and construction of current and future major MTA system-wide expansion projects.
- MTA Bus Company ("MTA Bus") operates certain bus routes in areas previously served by private bus operators pursuant to franchises granted by the City of New York.
- MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA
 Capital Construction, and MTA Bus, collectively are referred to herein as MTA. MTA Long Island Rail Road and
 MTA Metro-North Railroad are referred to collectively as the Commuter Railroads.
- New York City Transit Authority ("MTA New York City Transit") and its subsidiary, Manhattan and Bronx Surface
 Transit Operating Authority ("MaBSTOA"), provide subway and public bus service within the five boroughs of
 New York City.
- Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels") operates seven toll bridges, two tunnels, and the Battery Parking Garage, all within the five boroughs of New York City.

The subsidiaries and affiliates, considered component units of the MTA, are operationally and legally independent of the MTA. These related groups enjoy certain rights typically associated with separate legal status including, in some cases, the ability to issue debt. However, they are included in the MTA's consolidated financial statements as blended component units because of the MTA's financial accountability for these entities and they are under the direction of the MTA Board (a reference to "MTA Board" means the board of MTAHQ and/or the boards of the other MTA Group entities that apply in the specific context, all of which are comprised of the same persons). Under accounting principles generally accepted in the United States of America ("GAAP"), the MTA is required to include these related groups in its financial statements. While certain units are separate legal entities, they do have legal capital requirements and the revenues of all of the related groups of the MTA are used to support the organizations as a whole. The components do not constitute a separate accounting entity (fund) since there is no legal requirement to account for the activities of the components as discrete accounting entities. Therefore, the MTA financial statements are presented on a consolidated basis with segment disclosure for each distinct operating activity. All of the component units publish separate annual financial statements, which are available by writing to

the Metropolitan Transportation Authority, Deputy Chief Controller's Office, 2 Broadway, 15th Floor, New York, NY 10004.

Although the MTA Group collects fares for the transit and commuter service, they provide and receive revenues from other sources, such as the leasing out of real property assets, and the licensing of advertising. Such revenues, including forecastincreased revenues from fare increases, are not sufficient to cover all operating expenses associated with such services. Therefore, to maintain a balanced budget, the members of the MTA Group providing transit and commuter service rely on operating surpluses transferred from MTA Bridges and Tunnels, operating subsidies provided by NYS and certain local governmental entities in the MTA commuter district, and service reimbursements from certain local governmental entities in the MTA commuter district and from the State of Connecticut. Non-operating subsidies to the MTA Group for transit and commuter service for the period ended September 30, 2022 and 2021 totaled \$5.7 billion and \$5.3 billion, respectively.

Basis of Presentation - Fiduciary Funds - The fiduciary fund financial statements provide information about the funds that are used to report resources held in trust for retirees and beneficiaries covered by pension plans and other employee benefit trust funds of the MTA. Separate financial statements are presented for the fiduciary funds.

The following MTA fiduciary component units comprise the fiduciary activities of the MTA and are categorized within Pension and Other Employee Benefit Trust Funds.

• Pension Trust Funds

- MTA Defined Benefit Plan
- The Long Island Railroad Company Plan for Additional Pensions ("Additional Plan")
- Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA Plan")
- Metro-North Commuter Railroad Company Cash Balance Plan ("MNR Cash Balance Plan")
- Other Employee Benefit Trust Funds
 - MTA Other Postemployment Benefits Plan ("OPEB" Plan)

These fiduciary statements of the fiduciary funds are prepared using the accrual basis of accounting and a measurement focus on the periodic determination of additions, deductions, and net position restricted for benefits. For reporting purposes, the financial results of the MNR Cash Balance Plan are not material and therefore not included in the fiduciary statements.

SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting — The accompanying consolidated interim financial statements are prepared on the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America.

The MTA applies Governmental Accounting Standards Board ("GASB") Codification of Governmental Accounting and Financial Reporting Standards ("GASB Codification") Section P80, Proprietary Accounting and Financial Reporting.

New Accounting Standards – The MTA early adopted the following GASB Statement for the period ended September 30, 2022.

GASB Statement No. 98, The Annual Comprehensive Financial Report, establishes the term annual comprehensive financial report and its acronym ACFR. That new term and acronym replace instances of comprehensive annual financial report and its acronym in generally accepted accounting principles for state and local governments. The requirements of this Statement are effective for fiscal years ending after December 15, 2021, with early application encouraged. The adoption of this Statement did not have an impact on the financial position, results of operations or cash flows of the MTA.

Accounting Standards Issued but Not Yet Adopted

GASB has issued the following pronouncements that may affect the future financial position, results of operations, cash flows, or financial presentation of the MTA upon implementation. Management has not yet evaluated the effect of implementation of these standards.

GASB Statement No.	GASB Accounting Standard	Required Year of Adoption
87	Leases	2022
91	Conduit Debt Obligations 2021	2022
92	Omnibus 2020	2022
93	Replacement of Interbank Offered Rates	2022
94	Public-Private and Public-Public Partnerships and Availability Payment Arrangements	2023

GASB Statement No.	GASB Accounting Standard	Required Year of Adoption
96	Subscription-based Information Technology Arrangements	2023
99	Omnibus 2022	2023
100	Accounting Changes and Error Corrections	2022
101	Compensated Absences	2023

Use of Management Estimates — The preparation of the consolidated interim financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, and disclosure of contingent assets and liabilities at the date of the consolidated interim financial statements, and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the fair value of investments, allowances for doubtful accounts, valuation of derivative instruments, arbitrage rebate liability, accrued expenses and other liabilities, depreciable lives of capital assets, estimated liability arising from injuries to persons, pension benefits and other postemployment benefits. Actual results could differ significantly from those estimates.

Principles of Consolidation — The consolidated interim financial statements consist of MTAHQ, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA Bus, MTA Construction and Development, MTA New York City Transit (including its subsidiary MaBSTOA), and MTA Bridges and Tunnels for years presented in the financial statements. All related group transactions have been eliminated for consolidation purposes.

Net Position – Restricted for Other Purposes – This category is classified within net position and includes net investments restricted for capital leases and MTA Bridges and Tunnels necessary reconstruction reserve.

Investments — The MTA Group's investment policies comply with the New York State Comptroller's guidelines for such operating and capital policies. Those policies permit investments in, among others, obligations of the U.S. Treasury, its agencies and instrumentalities, and repurchase agreements secured by such obligations. FMTAC's investment policies comply with New York State Comptroller guidelines and New York State Department of Insurance guidelines.

Investments expected to be utilized within a year of September 30th have been classified as current assets in the consolidated interim financial statements.

In accordance with the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, investments are recorded on the consolidated statement of net position at fair value, except for commercial paper, certificates of deposit, and repurchase agreements, which are recorded at amortized cost or contract value. All investment income, including changes in the fair value of investments, is reported as revenue on the consolidated statement of revenues, expenses and changes in net position. Fair values have been determined using quoted market values at September 30, 2022 and December 31, 2021.

Investment derivative contracts are reported at fair value using the income approach.

Materials and Supplies — Materials and supplies are valued at average cost, net of obsolescence reserve at September 30, 2022 and December 31, 2021 of \$222 and \$213, respectively.

Prepaid Expenses and Other Current Assets — Prepaid expenses and other current assets primarily reflect advance payment of insurance premiums as well as farecard media related to ticket machines, WebTickets and AirTrain tickets.

Capital Assets — Properties and equipment are carried at cost and are depreciated on a straight-line basis over their estimated useful lives. Expenses for maintenance and repairs are charged to operations as incurred. Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA having a minimum useful life of two years and having a cost of more than \$25 thousand. Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. Capital leases are classified as capital assets in amounts equal to the lesser of the fair market value or the present value of net minimum lease payments at the inception of the lease. Accumulated depreciation and amortization are reported as reductions of capital assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment, and 25 to 100 years for infrastructure. Capital lease assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less.

Pollution remediation projects —Pollution remediation costs have been expensed in accordance with the provisions of GASB Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (See Note 12). An operating expense provision and corresponding liability measured at current value using the expected cash flow method has been recognized for certain pollution remediation obligations, which previously may not have been required to be recognized, have been recognized earlier than in the past or are no longer able to be capitalized as a component of a capital project. Pollution remediation obligations occur when any one of the following obligating events takes place: the MTA is in violation of a pollution prevention-related permit or license; an imminent threat to public health due to pollution exists;

the MTA is named by a regulator as a responsible or potentially responsible party to participate in remediation; the MTA voluntarily commences or legally obligates itself to commence remediation efforts; or the MTA is named or there is evidence to indicate that it will be named in a lawsuit that compels participation in remediation activities.

Operating Revenues — Passenger Revenue and Tolls — Revenues from the sale of tickets, tokens, electronic toll collection system, and farecards are recognized as income when tickets or farecards are used. Tickets are assumed to be used in the month of purchase, with the exception of advance purchases of monthly and weekly tickets. When the farecards expire, revenue is recorded for the unused value of the farecards.

MTA Bridges and Tunnel has two toll rebate programs at the Verrazano-Narrows Bridge: the Staten Island Resident ("SIR") Rebate Program, available for residents of Staten Island participating in the SIR E-ZPass toll discount plan, and the Verrazano-Narrows Bridge Commercial Rebate Program ("VNB Commercial Rebate Program"), available for commercial vehicles making more than ten trips per month using the same New York Customer Service Center ("NYCSC") E-ZPass account. The VNB Commercial Rebate Program and SIR Rebate Program are funded by the State and MTA.

Capital Financing — The MTA has ongoing programs on behalf of its subsidiaries and affiliates, subject to approval by the New York State Metropolitan Transportation Authority Capital Program Review Board (the "State Review Board"), which are intended to improve public transportation in the New York Metropolitan area.

The federal government has a contingent equity interest in assets acquired by the MTA with federal funds and upon disposal of such assets, the federal government may have a right to its share of the proceeds from the sale. This provision has not been a substantial impediment to the MTA's operations.

Federal Transit Administration CARES Act — On March 27, 2020, the Coronavirus Aid, Relief and Economic Security Act, also known as the CARES Act, was signed into law in response to the economic fallout of the COVID-19 pandemic. The CARES Act through the Federal Transit Administration's ("FTA") formula funding provisions provided the MTA with \$4.010 billion of operating assistance. More detailed information about the CARES Act is presented in Note 14 to the consolidated interim financial statements.

Coronavirus Response and Relief Supplemental Appropriations Act of 2021 — On December 27, 2020, the Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") was signed into law in response to the economic fallout of the COVID-19 pandemic. CRRSAA, through the FTA's formula funding provision provided the MTA with \$4.1 billion of operating assistance. Additional information about the CRRSAA is presented in Note 14 to the consolidated interim financial statements.

American Rescue Plan Act ("ARPA") - On March 11, 2021, President Biden signed into law the American Rescue Plan Act of 2021 ("ARPA"). The \$1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. The MTA received \$6.1 billion in aid from ARPA in 20222. In September of 2021, Additional Assistance Funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received approximately \$769 million in such additional aid.

Non-operating Revenues

Operating Assistance — The MTA Group receives, subject to annual appropriation, NYS operating assistance funds that are recognized as revenue after the NYS budget is approved and adopted. Generally, funds received under the NYS operating assistance program are fully matched by contributions from NYC and the seven other counties within the MTA's service area.

Mortgage Recording Taxes ("MRT") — Under NYS law, the MTA receives capital and operating assistance through a Mortgage Recording Tax ("MRT-1"). MRT-1 is collected by NYC and the seven other counties within the MTA's service area, at the rate of 0.25% of the debt secured by certain real estate mortgages. Effective September 2005, the rate was increased from 25 cents per 100 dollars of recorded mortgage to 30 cents per 100 dollars of recorded mortgage. The MTA also receives an additional Mortgage Recording Tax ("MRT-2") of 0.25% of certain mortgages secured by real estate improved or to be improved by structures containing one to nine dwelling units in the MTA's service area. MRT-1 and MRT-2 taxes are recognized as revenue based upon reported amounts of taxes collected.

- MRT-1 proceeds are initially used to pay MTAHQ's operating expenses. Remaining funds, if any, are allocated 55% to certain transit operations and 45% to the commuter railroads operations. The commuter railroad portion is first used to fund the NYS Suburban Highway Transportation Fund in an amount not to exceed \$20 annually (subject to the monies being returned under the conditions set forth in the governing statute if the Commuter Railroads are operating at a deficit).
- The first \$5 of the MRT-2 proceeds is transferred to the MTA Dutchess, Orange, and Rockland ("DOR") Fund (\$1.5 each for Dutchess and Orange Counties and \$2 for Rockland County). Additionally, the MTA must transfer to each County's fund an amount equal to the product of (i) the percentage by which each respective County's mortgage recording tax payments (both MRT-1 and MRT-2) to the MTA increased over such payments in 1989 and (ii) the base amount received by each county as described above. The counties do not receive any portion of the September

- **Transportation Authority**
 - 1, 2005 increase in MRT-1 from 25 cents per \$100 of recorded mortgage to 30 cents. As of September 30, 2022, the MTA paid to Dutchess, Orange and Rockland Counties the 2021 excess amounts of MRT-1 and MRT-2 totaling \$7.5.
 - In addition, MTA New York City Transit receives operating assistance directly from NYC through a mortgage recording tax at the rate of 0.625% of the debt secured by certain real estate mortgages and through a property transfer tax at the rate of one percent of the assessed value (collectively referred to as "Urban Tax Subsidies") of certain properties.

Mobility Tax — In June of 2009, Chapter 25 of the NYS Laws of 2009 added Article 23, which establishes the Metropolitan Commuter Transportation Mobility Tax ("MCTMT"). The proceeds of this tax, administered by the New York State Tax Department, are to be distributed to the Metropolitan Transportation Authority. This tax is imposed on certain employers and self-employed individuals engaging in business within the metropolitan commuter transportation district which includes New York City, and the counties of Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester. This Tax is imposed on certain employers that have payroll expenses within the Metropolitan Commuter Transportation District, to pay at a rate of 0.34% of an employer's payroll expenses for all covered employees for each calendar quarter. The employer is prohibited from deducting from wages or compensation of an employee any amount that represents all or any portion of the MCTMT. The effective date of this tax was March 1, 2009 for employers other than public school districts; September 1, 2009 for Public school districts and January 1, 2009 for individuals.

Supplemental Aid — In 2009, several amendments to the existing tax law provided the MTA supplemental revenues to be deposited into the AID Trust Account of the Metropolitan Transportation Authority Financial Assistance Fund established pursuant to Section 92 of the State Finance law. These supplemental revenues relate to: 1) supplemental learner permit/ license fee in the Metropolitan Commuter Transportation District, 2) supplemental registration fee, 3) supplemental tax on every taxicab owner per taxicab ride on every ride that originated in the City of New York and terminates anywhere within the territorial boundaries of the Metropolitan Commuter Transportation District, and 4) supplemental tax on passenger car rental. This Supplemental Aid Tax is provided to the MTA in conjunction with the Mobility Tax.

Dedicated Taxes — Under NYS law, subject to annual appropriation, the MTA receives operating assistance through a portion of the Dedicated Mass Transportation Trust Fund ("MTTF") and Metropolitan Mass Transportation Operating Assistance Fund ("MMTOA"). The MTTF receipts consist of a portion of the revenues derived from certain business privilege taxes imposed by the State on petroleum businesses, a portion of the motor fuel tax on gasoline and diesel fuel, and a portion of certain motor vehicle fees, including registration and non-registration fees. Effective October 1, 2005, the State increased the amount of motor vehicle fees deposited into the MTTF for the benefit of the MTA. MTTF receipts are applied first to meet certain debt service requirements or obligations and second to the Transit System (defined as MTA New York City Transit and MaBSTOA), MTA Staten Island Railway and the Commuter Railroads to pay operating and capital costs. The MMTOA receipts are comprised of 0.375% regional sales tax, regional franchise tax surcharge, a portion of taxes on certain transportation and transmission companies, and an additional portion of the business privilege tax imposed on petroleum businesses. MMTOA receipts, to the extent that MTTF receipts are not sufficient to meet debt service requirements, will also be applied to certain debt service obligations, and secondly to operating and capital costs of the Transit System, and the Commuter Railroads.

The State Legislature enacts in an annual budget bill for each state fiscal year an appropriation to the MTA Dedicated Tax Fund for the then-current state fiscal year and an appropriation of the amounts projected by the Director of the Budget of the State to be deposited in the MTA Dedicated Tax Fund for the next succeeding state fiscal year. The assistance deposited into the MTTF is required by law to be allocated, after provision for debt service on Dedicated Tax Fund Bonds (See Note 7), 85% to certain transit operations (not including MTA Bus) and 15% to the commuter railroads operations. Revenues from this funding source are recognized based upon amounts of tax reported as collected by NYS, to the extent of the appropriation.

Build America Bond Subsidy — The MTA is receiving cash subsidy payments from the United States Treasury equal to 35% of the interest payable on the Series of Bonds issued as "Build America Bonds" and authorized by the Recovery Act. The Internal Revenue Code of 1986 imposes requirements that MTA must meet and continue to meet after the issuance in order to receive the cash subsidy payments. The interest on these bonds is fully subject to Federal income taxation to the bondholder.

Congestion Zone Surcharges - In April 2018, the approved 2018-2019 New York State Budget enacted legislation that provided additional sources of revenue, in the form of surcharges and fines, as defined by Article 29-C, Chapter 59 of the Tax Law, to address the financial needs of the MTA. Beginning on January 1, 2019, the legislation imposed the following:

• A surcharge of \$2.75 on for-hire transportation trips provided by motor vehicles carrying passengers for hire (or \$2.50 in the case of taxicabs that are subject to the \$0.50 cents tax on hailed trips that are part of the MTA Aid Trust Account Receipts), other than pool vehicles, ambulance and buses, on each trip that (1) originates and terminates south of and excluding 96th Street in the City of New York, in the Borough of Manhattan (the "Congestion Zone"), (2) originates anywhere in NYS and terminates within the Congestion Zone, (3) originates in the Congestion Zone and terminates anywhere in NYS, or (4) originates anywhere in NYS, enters into the Congestion Zone while in transit, and terminates anywhere in NYS.

• A surcharge of \$0.75 cents for each person who both enters and exits a pool vehicle in NYS and who is picked up in, dropped off in, or travels through the Congestion Zone.

The Congestion Zone Surcharges do not apply to transportation services administered by or on behalf of MTA, including paratransit services.

The April 2018 legislation also created the New York City Transportation Assistance Fund, held by MTA. The fund consists of the three sub-accounts, the Subway Action Plan Account, the Outer Borough Transportation Account and the General Transportation Account.

- Subway Action Plan Account Funds in this account may be used exclusively for funding the operating and capital costs, and debt service associated with the Subway Action Plan.
- Outer Borough Transportation Account Funds in this account may be used exclusively for funding (1) the operating and capital costs of, and debt service associated with, the MTA facilities, equipment and services in the counties of Bronx, Kings, Queens and Richmond, and any projects improving transportation connections from such counties to Manhattan, or (2) a toll reduction program for any crossing under the jurisdiction of MTA or MTA Bridges and Tunnels.
- General Transportation Account Funds in this account may be used exclusively for funding the operating and capital costs of MTA. In each case, funds may be used for various operations and capital needs or for debt service and reserve requirements.

Dedicated Revenues - In April 2019, the approved 2019-2020 New York State Budget enacted legislation that included new, dedicated revenue streams for the MTA. The additional sources of revenue include a Central Business District Tolling Program, which has an implementation date of December 31, 2020. The Central Business District Tolling Program will assess a toll for vehicles entering the Central Business District, defined as south of 60th Street in Manhattan, but will exclude vehicles traveling on the FDR Drive or the West Side Highway, which includes the Battery Park underpass and or any surface roadway portion of the Hugh L. Carey Tunnel that connects to West Street.

The enacted State Budget also included provisions for a new Real Property Transfer Tax Surcharge (referred to as the "Mansion Tax") on high-priced residential property sales in New York City and an Internet Marketplace Sales Tax. The Mansion Tax went into effect on July 1, 2019 and increases the transfer tax on a sliding scale by a quarter percent starting at \$2, with a combined top rate of 4.15%, on the sale of New York City residential properties valued at \$25 or above. The Internet Marketplace Sales Tax went into effect on June 1, 2019 and requires internet marketplace providers to collect and remit sales tax from out of state retailers on their sites that have gross receipts exceeding \$500,000 (dollars) and delivering more than one hundred sales into New York State in the previous four quarters. The sales tax will be collected at the normal rate of 4% plus local sales tax.

The proceeds from the Central Business District Tolling Program, the Internet Marketplace Sales Tax and the Real Property Transfer Tax Surcharge will be deposited into the MTA's Central Business District Tolling Program capital lock box and may only be used to support financing of the 2020-2024 Capital Program.

Operating Subsidies Recoverable from Connecticut Department of Transportation ("CDOT") — A portion of the deficit from operations relating to MTA Metro-North Railroad's New Haven line is recoverable from CDOT. Under the terms of a renewed Service Agreement, which began on January 1, 2015, and the 1998 resolution of an arbitration proceeding initiated by the State of Connecticut, CDOT pays 100.0% of the net operating deficit of MTA Metro-North Railroad's branch lines in Connecticut (New Canaan, Danbury, and Waterbury), 65.0% of the New Haven mainline operating deficit, and 54.3% of the Grand Central Terminal ("GCT") operating deficit. The New Haven line's share of the net operating deficit for the use of GCT is comprised of a fixed fee, calculated using several years as a base, with annual increases for inflation, and the actual cost of operating GCT's North End Access beginning in 1999. The Service Agreement also provides that CDOT pay 100% of the cost of non-movable capital assets located in Connecticut, 100% of movable capital assets to be used primarily on the branch lines and 65% of the cost of other movable capital assets allocated to the New Haven line. Remaining funding for New Haven line capital assets is provided by the MTA. The Service Agreement provides for automatic five-year renewals unless a notice of termination has been provided. The Service Agreement has been automatically extended for an additional five years beginning January 1, 2015 subject to the right of CDOT or MTA to terminate the agreement on eighteen month's written notice. Capital assets completely funded by CDOT are not reflected in these financial statements, as ownership is retained by CDOT. The Service Agreement provides that final billings for each year be subject to audit by CDOT. The audits of 2020 and 2021 billings are still open.

increase or decrease of the regional Consumer Price Index.

In 1995, New York City ceased reimbursing MTA for the full costs of the free/reduced fare program for students. Beginning in 1996, the State and New York City each began paying \$45 million per annum to the MTA toward the cost of the program. In 2009, New York State reduced their \$45 million reimbursement to \$6.3 million. Beginning in 2010, New York State increased their annual commitment to \$25.3 million while New York City's annual commitment remained at \$45 million. These commitments have been met by both the State and New York City for both 2020 and 2021. For the year ended December 31, 2021, MTA received \$90.3 million from the State and New York City combined, which include \$5.0 million due from the State and \$15.0 million due from New York City both for the year 2020.

Prior to April 1995, New York City was obligated to reimburse MTA New York City Transit for the transit police force. As a result of the April 1995 merger of the transit police force into the New York City Police Department, New York City no longer reimburses MTA New York City Transit for the costs of policing the Transit System on an ongoing basis since policing of the Transit System is being carried out by the New York City Police Department at New York City's expense. MTA New York City Transit continues to be responsible for certain capital costs and support services related to such police activities, a portion of which is reimbursed by New York City. MTA New York City Transit received approximately \$3.6 in the nine months ended September 30, 2022 and \$2.1 in the nine months ended September 30, 2021 from New York City for the reimbursement of transit police costs.

MTAHQ bills MTA Metro-North Railroad through its consolidated services for MTA police costs in the New Haven line of which MTA Metro-North Railroad recovers approximately 65% from Connecticut Department of Transportation. The amounts billed for the periods ended September 30, 2022 and 2021 were \$18.3 and \$16.8, respectively. The amounts recovered for the periods ended September 30, 2022 and 2021 were approximately \$11.9 and \$10.9, respectively.

Federal law and regulations require a paratransit system for passengers who are not able to ride the buses and trains because of their disabilities. Pursuant to an agreement between New York City and the MTA, MTA New York City Transit, effective July 1, 1993, assumed operating responsibility for all paratransit service required by the Americans with Disability Act of 1990. Services are provided by private vendors under contract with MTA New York City Transit. New York City reimburses MTA New York City Transit for the lesser of 33% of net paratransit operating expenses defined as labor, transportation, and administrative costs less fare revenues and 6% of gross urban tax proceeds as described above or, an amount that is 20% greater than the amount paid by New York City for the preceding calendar year. Fare revenues and New York City's reimbursement aggregated approximately \$194.8 for the nine months ended September 30, 2022 and \$171.0 for the nine months ended September 30, 2021.

Grants and Appropriations — Grants and appropriations for capital projects are recorded when requests are submitted to the funding agencies for reimbursement of capital expenditures meeting eligibility requirements. These amounts are reported separately after Net Non-operating Revenues in the Statements of Revenues, Expenses, and Changes in Net Position.

Operating and Non-operating Expenses — Operating and non-operating expenses are recognized in the accounting period in which the liability is incurred. All expenses related to operating the MTA (e.g. salaries, insurance, depreciation, etc.) are reported as operating expenses. All other expenses (e.g. interest on long-term debt, subsidies paid to counties, etc.) are reported as non-operating expenses.

Liability Insurance — FMTAC, an insurance captive subsidiary of MTA, operates a liability insurance program ("ELF") that insures certain claims in excess of the self-insured retention limits of the agencies on both a retrospective (claims arising from incidents that occurred before October 31, 2003) and prospective (claims arising from incidents that occurred on or after October 31, 2003) basis. For claims arising from incidents that occurred on or after November 1, 2006, but before November 1, 2009, the self-insured retention limits are: \$8 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road, and MTA Metro-North Railroad; \$2.3 for MTA Long Island Bus and MTA Staten Island Railway; and \$1.6 for MTAHQ and MTA Bridges and Tunnels. For claims arising from incidents that occurred on or after November 1, 2009, but before November 1, 2012, the self-insured retention limits are: \$9 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; \$2.6 for MTA Long Island Bus and MTA Staten Island Railway; and \$1.9 for MTAHO and MTA Bridges and Tunnels. Effective November 1, 2012, the self-insured retention limits for ELF were increased to the following amounts: \$10 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; \$3 for MTA Staten Island Railway; and \$2.6 for MTAHQ and MTA Bridges and Tunnels. Effective October 31, 2015, the self-insured retention limits for ELF were increased to the following amounts: \$11 for MTA New York City Transit, MaBSTOA, MTA Bus, MTA Long Island Rail Road and MTA Metro-North Railroad; \$3.2 for MTA Staten Island Railway, MTAHQ and MTA Bridges and Tunnels. The maximum amount of claims arising out of any one occurrence is the total assets of the program available for claims, but in no event greater than \$50. The retrospective portion contains the same insurance agreements, participant retentions, and limits as existed under the ELF program for occurrences happening on or before October 30, 2003. On a prospective basis, FMTAC issues insurance policies indemnifying the other MTA Group entities above their specifically assigned self-insured retention with a limit of \$50 per occurrence with a \$50 annual aggregate. FMTAC charges appropriate annual premiums based on loss experience and exposure analysis to maintain the fiscal viability of the program. On September 30, 2022, the balance of the assets in this program was \$171.31.

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords the MTA Group additional coverage limits of \$357.5 for a total limit of \$407.5 (\$357.5 excess of \$50). In certain circumstances, when the assets in the program described in the preceding paragraph are exhausted due to payment of claims, the All-Agency Excess Liability Insurance will assume the coverage position of \$50.

On March 1, 2022, the "nonrevenue fleet" automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for MTA Long Island Rail Road, MTA Staten Island Railway, MTA Police, MTA Metro-North Railroad, MTA Inspector General, MTA Construction & Development Company and MTA Headquarters. The program limit is \$11 per occurrence on a combined single limit with a \$1 per occurrence deductible. Primary limits of \$6 were procured through the commercial marketplace. Excess limits of \$5 were procured through FMTAC. FMTAC renewed its deductible buy back policy, where it assumes the liability of the agencies for their deductible.

On March 1, 2022, the "Access-A-Ride" automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA New York City Transit's Access-A-Ride program, including the contracted operators. This policy provides a \$1 per occurrence limit excess of a \$2 self-insured retention.

On December 15, 2021, FMTAC renewed the primary coverage on the Station Liability and Force Account liability policies \$11 per occurrence loss for MTA Metro-North Railroad and MTA Long Island Rail Road.

Property Insurance — Effective May 1, 2022, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2022, FMTAC directly insures property damage claims of the Related Entities in excess of a \$25 per occurrence deductible, subject to an annual \$75 aggregate deductible. The total All Risk program annual limit is \$500 per occurrence and in the annual aggregate for Flood and Earthquake covering property of the Related Entities collectively. FMTAC is reinsured in the domestic, Asian, London, European and Bermuda reinsurance markets for this coverage.

Losses occurring after exhaustion of the deductible aggregate are subject to a deductible of \$7.5 per occurrence. In addition to the noted \$25 per occurrence self-insured deductible, MTA self-insures above that deductible for \$85.731 within the overall \$500 per occurrence property program as follows: \$13.296 (or 26.59%) of the primary \$50 layer, plus \$17.127 (or 34.25%) of the \$50 excess \$50 layer, plus \$8.08 (or (16.16%) of the \$50 excess \$100 layer, plus \$2.845 (or 5.69%) of the \$50 excess \$150 layer, plus \$1.398 (or 2.79%) of the \$50 excess \$200 layer, plus \$10.559 (or 21.11%) of the \$50 excess \$250 layer, plus \$9.182 (or 18.36%) of the \$50 excess \$300 layer, plus \$6.247 (or 12.49%) of the \$50 excess \$350 layer, plus \$8.747 (or 17.49%) of the \$50 excess \$400 layer, and \$8.247 (or 16.49%) of the \$50 excess \$450 layer.

The property insurance policy provides replacement cost coverage for all risks (including Earthquake, Flood and Wind) of direct physical loss or damage to all real and personal property, with minor exceptions. The policy also provides extra expense and business interruption coverage.

Supplementing the \$500 per occurrence noted above, FMTAC's property insurance program has been expanded to include a further layer of \$100 of fully collateralized earthquake coverage for an event of a certain index value and for storm surge coverage for losses from storm surges that surpass specified trigger levels in the New York Harbor or Long Island Sound and are associated with named storms that occur at any point in the three year period from May 12, 2020 to April 30, 2023. The expanded protection is reinsured by MetroCat Re Ltd. 2020-1, a Bermuda special purpose insurer independent from the MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2020-1 reinsurance policy is fully collateralized by a Regulation 114 trust invested in U.S. Treasury Money Market Funds. The additional coverage provided is parametric and available for storm surge losses resulting from a storm that causes water levels that reach the specified index values, and also for an earthquake event of a certain index value.

With respect to acts of terrorism, FMTAC provides direct coverage that is reinsured by the United States Government for 80% of "certified" losses, as covered by the Terrorism Risk Insurance Program Reauthorization Act ("TRIPRA") of 2019. The remaining 20% of the Related Entities' losses arising from an act of terrorism would be covered under the additional terrorism policy described below. No federal compensation will be paid unless the aggregate industry insured losses exceed a trigger of \$200. The United States government's reinsurance is in place through December 31, 2027.

To supplement the reinsurance to FMTAC through the TRIPRA, MTA obtained an additional commercial reinsurance policy with various reinsurance carriers in the domestic, London and European marketplaces. That policy provides coverage for (1) 20% of any "certified" act of terrorism up to a maximum recovery of \$215 for any one occurrence and in the annual aggregate (2) the TRIPRA FMTAC captive deductible (per occurrence and on an aggregated basis) that applies when recovering under the "certified" acts of terrorism insurance or (3) 100% of any "certified" terrorism loss which exceeds \$5

and less than the \$200 TRIPRA trigger up to a maximum recovery of \$200 for any occurrence and in the annual aggregate.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of \$215. Recovery under the terrorism policy is subject to a deductible of \$25 per occurrence and \$75 in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities' deductible in any one year exceed \$75 future losses in that policy year are subject to a deductible of \$7.5. The terrorism coverages expire at midnight on May 1, 2023.

Pension Plans — In accordance with the provisions of GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, the MTA recognizes a net pension liability for each qualified pension plan in which it participates, which represents the excess of the total pension liability over the fiduciary net position of the qualified pension plan, or the MTA's proportionate share thereof in the case of a cost-sharing multiple-employer plan, measured as of the measurement date of each of the qualified pension plans. Changes in the net pension liability during the year are recorded as pension expense, or as deferred inflows of resources or deferred outflows of resources depending on the nature of the change, in the year incurred. Those changes in net pension liability that are recorded as deferred inflows of resources or deferred outflows of resources that arise from changes in actuarial assumptions or other inputs and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the respective qualified pension plan and recorded as a component of pension expense beginning with the year in which they are incurred. Projected earnings on qualified pension plan investments are recognized as a component of pension expense. Differences between projected and actual investment earnings are reported as deferred inflows of resources or deferred outflows of resources and amortized as a component of pension expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

Postemployment Benefits Other Than Pensions — In accordance with the provisions of GASB Statement No. 75, Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions and GASB Statement No. 85, Omnibus for the OPEB Plan, the MTA recognizes a net OPEB liability, which represents the excess of the total OPEB liability over the fiduciary net position of the OPEB Plan, measured as of the measurement date of the plan.

Changes in the net OPEB liability during the year are recorded as OPEB expense, or as deferred outflows of resources or deferred inflows of resources relating to OPEB depending on the nature of the change, in the year incurred. Changes in net OPEB liability that are recorded as deferred outflows of resources or deferred inflows of resources that arise from changes in actuarial assumptions and differences between expected or actual experience are amortized over the weighted average remaining service life of all participants in the OPEB plan and recorded as a component of OPEB expense beginning with the year in which they are incurred. Projected earnings on qualified OPEB plan investments are recognized as a component of OPEB expenses. Differences between projected and actual investment earnings are reported as deferred outflows of resources or deferred inflow of resources as a component of OPEB expense on a closed basis over a five-year period beginning with the year in which the difference occurred.

3. CASH AND INVESTMENTS

Cash - The Bank balances are insured up to \$250 thousand in the aggregate by the Federal Deposit Insurance Corporation ("FDIC") for each bank in which funds are deposited. As of September 30, 2022, restricted cash, primarily for capital projects, totaled \$867.

Cash, including deposits in transit, consists of the following at September 30, 2022 and December 31, 2021 (in millions):

	September 30, 2022					December	, 2021	
	Carrying			Bank		Carrying		Bank
	Amount			Balance		Amount		Balance
FDIC insured or collateralized deposits	\$	137	\$	136	\$	281	\$	280
Uninsured and not collateralized		1,165		1,122	_	501	_	482
Total Balance	\$	1,302	\$	1,258	\$	782	\$	762

All collateralized deposits are held by the MTA or its agent in the MTA's name.

The MTA, on behalf of itself, its affiliates and subsidiaries, invests funds which are not immediately required for the MTA's operations in securities permitted by the New York State Public Authorities Law, including repurchase agreements collateralized by U.S. Treasury securities, U.S. Treasury notes, and U.S. Treasury zero coupon bonds.

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the MTA will not be able to recover the value of its deposits. While the MTA does not have a formal deposit policy for custodial credit risk, New York State statues govern the MTA's investment policies. The MTA's uninsured and uncollateralized deposits are primarily held by commercial banks in the metropolitan New York area and are subject to the credit risks of those institutions.

Investments - MTA holds most of its investments at a custodian bank. The custodian must meet certain banking institution criteria enumerated in MTA's Investment Guidelines. The Investment Guidelines also require the Treasury Division to hold at least \$100 of its portfolio with a separate emergency custodian bank. The purpose of this deposit is in the event that the MTA's main custodian cannot execute transactions due to an emergency outside of the custodian's control, the MTA has an immediate alternate source of liquidity.

The MTA categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The hierarchy is based on the valuation inputs used to measure the fair value of the asset. Level 1 inputs are quoted prices in active markets for identical assets; Level 2 inputs are significant other observable inputs; Level 3 inputs are significant unobservable inputs.

The MTA had the following recurring fair value measurements as of September 30, 2022 and December 31, 2021 (in millions):

	Sej	otember	E7.*	. 37.1 . 34			ъ.		T7 . •	. X7.1 . M		
Investments by fair value level		30, 2022		Fair Value Measurement Level 1 Level 2		Level 2	2021		Fair Value M Level 1		Level 2	
investments by fair value level		2022		evel 1		Zevel 2		2021		evel 1		evel 2
Debt Securities:												
U.S. treasury securities	\$	16,159	\$	12,938	\$	3,221	\$	10,695	\$	10,327	\$	368
U.S. government agency		362		-		362		325		-		325
Commercial paper		514		-		514		1,615		-		1,615
Asset-backed securities		31		-		31		23		-		23
Commercial mortgage-backed												
securities		176		-		176		166		-		166
Foreign bonds		15		15		-		20		20		-
Corporate bonds		118		118		-		135		135		-
Tax Benefit Lease Investments:												
U.S. treasury securities		152		137		15		197		197		-
U.S. government agency		116		64		52		141		76		65
Repurchase agreements		179		179		-		274		274		-
Equity Securities				-				1		1		_
Total investments by fair value level		17,822	\$	13,451	\$	4,371		13,592	\$	11,030	\$	2,562
Capital leases		102						113				
Total Investments	\$	17,924					\$	13,705				

Investments classified as Level 1 of the fair value hierarchy, totaling \$13,451 and \$11,030 as of September 30, 2022 and December 31, 2021, respectively, are valued using quoted prices in active markets. Fair values include accrued interest to the extent that interest is included in the carrying amounts. Accrued interest on investments other than Treasury bills and coupons is included in other receivables on the statement of net position. The MTA's investment policy states that securities underlying repurchase agreements must have a fair value at least equal to the cost of the investment.

U.S. Government agency securities totaling \$414 and \$390, U.S, treasury securities totaling \$3,236 and \$368, commercial paper totaling \$514 and \$1,615, asset-backed securities totaling \$31 and \$23, and commercial mortgage-backed securities totaling \$176 and \$166 as of September 30, 2022 and December 31, 2021, respectively, classified in Level 2 of the fair value hierarchy, are valued using matrix pricing techniques maintained by a third-party pricing service. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices and indices. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from a third-party pricing service or our custodian bank.

In connection with certain lease transactions described in Note 8, the MTA has purchased securities or entered into payment undertaking, letter of credit, or similar type agreements or instruments (guaranteed investment contracts) with financial institutions, which generate sufficient proceeds to make basic rent and purchase option payments under the terms of the leases. If the obligors do not perform, the MTA may have an obligation to make the related rent payments.

All investments, other than the investments restricted for capital lease obligations, are either insured or registered and held by the MTA or its agent in the MTA's name. Investments restricted for capital lease obligations are either held by MTA or its agent in the MTA's name or held by a custodian as collateral for MTA's obligation to make rent payments under capital lease obligations. Investments had weighted average yields of 2.03% and 1.14% for the nine months ended September 30, 2022 and year ended December 31, 2021, respectively.

Credit Risk — At September 30, 2022 and December 31, 2021, the following credit quality rating has been assigned to MTA investments by a nationally recognized rating organization (in millions):

Quality Rating Standard & Poor's	mber 30, 2022	Percent of Portfolio	December 31, 2021	Percent of Portfolio		
A-1+	\$ 144	1%	\$ 45	0%		
A-1	514	3%	1,615	12%		
AAA	260	1%	303	2%		
AA+	52	0%	65	1%		
AA	31	0%	29	0%		
A	64	1%	72	1%		
A-	128	1%	147	1%		
BBB	45	0%	60	0%		
В	-	0%	-	0%		
Not Rated	209	1%	286	2%		
U.S. Government	16,375	92%	10,969	81%		
Total	 17,822	100%	13,591	100%		
Equities and capital leases	102		114			
Total investment	\$ 17,924		\$ 13,705			

Interest Rate Risk — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of interest rate risk. The greater the duration of a bond or portfolio of bonds, the greater its price volatility will be in response to a change in interest rate risk and vice versa. Duration is an indicator of bond price's sensitivity to a 100 basis point change in interest rates.

	September 30	0, 2022	December 31	, 2021
	Fair Value	Duration	Fair Value	Duration
(In millions)		(in years)		(in years)
U.S. Treasuries	\$ 16,160	5.27	\$ 10,697	5.14
Federal Agencies	362	5.96	324	5.67
Tax benefits lease investments	268	5.95	337	-
Repurchase agreements	178	-	274	-
Commercial paper	514	-	1,615	-
Asset-backed securities (1)	31	3.43	23	3.83
Commercial mortgage-backed securities (1)	176	4.83	166	4.29
Foreign bonds (1)	15	5.71	20	7.08
Corporates (1)	118	5.84	135	6.92
Total fair value	17,822		13,591	
Modified duration		5.09		4.32
Equities (1)	-		1	
Investments with no duration reported	 102		 113	
Total investments	\$ 17,924		\$ 13,705	

⁽¹⁾ These securities are only included in the FMTAC portfolio.

MTA is a public benefit corporation established under the New York Public Authorities Law. MTA's Treasury Division is responsible for the investment management of the funds of the component units. The investment activity covers all operating and capital funds, including bond proceeds, and the activity is governed by State statutes, bond resolutions and the Board-adopted investment guidelines (the "Investment Guidelines"). The MTA Act currently permits the Related Entities to invest in the following general types of obligations:

- obligations of the State or the United States Government;
- obligations of which the principal and interest are guaranteed by the State or the United States government;
- obligations issued or guaranteed by certain Federal agencies;
- repurchase agreements fully collateralized by the obligations of the foregoing United States Government and Federal agencies;
- certain certificates of deposit of banks or trust companies in the State;

- certain banker's acceptances with a maturity of 90 days or less;
- certain commercial paper;
- · certain municipal obligations; and
- certain mutual funds up to \$10 in the aggregate.

MTA adopted NYS Statutory Requirements with respect to credit risk of its investments, which include, but are not limited to the following sections:

- i. Public Authorities Law Sections 1265(4) (MTA), 1204(19) (MTA New York City Transit Authority) and 553(21) (MTA Bridges and Tunnels);
- ii. Public Authorities Law Section 2925 Investment of funds by public authorities and public benefit corporations; general provisions; and
- iii. State Finance Law Article 15 EXCELSIOR LINKED DEPOSIT ACT.

MTA Investment Guidelines limit the dollar amount invested in banker acceptances, commercial paper, and obligations issued or guaranteed by certain Federal agencies to \$250 at cost. There are no dollar limits on the purchase of obligations of the United States government, the State or obligations the principal and interest of which are guaranteed by the State or the United States government. Investments in collateralized repurchase agreements are limited by dealer or bank's capital. MTA can invest no greater than \$300 with a bank or dealer rated in Tier 1 (i.e. \$1 billion or more of capital).

FMTAC is created as a MTA subsidiary and is licensed as a captive direct insurer and reinsurer by the New York State Department of Insurance. As such, FMTAC is responsible for the investment management of its funds. The investment activity is governed by State statutes and the FMTAC Board adopted investment guidelines. The minimum surplus to policyholders and reserve instruments are invested in the following investments:

- obligations of the United States or any agency thereof provided such agency obligations are guaranteed as to principal and interest by the United States;
- direct obligations of the State or of any county, district or municipality thereof;
- any state, territory, possession or any other governmental unit of the United States;
- certain bonds of agencies or instrumentalities of any state, territory, possession or any other governmental unit of the United States;
- the obligations of a solvent American institution which are rated investment grade or higher (or the equivalent thereto) by a securities rating agency; and
- certain mortgage backed securities in amounts no greater than five percent of FMTAC's admitted assets.

FMTAC may also invest non-reserve instruments in a broader range of investments including the following general types of obligations:

- certain equities; and
- certain mutual funds.

FMTAC is prohibited from making the following investments:

- investment in an insolvent entity;
- any investment as a general partner; and
- any investment found to be against public policy.

FMTAC investment guidelines do include other investments, but FMTAC has limited itself to the above permissible investments at this time.

4. EMPLOYEE BENEFITS

Pensions — The MTA Related Groups sponsor and participate in several defined benefit pension plans for their employees, the Long Island Railroad Company Plan for Additional Pensions (the "Additional Plan"), the Manhattan and Bronx Surface Transit Operating Authority Pension Plan (the "MaBSTOA Plan"), the Metro-North Commuter Railroad Company Cash Balance Plan (the "MNR Cash Balance Plan"), the Metropolitan Transportation Authority Defined Benefit Plan (the "MTA Defined Benefit Plan"), the New York City Employees' Retirement System ("NYCERS"), and the New York State and Local Employees' Retirement System ("NYSLERS"). A brief description of each of these pension plans follows:

Plan Descriptions

1. Additional Plan —

The Additional Plan is a single-employer defined benefit pension plan that provides retirement, disability and survivor benefits to members and beneficiaries. The Additional Plan covers MTA Long Island Rail Road employees hired effective July 1, 1971 and prior to January 1, 1988. The Additional Plan's activities, including establishing and amending contributions and benefits are administered by the Board of Managers of Pensions. The Additional Plan is a governmental plan and accordingly, is not subject to the funding and other requirements of the Employee Retirement Income Security Act of 1974 ("ERISA"). The Additional Plan is a closed plan.

The Board of Managers of Pensions is comprised of the Chairman of the MTA, MTA Chief Financial Officer, MTA Director of Labor Relations and the agency head of each participating Employer or the designee of a member of the Board of Managers. The Additional Plan for Additional Pensions may be amended by action of the MTA Board. The Additional Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan has a separately issued financial statement that is publicly available and contains required descriptions and supplemental information regarding the employee benefit plan. The financial statements may be obtained at www. mta.info or by writing to, Long Island Rail Road, Controller, 93-02 Sutphin Boulevard - mail code 1421, Jamaica, New York 11435.

2. MaBSTOA Plan —

The MaBSTOA Plan is a multi-employer defined benefit retirement plan administered by MTA New York City Transit covering employees of MaBSTOA and MTA Headquarters. Prior to January 1, 2020, this was a single employer defined benefit retirement plan covering only MaBSTOA employees. Employees of MaBSTOA and MTA Headquarters are specifically excluded from participating in the New York City Employees' Retirement System (NYCERS). The Plan provides retirement as well as death, accident and disability benefits. Effective January 1, 1999, in order to afford managerial and non-represented MaBSTOA employees the same pension rights as like title employees in the MTA New York City Transit Authority, membership in the MaBSTOA Plan is optional.

The Board of Administration, established in 1963, determines the eligibility of employees and beneficiaries for retirement and death benefits. The MaBSTOA Plan assigns authority to the MaBSTOA Board to modify, amend or restrict the MaBSTOA Plan or to discontinue it altogether, subject, however, to the obligations under its collective bargaining agreements. The Board is composed of five members: two representatives from the Transport Workers Union, Local 100 ("TWU") and three employer representatives. The MaBSTOA Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained by writing to the Metropolitan Transportation Authority, Deputy Chief Controller's Office, 2 Broadway, 15th Floor, New York, NY 10004, or at www.mta.info.

3. MNR Cash Balance Plan —

The MNR Cash Balance Plan is a single employer, defined benefit pension plan administered by MTA Metro-North Railroad. The MNR Cash Balance Plan covers non-collectively bargained employees, formerly employed by Conrail, who joined MTA Metro-North Railroad as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these management employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees (the "Management Plan") and the MNR Cash Balance Plan was closed to new participants. The assets of the Management Plan were merged with the Metropolitan Transportation Authority Defined Benefit Plan for Non-Represented Employees (now titled as the Metropolitan Transportation Authority Defined Benefit Pension Plan) as of the asset transfer date of July 14, 1995. The MNR Cash Balance Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) and 501(a) of the Internal Revenue Code. Accordingly, the MNR Cash Balance Plan is tax-exempt and is not subject to the provisions of ERISA.

The MTA Board of Trustees appoints a Board of Managers of Pensions consisting of five individuals who may, but need not, be officers or employees of the company. The Board of Managers control and manage the operation and administration of the MNR Cash Balance Plan's activities, including establishing and amending contributions and benefits.

Further information about the MNR Cash Balance Plan is more fully described in the separately issued financial statements that can be obtained by writing to the Metropolitan Transportation Authority, Deputy Chief Controller's Office, 2 Broadway, 15th Floor, New York, NY 10004. These statements are also available at www.mta.info.

4. MTA Defined Benefit Plan —

The MTA Defined Benefit Pension Plan (the "MTA Plan" or the "Plan") is a cost sharing, multiple-employer defined benefit pension plan. The Plan covers certain MTA Long Island Railroad non-represented employees hired after January 1, 1988, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 24, 1983, MTA Police, MTA Long Island Railroad represented employees hired after December 31, 1987, certain MTA Metro-North Railroad represented employees, MTA Staten Island Railway represented and non-represented employees and certain employees of the MTA Bus Company ("MTA Bus"). The MTA, MTA Long Island Railroad, MTA Metro-North Railroad, MTA Staten Island Railway and MTA Bus contribute to the MTA Plan, which offers distinct retirement, disability retirement, and death benefit programs for their covered employees and beneficiaries.

The MTA Defined Benefit Plan is administered by the Board of Managers of Pensions. The MTA Plan, including benefits and contributions, may be amended by action of the MTA Board. The MTA Defined Benefit Plan is a fiduciary component unit of the MTA and is reflected in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The pension plan issues a publicly available financial report that includes financial statements and required supplementary information. This report may be obtained by writing to the Metropolitan Transportation Authority, Deputy Chief Controller's Office, 2 Broadway, 15th Floor, New York, NY 10004, or at www.mta.info.

5. NYCERS—

NYCERS is a cost-sharing, multiple-employer retirement system for employees of The City of New York ("The City") and certain other governmental units whose employees are not otherwise members of The City's four other pension systems. NYCERS administers the New York City Employees Retirement System qualified pension plan.

NYCERS was established by an act of the Legislature of the State of New York under Chapter 427 of the Laws of 1920. NYCERS functions in accordance with the governing statutes contained in the New York State Retirement and Social Security Law ("RSSL"), and the Administrative Code of the City of New York ("ACNY"), which are the basis by which benefit terms and employer and member contribution requirements are established and amended. The head of the retirement system is the Board of Trustees. NYCERS is a fiduciary component unit of The City and is in the Pension and Other Employee Benefit Trust Funds section of The City's Annual Comprehensive Financial Report ("ACFR").

NYCERS issues a publicly available comprehensive annual financial. This report may be obtained by writing to the New York City Employees' Retirement System at 335 Adams Street, Suite 2300, Brooklyn, NY 11201-3724 or at www.nycers.org.

All employees of the Related Group holding permanent civil service positions in the competitive or labor class are required to become members of NYCERS six months after their date of appointment, but may voluntarily elect to join NYCERS prior to their mandated membership date. All other eligible employees have the option of joining NYCERS upon appointment or anytime thereafter. NYCERS members are assigned to a "tier" depending on the date of their membership.

- Tier 1 All members who joined prior to July 1, 1973.
- Tier 2 All members who joined on or after July 1, 1973 and before July 27, 1976.
- Tier 3 Only certain members who joined on or after July 27, 1976 and prior to April 1, 2012
- Tier 4 All members (with certain member exceptions) who joined on or after July 27, 1976
 - but prior to April 1, 2012. Members who joined on or after July 27, 1976 but prior to
 - September 1, 1983 retain all rights and benefits of Tier 3 membership.
- Tier 6 Members who joined on or after April 1, 2012.

6. NYSLERS—

NYSLERS is a cost-sharing, multiple-employer defined benefit retirement system. The New York State Comptroller's Office administers the NYSLERS' plan. The net position of NYSLERS is held in the New York State Common Retirement Fund (the "Fund"), which was established to hold all assets and record changes in fiduciary net position allocated to the plan. The Comptroller of the State of New York serves as the trustee of the Fund and is the administrative head of NYSLERS. NYSLERS' benefits are established under the provisions of the New York State RSSL. Once a public employer elects to participate in NYSLERS, the election is irrevocable. The New York State Constitution provides that pension membership is a contractual relationship and plan benefits cannot be diminished or impaired. Benefits can be changed for future members only by enactment of a State statute.

NYSLERS is included in New York State's financial report as a pension trust fund. The report can be accessed on the New York State Comptroller's website at: www.osc.state.ny.us/retire/about_us/financial_statements_index.php or obtained by writing to the New York State and Local Retirement System, 110 State Street, Albany, NY 12244-001.

Pension legislation enacted in 1973, 1976, 1983, 2009 and 2012 established distinct classes of tier membership.

Tier 1	All members who joined prior to July 1, 1973.
Tier 2	All members who joined on or after July 1, 1973 and before July 27, 1976.
Tier 3	Generally, certain members who joined on or after July 27, 1976 but before January 1, 2010 and all other members who joined on or after July 27, 1976, but before September 1, 1983.
Tier 4	Generally, members (with certain member exceptions) who joined on or after September 1, 1983, but before January 1, 2010.
Tier 5	Members who joined on or after January 1, 2010, but before April 1, 2012.
Tier 6	Members who joined on or after April 1, 2012.

Benefits Provided

1. Additional Plan —

Pension Benefits — An employee who retires under the Additional Plan, either: (a) after completing at least 20 years of credited service, or (b) after both attaining age 65 while in service and completing at least five years of credited service, or in the case of those who were active employees on January 1, 1988, after completing at least 10 years of credited service, is entitled to an annual retirement benefit, payable monthly for life. Payments commence to an employee referred to in: (a) only after attaining age 50, or (b) only after attaining age 65.

Benefit and contribution provisions, which are based on the point in time at which participants last entered qualifying service and their length of credited service, are established by, and may only be amended by the MTA Long Island Rail Road, subject to the obligations of the MTA Long Island Rail Road under its collective bargaining agreements.

The Additional Plan has both contributory and non-contributory requirements, with retirement ages varying from 50 to 65 depending upon a participant's length of credited service. Pension benefits payable to age 65, where eligible, are calculated as 2% of the employee's applicable final average earnings for each year of qualifying service up to 25 years plus 1.5% of applicable final average earnings for each year of qualifying service in excess of 25 years. For pension benefits payable at and after age 65, regardless of whether benefits commenced before or after the employee attained age 65, benefits are calculated in the same manner as pension benefits payable prior to age 65 except that the amount so determined is reduced by a percentage of the employee's annuity (not including any supplemental annuity) value at age 65 under the Federal Railroad Retirement Act.

Participants who entered qualifying service before July 1, 1978 are not required to contribute. Participants who entered qualifying service on or after July 1, 1978, are required to contribute 3% of their wages. The MTA Long Island Railroad contributes additional amounts based on actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due.

Death and Disability Benefits — Participants who become disabled after accumulating 10 years of credited service and who meet the requirements as described in the Additional Plan receive a disability benefit. Disability pension benefits are calculated based on the participant's qualifying service and a percentage of final average compensation reduced by the full amount of benefit under the Federal Railroad Retirement Act. Survivorship benefits are paid to the participant's spouse when a survivorship option is elected or when an active participant has not divested his or her spouse of benefits. The survivorship benefit is payable at the time of death or when the vested participant would have attained an eligible age. The amount payable is in the form of an annuity. A lump sum death benefit no greater than five thousand dollars is payable upon death on behalf of a non-vested participant or vested participant whose pension rights were waived.

Retirement benefits establishment and changes for representative employees are collectively bargained and must be ratified by the respective union and the MTA Board. For nonrepresented employees, amendments must be approved by the MTA Board.

2. MaBSTOA Plan —

The MaBSTOA Plan provides retirement as well as death, accident, and disability benefits. The benefits provided by the MaBSTOA Plan are generally similar to the benefits provided to MTA New York City Transit participants in NYCERS. Benefits vest after either 5, 10, or 20 years of credited service, depending on the date of membership.

In 2008, NYCERS had determined that Tier 4 employees are and have been eligible for a post retirement death benefit retroactive to 1986. In June 2012, the MTA Board approved an amendment to the MaBSTOA Plan to provide for incorporation of this benefit.

Tier 1 —

Eligibility and Benefit Calculation: Tier 1 members must be at least age 50 with the completion of 20 years of service to be eligible to collect a service retirement benefit. Generally, the benefit is 1.50% for service before March 1, 1962, plus 2.0% for service from March 1, 1962 to June 30, 1970, plus 2.5% for service after June 30, 1970. The accumulated percentage, up to a maximum of 50%, is multiplied by the member's compensation, which is the greater of earned salary during the year prior to retirement. Once the accumulated reaches 50%, the percentage for each further year of service reverts back to 1.5%. The percentage in excess of 50% is multiplied by the final compensation, which is the highest average earnings over five consecutive years.

Ordinary Disability Benefits — Generally, ordinary disability benefits, are provided to eligible Tier 1 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by final compensation.

Accidental Disability Benefits — The accidental disability benefit to eligible Tier 1 members is equal to 75% of final compensation reduced by 100% of any worker's compensation payments.

Ordinary Death Benefits — For Tier 1 members the amount of the death benefit is a lump sum equal to six months' pay for members with less than 10 years of service; a lump sum equal to a 12 months of pay for members with more than 10 but less than 20 years of service, and a lump sum equal to two times 12 months of pay for members with more than 20 years of service.

Tier 2 —

Eligibility and Benefit Calculation: Tier 2 members must be at least age 55 with the completion of 25 years of service to be eligible to collect a service retirement benefit. Generally, the benefit equals 50% of final 3-year average compensation, defined as the highest average earnings over three consecutive years, plus 1% of final 5-year average compensation, defined as the highest average earnings over five consecutive years, per year of credited service in excess of 20 years. For early retirement, members must be at least age 50 with the completion of at least 20 years of service. The benefit is determined in the same manner as the service retirement but not greater than 2.0% of final 3-year average compensation per year of service.

Ordinary Disability Benefits — Generally, ordinary disability benefits, are provided to eligible Tier 2 members after ten years of service with the benefit equal to the greater of the service retirement percentages or 25% multiplied by the final 5- year average compensation.

Accidental Disability Benefits — The accidental disability benefit to eligible Tier 2 members is equal to 75% of the final 5-year average compensation reduced by any worker's compensation payments.

Ordinary Death Benefits — Tier 2 members require the completion of 90 days of service to receive a lump sum equal to 3 times salary, raised to the next multiple of \$1,000 dollars.

Tiers 3, 4—

Eligibility and Benefit Calculation: Tier 3 and 4 members in the Regular 62 and 5 Plan must be at least age 62 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of Final Average Compensation ("FAC") for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. FAC is defined as the highest average earnings over three consecutive years, of which earnings in a year cannot exceed 110% of the average of the two preceding years. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service. For early retirement, members must be at least age 55 with the completion of at least 5 years of service. The benefit equals the service retirement benefit reduced by 6% for each of the first two years prior to age 62, and by 3% for years prior to age 60.

Tier 3 and 4 members in the basic 55/25Plan must be at least age 55 with the completion of at least 25 years of service, or be at least age 62 with the completion of at least 5 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of FAC for the first 30



years of service plus 1.5% of FAC for years of service in excess of 30. If the member completes less than 25 years of credited service, the benefit equals 1-2/3% of FAC multiplied by years of service.

Tier 4 members in the 57/5 Plan must be at least age 57 with the completion of at least 5 years of service to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 2.0% of FAC for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. member completes less than 20 years of credited service, the benefit equals 1-2/3% of FAC multiplied by years of

Ordinary and Accidental Disability Benefits — For eligible members of the Regular 62/5 Plan, 57/25Plan and 57/5 Plan, ordinary and accidental disability benefits, are provided after 10 years of service for ordinary and no service required for accidental disability benefit. The benefit equals the greater of 1-2/3% of FAC per year of service and 1/3 of FAC.

Ordinary Death Benefits — For eligible members of the Regular 62/5 Plan, 55/25 Plan, 57/5 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement. After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

Tier 6 —

Eligibility and Benefit Calculation: Tier 6 members in the 55/25 Special Plan must be at least age 55 with the completion of at least 25 years, or at least age 63 with the completion of at least 10 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of Final Average Salary ("FAS") for the first 30 years of service plus 1.5% of FAS for years of service in excess of 30. If the member completes less than 20 years of credited service, the benefit equals 1-2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable compensation over five consecutive years.

Tier 6 members in the Basic 63/10 Plan must be at least age 63 with the completion of at least 10 years to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 20 years of service, is equal to 35% of FAS plus 2.0% of FAS for years of service in excess of 20. If the member completes less than 20 years of credited service, the benefit equals 1-2/3% of FAS multiplied by years of service. FAS is defined as the highest average pensionable earnings over five consecutive years. For early retirement, members must be at least age 55 with the completion of at least 10 years of service. The benefit equals the service retirement benefit reduced by 6.5% for each year early retirement precedes age 63.

Ordinary and Accidental Disability Benefits — For eligible members of the 55/25 Special Plan and the Basic 63/10 Plan, ordinary and accidental disability benefits, are provided after 10 years of credited service for ordinary disability benefit. There is no service requirement for accidental disability benefit. The benefit equals the greater of 1-2/3% of FAS per year of service and 1/3 of FAS.

Ordinary Death Benefits — For eligible members of the 55/25 Special Plan and the Basic 63/10 Plan, the pre-retirement ordinary death benefit is equal to a lump sum of annual salary times the lesser of completed years of service and 3. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest and one-half of accumulated additional member contributions with interest are also payable. Upon retirement, the post-retirement benefit is reduced by 50% and reduced an additional 25% after completion of one year of retirement. After completion of two years of retirement, the benefit equals 10% of the pre-retirement benefit in force at age 60.

3. MNR Cash Balance Plan —

Pension Benefits — Participants of the MNR Cash Balance Plan are vested in their benefit upon the earlier of (a) the completion of 5 years of service with MTA Metro-North Railroad or (b) the attainment of age 62. The accrued benefit is a participant's Initial Account Balance increased each month by the benefit escalator. The benefit escalator is defined as the Pension Benefit Guaranty Corporation ("PBGC") immediate annuity rate in effect for December of the year preceding the year for which the determination is being made) divided by 180. The accrued benefit is paid as an escalating annuity. Vested participants are entitled to receive pension benefits commencing at age sixty-five. Participants may elect to receive the value of their accumulated plan benefits as a lump-sum distribution upon retirement or they may elect a monthly life annuity. Participants may elect to receive their pension in the form of a joint and survivor annuity.

Participants of the MNR Cash Balance Plan are eligible for early retirement benefits upon termination of employment, the attainment of age 62, or age 60 and completion of 15 years of service, or age 55 and the completion of 30 years of service. The early retirement benefits paid is the normal retirement pension deferred to age 65 or an immediate pension equal to the life annuity actuarial equivalent of a participant's escalating annuity at normal retirement date indexed by

the Initial Benefit Escalator from early retirement date to normal retirement date and reduced by 5/9 of 1% for each month retirement precedes age 65 up to 60 months and 5/18 of 1% for each month after 60 months.

For members with cash balances who are currently members of the Metropolitan Transportation Authority Defined Benefit Pension Plan, an additional benefit is provided equal to the amount needed to bring their total benefits (i.e., Railroad Retirement Tier I and II benefits, Conrail Plan benefits, Cash Balance Plan benefits, and MTA Defined Benefit Pension Plan benefits) up to a minimum of 65% of their 3-year final average pay under the MTA Defined Benefit Plan. In no event will the Additional Benefit exceed 2% of 3-year final average pay multiplied by the Conrail Management Service prior to July 1, 1983. This benefit is payable as a life annuity and is reduced for commencement prior to age 65 in the same manner as the regular cash balance benefit. This additional benefit is payable only in the form of a life annuity or 100% or 50% contingent annuity

Death Benefits — Benefits are paid to vested participants' beneficiaries in the event of a participants' death. The amount of benefits payable is the participant's account balance at the date of his or her death. Pre-retirement death benefits paid for a participant's death after 55 is equal to the amount the spouse would have received had the participant elected retirement under the normal form of payment on the day preceding his death. Pre-retirement death benefits paid for a participant's death before 55 is equal to the amount the spouse would have received had the participant survived to age 55 and retired under the normal form of payment on that date. The benefit is based on service to the participant's date of death and is payable beginning on the date the participant would have attained age 55.

In lieu of the above benefit, the surviving spouse can elect to receive the participant's account balance in a single lump sum payment immediately. If the participant was not married, the participant's beneficiary is entitled to receive the participant's Account Balance as of the participant's date of death in a single lump sum payment.

4. MTA Defined Benefit Plan

Pension Benefits — Retirement benefits are paid from the Plan to covered MTA Metro-North Railroad, MTA Staten Island Railway and post - 1987 MTA Long Island Rail Road employees as service retirement allowances or early retirement allowances. A participant is eligible for a service retirement allowance upon termination if the participant satisfied both age and service requirements. A participant is eligible for an early retirement allowance upon termination if the participant has attained age 55 and completed at least 10 years of credited service. Terminated participants with 5 or more years of credited service are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on the first day of the month following the participant's 62nd birthday.

Certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad continue to make contributions to the Plan for 15 years. Certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad are eligible for an early retirement allowance upon termination if the participant has attained age 60 and completed at least 5 years of credited service, or has attained age 55 and completed at least 30 years of credited service. The early retirement allowance is reduced one-quarter of 1% per month for each full month that retirement predates age 60 for certain represented employees of the MTA Long Island Rail Road and the MTA Metro-North Railroad.

Effective in 2007, members and certain former members who become (or became) employed by another MTA agency which does not participate in the Plan continue to accrue service credit based on such other employment. Upon retirement, the member's vested retirement benefit from the Plan will be calculated on the final average salary of the subsequent MTA agency, if higher. Moreover, the Plan benefit will be reduced by the benefit, if any, payable by the other plan based on such MTA agency employment. Such member's disability and ordinary death benefit will be determined in the same way.

Retirement benefits are paid from the Plan under the MTA 20-Year Police Retirement Program. A participant is eligible for service retirement at the earlier of completing twenty years of credited Police service or attainment of age 62. Terminated participants with five years of credited police service, who are not eligible for retirement, are eligible for a deferred benefit. Deferred vested benefits are payable on the first of the month following the participant's attainment of age 55.

Retirement benefits paid from the Plan to covered represented MTA Bus employees include service retirement allowances or early retirement allowances. Under the programs covering all represented employees at Baisley Park, Eastchester, La Guardia, Spring Creek, and Yonkers Depots and the represented employees at College Point Depot, JFK, Far Rockaway a participant is eligible for a service retirement allowance upon termination if the participant has attained age sixty-five and completed at least five years of credited service or if the participant has attained age 57 and completed at least 20 years of credited service. A participant hired prior to June 2009 from Baisley Park, College Point, and La Guardia Depots is eligible for an early retirement allowance if the participant has attained age 55 and completed 20 years of credited service. Terminated participants with five or more years of credited service who are not eligible to receive a service retirement allowance or early retirement allowance are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on or after the participant attains age 65.

At Baisley Park, Far Rockaway, JFK, La Guardia and Spring Creek Depots, a participant who is a non-represented employee is eligible for an early retirement allowance upon termination if the participant has attained age 55 and completed 15 years of service. Terminated participants with five or more years of credited service who are not eligible to receive a service retirement allowance or early retirement allowance are eligible for a deferred vested benefit. Deferred vested benefits are payable on an unreduced basis on or after the participant attains age 62.

The MTA Bus retirement programs covering represented and non-represented employees at Eastchester and Yonkers and covering the represented employees at Baisley Park, College Point, Far Rockaway, JFK, La Guardia and Spring Creek are fixed dollar plans, i.e., the benefits are a product of credited service and a specific dollar amount.

The retirement benefits for certain non-represented employees at Baisley Park, Far Rockaway, JFK, La Guardia and Spring Creek are based on final average salary. Certain participants may elect to receive the retirement benefit as a single life annuity or in the form of an unreduced 75% joint and survivor benefit.

Pre-1988 MTA Long Island Rail Road participants are eligible for a service retirement allowance upon termination if the participants has either: (a) attained age sixty-five and completed at least five years of credited service, or if an employee on January 1, 1988 completed at least 10 years of credited service, or (b) attained age fifty and has completed at least 20 years of credited service. Terminated participants who were not employees on January 1, 1988 with five or more years of credited service are eligible for a deferred vested benefit. Pension benefits payable to age 65, where eligible, are calculated as 2% of the employee's applicable final average earnings for each year of qualifying service up to 25 years plus 1.5% of applicable final average earning of each year of qualifying service in excess of 25 years. For pension benefits payable at and after age 65 regardless of whether benefits commenced before or after the employee attained age 65, benefits are calculated in the same manner as pension benefits payable prior to age 65 except that the amount so determined is reduced by a percentage of the employee's annuity (not including supplemental annuity) value at age 65 under the Federal Railroad Retirement Act. The reduction of pension benefits for amounts payable under the Federal Railroad Retirement Act is 50%.

Death and Disability Benefits — In addition to service retirement benefits, participants of the Plan are eligible to receive disability retirement allowances and death benefits. Participants who become disabled may be eligible to receive disability retirement allowances after 10 years of covered MTA Bus service; 10 years of credited service for covered MTA Metro-North Railroad and MTA Long Island Rail Road management and represented employees, covered MTA Staten Island Railway employees and covered MTA police participants.

The disability retirement allowance for covered MTA Metro-North Railroad and MTA Long Island Rail Road management and represented covered MTA Staten Island Railway employees is calculated based on the participant's credited service and final average salary ("FAS") but not less than 1/3 of FAS. Under the MTA 20 Year Police Retirement Program, a disabled participant may be eligible for one of three forms of disability retirement: (a) ordinary disability which is payable if a participant has ten years of credited Police service and is calculated based on the participant's credited Police service and FAS but not less than \(\frac{1}{2} \) of FAS; (b) performance of duty, which is payable if a participant is disabled in the performance of duty and is ½ of FAS, and (c) accidental disability, which is payable if a participant is disabled as the result of an on-the-job accidental injury and is \(^3\)4 of FAS subject to an offset of Workers' Compensation benefits. Pursuant to the MTA Bus programs, the disability benefit is the same as the service retirement benefit.

Pre -1988 MTA Long Island Rail Road participants who become disabled after accumulating 10 years of credited service and who meet the requirements as described in the Plan may be eligible to receive a disability benefit. Disability pension benefits are based on the participant's qualified service and a percentage of final average compensation reduced by the full amount of the disability benefit under the Federal Railroad Retirement Act. Survivorship benefits for pre-1988 MTA Long Island Rail Road participants are paid to the spouse when a survivorship option is elected or when an active participant has not divested their spouse of benefits.

The survivorship benefit is payable at the time of death or when the vested participant would have attained an eligible age. The amount payable is in the form of an annuity. A lump sum death benefit no greater than \$5,000 (whole dollars) is payable upon death on behalf of a non-vested participant or vested participant whose pension rights were waived.

Death benefits are paid to the participant's beneficiary in the event of the death of a covered MTA Metro-North Railroad, post-1987 MTA Long Island Rail Road or MTA Staten Island Railway employee after completion of one year of credited service. The death benefit payable is calculated based on a multiple of a participant's salary based on years of credited service up to three years and is reduced beginning at age 61. There is also a post-retirement death benefit which, in the 1st year of retirement, is equal to 50% of the pre-retirement death benefit amount, whichever is greater, 25% the 2nd year and 10% of the death benefit payable at age 60 for the 3rd and later years. For the Police 20 Year Retirement Program, the death benefit is payable after ninety days of credited MTA Police service, and is equal to three times their salary. For non-Police groups, this death benefit is payable in a lump sum distribution while for Police, the member or the beneficiary can elect to have it paid as an annuity. The MTA Police do not have a post retirement benefit.

In the MSBA Employees' Pension Plan, there are special spousal benefits payable upon the death of a participant who is eligible for an early retirement benefit, or a normal service retirement benefit, or who is a vested participant or vested former participant. To be eligible, the spouse and participant must have been married at least one year at the time of death. Where the participant was eligible for an early service retirement benefit or was a vested participant or former participant, the benefit is a pension equal to 40% of the benefit payable to the participant as if the participant retired on the date of death. Where the participant was eligible for a normal service retirement benefit, the eligible spouse can elect either the benefit payable as a pension, as described in the prior sentence, or a lump sum payment based on an actuarially determined pension reserve. If there is no eligible spouse for this pension reserve benefit, a benefit is payable to the participant's beneficiary or estate.

Moreover, an accidental death benefit is payable for the death of a participant who is a covered MTA Metro-North Railroad or post-1987 MTA Long Island Rail Road employee, a covered MTA Staten Island Railway employee or a covered MTA Police member and dies as the result of an on-the-job accidental injury. This death benefit is paid as a pension equal to 50% of the participant's salary and is payable to the spouse for life, or, if none, to children until age eighteen (or twenty-three, if a student), or if none, to a dependent parent.

For MTA Bus employees, there is varied death benefit coverage under the Plan. For all represented and non-represented MTA Bus employees at Eastchester and Yonkers Depots and represented MTA Bus employees at Baisley Park, College Point, Far Rockaway, JFK, La Guardia and Spring Creek Depots, if a participant dies prior to being eligible for a retirement benefit, the participant's beneficiary may elect to receive a refund of the participant's contributions plus interest.

Moreover, the spouses of the above employees who are vested are entitled to a presumed retirement survivor annuity which is based on a 50% Joint and Survivor annuity. The date as of which such annuity is determined and on which it commences varies among the different programs depending on whether the participants are eligible for retirement and for payment of retirement benefits.

In addition, the spouse of a non-represented MTA Bus employee at Spring Creek, JFK, La Guardia, Baisley Park and Far Rockaway, if such employee is age 55 and has 15 years of service and is a terminated member with a vested benefit which is not yet payable, may elect the presumed retirement survivor annuity or 1/2 the participant's accrued benefit paid monthly and terminating on the 60th payment or the spouse's death. The spouse of a non-represented MTA Bus employee at Yonkers Depot may also receive a pre-retirement survivor annuity from the supplemental plan. If there is no such spouse, the actuarial equivalent of such annuity is payable.

Dependent children of MTA Bus employees are also entitled to an annuity based on the spouse's pre-retirement survivor annuity (1/2 of the spouse's annuity is payable to each child, but no more than 100% of the spouse's annuity is payable). In addition, the dependent children of retirees who were MTA Bus employees at these Depots are entitled to an annuity based on the presumed retirement survivor's annuity (25% of the spouse's annuity; but no more than 50% of the spouse's annuity is payable).

Retirement benefits establishment and changes for represented employees are collectively bargained and must be ratified by the respective union and the MTA Board. For nonrepresented employees, retirement benefits establishment and changes are presented to the MTA Board and must be accepted and approved by the MTA Board.

5. NYCERS—

NYCERS provides three main types of retirement benefits: Service Retirements, Ordinary Disability Retirements (nonjob-related disabilities) and Accident Disability Retirements (job-related disabilities) to participants generally based on salary, length of service, and member Tiers.

The Service Retirement benefits provided to Tier 1 participants fall into four categories according to the level of benefits provided and the years of service required. Three of the four categories provide annual benefits of 50% to 55% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.2% to 1.7%) of final salary. The fourth category has no minimum service requirement and instead provides an annual benefit for each year of service equal to a specified percentage (currently 0.7% to 1.53%) of final salary.

Tier 2 participants have provisions similar to Tier 1, except that the eligibility for retirement and the salary base for benefits are different and there is a limitation on the maximum benefit.

Tier 3 participants were later mandated into Tier 4, but could retain their Tier 3 rights. The benefits for Tier 3 participants are reduced by one half of the primary Social Security benefit attributable to service, and provides for an automatic annual cost-of- living escalator in pension benefits of not more than 3.0%.

Tier 4 participants upon satisfying applicable eligibility requirements may be mandated or elected, as applicable, into the Basic 62/5 Retirement Plan, the 57/5 Plan, the 55/25 Plan, the Transit 55/25 Plan, the MTA Triborough Bridge and Tunnel Authority 50/20 Plan, and the Automotive Member 25/50 Plan. These plans provide annual benefits of 40% to 50% of final salary after 20 or 25 years of service, with additional benefits equal to a specified percentage per year of service (currently 1.5% to 2%) of final salary.

Chapter 18 of the Laws of 2012 created Tier 6. These changes increase the retirement age to 63, require member contributions for all years of service, institute progressive member contributions, and lengthen the final average salary period from 3 to 5 years.

NYCERS also provides automatic Cost-of-Living Adjustments ("COLA") for certain retirees and beneficiaries, death benefits; and certain retirees also receive supplemental benefits. Subject to certain conditions, members generally become fully vested as to benefits upon the completion of 5 years of service.

6. NYSLERS -

NYSLERS provides retirement benefits as well as death and disability benefits. Members who joined prior to January 1, 2010 need 5 years of service to be fully vested. Members who joined on or after January 1, 2010 need 10 years of service to be fully vested.

Tiers 1 and 2 —

Eligibility: Tier 1 members generally must be at least age 55 to be eligible for a retirement benefit. There is no minimum service requirement for Tier 1 members. Generally, Tier 2 members must have 5 years of service and be at least age 55 to be eligible for a retirement benefit. The age at which full benefits may be collected for Tier 1 is 55, and the full benefit age for Tier 2 is 62.

Benefit Calculation: Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If the member retires with 20 or more years of service, the benefit is 2 percent of final average salary for each year of service. Tier 2 members with five or more years of service can retire as early as age 55 with reduced benefits. Tier 2 members age 55 or older with 30 or more years of service can retire with no reduction in benefits. As a result of Article 19 of the RSSL, Tier 1 and Tier 2 members who worked continuously from April 1, 1999 through October 1, 2000 received an additional month of service credit for each year of credited service they have at retirement, up to a maximum of 24 additional months. Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 1 members who joined on or after June 17, 1971, each year's compensation used in the final average salary calculation is limited to no more than 20 percent greater than the previous year. For Tier 2 members, each year of final average salary is limited to no more than 20 percent greater than the average of the previous two years.

Tiers 3, 4, and 5 —

Eligibility: Most Tier 3 and 4 members must have 5 years of service and be at least age 55 to be eligible for a retirement benefit. Tier 5 members, must have 10 years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tiers 3, 4 and 5 is 62.

Benefit Calculation: Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If a member retires with between 20 and 30 years of service, the benefit is 2 percent of final average salary for each year of service. If a member retires with more than 30 years of service, an additional benefit of 1.5% of final average salary is applied for each year of service over 30 years. Tier 3 and 4 members with five or more years of service and Tier 5 members with 10 or more years of service can retire as early as age 55 with reduced benefits. Tier 3 and 4 members age 55 or older with 30 or more years of service can retire with no reduction in benefits. Final average salary is the average of the wages earned in the three highest consecutive years of employment. For Tier 3, 4 and 5 members, each year's compensation used in the final average salary calculation is limited to no more than 10% greater than the average of the previous two years.

Tier 6 —

Eligibility: Generally, Tier 6 members must have 10 years of service and be at least age 55 to be eligible to collect a retirement benefit. The full benefit age for Tier 6 is 63.

Benefit Calculation: Generally, the benefit is 1.67% of final average salary for each year of service if the member retires with less than 20 years. If a member retires with 20 years of service, the benefit is 1.75% of final average salary for each year of service. If a member retires with more than 20 years of service, an additional benefit of 2% of final average salary is applied for each year of service over 20 years. Tier 6 members with 10 or more years of service can retire as early as age 55 with reduced benefits. Final average salary is the average of the wages earned in the five highest consecutive years of employment. For Tier 6 members, each year's compensation used in the final average salary calculation is limited to no more than 10% greater than the average of the previous four years.

Disability Benefits— Generally, disability retirement benefits are available to members unable to perform their job



duties because of permanent physical or mental incapacity. There are three general types of disability benefits: ordinary, performance of duty, and accidental disability benefits. Eligibility, benefit amounts, and other rules such as any offsets of other benefits depend on a member's tier, years of service, and plan. Ordinary disability benefits, usually one-third of salary, are provided to eligible members after ten years of service; in some cases, they are provided after five years of service. For all eligible Tier 1 and Tier 2 members, the accidental disability benefit is a pension of 75 percent of final average salary, with an offset for any Workers' Compensation benefits received. The benefit for eligible Tier 3, 4, 5 and 6 members is the ordinary disability benefit with the years-of-service eligibility requirement dropped.

Ordinary Death Benefits — Death benefits are payable upon the death, before retirement, of a member who meets eligibility requirements as set forth by law. The first \$50,000 (whole dollars) of an ordinary death benefit is paid in the form of group term life insurance. The benefit is generally three times the member's annual salary. For most members, there is also a reduced post-retirement ordinary death benefit available.

Post-Retirement Benefit Increases — A cost-of-living adjustment is provided annually to: (i) all retirees who have attained age 62 and have been retired for five years; (ii) all retirees who have attained age 55 and have been retired for ten years; (iii) all disability retirees, regardless of age, who have been retired for five years; (iv) recipients of an accidental death benefit, regardless of age, who have been receiving such benefit for five years and (v) the spouse of a deceased retiree receiving a lifetime benefit under an option elected by the retiree at retirement. An eligible spouse is entitled to one-half the cost-of-living adjustment amount that would have been paid to the retiree when the retiree would have met the eligibility criteria. This cost-of-living adjustment is a percentage of the annual retirement benefit of the eligible member as computed on a base benefit amount not to exceed \$18,000 (whole dollars) of the annual retirement benefit. The cost-of-living percentage shall be 50 percent of the annual Consumer Price Index as published by the U.S. Bureau of Labor, but cannot be less than 1 percent or exceed 3 percent.

Membership

As of January 1, 2020 and January 1, 2019, the dates of the most recent actuarial valuations, membership data for the following pension plans are as follows:

Membership at:					
	MNR Cash Balance Plan	Additional Plan	MaBSTOA Plan	MTA Defined Benefit Plan	TOTAL
Active Plan Members	2	34	8,795	18,960	27,791
Retirees and beneficiaries receiving benefits Vested formerly active members	24	5,483	5,944	11,468	22,919
not yet receiving benefits	15	19	1,040	1,519	2,593
Total	41	5,536	15,779	31,947	53,303

Membership at:	January 1, 2019					
	MNR Cash Balance Plan	Additional Plan	MaBSTOA Plan	MTA Defined Benefit Plan	TOTAL	
Active Plan Members	2	49	9,087	19,074	28,212	
Retirees and beneficiaries receiving benefits Vested formerly active members	25	5,626	5,779	11,249	22,679	
not yet receiving benefits	15	20	1,023	1,481	2,539	
Total	42	5,695	15,889	31,804	53,430	

Contributions and Funding Policy

1. Additional Plan —

Employer contributions are actuarially determined on an annual basis and are recognized when due. The Additional Plan is a defined benefit plan administered by the Board of Pension Managers and is a governmental plan and accordingly, is not subject to the funding and other requirements of ERISA.

Upon termination of employment before retirement, vested participants who have been required to contribute must choose to: (1) receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2020 and 2019), or (2) leave their contributions in the Additional Plan until they retire and become entitled to the pension benefits. Non-vested participants who have been required to contribute will receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2020 and 2019).

Funding for the Additional Plan by the MTA Long Island Railroad is provided by MTA. Certain funding by MTA is made to the MTA Long Island Railroad on a discretionary basis. The continuance of the MTA Long Island Railroad's funding for the Additional Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

2. MaBSTOA Plan —

The contribution requirements of MaBSTOA Plan members are established and may be amended only by the MaBSTOA Board in accordance with Article 10.01 of the MaBSTOA Plan. MaBSTOA's funding policy for periodic employer contributions is to provide for actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due. It is MaBSTOA's policy to fund, at a minimum, the current year's normal pension cost plus amortization of the unfunded actuarial accrued liability.

The MaBSTOA Pension Plan includes the following plans, including the 2000 amendments which are all under the same terms and conditions as NYCERS:

- i. Tier 1 and 2 Basic Plans;
- ii. Tier 3 and 4 55 and 25 Plan;
- iii. Tier 3 and 4 Regular 62 and 5 Plan;
- iv. Tier 4 57 and 5 Plan
- v. Tier 6 55 and 25 Special Plan
- vi. Tier 6 Basic 63 and 10 Plan

For employees, the MaBSTOA Plan has both contributory and noncontributory requirements depending on the date of entry into service. Employees entering qualifying service on or before July 26, 1976, are non-contributing (Tiers 1 and 2). Certain employees entering qualifying service on or after July 27, 1976, are required to contribute 3% of their salary (Tiers 3 and 4).

In March 2012, pursuant to Chapter 18 of the Laws of 2012, individuals joining NYCERS or the MaBSTOA Pension Plan on or after April 1, 2012 are subject to the provisions of Tier 6. The highlights of Tier 6 include:

- Increases in employee contribution rates. The rate varies depending on salary, ranging from 3% to 6% of gross wages. Contributions are made until retirement or separation from service.
- The retirement age increases to 63 and includes early retirement penalties, which reduce pension allowances by 6.5 percent for each year of retirement prior to age 63.
- Vesting after 10 years of credited service; increased from 5 years of credited service under Tier 3 and Tier 4.
- o Adjustments of the Pension Multiplier for calculating pension benefits (excluding Transit Operating Employees): the multiplier will be 1.75% for the first 20 years of service, and 2% starting in the 21st year; for an employee who works 30 years, their pension will be 55% of Final Average Salary under Tier 4, instead of 60% percent under Tier 4.
- o Adjustments to the Final Average Salary Calculation; the computation changed from an average of the final 3 years to an average of the final 5 years. Pensionable overtime will be capped at \$15,000 dollars per year plus an inflation factor.
- Pension buyback in Tier 6 will be at a rate of 6% of the wages earned during the period of buyback, plus 5% compounded annually from the date of service until date of payment.

Pursuant to Section 7.03 of the MaBSTOA Plan, active plan members are permitted to borrow up to 75% of their contributions with interest. Their total contributions and interest remain intact and interest continues to accrue on the full balance. The participant's accumulated contribution account is used as collateral against the loan.

3. MNR Cash Balance Plan —

Funding for the MNR Cash Balance Plan is provided by MTA Metro-North Railroad, a public benefit corporation that receives funding for its operations and capital needs from the MTA and the Connecticut Department of Transportation ("CDOT"). Certain funding by MTA is made to the MTA Metro-North Railroad on a discretionary basis. The continuance of funding for the MNR Cash Balance Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

MTA Metro-North Railroad's funding policy with respect to the MNR Cash Balance Plan was to contribute the full amount of the pension benefit obligation ("PBO") of approximately \$2.977 million to the trust fund in 1989. As participants retire, the Trustee has made distributions from the MNR Cash Balance Plan. MTA Metro-North Railroad anticipated that no further contributions would be made to the MNR Cash Balance Plan. However, due to changes in actuarial assumptions and market performance, additional contributions were made to the MNR Cash Balance Plan in several subsequent years. Per the January 1, 2020 valuation, there is no unfunded accrued liability and the actuarially determined contribution is \$0. Per the January 1, 2019 valuation, there is an unfunded accrued liability of \$8,252 (in whole dollars) and the actuarially determined contribution is \$8,582 (in whole dollars).

4. MTA Defined Benefit Plan —

Employer contributions are actuarially determined on an annual basis. Amounts recognized as receivables for contributions include only those due pursuant to legal requirements. Employee contributions to the MTA Defined Benefit Plan are recognized in the period in which the contributions are due. There are no contributions required under the Metropolitan Suburban Bus Authority Employee's Pension Plan.

The following summarizes the employee contributions made to the MTA Defined Benefit Plan:

Effective January 1, 1994, covered MTA Metro-North Railroad and MTA Long Island Railroad non-represented employees are required to contribute to the MTA Plan to the extent that their Railroad Retirement Tier II employee contribution is less than the pre-tax cost of the 3% employee contributions. Effective October 1, 2000, employee contributions, if any, were eliminated after ten years of making contributions to the MTA Plan. MTA Metro-North Railroad employees may purchase prior service from January 1, 1983 through December 31, 1993 and MTA Long Island Railroad employees may purchase prior service from January 1, 1988 through December 31, 1993 by paying the contributions that would have been required of that employee for the years in question, calculated as described in the first sentence, had the MTA Plan been in effect for those years.

Police Officers who become participants of the MTA Police Program prior to January 9, 2010 contribute to that program at various rates. Police Officers who become participants on or after January 9, 2010, but before April 1, 2012 contribute 3% up to the completion of 30 years of service, the maximum amount of service credit allowed. Police Officers who become participants on or after April 1, 2012 contribute 3%, with additional new rates starting April 2013, ranging from 3.5%, 4.5%, 5.75%, to 6%, depending on salary level, for their remaining years of service.

Covered MTA Metro-North Railroad represented employees and MTA Long Island Railroad represented employees who first became eligible to be MTA Plan participants prior to January 30, 2008 contribute 3% of salary. MTA Staten Island Railway employees contribute 3% of salary except for represented employees hired on or after June 1, 2010 who contribute 4%. MTA Long Island Railroad represented employees who became participants after January 30, 2008 contribute 4% of salary. For the MTA Staten Island Railway employees, contributions are not required after the completion of ten years of credited service. MTA Long Island Railroad represented employees are required to make the employee contributions for ten years, or fifteen years if hired after certain dates in 2014 as per collective bargaining agreements. Certain Metro-North represented employees, depending on their collective bargaining agreements, are required to make the employee contributions until January 1, 2014, January 1, 2017, June 30, 2017, or the completion of required years of credited service as per the relevant collective bargaining agreements.

Covered MTA Bus represented employees and certain non-represented employees are required to contribute a fixed dollar amount, which varies, by depot. Currently, non-represented employees at certain Depots, contribute \$21.50 (whole dollars) per week. Non-represented employees at Eastchester hired prior to 2007 contribute \$25 (whole dollars) per week. Represented employees at Baisley Park, College Point, Eastchester, Far Rockaway, JFK, LaGuardia and Yonkers Depots contribute \$29.06 (whole dollars) per week; Spring Creek represented employees contribute \$32.00 (whole dollars) per week. Certain limited number of represented employees promoted prior to the resolution of a bargaining impasse continue to participate in the MTA Defined Benefit Plan that was in effect before their promotion. Certain MTA Bus non-represented employees who are formerly employed by the private bus companies (Jamaica, Green, Triboro and Command) at Baisley Park, Far Rockaway, JFK, LaGuardia and Spring Creek Depots who are in the pension program covering only such employees make no contributions to the program. (Note: the dollar figures in this paragraph are in dollars, not in millions of dollars).

5. NYCERS—

NYCERS funding policy is to contribute statutorily-required contributions ("Statutory Contributions"), determined by the Chief Actuary for the New York City Retirement Systems, in accordance with State statutes and City laws, and are generally funded by employers within the appropriate Fiscal Year. The Statutory Contributions are determined under the One-Year Lag Methodology ("OYLM"). Under OYLM, the actuarial valuation date is used for calculating the Employer Contributions for the second following Fiscal Year. Statutory Contributions are determined annually to be an amount that, together with member contributions and investment income, provides for NYCERS' assets to be



sufficient to pay benefits when due.

Member contributions are established by law. NYCERS has both contributory and noncontributory requirements, with retirement age varying from 55 to 70 depending upon when an employee last entered qualifying service.

In general, Tier 1 and Tier 2 member contribution rates are dependent upon the employee's age at membership and retirement plan election. In general, Tier 3 and Tier 4 members make basic contributions of 3.0% of salary, regardless of age at membership. Effective October 1, 2000, in accordance with Chapter 126 of the Laws of 2000, these members, except for certain MTA New York City Transit Authority employees enrolled in the Transit 20-Year Plan, are not required to make basic contributions after the 10th anniversary of their membership date or completion of ten years of credited service, whichever is earlier. In addition, members who meet certain eligibility requirements will receive one month's additional service credit for each completed year of service up to a maximum of two additional years of service credit. Effective December 2000, certain MTA New York City Transit Authority Tier 3 and Tier 4 members make basic member contributions of 2.0% of salary, in accordance with Chapter 10 of the Laws of 2000. Certain Tier 2, Tier 3 and Tier 4 members who are participants in special retirement plans are required to make additional member contributions of 1.85%, in addition to their base membership contribution. Tier 6 members are mandated to contribute between 3.0% and 6.0% of salary, depending on salary level, until they separate from City service or until they retire.

NYCERS established a "special program" for employees hired on or after July 26, 1976. A plan for employees, who have worked 20 years, and reached age 50, is provided to Bridge and Tunnel Officers, Sergeants and Lieutenants and Maintainers. Also, an age 57 retirement plan is available for all other such MTA Bridges and Tunnels employees. Both these plans required increased employee contributions.

Certain retirees also receive supplemental benefits from MTA Bridges and Tunnels. Certain participants are permitted to borrow up to 75% of their own contributions including accumulated interest. These loans are accounted for as reductions in such participants' contribution accounts. Upon termination of employment before retirement, certain members are entitled to refunds of their own contributions, including accumulated interest, less any outstanding loan balances.

MTA New York City Transit and MTA Bridges and Tunnels are required to contribute at an actuarially determined rate. The contribution requirements of plans members, MTA New York City Transit and MTA Bridges and Tunnels are established and amended by law.

6. NYSLERS—

Employer Contributions - Under the authority of the RSSL, the Comptroller annually certifies the actuarially determined rates expressly used in computing the employers' contributions based on salaries paid during the NYSLERS fiscal year ending June 30.

Member Contributions - NYSLERS is noncontributory except for employers who joined the plan after July 27, 1976. Generally, Tier 3, 4, and 5 members must contribute 3% of their salary to NYSLERS. As a result of Article 19 of the RSSL, eligible Tier 3 and 4 employees, with a membership date on or after July 27, 1976, who have ten or more years of membership or credited service with NYSLERS, are not required to contribute. Members cannot be required to begin making contributions or to make increased contributions beyond what was required when membership began. For Tier 6 members, the contribution rate varies from 3% to 6% depending on salary. Generally, Tier 5 and 6 members are required to contribute for all years of service.

MTAHQ, MTA Construction and Development and MTA Long Island Bus are required to contribute at an actuarially determined rate.

A summary of the aggregate actual contributions made to each pension plan for the years ended December 31, 2021 and 2020 are as follows:

Year-ended December 31,	2	2021		2020	
(\$ in millions)		Actual Employer Contributions		Employer ributions	
Additional Plan	\$	70.6	\$	68.7	
MaBSTOA Plan		156.2		159.5	
MNR Cash Balance Plan		- *		- *	
MTA Defined Benefit Plan		396.1		394.0	
NYCERS		842.2		882.7	
NYSLERS		16.3		14.5	
Total	\$	1,481.4	\$	1,519.4	

^{*}MNR Cash Balance Plan's actual employer contribution for the years ended December 31, 2021 and 2020 was \$0 and \$0, respectively.



Net Pension Liability

The MTA's net pension liabilities for each of the pension plans reported at December 31, 2021 and 2020 were measured as of the fiscal year-end dates for each respective pension plan. The total pension liabilities used to calculate those net pension liabilities were determined by actuarial valuations as of each pension plan's valuation date, and rolled forward to the respective year-ends for each pension plan. Information about the fiduciary net position of each qualified pension plan's fiduciary net position has been determined on the same basis as reported by each respective qualified pension plan. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the respective qualified pension plan, and investments are reported at fair value. The following table provides the measurement and valuation dates used by each pension plan to calculate the MTA's aggregate net pension liability.

Year ended December 31,	202	1	2020		
Pension Plan	Plan Measurement Date	Plan Valuation Date	Plan Measurement Date	Plan Valuation Date	
Additional Plan	December 31, 2020	January 1, 2020	December 31, 2019	January 1, 2019	
MaBSTOA Plan	December 31, 2020	January 1, 2020	December 31, 2019	January 1, 2019	
MNR Cash Balance Plan	December 31, 2020	January 1, 2020	December 31, 2019	January 1, 2019	
MTA Defined Benefit Plan	December 31, 2020	January 1, 2020	December 31, 2019	January 1, 2019	
NYCERS	June 30, 2021	June 30, 2020	June 30, 2020	June 30, 2019	
NYSLERS	March 31, 2021	April 1, 2020	March 31, 2020	April 1, 2019	

Pension Plan Fiduciary Net Position

Detailed information about the fiduciary net position of the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan, MTA Defined Benefit Plan, NYCERS plan and the NYSLERS plan is available in the separately issued pension plan financial reports for each respective plan.



Metropolitan Transportation Authority

The total pension liabilities in each pension plan's actuarial valuation dates were determined using the following actuarial assumptions for each pension plan, applied to all periods included in the measurement date:

	Additio	Additional Plan MaBSTOA Plan MNR Cash Balance Plan		MaBSTOA Plan		Balance Plan
Valuation Date:	January 1, 2020	January 1, 2019	January 1, 2020	January 1, 2019	January 1, 2020	January 1, 2019
Investment Rate of Return	6.50% per annum, net of investment expenses.	6.50% per annum, net of investment expenses.	6.50% per annum, net of investment expenses.	6.50% per annum, net of investment expenses.	3.00% per annum, net of investment expenses.	3.50% per annum, net of investment expenses.
Salary Increases	3.00%	3.00%	Reflecting general wage, merit and promotion incresses of 3.5% to 4.0% for operating and non-operating employees per year. Larger increases are assumed in the first 5 years of a member's career.	Reflecting general wage, merit and promotion increases of 3.5% for operating employees and 4.0% for non- operating employees per year. Larger increases are assumed in the first 5 years of a member's career.	Not applicable	Not applicable
Inflation	2.25%; 3.25% for Railroad Retirement Wage Base.	2.25%; 3.25% for Railroad Retirement Wage Base.	2.25%.	2.25%.	2.25%.	2.25%.
Cost-of Living Adjustments	Not applicable	Not applicable	1.35% per annum.	1.35% per annum.	Not applicable	Not applicable
	MTA Define	d Benefit Plan	NYO	CERS	NYS	LERS
Valuation Date:	January 1, 2020	January 1, 2019	June 30, 2020	June 30, 2019	April 1, 2020	April 1, 2019
Investment Rate of Return	6.50% per annum, net of investment expenses.	6.50% per annum, net of investment expenses.	7.00% per annum, net of expenses.	7.00% per annum, net of expenses.	5.90% per annum, including inflation, net of investment expenses.	6.80% per annum, including inflation, net of investment expenses.
Salary Increases	Varies by years of employment, and employee group; 2.75% General Wage Increases for TWU Local 100 MTA Bus hourly employees.	Varies by years of employment, and employee group; 2.75% General Wage Increases for TWU Local 100 MTA Bus hourly employees.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	In general, merit and promotion increases plus assumed General Wage increases of 3.0% per year.	4.4% in ERS, 6.2 % in PFRS	4.2% in ERS, 5.0% in PFRS
Inflation	2.25%; 3.25% for Railroad Retirement Wage Base.	2.25%; 3.25% for Railroad Retirement Wage Base.	2.50%	2.50%	2.70%	2.50%
Cost-of Living Adjustments	60% of inflation assumption or 1.35%, if applicable.	60% of inflation assumption or 1.35%, if applicable.	1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees.	1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees.	1.40% per annum.	1.30% per annum.

Mortality

Additional Plan / MaBSTOA Plan/ MNR Cash Balance Plan and MTA Defined Benefit Plan:

The actuarial assumptions used in the January 1, 2020 and 2019 valuations for the MTA plans are based on an experience study covering the period from January 1, 2006 to December 31, 2011. The mortality assumption used in the January 1, 2020 and 2019 valuations are based on an experience study for all MTA plans covering the period from January 1, 2011 to December 31, 2015. The pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA, as recommended by the Society of Actuaries Retirement Plans Experience Committee. As generational tables, they reflect mortality improvements both before and after the measurement date.

<u>Pre-retirement</u>: The MTA plans utilized RP-2000 Employee Mortality Table for Males and Females with Blue collar adjustments.

<u>Post-retirement Healthy Lives</u>: Assumption utilized 95% of RP-2000 Healthy Annuitant mortality table for males with Blue Collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.

<u>Post-retirement Disabled Lives</u>: Assumption utilized in the January 1, 2020 and 2019 valuation was the RP-2014 Disabled Annuitant mortality table for males and females. This assumption was not applicable for the Additional Plan and the MNR Cash Balance Plan.

NYCERS:

Pursuant to Section 96 of the New York City Charter, an independent actuarial firm conducts studies of the actuarial assumptions used to value liabilities of the NYCERS pension plan every two years. In accordance, with the Administrative Code of the City of New York ("ACNY"), the Board of Trustees of NYCERS are to periodically review and adopt actuarial assumptions as proposed by the Actuary for use in the determination of Employer Contributions, which are also generally used to determine the total pension liability, as applicable.

Mortality tables for service and disability pensioners were developed from experience studies of the NYCERS Plan. The mortality tables for beneficiaries were developed from an experience review.

The actuarial assumptions used in the June 2019 valuation is based on the most recent actuarial experience study and recommendations prepared by Bolton, Inc. for the four-year and ten-year periods ended June 30, 2017. Based, in part, on this report issued in June 2019, the Actuary proposed and the Board of Trustees of NYCERS adopted changes in actuarial assumptions including a change to Mortality Improvement Scale MP-2018 beginning in Fiscal Year 2019. The actuarial assumptions used in the June 2018 valuation was based on the previous study by Gabriel, Roeder, Smith & Company ('GRS") published in October 2015 for the four-year and ten-year periods ended June 30, 2013. Based, in part, on the GRS Report, the Actuary proposed, and the Boards of Trustees of the NYCERS adopted, new post-retirement mortality tables including the application of Mortality Improvement Scale MP-2015 for use in determining employer contributions beginning in Fiscal Year 2016. Scale MP-2015 replaced Mortality Improvement Scale AA.

NYSLERS:

The actuarial assumptions used in the April 1, 2020 and April 1, 2019 valuations are based on the results of an actuarial experience study for the period April 1, 2010 through March 31, 2015. The annuitant mortality rates are based on the April 1, 2015 - March 31, 2020 System experience with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2020. The previous actuarial valuation as of April 1, 2019 used April 1,2020 - March 31, 2015 System experience, mortality improvements based on the Society of Actuaries' Scale MP-2018.

Expected Rate of Return on Investments

The long-term expected rate of return on pension plan investments for each pension plan is presented in the following table.

Pension Plan	Plan Measurement Date	Rate
Additional Plan	December 31, 2020	6.50%
MaBSTOA Plan	December 31, 2020	6.50%
MNR Cash Balance Plan	December 31, 2020	3.00%
MTA Defined Benefit Plan	December 31, 2020	6.50%
NYCERS	June 30, 2021	7.00%
NYSLERS	March 31, 2021	5.90%

For the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan, MTA Defined Benefit Plan, NYCERS plan and NYSLERS plan, the long-term expected rate of return on investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The target asset allocation of each of the funds and the expected real rate of returns ("RROR") for each of the asset classes are summarized in the following tables for each of the pension plans:

	Addition	al Plan	MaBSTOA Plan	
		Long - Term		Long - Term
	Target Asset	Expected Real	Target Asset	Expected Real
Asset Class	Allocation	Rate of Return	Allocation	Rate of Return
US Core Fixed Income	9.00%	0.78%	9.00%	0.78%
US Long Bonds	1.00%	1.82%	1.00%	1.82%
US Bank / Leveraged Loans	7.00%	2.73%	7.00%	2.73%
US Inflation-Indexed Bonds	2.00%	-0.07%	2.00%	-0.07%
US High Yield Bonds	4.00%	3.84%	4.00%	3.84%
Emerging Markets Bonds	2.00%	4.19%	2.00%	4.19%
US Large Caps	12.00%	3.93%	12.00%	3.93%
US Small Caps	6.00%	5.11%	6.00%	5.11%
Foreign Developed Equity	12.00%	5.74%	12.00%	5.74%
Emerging Markets Equity	5.00%	7.53%	5.00%	7.53%
Global REITs	1.00%	5.65%	1.00%	5.65%
Private Real Estate Property	4.00%	3.85%	4.00%	3.85%
Private Equity	9.00%	9.02%	9.00%	9.02%
Commodities	1.00%	2.26%	1.00%	2.26%
Hedge Funds - MultiStrategy	16.00%	2.99%	16.00%	2.99%
Hedge Funds - Event-Driven	6.00%	3.16%	6.00%	3.16%
Hedge Funds - Equity Hedge	3.00%	3.42%	3.00%	3.42%
	100.00%		100.00%	
Assumed Inflation - Mean		2.25%		2.25%
Assumed Inflation - Standard Deviation		1.65%		1.65%
Portfolio Nominal Mean Return		6.44%		6.44%
Portfolio Standard Deviation		11.47%		11.47%
Long Term Expected Rate of Return selected by MTA		6.50%		6.50%

	MTA Defined Benefit Plan		MNR Cash Balance Plan	
		Long - Term		Long - Term
	Target Asset	Expected Real	Target Asset	Expected Real
Asset Class	Allocation	Rate of Return	Allocation	Rate of Return
US Core Fixed Income	9.00%	0.78%	100.00%	0.45%
US Long Bonds	1.00%	1.82%	-	-
US Bank / Leveraged Loans	7.00%	2.73%	-	-
US Inflation-Indexed Bonds	2.00%	-0.07%	-	-
US High Yield Bonds	4.00%	3.84%	-	-
Emerging Markets Bonds	2.00%	4.19%	-	-
US Large Caps	12.00%	3.93%	-	-
US Small Caps	6.00%	5.11%	-	-
Foreign Developed Equity	12.00%	5.74%	-	-
Emerging Markets Equity	5.00%	7.53%	-	-
Global REITs	1.00%	5.65%	-	-
Private Real Estate Property	4.00%	3.85%	-	-
Private Equity	9.00%	9.02%	-	-
Commodities	1.00%	2.26%		
Hedge Funds - MultiStrategy	16.00%	2.99%	-	-
Hedge Funds - Event-Driven	6.00%	3.16%	-	-
Hedge Funds - Equity Hedge	3.00%	3.42%		-
	100.00%		100.00%	
Assumed Inflation - Mean		2.25%		2.25%
Assumed Inflation - Standard Deviation		1.65%		1.65%
Portfolio Nominal Mean Return		6.44%		2.70%
Portfolio Standard Deviation		11.47%		3.85%
Long Term Expected Rate of Return selected by				
MTA		6.50%		3.00%

	NYCERS		NYSLERS		
		Long - Term		Long - Term	
	Target Asset	Expected Real	Target Asset	Expected Real	
Asset Class	Allocation	Rate of Return	Allocation	Rate of Return	
U.S. Public Market Equities	27.00%	7.10%	32.00%	4.05%	
International Public Market Equities	0.00%	0.00%	15.00%	6.30%	
Developed Public Market Equities	12.00%	7.20%	0.00%	0.00%	
Emerging Public Market Equities	5.00%	9.00%	0.00%	0.00%	
Fixed Income	30.50%	1.80%	23.00%	0.00%	
Private Equities	8.00%	11.30%	10.00%	6.75%	
Alternatives (Real Assets, Hedge Funds)	0.00%	0.00%	3.00%	5.95%	
Real Estate	7.50%	6.90%	9.00%	4.95%	
Infrastructure	4.00%	6.00%	0.00%	0.00%	
Absolute Return Strategies	0.00%	0.00%	0.00%	0.00%	
Opportunistic Portfolio	6.00%	7.10%	3.00%	4.50%	
Cash	0.00%	0.00%	1.00%	0.50%	
Credit	0.00%	0.00%	4.00%	3.63%	
	100.00%		100.00%		
Assumed Inflation - Mean		2.50%		2.70%	
Long Term Expected Rate of Return		7.00%		5.90%	



Discount rate

The discount rate used to measure the total pension liability of each pension plan is presented in the following table:

	Discount Rate						
Year ended December 31,	2021	2021					
	Plan Measurement		Plan Measurement				
Pension Plan	Date	Rate	Date	Rate			
Additional Plan	December 31, 2020	6.50%	December 31, 2019	6.50%			
MaBSTOA Plan	December 31, 2020	6.50%	December 31, 2019	6.50%			
MNR Cash Balance Plan	December 31, 2020	3.00%	December 31, 2019	3.50%			
MTA Defined Benefit Plan	December 31, 2020	6.50%	December 31, 2019	6.50%			
NYCERS	June 30, 2021	7.00%	June 30, 2020	7.00%			
NYSLERS	March 31, 2021	5.90%	March 31, 2020	6.80%			

The projection of cash flows used to determine the discount rate assumed that employee contributions will be made at the rates applicable for each pension plan and that employer contributions will be made at the rates determined by each pension plan's actuary. Based on those assumptions, each pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current and inactive plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Changes in Net Pension Liability – Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan

Changes in the MTA's net pension liability for the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan for the year ended December 31, 2021, based on the December 31, 2020 measurement date, and for the year ended December 31, 2020, based on the December 31, 2019 measurement date, were as follows:

	A	Additional Plan			MaBSTOA Plan			
	Total	Plan	Net	Total	Plan	Net		
	Pension	Fiduciary	Pension	Pension	Fiduciary	Pension		
	Liability	Net Position	Liability	Liability	Net Position	Liability		
			(in thou	ısands)				
Balance as of December 31, 2019	\$ 1,411,570	\$ 840,460	\$ 571,110	\$ 4,122,934	\$ 3,300,268	\$ 822,666		
Changes for fiscal year 2020:								
Service Cost	453	-	453	95,514	-	95,514		
Interest on total pension liability	86,918	-	86,918	266,588	-	266,588		
Effect of economic /demographic (gains)								
or losses	10,428	-	10,428	(720)	-	(720)		
Benefit payments	(152,046)	(152,046)	-	(237,930)	(237,930)	-		
Administrative expense	-	(612)	612	-	(244)	244		
Member contributions	-	140	(140)	-	24,709	(24,709)		
Net investment income	-	4,024	(4,024)	-	60,327	(60,327)		
Employer contributions	-	68,724	(68,724)	-	159,486	(159,486)		
Balance as of December 31, 2020	\$ 1,357,323	\$ 760,690	\$ 596,633	\$ 4,246,386	\$ 3,306,616	\$ 939,770		

	A	Additional Plan	1	N	MaBSTOA Plai	1
	Total	Plan	Net	Total	Plan	Net
	Pension	Fiduciary	Pension	Pension	Fiduciary	Pension
	Liability	Net Position	Liability	Liability	Net Position	Liability
			(in thou	ısands)		
Balance as of December 31, 2018	\$ 1,411,144	\$ 819,317	\$ 591,827	\$ 3,811,124	\$ 2,844,402	\$ 966,722
Changes for fiscal year 2019:						
Service Cost	621	-	621	89,814	-	89,814
Interest on total pension liability	93,413	-	93,413	265,454	-	265,454
Effect of economic /demographic						
(gains) or losses	13,455	-	13,455	9,011	-	9,011
Effect of assumption changes or inputs	50,191	-	50,191	168,752	-	168,752
Benefit payments	(157,254)	(157,254)	-	(221,221)	(221,221)	-
Administrative expense	-	(718)	718	-	(220)	220
Member contributions	-	249	(249)	-	23,552	(23,552)
Net investment income	-	116,092	(116,092)	-	447,365	(447,365)
Employer contributions	-	62,774	(62,774)	-	206,390	(206,390)
Balance as of December 31, 2019	\$ 1,411,570	\$ 840,460	\$ 571,110	\$ 4,122,934	\$ 3,300,268	\$ 822,666

		MNR	Cas	h Balance	Plan	MTA	Def	fined Benefit	t Plan
	To	otal		Plan	Net	Total		Plan	Net
	Per	ision	Fic	luciary	Pension	Pension	I	Fiduciary	Pension
	Lia	bility	Net	Position	Liability	Liability	N	et Position	Liability
					(in tho	usands)			
Balance as of December 31, 2019	\$	448	\$	455	\$ (7)	\$ 6,510,686	\$	4,784,224	\$ 1,726,462
Changes for fiscal year 2020:									
Service Cost		_		_	-	213,494		_	213,494
Interest on total pension liability		14		_	14	427,672		_	427,672
Effect of economic / demographic (gains)									
or losses		10		-	10	92,019		-	92,019
Effect of assumption changes or inputs		11		-	11	-		-	-
Benefit payments		(105)		(105)	-	(293,836)		(293,836)	-
Administrative expense		-		3	(3)	-		(3,660)	3,660
Member contributions		-		-	_	-		32,006	(32,006)
Net investment income		-		32	(32)	-		99,045	(99,045)
Employer contributions		-		9	(9)	-		394,986	(394,986)
Balance as of December 31, 2020	\$	378	\$	394	\$ (16)	\$ 6,950,035	\$	5,012,765	\$ 1,937,270

	MNF	R Cash Balance	Plan	MTA	Defined Benefi	t Plan
	Total	Plan	Net	Total	Plan	Net
	Pension	Fiduciary	Pension	Pension	Fiduciary	Pension
	Liability	Net Position	Liability	Liability	Net Position	Liability
			(in thou	ısands)		
Balance as of December 31, 2018	\$ 479	\$ 471	\$ 8	\$ 5,488,490	\$ 4,024,480	\$ 1,464,010
Changes for fiscal year 2019:						
Service Cost	-	-	-	173,095	-	173,095
Interest on total pension liability	18	-	18	387,193	-	387,193
Effect of economic / demographic						
(gains) or losses	4	-	4	35,935	-	35,935
Effect of assumption changes or inputs	-	-	-	690,958	-	690,958
Benefit payments	(53)	(53)	-	(264,985)	(264,985)	-
Administrative expense	-	(3)	3	-	(3,408)	3,408
Member contributions	-	-	-	-	31,504	(31,504)
Net investment income	-	40	(40)	-	651,919	(651,919)
Employer contributions	-	-	_	-	344,714	(344,714)
Balance as of December 31, 2019	\$ 448	\$ 455	\$ (7)	\$ 6,510,686	\$ 4,784,224	\$ 1,726,462

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the MTA's net pension liability calculated for the Additional Plan, MaBSTOA Plan, MNR Cash Balance Plan and the MTA Defined Benefit Plan using the discount rate as of each measurement date, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for each measurement date:

Measurement Date:	D	ecember 31, 20	020	De	cember 31, 20	019
	1% Decrease	Discount Rate	1% Increase	1% Decrease	Discount Rate	1% Increase
	(5.5%)	(6.5%)	(7.5%)	(5.5%)	(6.5%)	(7.5%)
		(in tho	usands)		(in tho	usands)
Additional Plan	\$ 702,16	7 \$ 596,633	\$ 504,666	\$ 682,677	\$ 571,110	\$ 474,087
MaBSTOA Plan	1,421,34	939,770	531,498	1,293,875	822,666	422,759
MTA Defined Benefit Plan	2,812,06	3 1,937,270	1,200,642	2,551,551	1,726,462	1,031,686
	1%	Discount		1%	Discount	
	Decrease	Rate	1% Increase	Decrease	Rate	1% Increase
	(2.0%)	(3.0%)	(4.0%)	(2.5%)	(3.5%)	(4.5%)
		(in whol	e dollars)		(in whol	e dollars)
MNR Cash Balance Plan	\$ 7,34	3 \$ (15,852)	\$ (36,311)	\$ 17,379	\$ (6,494)	\$ (27,526)

The MTA's Proportion of Net Pension Liability – NYCERS and NYSLERS

The following table presents the MTA's proportionate share of the net pension liability of NYCERS based on the June 30, 2020 and June 30, 2019 actuarial valuations, rolled forward to June 30, 2021 and June 30, 2020, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

		NYO	CERS	
	Ju	ine 30, 2021	Ju	ine 30, 2020
		(\$ in the	ousand	ls)
MTA's proportion of the net pension liability		22.218%		24.420%
MTA's proportionate share of the net pension liability	\$	1,424,952	\$	5,147,445



The following table presents the MTA's proportionate share of the net pension liability of NYSLERS based on the April 1, 2020 and April 1, 2019 actuarial valuations, rolled forward to March 31, 2021 and March 31, 2020, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	N	IYSLERS	
	March 31, 202	1 Mar	rch 31, 2020
	(\$ i	n thousands	s)
MTA's proportion of the net pension liability	0.314	1%	0.346%
MTA's proportionate share of the net pension liability	\$ 313	3 \$	91,524

The MTA's proportion of each respective Plan's net pension liability was based on the MTA's actual required contributions made to NYCERS for the plan's fiscal year-end June 30, 2021 and 2020 and to NYSLERS for the plan's fiscal year-end March 31, 2021 and 2020, relative to the contributions of all employers in each plan.

Sensitivity of the MTA's Proportionate Share of the Net Pension Liability to Changes in the Discount Rate

The following presents the MTA's proportionate share of the net pension liability for NYCERS and NYSLERS calculated using the discount rate as of each measurement date, as well as what the proportionate share of the net pension liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used as of each measurement date (\$\sigma\$ in thousands):

Measurement Date:		June 30, 2021								
	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)				
NYCERS	\$ 3,738,910	\$ 1,424,952	\$ (538,293)	\$ 7,695,327	\$ 5,147,445	\$ 2,997,039				
Measurement Date:		March 31, 2021			March 31, 2020					
	1% Decrease	Discount Rate	1% Increase	1% Decrease	Discount Rate	1% Increase				
	(4.9%)	(5.9%)	(6.9%)	(5.8%)	(6.8%)	(7.8%)				
NYSLERS	\$ 86,873	\$ 313	\$ (79,515)	\$ 167,973	\$ 91,524	\$ 21,115				

Pension Expense, Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the nine-month period ended September 30, 2022 and year ended December 31, 2021, the MTA recognized pension expense related to each pension plan as follows (in \$ thousands):

Pension Plan	S	eptember 30, 2022	December 31, 2021				
Additional Plan		53,325	\$	50,360			
MaBSTOA Plan		110,294		140,280			
MNR Cash Balance plan		-		7			
MTA Defined Benefit Plan		298,345		413,652			
NYCERS		578,227		(47,824)			
NYSLERS		5,657		8,189			
Total	\$	1,045,847	\$	564,664			





For the nine-month period ended September 30, 2022 and year ended December 31, 2021, the MTA reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows (in \$ thousands):

For the Period Ended		Addition	nal Plan		MaBSTO	OA 1	Plan	MNR Cash	Balaı	ice Plan	MT	A Defined	Benefit Plan
September 30, 2022	De	ferred	Deferred		Deferred		Deferred	Deferred		Deferred	De	ferred	Deferred
	Outf	lows of	Inflows of	(Outflows of]	Inflows of	Outflows of	I	nflows of	Outf	lows of	Inflows of
	Res	ources	Resources		Resources	_1	Resources	Resources	F	Resources	Res	ources	Resources
Differences between expected and													
actual experience	\$	-	\$	- \$	17,004	\$	3,896	\$ -	. \$	-	\$	218,415	\$ 13,714
Changes in assumptions		-		-	121,560		-	-		-		535,702	17,580
Net difference between projected and actual													
earnings on pension plan investments		27,816		-	57,062		-	-		19		72,382	-
Changes in proportion and differences													
between contributions and proportionate													
share of contributions		-		-	-		-	-		-		78,760	78,760
Employer contributions to the plan													
subsequent to the measurement													
of net pension liability		70,553			156,204		<u>-</u>			_		396,144	<u>-</u>
Total	\$	98,369	\$	- \$	351,830	\$	3,896	\$ -	\$	19	\$	1,301,403	\$ 110,054

For the Period Ended		NYC	ERS	S		NYSI	E	RS		ТОТ	ΆI	1
September 30, 2022	I	Deferred		Deferred	_	Deferred		Deferred		Deferred		Deferred
	Οι	ıtflows of]	Inflows of		Outflows of		Inflows of	(Outflows of		Inflows of
	R	esources]	Resources		Resources		Resources		Resources		Resources
Differences between expected and												
actual experience	\$	365,770	\$	164,835	9	3,822	\$	-	\$	605,011	\$	182,445
Changes in assumptions		1,318		176,775		57,548		1,085		716,128		195,440
Net difference between projected and actual												
earnings on pension plan investments		-		2,091,098		-		89,908		157,260		2,181,025
Changes in proportion and differences												
between contributions and proportionate												
share of contributions		55,095		353,104		3,424		2,823		137,279		434,687
Employer contributions to the plan												
subsequent to the measurement												
of net pension liability		434,102			_	16,284	_	<u> </u>		1,073,288		_
Total	\$	856,285	\$	2,785,812	\$	\$ 81,078	\$	93,816	\$	2,688,966	\$	2,993,597



For the Year Ended		Additio	nal Plan			MaBSTO)A	Plan		MNR Cash Ba	lance Plan		M	ITA Defined	Benef	it Plan
December 31, 2021	Def	erred	Deferred			Deferred		Deferred		Deferred	Deferred		Γ	Deferred	De	eferred
	Outfl	ows of	Inflows of		(Outflows of		Inflows of		Outflows of	Inflows of		Ου	ıtflows of	Inf	ows of
	Reso	ources	Resources			Resources		Resources	_	Resources	Resources		_R	esources	Res	sources
Differences between expected and																
actual experience	\$	-	\$	-	\$	17,004	\$	3,896	\$	- \$	5	-	\$	218,415	\$	13,714
Changes in assumptions		-		-		121,560		-		-		-		535,702		17,580
Net difference between projected and actual																
earnings on pension plan investments		27,816		-		57,062		-		-		19		72,382		-
Changes in proportion and differences																
between contributions and proportionate																
share of contributions		-		-		-		-		-		-		78,760		78,760
Employer contributions to the plan																
subsequent to the measurement																
of net pension liability		70,553				156,204	_			<u> </u>				396,144		
Total	\$	98,369	\$		\$	351,830	\$	3,896	\$	<u> </u>	<u> </u>	19	\$	1,301,403	\$	110,054

For the Year Ended		NYC	ERS	S	NYSLERS					ТОТ		
December 31, 2021		eferred		Deferred		Deferred		Deferred		Deferred		Deferred
	Ou	tflows of	I	nflows of		Outflows of		Inflows of	O	utflows of]	nflows of
	Re	esources	F	Resources		Resources		Resources	F	Resources]	Resources
Differences between expected and												
actual experience	\$	365,770	\$	164,835	\$	3,822	\$	-	\$	605,011	\$	182,445
Changes in assumptions		1,318		176,775		57,548		1,085		716,128		195,440
Net difference between projected and actual												
earnings on pension plan investments		-		2,091,098		-		89,908		157,260		2,181,025
Changes in proportion and differences												
between contributions and proportionate												
share of contributions		55,095		353,104		3,424		2,823		137,279		434,687
Employer contributions to the plan												
subsequent to the measurement												
of net pension liability		451,816		-		16,284		-		1,091,001		-
Total	\$	873,999	\$	2,785,812	\$	81,078	\$	93,816	\$	2,706,679	\$	2,993,597

The annual differences between the projected and actual earnings on investments are amortized over a five-year closed period beginning the year in which the difference occurs.

Changes in proportion

The following table presents the recognition periods used by each pension plan to amortize the annual differences between expected and actual experience, changes in proportion and differences between employer contributions and proportionate share of contributions, and changes in actuarial assumptions, beginning the year in which the deferred amount occurs.

Recognition Period (in years) Pension Plan	Differences between expected and actual experience	and differences between employer contributions and proportionate share of contributions	Changes in actuarial assumptions	
Additional Plan	1.00	N/A	1.00	
MaBSTOA Plan	6.60	N/A	6.60	
MNR Cash Balance Plan	1.00	N/A	1.00	
MTA Defined Benefit Plan	8.60	8.60	8.60	
NYCERS	6.04	6.04	6.04	
NYSLERS	5.00	5.00	5.00	

For the nine-month period ended September 30, 2022 and year ended December 31, 2021, \$1,073.3 and \$1,091.0 were reported as deferred outflows of resources related to pensions resulting from the MTA's contributions subsequent to the measurement date which will be recognized as a reduction of the net pension liability in the year ending December 31, 2021 and December 31, 2020, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2021 will be recognized as pension expense as follows:

		ditional Plan	M	aBSTOA Plan	INR Cash Balance plan	_	MTA Defined Benefit Plan		NYCERS	N'	YSLERS	_	Total
						(in thousands)					
Year Ending December 3	1:												
2022	\$	5,306	\$	34,070	\$ (4)	\$	121,675	\$	(587,273)	\$	(4,659)	\$	(430,885)
2023		15,907		70,407	(4)		175,015		(556,670)		(1,630)		(296,975)
2024		(2,921)		9,373	(8)		82,812		(483,728)		(5,029)		(399,501)
2025		9,524		57,140	(3)		146,542		(643,865)		(17,704)		(448, 366)
2026		-		20,804	-		104,257		(88,453)		-		36,608
Thereafter		-		(64)	-		164,904		(3,640)		-		161,200
	\$	27,816	\$	191,730	\$ (19)	\$	795,205	\$	(2,363,629)	\$	(29,022)	\$	(1,377,919)

Deferred Compensation Program

Description - The Deferred Compensation Program consists of two defined contribution plans that provide benefits based solely on the amount contributed to each participant's account(s), plus or minus any income, expenses and gains/losses. The Deferred Compensation Program is comprised of the Deferred Compensation Plan For Employees of the Metropolitan Transportation Authority ("MTA"), its Subsidiaries and Affiliates ("457 Plan") and the Thrift Plan For Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates ("401(k) Plan"). Certain MTA Related Groups employees are eligible to participate in both deferred compensation plans. Both Plans are designed to have participant charges, including investment and other fees, cover the costs of administering the Deferred Compensation Program.

Participation in the 401(k) Plan is now available to non-represented employees and, after collective bargaining, most represented employees. All amounts of compensation deferred under the 401(k) Plan, and all income attributable to such compensation, less expenses and fees, are held in trust for the exclusive benefit of the participants and their beneficiaries. Accordingly, the 401(k) Plan is not reflected in the accompanying consolidated statements of net position.

The Deferred Compensation Program is administered and may be amended by the Deferred Compensation Committee.

As the Deferred Compensation Program's asset base and contribution flow increased, participants' investment options were expanded by the Deferred Compensation Committee with the advice of its Financial Advisor to provide greater diversification and flexibility. In 1988, after receiving an IRS determination letter for the 401(k) Plan, the MTA offered its managers the choice of either participating in the 457 Plan or the 401(k) Plan. By 1993, the MTA offered eight investment funds: a Guaranteed Interest Account Fund, a Money Market Fund, a Common Stock Fund, a Managed Fund, a Stock Index Fund, a Government Income Fund, an International Fund and a Growth Fund.

In 1998, the Deferred Compensation Committee approved the unbundling of the Plans. In 2008, the Plans' investment choices were restructured to set up a four-tier strategy:

- Tier 1 The MTA Asset Allocation Programs offer two options for those participants who would like to make retirement investing easy – the MTA Target Year Funds and Goal maker. Investments will be automatically diversified among a range of investment options.
- Tier 2 The MTA Index Funds offer a tier of index funds, which invest in the securities of companies that are included in a selected index, such as the Standard & Poor's 500 (large cap) Index or Barclays Capital U.S. Aggregate (bond) index. The typical objective of an index fund is to achieve approximately the same return as that specific market index. Index funds provide investors with lower-cost investments because they are less expensive to administer than actively managed funds.
- Tier 3 The MTA Actively Managed Portfolios, which are comprised of actively managed portfolios that are directed by one or a team of professional managers who buy and sell a variety of holdings in an effort to outperform selected indices. The funds provide a diversified array of distinct asset classes, with a single option in each class. They combine the value and growth disciplines to create a "core" portfolio for the mid-cap and international categories.
- o Tier 4 The Self-Directed Mutual Fund Option is designed for the more experienced investors. The fund offers access to an expanded universe of mutual funds from hundreds of well-known mutual fund families. Participants may invest only a portion of their account balances in this Tier.

In 2011, the Deferred Compensation Program began offering Roth contributions. Employees can elect after-tax Roth contributions and before-tax contributions in both the 401(k) Plan and the 457 Plan. The total combination of Roth after-tax contributions and regular before-tax contributions cannot exceed the IRS maximum of \$19,500 dollars or \$26,000 dollars for those over age 50 for the year ended December 31, 2020.

The two Plans offer the same array of investment options to participants. Eligible participants in the Deferred Compensation Program include employees (and in the case of MTA Long Island Bus, former employees) of:

- MTA
- MTA Long Island Rail Road
- MTA Bridges and Tunnels
- MTA Long Island Bus
- MTA Metro-North Railroad
- MTA New York City Transit
- MTA Staten Island Rapid Transit
- MTA Capital and Development
- MTA Bus

Matching Contributions - MTA Bus on behalf of certain MTA Bus employees, MTA Metro-North Railroad on behalf of certain MNR employees who opted-out of participation in the MTA Defined Benefit Pension Plan and MTA on behalf of certain represented MTA Business Service Center employees and on behalf of certain MTA Police Officers, make contributions to the 401(k) Plan. The rate for the employer contribution varies.

MTA Bus – Effective in 2019, there are no employees receiving these employer contributions. Prior to 2019, certain members who were employed by Queens Surface Corporation on February 26, 2005, and who became employees of MTA Bus on February 27, 2005, receive a matching contribution equal to 50% of member's before-tax contributions provided that the maximum matching contribution shall not exceed 3% of the member's base pay. MTA Bus also makes a basic contribution equal to 2% of the member's compensation. These contributions vest as follows:

Years of Service	Vested Percentage
Less than 2	0%
2	20%
3	40%
4	60%
5	80%
6 or more	100%

MTA Metro-North Railroad – MNR employees represented by certain unions and who elected to opt-out of participation in the MTA Defined Benefit Pension Plan receive an annual employer contribution equal to 4% of the member's compensation. Effective on the first full pay period following the nineteenth anniversary date of an eligible MNR member's continuous employment, MTA Metro-North Railroad contributes an amount equal to 7% of the member's compensation. Eligible MNR members vest in these employer contributions as set forth below:

Years of Service	Vested Percentage
Less than 5	0%
5 or more	100%

MTA Headquarters - Police - For each plan year, the MTA shall make contributions to the account of each eligible MTA Police Benevolent Association member in the amounts required by the collective bargaining agreement ("CBA") and subject to the contribution limits set forth in the CBA. These contributions shall be made monthly and shall be considered MTA Police contributions. Members are immediately 100% vested in these employer contributions.

MTA Headquarters – Commanding Officers - In addition, for each plan year, the MTA shall make contributions to the account of each eligible MTA Police Department Commanding Officers Benevolent Association member in the amounts required by the CBA and subject to the contribution limits set forth in the CBA. These contributions shall be made monthly and shall be considered MTA Police contributions. These members are immediately 100% vested in these employer contributions.

MTA Headquarters – Business Services - Effective January 1, 2011, all newly hired MTA Business Services Center employees represented by the Transportation Communications Union are eligible to receive a matching contribution up to a maximum of 3% of the participant's compensation. A participant's right to the balance in his or her matching contributions shall vest upon the first of the following to occur:

- i. Completing 5 years of service,
- ii. Attaining the Normal Retirement Age of 62 while in continuous employment, or
- iii. Death while in continuous employment.

Additional Deposits (Incoming Rollover or Transfers) - Participants in the Deferred Compensation Program are eligible to roll over both their before-tax and after-tax assets from other eligible retirement plans into the 401(k) and 457 Plans. Under certain conditions, both Plans accepts rollovers from all eligible retirement plans (as defined by the Code), including 401(a), 457, 401(k), 403(b), and rollover IRAs.

Forfeitures – Non vested contributions are forfeited upon termination of employment. Such forfeitures are used to cover a portion of the pension plan's administrative expenses.

	December 31,		December	31,
	2	021	2020	
		(In thous	ands)	
Employer 401K contributions	\$	3,939	\$	4,103

5. OTHER POSTEMPLOYMENT BENEFITS

The MTA participates in a defined benefit other postemployment benefits ("OPEB") plan for its employees, the Metropolitan Transportation Authority Retiree Welfare Benefits Plan ("OPEB Plan"). A description of the Plan follows:

(1) Plan Description

The MTA Retiree Welfare Benefits Plan ("OPEB Plan") and the related Trust Fund ("Trust") was established on January 1, 2009 for the exclusive benefit of MTA retired employees and their eligible spouses and dependents, to fund some of the OPEB provided in accordance with the MTA's various collective bargaining agreements. Postemployment benefits are part of an exchange of salaries and benefits for employee services rendered. Amounts contributed to the OPEB Plan are held in an irrevocable trust and may not be used for any other purpose than to fund the costs of health and welfare benefits of its eligible participants.

The OPEB Plan and the Trust are exempt from federal income taxation under Section 115(1) of the Internal Revenue Code. The OPEB Plan is classified as a single-employer plan.

The OPEB Plan Board of Managers, comprised of the MTA Chairman, MTA Chief Financial Officer and MTA Director of Labor Relations, are the administrators of the OPEB Plan. The MTA Board has the right to amend, suspend or terminate the OPEB Plan. The OPEB Plan is a fiduciary component unit of the MTA and is in the Pension and Other Employee Benefit Trust Funds section of the MTA's basic financial statements.

The separate annual financial statements of the OPEB Plan may be obtained by writing to the Metropolitan Transportation Authority, Deputy Chief Controller's Office, 2 Broadway, 15th Floor, New York, NY 10004, or at www.mta.info.

DRAF"

Benefits Provided — The benefits provided by the OPEB Plan include medical, pharmacy, dental, vision, life insurance and a Medicare supplemental plan. The different types of benefits provided vary by agency, employee type (represented employees versus non-represented) and the relevant collective bargaining agreements. Certain benefits are provided upon retirement as defined in the applicable pension plan. Certain agencies provide benefits to certain former employees if separated from service within 5 years of attaining retirement eligibility. Employees of the MTA are members of the following pension plans: the MTA Defined Benefit Plan, the Additional Plan, the MNR Cash Balance Plan, the MaBSTOA Plan, NYCERS, and NYSLERS. Certain represented employees of MTA Metro-North Railroad participate in the 401(k) Plan. Eligible employees of the MTA may elect to join the New York State Voluntary Defined Contribution Plan ("VDC").

The MTA participates in the New York State Health Insurance Program ("NYSHIP") and provides medical and prescription drug benefits, including Medicare Part B reimbursements, to many of its retirees. NYSHIP offers a Preferred Provider Organization ("PPO") plan and several Health Maintenance Organization ("HMO") plans. Represented MTA New York City Transit employees, other MTA New York City Transit former employees who retired prior to January 1, 1996 or January 1, 2001, MTA Staten Island Railway represented employees as of March 1, 2010, June 1, 2010 or January 1, 2013 depending on the union and MTA Bus retirees do not participate in NYSHIP. These benefits are provided either through a self-insured health plan, a fully insured health plan or an HMO.

The MTA is a participating employer in NYSHIP. The NYSHIP financial report can be obtained by writing to NYS Department of Civil Service, Employee Benefits Division, Alfred E. Smith Office Building, 805 Swan Street, Albany, NY 12239.

OPEB Plan Eligibility — To qualify for benefits under the OPEB Plan, a former employee of the MTA must:

- i. have retired;
- ii. be receiving a pension (except in the case of the 401(k) Plan);
- iii. have at least 10 years of credited service as a member of NYCERS, NYSLERS, the MTA Defined Benefit Plan, the Additional Plan, the MaBSTOA Plan, the MNR Cash Balance Plan, the 401(k) Plan or the VDC; and
- iv. have attained the minimum age requirement (unless within 5 years of commencing retirement for certain members). A represented retired employee may be eligible only pursuant to the relevant collective bargaining agreement.

Surviving Spouse and Other Dependents —

- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of retired managers and certain non-represented retired employees.
- Represented retired employees must follow the guidelines of their collective bargaining agreements regarding continued health coverage for a surviving spouse or domestic partner and surviving dependents. The surviving spouse coverage continues until spouse is eligible for Medicare for represented employees of MTA New York City Transit and MTA Staten Island Railway, retiring on or after:
 - May 21, 2014 for Transport Workers Union ("TWU") Local 100;
 - September 24, 2014 for Amalgamated Transit Union ("ATU") Local 726;
 - October 29, 2014 for ATU Local 1056;
 - March 25, 2015 for Transportation Communication Union ("TCU"); and
 - o December 16, 2015 for United Transportation Union ("UTU") and American Train Dispatchers Association ("ATDA").
- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependents of retired uniform members of the MTA Police Department.
- Lifetime coverage is provided to the surviving spouse (not remarried) or domestic partner and surviving dependent children to age 26 of uniformed members of the MTA Police Department whose death was sustained while in performance of duty.

The OPEB Plan Board of Managers has the authority to establish and amend the benefits that will be covered under the OPEB Plan, except to the extent that they have been established by collective bargaining agreement.

Number of

Employees Covered by Benefit Terms — As of July 1, 2019, the date of the most recent actuarial valuation, the following classes of employees were covered by the benefit terms:

	Participants
Active plan members	73,588
Inactive plan members currently receiving benefit payments	46,994
Inactive plan members entitled to but not yet receiving benefit payments	186
Total	120,768

Contributions — The MTA is not required by law or contractual agreement to provide funding for the OPEB Plan, other than the "pay-as-you-go" ("PAYGO") amounts. PAYGO is the cost of benefits necessary to provide the current benefits to retirees and eligible beneficiaries and dependents. Employees are not required to contribute to the OPEB Plan. The OPEB Plan Board has the authority for establishing and amending the funding policy. For the years ended December 31, 2021 and 2020, the MTA paid \$813.2 and \$391.5 of PAYGO to the OPEB Plan, respectively. In addition, the OPEB Plan paid \$337.6 in OPEB benefits in 2020. The PAYGO amounts include an implicit rate subsidy adjustment of \$53 and \$69.5 for the years ended December 31, 2021 and 2020, respectively. The implicit rate subsidy adjustment of \$69.5 includes an additional adjustment of \$6.7 related to 2019, resulting in a net amount of \$62.8 for the year ended December 31, 2020. There were no additional prior year implicit rate subsidy adjustments for the year ended December 31, 2021.

During 2012, the MTA funded \$250 into the Trust and an additional \$50 during 2013. There have been no further contributions made to the Trust. The investment trust paid benefits in 2020 covering a portion of the year's benefit payments resulting in lower contributions than the payments for the year.

The discount rate estimates investment earnings for assets earmarked to cover retiree health benefits. Under GASB Statement No. 75, the discount rate depends on the nature of underlying assets for funded plans. Since the amount of benefits paid in 2020 exceeded the current market value of the assets, a depletion date is assumed to occur immediately. Therefore, the discount rate is set equal to the municipal bond index. The MTA elected the Bond Buyer General Obligation 20-Bond Municipal Bond Index. As a result, the discount rates as of December 31, 2020 and December 31, 2019, the measurement dates, are 2.12% and 2.74%, respectively.

Employer contributions include the implicit subsidy, or age-related subsidy inherent in the healthcare premiums structure. The implicit subsidy arises when an employer allows a retiree and their dependents to continue on the active plans and pay the active premiums. Retirees are not paying the true cost of their benefits because they have higher utilization rates than actives and therefore, are partially subsidized by the active employees. As shown in the following table, for the years ended December 31, 2020 and 2019, the employer made a cash payment for retiree healthcare of \$69,472 and \$76,758, respectively, as part of the employer's payment for active-employee healthcare benefits. For purposes of GASB Statement No. 75, this payment made on behalf of the active employees should be reclassified as benefit payments for retiree health care to reflect the retirees' underlying age-adjusted, retiree benefit costs.

Blended and Age-adjusted Premium	2020 Retirees	2019 Retirees
(in thousands)		
Total blended premiums Employment payment for retiree	\$655,269	\$660,539
healthcare	69,472	76,758
Net Payments	\$724,741	<u>\$737,297</u>

(2) Actuarial Assumptions

Actuarial valuation involves estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future, such as future employment, mortality and health care cost trend. Actuarially determined amounts are subject to continual revision as actual results are compared with past expectations and new estimates are made about the future.

Projections of benefits for financial reporting purposes are based on the substantive plan, which refers to the plan terms as understood by the employer and the plan members at the time of the valuation, including only changes to plan terms that have been made and communicated to employees. The projections include the types of benefits provided at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members at that time. The MTA may not be obligated to provide the same types or levels of benefits to retirees in the future.



The total OPEB liability was determined by an actuarial valuation performed on July 1, 2019. Update procedures were used to roll forward the total OPEB liability to December 31, 2020 and December 31, 2019, the measurement dates. The actuarial valuations were performed using the following actuarial assumptions, applied to all periods included in the measurement, unless specified:

Valuation date	July 1, 2019	July 1, 2019
Measurement date	December 31, 2020	December 31, 2019
Discount rate	2.12%, net of expenses	2.74%, net of expenses
Inflation	2.25%	2.50%
Actuarial cost method	Entry Age Normal	Entry Age Normal
Amortization method	Level percentage of payroll	Level percentage of payroll
Normal cost increase factor	4.25%	4.50%
Salary increases	Varies by years of service and differs for members of the various pension plans	Varies by years of service and differs for members of the various pension plans
Investment rate of return	2.12%	5.75%

Healthcare Cost Trend — The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2019 utilizing the baseline assumptions included in the model, except inflation of 2.25% for medical and pharmacy benefits. Additional adjustments apply based on percentage of costs associated with administrative expenses, aging factors, healthcare reform provisions including changes due to H.R. Bill 1865, separately for NYSHIP and self-insured benefits administered by MTA New York City Transit. These assumptions are combined with long-term assumptions for dental and vision benefits of an annual trend of 3.5% plus Medicare Part B reimbursements of an annual trend of 4.5%, but not more than projected medical and pharmacy trends. The self-insured trend is applied directly for represented employees of MTA New York City Transit, MTA Staten Island Railway and MTA Bus.

This valuation reflects updated healthcare-related assumptions, including changes due to H.R. Bill 1865 Further Consolidated Appropriations Act, 2020, which repealed the Cadillac Tax on health plans. This change decreased the MTA's OPEB liability by \$742.0 million as of the valuation date July 1, 2019 and reporting year-ended December 31, 2020 for GASB 75, using a discount rate of 4.10%.

Healthcare Cost Trend Rates — The following lists illustrative rates for the NYSHIP and self-insured trend assumptions (all amounts are in percentages).

	NYSI	HP	TBTA		TBTA			sured
Fiscal Year	< 65	>=65	< 65	>=65	< 65	>=65		
2020	6.80%	5.90%	6.20%	3.70%	6.50%	5.10%		
2021	6.20%	5.70%	5.80%	4.00%	6.10%	5.10%		
2022	5.70%	5.40%	5.50%	4.60%	5.60%	5.10%		
2023	5.10%	5.10%	5.10%	5.10%	5.10%	5.10%		
2024	5.00%	5.00%	5.00%	5.00%	5.00%	5.00%		
2025	4.90%	4.90%	4.90%	4.90%	4.90%	4.90%		
2026	4.80%	4.80%	4.80%	4.80%	4.80%	4.80%		
2027	4.70%	4.70%	4.70%	4.70%	4.70%	4.70%		
2028	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%		
2029	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%		
2039	4.60%	4.60%	4.60%	4.60%	4.60%	4.60%		
2049	4.80%	4.80%	4.80%	4.70%	4.80%	4.70%		
2059	4.50%	4.50%	4.50%	4.50%	4.50%	4.50%		
2069	4.20%	4.20%	4.20%	4.20%	4.20%	4.20%		
2079	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%		
2089	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%		
2099	3.80%	3.80%	3.80%	3.80%	3.80%	3.80%		

Long Torm Expected

For purposes of applying the Entry Age Normal cost method, the healthcare trend prior to the valuation date is based on the ultimate rates, which are 4.0% for medical and pharmacy costs.

Mortality — Preretirement and postretirement healthy annuitant rates are projected on a generational basis using Scale AA. As a generational table, it reflects mortality improvements both before and after the measurement date. The postretirement mortality assumption is based on an experience analysis covering the period from January 1, 2011 to December 31, 2015 for the MTA-sponsored pension plans.

Preretirement — RP-2000 Employee Mortality Table for Males and Females with blue-collar adjustments. No blue-collar adjustments were used for management members of MTAHQ.

Postretirement Healthy Lives — 95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females. No blue collar or percentage adjustments were used for management members of MTAHQ.

Postretirement Disabled Lives — RP-2014 Disabled Annuitant mortality table for males and females.

(3) Net OPEB Liability

At December 31, 2021 and 2020, the MTA reported a net OPEB liability of \$24,409 and \$21,117, respectively. The MTA's net OPEB liability was measured as of the OPEB Plan's fiscal year-ends of December 31, 2020 and December 31, 2019, respectively. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation date of July 1, 2019 and rolled forward to the measurement date.

OPEB Plan Fiduciary Net Position — The fiduciary net position has been determined on the same basis used by the OPEB plan. The OPEB plan uses the accrual basis of accounting under which contributions from the employer are recognized when paid. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Investments are reported at fair value based on quoted market prices or Net Asset Value. Detailed information about the OPEB plan's fiduciary net position is available in the separately issued financial report or at www.mta.info.

Expected Rate of Return on Investments — The best-estimate range for the long term expected rate of return was determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation.

Asset Class	Index	Target Allocation	Arithmetic Real Rate of Return				
U.S. cash	BAML 3-Month T-Bill	100.00%	-0.54%				
Assumed Inflation - Mean			2.25%				
Assumed Inflation - Standard Deviation			1.65%				
Portfolio Nominal Mean return			1.73%				
Portfolio Standard Deviation 1.20%							
Long Term Expected Rate of Return selected by MTA 2.12%							



Discount Rate — The plan's fiduciary net position was not projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the discount rate for calculating the total OPEB liability is equal to the single equivalent rate that results in the same actuarial present value as the long-term expected rate of return applied to benefit payments, to the extent that the plan's fiduciary net position is projected to be sufficient to make projected benefit payments, and the municipal bond rate applied to benefit payments, to the extent that the plan's fiduciary net position is not projected to be sufficient. Therefore, the discount rate is set equal to the Bond Buyer General Obligation 20-Bond Municipal Bond Index as of December 31, 2020 of 2.12%.

Changes in Net OPEB Liability — Changes in the MTA's net OPEB liability for the year ended December 31, 2021 based on the December 31, 2020 measurement date, and for the year ended December 31, 2020, based on the December 31, 2019 measurement date, were as follows:

	_	Total OPEB Liability	Plan Fiduciary Net Position		Net OPEB Liability
			(in thousands)		
Balance as of December 31, 2019	\$	21,531,473	\$ 414,827	\$	21,116,646
Changes for the year:					
Service Cost		1,097,051	-		1,097,051
Interest on total OPEB liability		610,160	-		610,160
Effect of plan changes		-	-		0
Effect of economic/demographic gains or losses		(43,890)	-		(43,890)
Effect of assumptions changes or inputs		1,939,528	-		1,939,528
Benefit payments		(724,741)	(724,741)		-
Employer contributions		-	387,371		(387,371)
Net investment income		-	(77,118)		77,118
Administrative expenses			(209)		209
Net changes	_	2,878,108	(414,697)	_	3,292,805
Balance as of December 31, 2020	\$	24,409,581	\$ 130	\$	24,409,451
		Total	Plan		Net
		OPEB	Fiduciary		OPEB
		Liability	Net Position		Liability
	-		(in thousands)		
Balance as of December 31, 2018	\$	19,933,888	\$ 351,380	\$	19,582,508
Changes for the year:					
Service Cost		928,573	-		928,573
Interest on total OPEB liability		840,532	-		840,532
Effect of plan changes		-	-		0
Effect of economic/demographic gains or losses		247,871	-		247,871
Effect of assumptions changes or inputs		311,286	-		311,286
Benefit payments		(730,677)	(730,677)		-
Employer contributions		-	730,677		(730,677)
Net investment income		-	63,647		(63,647)
Administrative expenses			(200)		200
Net changes		1,597,585	63,447		1,534,138
Balance as of December 31, 2019	\$	21,531,473	\$ 414,827	\$	21,116,646

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate —The following presents the net OPEB liability of the MTA, calculated using the discount rate as of each measurement date, as well as what the MTA's net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the actual discount rate used for the measurement date (\$ in thousands):

Measurement Date:	December 31, 2020						
	1% Decrease (1.12%)	Discount Rate (2.12%)	1% Increase (3.12%)				
		(in thousands)					
Net OPEB liability	\$28,098,117	\$24,409,451	\$21,392,425				
Measurement Date:		December 31, 2019					
	1% Decrease	Discount Rate	1% Increase				
	(1.74%)	(2.74%)	(3.74%)				
		(in thousands)					
Net OPEB liability	\$24,232,661	\$21,116,646	\$18,552,646				

Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates — The following presents the net OPEB liability of the MTA, calculated using the healthcare cost trend rates as of each measurement date, as well as what the MTA's net OPEB liability would be if it were calculated using trend rates that are 1-percentage point lower or 1-percentage point higher than the actual healthcare trend rate used for the measurement date (\$ in thousands):

Measurement Date:		December 31, 2020								
	1% Decrease	1% Increase								
Net OPEB liability	\$20,595,637	\$24,409,451	\$29,295,102							
Measurement Date:		December 31, 2019								
		Healthcare Cost								
		Current Trend								
	1% Decrease	Rate*	1% Increase							
Net OPEB liability	\$18,031,859	\$21,116,646	\$25,019,480							

^{*}For further details, refer to the Health Care Cost Trend Rates tables in the Actuarial Assumptions section of this Note Disclosure

(4) OPEB Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to OPEB

For the nine-month period ended September 30, 2022 and year ended December 31, 2021, the MTA recognized OPEB expense of \$564 and \$1,870, respectively.

At September 30, 2022 and December 31, 2021, the MTA reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows (\$ in thousands):

	Septembe	er 30, 2022	Decembe	r 31, 2021
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 192,919	\$ 50,007	\$ 192,919	\$ 50,007
Changes of assumptions	2,353,287	1,070,351	2,353,287	1,070,351
Net difference between projected and actual earnings on OPEB plan investments	60,552	-	60,552	-
Changes in proportion and differences between contributions and proportionate share of contributions	612,892	612,892	612,892	612,892
Employer contributions to the plan subsequent to the measurement of net OPEB liability	808,507	-	813,195	-
Total	\$ 4,028,157	\$ 1,733,250	\$ 4,032,845	\$ 1,733,250

The annual differences between the projected and actual earnings on investments are amortized over a 5-year closed period beginning the year in which the difference occurs. The annual differences between expected and actual experience and changes in assumptions are amortized over a 8.1-year closed period, beginning the year in which the deferred amount occurs.

For the nine-month period ended September 30, 2022 and year ended December 31, 2021, \$808.5 and \$813.2 were reported as deferred outflows of resources related to OPEB. This amount includes both MTA's contributions subsequent to the measurement date and an implicit rate subsidy adjustment that will be recognized as a reduction of the net OPEB liability in the year ended December 31, 2022 and December 31, 2020, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2021 will be recognized in OPEB expense as follows:

Year end	led D	eceml	ber	31,	:
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2022	\$ 195,627
2023	200,902
2024	192,305
2025	125,462
2026	204,708
Thereafter	567,396
	\$ 1,486,400

6. CAPITAL ASSETS

Capital assets and improvements include all land, buildings, equipment, and infrastructure of the MTA having a minimum useful life of two years and having a cost of more than \$25 thousand.

Capital assets are stated at historical cost, or at estimated historical cost based on appraisals, or on other acceptable methods when historical cost is not available. Capital leases are classified as capital assets in amounts equal to the lesser of the fair market value or the present value of net minimum lease payments at the inception of the lease.





Accumulated depreciation and amortization are reported as reductions of fixed assets. Depreciation is computed using the straight-line method based upon estimated useful lives of 25 to 50 years for buildings, 2 to 40 years for equipment, and 25 to 100 years for infrastructure. Capital lease assets and leasehold improvements are amortized over the term of the lease or the life of the asset whichever is less. Capital assets consist of the following at December 31, 2021 and September 30, 2022 (in millions):

		Balance			В	alance			Balance
	De	ecember 31, 2020	Additions / classifications	eletions / assifications	De	ecember 31, 2021	Additions / classifications	Deletions / lassifications	ptember 30, 2022
Capital assets not being depreciated:									
Land	\$	248	\$ 2	\$ 1	\$	249	\$ -	\$ -	\$ 249
Construction work-in-progress		21,775	5,556	3,954		23,377	3,722	 2,382	 24,717
Total capital assets not being depreciated		22,023	5,558	 3,955		23,626	 3,722	 2,382	 24,966
Capital assets being depreciated:									
Buildings and structures		20,859	1,650	425		22,084	284	1	22,367
Bridges and tunnels		4,392	195	-		4,587	174	-	4,761
Equipment:									
Passenger cars and locomotives		14,204	151	24		14,331	56	20	14,367
Buses		3,688	317	136		3,869	323	251	3,941
Infrastructure		28,849	1,177	22		30,004	739	-	30,743
Other		28,391	 1,325	 12		29,704	 826	 2	 30,528
Total capital assets being depreciated		100,383	 4,815	 619		104,579	 2,402	 274	 106,707
Less accumulated depreciation:									
Buildings and structures		8,498	607	25		9,080	459	-	9,539
Bridges and tunnels		871	40	-		911	31	-	942
Equipment:									
Passenger cars and locomotives		7,753	413	22		8,144	296	20	8,420
Buses		2,200	251	135		2,316	190	251	2,255
Infrastructure		11,760	1,054	23		12,791	690	-	13,481
Other		10,429	 793	18		11,204	 740	2	 11,942
Total accumulated depreciation		41,511	 3,158	223		44,446	 2,406	 273	 46,579
Total capital assets being depreciated - net		58,872	 1,657	 396		60,133	 (4)	 1	60,128
Capital assets - net	\$	80,895	\$ 7,215	\$ 4,351	\$	83,759	\$ 3,718	\$ 2,383	\$ 85,094

In 2021, MTA Long Island Rail Road obtained legal title to a newly constructed rail yard on its property in accordance to an agreement with the developer. The agreement provides for the developer to construct a rail yard for MTA Long Island Rail Road to store and service trains in a new location in exchange for development rights. A gain of \$266.6 for the fair market value of the assets were recognized at the date of conveyance.

In December 2021, MTA obtained legal title to the wireless telecommunications equipment installed on its property according to the network license agreement entered into with the licensee. The license agreement provides for the licensee to construct, operate, and maintain the wireless network. This asset was transferred by MTA to MTA Long Island Rail Road as a non-cash capital contribution recorded at \$27.3 representing the fair market value at the date of conveyance. In addition, in December 2021, MTA obtained legal title to work in process wireless telecommunications equipment to be installed on its property according to the network license agreement entered into with the licensee. The work in process assets were transferred by MTA to MTA Long Island Rail Road as a non-cash capital contribution recorded at \$33.2 representing the fair market value at the date of conveyance.

In December 2021, MTA obtained legal title to the wireless telecommunications equipment installed on the MTA New York City Transit Authority's property according to the network license agreement that MTA entered into with the licensee. The license agreement provides for the licensee to construct, operate, and maintain the wireless network. This asset was transferred by MTA to the MTA New York City Transit Authority as a non-cash capital contribution recorded at \$73.3 representing the fair market value at the date of conveyance.

Capital assets acquired prior to April 1982 for MTA New York City Transit were funded primarily by New York City with capital grants made available to MTA New York City Transit. New York City has title to a substantial portion of such assets and, accordingly, these assets are not recorded on the books of the MTA. Subsequent acquisitions, which are part of the MTA Capital Program, are recorded at cost by MTA New York City Transit. In certain instances, title to MTA Bridges and Tunnels' real property may revert to New York City in the event the MTA determines such property is unnecessary for its corporate purpose. With respect to MTA Metro-North Rail Road, capital assets completely funded by CDOT are not reflected in MTA's financial statements, as ownership is retained by CDOT.

For certain construction projects, the MTA holds in various trust accounts marketable securities and cash pledged by third-party contractors. At September 30, 2022 and December 31, 2021, these retainage accounts, which are not included in these financial statements, totaled \$139.2 and \$153.1, respectively, including securities with a market value of \$124.8 and \$80.1, respectively.

As of September 30, 2022, \$68.5 billion is unexpended from the MTA's Capital Program (2005 - 2024) and \$16.3 billion has been committed. As of December 31, 2021, \$72.8 billion is unexpended from the MTA's Capital Program and \$16.9 billion has been committed.

7. LONG-TERM DEBT

(In millions)	Origina Issuance		December 31, 2021	Issued	Retired	September 30, 2022
MTA:						
Transportation Revenue Bonds						
1.62%–5.15% due through 2057	\$ 44	,080 \$	23,950	\$ 165	\$ 1,577	\$ 22,538
Bond Anticipation Notes*						
1.94% due through 2023	23	,635	13,004	C	9,097	3,907
Dedicated Tax Fund Bonds						
4.00%–5.77% due through 2032		,527	4,681	436		5,059
	79	,242	41,635	601	10,732	31,504
Net unamortized bond premium		-	1,158	74		943
	79	,242	42,793	675	11,021	32,447
TBTA:						
General Revenue Bonds						
4.00%–5.77% due through 2057	18	,521	8,165	400	45	8,520
Bond Anticipation Notes						
due 2025		193	193	-	-	193
Payroll Mobility Tax Senior Lien Obligations						
due through 2051	7	,385	2,464	4,237	8	6,693
Sales Tax Revenue Bonds						
due through 2062		700	-	700	-	700
Subordinate Revenue Bonds						
4.00%–5.77% due through 2032		,066	795	-	-	795
	30	,865	11,617	5,337		16,901
Net unamortized bond premium			1,173	524		1,647
	30	,865	12,790	5,861	103	18,548
MTA Hudson Rail Yards Trust:						
MTA Hudson Rail Yards Trust Obligations						
1.88%–2.65% due through 2056	1	,220	830	-	. 19	811
Net unamortized bond premium		-	87	-		87
m . 1		,220	917	-	. 19	898
Total	<u>\$ 111</u>	,327 \$	56,500	\$ 6,536	\$ 11,143	\$ 51,893
Current portion**		\$	8,069			\$ 1,966
Long-term portion		<u>\$</u> \$	48,431			\$\frac{1,966}{\$} \tag{49,927}
-		_				

^{*} As of September 30, 2022 and December 31, 2021, the outstanding RAN was \$0 and \$1,196, respectively.

^{**} As a result of certain MTA issuances of Bonds and Bond Anticipation Notes, the current portion of the Bonds and BANs that were reclassified as long-term were \$141 and \$1,891 as of September 30, 2022 and December 31, 2021, respectively.

(In millions)		Original		cember 31,					nber 31,
	Issuance			2020	_	Issued	Retired	2	021
MTA:									
Transportation Revenue Bonds									
1.43%–5.15% due through 2057	\$	44,080	\$	24,701	\$	1,415 \$	2,166	\$	23,950
Bond Anticipation Notes*									
1.33% due through 2023		23,635		9,536		4,720	1,252		13,004
Dedicated Tax Fund Bonds									
1.86%-4.89% due through 2057		11,149		4,857		110	286		4,681
		78,864		39,094		6,245	3,704		41,635
Net unamortized bond premium		-		1,403		122	367		1,158
		78,864		40,497		6,367	4,071		42,793
TBTA:									
General Revenue Bonds									
1.81%-4.18% due through 2047		18,121		8,040		365	240		8,165
Payroll Mobility Tax Senior Lien Obligations									
1.36%-2.02% due through 2051		2,464		-		2,464	-		2,464
Subordinate Revenue Bonds									
3.13%-5.34% due through 2032		4,066		867		-	72		795
Bond Anticipation Notes									
0.69% due through 2025		193		-		193	-		193
		24,844		8,907		3,022	312		11,617
Net unamortized bond premium		-		676		578	81		1,173
		24,844		9,583		3,600	393		12,790
MTA Hudson Rail Yards Trust:									
MTA Hudson Rail Yards Trust Obligations									
1.88%–2.65% due through 2056		1,220		845		-	15		830
Net unamortized bond premium		-		88		-	1		87
		1,220		933		-	16		917
Total	\$	104,928	\$	51,013	\$	9,967 \$	4,480	\$	56,500
Current portion**			\$	1,543				\$	8,069
Long-term portion			\$	49,470				\$	48,431

^{*} Includes draws on a \$800 taxable revolving credit agreement with JPMorgan Chase Bank, National Association, which is active through August 24, 2022, and a \$400 taxable revolving credit agreement with Bank of America, National Association, which is active through August 24, 2022. Draws under the JPMorgan Chase Agreement and the Bank of America agreement are evidenced by revenue anticipation notes ("RANs"). As of December 31, 2021 and 2020, the outstanding RAN was \$1,196 and \$477, respectively.

^{**} As a result of certain MTA issuances of Bonds and Bond Anticipation Notes, the current portion of the Bonds and BANs that were reclassified as long-term were \$1,891 and \$831, as of December 31, 2021 and 2020, respectively.

MTA Transportation Revenue Bonds — Prior to 2022, MTA issued sixty-nine Series of Transportation Revenue Bonds secured under its General Resolution Authorizing Transportation Revenue Obligations adopted on March 26, 2002 in the aggregate principal amount of \$36,956. The Transportation Revenue Bonds are MTA's special obligations payable solely from transit and commuter systems revenues and certain state and local operating subsidies.

On February 1, 2022, MTA effectuated a mandatory tender and remarketed \$32.475 of Transportation Revenue Variable Rate Refunding Bonds, Subseries 2002G-1h and \$50.000 of Transportation Revenue Variable Rate Bonds, Subseries 2012A-3 because their respective current interest rate periods were expiring by their terms. The Subseries 2002G-1h and Subseries 2012A-3 bonds were remarketed in Term Rate Mode as Secured Overnight Financing Rate (SOFR) Notes as follows

Quantity	Subseries	Delivery Date	Purchase Date	Interest Rate
\$13.425	TRB 2002G-1h	N/A	November 1, 2023	67% of SOPR plus 0.40%
\$18.750	TRB 2002G-1h	N/A	November 1, 2026	67% of SOPR plus 0.60%
\$50.000	TRB 2012A-3	April 1, 2026	November 15, 2042	67% of SOPR plus 0.65%

On March 24, 2022, MTA effectuated a mandatory tender and remarketed \$82.660 of Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-2 because the Continuing Covenant Agreement (CCA), between MTA and Bank of America, N.A., was expiring by its terms. The CCA associated with Subseries 2020B-2 was replaced with an irrevocable direct-pay Letter of Credit (LOC) issued by PNC Bank, National Association. The LOC will expire on March 22, 2024. PNC Capital Markets LLC will serve as remarketing agent.

On March 24, 2022, MTA extended its irrevocable direct-pay LOC issued by PNC Bank, National Association that is associated with Transportation Revenue Variable Rate Refunding Bonds, Subseries 2020B-1 for two years to March 22, 2024.

On May 26, 2022, MTA extended its irrevocable direct-pay LOC issued by Bank of Montreal that is associated with Transportation Revenue Variable Rate Bonds, Subseries 2012A-2 for three years to June 2, 2025.

On August 31, 2022, MTA extended its irrevocable direct-pay Letter of Credit issued by Bank of America, N.A. that is associated with Transportation Revenue Variable Rate Bonds, Subseries 2015E-3 for three years to September 2, 2025.

MTA Bond Anticipation Notes — From time to time, MTA issues Transportation Revenue Bond Anticipation Notes in accordance with the terms and provisions of the General Resolution described above in the form of commercial paper to fund its transit and commuter capital needs. The interest rate payable on the notes depends on the maturity and market conditions at the time of issuance. The MTA Act requires MTAHQ to periodically (at least each five years) refund its bond anticipation notes with bonds.

MTA Revenue Anticipation Notes — On August 24, 2017, MTA entered into a \$350 taxable Revenue Anticipation Note facility, (the "2017A RAN"), with JPMorgan Chase Bank, National Association. An initial draw of \$3.5 was made at closing.

On August 14, 2018, MTA amended the 2017A RAN to (1) correct the designation of the facility to Transportation Revenue Anticipation Notes, Series 2017 (the "Series 2017 RANs") and (2) increase the maximum amount of the Series 2017 RANs authorized to be issued by \$350, for a maximum principal amount of \$700 at any one-time outstanding. To maintain the 1% draw on the line of credit throughout the duration of the agreement, an additional \$3.5 draw was made on August 14, 2018.

On August 16, 2019, the Revenue Anticipation Note facility with JPMorgan Chase was amended, increasing the line of credit to \$800.To maintain the 1% draw on the line of credit throughout the duration of the agreement, an additional \$1 draw was made on August 16, 2019.

On August 16, 2019, MTA entered into a \$200 taxable revolving credit agreement with Bank of America, National Association ("BANA") that is active through August 24, 2022. Draws under the BANA Agreement will be evidenced by RANs. Funds may be used for operational or capital purposes.

On March 20, 2020, MTA drew down the remaining \$792 of its \$800 Revolving Credit Agreement with JPMorgan Chase Bank National Association and \$200 of its Revolving Credit Agreement with Bank of America National Association.

On April 22, 2020, MTA drew down \$2.5 of its taxable Revolving Credit Agreement with Bank of America National Association.

On May 22, 2020, MTA entered into a \$950 taxable term credit agreement with JPMorgan Chase Bank National Association, as administrative agent, and Industrial and Commercial Bank of China Limited, New York Branch, and Bank of China, New York Branch, collectively as lenders. Funds drawn from this credit agreement may be used for operational or capital purposes. The credit agreement was active through May 22, 2022.

On July 23, 2020, the Urban Development Corporation (dba "Empire State Development" or "ESD"), on behalf of the State of New York, issued its State Personal Income Tax Revenue Bonds, Series 2020C ("ESD Series 2020C Bonds"). A portion of the proceeds of the ESD Series 2020C Bonds, \$1.1 billion, were applied to the retirement of certain short-term notes issued by MTA on behalf of the existing \$7.3 billion commitment of NYS toward the MTA's 2015-2019 Capital Program. The proceeds were applied as follows: (i) \$413.517, plus interest, to retire Transportation Revenue Anticipation Notes, Series 2020A ("Series 2020A RANs"), (ii) \$104.672, plus interest, to retire Transportation Revenue Anticipation Notes, Series 2020B ("Series 2020B RANs"), and (iii) \$600, plus interest, to retire Transportation Revenue Bond Anticipation Notes, Series 2019E.

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On March 21, 2022 and March 24, 2022, MTA prepaid the outstanding \$300 on the 2021A RAN (with Bank of America) and \$420 on the 2021B RAN (with JP Morgan), respectively.

On March 31, 2022 and April 1, 2022, MTA prepaid the outstanding \$95.3 on the 2021C RAN and \$2.5 million on the 2021D RAN, both with Bank of America, respectively. On April 11, 2022, MTA prepaid the outstanding \$378.5 on the 2021E RAN, with JP Morgan.

On August 2, 2022, MTA entered into new \$800 and \$400 revolving credit agreements with JP Morgan Chase Bank, National Association and Bank of America, National Association, respectively. These agreements replace the existing agreements with JP Morgan (dated August 24, 2017, as amended) and Bank of America (dated August 16, 2019, as amended), which were for the same amounts and terminated pursuant to their terms. The new agreements are active until August 1, 2025.

MTA State Service Contract Bonds — Prior to 2022, MTA issued two Series of State Service Contract Bonds secured under its State Service Contract Obligation Resolution adopted on March 26, 2002, in the aggregate principal amount of \$2,395. Currently, there are no outstanding bonds. The State Service Contract Bonds are MTA's special obligations payable solely from certain payments from the State of New York under a service contract.

MTA Dedicated Tax Fund Bonds — Prior to 2022, MTA issued twenty-two Series of Dedicated Tax Fund Bonds secured under its Dedicated Tax Fund Obligation Resolution adopted on March 26, 2002, in the aggregate principal amount of \$9,769. The Dedicated Tax Fund Bonds are MTA's special obligations payable solely from monies held in the Pledged Amounts Account of the MTA Dedicated Tax Fund. State law requires that the MTTF revenues and MMTOA revenues (described above in Note 2 under "Nonoperating Revenues") be deposited, subject to appropriation by the State Legislature, into the MTA Dedicated Tax Fund.

On March 1, 2022, MTA issued \$377.955 of Dedicated Tax Fund Bonds, Series 2022A to retire outstanding MTA Transportation Revenue Bond Anticipation Notes (BANs), Series 2020B (note that those BANs were purchased, pursuant to a Note Purchase Agreement, between MTA and Municipal Liquidity Facility LLC). The Series 2022A bonds were priced through a competitive method of sale. The Series 2022A bonds were issued as fixed rate tax-exempt bonds with a final maturity of November 15, 2052. On March 18, 2021, MTA effectuated a mandatory tender and remarketed \$110.325 of Dedicated Tax Fund Bonds, Subseries 2002B-1 because the irrevocable direct-pay LOC issued by The Bank of Tokyo-Mitsubishi UFJ, Ltd. was expiring by its terms. The Subseries 2002B-1 bonds were remarketed as fixed rate tax-exempt bonds with a final maturity of November 1, 2022.

On June 1, 2022, MTA extended its irrevocable direct-pay LOC issued by TD Bank, N.A. that is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-1 for three years to June 13, 2025.

On June 1, 2022, MTA effectuated a mandatory tender and remarketed \$58.015 Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-2a because its current interest rate period was set to expire by its terms. The Subseries 2008A-2a bonds were remarketed as Variable Interest Rate Obligations in Daily Mode supported by an irrevocable direct-pay LOC issued by TD Bank, N.A. The new LOC will expire on November 1, 2026.

MTA Certificates of Participation — Prior to 2022, MTA (solely on behalf of MTA Long Island Rail Road and MTA Metro-North Railroad), MTA New York City Transit and MTA Bridges and Tunnels executed and delivered three Series of Certificates of Participation in the aggregate principal amount of \$807 to finance certain building and leasehold improvements to an office building at Two Broadway in Manhattan occupied principally by MTA New York City Transit, MTA Bridges and Tunnels, MTA Construction and Development, and MTAHQ. The Certificates of Participation represented proportionate interests in the principal and interest components of Base Rent paid severally, but not jointly, in their respective proportionate shares by MTA New York City Transit, MTA, and MTA Bridges and Tunnels, pursuant to a Leasehold Improvement Sublease Agreement.

MTA Bridges and Tunnels General Revenue Bonds — Prior to 2022, MTA Bridges and Tunnels issued thirty-five Series of General Revenue Bonds, secured under its General Resolution Authorizing General Revenue Obligations adopted on March 26, 2002, in the aggregate principal amount of \$14,174. The General Revenue Bonds are MTA Bridges and Tunnels' general obligations payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels.

On January 19, 2022, MTA effectuated a mandatory tender and remarketed \$96.335 of Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Subseries 2003B-1 because its irrevocable direct-pay LOC issued by Bank of America, N.A. was expiring by its terms and was substituted with an irrevocable direct-pay LOC issued by U.S. Bank, N.A. The new LOC will expire on January 17, 2025. U.S. Bancorp will serve as remarketing agent.

On May 20, 2022, MTA extended its irrevocable direct-pay LOC issued by U.S. Bank National Association that is associated with Triborough Bridge and Tunnel Authority General Revenue Variable Rate Refunding Bonds, Subseries 2005B-4c for three years to May 23, 2025.

On August 18, 2022, MTA issued \$400 Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2022A. Proceeds from the transaction will be used to finance existing approved bridge and tunnel capital projects. The Series 2022A bonds were issued as fixed-rate tax-exempt bonds with a final maturity of November 15, 2057.

MTA Bridges and Tunnels Subordinate Revenue Bonds — Prior to 2022, MTA Bridges and Tunnels issued twelve Series of Subordinate Revenue Bonds secured under its 2001 Subordinate Revenue Resolution Authorizing Subordinate Revenue Obligations adopted on March 26, 2002, in the aggregate principal amount of \$4,066. The Subordinate Revenue Bonds are MTA Bridges and Tunnels' special obligations payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels after the payment of debt service on the MTA Bridges and Tunnels General Revenue Bonds described in the preceding paragraph.

MTA Bridges and Tunnels Second Subordinate Bond Anticipation Notes — On June 10, 2021, MTA issued \$192.835 of Triborough Bridge and Tunnel Authority Second Subordinate Bond Anticipation Notes, Series 2021A. Proceeds from the transaction will be used to finance costs related to the design, build, and installation of infrastructure, tolling systems and allowable implementation expenses necessary for the operation of the Central Business District Tolling Program. The Series 2021A notes were issued as fixed rate tax-exempt notes with a final maturity of November 1, 2025.

MTA Bridges and Tunnels Payroll Mobility Tax Senior Lien Bonds — Prior to 2022, MTA issued three Series of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds secured under its 2021 TBTA PMT Resolution adopted on March 17, 2021 in the aggregate principal amount of \$1,679. Each of the TBTA PMT Senior Lien Obligations and any MTA PMT Senior Lien Obligations issued pursuant to the MTA PMT Resolution, adopted by the Board on November 18, 2020, are secured by a first lien on, and parity pledge of, the PMT Receipts, consisting of two distinct revenue streams: Mobility Tax Receipts and MTA Aid Trust Account Receipts (also referred to as "ATA Receipts"). MTA and MTA Bridges and Tunnels have entered into the Financing Agreement, dated as of April 9, 2021, to provide the mechanism by which MTA and MTA Bridges and Tunnels share PMT Receipts on a parity basis (i) first with respect to the PMT Senior Lien and then (ii) with respect to PMT Second Lien. Under State law, the MTA PMT Senior Lien Indebtedness and the MTA Bridges and Tunnels PMT Senior Lien Indebtedness are special obligations of MTA and MTA Bridges and Tunnels, respectively, which means that they are payable solely from a gross lien on the money pledged for payment under the MTA Payroll Mobility Tax Obligation Resolution and the MTA Bridges and Tunnels Payroll Mobility Tax Obligation Resolution. Such bonds are not general obligations of MTA or MTA Bridges and Tunnels.

On February 10, 2022, MTA issued \$592.680 of Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022A. Proceeds from the transaction were used to retire \$750.000 Dedicated Tax Fund Bond Anticipation Notes, Series 2019A. The Series 2022A bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2057.

On April 5, 2022, MTA priced, subject to a Forward Delivery Bond Purchase Agreement, \$1,000.015 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022B. MTA expects to issue and deliver the Series 2022B Bonds on August 18, 2022. Proceeds from the transaction will be used to retire: \$75.235 MTA Transportation Revenue Variable Rate Refunding Bonds, Subseries 2002D-1; \$174.050 MTA Transportation Revenue Bonds, Series 2012C; \$406.730 MTA Transportation Revenue Refunding Bonds, Series 2012D; \$350.280 MTA Transportation Revenue Refunding Bonds, Series 2012F; and \$112.655 MTA Transportation Revenue Bonds, Series 2012H. The refunding resulted in a net present value savings of \$135.306 or 12.09% of the par amount of the refunded bonds. The Series 2022B bonds were priced as fixed rate tax-exempt bonds with a final maturity of May 15, 2042.

On May 12, 2022, MTA issued \$927.950 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022C. Proceeds from the transaction were used to retire outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2019B-1. The Series 2022C bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2057.

On August 18, 2022, MTA issued and delivered \$1,000.015 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds, Series 2022B.

On September 15, 2022, MTA issued \$748.682 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds, Series 2022D (Climate Bond Certified). Proceeds from the transaction will be used to finance existing approved transit and commuter projects and to refund the following MTA Transportation Revenue Bonds: \$41.730 Series 2012B; \$102.440 Series 2012C; \$32.830 Series 2012E; \$76.360 Series 2012F; and \$19.495 Series 2012H. The refunding resulted in a net present value savings of \$21.134 or 7.75% of the par amount of the refunded bonds. The Series 2022D bonds were issued as: \$230.745 Subseries 2022D-1a; \$20.202 Subseries 2022D-1b; and \$497.735 Subseries 2022D-2. The Subseries 2022D-1a bonds were issued as fixed rate tax-exempt refunding bonds with a final maturity of November 15, 2042. The Subseries 2022D-1b bonds were issued as fixed rate tax-exempt refunding Capital Appreciation Bonds (CABs)

with a final maturity of November 15, 2039. The Subseries 2022D-2 bonds were issued as fixed-rate tax-exempt bonds with a final maturity of May 15, 2052.

MTA Bridges and Tunnels Sales Tax Revenue Bonds — On July 20, 2022, MTA issued \$700 Triborough Bridge and Tunnel Authority Sales Tax Revenue Bonds, Series 2022A (TBTA Capital Lockbox – City Sales Tax). This was the inaugural issuance for this credit. Proceeds from the transaction were used to generate new money proceeds to finance approved 2020-2024 Capital Program transit and commuter projects. The Series 2022A bonds were issued as fixed rate tax-exempt bonds with a final maturity of May 15, 2062.

MTA Payroll Mobility Tax Bond Anticipation Notes — On December 17, 2020, MTA issued \$2,907.280 of MTA Payroll Mobility Tax Bond Anticipation Notes, Series 2020A pursuant to a Note Purchase Agreement, between MTA and Municipal Liquidity Facility LLC. Proceeds from the transaction were used to finance COVID-19 Lost Revenues and Increased Costs of the MTA agencies and TBTA. The Series 2020A notes were issued as fixed rate tax-exempt notes with a final maturity of December 15, 2023.

On September 1, 2022, MTA issued \$951.370 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Bond Anticipation Notes, Series 2022A. Proceeds from the transaction were used to refinance outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2019D-1 as they were set to mature on September 1, 2022. The Series 2022A Notes were issued as fixed rate tax-exempt notes with a final maturity of August 15, 2024.

MTA Hudson Rail Yards Trust Obligations — The MTA Hudson Rail Yards Trust Obligations, Series 2016A ("Series 2016A Obligations") were executed and delivered on September 22, 2016 by Wells Fargo Bank National Association, as Trustee ("Trustee"), to (i) retire the outstanding Transportation Revenue Bond Anticipation Notes, Series 2016A of the MTA, which were issued to provide interim financing of approved capital program transit and commuter projects, (ii) finance approved capital program transit and commuter projects of the affiliates and subsidiaries of the MTA, (iii) fund an Interest Reserve Requirement in an amount equal to one-sixth (1/6) of the greatest amount of Interest Components (as hereinafter defined) in the current or any future year, (iv) fund a portion of the Capitalized Interest Fund requirement, and (v) finance certain costs of issuance.

Pursuant to the Financing Agreement (as hereinafter defined), the MTA has agreed to pay to, or for the benefit of, the Trustee the "MTA Financing Agreement Amount," consisting of principal and interest components. The Series 2016A Obligations evidence the interest of the Owners thereof in such MTA Financing Agreement Amount payable by the MTA pursuant to the Financing Agreement. The principal amount of the Series 2016A Obligations represent the principal components of the MTA Financing Agreement Amount ("Principal Components") and the interest represent the interest components of the MTA Financing Agreement Amount ("Interest Components"). The Series 2016A Obligations (and the related Principal Components and Interest Components) are special limited obligations payable solely from the Trust Estate established under the MTA Hudson Rail Yards Trust Agreement, dated as of September 1, 2016 ("Trust Agreement"), by and between the MTA and the Trustee.

The Trust Estate consists principally of (i) the regularly scheduled rent, delinquent rent or prepaid rent ("Monthly Ground Rent") to be paid by Ground Lease Tenants (the tenants under the Western Rail Yard Original Ground Lease and each Severed Parcel Ground Lease of the Eastern Rail Yard) of certain parcels being developed on and above the Eastern Rail Yard and Western Rail Yard portions of the John D.Caemmerer West Side Yards ("Hudson Rail Yards") currently operated by The Long Island Rail Road Company ("LIRR"), (ii) monthly scheduled transfers from the Capitalized Interest Fund during the limited period that the Monthly Ground Rent is abated under the applicable Ground Lease, (iii) payments made by the Ground Lease Tenants if they elect to exercise their option to purchase the fee interest in such parcels ("Fee Purchase Payments"), (iv) Interest Reserve Advances and Direct Cost Rent Credit Payments (collectively "Contingent Support Payments") made by the MTA, (v) rights of the MTA to exercise certain remedies under the Ground Leases and (vi) rights of the Trustee to exercise certain remedies under the Ground Leases and the Fee Mortgages.

Pursuant to the Interagency Financing Agreement, dated as of September 1, 2016 ("Financing Agreement"), by and among the MTA, New York City Transit Authority, Manhattan and Bronx Surface Transit Operating Authority, LIRR, Metro-North Commuter Railroad Company, and MTA Bus Company (collectively, the "Related Transportation Entities"), and the Trustee, the MTA has agreed to pay to the Trustee the MTA Financing Agreement Amount with moneys provided by the Financing Agreement Payments (which are principally the revenues within the Trust Estate) and Interest Reserve Advances. The MTA has established a deposit account with Wells Fargo Bank, National Association, as depositary ("Depositary"), and the MTA will direct all Ground Lease Tenants to make Monthly Ground Rent and Fee Purchase Payments (payments made by the Ground Lease Tenants if they elect to exercise their option to purchase the fee interest in such parcels) directly to the Depositary, which deposits will be transferred daily to the Trustee. In addition, in the event the MTA elects to exercise certain Authority Cure Rights upon the occurrence of a Ground Lease Payment Event of Default or is required to make certain Direct Cost Rent Credit Payments, the MTA will make all payments relating to defaulted and future Monthly Ground Rent directly to the Depositary.

On July 15, 2019, MTA effectuated the early mandatory redemption of a portion of the MTA Hudson Rail Yards Trust Obligations, Series 2016A maturing on November 15, 2046 in the Principal Component of \$68. This is due to the payment



of Fee Purchase Payments in connection with three commercial condominium units to be owned and occupied by Wells Fargo and KKR.

On September 21, 2020, Moody's Investors Services downgraded Hudson Rail Yard Trust Obligations from A2 to A3 and assigned the Hudson Rail Yard Trust Obligations with a Negative Outlook.

Refer to Note 8 for further information on Leases.

MTA Grant Anticipation Notes - On December 9, 2021, MTA issued \$4,000.000 of Grant Anticipation Notes, Series 2021A. Proceeds from the transaction were used to reimburse MTA for certain operating expenses and lost revenues since January 20, 2020, due to the COVID-19 public health emergency. The Series 2021A Notes were priced as fixed rate federally taxable notes with a final maturity of November 15, 2022.

On February 10, 2022, the Grant Anticipation Notes, Series 2021A were called for redemption prior to maturity.

Debt Limitation — The New York State Legislature has imposed limitations on the aggregate amount of debt that the MTA and MTA Bridges and Tunnels can issue to fund the approved transit and commuter capital programs. The current aggregate ceiling, subject to certain exclusions, is \$90,100 compared with issuances totaling approximately \$43,416. The MTA expects that the current statutory ceiling will allow it to fulfill the bonding requirements of the approved Capital Programs.

Bond Refundings — From time to time, the MTA and MTA Bridges and Tunnels issue refunding bonds to achieve debt service savings or other benefits. The proceeds of refunding bonds are generally used to purchase U.S. Treasury obligations that are placed in irrevocable trusts. The principal and interest within the trusts will be used to repay the refunded debt. The trust account assets and the refunded debt are excluded from the consolidated statements of net position.

At September 30, 2022 and December 31, 2021, the following amounts of MTA bonds, which have been refunded, remain valid debt instruments and are secured solely by and payable solely from their respective irrevocable trusts.

(In millions)	September 30, 2022		
MTA Transit and Commuter Facilities:			
Transit Facilities Revenue Bonds	\$ 79	\$	104
Commuter Facilities Revenue Bonds	76		102
MTA Bridges and Tunnels:			
General Purpose Revenue Bonds	160		458
Special Obligation Subordinate Bonds	43		59
Total	\$ 358	\$	723

For the nine months ended September 30, 2022, MTA refunding transactions decreased aggregate debt service payments by \$201 and provided an economic gain of \$156. For the nine months ended September 30, 2021, MTA refunding transactions increased aggregate debt service payments by \$66 and provided an economic gain of \$44. Details of bond refunding savings for the period ended September 30, 2022 and for the year ended December 31, 2021 are as follows (in millions):

Refunding Bonds Issued in 2022	Series	Date issued	Par value Refunded		Service Savings (Increase)		Present Value of Savings	
Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Refunding Bonds	2022B	8/18/2022	\$	631	\$	174	\$	135
Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds	2022D	9/15/2022		207		27		21
Total Bond Refunding Savings			\$	838	\$	201	\$	156

Refunding Bonds Issued in 2021	Series	Date issued	value inded	Debt Service Savings (Increase)	Net Present Value of Savings	
Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Bonds	2021A 2021C	5/5/2021 9/30/2021	\$ 631 207	\$ (103) 37	\$ 17 27	
Total Bond Refunding Savings			\$ 838	\$ (66)	<u>\$ 44</u>	



Unamortized losses related to bond refundings were as follows:

	December 31, 2020	(Gain)/loss on refunding	2019 amortizat	ion	December 31, 2021	(Gain)/loss on refunding	Current year amortization	September 30, 2022
MTA:								
Transportation Revenue Bonds	\$ 443	\$ 2	\$	(58)	\$ 387	\$ -	\$ (112)	\$ 275
State Service Contract Bonds	(12)	-		-	(12)	-	-	(12)
Dedicated Tax Fund Bonds	206			(17)	189		(12)	177
	637	2		(75)	564		(124)	440
TBTA:								
General Revenue Bonds	175	-		(21)	154	-	(12)	142
Subordinate Revenue Bonds	25			(3)	22		(2)	20
	200			(24)	176		(14)	162
Total	\$ 837	\$ 2	\$	(99)	\$ 740	\$ -	\$ (138)	\$ 602

Debt Service Payments — Future principal and interest debt service payments at September 30, 2022 are as follows:

	M	ГА	M	TA BRIDGES	AND	TUNNELS	Debt S	ervi	ce
	 Principal	Interest		Principal		Interest	Principal		Interest
2022	\$ 1,642	\$ 1,425	\$	324	\$	321	\$ 1,966	\$	1,746
2023	3,957	1,353		329		745	4,286		2,098
2024	944	1,209		1,338		716	2,282		1,925
2025	966	1,107		606		661	1,572		1,768
2026	860	962		581		628	1,441		1,590
2027-2031	4,913	4,216		3,213		2,709	8,126		6,925
2032-2036	5,593	3,545		1,924		2,177	7,517		5,722
2037-2041	4,691	2,502		1,947		1,781	6,638		4,283
2042-2046	3,749	1,441		2,280		1,313	6,029		2,754
2047-2051	3,669	624		2,838		709	6,507		1,333
2052-2056	1,308	125		1,284		197	2,592		322
Thereafter	23	1		237		28	260		29
Total	\$ 32,315	\$ 18,510	\$	16,901	\$	11,985	\$ 49,216	\$	30,495

The above interest amounts include both fixed-rate and variable-rate calculations. The interest rate assumptions for variable rate bonds are as follows:

- Transportation Revenue Refunding Bonds, Series 2002D 4.45% per annum taking into account the interest rate swap plus the current fixed floating rate note spread.
- Transportation Revenue Refunding Bonds, Series 2002G 3.542% per annum taking into account the interest rate swap plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
- Transportation Revenue Bonds, Series 2005D 3.561% per annum taking into account the interest rate swaps.
- *Transportation Revenue Bonds, Series 2005E* 3.561% per annum taking into account the interest rate swaps and 4.00% per annum on the unhedged portion.
- *Transportation Revenue Bonds, Series 2011B* 3.542% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
- Transportation Revenue Bonds, Series 2012A 4.00% per annum plus the current fixed floating rate note spread.
- *Transportation Revenue Bonds, Series 2012G* 3.563% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread.
- Transportation Revenue Bonds, Series 2014D-2 4.00% per annum plus the current fixed floating rate note spread.
- Transportation Revenue Bonds, Series 2015A-2—4.00% per annum plus the current fixed floating rate note spread.
- Transportation Revenue Bonds, Series 2015E 4.00% per annum.
- Dedicated Tax Fund Bonds, Series 2002B 4.00% per annum on Subseries 2002B-1; and 4.00% per annum plus the current fixed floating rate note spread.

- **Transportation Authority**
 - Dedicated Tax Fund Variable Rate Refunding Bonds, Series 2008A 3.316% per annum taking into account the interest rate swaps plus the current fixed floating rate note spread; and 4.00% per annum plus the current fixed floating rate note spread on the unhedged portion.
 - Dedicated Tax Fund Refunding Bonds, Subseries 2008B-3a and 2008B-3c—4.00% per annum plus the current fixed floating rate note spread.
 - MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2001C 4.00% per annum.
 - MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2002F 5.404% and 3.076% per annum taking into account the interest rate swaps and 4.00% per annum on portions not covered by the interest rate swaps.
 - MTA Bridges and Tunnels General Revenue Bonds, Series 2003B 4.00% per annum; and 4.00% per annum plus the current fixed floating rate note spread on Subseries 2003B-2.
 - MTA Bridges and Tunnels General Revenue Bonds, Series 2005A 4.00% per annum except from November 1, 2027 through November 1, 2030, 3.076% per annum taking into account the interest rate swap.
 - MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2005B 3.076% per annum based on the Initial Interest Rate Swaps plus the current fixed floating rate note spread.
 - MTA Bridges and Tunnels General Revenue Bonds, Series 2008B-2 4.00% per annum plus the current fixed floating rate note spread.
 - MTA Bridges and Tunnels General Revenue Bonds, Series 2018E 4.00% per annum.

Loans Payable - The MTA and the New York Power Authority ("NYPA") entered into an updated Energy Services Program Agreement ("ESP Agreement"). The ESP Agreement authorized MTA affiliates and subsidiaries to enter into a Customer Installation Commitment ("CIC") with NYPA for turn-key, energy efficiency projects, which would usually be long-term funded and constructed by NYPA. The repayment period for the NYPA loan can be up to 20 years, but can be repaid at any time without penalty.

The Loans Payable debt service requirements at September 30, 2022 are as follows (in millions):

Year	Prin	cipal	Interest	Total
2022	\$	11	\$ 2	\$ 13
2023		8	2	10
2024		9	1	10
2025		9	1	10
2026		9	1	10
2027-2031		33	3	36
2032-2036		6	0	6
2037-2041		1	0	1
Total	\$	86	\$ 10	\$ 96
Current portion	\$	11		
Long-term portion		75		
Total NYPA Loans Payable	\$	86		

The above interest amounts include both fixed and variable rate calculations. Interest on the variable-rate loan is paid at the Securities Industry and Financial Markets Association Municipal Swap Index ("SIFMA") rate and is reset annually.

Tax Rebate Liability — Under the Internal Revenue Code of 1986, the MTA may accrue a liability for an amount of rebateable arbitrage resulting from investing low-yielding, tax-exempt bond proceeds in higher-yielding, taxable securities. The arbitrage liability is payable to the federal government every five years. No accruals or payments were made during the periods ended September 30, 2022 and December 31, 2021.





Liquidity Facility — MTA and MTA Bridges and Tunnels have entered into several Standby Bond Purchase Agreements ("SBPA") and Letter of Credit Agreements ("LOC") as listed on the table below.

				Type of	
Resolution	Series	Swap	Provider (Insurer)	Facility	Exp. Date
Transportation Revenue	2002G-1g	Y	TD Bank, N.A.	LOC	11/1/2024
Transportation Revenue	2005D-2	Y	Helaba	LOC	11/10/2022
Transportation Revenue	2005E-1	Y	Barclays Bank	LOC	8/18/2025
Transportation Revenue	2005E-2	Y	Bank of America, N.A.	LOC	12/8/2023
Transportation Revenue	2012A-2	N	Bank of Montreal	LOC	6/2/2025
Transportation Revenue	2012G-1	Y	Barclays Bank	LOC	10/31/2023
Transportation Revenue	2012G-2	Y	TD Bank, N.A.	LOC	11/1/2024
Transportation Revenue	2015E-1	N	Barclays Bank	LOC	8/18/2025
Transportation Revenue	2015E-3	N	Bank of America, N.A.	LOC	9/2/2025
Transportation Revenue	2020B-1	N	PNC Bank	LOC	3/22/2024
Transportation Revenue	2020B-2	N	PNC Bank	LOC	3/22/2024
Dedicated Tax Fund	2008A-1	Y	TD Bank, N.A.	LOC	6/13/2025
Dedicated Tax Fund	2008A-2a	Y	TD Bank, N.A.	LOC	11/1/2026
Dedicated Tax Fund	2008A-2b	Y	PNC Bank	LOC	10/31/2022
Dedicated Tax Fund	2008B-3c	N	PNC Bank	LOC	10/31/2022
MTA Bridges and Tunnels General Revenue	2001C	Y	State Street	LOC	6/26/2023
MTA Bridges and Tunnels General Revenue	2003B-1	N	Bank of America, N.A.	LOC	1/17/2025
MTA Bridges and Tunnels General Revenue	2005A	Y	Barclays Bank	LOC	1/24/2024
MTA Bridges and Tunnels General Revenue	2005B-2	Y	State Street	LOC	1/21/2026
MTA Bridges and Tunnels General Revenue	2005B-3	Y	State Street	LOC	6/26/2023
MTA Bridges and Tunnels General Revenue	2005B-4c	Y	U.S. Bank National Association	LOC	5/23/2025
MTA Bridges and Tunnels General Revenue	2018E	N	Bank of America, N.A.	LOC	12/12/2022



Derivative Instruments — Fair value for the swaps is calculated in accordance with GASB Statement No. 72, utilizing the income approach and Level 2 inputs. It incorporates the mid-market valuation, nonperformance risk of either MTA/ MTA Bridges and Tunnels or the counterparty, as well as bid/offer. The fair values were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zerocoupon bonds due on the date of each future net settlement on the swap.

The fair value balances and notional amounts of derivative instruments outstanding at September 30, 2022 and December 31, 2021, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2021 are as follows (in \$ millions):

Derivative Instruments - Summary Information as of September 30, 2022

			Cash Flow or		Trade/Hedge	Notional	
Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Fair Value Hedge	Effective Methodology	Association Date	Amount	Fair Value
Cashflow Hedges							
				Synthetic Instrument/			
MTA Bridges and Tunnels Senior Revenue Bonds	2018E & 2003B (Citi 2005B)	Libor Fixed Payer	Cash Flow	Dollar Offset	6/2/2005	\$ 186.100	\$ (6.724)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	558.300	(20.173)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	17.690	(0.490)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	8.000	(0.239)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	281.450	(9.285)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(26.883)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	317.660	(19.012)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	355.525	(26.871)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	64.270	(0.727)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	89.765	(3.544)
					Total	\$ 2,078.760	\$ (113.948)

Derivative Instruments - Summary Information as of December 31, 2021

			Cash Flow or		Trade/Hedge	Notional	
Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Fair Value Hedge	Effective Methodology	Association Date	Amount	Fair Value
Cashflow Hedges					- '		
				Synthetic Instrument/			
MTA Bridges and Tunnels Senior Revenue Bonds	2018E & 2003B (Citi 2005B)	Libor Fixed Payer	Cash Flow	Dollar Offset	6/2/2005	\$ 187.2	00 \$ (30.789)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	561.6	00 (92.368)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	19.7	75 (2.043)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	9.0	00 (0.963)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	281.4	50 (37.600)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.0	00 (62.934)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	317.6	60 (60.799)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	355.5	25 (82.754)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	81.0	65 (4.481)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	91.1	35 (13.305)
					Total	\$ 2,104.4	10 \$ (388.036)

	Changes In Fair Value		Fair Value at Sep		
	Amount			Amount	Notional
	Classification	(in millions)	Classification	(in millions)	(in millions)
Government activities					
Cash Flow hedges:					
Pay-fixed interest rate swaps	Deferred outflow of resources	\$274.088	Debt	\$(113.948)	\$2,078.760

Swap Agreements Relating to Synthetic Fixed Rate Debt

Board-adopted Guidelines. The Related Entities adopted guidelines governing the use of swap contracts on March 26, 2002. The guidelines were amended and approved by the MTA Board on March 13, 2013. The guidelines establish limits on the amount of interest rate derivatives that may be outstanding and specific requirements that must be satisfied for a Related Entity to enter into a swap contract, such as suggested swap terms and objectives, retention of a swap advisor, credit ratings of the counterparties, collateralization requirements and reporting requirements.

Objectives of synthetic fixed rate debt. To achieve cash flow savings through a synthetic fixed rate, MTA and MTA Bridges and Tunnels have entered into separate pay-fixed, receive-variable interest rate swaps at a cost anticipated to be less than what MTA and MTA Bridges and Tunnels would have paid to issue fixed-rate debt, and in some cases where Federal tax law prohibits an advance refunding to synthetically refund debt on a forward basis.

Terms and Fair Values. The terms, fair values and counterparties of the outstanding swaps of MTA and MTA Bridges and Tunnels are reflected in the following tables (as of September 30, 2022).

Metropolitan Transportation Authority								
Related Bonds	Notional Amount as of 9/30/22	Effective Date	Maturity Date	Terms	Counterparty and Ratings(S&P / Moody's / Fitch)	Fair Value as of 9/30/22		
TRB 2002D-2	\$ 200.000	01/01/07	11/01/32	Pay 4.45%; receive 69% 1M LIBOR	JPMorgan Chase Bank, NA (A+/Aa2/AA)	\$ (26.883)		
TRB 2005D & 2005E	238.245	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(14.259)		
TRB 2005E	79.415	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products (1) (BBB+ / Baa2 / BBB+)	(4.753)		
TRB 2012G	355.525	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+/Aa2/AA)	(26.871)		
DTF 2008A	281.450	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(9.285)		
Total	\$ 1,154.635					\$ (82.051)		

¹ Guarantor: American International Group, Inc., parent of AIG Financial Products.

	MTA Bridges and Tunnels								
Related Bonds	Notional Amount as of 9/30/22	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fai	r Value as of 9/30/22		
TBTA 2018E & 2003B 4	\$ 186.100	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / Aa3 / A+)	\$	(6.725)		
TBTA 2005B-2	186.100	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+/Aa2/AA)		(6.724)		
TBTA 2005B-3	186.100	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas North America (A+/Aa3/AA-)		(6.724)		
TBTA 2005B-4	186.100	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)		(6.724)		
TRB 2002G-1 & 2011B TBTA 2005A & 2001C ²	89.863 ³	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA-)		(2.500) ³		
TRB 2002G-1 & 2011B TBTA 2005A & 2001C 2	89.862 ³	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (A+/Aa2/AA-)		(2.500) 3		
Total	\$ 924.125		•			\$	(31.897)		

- 1 Guarantor: BNP Paribas.
- 2 Between November 22, 2016 and December 5, 2016, the Variable Rate Certificates of Participation, Series 2004A were redeemed. Corresponding notional amounts from the Series 2004A COPs were reassigned to MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C.
- 3 Pursuant to an Interagency Agreement (following novations from UBS in April 2016), MTA New York City Transit is responsible for 68.7%, MTA is responsible for 21.0%, and TBTA is responsible for 10.3% of the transaction.
- 4 On October 27, 2021 the 2002F bonds were changed to fixed-rate mode and a portion of the Citi swap was reassigned to the 2018E bonds.

LIBOR: London Interbank Offered Rate TRB: Transportation Revenue Bonds DTF: Dedicated Tax Fund Bonds

Risks Associated with the Swap Agreements

From MTA's and MTA Bridges and Tunnels' perspective, the following risks are generally associated with swap agreements:

Credit Risk. The risk that a counterparty becomes insolvent or is otherwise not able to perform its financial obligations. To mitigate the exposure to credit risk, the swap agreements include collateral provisions in the event of downgrades to the swap counterparties' credit ratings. Generally, MTA and MTA Bridges and Tunnels' swap agreements contain netting provisions under which transactions executed with a single counterparty are netted to determine collateral amounts. Collateral may be posted with a third-party custodian in the form of cash, U.S. Treasury securities, or certain Federal agency securities. MTA and MTA Bridges and Tunnels require its counterparties to fully collateralize if ratings fall below certain levels (in general, at the Baa1/BBB+ or Baa2/BBB levels), with partial posting requirements at higher rating levels (details on collateral posting discussed further under "Collateralization/Contingencies"). As of September 30, 2022, all of the valuations were in liability positions to MTA and MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

The following table shows, as of September 30, 2022, the diversification, by percentage of notional amount, among the various counterparties that have entered into ISDA Master Agreements with MTA and/or MTA Bridges and Tunnels. The notional amount totals below include all swaps.

Counterparty	S&P	Moody's	Fitch	Notional Amount (in thousands)	% of Total Notional Amount
JPMorgan Chase Bank, NA	A+	Aa2	AA	\$741,624	35.68%
UBS AG	A+	Aa3	AA-	424,345	20.41
The Bank of New York Mellon	AA-	Aa2	AA	281,450	13.54
Citibank, N.A.	A+	Aa3	A+	186,100	8.95
BNP Paribas US Wholesale Holdings,					
Corp.	A+	Aa3	AA-	186,100	8.95
U.S. Bank National Association	AA-	A1	AA-	89,863	4.32
Wells Fargo Bank, N.A.	A+	Aa2	AA-	89,863	4.32
AIG Financial Products Corp.	BBB+	Baa2	BBB+	79,415	3.83
Total				\$2,078,760	100.00%

Interest Rate Risk. MTA and MTA Bridges and Tunnels are exposed to interest rate risk on the interest rate swaps. On the pay-fixed, receive variable interest rate swaps, as LIBOR or SIFMA (as applicable) decreases, MTA and MTA Bridges and Tunnels' net payments on the swaps increase.

Basis Risk. The risk that the variable rate of interest paid by the counterparty under the swap and the variable interest rate paid by MTA or MTA Bridges and Tunnels on the associated bonds may not be the same. If the counterparty's rate under the swap is lower than the bond interest rate, then the counterparty's payment under the swap agreement does not fully reimburse MTA or MTA Bridges and Tunnels for its interest payment on the associated bonds. Conversely, if the bond interest rate is lower than the counterparty's rate on the swap, there is a net benefit to MTA or MTA Bridges and Tunnels.

Termination Risk. The risk that a swap agreement will be terminated and MTA or MTA Bridges and Tunnels will be required to make a swap termination payment to the counterparty and, in the case of a swap agreement which was entered into for the purpose of creating a synthetic fixed rate for an advance refunding transaction may also be required to take action to protect the tax-exempt status of the related refunding bonds.

The ISDA Master Agreement sets forth certain termination events applicable to all swaps entered into by the parties to that ISDA Master Agreement. MTA and MTA Bridges and Tunnels have entered into separate ISDA Master Agreements with each counterparty that govern the terms of each swap with that counterparty, subject to individual terms negotiated in a confirmation. MTA and MTA Bridges and Tunnels are subject to termination risk if its credit ratings fall below certain specified thresholds or if MTA/MTA Bridges and Tunnels commits a specified event of default or other specified event of termination. If, at the time of termination, a swap were in a liability position to MTA or MTA Bridges and Tunnels, a termination payment would be owed by MTA or MTA Bridges and Tunnels to the counterparty, subject to applicable netting arrangements.

The following tables set forth the Additional Termination Events for MTA/MTA Bridges and Tunnels and its counterparties.

MTA Transportation Revenue						
Counterparty Name	MTA	Counterparty				
AIG Financial Products Corp.; JPMorgan Chase Bank, NA; UBS AG	Below Baa3 (Moody's) or BBB- (S&P)*	Below Baa3 (Moody's) or BBB- (S&P)*				

^{*}Note: Equivalent Fitch rating is replacement for Moody's or S&P.

MTA Dedicated Tax Fund						
Counterparty Name MTA Counterparty						
Bank of New York Mellon Below BBB (S&P) or BBB (Fitch)* Below A3 (Moody's) or A- (S&P)						

^{*}Note: Equivalent Moody's rating is replacement for S&P or Fitch.

^{**}Note: Equivalent Fitch rating is replacement for Moody's or S&P.

MTA Bridges and Tunnels Senior Lien						
Counterparty Name	MTA Bridges and Tunnels	Counterparty				
BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG	Below Baa2 (Moody's) or BBB (S&P)*	Below Baa1 (Moody's) or BBB+ (S&P)*				

^{*}Note: Equivalent Fitch rating is replacement for Moody's or S&P.

MTA Bridges and Tunnels Subordinate Lien				
Counterparty Name MTA Bridges and Tunnels Counterparty				
U.S. Bank National Association; Wells Fargo Bank, N.A.	Below Baa2 (Moody's) or BBB (S&P)*	Below Baa2 (Moody's) or BBB (S&P)**		

^{*}Note: Equivalent Fitch rating is replacement for Moody's or S&P. If not below Investment Grade, MTA Bridges and Tunnels may cure such Termination Event by posting collateral at a Zero threshold.

^{**}Note: Equivalent Fitch rating is replacement for Moody's or S&P.

MTA and MTA Bridges and Tunnels' ISDA Master Agreements provide that the payments under one transaction will be netted against other transactions entered into under the same ISDA Master Agreement. Under the terms of these agreements, should one party become insolvent or otherwise default on its obligations, close-out netting provisions permit the non-defaulting party to accelerate and terminate all outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.

Rollover Risk. The risk that the swap agreement matures or may be terminated prior to the final maturity of the associated bonds on a variable rate bond issuance, and MTA or MTA Bridges and Tunnels may be exposed to then market rates and cease to receive the benefit of the synthetic fixed rate for the duration of the bond issue. The following debt is exposed to rollover risk:

Associated Bond Issue	Bond Maturity Date	Swap Termination Date
MTA Bridges and Tunnels General Revenue Variable		
Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells	January 1, 2032	January 1, 2030
Fargo)		
MTA Bridges and Tunnels General Revenue Variable		
Rate Refunding Bonds, Series 2018E (swap with	November 15, 2032	January 1, 2032
Citibank, N.A.)		
MTA Bridges and Tunnels General Revenue Variable	January 1, 2033	January 1, 2032
Rate Bonds, Series 2003B (swap with Citibank, N.A.)	January 1, 2033	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable		January 1, 2030 (U.S. Bank/Wells Fargo)
Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells	November 1, 2041	January 1, 2030 (C.S. Bank) wens raigo)
Fargo and Citibank, N.A.)		January 1, 2032 (Citibank)
MTA Transportation Revenue Variable Rate Bonds,	November 1, 2041	January 1, 2030
Series 2011B (swaps with U.S. Bank/Wells Fargo)	November 1, 2041	January 1, 2030

Collateralization/Contingencies. Under the majority of the swap agreements, MTA and/or MTA Bridges and Tunnels is required to post collateral in the event its credit rating falls below certain specified levels. The collateral posted is to be in the form of cash, U.S. Treasury securities, or certain Federal agency securities, based on the valuations of the swap agreements in liability positions and net of the effect of applicable netting arrangements. If MTA and/or MTA Bridges and Tunnels do not post collateral, the swap(s) may be terminated by the counterparty(ies).

As of September 30, 2022, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was \$81.6; as of this date, the MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of September 30, 2022, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was \$32.4; as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

The following tables set forth the ratings criteria and threshold amounts applicable to MTA/MTA Bridges and Tunnels and its counterparties.

MTA Transportation Revenue				
Counterparty MTA Collateral Thresholds (based on highest rating) Counterparty Collateral Thresholds (based on highest rating)				
AIG Financial Products Corp.; JPMorgan Chase Bank, NA; UBS AG	Baa1/BBB+: \$10 million Baa2/BBB & below: Zero	Baa1/BBB+: \$10 million Baa2/BBB & below: Zero		

Note: Based on Moody's and S&P ratings. In all cases except JPMorgan counterparty thresholds, Fitch rating is replacement for either Moody's or S&P, at which point threshold is based on lowest rating.

MTA Dedicated Tax Fund				
Counterparty MTA Collateral Thresholds Counterparty Collateral Thresholds (based on lowest ratin				
Bank of New York Mellon	N/A–MTA does not post collateral	Aa3/AA- & above: \$10 million A1/A+: \$5 million A2/A: \$2 million A3/A-: \$1 million Baa1/BBB+ & below: Zero		

MTA Bridges and Tunnels Senior Lien				
Counterparty	Counterparty Collateral Thresholds (based on highest rating)			
BNP Paribas US Wholesale Holdings, Corp.; Citibank, N.A.; JPMorgan Chase Bank, NA; UBS AG	Baa1/BBB+: \$30 million Baa2/BBB: \$15 million Baa3/BBB- & below: Zero	A3/A-: \$10 million Baa1/BBB+ & below: Zero		

Note: MTA Bridges and Tunnels thresholds based on Moody's, S&P, and Fitch ratings. Counterparty thresholds based on Moody's and S&P ratings; Fitch rating is replacement for Moody's or S&P.

MTA Bridges and Tunnels Subordinate Lien				
Counterparty MTA Bridges and Tunnels Collateral Counterparty Collateral Thresh Thresholds (based on lowest rating) (based on lowest rating)				
U.S. Bank National Association; Wells Fargo Bank, N.A.	Baa3/BBB- & below: Zero (note: only applicable as cure for Termination Event)	Aa3/AA- & above: \$15 million A1/A+ to A3/A-: \$5 million Baa1/BBB+ & below: Zero		

Note: Thresholds based on Moody's and S&P ratings. Fitch rating is replacement for Moody's or S&P.

Swap Payments and Associated Debt. The following tables contain the aggregate amount of estimated variable- rate bond debt service and net swap payments during certain years that such swaps were entered into in order to: protect against the potential of rising interest rates; achieve a lower net cost of borrowing; reduce exposure to changing interest rates on a related bond issue; or, in some cases where Federal tax law prohibits an advance refunding, achieve debt service savings through a synthetic fixed rate. As rates vary, variable-rate bond interest payments and net swap payments will vary. Using the following assumptions, debt service requirements of MTA's and MTA Bridges and Tunnels' outstanding variable-rate debt and net swap payments are estimated to be as follows:

- It is assumed that the variable-rate bonds would bear interest at a rate of 4.0% per annum.
- The net swap payments were calculated using the actual fixed interest rate on the swap agreements.

		MTA			
		(in millions)			
Period Ended	Variable-F	Rate Bonds			
September 30, 2022	Principal	Interest	Net Swap Payments	Total	
2022	63.3	42.6	(4.4)	101.5	
2023	65.7	40.1	(4.1)	101.7	
2024	68.2	37.5	(3.8)	101.9	
2025	70.8	34.8	(3.4)	102.2	
2026	63.6	32.0	(3.1)	92.5	
2027-2031	617.0	351.7	(10.5)	958.2	
2032-2036	370.8	156.3	(2.0)	525.1	
2037-2041	99.6	11.6	(0.3)	110.9	

		MTA Bridges and Tunnels	S	
		(in millions)		
Period Ended	Variable-R	Rate Bonds		Total
September 30, 2022	Principal	Interest	Net Swap Payments	
2022	27.6	34.9	(6.8)	55.7
2023	28.6	33.8	(6.8)	55.6
2024	57.2	31.5	(6.4)	82.3
2025	30.4	30.3	(6.4)	54.3
2026	31.5	29.1	(6.3)	54.3
2027-2031	543.0	95.3	(22.8)	615.5
2032-2036	184.1	3.0	(0.1)	187.0
2037-2041	-	1.0	-	1.0

8. LEASE TRANSACTIONS

Leveraged Lease Transactions: Qualified Technological Equipment — On December 19, 2002, the MTA entered into four sale/leaseback transactions whereby MTA New York City Transit transferred ownership of certain MTA New York City Transit qualified technological equipment ("QTE") relating to the MTA New York City Transit automated fare collection system to the MTA. The MTA sold that equipment to third parties and the MTA leased that equipment back from such third parties. Three of those four leases were terminated early and are no longer outstanding. The fourth lease contains the option for the MTA to exercise a fixed-price purchase option in 2022 for the equipment or to continue to make lease payments until the lease expires in 2026. The MTA elected to purchase the equipment from the third-party owner with the final payment due on December 15, 2022...

Under the terms of the outstanding sale/leaseback agreement the MTA initially received \$74.9, which was utilized as follows: The MTA paid \$52.1 to an affiliate of the lender to the third party, which affiliate has the obligation to pay to MTA an amount equal to the rent obligations under the lease attributable to the debt service on the loan from the third party's lender. The MTA also purchased U.S. Treasury debt securities in amounts and with maturities, which are expected to be sufficient to pay the remainder of the regularly scheduled lease rent payments under the lease and the purchase price due upon exercise by the MTA of the related purchase option if exercised.

Leveraged Lease Transaction: Subway Cars — On September 3, 2003, the MTA entered into a sale/leaseback transaction whereby MTA New York City Transit transferred ownership of certain MTA New York City Transit subway cars to the MTA, the MTA sold those cars to a third party, and the MTA leased those cars back from such third party. The MTA subleased the cars to MTA New York City Transit. The lease expires in 2033. At the lease expiration, the MTA has the option of either exercising a fixed-price purchase option for the cars or returning the cars to the third-party owner.

Under the terms of the sale/leaseback agreement, the MTA initially received \$168.1, which was utilized as follows: The MTA paid \$126.3 to an affiliate of one of the lenders to the third party, which affiliate has the obligation to pay to the MTA an amount equal to the rent obligations under the lease attributable to the debt service on such loan from such third party's lender. The obligations of the affiliate of the third party's lender are guaranteed by American International Group, Inc. The MTA also purchased the Federal National Mortgage Association ("FNMA") and U.S. Treasury securities in amounts and with maturities which are sufficient to make the lease rent payments equal to the debt service on the loans from the other lender to the third party and to pay the remainder of the regularly scheduled rent due under that lease and the purchase price due upon exercise by the MTA of the fixed price purchase option if exercised. The amount remaining after payment of transaction expenses, \$7.4, was the MTA's benefit from the transaction.

Leveraged Lease Transactions: Subway Cars — On September 25, 2003 and September 29, 2003, the MTA entered into two sale/leaseback transactions whereby MTA New York City Transit transferred ownership of certain MTA New York City Transit subway cars to the MTA, the MTA sold those cars to third parties, and the MTA leased those cars back from such third parties. The MTA subleased the cars to MTA New York City Transit. Both leases expire in 2033. At the lease expiration, MTAHQ has the option of either exercising a fixed-price purchase option for the cars or returning the cars to the third-party owner.

Under the terms of the sale/leaseback agreements, the MTA initially received \$294, which was utilized as follows: In the case of one of the leases, the MTA paid \$97 to an affiliate of one of the lenders to the third party, which affiliate has the obligation to pay to the MTA an amount equal to the rent obligations under the lease attributable to the debt service on the loan from such third party's lender. The obligations of the affiliate of such third party's lender are guaranteed by American International Group, Inc. In the case of the other lease, the MTA purchased U.S. Treasury debt securities in amounts and with maturities, which are sufficient for the MTA to make the lease rent payments equal to the debt service on the loan from the lender to that third party. In the case of both of the leases, the MTA also purchased Resolution Funding Corporation ("REF-CO") debt securities that mature in 2030.Under an agreement with AIG Matched Funding Corp. (guaranteed by American International Group, Inc.), AIG Matched Funding Corp. receives the proceeds from the REFCO debt securities at maturity and is obligated to pay to the MTA amounts sufficient for the MTA to pay the remainder of the regularly scheduled lease rent payments under those leases and the purchase price due upon exercise by the MTA of the purchase options if exercised. The amount remaining after payment of transaction expenses, \$24, was the MTA's net benefit from these two transactions.

On September 16, 2008, the MTA learned that American International Group, Inc. was downgraded to a level that under the terms of the transaction documents for the sale/leaseback transaction that closed on September 29, 2003, the MTA was required to replace or restructure the applicable Equity Payment Undertaking Agreement provided by AIG Financial Products Corp. and guaranteed by American International Group, Inc. On December 17, 2008, MTA terminated the Equity Payment Undertaking Agreement provided by AIG Financial Products Corp. and guaranteed by American International Group, Inc. and provided replacement collateral in the form of U.S. Treasury strips. REFCO debt security that was being held in pledge was released to MTA. On November 6, 2008, the MTA learned that Ambac Assurance Corp., the provider of the credit enhancement that insures the MTA's contingent obligation to pay a portion of the termination values upon an early termination in both the September 25, 2003 and September 29, 2003 transactions, was downgraded to a level that required the provision of new credit enhancement facilities for each lease by December 21, 2008.

On December 17, 2008, MTA terminated the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 25, 2003 and since then MTA has provided short-term U.S. Treasury debt obligations as replacement collateral. As of September 30, 2022, the market value of total collateral funds was \$39.2.

DRAF"

On January 12, 2009, MTA provided a short-term U.S. Treasury debt obligation as additional collateral in addition to the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 29, 2003. From time to time, additional collateral has been required to be added such that the total market value of the securities being held as additional collateral are expected to be sufficient to pay the remainder of the regularly scheduled lease rent payments under the lease. As of September 30, 2022, the market value of total collateral funds was \$55.2.

MTA Hudson Rail Yards Ground Leases - In the 1980's, the MTA developed a portion of the Hudson Rail Yards as a storage yard, car wash and repair facility for the Long Island Railroad Company ("LIRR") rail cars entering Manhattan. It was anticipated that, eventually, the air rights above the Hudson Rail Yards would be developed to meet the evolving needs for high-quality commercial, retail, residential and public space in Manhattan. The Hudson Rail Yards is a rectangular area of approximately 26-acres bounded by 10th Avenue on the east, 12th Avenue on the west, 30th Street on the south and 33rd Street on the North. The Hudson Rail Yards is divided into the Eastern Rail Yards ("ERY") and the Western Rail Yards ("WRY"). In 2008, the MTA selected a development team led by the Related Companies, L.P to develop a commercial, residential and retail development on the ERY and the WRY.

To undertake the development of the Hudson Rail Yards, the MTA entered into two 99-year ground leases ("Balance Leases") for the airspace above a limiting plane above the tracks (from 31st to 33rd Streets) and the area where there are no rail tracks (from 30th to 31St Streets) within the boundary of the Hudson Rail Yards ("Ground Leased Property"), one for the ERY beginning December 3, 2012 (the "ERY Balance Lease") and the other for the WRY beginning December 3, 2013 (the "WRY Balance Lease"). The Balance Leases do not encumber the railroad tracks, which will continue to be used for transportation purposes. Each Ground Lease Tenant on the ERY Balance Lease and the WRY Balance Lease has the option to purchase fee title to the Ground Leased Property at any time following completion of construction of the building on the Ground Leased Property.

The ERY Balance Lease was terminated and substituted with separate Severed Parcel Ground Leases, each dated as of April 10, 2013, and entered into between the MTA, as landlord, and a special purpose entity controlled by Related-Oxford, as Ground Lease Tenants. Several of the Ground Lease Tenants under the Severed Parcel Ground Leases have exercised their options to purchase fee title, as well as numerous condominium owners in residential buildings.

The WRY Balance Lease is between the MTA and a special purpose entity controlled by Related-Oxford demising the WRY and is also expected to be severed into separate parcels as development progresses.

The Severed Parcel Ground Leases in the ERY, fee title for which has not been purchased, and the WRY Balance Lease (until any severed parcel ground leases are purchased) are pledged as security for the Series 2016A Hudson Yards Trust Obligations.

The following ground leases also do not provide a source of payment or security for the Series 2016A Hudson Yards Trust Obligations:

- o the ground lease demising the Culture Shed, which does not pay any Monthly Ground Rent, and
- o the ground lease demising the Open Space Severed Parcel which does not pay any Monthly Ground Rent.

The MTA has classified the ERY and WRY Ground Leases as operating leases. If at the inception of the ground leases, the leases meet one or more of the following four criteria, the lease should be classified as a capital lease. Otherwise, it should be classified as an operating lease. The ERY and WRY Ground Leases did not meet one or more of the following criteria:

- i. the lease transfers ownership of the property to the lessee by the end of the lease term.
- ii. the lease contains a bargain purchase option.
- iii. the lease term is equal to 75 percent or more of the estimated economic life of the leased property.
- iv. the present value at the beginning of the lease term of the minimum lease payments, equals or exceeds 90 percent of the excess of the fair value of the leased property to the lessor at the inception of the lease over any related investment tax credit retained by and expected to be realized by the lessor.

Minimum rent receipts for ERY and WRY Ground Leases are as follows as of September 30, 2022:

Year	ERY	WRY	Total
2022	\$ 8	\$ 33	\$ 41
2023	8	\$ 34	42
2024	8	\$ 36	44
2025	8	\$ 37	45
2026	9	\$ 36	45
Thereafter	3,348	14,244	17,592
Total	\$ 3,389	\$ 14,420	\$ 17,809

Other Lease Transactions — On July 29, 1998 the MTA, (solely on behalf of MTA Long Island Rail Road and MTA Metro-North Railroad, MTA New York City Transit, and MTA Bridges and Tunnels) entered into a lease and related agreements whereby each agency, as sublessee, will rent, an office building at Two Broadway in lower Manhattan. The triple-net-lease has an initial stated term of approximately 50 years, with the right to extend the lease for two successive 15-year periods at a rental of at least 95% of fair market rent. Remaining payments under the lease approximate \$1.0 billion. Under the subleases, the lease is apportioned as follows: MTA New York City Transit, 68.7%, MTA, 21%; and MTA Bridges and Tunnels, 10.3%. However, the involved agencies have agreed to sub-sublease space from one another as necessary to satisfy actual occupancy needs. The agencies will be responsible for obligations under the lease based on such actual occupancy percentages. Actual occupancy percentages at September 30, 2022, for the MTA New York City Transit, MTA Bridges and Tunnels and MTA (including MTA Bus, MTA Construction and Development and MTA Business Service Center) were 49.8%, 7.4% and 42.8%, respectively. MTAs' sublease is for a year-to-year term, automatically extended, except upon the giving of a non-extension notice by MTA. The lease is comprised of both operating and capital elements, with the portion of the lease attributable to the land recorded as an operating lease, and the portion of the lease attributable to the building recorded as a capital lease. The total annual rental payments over the initial lease term are \$1,602 with rent being abated from the commencement date through June 30, 1999. The office building at 2 Broadway, is principally occupied by MTA New York City Transit, MTA Bridges and Tunnels, MTA Construction and Development, MTAHQ, and MTA Bus.

MTA reflected a capital lease obligation as of September 30, 2022 and December 31, 2021 of \$245 and \$245, respectively. The MTA made rent payments of \$21 and \$28 for the period ended September 30, 2022 and December 31, 2021, respectively. MTA pays the lease payments on behalf of MTA New York City Transit and MTA Bridges and Tunnels and subsequently makes monthly chargebacks in the form of rental payments. During 2021, the total of the rental payments charged to MTA New York City Transit and MTA Bridges and Tunnels was \$7.16 and \$2.22 less, respectively, than the lease payment made by MTA on behalf of MTA New York City Transit and MTA Bridges and Tunnels.

The adjusted capital lease for the aforementioned building is being amortized over the remaining life of the lease. The cost of the building and related accumulated amortization at September 30, 2022 and December 31, 2021, is as follows (in millions):

	2022	2021
Capital lease - building	\$196	\$196
Less accumulated amortization	(105)	(102)
Capital lease - building - net	\$91	\$94

In August 1988, the MTA entered into a 99-year lease agreement with Amtrak for Pennsylvania Station. This agreement, with an option to renew, is for rights to the lower concourse level and certain platforms.

The lease agreement between MTA and Amtrak was fully amortized in 2018.

Total rent expense under operating leases approximated \$53.9 and \$52.6 for the periods ended September 30, 2022 and 2021, respectively.

At September 30, 2022, the future minimum lease payments under non-cancelable leases are as follows (in millions):

Years	 Operating	Capital
2022	\$ 25	\$ 74
2023	69	18
2024	71	21
2025	71	20
2026	71	20
2027–2031	358	119
2032–2036	348	567
2037–2041	262	164
2042–2046	280	181
2047–2051	 86	56
Future minimum lease payments	\$ 1,641	1,240
Amount representing interest	 	(815)
Total present value of capital lease obligations		425
Noncurrent present value of capital lease obligations	() =	\$ 425

Capital Leases Schedule

For the period ended September 30, 2022

_					
	Decen	nber 31,			September 30,
Description	2	021	Increase	Decrease	2022
Sumitomo	\$	15 \$	- \$	15	\$ -
Met Life		7	-	-	7
Met Life Equity		19	-	-	19
Bank of New York		22	-	-	22
Bank of America		35	3		38
Bank of America Equity		16	-	-	16
Sumitomo		14	-	-	14
Met Life Equity		64	-	-	64
2 Broadway Lease Improvement		185	-	-	185
2 Broadway		60	-	-	60
Total MTA Capital Lease	\$	437 \$	3 \$	15	\$ 425
Current Portion Obligations under Capital Lease		14			
Long Term Portion Obligations under Capital Lease	\$	423			<u>\$ 425</u>

Capital Leases Schedule

For the Year Ended December 31, 2021

	Decen	ıber 31,			December 31,
Description	2	020	Increase	Decrease	2021
Sumitomo	\$	15 \$	- \$	- 5	\$ 15
Met Life		6	1	_	7
Met Life Equity		19	-	-	19
Bank of New York		22	-	-	22
Bank of America		33	2	-	35
Bank of America Equity		16	-	-	16
Sumitomo		18	1	5	14
Met Life Equity		61	3	-	64
2 Broadway Lease Improvement		182	3	-	185
2 Broadway		59	11	-	60
Total MTA Capital Lease	\$	431 \$	11 \$	5 5	\$ 437
Current Portion Obligations under Capital Lease		4		-	14
Long Term Portion Obligations under Capital Lease	\$	427		9	\$ 423



FUTURE OPTION

In 2010, MTA and MTA Long Island Railroad entered into an Air Space Parcel Purchase and Sale Agreement ("Agreement") with Atlantic Yards Development Company, LLC ("AADC") pursuant to which AADC has obtained an exclusive right to purchase fee title to a parcel (subdivided into six sub-parcels) of air space above the MTA Long Island Railroad Vanderbilt Yard in Brooklyn, New York. Initial annual payments of \$2 (covering all six sub-parcels) commenced on June 1, 2012 and were paid on the following three anniversaries of that date. Starting on June 1, 2016, and continuing on each anniversary thereof through and including June 1, 2031, an annual option payment in the amount of \$11 is due. The Agreement provides that all such payments are (i) fully earned by MTA as of the date due in consideration of the continuing grant to AADC of the rights to purchase the air space sub-parcels, (ii) are non-refundable except under certain limited circumstances and (iii) shall be deemed to be payments on account of successive annual options granted to AADC.

After AADC and its affiliates have completed the new yard and transit improvements to be constructed by them at and in the vicinity of the site, AADC has the right from time to time until June 1, 2031, to close on the purchase of any or all of the six air rights sub-parcels. The purchase price for the six sub-parcels is an amount, when discounted at 6.5% per annum from the date of each applicable payment that equals a present value of \$80 as of January 1, 2010. The purchase price of any particular air space sub-parcel is equal to a net present value as of January 1, 2010 (calculated based on each applicable payment) of the product of that sub-parcel's percentage of the total gross square footage of permissible development on all six air space sub-parcels multiplied by \$80.

10. ESTIMATED LIABILITY ARISING FROM INJURIES TO PERSONS

A summary of activity in estimated liability as computed by actuaries arising from injuries to persons, including employees, and damage to third-party property for the period ended September 30, 2022 and year ended December 31, 2021 is presented below (in millions):

	Septe	December 31, 2021			
Balance - beginning of year	\$	5,100	\$	4,675	
Activity during the year:					
Current year claims and changes in estimates		638		817	
Claims paid		(383)		(392)	
Balance - end of year		5,355		5,100	
Less current portion		(550)		(543)	
Long-term liability	\$	4,805	\$	4,557	

See Note 2 for additional information on MTA's liability and property disclosures.

11. COMMITMENTS AND CONTINGENCIES

The MTA Group monitors its properties for the presence of pollutants and/or hazardous wastes and evaluates its exposure with respect to such matters. When the expense, if any, to clean up pollutants and/or hazardous wastes is estimable it is accrued by the MTA (see Note 12).

Management has reviewed with counsel all actions and proceedings pending against or involving the MTA Group, including personal injury claims. Although the ultimate outcome of such actions and proceedings cannot be predicted with certainty at this time, management believes that losses, if any, in excess of amounts accrued resulting from those actions will not be material to the financial position, results of operations, or cash flows of the MTA.

Under the terms of federal and state grants, periodic audits are required, and certain costs may be questioned as not being appropriate expenditures under the terms of the grants. Such audits could lead to reimbursements to the grantor agencies. While there have been some questioned costs in recent years, ultimate repayments required of the MTA have been infrequent.

Financial Guarantee — Moynihan Station Development Project - On May 22, 2017, the MTA Board approved entering into various agreements, including a Joint Services Agreement ("JSA"), necessary to effectuate Phase 2 of the Moynihan Station Development Project (the "Project"), which entailed the redevelopment of the James A. Farley Post Office Building to include a new world-class train hall to be shared by National Railroad Passenger Corporation ("Amtrak"), The Long Island Rail Road ("LIRR") and Metro-North Commuter Railroad (the "Train Hall"), as well as retail and commercial space (the "Retail and Commercial Space").

On July 21, 2017, New York State Urban Development Corporation d/b/a Empire State Development ("ESD") executed a TIFIA Loan Agreement with the United States Department of Transportation (the "TIFIA Lender") in an amount of up to \$526 (the "2017 TIFIA Loan"), to pay for costs of the construction of the Train Hall. The 2017 TIFIA Loan was amended and restated on November 18, 2021 in an amount up to \$607 (the "2021 TIFIA Loan"), to lower the interest rate to 1.99% per annum and to provide additional capital financing for the Train Hall. The 2021 TIFIA Loan has a final maturity date of the earlier of (1) October 30, 2055 and (2) the last semi-annual payment date occurring no later than the date that is thirty-five (35) years following the date on which the Train Hall is substantially completed. The proceeds of the 2021 TIFIA Loan are being used to reimburse or pay for costs of the construction of the Train Hall. The 2021 TIFIA Loan is secured by mortgages on the Train Hall property. The principal and interest on the 2021 TIFIA Loan is payable from a pledged revenue stream that primarily consists of PILOT payments to be paid by certain tenants in the Retail and Commercial Space. The amount of the PILOT payments is fixed through June, 2030 and is thereafter calculated based upon the assessed value of the properties as determined by New York City. The 2021 TIFIA Loan is further supported by a debt service reserve account, which is funded in an amount equal to the sum of the highest aggregate TIFIA Loan debt service amounts that will become due and payable on any two consecutive semi-annual payment dates in a five-year prospective period (the "TIFIA Debt Service Reserve Account")..

Simultaneously with the execution of the 2017 TIFIA Loan, the JSA was entered into by and among the MTA, the TIFIA Lender, ESD, and Manufacturers and Traders Trust Company (as PILOT trustee). MTA ratified and confirmed its obligations under the JSA in connection with the closing of 2021 TIFIA Loan.

Under the JSA, MTA is obligated to satisfy semi-annual deficiencies in the TIFIA Debt Service Reserve Account. MTA's obligations under the JSA are secured by the same monies available to MTA for the payment of the operating and maintenance expenses of the operating agencies.

MTA's obligation under the JSA remains in effect until the earliest to occur of (a) the MTA JSA Release Date (as defined in the JSA and generally summarized below), (b) the date on which the 2021 TIFIA Loan has been paid in full and (c) foreclosure by the TIFIA Lender under the Mortgage (as defined in the 2021 TIFIA Loan).

The obligations of the MTA under the JSA will be terminated and released on the date (the "MTA JSA Release Date") on which each of the following conditions have been satisfied: (a) substantial completion of (1) the Train Hall Project and initiation by LIRR and Amtrak of transportation operations therein, and (2) the Retail and Commercial Space; (b) all material construction claims have been discharged or settled; (c) the PILOT payments have been calculated based upon assessed value for at least three years (i.e., 2033); (d) certain designated defaults or events of default under the 2021 TIFIA Loan have not occurred and are continuing; and (e) either of the following release tests shall have been satisfied:

- Release Test A: (a) certain debt service coverage ratios have equaled or exceeded levels set forth in the JSA, taking into consideration assessment appeals; (b) occupancy levels have equaled or exceeded levels set forth in the JSA; and (c) the 2021 TIFIA Loan is rated no lower than "BBB-" or "Baa3" by one rating agency, all as more fully described in the JSA: or
- Release Test B: the 2021 TIFIA Loan is rated no lower than "A-" or "A3" by two rating agencies, all as more fully described in the JSA.

On the date the JSA was executed and delivered, MTA deposited \$20 into an account, which MTA invests, to be used in accordance with the JSA to reimburse MTA in the event it is obligated under the JSA to make semi-annual deficiency payments to the TIFIA Debt Service Reserve Account.

On June 12, 2017, the MTA entered into a Memorandum of Understanding with ESD and the New York State Division of the Budget (the "Division"). Under the Memorandum of Understanding, which was updated in November 2020 to reflect the 2021 TIFIA Loan, the Division agreed that in the event in any given year during the term of the JSA (i) the MTA is required to make a semi-annual deficiency payment to the TIFIA Debt Service Reserve Account, and (ii) the Division has determined that the MTA has incurred an expense that would otherwise have been incurred by the State of New York (the "State Expense"), the Division will consider entering into a cost recovery agreement with the MTA pursuant to subdivision 4 of Section 2975 of the Public Authorities Law (the "PAL") for such year that will provide that in lieu of paying the full assessment pursuant to subdivisions 2 and 3 of Section 2975 of the PAL in any such year, any such assessment shall be reduced by the State Expense.

12. POLLUTION REMEDIATION COST

In accordance with GASB Statement No. 49, Accounting and Financial Reporting for Pollution Remediation Obligations, an operating expense provision and corresponding liability measured at its current value using the expected cash flow method is recognized when an obligatory event occurs. Pollution remediation obligations are estimates and subject to changes resulting from price increase or reductions, technology, or changes in applicable laws or regulations. The MTA does not expect any recoveries of cost that would have a material effect on the recorded obligations.



The MTA recognized pollution remediation expenses of \$1 and \$2 for the periods ended September 30, 2022 and 2021, respectively. A summary of the activity in pollution remediation liability at September 30, 2022 and December 31, 2021 were as follows:

	Septer 2	December 31, 2021		
Balance at beginning of year	\$	145	\$	152
Current year expenses/changes in estimates		-		37
Current year payments		(3)		(44)
Balance at end of year		142		145
Less current portion		28		29
Long-term liability	\$	114	\$	116

The MTA's pollution remediation liability primarily consists of future remediation activities associated with asbestos removal, lead abatement, ground water contamination, arsenic contamination and soil remediation.

13. NON-CURRENT LIABILITIES

Changes in the activity of non-current liabilities for the periods ended September 30, 2022 and December 31, 2021 are presented below:

	Bal	lance				Balance			Balance
	Decen	nber 31,					September 30,		
	2	020	Addition	s R	eductions	2021	Additions	Reductions	2022
Non-current liabilities:									
Contract retainage payable	\$	479	\$	- \$	(63)	416	\$ 2	\$ -	\$ 418
Other long-term liabilities		508			(73)	435		(30)	405
Total non-current liabilities	\$	987	\$	<u> </u>	(136)	\$ 851	<u>\$</u> 2	\$ (30)	<u>\$ 823</u>

14. NOVEL CORONAVIRUS (COVID-19)

On March 12, 2020, the World Health Organization declared the COVID-19 outbreak to be a pandemic in the face of the global spread of the virus. The outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was first detected in China, and has since spread globally, including to the United States and to New York State. On March 7, 2020, Governor Cuomo declared a Disaster Emergency in the State of New York. On March 13, 2020, President Trump declared a national state of emergency as a result of the COVID-19 pandemic. By order of Governor Cuomo ("New York State on PAUSE"), effective March 22, 2020, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. The PAUSE order was lifted on May 15, 2020 for five New York regions that met the requirements to start opening. However, a new order was signed by Governor Cuomo on May 15, 2020 extending the PAUSE to June 13, 2020 for New York City, Long Island, and the Hudson Valley. The impact of social distancing and subsequent State governmental orders limiting non-essential activities caused by the COVID-19 pandemic resulted in a sharp decline in the utilization of MTA services, dramatic declines in MTA public transportation system ridership and fare revenues, and MTA Bridge and Tunnel crossing traffic and toll revenues. A significant development was the impact of COVID-19 vaccinations on the MTA region. Capacity restrictions on restaurants, bars, event venues and businesses put in place due to COVID-19 were mostly removed on May 19, 2021, and all remaining restrictions were eliminated on June 15 after the State reached its goal of 70% of adults receiving at least a first dose of the vaccine. MTA has seen ridership steadily improve since the low point of ridership during the pandemic in 2020; but continues to be wellbelow 2019 levels.

Coronavirus Aid, Relief and Economic Security Ac ("CARES Act'). The CARES Act is a \$2.2 trillion economic stimulus bill passed by Congress and signed into law by the President on March 27, 2020 in response to the economic fallout of the COVID-19 pandemic in the United States. The CARES Act through the Federal Transit Administration's ("FTA") formula funding provisions provided approximately \$4 billion to MTA. Funding was provided at a 100 percent Federal share, with no local match required, and is available to support operating, and other expenses generally eligible under those programs and incurred beginning on January 20, 2020, to prevent, prepare for, and respond to the COVID-19 pandemic, including operating service for essential workers, such as medical personnel and first responders. On May 8, 2020, the FTA approved MTA's initial grant application of \$3.9 billion. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately \$98 in additional formula grant allocations to MTA for a CARES Act grant total of \$4.0 billion. As of December 31, 2020, a total of \$4.0 billion was released to MTA for operating assistance that occurred from January 20, 2020, through July 31, 2020. The MTA has received all CARES Act funding as provided in the first congressional relief



package.

Federal Reserve Bank of New York's Municipal Liquidity Facility LLC ("MLF"). Due to the COVID-19 pandemic, the Federal Reserve established the MLF in April 2020 as a source of emergency financing by being available to purchase up to \$500 billion of short-term notes from state and local governments and certain public entities to ensure they had access to credit during the COVID-19 pandemic. MTA was able to utilize the MLF twice before the MLF window closed at the end of December 2020. On August 26, 2020, MTA directly placed with the MLF \$450.72 Transportation Revenue BANs, Series 2020B, which were issued to retire existing Transportation Revenue BANs maturing on September 1, 2020. The MTA subsequently retired the MLF \$450.72 Transportation Revenue BANs, Series 2020B, with an issuance of Dedicated Tax Funds bonds on March 1, 2022. MTA issued into the MLF a second time by directly placing \$2.907 billion Payroll Mobility Tax BANs issued for working capital on December 17, 2020. The \$2.907 billion MLF loan matures in 2023.

Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA"). On December 27, 2020, the President signed into law the Coronavirus Response and Relief Supplemental Appropriation Act of 2021 ("CRRSAA") that includes \$900 billion for various COVID-19 economic relief programs to address hardships caused by the coronavirus pandemic and a \$1.4 trillion government funding package to fund the government through September 30, 2021. Included in the legislation is \$45 billion in financial assistance to the transportation industry, including \$16 billion for another round of airline employee and contractor payroll support: \$14 billion for transit; \$10 billion for highways; \$2 billion for intercity buses; \$2 billion for airports; and \$1 billion for Amtrak. The MTA received \$4.1 billion in aid from the CRRSAA between December 2021 (\$0.6 billion) and January 2022 (\$3.5 billion). Release of such funds by the FTA was awaiting agreement of the final allocation of CRRSAA and ARPA monies among the states of New York, New Jersey, and Connecticut which was made on November 9, 2021. This federal relief is expected to offset operating deficits in 2021.

American Rescue Plan Act ("ARPA"). On March 11, 2021, President Biden signed into law the American Rescue Plan Act of 2021 ("ARPA"). The \$1.9 trillion package is intended to combat the COVID-19 pandemic, including the public health and economic impacts. The package includes \$30 billion of direct federal aid to transportation agencies. Release of such funds was awaiting agreement on the final allocation of CRRSAA and ARPA monies among the states of New York, New Jersey, and Connecticut which was made on November 9, 2021. The MTA received \$6.1 billion in aid from ARPA in 2022. In September of 2021, Additional Assistance Funding was made available to transit systems demonstrating additional pandemic associated needs. MTA received \$769 million in additional aid in the fourth quarter of 2022.

Federal Emergency Management Agency ("FEMA") Reimbursement. The MTA is eligible for FEMA payments which are expected to cover expenses related to the COVID-19 pandemic, over and above normal emergency costs that are not covered by other federal funding. An estimated \$795.4 of direct COVID-19-related expenses incurred from the start of the pandemic through July 1, 2022 was submitted by MTA to the New York State Department of Budget (DOB), which is the agency managing COVID-19-related expense reimbursement from FEMA. An additional estimated \$80 million is expected to be submitted for the period ended September 30, 2022.

15. FUEL HEDGE

MTA partially hedges its fuel cost exposure using financial hedges. All MTA fuel hedges provide for up to 24 monthly settlements. The table below summarizes twenty-four (24) active ultra-low sulfur diesel ("ULSD") hedges in whole dollars:

Counterparty	Goldman Sachs	BOA_ Merrill	JPMorgan	JPMorgan	Goldman Sachs	JPMorgan	Goldman Sachs	BOA_ Merrill
Trade Date	10/27/2020	11/30/2020	12/29/2020	1/26/2021	2/23/2021	3/31/2021	4/29/2021	6/2/2021
Effective Date	10/1/2021	11/1/2021	12/1/2021	1/1/2022	2/1/2022	3/1/2022	4/1/2022	5/1/2022
Termination Date	9/30/2022	10/31/2022	11/30/2022	12/31/2022	1/31/2023	2/28/2023	3/31/2023	4/30/2023
Price/Gal	\$1.3120	\$1.4615	\$1.5355	\$1.6051	\$1.7845	\$1.8072	\$1.9360	\$2.0495
Original Notional								
Quantity	2,825,162	2,841,038	2,826,765	2,862,779	2,826,759	2,826,761	2,826,752	2,826,757

Counterparty	Goldman Sachs	JPMorgan	BOA_ Merrill	BOA_ Merrill	BOA_ Merrill	Cargill	Goldman Sachs	Goldman Sachs
Trade Date	6/29/2021	7/27/2021	8/31/2021	9/29/2021	10/25/2021	11/30/2021	12/28/2021	1/25/2022
Effective Date	6/1/2022	7/1/2022	8/1/2022	9/1/2022	10/1/2022	11/1/2022	12/1/2022	1/1/2023
Termination Date	5/31/2023	6/30/2023	7/31/2023	8/31/2023	9/30/2023	10/31/2023	11/30/2023	12/31/2023
Price/Gal	\$2.0610	\$2.0505	\$2.0345	\$2.1459	\$2.2879	\$2.0100	\$2.2227	\$2.3615
Original Notional								
Quantity	2,826,738	2,826,751	2,826,725	2,826,740	2,826,749	2,826,751	2,826,765	2,826,779

				Goldman	Goldman	BOA_	BOA_	
Counterparty	Cargill	Cargill	Cargill	Sachs	Sachs	Merrill	Merrill	Cargill
Trade Date	2/28/2022	3/31/2022	4/28/2022	5/31/2022	6/27/2022	7/25/2022	8/29/2022	9/29/2022
Effective Date	2/1/2023	3/1/2023	4/1/2023	5/1/2023	6/1/2023	7/1/2023	8/1/2023	9/1/2023
Termination Date	1/31/2024	2/29/2024	3/31/2024	4/30/2024	5/31/2024	6/30/2024	7/31/2024	8/31/2024
Price/Gal	\$2.5015	\$2.7469	\$2.8675	\$2.9450	\$3.0195	\$2.8739	\$2.9620	\$2.6846
Original Notional	2.026.750	2.026.761	2.026.752	2.026.757	2.026.720	2.026.751	2.026.725	2.026.740
Quantity	2,826,759	2,826,761	2,826,752	2,826,757	2,826,738	2,826,751	2,826,725	2,826,740

The monthly settlements are based on the daily prices of the respective commodities whereby MTA will either receive a payment, or make a payment to the various counterparties depending on the average monthly price of the commodities in relation to the contract prices. At a contract's termination date, the MTA will take delivery of the fuel. As of September 30, 2022, the total outstanding notional value of the ULSD contracts was 51.9 million gallons with a positive fair market value of \$23.4. The valuation of each trade was based on discounting future net cash flows to a single current amount (the income approach) using observable commodity futures prices (Level 2 inputs).



16. CONDENSED COMPONENT UNIT INFORMATION

The following tables present condensed financial information for MTA's component units (in millions).

				1etro North		Long Island	New Yorl City Trans		Br	iborough idge and Funnel			Co	onsolidated
September 30, 2022		MTA	Ra	ilroad	R	ailroad	Authority	<u> </u>	A	uthority	Elimin	ations		Total
Current assets	\$	12,488	\$	208	\$	252	\$ 4	190	\$	1,804	\$	(368)	\$	14,874
Capital assets		13,698		6,470		10,254	46,9	939		7,733		-		85,094
Other Assets		19,610		-		-		1		1,655	((14,947)		6,319
Intercompany receivables		303		53		(102)	7	736		6,901		(7,891)		-
Deferred outflows of resources		1,514		849		1,042	3,6	546		449		(71)		7,429
Total assets and deferred outflows of resources	\$	47,613	\$	7,580	\$	11,446	\$ 51,8	312	\$	18,542	\$ ((23,277)	\$	113,716
Current liabilities	\$	4,910	\$	347	\$	319	\$ 2,0)89	\$	1,097	\$	(197)	\$	8,565
Non-current liabilities		36,389		2,795		4,467	22,5	666		19,437		(31)		85,623
Intercompany payables		7,715		148		25	1	73		595		(8,656)		-
Deferred inflows of resources		440		134		335	3,6	502		242		-		4,753
Total liabilities and deferred inflows of resources	\$	49,454	\$	3,424	\$	5,146	\$ 28,4	130	\$	21,371	\$	(8,884)	\$	98,941
Net investment in capital assets	\$	(26,272)	\$	6,460	\$	10,232	\$ 46,6	599	\$	(3,583)	\$	(408)	\$	33,128
Restricted		6,084		-		-		-		1,017		(419)		6,682
Unrestricted		18,347		(2,304)		(3,932)	(23,3	317)		(263)	(13,566)		(25,035)
Total net position	\$	(1,841)	\$	4,156	\$	6,300	\$ 23,3	882	\$	(2,829)	\$ ((14,393)	\$	14,775
For the period ended September 30, 2022														
Fare revenue	\$	125	\$	317	\$	332	\$ 2,1	57	\$	_	\$	_	\$	2,931
Vehicle toll revenue		_		-		-		-		1,743		_		1,743
Rents, freight and other revenue		45		21		25	3	880		18		(28)		461
Total operating revenue		170		338	_	357	2,5	37		1,761		(28)		5,135
Total labor expenses		883		751		891	5,2	249		168		-		7,942
Total non-labor expenses		374		312		303	1,5	521		178		(36)		2,652
Depreciation		72		226		362	1,5	97		148		_		2,405
Total operating expenses	_	1,329		1,289		1,556	8,3	867		494		(36)		12,999
Operating (deficit) surplus	_	(1,159)		(951)	_	(1,199)	(5,8	<u>30)</u>		1,267		8	_	(7,864)
Subsidies and grants		797		180		-	4	185		6		(327)		1,141
Tax revenue		4,456		-		-	2,7	777		110		(2,240)		5,103
Interagency subsidy		926		243		229	3	340		-		(1,738)		-
Interest expense		(1,328)		-		-		(9)		(264)		-		(1,601)
Other		4,384			_	(2)		1		(183)		2,083		6,283
Total non-operating revenues (expenses)	_	9,235	_	423	_	227	3,5	594	_	(331)		(2,222)	_	10,926
Gain (Loss) before appropriations		8,076		(528)		(972)	(2,2	236)		936		(2,214)		3,062
Appropriations, grants and other receipts externally														
restricted for capital projects	_	(1,143)		582	_	832		968		(1,127)		2,458		2,570
Change in net position		6,933		54		(140)		268)		(191)		244		5,632
Net position, beginning of period	_	(8,774)		4,102	_	6,440	24,0		_	(2,638)		14,637)	_	9,143
Net position, end of period	<u>\$</u>	(1,841)	\$	4,156	<u>\$</u>	6,300	\$ 23,3	882	<u>\$</u>	(2,829)	\$ ((14,393)	<u>\$</u>	14,775
For the period ended September 30, 2022														
Net cash (used by) / provided by operating activities	\$	(941)	\$	(672)	\$	(672)	\$ (4,0)15)	\$	1,493	\$	-	\$	(4,807)
Net cash provided by / (used by) non-capital														
financing activities		16,481		460		426	4,2	237		(923)		(5,638)		15,043
Net cash (used by) / provided by capital and related														
financing activities		(10,368)		(61)		(36)		772)		5,894		98		(5,245)
Net cash (used by) / provided by investing activities		(4,528)		274		304	5	547		(6,608)		5,540		(4,471)
Cash at beginning of period	_	515	_	17	_	5		28		217			_	782
Cash at end of period	<u>\$</u>	1,159	\$	18	<u>\$</u>	27	\$	25	<u>\$</u>	73	\$		<u>\$</u>	1,302

			Metro- North		Long Island		New York lity Transit	Triborough Bridge and Tunnel			Cor	ısolidated
December 31, 2021		MTA	Railroad	1	Railroad	Α	Authority	Authority	El	liminations		Total
Current assets	\$	15,727	\$ 232	\$	247	\$	639	\$ 1,836	\$	(792)	\$	17,889
Capital assets		13,514	6,096		9,889		46,653	7,607		-		83,759
Other Assets		15,887	-		-		1	3		(13,781)		2,110
Intercompany receivables		681	333		349		1,814	2,874		(6,078)		(27)
Deferred outflows of resources		1,912	849		1,047		3,646	580		(171)		7,863
Total assets and deferred outflows of resources	\$	47,721	\$ 7,510	\$	11,532	\$	52,753	\$ 12,900	\$	(20,822)	\$	111,594
Current liabilities	\$	9,899	\$ 362	\$	273	\$	2,140	\$ 938	\$	(59)	\$	13,553
Non-current liabilities		40,904	2,797		4,462		22,361	13,763		(123)		84,164
Intercompany payables		5,245	117		22		-	595		(6,002)		(23)
Deferred inflows of resources		447	132		335		3,602	242				4,758
Total liabilities and deferred inflows of resources	<u>\$</u>	56,495	\$ 3,408	<u>\$</u>	5,092	\$	28,103	\$ 15,538	<u>\$</u>	(6,184)	<u>\$</u>	102,452
Net investment in capital assets	\$	(33,964)	\$ 6,085	\$	9,866	\$	46,407		\$	(643)	\$	29,898
Restricted		2,351	-		-		-	1,606		(1,347)		2,610
Unrestricted		22,839	(1,983	<u> </u>	(3,426)	_	(21,757)	(6,391)	_	(12,648)		(23,366)
Total net position	<u>\$</u>	(8,774)	\$ 4,102	\$	6,440	\$	24,650	\$ (2,638)	<u>\$</u>	(14,638)	<u>\$</u>	9,142
For the period ended September 30, 2021												
Fare revenue	\$	103	\$ 171	\$	199	\$	1,617	\$ -	\$	-	\$	2,090
Vehicle toll revenue		-	-		-		-	1,565		-		1,565
Rents, freight and other revenue		38	15		21	_	352	17	_	(28)		415
Total operating revenue		141	186		220		1,969	1,582		(28)		4,070
Total labor expenses		862	703		836		5,018	159	-			7,578
Total non-labor expenses		385	258		259		1,290	146		(28)		2,310
Depreciation		60	214		343		1,558	143		<u>-</u>		2,318
Total operating expenses	_	1,307	1,175		1,438	_	7,866	448	_	(28)		12,206
Operating (deficit) surplus	_	(1,166)	(989) _	(1,218)	_	(5,897)	1,134	_			(8,136)
Subsidies and grants		778	250)	-		429	7		(272)		1,192
Tax revenue		4,280	-		-		1,837	234		(1,535)		4,816
Interagency subsidy		739	419		547		256	-		(1,961)		-
Interest expense		(1,100)	-		(1)		(2)	(262)		2		(1,363)
Other		(1,051)	-		-		397	1		797		144
Total non-operating revenues (expenses)	_	3,646	669		546		2,917	(20)		(2,969)		4,789
Gain (Loss) before appropriations		2,480	(320)	(672)		(2,980)	1,114		(2,969)		(3,347)
Appropriations, grants and other receipts externally		,,	_									
restricted for capital projects	_	(1,223)	350		899		868	(1,331)	_	2,849		2,412
Change in net position		1,257	30		227		(2,112)	(217)		(120)		(935)
Net position, beginning of the period	_	(10,289)	3,768		5,230	_	21,824	(2,443)		(13,107)		4,983
Net position, end of period	<u>\$</u>	(9,032)	\$ 3,798	= =	5,457	\$	19,712	\$ (2,660)	\$	(13,227)	<u>\$</u>	4,048
For the period ended September 30, 2021												
Net cash (used in) / provided by operating activities	\$	(1,194)	\$ (625) \$	(668)	\$	(4,139)	\$ 1,325	\$	(381)	\$	(5,682)
Net cash provided by / (used in) non-capital financing activities		5,095	667		646		2,966	(1,544)		(2,012)		5,818
Net cash (used in) / provided by capital and related		- ,	507				-,	(-,- / 1)		(=,2)		-,
financing activities		(2,174)	(48	(22		(792)	1,375		1,963		346
Net cash provided by / (used in) investing activities		(1,546)	-		-		1,965	(675)		430		174
Cash at beginning of period	_	471	23		5	_	20	507	_			1,026
Cash at end of period	\$	652	\$ 17	<u>\$</u>	5	\$	20	\$ 988	\$	-	\$	1,682

17. SUBSEQUENT EVENTS

On October 25, 2022, MTA executed a 2,826,749 gallon ultra-low sulfur diesel fuel hedge at an all-in price of \$2.7422 (whole dollars) per gallon. The hedge covers the period from October 2023 through September 2024.

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On October 27, 2022, MTA extended its irrevocable direct-pay Letter of Credit (LOC) issued by PNC Bank, National Association that is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-2b for three years to October 24, 2025.

On October 27, 2022, MTA extended its irrevocable direct-pay LOC issued by PNC Bank, National Association that is associated with Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008B-3c for three years to October 24, 2025.

On November 1, 2022, MTA issued \$700.200 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Senior Lien Green Bonds, Series 2022E (Climate Bond Certified). Proceeds from the transaction will be used to refund outstanding Transportation Revenue Variable Rate Bonds, Series 2011B (LIBOR FRNs), Transportation Revenue Bonds, Subseries 2014D-2 (SIFMA FRNs), Transportation Revenue Bonds, Subseries 2018A-2 (Mandatory Tender Bonds), and to retire the Transportation Revenue Bond Anticipation Notes, Series 2019F that mature on November 15, 2022. The Series 2022E bonds were issued as: \$188.630 Subseries 2022E-1; \$99.560 Subseries 2022E-2a; and \$412.010 Subseries 2022E-2b. The Subseries 2022E-1 bonds were issued as fixed-rate tax-exempt bonds with a final maturity of November 15, 2027. The Subseries 2022E-2a bonds were issued as variable rate tax-exempt refunding Secured Overnight Financing Rate (SOFR) Notes with a final maturity of April 1, 2026, and with an interest rate of 67% of SOFR plus 1.05%. The Subseries 2022E-2b bonds were issued as fixed-rate tax-exempt refunding bonds with a final maturity of November 15, 2032.

On November 1, 2022, MTA effectuated a mandatory tender and remarket \$75.100 Transportation Revenue Variable Rate Bonds, Subseries 2005D-2 because its irrevocable direct-pay LOC issued by Landesbank Hessen-Thuringen Girozentrale (Helaba) was expiring by its terms and \$70.650 Transportation Revenue Variable Rate Bonds, Subseries 2012G-4 because its respective current interest rate period was expiring by its terms. Both Subseries 2005D-2 and Subseries 2012G-4 Bonds were remarketed as Variable Rate Demand Bonds in Daily Rate Mode and supported with irrevocable direct-pay LOCs issued by BMO Harris Bank, N.A. Both LOCs will expire on October 31, 2025.

On November 30, 2022, MTA executed a 2,826,751 gallon ultra-low sulfur diesel fuel hedge at an all-in price of \$2.7624 (whole dollars) per gallon. The hedge covers the period from November 2023 through October 2024.

On December 8, 2022, MTA effectuated a mandatory tender and remarket \$148.470 Triborough Bridge and Tunnel Authority General Revenue Variable Rate Refunding Bonds, Series 2018E.

On December 15, 2022, MTA issued \$766.540 Triborough Bridge and Tunnel Authority Payroll Mobility Tax Bond Anticipation Notes, Series 2022B ("the Series 2022B Notes"). Proceeds from the transaction will be used to retire \$800.000 of MTA Transportation Revenue Bond Anticipation Notes, Series 2020A-1, and to pay certain financing, legal, and miscellaneous expenses associated with the Series 2022B Notes.



Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans

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						Ad	ditional Plan					
Plan Measurement Date (December 31):	 2020	_	2019	_	2018	_	2017	_	2016	_	2015	 2014
Total pension liability:												
Service cost	\$ 453	\$	621	\$	1,057	\$	1,874	\$	2,752	\$	3,441	\$ 3,813
Interest	86,918		93,413		97,611		101,477		104,093		106,987	110,036
Effect of economic / demographic (gains) or losses	10,428		13,455		213		1,890		15,801		6,735	-
Effect of assumption changes or inputs	-		50,191		-		-		-		-	-
Benefit payments and withdrawals	 (152,046)		(157,254)		(159,565)		(159,717)		(158,593)		(157,071)	 (156,974)
Net change in total pension liability	(54,247)		426		(60,684)		(54,476)		(35,947)		(39,908)	(43,125)
Total pension liability—beginning	 1,411,570		1,411,144		1,471,828	_	1,526,304		1,562,251		1,602,159	1,645,284
Total pension liability—ending (a)	1,357,323		1,411,570		1,411,144		1,471,828		1,526,304		1,562,251	1,602,159
Plan fiduciary net position:												
Employer contributions	68,724		62,774		59,500		76,523		81,100		100,000	407,513
Nonemployer contributions	-		-		-		145,000		70,000		-	-
Member contributions	140		249		333		760		884		1,108	1,304
Net investment income	4,024		116,092		(31,098)		112,614		58,239		527	21,231
Benefit payments and withdrawals	(152,046)		(157,254)		(159,565)		(159,717)		(158,593)		(157,071)	(156,974)
Administrative expenses	(612)		(718)		(1,180)		(1,070)		(611)		(1,218)	(975)
Net change in plan fiduciary net position	 (79,770)		21,143		(132,010)		174,110		51,019		(56,654)	272,099
Plan fiduciary net position—beginning	840,460		819,317		951,327		777,217		726,198		782,852	510,753
Plan fiduciary net position—ending (b)	760,690		840,460		819,317	_	951,327		777,217		726,198	782,852
Employer's net pension liability—ending (a)-(b)	\$ 596,633	\$	571,110	\$	591,827	\$	520,501	\$	749,087	\$	836,053	\$ 819,307
Plan fiduciary net position as a percentage of the total pension liability	56.04%		59.54%		58.06%		64.64%		50.92%		46.48%	48.86%
Covered payroll	\$ 5,174	\$	7,236	\$	13,076	\$	20,500	\$	29,312	\$	39,697	\$ 43,267
Employer's net pension liability as a percentage of covered payroll	11531.37%		7892.62%		4526.06%		2539.03%		2555.56%		2106.09%	1893.61%



Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans

(\$	in	thousands)
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						Ma	BSTOA Plan						
Plan Measurement Date (December 31):		2020	_	2019	 2018	_	2017	_	2016	_	2015	_	2014
Total pension liability:													
Service cost	\$	95,514	\$	89,814	\$ 86,979	\$	84,394	\$	82,075	\$	77,045	\$	72,091
Interest		266,588		265,454	256,084		246,284		236,722		232,405		223,887
Effect of economic / demographic (gains) or losses		(720)		9,011	5,412		11,826		13,784		(68,997)		-
Effect of assumption changes or inputs				168,752	-		6,347		-		-		-
Differences between expected and actual experience				-	-		-		-		-		(1,596)
Benefit payments and withdrawals		(237,930)		(221,221)	 (213,827)		(209,122)		(187,823)		(179,928)		(175,447)
Net change in total pension liability		123,452		311,810	134,648		139,729		144,758		60,525		118,935
Total pension liability—beginning		4,122,934	_	3,811,124	3,676,476	_	3,536,747		3,391,989		3,331,464		3,212,529
Total pension liability—ending (a)		4,246,386		4,122,934	3,811,124		3,676,476		3,536,747		3,391,989		3,331,464
Plan fiduciary net position:													
Employer contributions		159,486		206,390	205,433		202,684		220,697		214,881		226,374
Member contributions		24,709		23,552	21,955		19,713		18,472		16,321		15,460
Net investment income		60,326		447,365	(87,952)		350,186		212,260		(24,163)		105,084
Benefit payments and withdrawals		(237,930)		(221,221)	(213,827)		(209,122)		(187,823)		(179,928)		(175,447)
Administrative expenses		(244)		(220)	(196)		(208)		(186)		(88)		(74)
Net change in plan fiduciary net position		6,347		455,866	(74,587)		363,253		263,420		27,023		171,397
Plan fiduciary net position—beginning		3,300,268		2,844,402	2,918,989		2,555,736		2,292,316		2,265,293		2,093,896
Plan fiduciary net position—ending (b)		3,306,616		3,300,268	2,844,402		2,918,989		2,555,736		2,292,316		2,265,293
Employer's net pension liability—ending (a)-(b)	<u>\$</u>	939,770	\$	822,666	\$ 966,722	\$	757,487	\$	981,011	\$	1,099,673	\$	1,066,171
Plan fiduciary net position as a percentage of the total pension liability		77.87%		80.05%	74.63%		79.40%		72.26%		67.58%		68.00%
Covered payroll	\$	802,100	\$	786,600	\$ 776,200	\$	749,666	\$	716,527	\$	686,674	\$	653,287
Employer's net pension liability as a percentage of covered payroll		117.16%		104.59%	124.55%		101.04%		136.91%		160.14%		163.20%





Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans

(continued)

(\$ in thousands)									
			 MN	IR C	Cash Balance	Plan	<u> </u>		
Plan Measurement Date (December 31):	 2020	2019	 2018		2017	_	2016	 2015	 2014
Total pension liability:									
Interest	\$ 14	\$ 18	\$ 20	\$	21	\$	24	\$ 29	\$ 32
Effect of economic / demographic (gains) or losses	10	4	(11)		12		(15)	(10)	-
Effect of assumption changes or inputs	11	-	-		-		-	18	-
Benefit payments and withdrawals	 (105)	 (53)	 (58)		(71)		(77)	 (113)	 (88)
Net change in total pension liability	(70)	(31)	(49)		(38)		(68)	(76)	(56)
Total pension liability—beginning	448	479	528		566		634	710	766
Total pension liability—ending (a)	 378	 448	 479		528		566	 634	 710
Plan fiduciary net position:									
Employer contributions	9	-	5		-		23	18	-
Net investment income	32	40	1		20		16	6	41
Benefit payments and withdrawals	(105)	(53)	(58)		(71)		(77)	(113)	(88)
Administrative expenses	 3	 (3)	 					 3	 (3)
Net change in plan fiduciary net position	(61)	(16)	(52)		(51)		(38)	(86)	(50)
Plan fiduciary net position—beginning	 455	 471	523		574		612	698	 748
Plan fiduciary net position—ending (b)	 394	 455	 471		523		574	612	 698
Employer's net pension liability—ending (a)-(b)	\$ (16)	\$ (7)	\$ 8	\$	5	\$	(8)	\$ 22	\$ 12
Plan fiduciary net position as a percentage of the total pension liability	104.23%	101.45%	98.33%		99.05%		101.41%	96.53%	98.36%
Covered payroll	\$ 277	\$ 278	\$ 268	\$	471	\$	846	\$ 1,474	\$ 2,274
Employer's net pension liability as a percentage of covered payroll	-5.78%	-2.52%	2.99%		1.06%		-0.95%	1.49%	0.53%



Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for Single Employer Pension Plans

(continued)

(\$ in thousands)				MTA	A De	efined Benefit	Pla	n		
Plan Measurement Date (December 31):	_	2020	2019	2018		2017		2016	2015	2014
Total pension liability:										
Service cost	\$	213,494	\$ 173,095	\$ 162,273	\$	148,051	\$	138,215	\$ 124,354	\$ 121,079
Interest		427,672	387,193	358,118		335,679		308,009	288,820	274,411
Effect of economic / demographic (gains) or losses		92,019	35,935	75,744		(27,059)		86,809	121,556	2,322
Effect of assumption changes or inputs			690,958	-		10,731		-	(76,180)	-
Effect of plan changes		-	-	61,890		76,511		73,521	6,230	-
Benefit payments and withdrawals		(293,836)	(264,985)	(242,349)		(232,976)		(209,623)	(199,572)	(191,057)
Net change in total pension liability		439,349	1,022,196	415,676		310,937		396,931	265,208	206,755
Total pension liability—beginning		6,510,686	5,488,490	5,072,814		4,761,877		4,364,946	4,099,738	3,892,983
Total pension liability—ending (a)		6,950,035	6,510,686	5,488,490		5,072,814		4,761,877	4,364,946	4,099,738
Plan fiduciary net position:										
Employer contributions		394,986	344,714	338,967		321,861		280,768	221,694	331,259
Member contributions		32,006	31,504	29,902		31,027		29,392	34,519	26,006
Net investment income		99,045	651,919	(150,422)		516,153		247,708	(45,122)	102,245
Benefit payments and withdrawals		(293,836)	(264,985)	(242,349)		(232,976)		(209,623)	(199,572)	(191,057)
Administrative expenses		(3,660)	(3,408)	(3,152)		(4,502)		(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position		228,541	759,744	(27,054)		631,563		345,194	9,557	258,853
Plan fiduciary net position—beginning		4,784,224	4,024,480	4,051,534		3,419,971		3,074,777	3,065,220	2,806,367
Plan fiduciary net position—ending (b)		5,012,765	4,784,224	4,024,480		4,051,534		3,419,971	3,074,777	3,065,220
Employer's net pension liability—ending (a)-(b)	\$	1,937,270	\$ 1,726,462	\$ 1,464,010	\$	1,021,280	\$	1,341,906	\$ 1,290,169	\$ 1,034,518
Plan fiduciary net position as a percentage of the total pension liability		72.13%	73.48%	73.33%		79.87%		71.82%	70.44%	74.77%
Covered payroll	\$	2,050,970	\$ 2,052,657	\$ 2,030,695	\$	1,857,026	\$	1,784,369	\$ 1,773,274	\$ 1,679,558
Employer's net pension liability as a percentage of covered payroll		94.46%	84.11%	72.09%		55.00%)	75.20%	72.76%	61.59%



Schedule of the MTA's Proportionate Share of the Net Pension Liabilities of Cost-Sharing Multiple-Employer Pension Plans

2	in	thousands)	

							N	YCERS Plan						
Plan Measurement Date:	Ju	ine 30, 2021	J	une 30, 2020	Jı	une 30, 2019	Jı	une 30, 2018	Ju	ine 30, 2017	J	une 30, 2016	J	une 30, 2015
MTA's proportion of the net pension liability MTA's proportionate share of the net pension		22.218%		24.420%		24.493%		23.682%		24.096%		23.493%		23.585%
liability	\$	1,424,952	\$	5,147,445	\$	4,536,510	\$	4,176,941	\$	5,003,811	\$	5,708,052	\$	4,773,787
MTA's actual covered payroll	\$	3,618,339	\$	3,514,665	\$	3,385,743	\$	3,216,837	\$	3,154,673	\$	3,064,007	\$	2,989,480
MTA's proportionate share of the net pension liability as														
a percentage of the MTA's covered payroll		39.000%		146.456%		113.989%		129.846%		158.616%		186.294%		159.686%
Plan fiduciary net position as a percentage of														
the total pension liability		77.000%		76.933%		78.836%		78.826%		74.805%		69.568%		73.125%
Plan Measurement Date:	— Ma	arch 31, 2021	M	arch 31, 2020	Ma	arch 31, 2019		SLERS Plan arch 31, 2018	Ma	arch 31, 2017	M	arch 31, 2016	M	arch 31, 2015
		-												
MTA's proportion of the net pension liability MTA's proportionate share of the net pension		0.314%		0.346%		0.345%		0.327%		0.311%		0.303%		0.289%
liability	\$	313	\$	91,524	\$	24,472	\$	10,553	\$	29,239	\$	48,557	\$	9,768
MTA's actual covered payroll MTA's proportionate share of the net pension liability as	\$	102,838	\$	105,457	\$	109,252	\$	105,269	\$	96,583	\$	87,670	\$	87,315
a percentage of the MTA's covered payroll		0.000%		86.788%		22.400%		10.025%		30.273%		55.386%		11.187%
Plan fiduciary net position as a percentage of														
the total pension liability		99.950%		86.392%		96.267%		98.240%		94.703%		90.685%		97.947%

Note: Information was not readily available for periods prior to 2015. This schedule is intended to show information for ten years. Additional years will be displayed as they become available. The data provided in this schedule is based on the measurement date used by NYCERS and NYSLERS for the net pension liability.



Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

(\$ in thousands)	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
		2020		2016						
Additional Plan*										
Actuarially Determined Contribution		\$ 68,723	\$ 62,774	\$ 59,196	\$ 76,523	\$ 83,183	\$ 82,382	\$ 112,513	\$ -	\$ -
Actual Employer Contribution	70,553	68,724	62,774	59,500	221,523	151,100	100,000	_407,513		
Contribution Deficiency (Excess)	-	\$ (1)	<u>\$</u>	\$ (304)	\$ (145,000)	\$ (67,917)	\$ (17,618)	\$(295,000)	\$ -	<u>\$ -</u>
Covered Payroll	\$ 3,230	\$ 5,174	\$ 7,236	\$ 13,076	\$ 20,500	\$ 29,312	\$ 39,697	\$ 43,267	\$ -	<u> </u>
Contributions as a % of Covered Payroll	2184.33%	1328.26%	867.54%	455.02%	1080.62%	515.49%	251.91%	941.87%	N/A	N/A
MaBSTOA Plan										
Actuarially Determined Contribution	\$ 156,204	\$ 159,486	\$ 209,314	\$ 202,509	\$ 202,924	\$ 220,697	\$ 214,881	\$ 226,374	\$ 234,474	\$ 228,918
Actual Employer Contribution	156,204	159,486	206,390	205,434	202,684	220,697	214,881	226,374	234,474	228,918
Contribution Deficiency (Excess)	\$ -	\$ -	\$ 2,924	\$ (2,925)	\$ 240	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 768,868	\$ 802,100	\$ 786,600	\$ 776,200	\$ 749,666	\$ 716,527	\$ 686,674	\$ 653,287	\$ 582,081	\$ 575,989
Contributions as a % of Covered Payroll	20.32%	19.88%	26.24%	26.47%	27.04%	30.80%	31.29%	34.65%	40.28%	39.74%
Metro-North Cash Balance Plan*										
Actuarially Determined Contribution	\$ -	\$ -	\$ 8	\$ 5	\$ -	\$ 23	\$ -	\$ 5	\$ -	\$ -
Actual Employer Contribution				5		23	14			
Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (14)	\$ 5	\$ -	\$ -
Covered Payroll	\$ -	\$ 277	\$ 278	\$ 268	\$ 471	\$ 846	\$ 1,474	\$ 2,274	\$ -	\$ -
Contributions as a % of Covered Payroll	0.00%	0.00%	0.00%	1.87%	0.00%	2.68%	0.96%	0.00%	N/A	N/A
MTA Defined Benefit Plan*										
Actuarially Determined Contribution	\$ 392,547	\$ 392,921	\$ 349,928	\$ 331,566	\$ 316,916	\$ 290,415	\$ 273,700	\$ 271,523	\$ -	\$ -
Actual Employer Contribution	396,144	393,961	343,862	339,800	321,861	280,767	221,694	331,259	-	-
Contribution Deficiency (Excess)	\$ (3,597)	\$ (1,040)	\$ 6,066	\$ (8,234)	\$ (4,945)	\$ 9,648	\$ 52,006	\$ (59,736)	\$ -	\$ -
C ID II	£ 2 029 029	e 2 050 070	Ф 2 052 <i>(57</i>	¢ 2 020 605	¢ 1 057 026	\$ 1.704.200	\$	\$	ф.	<u> </u>
Covered Payroll	\$ 2,028,938	\$ 2,050,970	\$ 2,052,657	\$ 2,030,695	\$ 1,857,026	1,784,369	1,773,274	1,679,558	<u>a - </u>	<u> </u>
Contributions as a % of Covered Payroll	19.52%	19.21%	16.75%	16.73%	17.33%	15.73%	12.50%	19.72%	N/A	N/A

^{*} For the MTA Defined Benefit Plan, Additional Plan and Metro-North Cash Balance Plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.



Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

(continued)

(\$ in thousands)																			
	2021		2020	_	2019	_	2018	_	2017	_	2016	_	2015	_	2014	_	2013	_	2012
NYCERS																			
Actuarially Determined Contribution	\$ 842,269	\$	882,690	\$	952,616	\$	807,097	\$	800,863	\$	797,845	\$	736,212	\$	741,223	\$	736,361	\$	731,983
Actual Employer Contribution	842,269		882,690		952,616		807,097		800,863		797,845		736,212		741,223		736,361		731,983
Contribution Deficiency (Excess)	\$ -	\$		\$		\$		\$		\$		\$		\$		\$		\$	
Covered Payroll	\$3,637,544	\$3	,771,595	\$3	,948,283	\$3	,974,494	\$ 3	3,768,885	\$ 3	3,523,993	\$ 3	3,494,907	\$ 3	3,617,087	\$ 2	2,943,195	\$ 2,	925,834
Contributions as a % of																			
Covered Payroll	23.15%)	23.40%		24.13%		20.31%		21.25%		22.64%		21.07%		20.49%		25.02%		25.02%
NYSLERS **																			
Actuarially Determined Contribution	\$ 16,284	\$	14,533	\$	14,851	\$	14,501	\$	13,969	\$	12,980	\$	15,792	\$	13,816	\$	_	\$	_
Actual Employer Contribution	16,284		14,533		14,851		14,501		13,969		12,980		15,792		13,816		-		-
Contribution Deficiency (Excess)	\$ -	\$		\$		\$		\$		\$		\$		\$		\$	_	\$	
Covered Payroll Contributions as a % of	\$ 99,129	\$	102,838	\$	106,913	\$	109,210	\$	103,787	\$	94,801	\$	86,322	\$	84,041	\$	-	\$	
Covered Payroll	16.43%)	14.13%		13.89%		13.28%		13.46%		13.69%		18.29%		16.44%		N/A		N/A

^{**} For the NYSLERS plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.



		Additio	nal Plan				
Valuation Dates:	January 1, 2020	January 1, 2019	January 1, 2018	January 1, 2017			
Measurement Date:	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017			
Actuarial cost method:	Entry Age Normal Cost						
Amortization method:	Period specified in current valuation report (closed 13 year period beginning January 1, 2020) with level dollar payments.	Period specified in current valuation report (closed 14 year period beginning January 1, 2019) with level dollar payments.	Period specified in current valuation report (closed 15 year period beginning January 1, 2018) with level dollar payments.	Period specified in current valuation report (closed 16 year period beginning January 1, 2017) with level dollar payments.			
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.			
Salary increases:	3.00%	3.00%	3.00%	3.00%			
Actuarial assumptions:							
Discount Rate:	6.50%	6.50%	7.00%	7.00%			
Investment rate of return:	6.50%, net of investment expenses.	6.50%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.			
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.			
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.			
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.			
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A			
Inflation/Railroad Retirement Wage Base:	2.25%; 3.25%	2.25%; 3.25%	2.50%; 3.50%	2.50%; 3.50%			
Cost-of-Living Adjustments:	N/A	N/A	N/A	N/A			





		Additional Plan (continued)	
Valuation Dates:	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost
Amortization method:	Period specified in current valuation report (closed 17 year period beginning January 1, 2016) with level dollar payments.	Period specified in current valuation report (closed 18 year period beginning January 1, 2015) with level dollar payments.	Period specified in current valuation report (closed 19 year period beginning January 1, 2014) with level dollar payments.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.
Salary increases:	3.00%	3.00%	3.00%
Actuarial assumptions:			
Discount Rate:	7.00%	7.00%	7.00%
Investment rate of return:	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans.
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%; 3.50%	2.50%; 3.50%	2.50%; 3.50%
Cost-of-Living Adjustments:	N/A	N/A	N/A

		MaBST	OA Plan	
Valuation Dates:	January 1, 2020	January 1, 2019	January 1, 2018	January 1, 2017
Measurement Date:	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017
Actuarial cost method:	Frozen Initial Liability (FIL)			
Amortization method:	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.
Salary increases:	Reflecting general wage, merit and promotion increases for operating employees and non- operating members. Varies by years of employment.	Reflecting general wage, merit, and promotion increases of 3.5% for operating employees and 4.0% for non-operating employees per year. Large increases are assumed in the first 5 years of a member's career.	Varies by years of employment and employment type.	Varies by years of employment and employment type.
Actuarial assumptions: Discount Rate:	6.50%	6.50%	7.00%	7.00%
Investment rate of return:	6.50%, net of investment expenses.	6.50%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	RP-2014 Disabled Annuitant mortality table for males and females.	RP-2014 Disabled Annuitant mortality table for males and females.	RP-2014 Disabled Annuitant mortality table for males and females.	RP-2014 Disabled Annuitant mortality table for males and females.
Inflation/Railroad Retirement				
Wage Base:	2.25%	2.25%	2.50%	2.50%
Cost-of-Living Adjustments:	1.35% per annum	1.35% per annum	1.375% per annum	1.375% per annum

Valuation Dates:	January 1, 2016	MaBSTOA Plan (continued) January 1, 2015	
		January 1, 2015	January 1, 2014
Measurement Date:	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Frozen Initial Liability (FIL)	Frozen Initial Liability (FIL)	Frozen Initial Liability (FIL)
Amortization method:	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized Market value restart as of 1/1/96, then gains/losses over a 5-year period. Gains/losses are five-year moving average of market values based on market value of assets.
Salary increases:	Varies by years of employment and employment type.	Varies by years of employment and employment type.	In general, merit and promotion increases plus assumed general wage increases of 3.5% to 15.0% for operating employees and 4.0% to 7.0% for nonoperating employees per year, depending on years of service.
Actuarial assumptions:			year, depending on years or service.
Discount Rate:	7.00%	7.00%	7.00%
Investment rate of return:	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA.	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans.
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females.	75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females.	75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females.
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%



	MNR Cash Balance Plan				
Valuation Dates:	January 1, 2020	January 1, 2019	January 1, 2019	January 1, 2018	
Measurement Date:	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017	
Actuarial cost method:	Unit Credit Cost	Unit Credit Cost	Unit Credit Cost	Unit Credit Cost	
Amortization method:	One-year amortization of the unfunded liability, if any.	One-year amortization of the unfunded liability, if any.	One-year amortization of the unfunded liability, if any.	One-year amortization of the unfunded liability, if any.	
Asset Valuation Method:	Actuarial value equals market value.				
Salary increases: Actuarial assumptions:	N/A	N/A	N/A	N/A	
Discount Rate:	3.00%	3.50%	4.00%	4.00%	
Investment rate of return:	3.00%, net of investment expenses.	3.50%, net of investment expenses.	4.00%, net of investment expenses.	4.00%, net of investment expenses.	
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on an experience study for all MTA plans.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on an experience study for all MTA plans.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2017 experience study for all MTA plans.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2017 experience study for all MTA plans.	
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A	
Inflation/Railroad Retirement Wage Base:	2.25%	2.25%	2.50%	2.50%	
Cost-of-Living Adjustments:	N/A	N/A	N/A	N/A	

	MNR Cash Balance Plan (continued)				
Valuation Dates:	January 1, 2017	January 1, 2016	January 1, 2014		
Measurement Date:	December 31, 2016	December 31, 2015	December 31, 2014		
Actuarial cost method:	Unit Credit Cost	Unit Credit Cost	Unit Credit Cost		
Amortization method:	One-year amortization of the unfunded liability, if any.	One-year amortization of the unfunded liability, if any.	Period specified in current valuation report (closed 10 year period beginning January 1, 2008 - 4 year period for the January 1, 2014 valuation).		
Asset Valuation Method:	Actuarial value equals market value.	Actuarial value equals market value.	Effective January 1, 2015, the Actuarially Determined Contribution (ADC) will reflect one- year amortization of the unfunded accrued liability in accordance with the funding policy adopted by the MTA.		
Salary increases:	N/A	N/A	There were no projected salary increase assumptions used in the January 1, 2014 valuation as the participants of the Plan were covered under the Management Plan effective January 1, 1989. For participants of the Plan eligible for additional benefits, these benefits were not valued as the potential liability is de minimus.		
Actuarial assumptions: Discount Rate:	4.00%	4.00%	4.50%		
Investment rate of return :	4.00%, net of investment expenses.	4.00%, net of investment expenses.	4.50%, net of investment expenses.		
Mortality:	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2012 experience study for all MTA plans.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. Mortality assumption is based on a 2012 experience study for all MTA plans.	Based on experience of all MTA members reflecting mortality improvement on a generational basis using scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date. Mortality assumption is based on a 2012 experience study for all MTA plans.		
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.		
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.		
Post-retirement Disabled Lives:	N/A	N/A	N/A		
Inflation/Railroad Retirement Wage Base:	2.30%	2.30%	2.50%		
Cost-of-Living Adjustments:	N/A	N/A	N/A		

		MTA Defined Benefit Plan	
Valuation Dates:	January 1, 2020	January 1, 2019	January 1, 2018
Measurement Date:	December 31, 2020	December 31, 2019	December 31, 2018
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost
Amortization method:	For Frozen Initial Liability ("FIL") bases, 18 years for Fresh start base as of Jan 1, 2020 and period specified in current valuation report for specific plan change bases. Future gains/ losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary or service, of the projected population for each group and further weighted by total present value of benefits for each group.	For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.	For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.
Salary increases:	Varies by years of employment, and employee group. 2.75% general wage increases for TWU Local 100 MTA Bus hourly employees.	Varies by years of employment, and employee group. 2.75% general wage increases for TWU Local 100 MTA Bus hourly employees.	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.
Actuarial assumptions: Discount Rate:	6.50%	6.50%	7.00%
Investment rate of return :	6.50%	6.50%	7.00%
Mortality:	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP- 2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	RP-2014 Disabled Annuitant mortality table for males and females	RP-2014 Disabled Annuitant mortality table for males and females	RP-2014 Disabled Annuitant mortality table for males and females
Inflation/Railroad Retirement Wage Base:	2.25%; 3.25%	2.25%; 3.25%	2.50%; 3.50%
Cost-of-Living Adjustments:	60% of inflation assumption or 1.35%, if applicable.	60% of inflation assumption or 1.35%, if applicable.	55% of inflation assumption or 1.375%, if applicable.

	MTA Defined Benefit Plan (continued)					
Valuation Dates:	January 1, 2017	January 1, 2016	January 1, 2015			
Measurement Date:	December 31, 2017	December 31, 2016	December 31, 2015			
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost			
Amortization method:	For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.	For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.	For Frozen Initial Liability ("FIL") bases, period specified in current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.			
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.			
Salary increases:	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.			
Actuarial assumptions: Discount Rate:	7.00%	7.00%	7.00%			
Investment rate of return:	7.00%	7.00%	7.00%			
Mortality:	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.	Pre-retirement and post-retirement healthy annuitant rates are projected on a generational basis using Scale AA. As a general table, it reflects mortality improvements both before and after the measurement date.			
Pre-retirement:	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.	RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments.			
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.			
Post-retirement Disabled Lives:	RP-2014 Disabled Annuitant mortality table for males and females	75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and females healthy rates, respectively.	75% of the rates from the RP-2000 Healthy Annuitant mortality table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and females healthy rates, respectively.			
Inflation/Railroad Retirement Wage Base:	2.50%; 3.50%	2.50%; 3.50%	2.50%; 3.50%			
Cost-of-Living Adjustments:	55% of inflation assumption or 1.375%, if applicable.	55% of inflation assumption or 1.375%, if applicable.	55% of inflation assumption or 1.375%, if applicable.			

Notes to Schedule of the MTA's Contributions for All Pension Plans

MTA Defined Benefit Plan (continued)

Valuation Dates:January 1, 2014Measurement Date:December 31, 2014Actuarial cost method:Entry Age Normal Cost

Amortization method: For Frozen Initial Liability ("FIL") bases, period specified in

current valuation report. Future gains/ losses are amortized through the calculation of the normal cost in accordance with FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for each group.

Asset Valuation Method: Actuarial value equals market value less unrecognized gains/losses

over a 5-year period. Gains/losses are based on market value of

assets.

Salary increases: Varies by years of employment, and employee group.

Actuarial assumptions:

Discount Rate: 7.00% Investment rate of return: 7.00%

Mortality: Pre-retirement and post-retirement healthy annuitant rates are

projected on a generational basis using Scale AA, as recommended

by the Society of Actuaries Retirement Plans Experience Committee. Mortality assumption is based on a 2012 experience

study for all MTA plans.

Pre-retirement: RP-2000 Employee Mortality Table for Males and Females with

blue collar adjustments.

Post-retirement Healthy Lives: 95% of the rates from the RP-2000 Healthy Annuitant mortality

table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.

Post-retirement Disabled Lives: 75% of the rates from the RP-2000 Healthy Annuitant mortality

table for males and females. At age 85 and later for males and age 77 and later for females, the disability rates are set to the male and

females healthy rates, respectively.

Inflation/Railroad Retirement Wage Base: 2.50%; 3.00%

Cost-of-Living Adjustments: 55% of inflation assumption or 1.375%, if applicable.



	NYCERS Plan				
Valuation Dates:	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2016	
Measurement Date:	June 30, 2021	June 30, 2020	June 30, 2019	June 30, 2018	
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost	
Amortization method:	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	
Asset Valuation Method:	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	
Salary increases:	3% per annum.	3% per annum.	3% per annum.	3% per annum.	
Actuarial assumptions: Discount Rate:	7.00%	7.00%	7.00%	7.00%	
Investment rate of return:	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	
Mortality:	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was prepared by Bolton, Inc. dated June 2019 analyzed the four-year and ten-year periods ended June 30, 2017.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was prepared by Bolton, Inc. dated June 2019 analyzed the four-year and ten-year periods ended June 30, 2017.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	
Pre-retirement:	N/A	N/A	N/A	N/A	
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A	
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A	
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%	2.50%	
Cost-of-Living Adjustments:	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	

	NYCERS Plan (continued)				
Valuation Dates:	June 30, 2015	June 30, 2014	June 30, 2013		
Measurement Date:	June 30, 2017	June 30, 2016	June 30, 2015		
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost		
Amortization method:	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.		
Asset Valuation Method:	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.		
Salary increases:	3% per annum.	3% per annum.	3% per annum.		
Actuarial assumptions: Discount Rate:	7.00%	7.00%	7.00%		
Investment rate of return:	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.		
Mortality:	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.		
Pre-retirement:	N/A	N/A	N/A		
Post-retirement Healthy Lives:	N/A	N/A	N/A		
Post-retirement Disabled Lives:	N/A	N/A	N/A		
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%		
Cost-of-Living Adjustments:	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.		

	NYSLERS Plan					
Valuation Dates:	April 1, 2020	April 1, 2019	April 1, 2018	April 1, 2017		
Measurement Date:	March 31, 2021	March 31, 2020	March 31, 2019	March 31, 2018		
Actuarial cost method:	Aggregate Cost method	Aggregate Cost method	Aggregate Cost method	Aggregate Cost method		
Amortization method:	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.		
Asset Valuation Method:	ethod: 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return. 5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.		5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.	5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.		
Salary increases:	4.40% in ERS; 6.20% in PFRS	4.20% in ERS; 5.00% in PFRS	3.80%	3.80%		
Actuarial assumptions: Discount Rate:	5.90%	6.80%	7.00%	7.00%		
Investment rate of return:	5.90%, net of investment expenses.	6.80%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.		
Mortality:	Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2015 through March 31, 2020 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2020.	Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2018.	Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.	Annuitant mortality rates are based on NYSLERS's 2015 experience study of the period April 1, 2010 through March 31, 2015 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.		
Pre-retirement:	N/A	N/A	N/A	N/A		
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A		
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A		
Inflation/Railroad Retirement Wage Base:	2.70%	2.50%	2.50%	2.50%		
Cost-of-Living Adjustments:	1.4% per annum.	1.3% per annum.	1.3% per annum.	1.3% per annum.		

		NYSLERS Plan (continued)	
Valuation Dates:	April 1, 2016	April 1, 2015	April 1, 2014
Measurement Date:	March 31, 2017	March 31, 2016	March 31, 2015
Actuarial cost method:	Aggregate Cost method	Aggregate Cost method	Aggregate Cost method
Amortization method:	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.
Asset Valuation Method:	5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.	5 year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.	5-year level smoothing of the difference between the actual gain and the expected gain using the assumed investment rate of return.
Salary increases:	3.80%	3.80%	4.90%
Actuarial assumptions: Discount Rate:	7.00%	7.00%	7.50%
Investment rate of return:	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.5%, net of investment expenses.
Mortality:	Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.	Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.	Annuitant mortality rates are based on NYSLERS's 2010 experience study of the period April 1, 2005 through March 31, 2010 with adjustments for mortality improvements based on the Society of Actuaries' Scale MP-2014.
Pre-retirement:	N/A	N/A	N/A
Post-retirement Healthy Lives:	N/A	N/A	N/A
Post-retirement Disabled Lives:	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.70%
Cost-of-Living Adjustments:	1.3% per annum.	1.3% per annum.	1.4% per annum.

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of MTA's Contributions for All Pension Plans

(concluded)

Significant methods and assumptions used in calculating the actuarially determined contributions of an employer's proportionate share in Cost Sharing, Multiple-Employer pension plans, the NYCERS plan and the NYSLERS plan, are presented as notes to the schedule.

Factors that significantly affect trends in the amounts reported are changes of benefit terms, changes in the size or composition of the population covered by the benefit terms, or the use of different assumptions. Following is a summary of such factors:

Changes of Benefit Terms:

There were no significant legislative changes in benefit for the June 30, 2020 valuation for the NYCERS plan.

There were no significant legislative changes in benefit for the April 1, 2020 valuation for the NYSLERS plan.

Changes of Assumptions:

There were no significant changes in the economic and demographic used in the June 30, 2020 valuation for the NYCERS plan.

There were no significant changes in the economic and demographic assumptions used in the April 1, 2020 valuation for the NYSLERS plan.



REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the MTA's Net OPEB Liability and Related Ratios and Notes to Schedule

(\$ in thousands)				
Plan Measurement Date (December 31):	2020	2019	2018	2017
Total OPEB liability:				
Service cost	\$1,097,051	\$ 928,573	\$1,002,930	\$ 884,548
Interest on total OPEB liability	610,160	840,532	734,968	731,405
Effect of plan changes Effect of economic/demographic (gains) or losses	(43,890)	247,871	1,580 (19,401)	27,785 13,605
Effect of assumption changes or inputs	1,939,528	311,286	(1,800,135)	911,465
Benefit payments	(724,741)	(730,677)	(691,122)	(650,994)
	2,878,108	1,597,585	(771,180)	1,917,814
Net change in total OPEB liability Total OPEB liability—beginning	21,531,473	1,397,383	20,705,068	1,917,814
Total OPEB liability—ending (a)	24,409,581	21,531,473	19,933,888	20,705,068
Total Of EB habinty—cliding (a)	24,409,381	21,331,473	19,933,000	20,703,000
Plan fiduciary net position:				
Employer contributions	387,371	730,677	691,122	650,994
Net investment income	(77,118)	63,647	(18,916)	47,370
Benefit payments	(724,741)	(730,677)	(691,122)	(650,994)
Administrative expenses	(209)	(200)	(56)	
Net change in plan fiduciary net position	(414,697)	63,447	(18,972)	47,370
Plan fiduciary net position—beginning	414,827	351,380	370,352	322,982
Plan fiduciary net position—ending (b)	130	414,827	351,380	370,352
Net OPEB liability—ending (a)-(b)	\$ 24,409,451	\$ 21,116,646	\$ 19,582,508	\$ <u>20,334,716</u>
Plan fiduciary net position as a percentage				
of the total OPEB liability	0.00%	1.93%	1.76%	1.79%
Covered payroll	\$6,716,423	\$6,901,690	\$6,903,700	\$5,394,332
Net OPEB liability as a percentage of covered payroll	363.43%	305.96%	283.65%	376.96%

Notes to Schedule:

Changes of benefit

terms: In the July 1, 2019 actuarial valuation, there were no changes to the benefit terms.

Changes of In the July 1, 2019 actuarial valuation, there were updates to various healthcare assumptions including the per capita claim costs assumption and healthcare trend assumptions.

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.



REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the MTA's Contributions to the OPEB Plan for the years ended December 31:

(\$ in thousands)	2021	2020	2019	2018	2017
Actuarially Determined Contribution Actual Employer Contribution (1) Contribution Deficiency (Excess)	N/A \$ 813,195 N/A	N/A \$ 391,529 N/A	N/A \$ 737,297 N/A	N/A \$ 691,122 N/A	\$ N/A 650,994 N/A
Covered Payroll	\$ 6,537,709	\$ 6,716,423	\$ 6,901,690	\$ 6,903,700	\$ 5,394,200
Actual Contribution as a Percentage of Covered Payroll	12.44%	5.83%	10.68%	10.01%	 12.07%

(1) Actual employer contribution includes the implicit rate of subsidy adjustment of \$52,933 and \$62,852 for the years ended December 31, 2021 and 2020, respectively.

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.





REQUIRED SUPPLEMENTARY **INFORMATION**

Notes to Schedule of the MTA's Contributions to the OPEB Plan:

Valuation date	July 1, 2019	July 1, 2019	July 1, 2017	July 1, 2017
Measurement date	December 31, 2020	December 31, 2019	December 31, 2018	December 31, 2017
	2.12%, net of	2.74%, net of	4.10%, net of	3.44%, net of
Discount rate	expenses	expenses	expenses	expenses
Inflation	2.25%	2.25%	2.50%	2.50%
Actuarial cost method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
	Level percentage of	Level percentage of	Level percentage of	Level percentage of
Amortization method	payroll	payroll	payroll	payroll
Normal cost increase factor	4.25%	4.50%	4.50%	4.50%
Investment rate of return	2.12%	5.75%	6.50%	6.50%
Salary increases	3%. Varies by years	3%. Varies by years		3%. Varies by years
	of service and differs	of service and differs	3%. Varies by years	of service and differs
	for members of the various pension	for members of the various pension	of service and differs for members of the	for members of the various pension
	plans.	plans.	various pension plans.	plans.

Note: This schedule is intended to show information for ten years. However, until a full 10-year trend has been compiled, information is presented only for the years for which the required supplementary information is available.

SUPPLEMENTARY INFORMATION

Master Page # 142 of 208 - Audit Committee Meeting 2/21/2023

Pension And Other Employee Benefit Trust Funds Combining Statement of Fiduciary Net Position as of December 31, 2021

	Pension Funds							ployee Benefit st Funds		
(\$ in thousands)	Defined Benefit Pension Plan		LIRR Company Plan for Additional Pensions		MaBSTOA Plan		Other Post- employment Benefit Plan		Total	
ASSETS:										
Cash	\$	24,495	\$	2,956	\$	11,821	\$	107	\$	39,379
Receivables:										
Employee loans		-		-		26,082		-		26,082
Participant and union contributions		-		(20)		-		-		(20)
Investment securities sold		-		139		5,532		-		5,671
Accrued interest and dividends		2,798		338		1,746		-		4,882
Other receivables		2,412		1,358						3,770
Total receivables		5,210		1,815		33,360		-		40,385
Investments at fair value:		5,739,559		773,997		3,630,953		-		10,144,509
Total assets	\$	5,769,264	\$	778,768	\$	3,676,134	\$	107	\$	10,224,273
LIABILITIES:										
Accounts payable and accrued liabilities	\$	6,471	\$	279	\$	1,565	\$	-	\$	8,315
Payable for investment securities purchased		8,155		984		5,620		-		14,759
Accrued benefits payable		-		-		50		24		74
Accrued postretirement death benefits (PRDB) payable		-		-		5,405		-		5,405
Accrued 55/25 Additional Members Contribution (AMC) payable		-		-		3,847		-		3,847
Other liabilities		1,509		182		1,296				2,987
Total liabilities		16,135		1,445		17,783		24		35,387
NET POSITION:										
Restricted for pensions		5,753,129		777,323		3,658,351		-		10,188,803
Restricted for postemployment benefits other than pensions		<u> </u>						83		83
Total net position		5,753,129		777,323		3,658,351		83		10,188,886
Total liabilities and net position	\$	5,769,264	\$	778,768	\$	3,676,134	\$	107	\$	10,224,273

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.

Other Employee





(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds Combining Statement of Fiduciary Net Position as of December 31, 2020

				Benefit Trust Funds Other Post- employment Benefit Plan					
(\$ in thousands)	Defined Benefit Pension Plan		LIRR Company Plan for Additional Pensions			MaBSTOA Plan		Total	
ASSETS:									
Cash	\$	10,702	\$	1,480	\$ 8,	076	\$ -	\$	20,258
Receivables:									
Employee loans		-		-	30,	744	-		30,744
Participant and union contributions		-		(6)		-	-		(6)
Investment securities sold		-		2,769	1,	902	-		4,671
Accrued interest and dividends		2,712		375	1,	351	-		4,438
Other receivables		21,687		97					21,784
Total receivables		24,399		3,235	33,	997	-		61,631
Investments at fair value:		4,980,355		755,908	3,273,	256	172		9,009,691
Total assets	\$	5,015,456	\$	760,623	\$ 3,315.	329	<u>\$ 172</u>	\$	9,091,580
LIABILITIES:									
Accounts payable and accrued liabilities	\$	5,461	\$	316	\$	-	\$ -	\$	5,777
Payable for investment securities purchased		3,921		542	4,	317	-		8,780
Accrued benefits payable		-		-		73	42		115
Accrued postretirement death benefits (PRDB) payable		-		-	4,	204	-		4,204
Accrued 55/25 Additional Members Contribution (AMC) payable		-		-	4,	643	-		4,643
Other liabilities		310		43					353
Total liabilities		9,692		901	13,	237	42		23,872
NET POSITION:									
Restricted for pensions		5,005,764		759,722	3,302.	092	-		9,067,578
Restricted for postemployment benefits other than pensions		-,,/0.			3,502,	_	130		130
Total net position		5,005,764		759,722	3,302,	092	130		9,067,708
Total liabilities and net position	\$	5,015,456	\$	760,623	\$ 3,315,	329	\$ 172	\$	9,091,580

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.



SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2021

the year chaca becomes 61, 2021			Pension Funds	Other Employee Benefit Trust Funds			
(\$ in thousands)		fined Benefit ension Plan	LIRR Additional Plan	MaBSTOA Plan	Other Post- employment Benefit Plan	Total	
ADDITIONS:		_					
Contributions:							
Employer contributions	\$	396,144	\$ 70,553	\$ 156,204	\$ 740,051	\$ 1,362,952	
Implicit rate subsidy contribution		-	-	-	52,933	52,933	
Member contributions		33,832	73	24,935		58,840	
Total contributions		429,976	70,626	181,139	792,984	1,474,725	
Investment income:							
Net (depreciation) / appreciation in fair value of investments		618,496	93,218	401,056	-	1,112,770	
Dividend income		64,476	8,131	42,762	-	115,369	
Interest income		10,895	1,361	8,197	-	20,453	
Less: Investment expenses		47,492	6,495	31,205	-	85,192	
Investment income, net		646,375	96,215	420,810	<u> </u>	1,163,400	
Total additions		1,076,351	166,841	601,949	792,984	2,638,125	
DEDUCTIONS:							
Benefit payments and withdrawals		324,999	148,630	243,251	740,051	1,456,931	
Implicit rate subsidy payments		-	-	-	52,933	52,933	
Transfer to other plans		474		-	-	474	
Distribution to participants		-	-	2,175	-	2,175	
Administrative expenses		3,513	610	264	47	4,434	
Total deductions		328,986	149,240	245,690	793,031	1,516,947	
Net increase (decrease) in fiduciary net position		747,365	17,601	356,259	(47)	1,121,178	
NET POSITION:							
Restricted for Benefits:							
Beginning of year		5,005,764	759,722	3,302,092	130	9,067,708	
End of year	\$	5,753,129	\$ 777,323	\$ 3,658,351	\$ 83	\$ 10,188,886	

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.

Other Employee



(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2020

	Pension Funds Benefit Trust Funds						_			
(\$ in thousands)	Defined Benefit Pension Plan		LIRR Additional Plan		MaBSTOA Plan		Other Post- employment Benefit Plan		Total	
ADDITIONS:										
Contributions:										
Employer contributions	\$	394,986	\$	68,723	\$	159,486	\$	317,899	\$	941,094
Implicit rate subsidy contribution		-		-		-		69,472		69,472
Member contributions		32,006		141		24,709				56,856
Total contributions		426,992		68,864		184,195		387,371		1,067,422
Investment income:										
Net appreciation/ (depreciation) in fair value of investments		76,041		366		40,738		(77,576)		39,569
Dividend income		44,575		1,648		29,752		734		76,709
Interest income		11,461		6,536		8,943		119		27,059
Less: Investment expenses		35,378		4,742		20,046		395		60,561
Investment income, net		96,699		3,808		59,387		(77,118)		82,776
Total additions		523,691		72,672		243,582		310,253		1,150,198
DEDUCTIONS:										
Benefit payments and withdrawals		293,603		152,924		237,931		655,269		1,339,727
Implicit rate subsidy payments		-		-		-		69,472		69,472
Transfer to other plans		233		(878)		-		-		(645)
Administrative expenses		3,660		612		244		209		4,725
Total deductions		297,496		152,658		238,175		724,950		1,413,279
Net increase (decrease) in fiduciary net position		226,195		(79,986)		5,407		(414,697)		(263,081)
NET POSITION:										
Restricted for Benefits:										
Beginning of year		4,779,569		839,708		3,296,685		414,827		9,330,789
End of year	\$	5,005,764	\$	759,722	\$	3,302,092	\$	130	\$	9,067,708

See Independent Auditor's Review Report and notes to the consolidated interim financial statements.





(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

SCHEDULE OF CONSOLIDATED RECONCILIATION BETWEEN FINANCIAL PLAN AND FINANCIAL STATEMENTS FOR THE PERIOD ENDED SEPTEMBER 30, 2022

Category		icial Plan ctual	Statement GAAP Actual	Variance
REVENUE:				
Farebox revenue	\$	2,930	\$ 2,931	\$ 1
Vehicle toll revenue	Ψ	1,743	1,743	-
Other operating revenue		400	461	61
Total revenue		5,073	5,135	62
OPERATING EXPENSES:				
Labor:				
Payroll		3,976	3,987	11
Overtime		843	847	4
Health and welfare		1,087	1,084	(3)
Pensions		984	1,009	25
Other fringe benefits		766	769	3
Postemployment benefits		554	564	10
Reimbursable overhead		(294)	(318)	(24)
Total labor expenses		7,916	7,942	26
Non-labor:				
Electric power		415	413	(2)
Fuel		213	212	(1)
Insurance		6	6	-
Claims		281	281	-
Paratransit service contracts		296	296	-
Maintenance and other operating contracts		551	520	(31)
Professional service contract		425	342	(83)
Pollution remediation project costs		1	1	-
Materials and supplies		406	406	-
Other business expenses		175	175	
Total non-labor expenses		2,769	2,652	(117)
Depreciation		2,255	2,405	150
Other Expenses Adjustment		10		(10)
Total operating expenses		12,950	12,999	49
NET OPERATING LOSS	\$	(7,877)	\$ (7,864)	\$ 13





(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

SCHEDULE OF CONSOLIDATED SUBSIDY ACCRUAL RECONCILIATION BETWEEN FINANCIAL PLAN AND FINANCIAL STATEMENTS FOR THE PERIOD ENDED SEPTEMBER 30, 2022 (\$ in millions)

Accrued Subsidies		Financial Plan Actual		Financial Statement GAAP Actual		Variance	
Mass transportation operating assistance	\$	1,207	\$	1,207	\$	-	{3}
Mass transit trust fund subsidies		379		443		64	{1}
Mortgage recording tax 1 and 2		516		525		9	{1}
MRT transfer				(4)		(4)	{1}
Urban tax		541		539		(2)	{1}
State and local operating assistance		236		278		42	{1}
Station maintenance		140		140		-	{1}
Connecticut Department of Transportation (CDOT)		180		182		2	{1}
Subsidy from New York City for MTA Bus and SIRTOA		463		389		(74)	{1}
Build American Bonds Subsidy		-		44		44	{1}
Mobility tax		1,610		1,720		110	{1}
Assistance Fund (For hire vehicle)		248		252		4	{1}
Real Property Transfer Tax Surcharge (Mansion Tax)		418		420		2	{1}
Internet Marketplace Tax		244		249		5	{1}
Transfer to Central Business District Capital Lockbox		(656)		-		656	{1}
Other non-operating income		7		6,143		6,136	{2}
Total accrued subsidies		5,533		12,527		6,994	
Net operating deficit before subsidies and debt service		(7,877)		(7,864)		13	
Debt Service		(2,243)		(1,601)		642	
Conversion to Cash basis: Pollution & Remediation		1				(1)	
Total net operating surplus/(deficit) before appropriations, grants and other receipts restricted for capital projects	<u>\$</u>	(4,586)	<u>\$</u>	3,062	<u>\$</u>	7,648	

^{1} The Financial Plan records on a cash basis while the Financial Statement records on an accrual basis.

^{2} The Financial Plan records do not include other non-operating income or changes in market value.

^{3} Timing of receipt in the Financial Plan.





(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

SCHEDULE OF FINANCIAL PLAN TO FINANCIAL STATEMENTS RECONCILIATION **RECONCILING ITEMS**

FOR THE PERIOD ENDED SEPTEMBER 30, 2022

(\$ in millions)

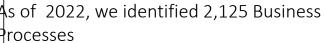
Financial Plan Actual Operating Loss at September 30, 2022	<u>\$</u>	(7,877)
The Financial Plan Actual Includes:		
1 Lower Other operating revenue		62
2 Lower labor expense primarily from lower payroll expense projections		(26)
3 Higher non-labor expense primarily from higher professional service contract expense		117
4 Other expense adjustments		(140)
Total operating reconciling items		13
Financial Statements Operating Loss at September 30, 2022		(7,864)
Financial Plan Deficit after Subsidies and Debt Service		(4,586)
The Audited Financial Statements Includes:		
1 Debt service bond principal payments		642
2 Adjustments for non-cash liabilities:		
Other non-cash liability adjustment	(1)	(1)
The Financial Statement includes:		
3 Higher subsidies and other non-operating revenues and expenses		6,994
4 Total operating reconciling items (from above)		13
Financial Statement Gain Before Capital Appropriations	<u>\$</u>	3,062

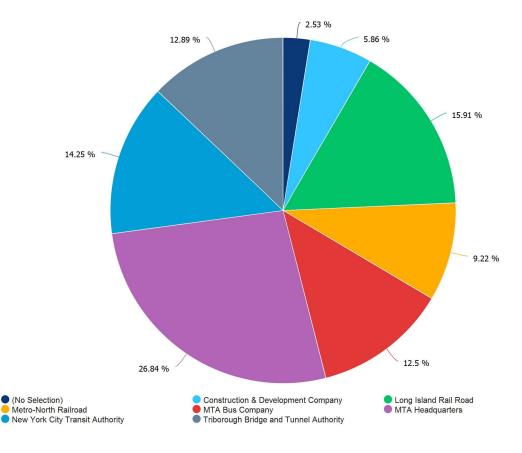
MTA CORPORATE COMPLIANCE

Enterprise Risk Management Status Report

Report to the Audit Committee February 2023

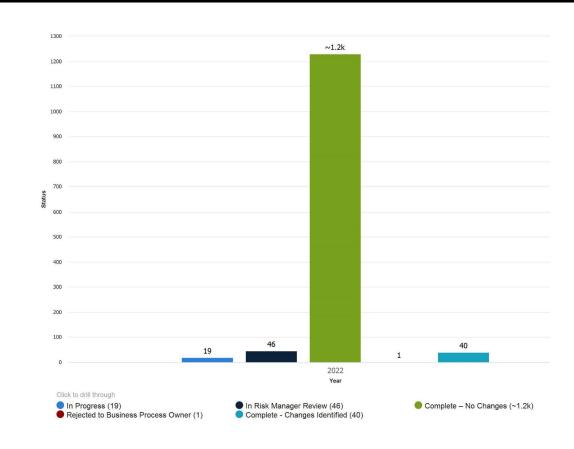
ERM: Business Processes by Risk Rating





ERM: Risk Assessments

e#151 of 208 - Audit We have completed 1,335 Risk
VA) Assessments
We heeting 2/21/2023

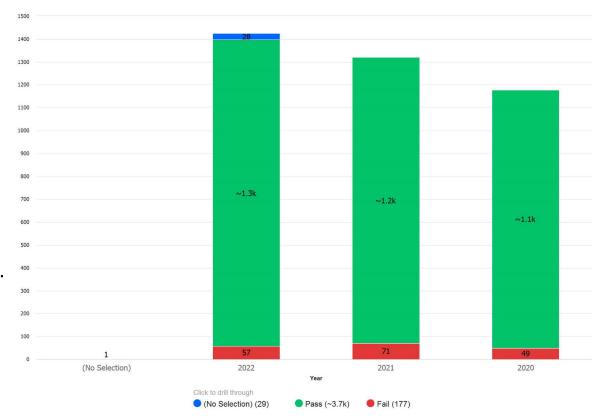


Control Self Assessments

2022, completed 1,425 Control Self Assessments.

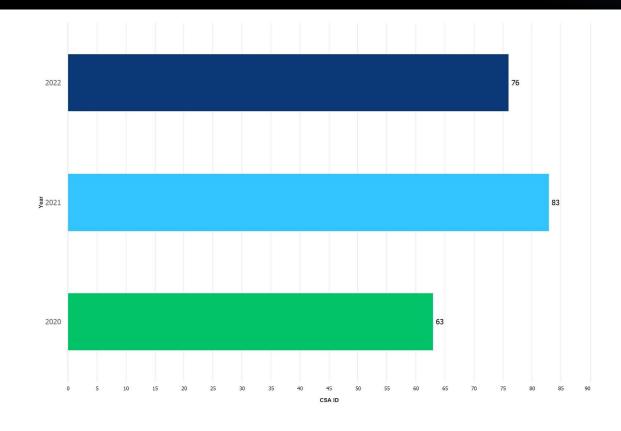
Solution 2022, completed 1,425 Control 28 elf Assessments.

Solution 2022, completed 1,425 Control 28 elf Assessments. iled and 28 are still under review.

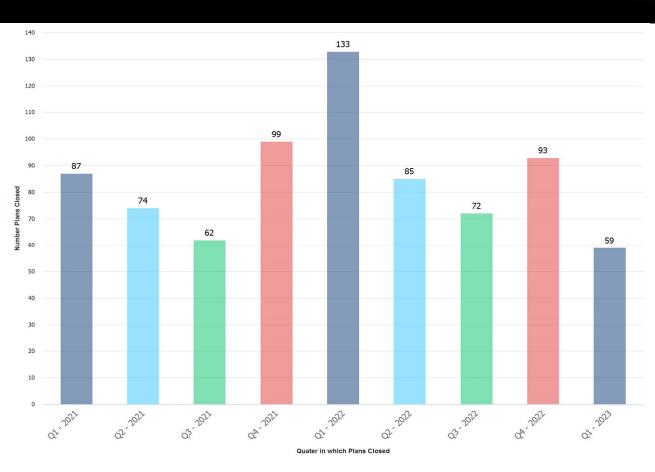


Deficiencies

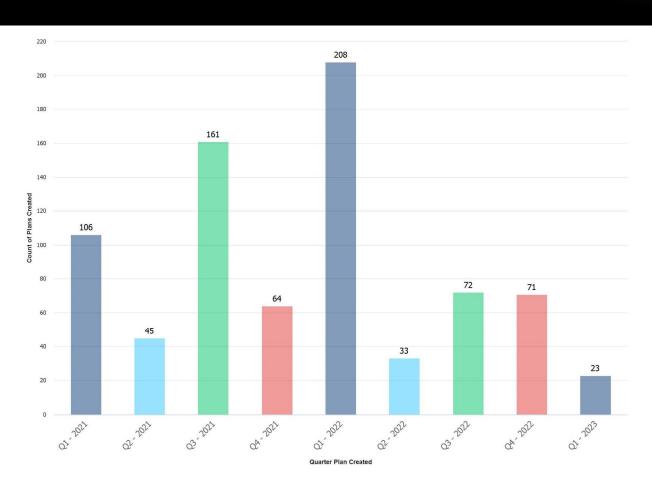
We have identified 76 deficiencies for 2022 as of this report which is consistent with prior years



Remediation Plans Closure Trending by Quarter



Remediation Plans Creation Trending by Quarter



ERM Risk Factors

Top Agency Risks

Risk Process

Cyber Security

Infrastructure and Equipment Maintenance Reputational

Safety - Employee and Customer

\$security

\$\succession Planning

Enterprise-Wide Risks

Risk Process

Cyber Security

Post Institutional Transformation

Reputational

Safety

Succession Planning



METROPOLITAN TRANSPORTATION AUTHORITY ENTERPRISE RISK MANAGEMENT AND INTERNAL CONTROL GUIDELINES

Pursuant to Public Authorities Law Section 2931 *Updated and Adopted by the Board on March 25, 2020*

These guidelines apply to the Metropolitan Transportation Authority ("MTA"), the New York City Transit Authority, the Long Island Rail Road Company, The Metro-North Commuter Railroad Company, Staten Island Rapid Transit Operating Authority, Manhattan and Bronx Surface Transit Operating Authority, MTA Construction & Development, MTA Bus Company, Triborough Bridge and Tunnel Authority, and to all future affiliated or subsidiary agencies of the MTA (each of which is referred to severally and together, as the "Authority").

Article I. Purpose of Guidelines

The purpose of these guidelines is to establish an effective system of internal controls for the Authority which complies with the requirements of the New York State Government Accountability, Audit and Internal Control Act of 1999 ("the Act") amending Public Authorities Law ("PAL") Sections 2930 through 2932, and is consistent with the Standards for Internal Control in New York State published by the Office of the State Comptroller ("Comptroller Standards"), Guidelines issued by the Independent Authority Budget Office ("IABO"), standards established by the U.S. Government Accountability Office (GAO), and the Commission of Sponsoring Organizations of the Treadway Commission ("COSO") standards.

Article II. Requirements of the Act

In compliance with the requirements of PAL Section 2931 the MTA Board is required to:

- 1. Establish and maintain for the Authority guidelines for a system of internal control that are in accordance with the Act and internal control standards;
- Establish and maintain for the MTA a system of internal controls and a
 program of internal control review. The program of internal review shall be
 designated to identify internal control weaknesses, identify actions that are
 needed to correct these weaknesses, monitor the implementation of the
 necessary corrective actions and periodically assess the adequacy of the
 Authority's ongoing internal controls;
- 3. Make available to each member, officer and employee a clear and concise statement of the generally applicable managerial policies and standards with which he or she is expected to comply. Such statement shall emphasize the importance of effective internal controls to the Authority and the responsibility of each member, officer and employee for effective internal control;

METROPOLITAN TRANSPORTATION AUTHORITY ENTERPRISE RISK MANAGEMENT/INTERNAL CONTROL GUIDELINES

Page 1 of 13

- 4. Designate an internal control officer who shall report to the head of the Authority to implement and review the internal control responsibilities established pursuant to this section; and
- 5. Implement education and training efforts to ensure that Board Members, officers and employees have achieved adequate awareness and understanding of internal control standards and, as appropriate, evaluation techniques.

Article III. Guidelines Maintenance

These guidelines are subject to annual review by the Audit Committee. In advance of submission of these guidelines for such review, the Enterprise Risk Management Committee ("the Committee" defined in Article IV(B)) shall be responsible for preparing any proposed revisions to the guidelines necessary to ensure that they continue to be in compliance with the Act and consistent with the Comptroller standards, IABO guidelines and COSO standards.

Article IV. Enterprise Risk Management and Internal Controls

Section A. Internal Controls

Internal control is a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance.

The definition emphasizes that internal control is:

- ➤ Geared to the achievement of objectives in one or more separate but overlapping categories operations, reporting, and compliance
- ➤ A process consisting of ongoing tasks and activities it is a means to an end, not an end in itself
- ➤ Effected by people it is not merely about policy and procedure manuals, systems, and forms, but about people and the actions they take at every level of an organization to effect internal control
- Able to provide only reasonable assurance, but not absolute assurance, to an entity's senior management and board of directors
- Adaptable to the entity structure flexible in application for the entire entity or for a particular subsidiary, division, operating unit, or business process

The Framework provides for three objectives, which allow Authority to focus on separate aspects of internal control:

Operations Objectives - These pertain to effectiveness and efficiency of the entity's operations, including operational and financial performance goals, and safeguarding assets against loss.

 $\label{thm:metropolitan} \mbox{ metropolitan transportation authority} \\ \mbox{ enterprise risk management/internal control guidelines}$

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Reporting Objectives - These pertain to internal and external financial and non-financial reporting and may encompass reliability, timeliness, transparency, or other terms as set forth by regulators, standard setters, or the Authority's policies.

Compliance Objectives - These pertain to adherence to laws and regulations to which the entity is subject.

A direct relationship exists between objectives, which are what an entity strives to achieve, components, which represent what is required to achieve the objectives, and Authority structure (the operating unit, legal entities, and other structure). Internal control consists of five interrelated components and seventeen principles. All components and principles are relevant in establishing an effective internal control system for the Authority. In order for the authority to have an effective internal control system, the components of internal control must be successfully designed, implemented, and functioning sufficiently. The principles represent the fundamental concepts which are associated with particular components within the system and apply to strategic, operating, reporting and compliance objectives. Below is a summary of each of the five components of internal control.

- 1. **Control Environment** The control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.
- 2. **Risk Assessment** Every entity faces a variety of risks from external and internal sources. Risk is defined as the possibility that an event will occur and adversely affect the achievement of objectives. Risk assessment involves a dynamic and iterative process for identifying and assessing risks to the achievement of objectives. Risks to the achievement of these objectives from across the entity are considered relative to established risk tolerances. Thus, risk assessment forms the basis for determining how risks will be managed.

A precondition to risk assessment is the establishment of objectives, linked at different levels of the entity. Management specifies objectives within

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categories relating to operations, reporting, and compliance with sufficient clarity to be able to identify and analyze risks to those objectives. Management also considers the suitability of the objectives for the entity. Risk assessment also requires management to consider the impact of possible changes in the external environment and within its own business model that may render internal control ineffective.

- 3. **Control Activities** Control activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities.
- 4. **Information and Communication** Information is necessary for the entity to carry out internal control responsibilities to support the achievement of its objectives. Management obtains, generates and uses relevant and quality information from both internal and external sources to support the functioning of other components of internal control. Communication is the continual, iterative process of providing, sharing, and obtaining necessary information. Internal communication is the means by which information is disseminated throughout the organization, flowing up, down, and across the entity. It enables personnel to receive a clear message from senior management that control responsibilities must be taken seriously. External communication is twofold: it enables inbound communication of relevant external information, and it provides information to external parties in response to requirements and expectations.
- 5. **Monitoring** Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to affect the principles within each component, is present and functioning.

Ongoing evaluations, built into business processes at different levels of the entity, provide timely information. Separate evaluations, conducted periodically, will vary in scope and frequency depending on assessment of risks, effectiveness of ongoing evaluations, and other management considerations. Findings are evaluated against criteria established by regulators, recognized standard-setting bodies or management and the board of directors, and deficiencies are communicated to management and the board of directors as appropriate.

The principles supporting the components of internal controls are listed below:

Control Environment

- 1. Demonstrates commitment to integrity and ethical values
- 2. Exercises oversight responsibility
- 3. Establishes structure, authority and responsibility
- 4. Demonstrates commitment to competence
- 5. Enforces accountability

Risk Assessment

- 6. Specifies suitable objectives
- 7. Identifies and analyzes risk
- 8. Assesses fraud risk
- 9. Manages risk during change

Control Activities

- 10. Selects and develops control activities
- 11. Selects and develops general controls over technology
- 12. Deploys controls through policies and procedures

Information and Communication

- 13. Uses relevant information
- 14. Communicates internally
- 15. Communicates externally

Monitoring

- 16. Conducts ongoing and/or separate evaluations
- 17. Evaluates and communicates deficiencies

In the event that management determines that a principle is not relevant, such determination should be at a minimum be supported with documentation and a rational of how, in the absence of that principle, the control is operating effectively.

Supporting each principle are points of focus, representing important characteristics associated with the principles. Point of focus are intended to provide helpful guidance to assist management in designing, implementing and conducting internal control and in assessing whether relevant principles are present and functioning.

Section B. Enterprise Risk Management

Enterprise risk management addresses more than internal controls. It also addresses other topics such as strategy-setting, governance, communicating with stakeholders and measuring performance. Its principles apply at all levels of the organization and across all functions.

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Enterprise Risk Management ("ERM") is defined as the culture, capabilities, and practices, integrated with strategy-setting and performance, that organizations rely on to manage risk in creating, preserving, and realizing value.

Enterprise risk management consists of five components and twenty principles. These components are:

- 1. **Governance & Culture** Governance sets the Authority's tone, reinforcing the importance of, and establishing oversight responsibilities for, enterprise risk management. Culture pertains to ethical values, desired behaviors, and understanding of risk in the entity.
- 2. **Strategy and Objective-Setting -** Enterprise risk management, strategy, and objective-setting work together in the strategic-planning process. A risk appetite is established and aligned with strategy; business objectives put strategy into practice while serving as a basis for identifying, assessing, and responding to risk.
- 3. **Performance** Risks that may impact the achievement of strategy and business objectives need to be identified and assessed. Risks are prioritized by severity in the context of risk appetite. The organization then selects risk responses and takes a portfolio view of the amount of risk it has assumed. The results of this process are reported to key risk stakeholders.
- 4. **Review and Revision** By reviewing entity performance, an organization can consider how well the enterprise risk management components are functioning over time and in light of substantial changes, and what revisions are needed.
- 5. **Information, Communication, and Reporting** Enterprise risk management requires a continual process of obtaining and sharing necessary information, from both internal and external sources, which flows up, down, and across the organization.

Enterprise Risk Management Principles

The five components are supported by a set of principles. These principles cover everything from governance to monitoring. These principles are:

Governance & Culture

- 1. Exercises board risk oversight
- 2. Establishes operating structures
- 3. Defines desired culture
- 4. Demonstrates commitment to core value
- 5. Attracts, develops, and retains capable individuals

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Strategy & Objective-Setting

- 6. Analyzes business context
- 7. Defines risk appetite
- 8. Evaluates alternative strategies
- 9. Formulates business objectives

Performance

- 10. Identifies risk
- 11. Assesses severity of risk
- 12. Prioritizes risks
- 13. Implements risk responses
- 14. Develops portfolio view

Review & Revision

- 15. Assesses substantial change
- 16. Reviews risk and performance
- 17. Pursues improvement in enterprise risk management

Information, Communication, & Reporting

- 18. Leverages information and technology
- 19. Communicates risk information
- 20. Reports on risk, culture, and performance

Section C. Enterprise Risk Management Committee

The Enterprise Risk Management Committee ("the Committee") has the authority and responsibility for ensuring compliance by the Authority with the Act, Comptroller Standards, IABO guidelines and COSO standards. In addition, the Committee has authority to oversee the ERM program as it relates to all MTA Business occur between multiple Agencies and may also:

- Advise on risk strategy,
- Assist with identifying risk appetite and tolerance
- > Oversee risk exposures
- > Review crisis management plans, and
- > Support the internal control program

Each Agency Risk Officer and other relevant MTA Staff may serve on the Committee, which is chaired by the MTA Chief Ethics, Risk and Compliance Officer. The Committee will meet as needed but generally not less than every quarter to review and suggest improvements to the ERM program.

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Section D. Vulnerability Assessments

Part 1. Components

Vulnerability (Risk) Assessments ("VA") is an analysis of potential threats to critical business functions. The VA identifies existing controls and controls need to be added or modified to manage risk. The VA also defines how often and when controls are to be tested. Each VA must at a minimum contain the following:

- Identification of key business processes
- Objectives of each business process
- Risks to those objectives
- Effect and likelihood (in the absence of controls) of risks occurring and an overall vulnerability rating
- > Controls in place to manage each risk to an acceptable level
- > Testing frequency (based on vulnerability rating)
- > Testing schedule (approximately when each control will be tested during a particular cycle)

Part 2. Controls

Controls will be classified as key, subordinate, secondary, or monitoring.

<u>Key Controls</u> – an internal control that is assessed by management that provides reasonable assurance that material errors will be prevented or detected in a timely manner and that without which the business process will break down.

<u>Subordinate Controls</u> – those internal controls that are utilized to supplement key controls. Subordinate controls can be compensating, mitigating or redundant as it relates to the key control.

<u>Secondary Controls</u> – those controls which are not key or subordinate controls.

<u>Monitoring Controls</u> - those controls that are not designed to mitigate risk but are designed to monitor non-critical business process risks.

Part 3. Assessing Risk Effect, Probability, and Overall Risk Rating

Risk within a business process is the probability that a hazard will adversely impact the business process, its objective, and/or related activities. Risk within a business process can be assessed by defining what negative event can reasonably occur (risk), evaluating the significance (effects) and estimating the likelihood that the event can happen (probability). When assessing the risk

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effect if the risk occurs the following categories should be used in determining level of significance.

Significance Rating	Evaluation Criteria
High (5)	Will cause a failure of the business process to meet its objectives, or cause objective failure in other activities, which will, in turn, cause or expose the Authority to significant financial losses, interruptions in operations, failure to comply with laws and regulations, major waste of resources, failure to achieve stated goals, etc.
Med High (4)	May cause a failure of the business process to meet a significant part of its objectives, or impact the objectives of other activities, which may, in turn, expose the Authority to unacceptable financial losses, reductions to or ineffectiveness of operations, non-compliance with laws and regulations, sizable waste of resources, etc.
Medium (3)	May cause a failure of the business process to meet part of its objectives, which may, in turn, expose the Authority to unacceptable financial losses, inefficient operations, non-compliance with laws and regulations, waste of resources, etc.
Medium Low (2)	May cause the business process, or other activities, not to meet part of its objectives which, may, in turn, expose the Authority to potentially unacceptable financial losses, less effective or efficient operations, some non-compliance with laws and regulations, waste of resources, etc.
Low (1)	Unlikely to cause the activity not to meet part of its objectives. If the activity does not meet part of its objective, this, in turn, may cause or expose the Authority to potentially unacceptable financial losses, less efficient operations, some non-compliance with laws and regulations, less efficient use of resources, etc.

When assessing the likelihood, the risk will occur the following categories should be used in determining level of likelihood.

Likelihood Rating	Evaluation Criteria (Assumes No Controls in Place)
High	Reasonable assumption that this risk will almost certainly occur
Medium High	Reasonable assumption that this risk will likely, but not certainly, occur
Medium	Reasonable assumption that this risk may occur
Medium Low	Reasonable assumption that this risk will likely not occur
Low	Reasonable assumption that this risk will not occur

Use the overall risk rating to identify the relative importance and required testing of each control. For ease of assessing, the impact of each risk multiply the numeric values associated with the significance rating and the likelihood rating to determine a relative overall risk rating to each risk: Effect x Probability = Vulnerability

Overall Risk Rating							
High	Medium High	Medium	Medium Low	Low			

Section E. Control Testing

The frequency of performing an internal control test is determined by the overall risk rating. Risks with very high or high overall risk rating are considered to be more critical than those in lower categories given that controls are used to manage risks to acceptable levels. Therefore, controls over high risk activities must be tested more frequently. The Authority's testing cycle is classified as follows:

Vulnerability	Control Test Cycle
High	Annually (Minimum)
Medium High	Not less than Every 2 years
Medium	Not less than Every 3 years
Medium Low	Not less than Every 4 years
Low	Not less than Every 5 years

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Each Business Process Owner along with Risk Manager is responsible for creating test instructions. Test instructions should contain at a minimum the standard which will be used to judge the control, the methods which will be utilized to test the control, the sample size and test period. In addition, the test instructions should include criteria for what constitutes passing versus failing of any given test.

Business Process Owners must maintain records, both electronic and paper, for each test. The records must include when the test was performed, by whom, what was tested, how it was done, scope (period of time covered), number of records reviewed, personnel involved, personnel interviewed, actions observed, errors found, conclusions and corrective action plans to be implemented. Records must be maintained at a minimum through at least one internal control review cycle (1-5 years) or as required by Authority's records retention policy.

The Committee shall establish standards for testing for the ERM business processes.

The Business Process Owners must provide proof of testing, including copies of all testing records at the request of the MTA Corporate Compliance, MTA Audit Services, or the MTA Inspector General Office. Failure to provide testing documentation must be reported to the Chief Compliance Officer and the Agency President.

Section F. Internal Control Review and Assessment

The Authority shall conduct an annual Internal Control Review and Assessment ("ICRA") which is an examination and evaluation of the Authority's system of internal controls to ascertain whether adequate controls exist to:

- Encourage adherence to Authority's policies and procedures
- > Promote operational efficiency and effectiveness
- Safeguard assets
- > Create and maintain a safe environment for employees and customers
- Ensure reliability of accounting data

The results of the ICRA, at a minimum, reaffirms that there is reasonable assurance that controls are functioning as intended.

Based upon the result of the ICRA, the Authority's shall complete, as part of its Annual Report, an annual assessment of the effectiveness of internal control structures and procedures. The assessment is a written statement from the MTA Chief Compliance Officer setting forth the Authority has conducted a formal, documented process to assess the effectiveness of its internal control structure and procedures, and indicating whether the internal controls are adequate.

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Section G. Certification and Summary Reports

The Chairman/Chief Executive Officer on behalf of the Authority shall complete a signed certification and summary report that the Authority's internal control program is compliant with the Act. In support of this certification, each Agency President shall also sign a certification and summary report that their Agency is compliant with the Act.

Section H. Corrective Action Plans

If any control should fail the Control Testing or ICRA process, described in Section D and E above, a corrective action plan must be initiated. The corrective action plans will at a minimum list the severity of the issue as either:

- Material Weakness
- Significant Deficiency
- Deficiency
- Documentation Only

This corrective action plan shall also include:

- > Actions to be undertaken
- > Persons responsible for those actions
- Resources required to complete the corrective action
- Date corrective actions were completed or date by which they are expected to be achieved

Article V. Generally Applicable Managerial Policies and Standards

The Chairman/Chief Executive Officer of the Authority, together with Agency Presidents shall prepare and disseminate annually a statement emphasizing the tone at the top, the importance of effective internal controls and the responsibility of each officer and employee for effective internal controls. This statement should list the name and contact number of the Risk Officer assigned to their respective Agency and any other individuals who can be contacted for further information on internal controls.

Managerial policies and procedures for the performance of specific functions shall be articulated in administrative manuals, employee handbooks, job descriptions and applicable policy and procedure manuals. While it is not necessary for all employees to possess all manuals, employees should be provided with, or have access to, applicable policies and procedures for their position.

Each Agency shall establish procedures for policy lifecycle management, including but not limited to the creation, approval, maintenance, storage, monitoring and review of Agency specific policies and procedures. MTA Corporate Compliance shall establish procedures for all agency policy lifecycle management, including but not limited to the creation,

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approval, maintenance, storage, monitoring and review of All Agency Policy Directives and Guidelines.

Article VI. Designation of an Internal Control Officer

The MTA Chief Compliance Officer shall serve as Internal Control Officer for the Authority and shall report to the Chairman and Chief Executive Officer of the Authority or his/her designee. The Chief Compliance Officer shall implement and review the internal control responsibilities established by these guidelines to ensure compliance by the Authority.

Article VII. Implementation of Education and Training Programs

Senior management and employees responsible for specific functions relating to the Authority's internal control program must attend recurring internal control training.

The training will utilize standardized material on Internal Controls developed by the Committee as well as the Office of the New York State Comptroller's Internal Control Guide-Compliance Road Map. Agencies may augment this guide, if necessary, to provide specialized instruction.

The Committee shall determine at a minimum which classification of employees should attend internal control training, including the method, content and frequency of such training.

Article VIII. MTA Audit Services

In order to maintain independence, MTA's Auditor General and MTA Audit Services shall not directly or indirectly manage the Authority's ERM/Internal Control program. MTA Audit Services shall evaluate the Authority's internal controls and operations, identify internal control weaknesses that have not been corrected and make recommendations to correct those weaknesses.

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MTA AUDIT SERVICES

2022 Year End Status

and

2023 Proposed Audit Plan

January 30, 2023



2022 Audit Plan Status

Financial/Operational/Technology

Projects Completed	77
Findings with Recommendations	123
Savings/Cost Efficiencies	\$ 19.2 M

Contracts

Projects Completed	723	
Pre-Award	14	
Overhead Reviews	572	
Contract Close-outs	110	
Claims	1	
\$ Audited	\$ 395.4	M
Questioned Costs	\$ 25.3	M



2022 - Significant Audits

	Cos	t Savings/		
Financial/Operational/Technology		Avoidance		
❖ Medical Eligibility	\$	6.7 M		
E-ZPass Customer Service Center	\$	2.1 M		
❖ Depot Audits	\$	1.6 M		
❖ Military Leave	\$	0.2 M		
Contracts (Capital)				
❖ Pre-Award Overhead Reviews (A/E Consultants)	\$	9.9 M		
Interim & Final Cost Audits	\$	7.7 M		
Cost Proposals (RFP's & AWO's)	\$	7.5 M		
❖ Impact Cost Claim Review	\$	0.2 M		



2022 – Sandy Audit Unit

Superstorm Sandy Audit Unit Recovery Oversight Audits (Since 2013)

Total Grant Expenditures \$3.94 Billion

Costs Audited \$536.4 Million

Projects/Recommendations 146/383

Follow-up Audits Completed 12

Total Cost Adjustments \$66.62 Million



2022 - Pension Support Program

Pension Quality Assurance Support Program:

- The Quality Assurance (QA) group continued to review calculations for new retirees, Retroactive Wage Adjustments (RWA) and other calculation adjustments.
- Plans reviewed include the LIRR's Defined Benefit (DB) Open and Closed Pension Plan, MNR DB Pension Plan, MTA Police DB Pension Plan, and MTA Bus Plan.
- The Pension QA Group reviewed 1,580 pension files from January 2022 through December 2022.

QA Results

Errors with No Financial Impact	139
Errors Identified with Financial Impact	75
Total cost impact over the expected life of retiree	\$1.69



2022 - On Board Program

Railroad Onboard Revenue Program:

- MTA Audit Services perform observations onboard the LIRR and MNR trains to ensure that conductors are collecting the correct fare and they are in compliance with operating processes.
- Monthly reporting is provided to both agencies for: 1) fare not collected,
 2) incorrect fare collected,
 3) conductor not seen and,
 4) other special observation request results.

Revenue tests completed in 2022:

LIRR 2,687MNR 2,935



MTA Audit Services

2023 Audit Plan





Audit Plan Formulation

Perform Company Analysis

> Analyze strategies, financial indicators, and operational controls to identify the audit universe.

Develop Value Driver Analysis

Understand enterprise, business unit and functional strategies based on business risk factors and discussions with key management personnel.

Evaluate Enterprise Risk

Evaluate the enterprise risk using five main key indicators.

Prioritize Audits

Identify auditable activities / units, based on the results of the risk assessment.

Refine Audit Strategy

Using the IIA's risk assessment methodology, formulate audit plan and obtain Audit Committee approval.

September October November December January



Factors Used For 2023 Audit Plan

Financial Exposure

Nature of Operations

Control Activities

Previous Audit Results

Management Input



- Conducted 92 Interviews
- Received 151 Suggestions



2023 Audit Areas

Service Delivery

Stations Inspection & Maintenance
Station Signage/Cleaning
Bus Depot Operations
Shop Overhaul Program
Car Maintenance [RCMP]
Bridge & Tunnel Operations
Power
Facility Inspection & Maint.
Track Inspection & Maint.
Video/Camera Inspection & Maint.
Elevators & Escalators
Subway Car Cleaning

Finance

Command Center Operations

Timekeeping/Overtime
Accounts Payable
Pensions
Treasury/Investments
Payroll
Travel Requests
Settlement Payments
TA Receivables
Lien Payments
Workers Compensation
Internal Control Reviews

Procurement

Operating Contracts
Professional Services Contract
Materials Contract
P-Card Review
Permanently Assigned Vehicles
Repair & Return
Paratransit Carrier Service

Revenue

OMNY
Tolling/EZPass Revenue
Wireless Agreement
Railroads On-Board Revenue
Revenue & Subsidies
NTD External Reporting
MetroCard Fraud Mgmt./Refunds
Bus Revenue Processing
Fare Evasion
Commuter Railroad Ridership

Safety

Accident/Incident Reporting
Energy Management System
MTA Police – Comp Time
Workplace Violence/Safety Training
B&T Hazardous Waste Mgmt.
Petroleum Storage Tanks
Gate Guard Program

Capital Program

Superstorm Sandy
Prevailing Wages
Contract Management
Additional Work Orders
Third Party Contracts

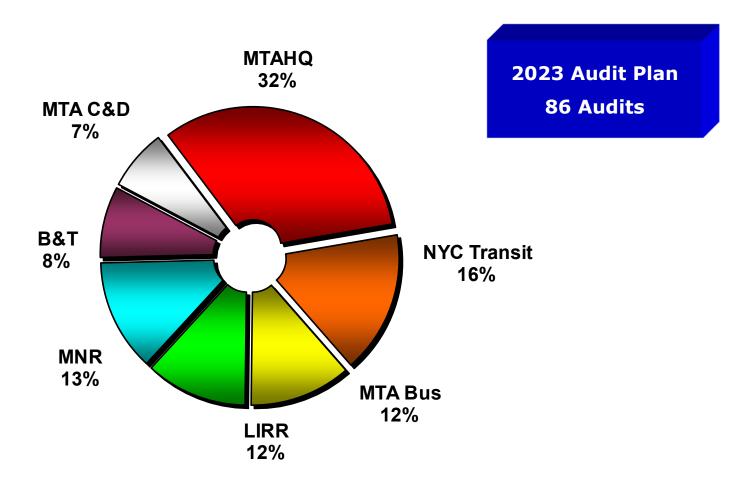
Human Resources

All-Agency Recruiting/Hiring
Teleworking
Health Benefits
Employee Availability
Employee Tuition & Membership Dues
Salary Adjustments/Compensation
Force Account Availability
FMLA
Personnel Actions

Technology

Network Reviews
Cybersecurity
Application Reviews/PeopleSoft Data
Operational Technology
System Implementations
Cloud Computing
Security over Sensitive and PII Data
IT Assets/Mobile Devices
Cloud Computing

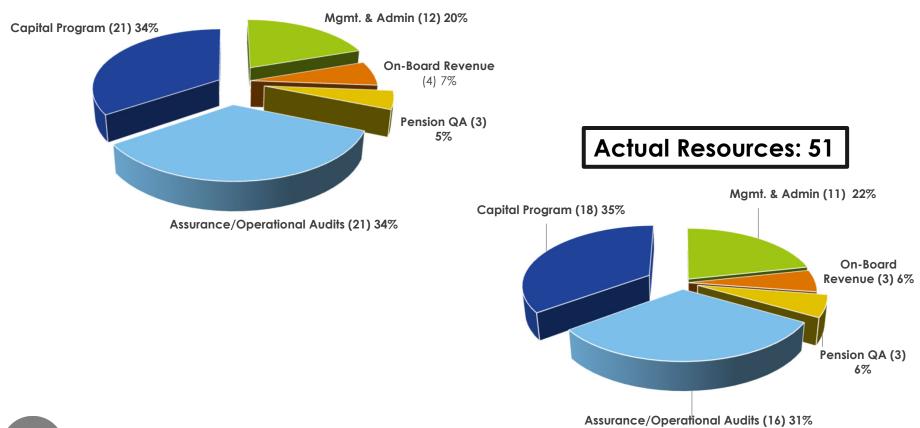
2023 **Agency Assurance Audit Allocation**





2023 **Audit Resource Allocation**

Budgeted Resources: 61





2023 Audit Strategy

- Support MTA Transformation
- Review Efficiency & Effectiveness of Operations
- Support Agency-wide Goals & Initiatives for Timekeeping and Overtime
- Evaluate Project Management Controls over Operating Contract and Capital Projects.
- Coordinate Audit Activities with Internal and External Parties



Looking Ahead

- Continue to coordinate audit activities with:
 - External Auditors
 - City/State Controller's Office
 - MTA Chief Compliance Office
 - MTA Inspector General Office
- Coordinate with the Office of Construction Oversight
- Work with Internal Control Staff to validate the implementation of recommendations and reduce the backlog of past due recommendations.



QUESTIONS?





MTA IT CTO Report

January 2023



Overview



IT consists of functional teams that drive our product-based focus and dynamic assignment of technical talent

Chief Technology Officer - Rafail Portnoy

Enterprise Product Management

Carolyn Ortega

The heart of MTA IT's product focus, a group of empowered, multifunctional teams focused on the end-to-end management of products from strategy to delivery

IT Infrastructure & Operations (maintenance)

Rick Ryan

Manage and optimize the day to day operation of networks, systems hardware and software, data centers, service desk, technical field support and vendor service management

IT Security Services

Tariq Habib

Protect
information
security, physical
security and cyber
physical systems.
Manage
cybersecurity
risks relating to
employees,
contractors,
consultants and
external suppliers
of information
services

Enterprise Strategy & Architecture

Murali Vivekenandam

Collaborate on the development of strategic planning, enterprise architecture and innovation.

Maintain and evolve the standards and information technology practices

IT Business Management

Office

Boris Mikhail

Plan & run the IT business to ensure that the necessary products & resources meet MTA requirements.
Provide an accurate & consistent accounting of IT services

... .. .

Abigail Amsterdam

IT Management Operations - Marge Ginsburg

IT Management

Services

Manage
communications
for IT products,
services, outages
and
emergencies.
Maintain IT
policies and
procedures

Client Services

John Boeck

Represent MTA
IT to all MTA
Agencies and
assure that IT is
aligned to
business needs.
Includes IT
involvement in
Capital
Programs



Major 2022 Accomplishments

MTA Consolidated TrainTime App

Buy tickets and plan your trip, all in one place

- Cross-Rail Trip Planning
- In-App Customer Service
- Real-Time Train Moveme
- Seat Availability Tracking
- Arrivals for Both Railroads
- Multi-Option Trip Planning
- Combo Tickets
- Grand Central Madison Support:
 - Push Notifications
 - Train Arrivals/Departures
 - Track Change Alerts
- iOS and Android



MTA TrainTime

Railroad tickets and trip

Metropolitan Transporta

#40 in Travel

★★★★ 4.8 • 9.9K Ratings

Free

Ratings & Reviews

4.9

***** *** 63,968 Ratings

Tap to Rate:



Write a Review

? App Support

Sort by Most Helpful ✓

Surprisingly, a really good app!

★★★★

over the

Oct 1

MTA's apps have been kind of all over the place. One app for train schedules and one for buying tickets. Both looked completely different from each other. It was a bit of a mess.

The new combined app is really nice more

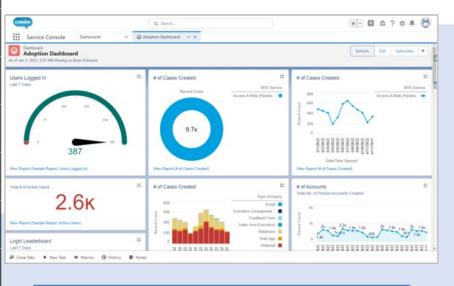
As of 9/8/22:

Over a million users 3M ticket activations 1.3M ticket payments

Developed by MTA IT in close partnership with MNR, LIRR and the Customer Service Departments

Cassie: MTA's next generation Customer Relationship Management platform

Developed in close partnership with agency customer service centers, Cassie is a Salesforce tool to help support MTA staff with responding to customers



Customers

Multi-channel **customer interface** platform that
enables lower-cost-toservice channels

- Phone Calls and IVR
- Web & Mobile Access
- Social Media and SMS Text
- · Email and Letters
- In-person

Managers

Rich reporting and monitoring aligns metrics to business goals and informed decisions

- Data quality and availability
- · Reporting interfaces
- Performance monitoring
- Strategic Big Picture Insights

IT team

Foundational IT platform to iterate upon to support the MTA's long-term transformation

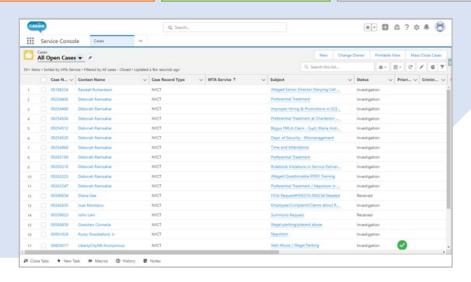
- Scalable Data Model
- Enhanced Security
- Reduction in TCO
- Reduction in Technical Debt

Agents

Unified **customer support service** experience connects staff to powerful admin tools Enhanced case and contact management promotes efficiency, quality and timeliness

- Customer
 Communications
- Transit Operations
- Railroad Operations
- Bridges and Tunnels
- Other

- Ease of access to info
- Enhanced case productivity and faster resolution
- Tracking
- Contact management



MTA Weekender provides fast and easy updates to weekend service changes



Twas the weekend of Christmas, and not a service change was stirring... well, almost!

This weekend, there's just one minor change to pervice on Christmas Eve (more on that below), and all subway lines are running on a regular Sunday schedule on Christmas Day. On Monday, December 26, the subway is running on a Sunday schedule. Bus riders should know that on Monday, December 26, buses in Staten Island will run on a Sunday schedule, and on a Saturday schedule in the rest of the boroughs.

For Long Island Rail Road and Metro-North riders heading out of the city, we're operating extra getaway trains on Friday, December 23. LIRR and Metro-North will operate on a regular weekend schedule on Christmas Eve. and Christmas Day. On Monday, December 26, LIRR

will operate on a weekday schedule, with off-peak fares in effect on all

Newsletter summarizes major service changes on Subways, LIRR and MNR

- Launched September 2022
- Informs customers about major weekend service changes, including travel alternatives for affected routes or stops
- Sent every Friday
- Helps customers navigate the transit system with certainty every weekend

We worked closely with Paratransit to enhance the MyMTA App for our riders

Additional Information and Prider-friendly language

Planned pick-up times are now more obvious

Additional valuable trip detail information for riders and customer service employees

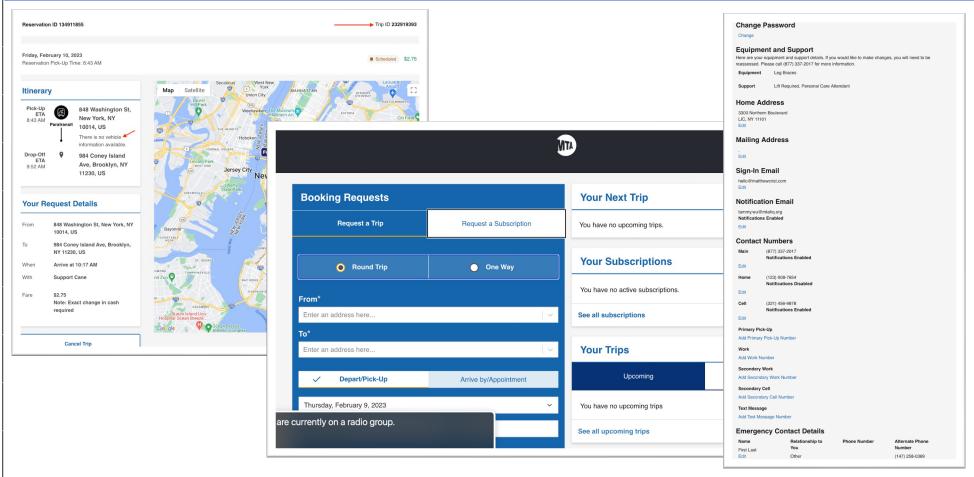
Accessibility Improvements

Screen reader enhancements for blind and limited mobility riders

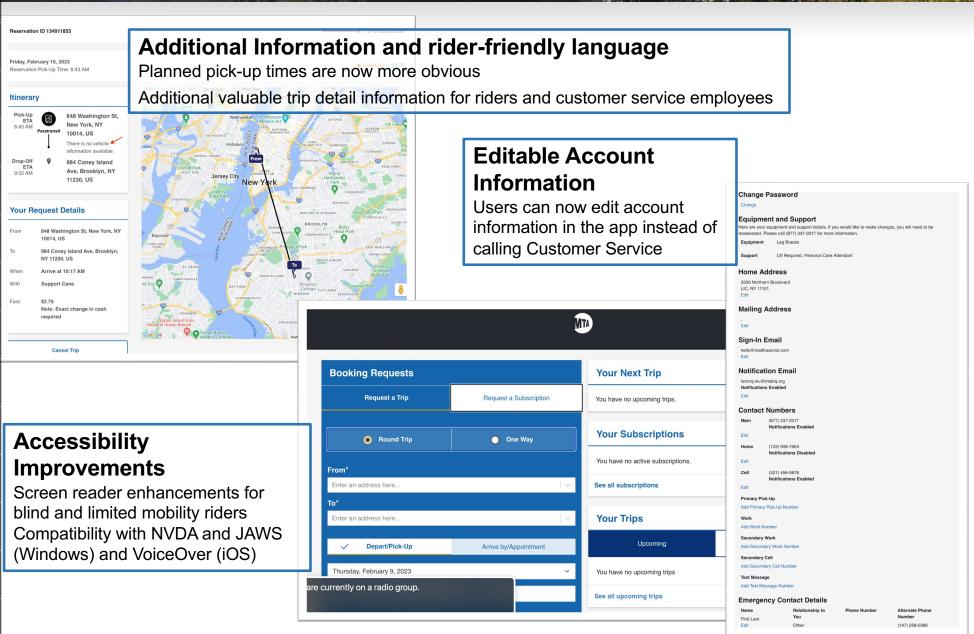
Compatibility with NVDA and JAWS (Windows) and VoiceOver (iOS)

Editable Account Information

Users can now edit account information in the app instead of calling Customer Service



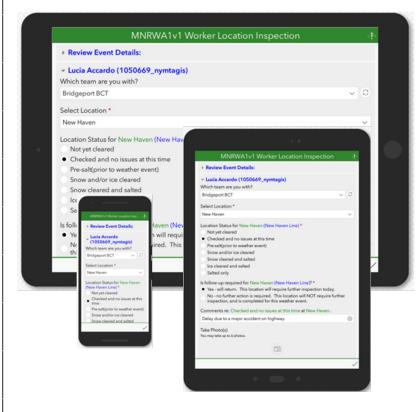
We worked closely with Paratransit to enhance the MyMTA App for our riders



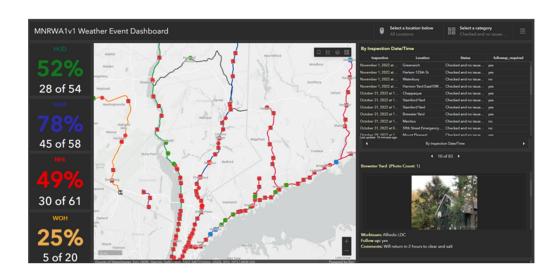
MNR Weather App improves our ability to manage during snow events

IT partnered with Metro North to create a platform that replaces manual winter weather event workflows with an easy-to-use, robust field data collection solution. It will save time, reduce errors, improve reporting and executive decision making

Smartphone, Tablet, Laptop, Desktop



Comprehensive Dashboard



In close partnership with NYCTA, we continue to enhance the popular Subway Cleaning App

Stations Disinfecting Tracking System

Automated tracking of 472 stations

Reduces the administrative tracking burden in the field

Provides management with appropriate KPI's

Well received by field personal.

Car Cleaning Tracking System

Tracks the daily Subway Car Disinfection effort for all cars due to COVID-19 Pandemic

Robust data collection

Creates significant business value

Car Equipment and Stations Divisions benefit from rapid application development

Enables leaders to make decisions quickly through data collected by the field in near real-time



MTA IT continues to enhance our services to support efficient operations

We have worked in **close partnership across the agencies and departments** on new deployments and upgrades to improve our operations. Selected improvements include:

Partnership	Initiative	
C&D	 Completed EE2CS deployments for NYCT and LIRR 	
Customer Service Department	 upgraded and migrated call center services to the unified cloud-based technology (NYCT, LIRR, MNR) 	
LIRR & MNR	 delivered 25 Train Control / Transportation Support Application system upgrades, updates, consolidations and refreshes 	
NYCT	 developed Building Entry Tracking System (BETS) continued SOGR upgrades to Automated Train Supervision system – A subdivision (ATS-A) delivered updates to Public Announcement Customer Information System (PACIS II) 	
NYCT / C&D	 delivered upgrades to Communications Based Train Control (CBTC) Flushing system delivered major enhancements to Unified General Order System/Track Access Mgt System (UGOS/TAMS) 	
People Department	 processed >6400 onboarding requests – highest ever 	



2023 Vision and Initiatives

End State Vision - Sustainable Technology Operations

Delivering

Lifecycle Management

Perpetual Renewal

- On-going perpetual consolidation, modernization, and standardization (CMS) process to maintain MTA technology portfolio in a state of good repair (SOGR)
- Obsolescence and unchecked growth in complexity of technology portfolio are eliminated by design, over time
- Lifecycle Management enables centralized portfolio decision-making, standardizes lifecycle management across MTA, and integrates with Capital Program's Design & Build project lifecycle
- Consolidation, modernization, and standardization activities are built-in into the lifecycle processes bydesign

What are the key attributes of sustainable technology operations?

Reliable

Resilient

Secure

Efficient

Agile

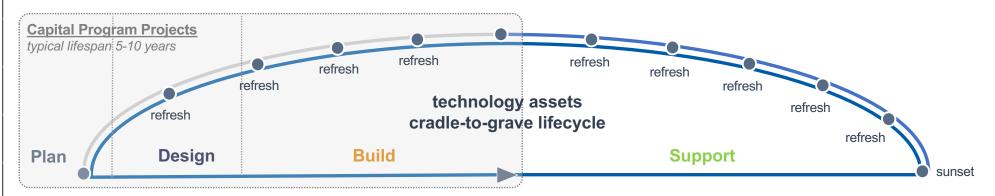
Next

We are integrating IT services into C&D Capital Project Lifecycle

Having visibility across all Capital Program Projects will ensure

- Consolidation of technology across the MTA Enterprise
- Standardization of technology across the MTA Enterprise
- A streamlined, more manageable technology portfolio is delivered

- Technology is refreshed over long duration projects to maintain modernization
- Economies of scale will be leveraged at both acquisitions and long-term support of the delivered technology



Audit Committee Meeting 2/21/202

IT involvement in Capital Program Planning has already yielded positive results

PURPOSE

• Improve integration with Capital Projects as part of the Design/Build and Design/Build processes

Project

Add IT value to capital projects planning from the start

OUTCOMES

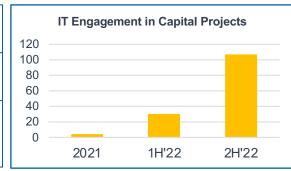
- IT fully integrated into capital projects cradle-to-grave lifecycle planning
- The accuracy of Capital Projects Design/Build and Design/Bid/Build approach improves
- The overall quality of Capital Projects bids and execution improves from IT's participation

C&D's Master Project List identifies 3314 projects* MTA IT has assessed an initial 200 projects

IT Capital Program Support is involved or is soon to be involved in major C&D projects:

IT Involvement

2021	Engaged in the 4 highest priority projects
1 st Half 2022	Engaged in 30 projects to evaluate
2 nd Half 2022	Engaged in 107 to evaluate Actively participating in >65 projects



Grand Central Madison	Yes
Penn Access	Yes
Rebuilding Penn Station	Yes
Third Track Project	Yes
LIRR Mainline Expansion	Pending
Next phase of 2nd Avenue Subway	Pending
ADA Accessibility Improvement	Yes

C&D Capital Project Lifecycle

Plan

Design

Build

Support

MTA's cybersecurity program aligns with Fed/NYS security mandates

The TSA, FTA, FCC and CISA, continue to issue more mandates

- The MTA is complying with the mandates, and continuing to implement the requirements
- Given the scale, scope and size of the MTA presents ongoing challenges as we remain current with the mandates
- TSA recently validated the MTA compliance with their security directives

The NYS Chamber requirement for the NYS critical infrastructure agencies

- NYS issued 6 detailed cybersecurity improvements for the Operational Technologies
- We are working closely with the NYS while we implement their recommendations

Innovative ways to help improve security within Operational Teams

The The MTA is continually working to improve security within our Operational Technologies areas

- In December, 25 operational employees from LIRR, MNR, NYCT, C&D successfully completed the 10-week cybersecurity training program
- The goal of the program is to train operational employees in cybersecurity
- The 2nd cohort of 15 MTA employees are currently attending the program

MTA IT continues to grow our partnerships and expand our capabilities

We are growing our collaborations with agency people departments, as well as forging a successful relationship with MTA's new Chief People Officer

RESOURCES

- Grow resources in **critical technology skill areas**, like Train Control and Operations systems, CBTC, PTC, and others
- Continued support in aligning compensation with the market to attract and retain the talent we need in leading technology areas
- Address our ability to maintain legacy environments
- Seek to expand the broad engineering skills required to support MTA operations
- Collaborate to evolve toward a sustainable technology state (IT/OT)

CONTINUED INVESTMENT

- Continue our effort for business-level integration with the agencies and C&D
- Focus on People-Process-Technology
- Strive to improve embracing of IT policies/practices by embedded IT teams to support increased cybersecurity and SOGR



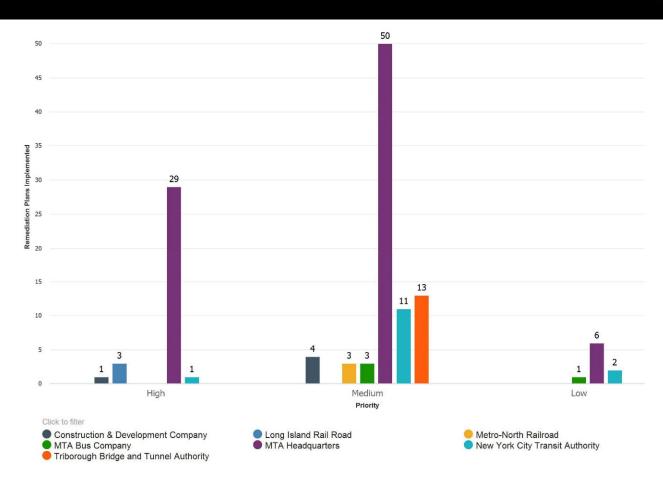
Questions?

MTA CORPORATE COMPLIANCE

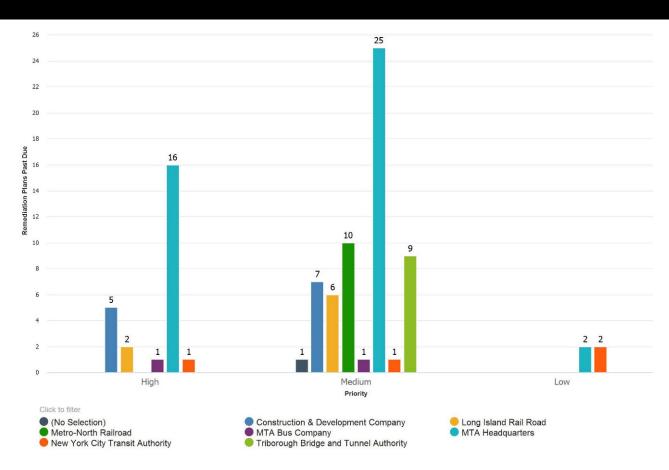
Remediation Plans Monitoring Six Months Past Due

Report to the Audit Committee February 2023

Remediation Plans Implemented Awaiting Closure By Agency & Priority



Remediation Plans Six Months Past Due by Agency & Priority



Remediation Plans Six Month Past Due which are High Priority By Business

