Metropolitan Transportation Authority

Audit Committee Meeting

July 2020

Committee Members

H. Mihaltses, Chair
D. Jones
R. Mujica, Jr.

Audit Committee Meeting

Wednesday, 7/22/2020
10:00 AM - 5:00 PM ET

MTA Board Room - 20th Floor
2 Broadway

MINUTES OF MEETING
AUDIT COMMITTEE OF THE BOARD
WEDNESDAY, MAY 20, 2020 – 10 A.M.
RONAN BOARD ROOM – 20TH FLOOR
2 BROADWAY

Because of the ongoing COVID-19 public health crisis, the MTA Chairman convened a one-day, virtual Board and Committee meeting session on May 20, 2020, which included the following committees:

- Long Island Rail Road and Metro-North Railroad;
- New York City Transit;
- MTA Bridges and Tunnels;
- Finance;
- Capital Program Oversight Committee;
- Audit;
- Diversity; and
- First Mutual Transportation Assurance Company.

To see a summary of the meeting and the actions taken by the Audit Committee, please refer to the May 20, 2020 Board minutes in the June Board Book available here on the Board materials website: https://new.mta.info/transparency/board-and-committee-meetings/june-2020.

MTA Chairman Foye introduced Acting Auditor General Michele Woods (AAG). The AAG stated that there is one item requiring a vote. The MTA public accounting firm (Deloitte) has completed their audit of the 2019 Financial Statements. Deloitte has provided a memo detailing the results and conclusions of their examination to the Audit Committee. Jill Strohmeyer from Deloitte was on the line to answer any questions. MTA management had reviewed the MTA's Consolidated Financial Statements for the Year Ended December 31, 2019, and indicated that the Financial Statements are complete, accurate and prepared in conformity with generally accepted accounting principles using the latest GASB accounting pronouncements. Noemi Lopez, the Acting MTA Comptroller was available to answer any questions. A motion was made and seconded to approve the audited 2019 year-end financial statements.

The remaining item on the Agenda did not require a vote. The General Counsels reported on Contingent Liabilities / 3rd Party Lawsuits in a call with Deloitte on May 19th to ensure all current information has been reflected in the financial statements. The General Counsels will update the Audit Committee as needed in a future brief. This concluded the May Work Plan for the Audit Committee.

Respectfully submitted,

Michele S Woods

Michele Woods
Acting Auditor General

Metropolitan Transportation Authority

2020 AUDIT COMMITTEE WORK PLAN

I. **RECURRING AGENDA ITEMS**	**Responsibility**
Each Meeting:	
Approval of Minutes	Committee Chair & Members
Audit Work Plan	Committee Chair & Members
As Appropriate:	
Pre-Approval of Audit and Non-Auditing Services	Committee Chair & Members
Follow-Up Items	Auditor General
Status of Audit Activities	Auditor General/MTA IG/ CCO/CFO/ Controllers/External Auditor/
Executive Sessions	Committee Chair & Members

II. SPECIFIC AGENDA ITEMS

January 2020

Quarterly Financial Statements – 3rd Quarter 2019	External Auditor/CFOs/Controllers
Pension Audits (2018)	External Auditor/Comptroller
Review of MTA/IG's Office (FY 2018)	External Auditor
Enterprise Risk Management Update and Internal Control Guidelines	Chief Compliance Officer
Compliance with the Internal Control Act	Chief Compliance Officer/Agency ICOs
2019 Audit Plan Status Report	Auditor General
2020 Audit Plan	Auditor General
DDCR Performance Measures	Chief Diversity Officer

May 2020

2019 Audited Financial Statements	External Auditor/CFOs/Controllers
Management's Review of Consolidated Financial Statements	Comptroller
Contingent Liabilities/Third Party Lawsuits (Executive Session)	General Counsels/External Auditor

July 2020

Quarterly Financial Statements – 1st Quarter 2020	External Auditor/CFOs
Pension Audits (2019)	External Auditor/Comptroller
Single Audit Report	External Auditor/CFOs

Investment Compliance Report	External Auditor
Review of MTA/IG's Office (FY 2019)	External Auditor
Management Letter Reports	External Auditor/CFOs/Controllers
Enterprise Risk Management Update	Chief Compliance Officer
Ethics and Compliance Program	Chief Compliance Officer
Financial Interest Reports	Chief Compliance Officer
MTAAS 2020 Audit Plan Status Report	Auditor General
DDCR Performance Measures	Chief Diversity Officer
Open Audit Recommendations	Agency ICOs/Chief Compliance Officer

<u>October 2020</u>

Quarterly Financial Statements – 2nd Quarter 2020	External Auditor/CFOs
Appointment of External Auditors	Committee Chair & Members
Audit Approach Plans/Coordination	External Auditor
Review of Audit Committee Charter	CCO and Committee Chair
Security of Sensitive Data & Systems (Executive Session)	Chief Information Officer
Open Audit Recommendations	Agency ICOs/Chief Compliance Officer
Annual Audit Committee Report	Committee Chair

2020 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

JANUARY 2020

Quarterly Financial Statements - 3rd Quarter 2019
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 2019.

Pension Audits

i Management's Review of MTA-Managed/Controlled Pension Plan Financial Statements
The MTA Comptroller will present a management's review of the 2018 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 firms 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.

Review of the MTA Inspector General's Office

Representatives of MTA's public accounting firm will provide the results of their 2018 "agreed-upon" review procedures on the MTA/IG's operating expenses to ensure compliance with applicable policies and procedures.

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 and Agency Internal Control Officers 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 2019/2020 Audit Plans

i. 2019 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 2019.

ii 2020 Audit Plan

A discussion by Audit Services of the areas scheduled to be reviewed in 2020 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.

DDCR Performance Measures

The MTA Chief Diversity Officer will brief the Committee on the status of the performance measures and compliance monitoring used by the Department of Diversity and Civil Rights in tracking critical tasks.

MAY 2020

2019 Financial Statements

The MTA public accounting firm will review the results and conclusions of their examination of the 2019 Financial Statements. The agency CFOs/Controllers 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 MTA Comptroller will present a management's review of the 2019 MTA consolidated financial statements, including changes in capital, net assets, other assets and operating revenues and expenses.

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 2020

Quarterly Financial Statements – 1st Quarter 2020
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 2020.

Pension Audits

i Management's Review of MTA-Managed/Controlled Pension Plan Financial Statements
The MTA Comptroller will present a management's review of the 2019 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 firms 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 State-mandated single audits of MTA and NYC Transit.

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.

Review of the MTA Inspector General's Office
Representatives of MTA's public accounting firm will provide the results of their 2019 "agreed-upon" review procedures on the MTA/IG's operating expenses to ensure compliance with applicable policies and procedures.

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.

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 2020 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.

DDCR Performance Measures
The MTA Chief Diversity Officer will brief the Committee on the status of the performance measures and compliance monitoring used by the Department of Diversity and Civil Rights in tracking critical tasks.

Open Audit Recommendations
The MTA Chief Compliance Officer and Agency Internal Control Officers will report to the Committee on the status of audit recommendations previously accepted by their respective agency.

OCTOBER 2020

Quarterly Financial Statements – 2nd Quarter 2020
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 2020.

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 2020 year-end 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 2020 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 Security Information 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 and Agency Internal Control Officers 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 2020. 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.

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Metropolitan Transportation Authority

(A Component Unit of the State of New York)

Independent Auditors’ Review Report

Interim Financial Statements as of and
for the Three-Month Period Ended March 31, 2020

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INDEPENDENT AUDITORS' REVIEW REPORT

To the Members of the Board of
Metropolitan Transportation Authority

Report on the Consolidated Interim Financial Information

We have reviewed the accompanying consolidated interim statement of the business-type activities of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, which include the consolidated interim statement of net position as of March 31, 2020, and the related consolidated interim statements of revenues, expenses and changes in net position and consolidated cash flows for the three-month periods ended March 31, 2020 and 2019 (the "interim financial information").

Management's Responsibility for the Interim Financial Information

MTA management is responsible for the preparation and fair presentation of the interim financial information in accordance with accounting principles generally accepted in the United States of America; this responsibility includes the design, implementation, and maintenance of internal control sufficient to provide a reasonable basis for the preparation and fair presentation of the interim financial information in accordance with accounting principles generally accepted in the United States of America.

Auditors' Responsibility

Our responsibility is to conduct our reviews in accordance with auditing standards generally accepted in the United States of America applicable to reviews of interim financial information. A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with auditing standards generally accepted in the United States of America, the objective of which is the expression of an opinion regarding the financial information. Accordingly, we do not express such an opinion.

Conclusion

Based on our reviews, we are not aware of any material modifications that should be made to the interim financial information referred to above for it to be in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

The MTA is a component unit of the State of New York. The MTA requires significant subsidies from and has material transactions with the City of New York, the State of New York, and the State of Connecticut, and depends on certain tax revenues that are economically sensitive. The accompanying interim financial information does not include any adjustments that might result from the outcome of this uncertainty. Our conclusion is not modified with respect to this matter.

As discussed in Note 16 to the financial statements, *Subsequent Events*, the novel coronavirus (COVID-19) outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant

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program proceeds to operating costs or other purposes to address COVID-19 impacts. Our conclusion is not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information on pages 6-21 and 104-118 as listed in the table of contents be presented to supplement the interim financial information. Such information, although not a part of the interim financial information, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the interim financial information in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, applicable to reviews of interim financial information. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

The supplementary information on pages 119-125 as listed in the table of contents is presented for the purpose of additional analysis and is not a required part of the interim financial information. These schedules are the responsibility of MTA's management and were derived from and relate directly to the underlying accounting and other records used to prepare the interim financial information. The supplementary information has been subjected to the review procedures applied in our review of the interim financial information. We are not aware of any material modifications that should be made to the supplementary information. We have not audited the supplementary information and do not express an opinion on such information.

Report on Consolidated Statement of Net Position of the Business-Type Activities of the MTA as of December 31, 2019 and Reports on the Financial Statements of the Fiduciary Activities of the MTA as of December 31, 2019 and 2018

We have previously audited, in accordance with auditing standards generally accepted in the United States of America, the business-type activities of the MTA, which include the consolidated statement of net position as of December 31, 2019, and the related consolidated statement of revenues, expenses and changes in net position and cash flows for the year then ended (not presented herein), and the fiduciary activities of the MTA, which include the statements of fiduciary net position as of December 31, 2019 and 2018, and the related statement of changes in fiduciary net position; and we expressed unmodified audit opinions on those financial statements of the business-type activities and fiduciary activities of the MTA in our reports dated May 29, 2020, which contains emphasis of matter paragraphs related to the significant subsidies the MTA receives from other governmental entities, the novel coronavirus (COVID-19), and the adoption of GASB 84; and also contains other matter paragraphs related to the inclusion of required supplementary information and supplementary information in the financial statements. In our opinion, the accompanying consolidated statement of net position of the business-type activities of the MTA as of December 31, 2019 and the statements of fiduciary net position and statements of changes in fiduciary net position of the fiduciary activities of the MTA as of December 31, 2019 and 2018, are consistent, in all material respects, with the audited financial statements of the business-type activities and fiduciary activities of the MTA from which it has been derived.

July 22, 2020

(A Component Unit of the State of New York)

MANAGEMENT'S DISCUSSION AND ANALYSIS

AS OF MARCH 31, 2020 AND DECEMBER 31, 2019 AND FOR THE THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ 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 Primary Government 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 Primary Government 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 Primary Government 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")
  - Thrift Plan for Employees of the MTA, its Subsidiaries and Affiliates ("401 (k) Plan")

The financial results of the Primary Government 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 March 31, 2020 and December 31, 2019 and for the three-month periods ended March 31, 2020 and 2019. 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 FINANCIAL INFORMATION AND CONDENSED CONSOLIDATED INTERIM FINANCIAL INFORMATION

The following sections discuss the significant changes in the MTA Group's financial position as of March 31, 2020 and December 31, 2019 and for the three-month periods ended March 31, 2020 and 2019. 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

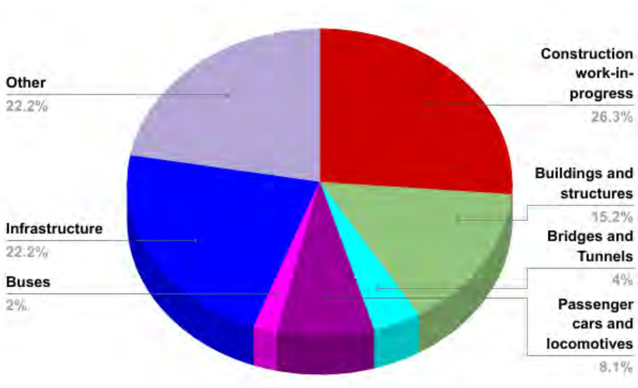
Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives.

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.

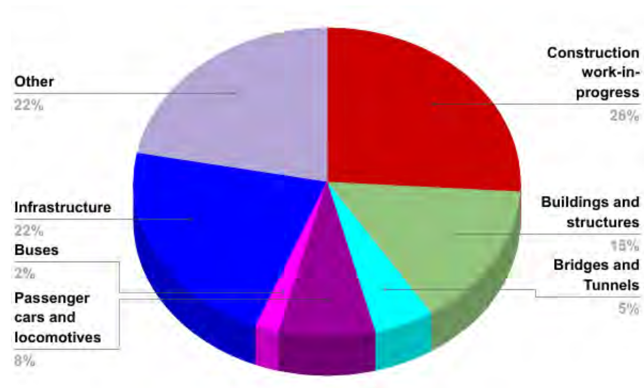
Deferred outflows of resources reflect: changes in fair market values of hedging derivative instruments that are determined to be effective, unamortized loss on refunding, deferred outflows from pension activities, and deferred outflows from OPEB activities.

(In millions)	**March 31, 2020**	**December 31, 2019**	**Increase / (Decrease)**
	(Unaudited)		
Capital assets — net (see Note 6)	$ 77,584	$ 77,502	$ 82
Other assets	10,543	8,857	1,686
Total Assets	88,127	86,359	1,768
Deferred outflows of resources	5,346	5,300	46
Total assets and deferred outflows of resources	$ 93,473	$ 91,659	$ 1,814

Capital Assets, Net - March 31, 2020 (Unaudited)



Capital Assets, Net - December 31, 2019



Significant Changes in Assets and Deferred Outflows of Resources Include:

March 31, 2020 versus December 31, 2019

- Net capital assets increased at March 31, 2020 by $82 or 0.1%. There was an increase in construction in progress of $380, an increase in infrastructure of $229, an increase in other capital assets of $131, an increase in passenger cars and locomotives of $49, an increase in buildings and structures of $15, and an increase in bridges and tunnels of $3. This was offset by a decrease in buses of $3 due to disposal of buses and a net increase in accumulated depreciation of $722. 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.
    - The MTA Long Island Railroad is constructing a third track between Floral Park and Hicksville.
    - Improvements to MTA Long Island Railroad's road-assets, replacement of signal power lines, various right-of-way enhancements and upgrades of radio communications.
    - 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.
    - Continued improvements made to the East River Tunnel Fire and Life Safety project for 1st Avenue, Long Island City and construction of three Montauk bridges.
    - Continued passenger station rehabilitations 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 $1,686 or 19.0%. The major items contributing to this change include:
  - An increase in current and non-current receivables of $30 primarily due to an increase from State and regional mass transit tax of $115, an increase in Station Maintenance receivable of $43, an increase in other receivables of $14, a decrease in Federal and State grants for capital projects of $7, a decrease in Mortgage Recording tax of $11, a decrease in State and local operating assistance of $41, a decrease in other receivable from New York City and New York State of $59, and a net decrease in other current and non-current receivables of $24.
  - An increase in cash of $8 from net cash flow activities.
  - An increase in investments of $1,623 mainly due to the issuance of new debt.
  - A net increase in various other current and noncurrent assets of $25.
- Deferred outflows of resources increased by $46 or 0.9%. This increase was primarily due to a change in the fair value of derivative instruments of $113, an increase in deferred outflows related to other post-employment benefits of $13, a decrease in deferred outflows related to pensions of $7, and a decrease in deferred outflows for unamortized loss of $73.

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

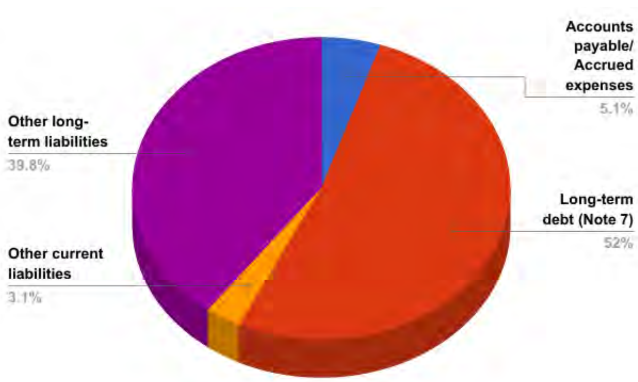
Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, capital lease obligations, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities.

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

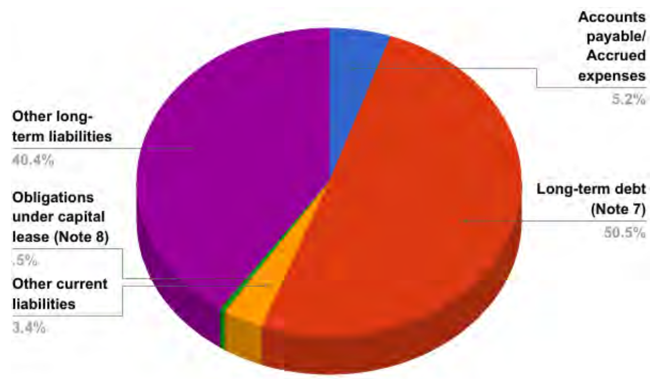
Deferred inflows of resources reflect unamortized gains on refunding, pension related deferred inflows, and deferred inflows from OPEB activities.

(In millions)	March 31, 2020 (Unaudited)	December 31, 2019	Increase / (Decrease)
Current liabilities	$ 7,628	$ 7,494	$ 134
Non-current liabilities	79,727	77,085	2,642
Total liabilities	87,355	84,579	2,776
Deferred inflows of resources	2,628	2,629	(1)
Total liabilities and deferred inflows of resources	$ 89,983	$ 87,208	$ 2,775

Total Liabilities - March 31, 2020 (Unaudited)



Total Liabilities - December 31, 2019



Significant Changes in Liabilities and Deferred Inflows of Resources Include:

March 31, 2020 versus December 31, 2019

- Current liabilities increased by $134 or 1.8%. The net increase in current liabilities was primarily due to an increase in accrued expenses $121 due to an increase in interest payable of $462, an increase in employee related accruals of $115, a decrease in capital accruals of $381, and a decrease in other and accrued expenses of $75. In addition, there was an increase in accounts payable due to vendors of $53, an increase in derivative fuel hedge liability of $37, an increase in unearned revenue of $10, a decrease current portion of long term debt of $75, a decrease in current portion of obligations under capital lease of $10, and a decrease in current portion of loan payable $2.
- Non-current liabilities increased by $2,642 or 3.4%. This increase was mainly due to:
  - An increase in the non-current portion of long-term debt of $2,471 primarily due to 2020 bond issuances (See Note 7).
  - An increase in estimated liability arising from injuries to persons (Note 10) of $104 due to revised calculations of the workers' compensation reserve.
  - An increase in derivative liabilities of $110 resulting mainly from changes in market valuation and a reduction in the notional amount of derivative contracts.
  - A decrease in obligations under capital leases of $13
  - A net decrease in other various non-current liabilities of $30.
- Deferred inflows of resources decreased by $1 or 0.0%, due to gain on refunding of debt of $1.

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

(In millions)	March 31, 2020 (Unaudited)	December 31, 2019	Increase / (Decrease)
Net investment in capital assets	$ 30,743	$ 31,147	$ (404)
Restricted for debt service	1,141	554	587
Restricted for claims	234	219	15
Restricted for other purposes	1,372	1,207	165
Unrestricted	(30,000)	(28,676)	(1,324)
Total Net Position	$ 3,490	$ 4,451	$ (961)

Significant Changes in Net Position Include:

March 31, 2020 versus December 31, 2019

At March 31, 2020, total net position decreased by $961 or 21.6%, when compared with December 31, 2019. This change is a result of net non-operating revenues of $1,047 and appropriations, grants and other receipts externally restricted for capital projects of $185 offset by operating losses of $2,193.

The net investment in capital assets decreased by $404 or 1.3%. Funds restricted for debt service, claims and other purposes increased by $767 or 38.7% in the aggregate, mainly due to scheduled debt service payments. Unrestricted net position decreased by $1,324 or 4.6%.

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

(In millions)	Three-Month Period Ended March 31, 2020 (Unaudited)	Three-Month Period Ended March 31, 2019 (Unaudited)	Increase / (Decrease)
Operating revenues			
Passenger and tolls	$ 1,790	$ 1,920	$ (130)
Other	146	166	(20)
Total operating revenues	1,936	2,086	(150)
Non-operating revenues			
Grants, appropriations and taxes	1,217	3,021	(1,804)
Other	245	239	6
Total non-operating revenues	1,462	3,260	(1,798)
Total revenues	3,398	5,346	(1,948)
Operating expenses			
Salaries and wages	1,579	1,573	6
Retirement and other employee benefits	865	754	111
Postemployment benefits other than pensions	162	144	18
Depreciation and amortization	739	706	33
Other expenses	784	830	(46)
Total operating expenses	4,129	4,007	122
Non-operating expenses			
Interest on long-term debt	414	329	85
Other net non-operating expenses	1	1	-
Total non-operating expenses	415	330	85
Total expenses	4,544	4,337	207
(Loss) / Gain before appropriations, grants and other receipts externally restricted for capital projects	(1,146)	1,009	(2,155)
Appropriations, grants and other receipts externally restricted for capital projects	185	381	(196)
Change in net position	(961)	1,390	(2,351)
Net position, beginning of period	4,451	3,953	498
Net position, end of period	$ 3,490	$ 5,343	$ (1,853)

Revenues and Expenses, by Major Source:

Period ended March 31, 2020 versus 2019

Total operating revenues decreased by $150 or 7.2%. The decrease was mainly due to the Stay At Home Executive Order issued by New York State governor in March in response to the COVID-19 pandemic. A decrease in fare revenue in toll revenue of $112 and $18 respectively. A decline in Other operating revenues of $20 when compared with the same period in 2019.

- Total non-operating revenues decreased by $1,798 or 55.2%.
  - Total grants, appropriations, and taxes decreased by $1,804 primarily due to the timing of the budget approval. The New York State Budget for 2020-2021 was approved in April 2020 when compared to the New York State Budget for 2019-2020, which was approved in March 2019. There was a decrease in Mass Transportation operating assistance of $1,824, a decrease in operating assistance of $217, a decrease in Urban Tax of $31, a decrease in Mass Transportation Trust Fund from New York State of $12, an increase from New York City Assistance Fund of $106, an increase in Internet Sales Tax of $43, an increase in Mansion Tax of $69, an increase in Payroll Mobility Tax of $32, an increase in Mortgage Recording Tax subsidies of $25, and an increase in Aid Trust subsidies of $5.
  - Other non-operating revenues increased by $6 primarily due to an increase in operating subsidies from New York City of $57 for MTA Bus and MTA Staten Island Railway, an increase in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of $11, an increase in other net non-operating revenue of $62.
- Labor costs increased by $135 or 5.5%. The major changes within this category are:
  - Salaries, wages and overtime increased by $6 primarily due to increases in MTA New York City Transit to support various maintenance and cleaning services due to the COVID-19 pandemic.
  - Retirement and employee benefits increased by $111.
  - Postemployment benefits other than pensions increased by $18 based on changes in actual estimates. The 2019 financial results reflect accounting for OPEB under GASB 75.
- Non-labor operating costs decreased by $13 or 0.8%. The variance was primarily due to:
  - An increase in depreciation of $33 primarily due to assets placed in service in the current year.
  - A decrease in paratransit service contracts of $17 primarily due to higher paratransit taxi expenses.
  - An increase in claims arising from injuries to persons of $9 based on the most recent actuarial valuations.
  - A decrease in material and supplies by $4, mainly due to revised maintenance and repairs requirements for transit and commuter systems.
  - An increase in insurance of $1 primarily due to changes in insurance policy requirements.
  - A decrease in maintenance and other contracts by $4 due to changes in maintenance work requirements.
  - A decrease in professional service contracts of $3 due to changes in consulting services requirements.
  - A decrease in electric power of $14 and fuel of $6 due to changes in rates and consumption.
  - A net decrease in other various expenses of $8.
- Total net non-operating expenses increased by $85 or 25.8% due to an increase in interest on long-term debt of $85.
- Appropriations, grants and other receipts externally restricted for capital projects decreased by $196 or 51.4% 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 many different 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.

Preliminary MTA system-wide utilization in the first quarter of 2020 decreased substantially relative to 2019, with ridership down by 94.9 million trips (15.5%). The initial impact of social distancing from personal actions taken and Governor Cuomo's PAUSE Executive Order, effective March 22nd limiting non-essential activities due to the COVID-19 pandemic, resulted in a severe decline in the utilization of MTA services. MTA New York City Transit subway ridership declined by 61.7 million trips (15.2%), MTA New York City Transit bus declined by 20.6 million trips (15.2%), MTA Long Island Rail Road ridership declined by 4.1 million trips (19.5%), MTA Metro-North Railroad declined by 4.1 million trips (20.2%), MTA Bus declined by 4.3 million trips (14.7%), and MTA Staten Island Railway declined by 0.2 million trips (17.8%). Vehicle traffic at MTA Bridges and Tunnels facilities in the fourth quarter decreased by 7.0 million crossings (9.3%) compared with 2019 levels. The 2019 New York State Budget approved congestion pricing in Manhattan south of 60th Street, which is scheduled to go into effect in 2021—this will likely impact ridership and vehicle crossings once implemented.

Seasonally adjusted non-agricultural employment in New York City for the first quarter was higher in 2020 than in 2019 by 43.7 thousand jobs (0.9%). On a quarter-to-quarter basis, New York City employment lost 16.2 thousand jobs, the first quarterly decline after thirty-seventh consecutive quarterly increases—the prior decline occurred in the third quarter of 2010.

National economic growth, as measured by Real Gross Domestic Product ("RGDP"), decreased at an annualized rate of 5.0% in the first quarter of 2020, according to the most recent advance estimate released by the Bureau of Economic Analysis ("BEA"). The decrease in RGDP reflected the response to the spread of COVID-19, as governments issued "stay-at-home" orders in March. This led to rapid changes in demand, as businesses and schools switched to remote work or canceled operations, and consumers canceled, restricted, or redirected their spending. The BEA has noted that the full economic effects of the COVID-19 pandemic cannot be quantified in the GDP estimate for the first quarter of 2020, since impacts are generally embedded in source data and cannot be separately identified. The decrease in real GDP in the first quarter reflected negative contributions from personal consumption expenditures, private inventory investment, nonresidential fixed investment, and exports. This was partially offset by positive contributions from residential fixed investment, federal government spending, and state and local spending. Imports, which are a subtraction in GDP, decreased. The decrease in personal consumption expenditures reflected a decrease in services, led by health care as well as food services and accommodations. The decrease in private inventory investment was mainly in nondurable goods manufacturing, led by petroleum and coal products. The decrease in nonresidential fixed investment primarily reflected a decrease in equipment, led by transportation equipment. The decrease in exports primarily reflected a decrease in services, led by travel. In the fourth quarter of 2019, annualized RGDP increased 3.1 percent.

The New York City metropolitan area's price inflation, as measured by the Consumer Price Index for All Urban Consumers ("CPI-U"), was higher than the national average in the first quarter of 2020, with the metropolitan area index increasing 2.30% while the national index increased 2.12%, when compared with the first quarter of 2019. Regional prices for energy products remained unchanged (0.0%), while the national price of energy products increased 0.97%, both lower than changes for other items comprising the CPI-U; in the metropolitan area, the CPI-U exclusive of energy products increased by 2.43%, while nationally, inflation exclusive of energy products increased 2.18%. However, the spot price for New York Harbor conventional gasoline decreased by 14.1%, from an average price of $1.60 per gallon to an average price of $1.38 per gallon between the first quarters of 2019 and 2020.

The Federal Open Market Committee ("FOMC") lowered its target for the Federal Funds rate twice during the first quarter of 2020, by a half point on March 3, 2020 to the target range of 1.00% to 1.25%, followed by a full point decline on March 15, 2020 to a target range of 0.00% to 0.25%. The COVID-19 outbreak has harmed communities and disrupted economic activity throughout the world, affecting global financial conditions. The U.S. economy entered this challenging period on a strong footing, with the labor market remaining strong through February and with economic activity rising at a moderate rate. The effects of the COVID-19 pandemic will weigh on economic activity in the near term and pose risks to the economic outlook. The FOMC expects to maintain its current target range for the Federal Funds rate until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals. This action will help support economic activity, strong labor market conditions, and inflation returning to the FOMC's symmetric 2 percent objective. The Federal Reserve is committed to using its full range of tools to support the U.S. economy in this challenging time and to promote its maximum employment and price stability goals. The FOMC continues to take steps to support the flow of credit to households and businesses by addressing strains in the markets for Treasury securities and agency mortgage-backed securities. The Federal Reserve continues to purchase Treasury securities and agency mortgage-backed securities needed to support smooth market functioning and effective transmission of monetary policy to broader financial conditions. Additionally, the Open Market Desk continues to offer large-scale overnight and term repurchase agreement operations. The FOMC will continue to closely monitor market conditions, and will assess the appropriate pace of its securities at future FOMC meetings.

On March 27, 2020, President Trump signed the Coronavirus Aid, Relief, and Economic Security (CARES) Act to blunt the impact of the economic downturn set in motion by the COVID-19 pandemic by dedicating government funding to support large and small businesses, individuals and families, gig-economy workers and independent contractors, and hospitals. Key aspects of the CARES Act include a $367 billion loan and grant program for small businesses, of which $349 billion covers the Paycheck Protection Program (PPP), used for small businesses to maintain their payrolls; expansion of unemployment benefits to include people furloughed, gig-economy workers, and freelancers, with benefits increased by $600 per week for a period of four months; direct stimulus payments to families of $1,200 per adult and $500 per child for households earning up to $75,000 annually; over $130 billion to hospitals, health care systems, and health care providers; $500 billion fund for loans to corporations; cash grants of $25 billion for airlines, $4 billion for air cargo carriers, and $3 billion for airline contractors for payroll support; a ban on stock buybacks for large companies receiving government loans for one year beyond the term of assistance, and; $150 billion to state and local governments. At $2.3 trillion, the CARES Act dwarfs the next largest rescue package in U.S. history, the $831 billion 2009 Recovery Act.

For the MTA, the CARES Act has provided $4.0 billion in funding, which will assist in covering our current and anticipated operating losses, but only through early summer. With the aid of a detailed economic study led by McKinsey & Company, MTA projects the full 2020 financial impact of the COVID-19 pandemic to be between $7.0 billion and $8.5 billion. Included in that figure are reductions of between $1.6 billion and $1.8 billion in State and local taxes dedicated to MTA in 2020, including reductions from the Mortgage Recording Tax and the Urban Tax.

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 the number of real estate transactions and thereby impact receipts from the Mortgage Recording Tax ("MRT") and Urban Tax, two important sources of MTA revenue. Real estate transaction activity has also been severely affected by social distancing during the COVID-19 pandemic; it is important to note, however, that March 2020 transaction tax revenues reflect February 2020 activity. Mortgage Recording Tax collections for the first quarter of 2020 were higher than the first quarter of 2019 by $21.6 (19.1%); receipts in the first quarter of 2020 were $15.4 (12.9%) higher than receipts from the fourth quarter of 2019. Despite the overall recovery of MRT receipts that began in 2012 following the financial crisis, average monthly receipts in the first quarter of 2020 remain $18.7 (29.3%) lower than the monthly average for 2006, just prior to the steep decline in Mortgage Recording Tax revenues. MTA's Urban Tax receipts—which are based on 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 $74.4 (32.3%) lower in the first quarter of 2020 than receipts for the first quarter of 2019; receipts in the first quarter of 2020 were $2.6 (1.7%) higher than receipts from the fourth quarter of 2019. Average monthly receipts in the first quarter of 2020 were $21.7 (29.5%) lower than the monthly average for 2007, just prior to the steep decline in Urban Tax revenues following the 2008 financial crisis.

Results of Operations

MTA Bridges and Tunnels - For the period ended March 31, 2020, operating revenue decreased by $18 compared to the three months ended March 31, 2019. Paid traffic for the first quarter of 2020 totaled 68.8 million crossings, which was 7.0 million, or 9.3% lower than the first quarter of 2019. The decline is due to the Stay At Home Executive Order issued by the Governor in March in response to the COVID-19 pandemic. Traffic had been up 4.4% through February primarily due to relatively mild winter weather and the additional day for the 2020 leap year. Volume in March declined 30.7% on a year-to-year basis. Toll revenue through March 2020 totaled $434, which was $18, or 4.0%, less than the first quarter of 2019. The lower revenue was due to the reduced traffic volume in March.

MTA New York City Transit - For the period ended March 31, 2020, revenue from fares was $988, a decrease of $80, or 7.5%, compared to March 31, 2019. For the same comparative period, total operating expenses were higher by $120, or 4.6%, totaling $2,720 for the three months ended March 31, 2020.

MTA Long Island Rail Road – Total operating revenue for the period ended March 31, 2020 was $169, which was lower by $18, or 9.6%, compared to March 31, 2019. For the same comparative period, operating expenses were higher by $11, or 2.3%, totaling $486 for the three months ended March 31, 2020.

MTA Metro-North Railroad – For the three months ended March 31, 2020, operating revenues totaled $170, a decrease of $17, or 9.1%, compared to March 31, 2019. During the same period, operating expenses increased by $5, or 1.3%, to $385. For the three months ended March 31, 2020, fare revenue decreased by 9.8% to $156 compared to March 31, 2019. Passenger fares accounted for 91.8% and 92.1% of operating revenues in 2020 and 2019, 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 March 2016, the State appropriated $1.6 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 March 31, 2020 was $124 compared to $99 at March 31, 2019.

Capital Programs

At March 31, 2020, $1,563 had been committed and $47 had been expended for the 2020-2024 MTA Bridges and Tunnels Capital Program, $25,739 had been committed and $13,977 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and $28,365 had been committed and $25,018 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and $24,107 had been committed and $23,809 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.

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, $9,792 in MTA bonds, $3,327 in MTA Bridges and Tunnels bonds, $10,680 in Federal funds, $3,000 in State of New York funding, and $3,000 in City of New York funding.

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 Programs 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 Programs 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 March 31, 2020, the revised 2015-2019 Capital Programs provided $33,913 in capital expenditures, of which $16,742 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; $6,096 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; $7,520 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; $243 relates to Planning and Customer Service; $376 relates to MTA Bus Company initiatives; and $2,936 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 $8,474 in MTA bonds, $2,936 in MTA Bridges and Tunnels dedicated funds, $9,064 in State of New York funding, $7,445 in Federal funds, $2,667 in City of New York funding, $2,145 in pay-as-you-go ("PAYGO") capital, $959 from asset sale/leases, and $223 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.

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. In 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 March 31, 2020, the 2010-2014 MTA Capital provided $31,704 in capital expenditures, of which $11,365 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; $3,925 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; $254 relates to a multi-faceted security program including MTA Police Department; $223 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 $11,635 in MTA Bonds, $2,022 in MTA Bridges and Tunnels dedicated funds, $7,377 in Federal Funds, $132 in MTA Bus Federal and City Match, $719 from City Capital Funds, and $1,293 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), $18 in pay-as-you-go capital, supplemented, to the extent necessary, by external borrowing of up to $1,042 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 $23,717 in capital expenditures. By March 31, 2020, the 2005-2009 MTA Capital Programs budget increased by $692 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 $24,409 now provided in capital expenditures, $11,516 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; $3,727 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; $7,721 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.

The combined funding sources for the MTA Board-approved 2005–2009 MTA Capital Programs and 2005–2009 MTA Bridges and Tunnels Capital Program include $11,006 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, $7,827 in Federal Funds, $2,838 in City Capital Funds, and $1,288 from other sources.

CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS

The 2019 MTA November Financial Plan

The November Plan, which was approved by the Board in December 2019, projected cash balances of $11 in 2020 and $33 in 2021, with deficits of $212 in 2022 and $426 in 2023.

The 2020 MTA February Financial Plan

The February Financial Plan incorporates several significant changes to the 2020 Adopted Budget and 2020-2023 Financial Plan which was approved in December. This Plan reflects the approved settlement with Local 100 of the Transport Workers Union, which represents approximately 37,000 employees at MTA New York City Transit and MTA Bus. The agreement provides for annual wage increases of 2 percent retroactive to May 2019, 2.25 percent in May 2020, 2.5 percent in May 2021 and 2.75 percent in May 2022. Several contractual provisions, including changes in co-payments for emergency room visits and varying tiers of prescription medications, along with improvements in employee availability, result in an average annual net increase of 2.3 percent over the 48-month term of the contract. The November Financial Plan assumed annual 2 percent increases, and the February Plan reflects the net additional expense greater than the 2 percent assumption in the MTA New York City Transit and MTA Bus financial plans, totaling $91 over the Plan period.

The plan proposes to invest: (1) $40.8 billion in MTA New York City Transit's subway and bus equipment and infrastructure, (2) $5.7 billion for MTA Long Island Rail Road track upgrades, station accessibility, rolling stock, and signals and switches, (3) $4.7 billion for MTA Metro-North Railroad station improvements, including accessibility, and rolling stock, and (4) $0.3 billion in other capital projects.

The Fiscal Year 2021 New York State Executive Budget, released by Governor Cuomo in mid- January, includes provisions for additional Metropolitan Mass Transportation Operating Assistance (MMTOA) for the MTA totaling $755 over the Plan period, along with an improvement of $11 in projected Petroleum Business Tax receipts in 2020.

The Plan reflects debt service savings of $145 through the Plan period based on revised cash flow funding assumptions for MTA Bridges and Tunnels' 2020-2024 Capital Program. The February Plan also reflects a significant increase in debt issuance and debt service, but will not impact the MTA operating budget. Financial support for the 2020-2024 Capital Program will include $7.3 billion of bonds supported by Central Business District Tolling lockbox revenues, including Internet Marketplace Sales Tax and Mansion Tax receipts. Debt service is $742 over the Plan period, and will be paid directly from capital lockbox revenues. While this will result in increased debt service, MTA supported debt service will remain below 20 percent of operating revenue during the Plan period.

The 2020 February Plan includes important policy actions that were captured “below-the-line” in the November Plan. With Board approval secured, these items—which have no impact on the bottom line—are now included within the MTA baseline:

Fare Evasion Deterrence – a renewed emphasis to gain control of, and reduce, fare evasion and to address assaults on transit workers..

Improved Overtime Spending Controls – Constraints have been implemented to better utilize “controllable” overtime and ensure usage is fiscally responsible.

Additional Revenue Achieved from Fare Evasion Initiatives – Subway and bus fare evasion mitigation efforts to increase farebox revenue.

The 2020 February Plan also includes one November Plan “below-the-line” action that has been included within the MTA baseline, but reflects a re-estimate that has a fiscal impact on the bottom line:

Vacancy Savings – The MTA identified and eliminated non-represented Administrative positions that became vacant through the third quarter of 2019 and had not been filled due to MTA policy, which restricted new hiring. The November Plan estimated savings of $74 in 2020, $83 in 2021, $85 in 2022, and $87 in 2023.

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.

- ***Ridership and Traffic Update.*** As of June 22, 2020, ridership on MTA facilities continue to be dramatically below 2019 year-to-year levels. Compared to 2019 results, ridership is down 82 percent on the subways, 52 percent for combined MTA New York City Transit and MTA Bus ridership, 87 percent on MTA Metro-North Railroad, and 84 percent on MTA Long Island Rail Road. For the period from June 1, 2020 through June 24, 2020, crossings at MTA Bridges and Tunnels facilities are down by an estimated 32% compared to 2019. This data represents an improvement in preliminary results for the period from May 1, 2020 through May 31, 2020, which showed a decrease in traffic of approximately 49% compared to 2019.

- ***Federal Aid Status (CARES Act)***. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately $98 million in additional formula grant allocations to MTA for a CARES Act grant total of $4.009 billion. MTA is expected to exhaust all CARES Act funding by July 2020, with 73% of that federal grant having been drawn down to cover agency operating expenses, excluding costs directly attributable for responding to the COVID-19 pandemic. Through June 25, 2020, a total of $2.916 billion has been released to MTA for operating assistance that occurred from January 20, 2020 through May 31, 2020.

- ***Additional Federal Aid Status.*** On April 16, 2020, MTA Chairman and Chief Executive Officer Patrick J. Foye wrote to the New York State Congressional delegation, urging Congressional action to provide an additional $3.9 billion in Federal grant assistance “to stem the immediate hemorrhaging in the MTA’s 2020 operating budget”. Such aid would be supplemental to the approximately $4 billion contained and approved in the CARES Act, and was requested to be included in any upcoming new Congressional COVID-19 aid package. Such additional federal assistance, if approved, would be exclusive of any capital infrastructure stimulus funding to be considered by Congress and the Administration. The Health and Economic Recovery Omnibus Emergency Solutions Act (“HEROES” Act) passed the U.S. House of Representatives on May 25, 2020. The HEROES Act would provide an additional $3.9 billion in federal funding requested by MTA to cover the remaining estimated operating losses in 2020 only as documented in the McKinsey Report. McKinsey & Company was contracted by MTA to analyze the potential impact of the COVID-19 pandemic on MTA’s 2020 calendar year revenues. As of the date of this report, the U.S. Senate has not acted on the HEROES Act.

- ***Projected COVID-19 Pandemic Budgetary Impacts***. MTA management projects a $6.6 billion budget gap for MTA’s 2021 fiscal year (based upon the midpoint scenario of the McKinsey report). However, there are no provisions in the HEROES Act, or any other currently approved federal assistance, to assist with such projected losses anticipated in 2021. The following table reflects MTA’s projected COVID-19 pandemic impacts for 2020 and 2021:

	($ billions) 2020	2021	2-Year Total
2020 Adopted Budget			
Total Operating Expenses + Debt Service	$ 17.12	$ 17.41	$ 34.53
McKinsey COVID-19 Analysis			
Fare and Toll Revenue	$ (5.30)	$ (3.90)	$ (9.20)
Subsidies	(1.70)	(1.90)	(3.60)
Additional Expenses	(0.75)	(0.75)	(1.50)
Total COVID-19 Loss	**$(7.75)**	**$(6.55)**	**$(14.30)**
Percent of Total Budget	**-45.30%**	**-37.60%**	**-41.40%**
Federal CARES Act	$4.00	$-	$4.00
Remaining Budget GAP	**$(3.75)**	**$(6.55)**	**$(10.30)**
Percent of Total Budget	**-21.90%**	**-37.60%**	**-29.80%**

Absent the billions in federal funding necessary for ensuring that the MTA system can function at pre-COVID-19 pandemic levels, management is considering any and all options to address such shortfall. That includes, but is not limited to, wage freezes, delaying starting new capital projects or reducing the scope of the historic 2020-2024 Capital Program, non-personnel expense reductions, reductions in workforce, fare and toll increases, service reductions and long-term deficit financing. Deficit financing would require additional resources to cover the debt service associated with such borrowing.

- ***Subway System Closure.*** On May 6, 2020, effective in the early morning, the MTA began its unprecedented closure of the subway system overnight from 1 – 5 a.m. for daily deep cleaning and a new "Essential Connector" service to continue moving the essential workers on the frontlines of the COVID-19 pandemic. During this overnight period, the MTA will intensify disinfecting operations, cleaning its fleet of thousands of cars and buses every night, and further testing new and innovative cleaning solutions. The MTA expects to spend approximately $500 million on direct COVID-19 pandemic -related expenses in 2020, primarily for MTA's round-the-clock sanitizing of public and employee areas.

Refer to Note 16, Subsequent Events, to the MTA's Consolidated Financial Statements for more information regarding the assessed impact from COVID-19 pandemic on the MTA's finances and operations.

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 $5.606 billion in FTA Emergency Relief Funding has been executed: seven repair/local priority resiliency grants totaling $4.552 billion and seventeen competitive resiliency grants totaling $1.054 billion. As of March 31, 2020, MTA has drawn down a total of $2.678 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.

In addition, MTA has submitted pending grant requests for the remaining FTA emergency relief allocation in Federal Fiscal Year 2020.

Labor Update

During the first quarter of 2020, the MTA Board approved several labor agreements that had been reached late in 2019. Significantly, the New York City Transit Authority/Manhattan and Bronx Surface Transit Operating Authority, together with the MTA Bus Company, settled on new terms with the Transport Workers Union, Local 100 (TWU Local 100). As a pattern-setting agreement covering the period May 16, 2019 to May 15, 2023, it establishes parameters for future agreements with almost all other MTA unions. Four other agreements were also passed by the MTA Board in the first quarter, and these all conformed to earlier bargaining patterns and to the expectations of the MTA Financial Plan. With these developments, the MTA was poised to begin a new round of collective bargaining, patterned on the TWU Local 100 deal, with nearly all of its represented employees. The following describes in greater detail the new agreements and the status of MTA's labor relations bargaining activity through March 31, 2020.

MTA Long Island Rail Road – MTA Long Island Rail Road has approximately 7,543 employees. Approximately 6,547 of the railroad's employees are represented by 12 different unions in 19 bargaining units. MTA Long Island Rail Road, having reached agreement with all its unions for the period from December 16, 2016 through April 16, 2019, is in position to begin a new round of collective bargaining, as all of its represented population is covered by agreements now considered amendable under the Railway Labor Act.

MTA Metro-North Railroad – In January 2020, the MTA Board approved new agreements between MTA Metro-North Railroad and two divisions of the Association of Commuter Rail Employees, Division 9 and Division 1 Yardmasters ("ACRE 9" and "ACRE 1-YM"). Like those reached with all other railroad unions at both MTA Metro-North Railroad (the only exception is MTA Metro-North's ACRE 166, the sole remaining bargaining unit at MTA Metro-North Railroad that has not yet reached an agreement. However, it too is expected to follow the TWU pattern) and MTA Long Island Rail Road, these follow the pattern established by the 2017-2019 labor agreement with TWU Local 100 operating employees: they are consistent with that agreement in terms of wage increases and overall net costs, and therefore align with Financial Plan expectations. The agreement with ACRE 9 covers approximately 440 Engineers and spans the 29.5-month period from January 16, 2017 through June 30, 2019, while the agreement with ACRE 1-YM covers approximately 48 Yardmasters and Assistant Yardmasters over the 31.5-month period January 16, 2017 through September 1, 2019. The 5.06% wage increases awarded in these agreements—implemented as two 2.5% raises thirteen months apart—have been a feature of all other railroad agreements corresponding to the 2017-2019 TWU round of bargaining. Together with the other employee benefits and employer savings provisions present, both agreements are expected to carry a going-out cost of 4.02% above base labor costs, precisely the same as the cost anticipated from the earlier TWU deal. With the passage of these agreements, only one other bargaining unit at MNR-ACRE Division 166, representing around 284 Signalmen—has not yet reached a new settlement with the railroad for the 2017-2019 round. MTA Metro-North Railroad's entire represented population of approximately 5,536 union members, is covered by agreements considered amendable under the Railway Labor Act.

MTA Headquarters – Labor agreements with MTA Police members of the Police Benevolent Association ("PBA") and of the Commanding Officers Association ("COA") expired in October 2018, and negotiations to establish new terms with these MTA Police unions, currently covering approximately 868 and 24 represented employees, respectively, or nearly half of MTA Headquarters' represented population, continued into the first quarter of 2020. Also by the end of the first quarter, MTA Headquarters' agreements with the Transportation Communications unions (TCU), currently representing approximately 841 employees who work at MTA Headquarters, had all expired. These include around 365 IT employees of TCU Local 982, whose agreement expired on December 31, 2019; and 258 Business Service Center, Pensions and Procurement employees, represented by TCU Local 643, whose agreement expired March 31, 2020.

MTA New York City Transit Authority/Manhattan and Bronx Surface Transit Operating Authority – In January 2020, the MTA Board approved a new labor agreement between MTA New York City Transit and its largest union, the Transport Workers Union Local 100 ("TWU Local 100") (MTA Bus Company was also a party to this agreement, as discussed below, and the figure of 38,000 members includes MTA Bus Company employees. Several months of negotiation had transpired before new terms were settled-- the previous agreement having expired in May 2019—and the new agreement will run for four years, from May 16, 2019 through May 15, 2023. Importantly for MTA as a whole, this agreement, which covers approximately 38,000 represented operating employees (this number includes TWU employees at NYCT/MaBSTOA and MTA Bus Company), is expected to set a bargaining pattern for the vast majority of the MTA's other unionized employees. In the past this has meant that negotiations with other unions, subsequent to a TWU accord, were oriented towards matching the same pattern of general wage increases and net going-out costs; and this is expected to be the case once again for almost all unions facing the corresponding round of bargaining. MTA financial planning will incorporate this expectation.

The TWU Local 100 agreement passed in January awards annual wage increases of 2.0%, 2.25%, 2.5% and 2.75%, effective each May 16, from 2019 to 2022, for a compounded total of 9.84%. These increases, together with other wage provisions, such as an increase in the Articulated Bus differential and the Maintainer bonus, will raise wage compensation to MTA New York City Transit/MaBSTOA TWU Local 100 employees by 10.0% over the four year term of the agreement. Among the significant non-wage provisions, the agreement will make these employees eligible for paid New York State family leave. Other provisions of the agreement, however, offset some of these costs, with savings achieved by changes to employee health care plans and additional savings from the institution of a program to improve employee availability. The total long-term net cost of the agreement is expected to be 9.43% above base (this figure is relative to the total base labor cost for both NYCT/MaBSTOA and MTA Bus Company). As estimated in the MTA 2020 Adopted Budget – February Financial Plan for 2020-2023, this cost will exceed earlier expectations for MTA New York City Transit and MTA Bus by $91 over the course of the Financial Plan period. The February Plan extrapolated a further unfavorable impact of $65 (compared with November expectations) for all other agencies should their unions follow the pattern going forward.

In the first quarter of 2020, the MTA also approved a labor agreement with approximately 160 Special Inspectors represented by the United Federation of Law Enforcement Officers. The terms of the previous agreement with this group had expired on November 30, 2018, and the new agreement will run the twenty-eight month period from December 1, 2018 through March 31, 2021. Like the vast majority of other labor agreements reached between the agencies of the MTA and their unions, this one also follows the pattern laid out in the 2017-2019 deal between MTA New York City Transit and TWU Local 100. It awards 5.06% wage increases, implemented as two separate increases of 2.5%; and together with the other costs and savings provisions, carries a net going-out cost of 4.02% higher than base. As such, the financial impact from this agreement has been fully anticipated by MTA New York City Transit and incorporated into the MTA Financial Plan.

The new TWU Local 100 agreement establishes a collective bargaining pattern for most of the remaining represented population at MTA New York City Transit. MTA New York City Transit employs approximately 41,375 people, 39,837 of whom are represented by 12 unions with 19 bargaining units.

MTA Bus Company – MTA Bus Company has 4,067 employees (full and part time), approximately 3,856 of whom are represented by two different unions (four 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. As mentioned above, the previous agreement with TWU Local 100, including the employees MTA Bus Company, expired on May 15, 2019, and the new agreement will run from May 16, 2019 through May 15, 2023. The major provisions that apply to MTA Bus Company members of the union are, by and large, the same as those that cover MTA New York City Transit/MaBSTOA members, except for certain provisions at the departmental level that would be applicable only to one or another agency. The general wage increases are the same as for MTA New York City Transit and MaBSTOA members, and amount to a 9.84% rise over the four-year term. Together with a newly introduced $650 Maintainer Bonus, total wage compensation will increase for MTA Bus Company employees by 10.16% (slightly higher than the 10% for MTA New York City Transit/MaBSTA employees, for whom the bonus was increased to $650 from a higher initial base of $150). The long-term net cost of the agreement will be incorporated in the future financial planning of the MTA. By the end of the first quarter, MTA Bus Company's other collective bargaining units—ATU Local 1179 and ATU Local 1181 and TWU Local 106—all had expired labor agreements.

MTA Bridges and Tunnels – MTA Bridges and Tunnels has 1,256 employees, approximately 858 of whom were represented by three different labor unions (four bargaining units). In the first quarter, the MTA Board approved a new labor agreement with approximately 34 administrative and clerical employees represented by the American Federation of State, County and Municipal Employees, District Council 37, Local 1655 ("DC37 Local 1655). The new agreement will run from July 3, 2017 to May 25, 2021. Historically, agreements with this bargaining unit, like agreements with other DC 37 locals at MTA New York City Transit, grant the same economic provisions as those granted to New York City employees in the same titles; and the new agreement continues that practice. Accordingly, DC 37 Local 1655 employees at MTA Bridges and Tunnels will receive the same wage increases that were awarded in the City's agreement with DC 37 employees: a wage increase of 2.0%, effective September 26, 2017; a wage increase of 2.25%, effective September 26, 2018; and a wage increase of 3.0%, effective October 26, 2019. The agreement also contains other economic provisions in common with the City agreement in the form of increased contributions to four of the group's funds. Some of the cost of these contributions will be offset by a delay—compared with the City agreement—of two months, twenty-three days in the implementation of the wage increases. The net cost of the agreement, 7.95% over base labor costs at the end of 46.75 month term, is within MTA Financial Plan expectations.

In the first quarter, approximately 339 Maintainers, members of DC 37 Local 1931, remained under an effective labor agreement, which will expire in July 2020. The recent Memorandum of Understanding between the agency and the MTA Bridge and Tunnel Officers Benevolent Association ("BTOBA"), having been passed by the MTA Board in June 2019, expired in September, and its members remained without a successor agreement in the first quarter of 2020. Finally, negotiations with the Superior Officers Benevolent Association ("SOBA") representing 149 supervisory officers, which expired March 14, 2012, have advanced to mediation. SOBA is ineligible to seek binding interest arbitration.

MTA Staten Island Railway – During the first quarter of 2020, MTA Staten Island Railway had 347 employees, approximately 321 of whom were represented by four different unions. In the first quarter, labor agreements with all the railway's unions had already expired, and new terms have not yet been reached with any of these groups.

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(A Component Unit of the State of New York)

CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF MARCH 31, 2020 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	**December 31, 2019**
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES		
CURRENT ASSETS:		
Cash unrestricted (Note 3)	$ 244	$ 305
Cash restricted (Note 3)	318	249
Unrestricted investments (Note 3)	2,632	3,304
Restricted investments (Note 3)	4,414	2,167
Restricted investments held under capital lease obligations (Notes 3 and 8)	99	107
Receivables:		
Station maintenance, operation, and use assessments	161	118
State and regional mass transit taxes	257	142
Mortgage Recording Tax receivable	38	49
State and local operating assistance	5	46
Other receivable from New York City and New York State	169	228
Due from Build America Bonds	3	1
Capital project receivable from federal and state government	18	25
Other	463	449
Less allowance for doubtful accounts	(226)	(200)
Total receivables — net	888	858
Materials and supplies	699	659
Prepaid expenses and other current assets (Note 2)	148	155
Total current assets	9,442	7,804
NON-CURRENT ASSETS:		
Capital assets (Note 6):		
Land and construction work-in-progress	20,761	20,381
Other capital assets (net of accumulated depreciation)	56,823	57,121
Unrestricted investments (Note 3)	89	66
Restricted investments (Note 3)	671	641
Restricted investments held under capital lease obligations (Notes 3 and 8)	292	289
Other non-current receivables	30	31
Receivable from New York State	10	10
Other non-current assets	9	16
Total non-current assets	78,685	78,555
TOTAL ASSETS	88,127	86,359
DEFERRED OUTFLOWS OF RESOURCES:		
Accumulated decreases in fair value of derivative instruments (Note 7)	532	419
Loss on debt refunding (Note 7)	928	1,001
Deferred outflows related to pensions (Note 4)	2,336	2,343
Deferred outflows related to OPEB (Note 5)	1,550	1,537
TOTAL DEFERRED OUTFLOWS OF RESOURCES	5,346	5,300
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	$ 93,473	$ 91,659

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

(Continued)

(A Component Unit of the State of New York)

CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF MARCH 31, 2020 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	**December 31, 2019**
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION		
CURRENT LIABILITIES:		
Accounts payable	$ 496	$ 443
Accrued expenses:		
Interest	749	287
Salaries, wages and payroll taxes	445	350
Vacation and sick pay benefits	1,054	1,040
Current portion — retirement and death benefits	20	15
Current portion — estimated liability from injuries to persons (Note 10)	502	501
Capital accruals	503	884
Accrued expenses	426	491
Other	478	488
Total accrued expenses	4,177	4,056
Current portion — loan payable (Note 7)	14	16
Current portion — long-term debt (Note 7)	2,135	2,210
Current portion — obligations under capital lease (Note 8)	4	14
Current portion — pollution remediation projects (Note 12)	31	31
Derivative fuel hedge liability (Note 14)	38	1
Unearned revenues	733	723
Total current liabilities	7,628	7,494
NON-CURRENT LIABILITIES:		
Net pension liability (Note 4)	7,584	7,584
Estimated liability arising from injuries to persons (Note 10)	4,190	4,086
Post employment benefits other than pensions (Note 5)	19,582	19,582
Loan payable (Note 7)	105	108
Long-term debt (Note 7)	46,406	43,935
Obligations under capital leases (Note 8)	425	438
Pollution remediation projects (Note 12)	119	120
Contract retainage payable	409	430
Derivative liabilities (Note 7)	540	430
Other long-term liabilities	367	372
Total non-current liabilities	79,727	77,085
TOTAL LIABILITIES	87,355	84,579
DEFERRED INFLOWS OF RESOURCES:		
Gain on debt refunding	19	20
Deferred Inflows related to pensions (Note 4)	934	934
Deferred inflows related to OPEB (Note 5)	1,675	1,675
TOTAL DEFERRED INFLOWS OF RESOURCES	2,628	2,629
NET POSITION:		
Net investment in capital assets	30,743	31,147
Restricted for debt service	1,141	554
Restricted for claims	234	219
Restricted for other purposes (Note 2)	1,372	1,207
Unrestricted	(30,000)	(28,676)
TOTAL NET POSITION	3,490	4,451
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	$ 93,473	$ 91,659

See Independent Auditors' Review Report and notes to the consolidated interim financial statements. (Concluded)

(A Component Unit of the State of New York)

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

THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	**March 31, 2019 (Unaudited)**
OPERATING REVENUES:		
Fare revenue	$ 1,356	$ 1,468
Vehicle toll revenue	434	452
Rents, freight, and other revenue	146	166
Total operating revenues	1,936	2,086
OPERATING EXPENSES:		
Salaries and wages	1,579	1,573
Retirement and other employee benefits	865	754
Postemployment benefits other than pensions (Note 5)	162	144
Electric power	104	118
Fuel	40	46
Insurance	2	1
Claims	110	101
Paratransit service contracts	105	122
Maintenance and other operating contracts	138	142
Professional service contracts	91	94
Pollution remediation projects (Note 12)	1	3
Materials and supplies	149	153
Depreciation (Note 2)	739	706
Other	44	50
Total operating expenses	4,129	4,007
OPERATING LOSS	(2,193)	(1,921)
NON-OPERATING REVENUES (EXPENSES):		
Grants, appropriations and taxes:		
Tax-supported subsidies — NYS:		
Mass Transportation Trust Fund subsidies	146	158
Metropolitan Mass Transportation Operating Assistance subsidies	-	1,824
Payroll Mobility Tax subsidies	511	479
MTA Aid Trust Account subsidies	70	65
Internet sales tax subsidies	43	-
Tax-supported subsidies — NYC and Local:		
Mortgage Recording Tax subsidies	124	99
Urban Tax subsidies	146	177
Mansion Tax	69	-
Other subsidies:		
Operating Assistance - 18-B program	-	217
Build America Bond subsidy	2	2
NYC Assistance Fund	106	-
Subtotal grants, appropriations and taxes	$ 1,217	$ 3,021

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

(Continued)

(A Component Unit of the State of New York)

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

THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	March 31, 2019 (Unaudited)
NON-OPERATING REVENUES (EXPENSES):		
Connecticut Department of Transportation	$ 44	$ 33
Subsidies paid to Dutchess, Orange, and Rockland Counties	(1)	(1)
Interest on long-term debt (Note 2)	(414)	(329)
Station maintenance, operation and use assessments	43	42
Operating subsidies recoverable from NYC	172	115
Other net non-operating expenses	(14)	49
Net non-operating revenues	1,047	2,930
(LOSS) / GAIN BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	(1,146)	1,009
APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	185	381
CHANGE IN NET POSITION	(961)	1,390
NET POSITION— Beginning of period	4,451	3,953
NET POSITION — End of period	$ 3,490	$ 5,343

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

(Concluded)

(A Component Unit of the State of New York)

CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS
THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	**March 31, 2019 (Unaudited)**
CASH FLOWS FROM OPERATING ACTIVITIES:		
Passenger receipts/tolls	$ 1,811	$ 1,900
Rents and other receipts	176	255
Payroll and related fringe benefits	(2,466)	(2,433)
Other operating expenses	(849)	(772)
Net cash used by operating activities	(1,328)	(1,050)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:		
Grants, appropriations, and taxes	1,258	1,101
Operating subsidies from CDOT	38	26
Subsidies paid to Dutchess, Orange, and Rockland Counties	(7)	(6)
Net cash provided by noncapital financing activities	1,289	1,121
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
MTA bond proceeds	1,106	552
MTA bonds refunded/reissued	(624)	(50)
MTA anticipation notes proceeds	1,627	1,583
MTA anticipation notes redeemed	(750)	(500)
MTA credit facility proceeds	1,358	310
MTA credit facility refunded	(366)	(300)
Capital lease payments and terminations	(1)	-
Federal and local grants	434	294
Other capital financing activities	(368)	(67)
Payment for capital assets	(1,023)	(1,429)
Debt service payments	117	(100)
Internet and Mansion Tax	111	-
Net cash provided by capital and related financing activities	1,621	293
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of long-term securities	(2,425)	(807)
Sales or maturities of long-term securities	397	485
Net sales (purchases) or maturities of short-term securities	429	(105)
Earnings on investments	25	27
Net cash used by investing activities	(1,574)	(400)
NET INCREASE (DECREASE) IN CASH	8	(36)
CASH — Beginning of period	554	541
CASH — End of period	$ 562	$ 505

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

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(A Component Unit of the State of New York)

CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS
THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ In millions)

	Business-Type Activities	
	March 31, 2020 (Unaudited)	**March 31, 2019 (Unaudited)**
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:		
Operating loss (Note 2)	$ (2,193)	$ (1,921)
Adjustments to reconcile to net cash used in operating activities:		
Depreciation and amortization	739	705
Net increase in payables, accrued expenses, and other liabilities	359	118
Net decrease in receivables	(209)	28
Net decrease in materials and supplies and prepaid expenses	(24)	20
NET CASH USED BY OPERATING ACTIVITIES	$ (1,328)	$ (1,050)
NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:		
Noncash investing activities:		
Interest expense includes amortization of net (premium) / discount (Note 2)	$ 77	$ 28
Interest expense which was capitalized	-	9
Total Noncash investing activities	77	37
Noncash capital and related financing activities:		
Capital assets related liabilities	503	585
Capital leases related liabilities	429	446
Total Noncash capital and related financing activities	932	1,031
TOTAL NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES	$ 1,009	$ 1,068

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

(Concluded)

(A Component Unit of the State of New York)

STATEMENTS OF FIDUCIARY NET POSITION
PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS
AS OF DECEMBER 31, 2019 AND 2018

($ In thousands)

	Fiduciary Activities	
	December 31, 2019	**December 31, 2018**
ASSETS:		
Cash	$ 14,499	$ 21,685
Receivables:		
Employee loans	208,406	196,266
Participant and union contributions	21	-
Investment securities sold	1,140	730
Accrued interest and dividends	4,866	4,606
Other receivables	2,182	1,937
Total receivables	216,615	203,539
Investments at fair value:		
Investments measured at readily determined fair value	1,692,906	1,368,589
Investments measured at net asset value	10,485,189	8,915,496
Investments at contract value	1,435,218	1,313,496
Total investments	13,613,313	11,597,581
Total assets	$ 13,844,427	$ 11,822,805
LIABILITIES:		
Accounts payable and accrued liabilities	$ 6,191	$ 8,888
Payable for investment securities purchased	7,600	5,354
Accrued benefits payable	141	1,109
Accrued postretirement death benefits (PRDB) payable	3,360	2,921
Accrued 55/25 Additional Members Contribution (AMC) payable	5,787	5,982
Other liabiliities	585	341
Total liabilities	23,664	24,595
NET POSITION:		
Restricted for pensions	8,915,962	7,688,199
Restricted for postemployment benefits other than pensions	414,827	351,380
Restricted for other employee benefits	4,489,974	3,758,631
Total net position	13,820,763	11,798,210
Total liabilities and net position	$ 13,844,427	$ 11,822,805

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

(A Component Unit of the State of New York)

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION PENSION AND OTHER EMPLOYEE BENEFIT TRUST FUNDS FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

($ In thousands)

	Fiduciary Activities	
	December 31, 2019	**December 31, 2018**
ADDITIONS:		
Contributions:		
Employer contributions	$ 1,278,817	$ 1,224,930
Non-Employer contributions	-	-
Implicit rate subsidy contribution	69,618	74,484
Participant rollovers	23,941	21,673
Member contributions	353,490	336,008
Total contributions	1,725,866	1,657,095
Investment income:		
Net (depreciation) / appreciation in fair value of investments	1,811,423	(464,140)
Dividend income	93,262	110,573
Interest income	25,626	19,021
Less:		
Investment expenses	50,970	92,896
Investment income, net	1,879,341	(427,442)
Other additions:		
Loan repayments - interest	8,979	7,529
Total additions	3,614,186	1,237,182
DEDUCTIONS:		
Benefit payments and withdrawals	1,303,892	1,232,179
Implicit rate subsidy payments	69,618	74,484
Transfer to other plans	98,556	93,387
Distribution to participants	107,396	87,379
Administrative expenses	5,382	5,305
Other deductions	6,789	5,410
Total deductions	1,591,633	1,498,144
Net (decrease) / increase in fiduciary net position	2,022,553	(260,962)
NET POSITION:		
Restricted for Benefits:		
Beginning of year	11,798,210	12,059,172
End of year	$ 13,820,763	$ 11,798,210

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

(A Component Unit of the State of New York)

NOTES TO CONSOLIDATED INTERIM FINANCIAL STATEMENTS AS OF MARCH 31, 2020 AND DECEMBER 31, 2019 AND FOR THE THREE-MONTH PERIODS ENDED MARCH 31, 2020 AND 2019

($ 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 Capital Construction") 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 MTA Comptroller, 2 Broadway, 16th Floor, New York, New York 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 forecast-increased 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 March 31, 2020 and 2019 totaled $1.2 billion and $3.0 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)
  - Thrift Plan for Employees of the MTA, its Subsidiaries and Affiliates ("401(k) 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.

2. 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 adopted the following GASB Statements for the period ended March 31, 2020.

GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*, establishes accounting requirements for interest cost incurred before the end of a construction period. Such interest cost includes all interest that previously was accounted for in accordance with the requirements of paragraphs 5–22 of Statement No. 62, *Codification of Accounting and Financial Reporting Guidance Contained in Pre-November 30, 1989 FASB and AICPA Pronouncements*, which are superseded by this Statement. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. The requirements of GASB Statement No. 89 are effective for reporting periods beginning after December 31, 2021. Earlier application is encouraged. Effective January 1, 2020, the MTA early implemented the provisions of GASB Statement No. 89. As a result of the implementation of this Statement, all interest incurred during the period ended March 31, 2020 is reported as an expense in the Statement of Revenues, Expenses and Changes in Net Position.

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	MTA Required Year of Adoption
87	*Leases*	2022
91	*Conduit Debt Obligations 2021*	2022
92	*Omnibus 2020*	2022
93	*Replacement of Interbank Oferred Rates*	2022
94	*Public-Private and Public-Public Partnerships and Availability Payment Arrangements*	2023
96	*Subscription-based Information Technology Arrangements*	2023
97	*Certain Component Unit Criteria, and Accounting and Financial Reporting for Internal Revenue Code Section 457 Deferred Compensation Plans- an amendment of GASB Statememts No. 14 and No. 84, and a supersession of GASB Statement No. 32*	2022

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 March 31st 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 March 31, 2020 and December 31, 2019.

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 March 31, 2020 and December 31, 2019 of $190 and $184, respectively.

Prepaid Expenses and Other Current Assets — Prepaid expenses and other current assets reflect advance payment of insurance premiums as well as farecard media related with 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.

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 1, 2005 increase in MRT-1 from 25 cents per $100 of recorded mortgage to 30 cents. As of March 31, 2020, the MTA paid to Dutchess, Orange and Rockland Counties the 2019 excess amounts of MRT-1 and MRT-2 totaling $5.3.
- 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 district; 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 $300,000 (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 2016 and 2017 billings are still open.

Reimbursement of Expenses — The cost of operating and maintaining the passenger stations of the Commuter Railroads in NYS is assessable by the MTA to NYC and the other counties in which such stations are located for each NYS fiscal year ending December 31, under provisions of the NYS Public Authorities Law. This funding is recognized as revenue based upon an amount, fixed by statute, for the costs to operate and maintain passenger stations and is revised annually by the increase or decrease of the regional Consumer Price Index.

In 1995, New York City ceased reimbursing the Authority 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 per annum to MTA New York City Transit toward the cost of the program. In 2009, the State reduced their $45 reimbursement to $6.3. Beginning in 2010, the State increased their annual commitment to $25.3 while New York City’s annual commitment remained at $45. These commitments have been met by both the State and New York City for both 2018 and 2019.

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 $1.3 in the three months ended March 31, 2020 and $1.9 in the three months ended March 31, 2019 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 March 31, 2020 and 2019 were $6.1 and $5.6, respectively. The amounts recovered for the periods ended March 31, 2020 and 2019 were approximately $3.9 and $3.7, 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 $53.6 for the three months ended March 31, 2020 and $60.7 for the three months ended March 31, 2019.

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 MTAHQ 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 March 31, 2020, the balance of the assets in this program was $174.

MTA also maintains an All-Agency Excess Liability Insurance Policy that affords the MTA Group additional coverage limits of $350 for a total limit of $400 ($350 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, 2020, the "nonrevenue fleet" automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA Group with the exception of MTA New York City Transit, MTA Bus and MTA Bridges and Tunnels. The policy provides $11 per occurrence limit with a $1 per occurrence deductible for MTA

Long Island Rail Road, MTA Staten Island Railway, MTA Police, MTA Metro-North Railroad, MTA Inspector General and MTA Headquarters. FMTAC renewed its deductible buy back policy, where it assumes the liability of the agencies for their deductible.

On March 1, 2020, 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 $1 per occurrence limit excess of a $2 self-insured retention.

On December 15, 2019, 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, 2019, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2019, 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 $575 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. 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 $575 per occurrence noted above, FMTAC’s property insurance program has been expanded to include a further layer of $125 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 23, 2017 to April 30, 2020. The expanded protection is reinsured by MetroCat Re Ltd. 2017-1, a Bermuda special purpose insurer independent from the MTA and formed to provide FMTAC with capital markets based property reinsurance. The MetroCat Re Ltd. 2017-1 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 81% of “certified” losses in 2019 and 80% of “certified” losses in 2020, as covered by the Terrorism Risk Insurance Program Reauthorization Act (“TRIPRA”) of 2015. The remaining 19% (2019) and 20% (2020) 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 $180 in 2019 and $200 in 2020. The United States government’s reinsurance is in place through December 31, 2020.

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) 19% of any “certified” act of terrorism up to a maximum recovery of $204.3 for any one occurrence and in the annual aggregate during 2019 and 20% of any “certified” act of terrorism up to a maximum recovery of $215 for any one occurrence and in the annual aggregate during 2020 (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 $180 TRIPRA trigger up to a maximum recovery of $180 for any occurrence and in the annual aggregate during 2019 or 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 during 2020.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of $204.3 in 2019 and $215 in 2020. 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 December 31, 2020.

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 March 31, 2020, restricted cash represents Mansion tax of $108 and Internet Tax of $121 received from the State of New York for capital programs for the MTA Bridges and Tunnels Central Business District Tolling Program (CBDTP) and $89 received by the MTA from the State of New York and New York City for the Subway Action Plan.

Cash, including deposits in transit, consists of the following at March 31, 2020 and December 31, 2019 (in millions):

	March 31, 2020		December 31, 2019	
	Carrying Amount	**Bank Balance**	**Carrying Amount**	**Bank Balance**
	(Unaudited)			
FDIC insured or collateralized deposits	$ 298	$ 297	$ 105	$ 104
Uninsured and not collateralized	264	217	449	405
Total Balance	$ 562	$ 514	$ 554	$ 509

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 March 31, 2020 and December 31, 2019 (in millions):

Investments by fair value level	**March 31, 2020**	**Fair Value Measurements Level 1**	**Fair Value Measurements Level 2**	**December 31, 2019**	**Fair Value Measurements Level 1**	**Fair Value Measurements Level 2**
	(Unaudited)	(Unaudited)				
Debt Securities:						
U.S. treasury securities	$ 4,724	$ 4,396	$ 328	$ 5,105	$ 4,753	$ 352
U.S. government agency	331	-	331	359	-	359
Commercial paper	2,271	-	2,271	175	-	175
Asset-backed securities	46	-	46	46	-	46
Commercial mortgage-backed securities	126	-	126	110	-	110
Foreign bonds	24	24	-	19	19	-
Corporate bonds	163	163	-	138	138	-
Tax Benefit Lease Investments:						
U.S. treasury securities	201	201	-	189	189	-
U.S. government agency	142	73	69	128	69	59
Repurchase agreements	55	55	-	182	182	-
Total investments by fair value level	8,083	$ 4,912	$ 3,171	6,451	$ 5,350	$ 1,101
Other	114			123		
Total Investments	$ 8,197			$ 6,574		

Investments classified as Level 1 of the fair value hierarchy, totaling $4,912 and $5,350 as of March 31, 2020 and December 31, 2019, 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 $400 and $418, U.S, treasury securities totaling $328 and $352, commercial paper totaling $2,271 and $175, asset-backed securities totaling $46 and $46, and commercial mortgage-backed securities totaling $126 and $110 as of March 31, 2020 and December 31, 2019, 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 1.44% and 1.62% for the three months ended March 31, 2020 and year ended December 31, 2019, respectively.

Credit Risk — At March 31, 2020 and December 31, 2019, the following credit quality rating has been assigned to MTA investments by a nationally recognized rating organization (in millions):

Quality Rating Standard & Poor's	March 31, 2020 (Unaudited)	Percent of Portfolio	December 31, 2019	Percent of Portfolio
A-1+	$ 201	2%	$ 235	4%
A-1	2,271	28%	175	3%
AAA	284	4%	256	4%
AA+	69	1%	59	1%
AA	40	0%	33	1%
A	104	1%	88	1%
BBB	49	1%	41	1%
Not rated	67	1%	202	3%
U.S. Government	4,998	62%	5,362	82%
Total	8,083	100%	6,451	100%
Equities and capital leases	114		123	
Total investment	$ 8,197		$ 6,574	

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.

	March 31, 2020 (Unaudited)		December 31, 2019	
(In millions)	**Fair Value**	**Duration (in years)**	**Fair Value**	**Duration (in years)**
U.S. Treasuries	$ 4,724	4.21	$ 5,105	4.36
Federal Agencies	331	6.59	359	5.98
Tax benefits lease investments	343	7.75	317	7.37
Repurchase agreements	55	-	182	-
Commercial paper	2,271	-	175	-
Asset-backed securities [1]	46	2.04	46	1.95
Commercial mortgage-backed securities [1]	126	3.38	110	3.85
Foreign bonds [1]	24	6.68	19	6.25
Corporates [1]	163	5.28	138	4.56
Total fair value	8,083		6,451	
Modified duration		3.25		4.34
Investments with no duration reported	114		123	
Total investments	$ 8,197		$ 6,574	

[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 Pension 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 composed 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 single-employer defined benefit governmental retirement plan administered by MTA New York City Transit covering MaBSTOA employees, who are specifically excluded from 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 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 MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 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 became 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 MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 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 December 31, 1987, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 23, 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 MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 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 New York City's Comprehensive Annual Financial Report ("CAFR").

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. If the member completes less than 20 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service.

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 requirement. 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 ⅓ 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 ⅓ 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 ¾ 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 (non-job-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 pensioners who have attained age 62 and have been retired for five years; (ii) all pensioners who have attained age 55 and have been retired for ten years; (iii) all disability pensioners, 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, 2019, January 1, 2018 and January 1, 2017, the dates of the most recent actuarial valuations, membership data for the following pension plans are as follows:

Membership at:	**January 1, 2019**	**January 1, 2018**			
	MNR Cash Balance Plan	**Additional Plan**	**MaBSTOA Plan**	**MTA Defined Benefit Plan**	**TOTAL**
Active Plan Members	2	84	8,918	18,631	27,635
Retirees and beneficiaries receiving benefits	25	5,755	5,661	11,132	22,573
Vested formerly active members not yet receiving benefits	15	24	1,000	1,472	2,511
Total	42	5,863	15,579	31,235	52,719

Membership at:	**January 1, 2018**	**January 1, 2017**			
	MNR Cash Balance Plan	**Additional Plan**	**MaBSTOA Plan**	**MTA Defined Benefit Plan**	**TOTAL**
Active Plan Members	2	146	8,739	18,048	26,935
Retirees and beneficiaries receiving benefits	26	5,833	5,523	10,861	22,243
Vested formerly active members not yet receiving benefits	15	28	1,006	1,433	2,482
Total	43	6,007	15,268	30,342	51,660

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 2018 and 2017), 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 2018 and 2017).

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.
- 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.
- 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 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.

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 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 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, 2019 and 2018 are as follows:

Year-ended December 31,	**2019**	**2018**
($ in millions)	Actual Employer Contributions	Actual Employer Contributions
Additional Plan	$ 62.8	$ 59.5
MaBSTOA Plan	206.4	205.4
MNR Cash Balance Plan	- *	- *
MTA Defined Benefit Plan	343.9	339.8
NYCERS	952.6	807.1
NYSLERS	14.9	14.5
Total	$ 1,580.6	$ 1,426.3

*MNR Cash Balance Plan's actual employer contribution for the years ended December 31, 2019 and 2018 was $0 thousand and $5 thousand, respectively.

Net Pension Liability

The MTA's net pension liabilities for each of the pension plans reported at December 31, 2019 and 2018 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.

Pension Plan	Plan Measurement Date	Plan Valuation Date	Plan Measurement Date	Plan Valuation Date
Additional Plan	December 31, 2018	January 1, 2018	December 31, 2017	January 1, 2017
MaBSTOA Plan	December 31, 2018	January 1, 2018	December 31, 2017	January 1, 2017
MNR Cash Balance Plan	December 31, 2018	January 1, 2019	December 31, 2017	January 1, 2018
MTA Defined Benefit Plan	December 31, 2018	January 1, 2018	December 31, 2017	January 1, 2017
NYCERS	June 30, 2019	June 30, 2018	June 30, 2018	June 30, 2016
NYSLERS	March 31, 2019	April 1, 2018	March 31, 2018	April 1, 2017

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.

Actuarial Assumptions

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:

	Additional Plan		MaBSTOA Plan		MNR Cash Balance Plan	
Valuation Date:	**January 1, 2018**	**January 1, 2017**	**January 1, 2018**	**January 1, 2017**	**January 1, 2019**	**January 1, 2018**
Investment Rate of Return	7.00% per annum, net of investment expenses.	7.00% per annum, net of investment expenses.	7.00% per annum, net of investment expenses.	7.00% per annum, net of investment expenses.	4.00% per annum, net of investment expenses.	4.00% per annum, net of investment expenses.
Salary Increases	3.00%	3.00%	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.	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	2.50%; 3.50% for Railroad Retirement Wage Base.	2.50%; 3.50% for Railroad Retirement Wage Base.	2.50%.	2.50%.	2.50%	2.30%
Cost-of Living Adjustments	Not applicable	Not applicable	1.375% per annum.	1.375% per annum.	Not applicable	Not applicable

	MTA Defined Benefit Plan		NYCERS		NYSLERS	
Valuation Date:	**January 1, 2018**	**January 1, 2017**	**June 30, 2018**	**June 30, 2016**	**April 1, 2018**	**April 1, 2017**
Investment Rate of Return	7.00% per annum, net of investment expenses.	7.00% per annum, net of investment expenses.	7.00% per annum, net of expenses.	7.00% per annum, net of expenses.	7.00% per annum, including inflation, net of investment expenses.	7.00% per annum, including inflation, net of investment expenses.
Salary Increases	Varies by years of employment, and employee group; 3.0% General Wage Increases for TWU Local 100 MTA Bus hourly employees.	Varies by years of employment, and employee group; 3.0% 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.	3.8% in ERS, 4.5% in PFRS	3.8% in ERS, 4.5% in PFRS
Inflation	2.50%; 3.50% for Railroad Retirement Wage Base.	2.50%; 3.00% for Railroad Retirement Wage Base.	2.50%	2.50%	2.50%	2.50%

Mortality

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

The actuarial assumptions used in the January 1, 2019, 2018, and 2017 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, 2019, 2018, and 2017 valuations 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.

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

Post-retirement Healthy Lives: 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.

Post-retirement Disabled Lives: Assumption utilized in the January 1, 2018 and 2017 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.

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 30, 2018 and June 30, 2016 valuations are based, in part, on the Gabriel, Roeder, Smith & Company ("GRS") report, on published studies of mortality improvement, and on input from the NYC's outside consultants and auditors, the Actuary proposed, and the Board of Trustees of NYCERS adopted, new post-retirement mortality tables for use in determining employer contributions beginning in Fiscal Year 2016. The new tables of post-retirement are based primarily on the experience of NYCERS and the application of the Mortality Improvement Scale MP-2015, published by the Society of Actuaries in October 2015. Scale MP-2015 replaced Mortality Improvement Scale AA.

NYSLERS:

The actuarial assumptions used in the April 1, 2018 and April 1, 2017 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 results of the 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.

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, 2018	7.00%
MaBSTOA Plan	December 31, 2018	7.00%
MNR Cash Balance Plan	December 31, 2018	4.00%
MTA Defined Benefit Plan	December 31, 2018	7.00%
NYCERS	June 30, 2019	7.00%
NYSLERS	March 31, 2019	7.00%

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:

	Additional Plan		MaBSTOA Plan	
Asset Class	Target Asset Allocation	Long - Term Expected Real Rate of Return	Target Asset Allocation	Long - Term Expected Real Rate of Return
US Core Fixed Income	9.00%	2.03%	9.00%	2.03%
US Long Bonds	1.00%	2.44%	1.00%	2.44%
US Bank / Leveraged Loans	7.00%	3.08%	7.00%	3.08%
US Inflation-Indexed Bonds	2.00%	1.16%	2.00%	1.16%
US High Yield Bonds	4.00%	3.93%	4.00%	3.93%
Emerging Markets Bonds	2.00%	3.76%	2.00%	3.76%
US Large Caps	12.00%	4.71%	12.00%	4.71%
US Small Caps	6.00%	5.93%	6.00%	5.93%
Foreign Developed Equity	12.00%	6.15%	12.00%	6.15%
Emerging Markets Equity	5.00%	8.22%	5.00%	8.22%
Global REITs	1.00%	5.80%	1.00%	5.80%
Private Real Estate Property	4.00%	3.69%	4.00%	3.69%
Private Equity	9.00%	9.50%	9.00%	9.50%
Commodities	1.00%	2.85%	1.00%	2.85%
Hedge Funds - MultiStrategy	16.00%	3.28%	16.00%	3.28%
Hedge Funds - Event-Driven	6.00%	3.38%	6.00%	3.38%
Hedge Funds - Equity Hedge	3.00%	3.85%	3.00%	3.85%
	100.00%		100.00%	
Assumed Inflation - Mean		2.50%		2.50%
Assumed Inflation - Standard Deviation		1.65%		1.65%
Portfolio Nominal Mean Return		7.19%		7.19%
Portfolio Standard Deviation		10.87%		10.87%
Long Term Expected Rate of Return selected by MTA		7.00%		7.00%

	MTA Defined Benefit Plan		MNR Cash Balance Plan	
Asset Class	Target Asset Allocation	Long - Term Expected Real Rate of Return	Target Asset Allocation	Long - Term Expected Real Rate of Return
US Core Fixed Income	9.00%	2.03%	100.00%	1.58%
US Long Bonds	1.00%	2.44%	-	-
US Bank / Leveraged Loans	7.00%	3.08%	-	-
US Inflation-Indexed Bonds	2.00%	1.16%	-	-
US High Yield Bonds	4.00%	3.93%	-	-
Emerging Markets Bonds	2.00%	3.76%	-	-
US Large Caps	12.00%	4.71%	-	-
US Small Caps	6.00%	5.93%	-	-
Foreign Developed Equity	12.00%	6.15%	-	-
Emerging Markets Equity	5.00%	8.22%	-	-
Global REITs	1.00%	5.80%	-	-
Private Real Estate Property	4.00%	3.69%	-	-
Private Equity	9.00%	9.50%	-	-
Commodities	1.00%	2.85%	-	-
Hedge Funds - MultiStrategy	16.00%	3.28%	-	-
Hedge Funds - Event-Driven	6.00%	3.38%	-	-
Hedge Funds - Equity Hedge	3.00%	3.85%	-	-
	100.00%		100.00%	
Assumed Inflation - Mean		2.50%		2.50%
Assumed Inflation - Standard Deviation		1.65%		1.65%
Portfolio Nominal Mean Return		7.19%		4.09%
Portfolio Standard Deviation		10.87%		3.90%
Long Term Expected Rate of Return selected by MTA		7.00%		4.00%

	NYCERS		NYSLERS	
Asset Class	Target Asset Allocation	Long - Term Expected Real Rate of Return	Target Asset Allocation	Long - Term Expected Real Rate of Return
U.S. Public Market Equities	29.00%	7.00%	36.00%	4.55%
International Public Market Equities	13.00%	7.10%	14.00%	6.35%
Emerging Public Market Equities	7.00%	9.40%	0.00%	0.00%
Private Market Equities	7.00%	10.50%	10.00%	7.50%
Fixed Income	33.00%	2.20%	17.00%	1.31%
Alternatives (Real Assets, Hedge Funds)	11.00%	5.70%	3.00%	5.29%
Real Estate	-	-	10.00%	5.55%
Absolute Return Strategies	-	-	2.00%	3.75%
Opportunistic Portfolio	-	-	3.00%	5.68%
Cash	-	-	1.00%	-0.25%
Inflation-indexed Bonds	-	-	4.00%	1.25%
	100.00%		100.00%	
Assumed Inflation - Mean		2.50%		2.50%
Long Term Expected Rate of Return		7.00%		7.00%

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,	**2019**		**2018**	
Pension Plan	**Plan Measurement Date**	**Rate**	**Plan Measurement Date**	**Rate**
Additional Plan	December 31, 2018	7.00%	December 31, 2017	7.00%
MaBSTOA Plan	December 31, 2018	7.00%	December 31, 2017	7.00%
MNR Cash Balance Plan	December 31, 2018	4.00%	December 31, 2017	4.00%
MTA Defined Benefit Plan	December 31, 2018	7.00%	December 31, 2017	7.00%
NYCERS	June 30, 2019	7.00%	June 30, 2018	7.00%
NYSLERS	March 31, 2019	7.00%	March 31, 2018	7.00%

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, 2019, based on the December 31, 2018 measurement date, and for the year ended December 31, 2018, based on the December 31, 2017 measurement date, were as follows:

	Additional Plan			**MaBSTOA Plan**		
	Total Pension Liability	**Plan Fiduciary Net Position**	**Net Pension Liability**	**Total Pension Liability**	**Plan Fiduciary Net Position**	**Net Pension Liability**
	(in thousands)					
Balance as of December 31, 2017	$ 1,471,828	$ 951,327	$ 520,501	$ 3,676,476	$ 2,918,989	$ 757,487
Changes for fiscal year 2018:						
Service Cost	1,057	-	1,057	86,979	-	86,979
Interest on total pension liability	97,611	-	97,611	256,084	-	256,084
Effect of economic /demographic (gains) or losses	213	-	213	5,412	-	5,412
Effect of assumption changes or inputs	-	-		-	-	-
Benefit payments	(159,565)	(159,565)	-	(213,827)	(213,827)	-
Administrative expense	-	(1,180)	1,180	-	(196)	196
Member contributions	-	333	(333)	-	21,955	(21,955)
Net investment income	-	(31,098)	31,098	-	(87,952)	87,952
Nonemployer contributions	-	-	-	-	-	-
Employer contributions	-	59,500	(59,500)	-	205,433	(205,433)
Balance as of December 31, 2018	$ 1,411,144	$ 819,317	$ 591,827	$ 3,811,124	$ 2,844,402	$ 966,722

	Additional Plan			**MaBSTOA Plan**		
	Total Pension Liability	**Plan Fiduciary Net Position**	**Net Pension Liability**	**Total Pension Liability**	**Plan Fiduciary Net Position**	**Net Pension Liability**
	(in thousands)					
Balance as of December 31, 2016	$ 1,526,304	$ 777,217	$ 749,087	$ 3,536,747	$ 2,555,735	$ 981,012
Changes for fiscal year 2017:						
Service Cost	1,874	-	1,874	84,394	-	84,394
Interest on total pension liability	101,477	-	101,477	246,284	-	246,284
Effect of economic /demographic (gains) or losses	1,890	-	1,890	11,826	-	11,826
Effect of assumption changes or inputs	-			6,347	-	6,347
Benefit payments	(159,717)	(159,717)	-	(209,122)	(209,122)	-
Administrative expense	-	(1,070)	1,070	-	(207)	207
Member contributions	-	760	(760)	-	19,713	(19,713)
Net investment income	-	112,614	(112,614)	-	350,186	(350,186)
Nonemployer contributions	-	145,000	(145,000)	-	-	-
Employer contributions	-	76,523	(76,523)	-	202,684	(202,684)
Balance as of December 31, 2017	$ 1,471,828	$ 951,327	$ 520,501	$ 3,676,476	$ 2,918,989	$ 757,487

	MNR Cash Balance Plan			MTA Defined Benefit Plan		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(in thousands)					
Balance as of December 31, 2017	$ 528	$ 523	$ 5	$ 5,072,814	$ 4,051,534	$ 1,021,280
Changes for fiscal year 2018:						
Service Cost	-	-	-	162,273	-	162,273
Interest on total pension liability	20	-	20	358,118	-	358,118
Effect of plan changes	-	-	-	61,890	-	61,890
Effect of economic / demographic (gains) or losses	(11)	-	(11)	75,744	-	75,744
Effect of assumption changes or inputs	-	-	-	-	-	-
Benefit payments	(58)	(58)	-	(242,349)	(242,349)	-
Administrative expense	-	-	-	-	(3,152)	3,152
Member contributions	-	-	-	-	29,902	(29,902)
Net investment income	-	1	(1)	-	(150,422)	150,422
Employer contributions	-	5	(5)	-	338,967	(338,967)
Balance as of December 31, 2018	$ 479	$ 471	$ 8	$ 5,488,490	$ 4,024,480	$ 1,464,010

	MNR Cash Balance Plan			MTA Defined Benefit Plan		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(in thousands)					
Balance as of December 31, 2016	$ 566	$ 574	$ (8)	$ 4,761,877	$ 3,419,971	$ 1,341,906
Changes for fiscal year 2017:						
Service Cost	-	-	-	148,051	-	148,051
Interest on total pension liability	21	-	21	335,679	-	335,679
Effect of plan changes	-	-	-	76,511	-	76,511
Effect of economic / demographic (gains) or losses	12	-	12	(27,059)	-	(27,059)
Effect of assumption changes or inputs	-	-	-	10,731	-	10,731
Benefit payments	(71)	(71)	-	(232,976)	(232,976)	-
Administrative expense	-	-	-	-	(4,502)	4,502
Member contributions	-	-	-	-	31,027	(31,027)
Net investment income	-	20	(20)	-	516,153	(516,153)
Employer contributions	-	-	-	-	321,861	(321,861)
Balance as of December 31, 2017	$ 528	$ 523	$ 5	$ 5,072,814	$ 4,051,534	$ 1,021,280

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:	**December 31, 2018**			**December 31, 2017**		
	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)
	(in thousands)			(in thousands)		
Additional Plan	$ 701,222	$ 591,827	$ 496,547	$ 636,713	$ 520,501	$ 419,474
MaBSTOA Plan	1,388,193	966,722	607,684	1,166,477	757,487	409,121
MTA Defined Benefit Plan	2,146,497	1,464,010	888,282	1,648,216	1,021,280	492,284

	1% Decrease (3.0%)	Discount Rate (4.0%)	1% Increase (5.0%)	1% Decrease (3.0%)	Discount Rate (4.0%)	1% Increase (5.0%)
	(in whole dollars)			(in whole dollars)		
MNR Cash Balance Plan	$ 35,157	$ 8,252	$ (15,544)	$ 35,109	$ 5,235	$ (21,154)

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, 2018 and June 30, 2016 actuarial valuations, rolled forward to June 30, 2019 and June 30, 2018, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYCERS	
	June 30, 2019	June 30, 2018
	($ in thousands)	
MTA's proportion of the net pension liability	24.493%	23.682%
MTA's proportionate share of the net pension liability	$ 4,536,510	$ 4,176,941

The following table presents the MTA's proportionate share of the net pension liability of NYSLERS based on the April 1, 2019 and April 1, 2018 actuarial valuations, rolled forward to March 31, 2019 and March 31, 2018, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYSLERS	
	March 31, 2019	March 31, 2018
	($ in thousands)	
MTA's proportion of the net pension liability	0.345%	0.327%
MTA's proportionate share of the net pension liability	$ 24,472	$ 10,553

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, 2019 and 2018 and to NYSLERS for the plan's fiscal year-end March 31, 2019 and 2018, 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 ($ in thousands):

Measurement Date:	**June 30, 2019**			**June 30, 2018**		
	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	$ 6,997,746	$ 4,536,510	$ 2,458,418	$ 6,402,891	$ 4,176,941	$ 2,298,962

Measurement Date:	**March 31, 2019**			**March 31, 2018**		
	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)
NYSLERS	$ 106,997	$ 24,472	$ (44,854)	$ 79,847	$ 10,553	$ (48,067)

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

For the three-month period ended March 31, 2020 and year ended December 31, 2019, the MTA recognized pension expense related to each pension plan as follows (in $ thousands):

Pension Plan	**March 31, 2020**	**December 31, 2019**
	(Unaudited)	
Additional Plan	$ 15,750	$ 57,499
MaBSTOA Plan	47,188	160,176
MNR Cash Balance plan	-	(3)
MTA Defined Benefit Plan	82,258	391,556
NYCERS	219,731	926,721
NYSLERS	3,713	17,569
Total	**$ 368,640**	**$ 1,553,518**

For the three-month period ended March 31, 2020 and year ended December 31, 2019, the MTA reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows (in $ thousands):

For the Period Ended March 31, 2020 (Unaudited)	**Additional Plan**		**MaBSTOA Plan**		**MNR Cash Balance Plan**		**MTA Defined Benefit Plan**	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -	$ 20,188	$ 25,455	$ -	$ -	$ 181,199	$ 20,403
Changes in assumptions	-	-	4,394	-	-	-	8,081	37,113
Net difference between projected and actual earnings on pension plan investments	50,828	-	148,979	-	24	-	226,387	-
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	36,724	36,724
Employer contributions to the plan subsequent to the measurement of net pension liability	62,774	-	209,454	-	-	-	344,888	-
Total	$ 113,602	$ -	$ 383,015	$ 25,455	$ 24	$ -	$ 797,279	$ 94,240

For the Period Ended March 31, 2020 (Unaudited)	**NYCERS**		**NYSLERS**		**TOTAL**	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 379,340	$ 315,130	$ 4,819	$ 1,643	$ 585,546	$ 362,631
Changes in assumptions	2,898	190,222	6,152	-	21,525	227,335
Net difference between projected and actual earnings on pension plan investments	-	281,488	-	6,281	426,218	287,769
Changes in proportion and differences between contributions and proportionate share of contributions	163,385	19,945	3,827	-	203,936	56,669
Employer contributions to the plan subsequent to the measurement of net pension liability	466,758	-	14,851	-	1,098,725	-
Total	$ 1,012,381	$ 806,785	$ 29,649	$ 7,924	$ 2,335,950	$ 934,404

For the Year Ended December 31, 2019	**Additional Plan** Deferred Outflows of Resources	**Additional Plan** Deferred Inflows of Resources	**MaBSTOA Plan** Deferred Outflows of Resources	**MaBSTOA Plan** Deferred Inflows of Resources	**MNR Cash Balance Plan** Deferred Outflows of Resources	**MNR Cash Balance Plan** Deferred Inflows of Resources	**MTA Defined Benefit Plan** Deferred Outflows of Resources	**MTA Defined Benefit Plan** Deferred Inflows of Resources
Differences between expected and actual experience	$ -	$ -	$ 20,188	$ 25,455	$ -	$ -	$ 181,199	$ 20,403
Changes in assumptions	-	-	4,394	-	-	-	8,081	37,113
Net difference between projected and actual earnings on pension plan investments	50,828	-	148,979	-	24	-	226,387	-
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	36,724	36,724
Employer contributions to the plan subsequent to the measurement of net pension liability	62,773	-	206,390	-	-	-	343,871	-
Total	$ 113,601	$ -	$ 379,951	$ 25,455	$ 24	$ -	$ 796,262	$ 94,240

For the Year Ended December 31, 2019	**NYCERS** Deferred Outflows of Resources	**NYCERS** Deferred Inflows of Resources	**NYSLERS** Deferred Outflows of Resources	**NYSLERS** Deferred Inflows of Resources	**TOTAL** Deferred Outflows of Resources	**TOTAL** Deferred Inflows of Resources
Differences between expected and actual experience	$ 379,340	$ 315,130	$ 4,819	$ 1,643	$ 585,546	$ 362,631
Changes in assumptions	2,898	190,222	6,152	-	21,525	227,335
Net difference between projected and actual earnings on pension plan investments	-	281,488	-	6,281	426,218	287,769
Changes in proportion and differences between contributions and proportionate share of contributions	163,385	19,945	3,827	-	203,936	56,669
Employer contributions to the plan subsequent to the measurement of net pension liability	478,069	-	14,851	-	1,105,954	-
Total	$ 1,023,692	$ 806,785	$ 29,649	$ 7,924	$ 2,343,179	$ 934,404

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.

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**	**Changes in proportion and differences between employer contributions and proportionate share of contributions**	**Changes in actuarial assumptions**
Additional Plan	1.00	N/A	N/A
MaBSTOA Plan	6.50	N/A	N/A
MNR Cash Balance Plan	1.00	N/A	N/A
MTA Defined Benefit Plan	8.20	8.20	N/A
NYCERS	6.10	6.10	6.10
NYSLERS	5.00	5.00	5.00

For the three-month period ended March 31, 2020 and year ended December 31, 2019, $1,098.7 and $1,106.0 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, 2020 and December 31, 2019, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2019 will be recognized as pension expense as follows:

Year Ending December 31:	**Additional Plan**	**MaBSTOA Plan**	**MNR Cash Balance plan**	**MTA Defined Benefit Plan**	**NYCERS**	**NYSLERS**	**Total**
				(in thousands)			
2020	$ 17,116	$ 45,985	$ 11	$ 103,010	$ (67,848)	$ 6,673	$ 104,947
2021	6,656	9,282	6	51,099	(198,105)	(3,822)	(134,884)
2022	8,227	26,928	4	56,798	(50,325)	328	41,960
2023	18,829	63,265	4	110,137	(15,141)	3,694	180,788
2024	-	2,230	-	17,934	63,793	-	83,957
Thereafter	-	416	-	19,171	6,465	-	26,053
	$ 50,828	$ 148,106	$ 25	$ 358,149	$ (261,161)	$ 6,873	$ 302,821

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.
- 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 $19,000 dollars or $25,000 dollars for those over age 50 for the year ended December 31, 2019.

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 Construction
- 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:

1. Completing 5 years of service,
2. Attaining the Normal Retirement Age of 62 while in continuous employment, or
3. 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, 2019	December 31, 2018
	(In thousands)	
Employer 401K contributions	$ 4,402	$ 4,392

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 MTA Comptroller, 2 Broadway, 16th Floor, New York, New York, 10004 or at www.mta.info.

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
  - 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.

Employees Covered by Benefit Terms — As of July 1, 2017, the date of the most recent actuarial valuation, the following classes of employees were covered by the benefit terms:

	Number of Participants
Active plan members	72,047
Inactive plan members currently receiving benefit payments	45,330
Inactive plan members entitled to but not yet receiving benefit payments	254
Total	117,631

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, 2019 and 2018, the MTA paid $737.3 and $696.1 of PAYGO to the OPEB Plan, respectively. The PAYGO amounts include an implicit rate subsidy adjustment of $76.8 and $74.5 for the years ended December 31, 2019 and 2018, respectively.

During 2012, the MTA funded $250 into the Trust an additional $50 during 2013. There have been no further contributions made to the Trust. 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 2018 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, 2018 and December 31, 2017, the measurement dates, are 4.10% and 3.44%, 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, 2018 and 2017, the employer made a cash payment for retiree healthcare of $74,484 and $71,101, 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	**2018 Retirees**	**2017 Retirees**
(in thousands)		
Total blended premiums	$616,638	$579,893
Employment payment for retiree healthcare	74,484	71,101
Net Payments	$691,122	$650,994

(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, 2017. Update procedures were used to roll forward the total OPEB liability to December 31, 2018 and December 31, 2017, 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, 2017	July 1, 2017
Measurement date	December 31, 2018	December 31, 2017
Discount rate	4.1%, net of expenses	3.44%, net of expenses
Inflation	2.50%	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	4.50%	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	6.50%	6.50%

Healthcare Cost Trend — The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2017 utilizing the baseline assumptions included in the model, except inflation of 2.5% for medical and pharmacy benefits. Additional adjustments apply based on percentage of costs associated with administrative expenses, aging factors, potential excise taxes due to healthcare reform, and other healthcare reform provisions, 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 4.0% plus Medicare Part B reimbursements of an annual trend of 4.5%, but not more than projected medical and pharmacy trends excluding any excise tax adjustments. The self-insured trend is applied directly for represented employees of MTA New York City Transit, MTA Staten Island Railway and MTA Bus. For purposes of estimating the impact of the excise tax, the NYSHIP trend for MTA Bridges and Tunnels reflects that certain represented members do not receive prescription drug coverage through NYSHIP.

The valuation reflects the actuary's understanding of the impact in future health costs due to the Affordable Care Act ("ACA") passed into law in March 2010. An excise tax for high cost health coverage or "Cadillac" health plans was included in ACA. The provision levies a 40% tax on the value of health plan costs that exceed certain thresholds for single coverage or family coverage. In December 2019, the President signed into law the "Further Consolidated Appropriations Act, 2020" (the "Act"), which included the permanent repeal of the "Cadillac" tax, effective January 1, 2020. The impact of the elimination of the "Cadillac" tax on the MTA's OPEB liability is approximately a decrease of $742.0 million and will be reflected in the next valuation dated July 1, 2019 and in the reporting year-ended December 31, 2020.

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

	NYSHIP		TBTA		Self-Insured	
Fiscal Year	**< 65**	**> = 65**	**< 65**	**> = 65**	**< 65**	**> = 65**
2018	8.5	8.2	7.5	4.9	6.8	9.1
2019	6.2	5.5	5.8	3.1	6.2	5.3
2020	5.8	5.3	5.6	3.9	5.8	5.2
2021	5.5	5.2	5.3	4.4	5.5	5.2
2022	7.2	5.1	5.1	5.1	11.1	5.1
2023	6.1	5.1	5.1	5.1	6.0	5.1
2024	6.1	5.0	5.0	5.0	5.9	5.0
2025	5.9	5.0	5.0	5.0	5.8	5.0
2026	5.9	5.0	5.0	5.0	5.8	5.0
2027	5.8	4.9	5.0	4.9	5.7	4.9
2037	5.6	5.0	5.9	5.0	5.5	5.0
2047	5.4	5.9	5.6	4.9	5.3	4.9
2057	5.1	5.4	5.2	4.8	5.1	5.2
2067	4.8	5.0	4.9	4.6	4.8	4.8
2077	4.2	4.3	4.2	4.0	4.1	4.5
2087	4.1	4.2	4.2	4.0	4.1	4.4
2097	4.1	4.2	4.2	4.7	4.1	4.4

For purposes of applying the Entry Age Normal Cost method, the healthcare trend prior to the valuation date are based on the ultimate rates, which are 4.1% for medical and pharmacy costs prior to age 65, 4.2% for NYSHIP costs at age 65 and later (4.6% for certain MTA Bridges and Tunnels represented members), and 4.3% for self-insured medical and pharmacy costs at age 65 and later.

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, 2019 and 2018, the MTA reported a net OPEB liability of $19,582 and $20,335, respectively. The MTA's net OPEB liability was measured as of the OPEB Plan's fiscal year-end of December 31, 2018. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation date of July 1, 2017, and rolled forward to December 31, 2018.

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 long-term expected rate of return on OPEB plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of OPEB 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 allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Arithmetic Real Rate of Return
U.S core fixed income	13.0%	2.03%
Global bonds	15.0%	0.41%
Emerging markets bonds	5.0%	3.76%
Global equity	35.0%	5.65%
Non-U.S. equity	15.0%	6.44%
Global REITs	5.0%	5.80%
Hedge funds - multistrategy	12.0%	3.28%
Total	**100%**	
Assumed Inflation - Mean		2.50%
Assumed Inflation - Standard Deviation		1.65%
Portfolio Nominal Mean return		6.65%
Portfolio Standard Deviation		10.39%
Long Term Expected Rate of Return selected by MTA		**6.50%**

Discount Rate — The discount rate used in this valuation to measure the total OPEB liability was updated to incorporate GASB Statement No. 75 guidance.

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, 2018 of 4.10%.

Changes in Net OPEB Liability — Changes in the MTA's net OPEB liability for the year ended December 31, 2019, based on the December 31, 2018 measurement date, and for the year ended December 31, 2018, based on the December 31, 2017 measurement date, were as follows:

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
		(in thousands)	
Balance as of December 31, 2017	$ 20,705,068	$ 370,352	$ 20,334,716
Changes for the year:			
Service Cost	1,002,930	-	1,002,930
Interest on total OPEB liability	734,968	-	734,968
Effect of plan changes	1,580	-	1,580
Effect of economic/demographic gains or losses	(19,401)	-	(19,401)
Effect of assumptions changes or inputs	(1,800,135)	-	(1,800,135)
Benefit payments	(691,122)	(691,122)	-
Employer contributions	-	691,122	(691,122)
Net investment income	-	(18,916)	18,916
Administrative expenses	-	(56)	56
Net changes	(771,180)	(18,972)	(752,208)
Balance as of December 31, 2018	$ 19,933,888	$ 351,380	$ 19,582,508

	Total OPEB Liability	Plan Fiduciary Net Position	Net OPEB Liability
		(in thousands)	
Balance as of December 31, 2016	$ 18,787,254	$ 322,982	$ 18,464,272
Changes for the year:			
Service Cost	884,548	-	884,548
Interest on total OPEB liability	731,405	-	731,405
Effect of plan changes	27,785	-	27,785
Effect of economic/demographic gains or losses	13,605	-	13,605
Effect of assumptions changes or inputs	911,465	-	911,465
Benefit payments	(650,994)	(650,994)	-
Employer contributions	-	650,994	(650,994)
Net investment income	-	47,370	(47,370)
Net changes	1,917,814	47,370	1,870,444
Balance as of December 31, 2017	$ 20,705,068	$ 370,352	$ 20,334,716

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:

Measurement Date:		**December 31, 2018**	
	1% Decrease (3.10%)	**Discount Rate (4.10%)**	**1% Increase (5.10%)**
		(in thousands)	
Net OPEB liability	$22,402,766	$19,582,508	$17,257,324

Measurement Date:		**December 31, 2017**	
	1% Decrease (2.44%)	**Discount Rate (3.44%)**	**1% Increase (4.44%)**
		(in thousands)	
Net OPEB liability	$23,407,072	$20,334,716	$17,817,307

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:

Measurement Date:		**December 31, 2018**	
	1% Decrease	**Healthcare Cost Current Trend Rate***	**1% Increase**
		(in thousands)	
Net OPEB liability	$16,727,628	$19,582,508	$23,171,172

Measurement Date:		**December 31, 2017**	
	1% Decrease	**Healthcare Cost Current Trend Rate***	**1% Increase**
		(in thousands)	
Net OPEB liability	$17,394,102	$20,334,716	$24,043,932

*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 three-month period ended March 31, 2020 and year ended December 31, 2019, the MTA recognized OPEB expense of $162 and $1.61 billion, respectively.

At March 31, 2020 and December 31, 2019, the MTA reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows ($ in thousands):

	March 31, 2020		December 31, 2019	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 9,928	$ 16,780	$ 9,928	$ 16,780
Changes of assumptions	665,123	1,556,874	665,123	1,556,874
Net difference between projected and actual earnings on OPEB plan investments	18,564	-	18,564	-
Changes in proportion and differences between contributions and proportionate share of contributions	101,229	101,229	101,229	101,229
Employer contributions to the plan subsequent to the measurement of net OPEB liability	755,061	-	742,438	-
Total	**$ 1,549,905**	**$ 1,674,883**	**$ 1,537,282**	**$ 1,674,883**

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 7.4-year closed period, beginning the year in which the deferred amount occurs.

For the three-month period ended March 31, 2020 and year ended December 31, 2019, $755.1 and $742.4 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, 2020. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2019 will be recognized in OPEB expense as follows (in thousands):

Year ended December 31, :	
2020	$ (117,552)
2021	(117,552)
2022	(117,552)
2023	(112,276)
2024	(120,874)
Thereafter	(294,233)
	$ (880,039)

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, 2018, December 31, 2019 and March 31, 2020 (in millions):

	Balance December 31, 2018	Additions / Reclassifications	Deletions / Reclassifications	Balance December 31, 2019	Additions / Reclassifications (Unaudited)	Deletions / Reclassifications (Unaudited)	Balance March 31, 2020 (Unaudited)
Capital assets not being depreciated:							
Land	$ 217	$ 6	$ -	$ 223	$ -	$ -	$ 223
Construction work-in-progress	18,052	8,372	6,266	20,158	1,204	824	20,538
Total capital assets not being depreciated	18,269	8,378	6,266	20,381	1,204	824	20,761
Capital assets being depreciated:							
Buildings and structures	18,457	1,103	1	19,559	15	-	19,574
Bridges and tunnels	4,154	72	-	4,226	3	-	4,229
Equipment:							
Passenger cars and locomotives	13,378	498	4	13,872	49	-	13,921
Buses	3,808	473	604	3,677	9	12	3,674
Infrastructure	26,258	1,491	21	27,728	229	-	27,957
Other	24,519	2,114	20	26,613	133	2	26,744
Total capital assets being depreciated	90,574	5,751	650	95,675	438	14	96,099
Less accumulated depreciation:							
Buildings and structures	7,414	530	-	7,944	136	3	8,077
Bridges and tunnels	806	27	-	833	9	-	842
Equipment:							
Passenger cars and locomotives	6,943	403	4	7,342	101	-	7,443
Buses	2,323	250	604	1,969	65	12	2,022
Infrastructure	10,072	862	21	10,913	213	-	11,126
Other	8,774	798	19	9,553	215	2	9,766
Total accumulated depreciation	36,332	2,870	648	38,554	739	17	39,276
Total capital assets being depreciated - net	54,242	2,881	2	57,121	(301)	(3)	56,823
Capital assets - net	$ 72,511	$ 11,259	$ 6,268	$ 77,502	$ 903	$ 821	$ 77,584

Effective January 1, 2020, in accordance with GASB Statement No. 89, the MTA no longer capitalizes interest costs related to the construction of capital assets. Interest capitalized in conjunction with the construction of capital assets for December 31, 2019 was $43.7.

Capital assets acquired prior to April 1982 for MTA New York City Transit were funded primarily by NYC with capital grants made available to MTA New York City Transit. NYC 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 NYC in the event the MTA determines such property is unnecessary for its corporate purpose. With respect to MTA Metro-North Railroad, 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 a trust account marketable securities pledged by third-party contractors in lieu of cash retainages. At March 31, 2020 and December 31, 2019, these securities, which are not included in these financial statements, totaled $115.0 and $107.8, respectively, and had a market value of $87.0 and $83.3, respectively.

7. LONG-TERM DEBT

(In millions)	Original Issuance	December 31, 2019	Issued	Retired	March 31, 2020
MTA:			(Unaudited)		(Unaudited)
Transportation Revenue Bonds					
1.62%–5.15% due through 2057	$ 39,053	$ 21,650	$ 1,088	$ 274	$ 22,464
Bond Anticipation Notes*					
2.29% due through 2023	15,554	7,508	2,492	750	9,250
Dedicated Tax Fund Bonds					
1.86%–4.89% due through 2057	11,039	5,024	-	-	5,024
	65,646	34,182	3,580	1,024	36,738
Net unamortized bond premium	-	1,648	262	150	1,760
	65,646	**35,830**	**3,842**	**1,174**	**38,498**
TBTA:					
General Revenue Bonds					
1.88%–4.28% due through 2050	17,132	7,782	-	48	7,734
Subordinate Revenue Bonds					
3.13%-5.34% due through 2032	4,066	936	-	-	936
	21,198	8,718	-	48	8,670
Net unamortized bond premium	-	618	-	18	600
	21,198	**9,336**	**-**	**66**	**9,270**
MTA Hudson Rail Yards Trust:					
MTA Hudson Rail Yards Trust Obligations					
1.88%–2.65% due through 2056	1,057	872	-	189	683
Net unamortized bond premium	-	107	-	17	90
	1,057	**979**	**-**	**206**	**773**
Total	**$ 87,901**	**$ 46,145**	**$ 3,842**	**$ 1,446**	**$ 48,541**
Current portion**		$ 2,210			$ 2,135
Long-term portion		$ 43,935			$ 46,406

* 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 March 31, 2020 and December 31, 2019, the outstanding RAN was $1,000 and $8, respectively.

** On January 16, 2020 and May 14, 2020, MTA issued $925 MTA Transportation Revenue Green Bonds, Series 2020A ("the Series 2020A Bonds"), with maturities from May 15, 2024 to November 15, 2054, and $1,725 MTA Transportation Revenue Green Bonds, Series 2020C ("the Series 2020C Bonds"), with maturities from November 15, 2045 to November 15, 2049, respectively. Both the Series 2020A Bonds and the Series 2020C Bonds were issued for purposes of (i) retiring, together with other MTA funds, certain outstanding Transportation Revenue Bond Anticipation Notes ("BANs"), (ii) refunding certain the MTA Transportation Revenue Bonds("TRBs"), (iii) financing existing approved transit and commuter projects, (iv) paying capitalized interest, and (v) paying certain financing, legal and miscellaneous expenses. As a result of these issuances, the current portion of the BANs that were reclassified as long-term were $1,450 and $2,200 as of March 31, 2020 and December 31, 2019, respectively.

(In millions)		Original Issuance		December 31, 2018		Issued		Retired		December 31, 2019
MTA:										
Transportation Revenue Bonds										
1.43%–5.15% due through 2057	$	37,965	$	20,923	$	1,596	$	869	$	21,650
Bond Anticipation Notes*										
1.33% due through 2022		13,062		4,007		5,455		1,954		7,508
Dedicated Tax Fund Bonds										
1.86%–4.89% due through 2057		11,039		5,184		-		160		5,024
		62,066		30,114		7,051		2,983		34,182
Net unamortized bond premium		-		1,559		514		425		1,648
		62,066		**31,673**		**7,565**		**3,408**		**35,830**
TBTA:										
General Revenue Bonds										
1.81%–4.18% due through 2047		17,132		7,663		452		333		7,782
Subordinate Revenue Bonds										
3.13%-5.34% due through 2032		4,066		1,022		-		86		936
		21,198		8,685		452		419		8,718
Net unamortized bond premium		-		626		47		55		618
		21,198		**9,311**		**499**		**474**		**9,336**
MTA Hudson Rail Yards Trust:										
MTA Hudson Rail Yards Trust Obligations										
1.88%–2.65% due through 2056		1,057		1,057		-		185		872
Net unamortized bond premium		-		128		-		21		107
		1,057		**1,185**		**-**		**206**		**979**
Total	**$**	**84,321**	**$**	**42,169**	**$**	**8,064**	**$**	**4,088**	**$**	**46,145**
Current portion**			$	2,552					$	2,210
Long-term portion			$	39,617					$	43,935

* Includes draws on a $800 taxable revolving credit agreement with JPMorgan Chase Bank, National Association, which is active through August 24, 2022. Draws under the JPMorgan Chase Agreement are evidenced by revenue anticipation notes ("RANs"). As of December 31, 2019 and 2018, the outstanding RAN was $8 and $7, respectively.

** On January 16, 2020 and May 14, 2020, MTA issued $925 MTA Transportation Revenue Green Bonds, Series 2020A ("the Series 2020A Bonds"), with maturities from May 15, 2024 to November 15, 2054, and $1,725 MTA Transportation Revenue Green Bonds, Series 2020C ("the Series 2020C Bonds"), with maturities from November 15, 2045 to November 15, 2049, respectively. Both the Series 2020A Bonds and the Series 2020C Bonds were issued for purposes of (i) retiring, together with other MTA funds, certain outstanding Transportation Revenue Bond Anticipation Notes ("BANs"), (ii) refunding certain the MTA Transportation Revenue Bonds("TRBs"), (iii) financing existing approved transit and commuter projects, (iv) paying capitalized interest, and (v) paying certain financing, legal and miscellaneous expenses. As a result of these issuances, the current portion of the BANs, $2,200, was reclassified as long-term as of December 31, 2019.

In addition, on February 15, 2020, MTA effectuated a $27 early mandatory redemption of a portion of the Hudson Rail Yards Trust Obligations, Series 2016A. As a result, $27 was reclassified from long-term to current as of December 31, 2019.

MTA Transportation Revenue Bonds — Prior to 2020, MTA issued sixty-five 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 $32,944. 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 January 16, 2020, MTA issued $924.750 of Transportation Revenue Bonds, Series 2020A to retire the existing outstanding Transportation Revenue Bond Anticipation Notes, Series 2019A; and to refund the Transportation Revenue Bonds, Subseries 2016C-2b. The Series 2020A bonds were priced as $686.840 Subseries 2020A-1 and $237.910 Subseries 2020A-2. The Subseries 2020A-1 bonds were issued as fixed rate tax-exempt bonds with a final maturity of November 15, 2054. The Subseries 2020A-2 bonds were issued as mandatory tender bonds with an initial purchase date of May 15, 2024.

On February 3, 2020, MTA effectuated a mandatory tender and remarketed $75 MTA Transportation Revenue Variable Rate Refunding Bonds, Subseries 2012G-3 because its current interest rate period expired by its terms. The Series 2012G-3 Bonds were remarketed in Term Rate Mode as Floating Rate Tender Notes with a purchase date of February 1, 2025 and with an interest rate of SIFMA plus 0.43%.

On March 19, 2020, Moody's placed MTA's Transportation Revenue Bonds (A1) and BANs (MIG 1) as Ratings Under Review for possible downgrade.

On March 20, 2020, Fitch Ratings placed MTA's Transportation Revenue Bonds (AA-) and BANs (F1+) as Ratings Watch Negative.

On March 24, 2020, S&P Global Ratings downgraded MTA's Transportation Revenue Bonds from 'A' to 'A-' with a negative outlook, under its Mass Transit Enterprise Ratings criteria.

On March 24, 2020, Kroll Bond Rating Agency placed MTA's Transportation Revenue Bonds (AA+) under outlook Watch Downgrade.

On March 27, 2020, $75 of Transportation Revenue Refunding Bonds, Subseries 2020B-1 Bonds were purchased, pursuant to a Continuing Covenant Agreement, between MTA and PNC Bank, National Association, as purchaser, and $87.660 of Transportation Revenue Refunding Bonds, Subseries 2020B-2 Bonds were purchased, pursuant to a Continuing Covenant Agreement, between MTA and Bank of America, N.A., as purchaser. Proceeds from the transaction will be used to exchange and finance certain Hudson Rail Yards Refunding Trust Obligations, Series 2020A. The Subseries 2020B-1 bonds have a mandatory purchase date of April 1, 2021. The Subseries 2020B-2 bonds have a mandatory tender date of March 24, 2022.

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 MTAAct requires MTAHQ to periodically (at least each five years) refund its bond anticipation notes with bonds.

On January 8, 2020, MTA issued $1,500 of MTA Transportation Revenue Bond Anticipation Notes, Series 2020A to generate new money proceeds to: finance existing approved transit and commuter projects; and to finance those existing approved transit and commuter projects related to the State funding commitment for the 2015-2019 Capital Program. The Series 2020A Notes were priced as $800 Subseries 2020A-1 and $700 Subseries 2020A-2S. The Subseries 2020A-1 notes were issued as fixed rate tax-exempt notes with a final maturity of February 1, 2023 and the Subseries 2020A-2S notes were issued as fixed rate tax-exempt notes with a final maturity of February 1, 2022.

MTA Revenue Anticipation Notes — On January 9, 2014, MTA closed a $350 revolving working capital liquidity facility with the Royal Bank of Canada which is expected to remain in place until July 7, 2017.Draws on the facility will be taxable, as such this facility is intended to be used only for operating needs of MTA and the related entities. On January 31, 2017, MTA drew down $200 of its $350 Revolving Credit Agreement with the Royal Bank of Canada, which was entered into on January 1, 2014.The purpose of the draw was to retire Transportation Revenue Bond Anticipation Notes, Subseries 2016A-2.The $200 draw-down plus accrued interest was repaid on March 31, 2017.

On August 24, 2017, MTA entered into a $350 taxable Revenue Anticipation Note facility, (the "2017A RAN"), with J.P.Morgan Chase Bank, National Association. An initial draw of $3.5 was made at closing. This balance will remain throughout the duration of the agreement. The 2017A RAN is available to be used by MTA for any corporate purpose as needed and is structured as a revolving loan facility. The RAN expires on August 24, 2022.

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.

MTA State Service Contract Bonds — Prior to 2020, 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 2020, 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.

MTA Certificates of Participation — Prior to 2020, 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 2020, MTA Bridges and Tunnels issued thirty- three 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 $13,249. 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 24, 2020, MTA effectuated a mandatory tender and remarketed $102.1 of Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Series 2005A because the irrevocable direct-pay letter of credit ("LOC") issued by TD Bank, N.A. was expiring by its terms. The LOC related to the Series 2005A bonds was substituted with an irrevocable direct-pay LOC issued by Barclays Bank PLC. The new LOC will expire on February 2, 2024. The Series 2005A bonds will continue as Variable Interest Rate Obligations in Weekly Mode.

On March 26, 2020, S&P Global Ratings placed TBTA General Revenue and Subordinate Revenue Bonds on a negative outlook as part of action on the U.S. Transportation Infrastructure sector.

On March 31, 2020, Kroll Bond Rating Agency placed TBTA General Revenue Bonds (AA) and TBTA Subordinate Revenue Bonds (AA-) under outlook Watch Downgrade.

MTA Bridges and Tunnels Subordinate Revenue Bonds — Prior to 2020, 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 $3,871.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 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.

Refer to Note 8 for further information on Leases.

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 $55,497 compared with issuances totaling approximately $36,051. 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 March 31, 2020 and December 31, 2019, 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)	March 31, 2020 (Unaudited)	December 31, 2019
MTA Transit and Commuter Facilities:		
Transit Facilities Revenue Bonds	$ 148	$ 148
Commuter Facilities Revenue Bonds	150	150
Dedicated Tax Fund Bonds	22	22
MTA Bridges and Tunnels:		
General Purpose Revenue Bonds	539	628
Special Obligation Subordinate Bonds	74	89
Total	$ 933	$ 1,037

For the three months ended March 31, 2020, MTA did not have any refunding transactions. For the three months ended March 31, 2019, MTA refunding transactions decreased aggregate debt service payments by $0 and provided an economic gain of $0. Details of bond refunding savings as of December 31, 2019 are as follows:

Refunding Bonds Issued in 2019 (In millions)	Series	Date issued	Par value Refunded	Debt Service Savings (Increase)	Net Present Value of Savings
Transportation Revenue Bonds	TRB 2019D-1	11/07/2019	$ 140	$ (7)	$ 5
	TRB 2019D-2	11/07/2019	101	(62)	9
			241	(69)	14
MTA Bridges and Tunnels General Revenue Bonds	TBTA 2019B	09/25/2019	102	(59)	5
Total Bond Refunding Savings			$ 343	$ (128)	$ 19

For the three-month periods ended March 31, 2020 and 2019, the accounting loss on bond refundings totaled $0 and the accounting loss on bond refundings totaled $0, respectively.

Unamortized losses related to bond refundings were as follows:

(In millions)	December 31, 2018	(Gain)/loss on refunding	2019 amortization	December 31, 2019	(Gain)/loss on refunding (Unaudited)	Current year amortization (Unaudited)	March 31, 2020 (Unaudited)
MTA:							
Transportation Revenue Bonds	$ 670	$ -	$ (100)	$ 570	$ -	$ (64)	$ 506
State Service Contract Bonds	(12)	-	-	(12)	-	-	(12)
Dedicated Tax Fund Bonds	238	-	(16)	222	-	(4)	218
	896	-	(116)	780	-	(68)	712
TBTA:							
General Revenue Bonds	209	-	(17)	192	-	(4)	188
Subordinate Revenue Bonds	33	-	(4)	29	-	(1)	28
	242	-	(21)	221	-	(5)	216
Total	$ 1,138	$ -	$ (137)	$ 1,001	$ -	$ (73)	$ 928

Debt Service Payments — Future principal and interest debt service payments at March 31, 2020 are as follows (in millions):

(Unaudited)	MTA		MTA BRIDGES AND TUNNELS		Debt Service	
	Principal	Interest	Principal	Interest	Principal	Interest
2020	$ 1,869	$ 1,448	$ 266	$ 317	$ 2,135	$ 1,765
2021	3,487	1,336	317	318	3,804	1,654
2022	4,720	1,266	328	304	5,048	1,570
2023	2,489	1,188	356	288	2,845	1,476
2024	976	1,048	383	270	1,359	1,318
2025-2029	5,436	4,217	2,203	1,070	7,639	5,287
2030-2034	6,364	3,224	2,073	626	8,437	3,850
2035-2039	5,379	2,190	1,275	339	6,654	2,529
2040-2044	2,921	1,095	870	104	3,791	1,199
2045-2049	2,069	488	586	20	2,655	508
2050-2054	1,157	162	13	1	1,170	163
2055-2059	554	16	-	-	554	16
Thereafter	-	-	-	-	-	-
Total	$ 37,421	$ 17,678	$ 8,670	$ 3,657	$ 46,091	$ 21,335

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.
- *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 Subordinate Refunding Bonds, Series 2000ABCD* — 6.08% 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.
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2001C* — 4.00% per annum.
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2001B* — 4.00% per annum plus the current fixed floating rate note spread.
- *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 2018D* — 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 March 31, 2020 are as follows (in millions):

Year	(Unaudited)	Principal	Interest	Total
2020		$ 12	$ 2	$ 14
2021		11	2	13
2022		12	2	14
2023		11	2	13
2024		11	3	14
2025-2029		43	5	48
2030-2034		17	1	18
2035-2039		2	0	2
Total		$ 119	$ 17	$ 136
Current portion		$ 14		
Long-term portion		105		
Total NYPA Loans Payable		$ 119		

The Loans Payable debt service requirements at March 31, 2020 are as follows (in millions):

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 March 31, 2020 and December 31, 2019.

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.

Resolution	Series	Swap	Provider (Insurer)	Type of Facility	Exp. Date
Transportation Revenue	2002G-1g	Y	TD Bank, N.A.	LOC	11/1/2021
Transportation Revenue	2005D-2	Y	Helaba	LOC	11/10/2022
Transportation Revenue	2005E-1	Y	PNC Bank, National Association	LOC	8/20/2021
Transportation Revenue	2005E-2	Y	Bank of America, N.A.	LOC	12/10/2021
Transportation Revenue	2005E-1	Y	PNC Bank, National Association	LOC	8/20/2021
Transportation Revenue	2012A-2	N	Bank of Montreal	LOC	6/2/2022
Transportation Revenue	2012G-1	Y	Barclays Bank	LOC	10/31/2023
Transportation Revenue	2012G-2	Y	TD Bank, N.A.	LOC	11/1/2021
Transportation Revenue	2015E-1	N	U.S. Bank National Association	LOC	8/20/2021
Transportation Revenue	2015E-3	N	Bank of America, N.A.	LOC	9/2/2022
Transportation Revenue	2015E-4	N	PNC Bank, National Association	LOC	9/3/2021
Dedicated Tax Fund	2002B-1	N	Bank of Tokyo Mitsbishi	LOC	3/22/2021
Dedicated Tax Fund	2008A-1	Y	TD Bank, N.A.	LOC	6/13/2022
MTA Bridges and Tunnels General Revenue	2001C	Y	State Street	LOC	6/26/2023
MTA Bridges and Tunnels General Revenue	2002F	Y	Citibank, N.A.	LOC	10/29/2021
MTA Bridges and Tunnels General Revenue	2003B-1	N	Bank of America, N.A.	LOC	1/21/2022
MTA Bridges and Tunnels General Revenue	2005A	Y	Barclays Bank	LOC	1/24/2024
MTA Bridges and Tunnels General Revenue	2005B-2	Y	Citibank, N.A.	LOC	1/23/2021
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	5/26/2022
MTA Bridges and Tunnels General Revenue	2018E	N	Bank of America, N.A.	LOC	12/12/2022

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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 zero-coupon 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 March 31, 2020 and December 31, 2019, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2019 are as follows (in $ millions):

Derivative Instruments - Summary Information as of March 31, 2020

Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Cash Flow or Fair Value Hedge	Effective Methodology	Trade/Hedge Association Date	Notional Amount	Fair Value
Cashflow Hedges						(Unaudited)	
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-[2,3,4]	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	564.900	(136.549)
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	$ 188.300	$ (45.516)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	21.780	(3.505)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	10.000	(1.638)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	304.000	(59.655)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(75.270)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	350.420	(80.204)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	356.375	(102.932)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	97.215	(9.950)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	92.455	(20.569)
					Total	**$ 2,185.445**	**$ (535.788)**

Derivative Instruments - Summary Information as of December 31, 2019

Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Cash Flow or Fair Value Hedge	Effective Methodology	Trade/Hedge Association Date	Notional Amount	Fair Value
Cashflow Hedges						**(Unaudited)**	
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	$ 189.300	$ (32.439)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	567.900	(97.316)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	22.650	(2.699)
MTA Bridges and Tunnels Senior Revenue Bonds	2005C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	21.275	(1.280)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	304.000	(44.413)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(67.381)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	350.420	(67.540)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	356.375	(86.689)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	112.730	(7.972)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	84.520	(15.530)
					Total	$ 2,209.170	$ (423.259)

	Changes In Fair Value		Fair Value at March 31, 2020		
	Classification	Amount (in millions)	Classification	Amount (in millions)	Notional (in millions)
Government activities		(Unaudited)		(Unaudited)	(Unaudited)
Cash Flow hedges:					
Pay-fixed interest rate swaps	Deferred outflow of resources	$(112.529)	Debt	$(535.788)	$2,185.445

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 March 31, 2020).

Metropolitan Transportation Authority						
Related Bonds	**Notional Amount as of 3/31/20 (Unaudited)**	**Effective Date**	**Maturity Date**	**Terms**	**Counterparty and Ratings(S&P / Moody's / Fitch)**	**Fair Value as of 3/31/20 (Unaudited)**
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)	$ (75.270)
TRB 2005D & 2005E	262.815	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(60.153)
TRB 2005E	87.605	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products (1) (BBB+ / Baa1 / BBB+)	(20.051)
TRB 2012G	356.375	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(102.932)
DTF 2008A	304.000	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(59.655)
Total	**$ 1,210.795**					**$ (318.061)**

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

MTA Bridges and Tunnels						
Related Bonds	Notional Amount as of 3/31/20 (Unaudited)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 3/31/20 (Unaudited)
TBTA 2002F & 2003B-2	$ 188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / Aa3 / A+)	$ (45.516)
TBTA 2005B-2	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(45.516)
TBTA 2005B-3	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas US Wholesale Holdings, Corp. [1] (A+ / Aa3 / AA-)	(45.517)
TBTA 2005B-4	188.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(45.516)
TRB 2002G-1 & 2011B TBTA 2005A & 2001C [2]	110.725 [3]	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA-)	(17.831) [3]
TRB 2002G-1 & 2011B TBTA 2005A & 2001C [2]	110.725 [3]	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (A+ / Aa2 / AA-)	(17.831) [3]
Total	**$ 974.650**					**$ (217.727)**

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.

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 March 31, 2020, 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 March 31, 2020, 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) (Unaudited)	% of Total Notional Amount (Unaudited)
JPMorgan Chase Bank, NA	A+	Aa2	AA	$744,675	34.07%
UBS AG	A+	Aa3	AA-	451,115	20.64
The Bank of New York Mellon	AA-	Aa2	AA	304,000	13.91
Citibank, N.A.	A+	Aa3	A+	188,300	8.62
BNP Paribas US Wholesale Hodings, Corp..	A+	Aa3	AA-	188,300	8.61
U.S. Bank National Association	AA-	A1	AA-	110,725	5.07
Wells Fargo Bank, N.A.	A+	Aa2	AA-	110,725	5.07
AIG Financial Products Corp.	BBB+	Baa1	BBB+	87,605	4.01
Total				**$2,185,445**	**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 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 Fargo)	January 1, 2032	January 1, 2030
MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2002F (swap with Citibank, N.A.)	November 1, 2032	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.)	January 1, 2033	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.)	November 1, 2041	January 1, 2030 (U.S. Bank/Wells Fargo) January 1, 2032 (Citibank)
MTA Transportation Revenue Variable Rate Bonds, 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 March 31, 2020, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was $308.5; as of this date, the MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of March 31, 2020, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was $223.7; 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 rating)**
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	**MTA Bridges and Tunnels Collateral Thresholds (based on highest rating)**	**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 Thresholds (based on lowest rating)**	**Counterparty Collateral Thresholds (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 March 31, 2020	Variable-Rate Bonds		Net Swap Payments	Total
	Principal	Interest		
2020	38.4	46.5	(4.9)	80.0
2021	58.3	44.9	(4.7)	98.5
2022	63.3	42.6	(4.4)	101.5
2023	65.7	40.1	(4.1)	101.6
2024	68.2	37.5	(3.8)	101.8
2025-2029	356.5	173.7	(13.8)	516.5
2030-2034	729.7	391.9	(4.8)	1,116.9
2035-2039	93.5	18.5	(0.6)	111.5

MTA Bridges and Tunnels (in millions)				
Period Ended March 31, 2020	Variable-Rate Bonds		Net Swap Payments	Total
	Principal	Interest		
2020	25.4	37.0	(6.9)	55.5
2021	26.6	36.0	(6.8)	55.9
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
2025-2029	289.2	133.1	(30.5)	391.8
2030-2034	499.7	23.6	(5.2)	518.1
2035-2039	-	2.0	-	2.0

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 expires in 2022, at which point the MTA has the option of either exercising a fixed-price purchase option for the equipment or returning the equipment to the third-party owner.

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 ("REFCO") 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 March 31, 2020, the market value of total collateral funds was $39.3.

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 March 31, 2020, the market value of total collateral funds was $55.4.

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 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").The Balance Leases do not encumber the railroad tracks, which will continue to be used for transportation purposes.

The following ground leases, each with a 99-year term (beginning December 3, 2012), entered into between the MTA, as landlord, and a special purpose entity controlled by Related-Oxford, as Ground Lease tenants, all of which Ground Leases demise the Eastern Rail Yards ("ERY") and were severed from the ERY Balance Lease, dated as of April 10, 2013:

- the Ground Lease demising the Tower A Severed Parcel, also known as 30 Hudson Yards.
- the Ground Lease demising the Tower D Severed Parcel, also known as 15 Hudson Yards.
- the Ground Lease demising the Tower E Severed Parcel, also known as 35 Hudson Yards.
- the Ground Lease demising the Retail Podium Severed Parcel.
- the Ground Lease demising the Retail Pavilion Parcel.

The 99-year West Side Rail Yard ("WRY") Balance Lease (beginning December 3, 2013) between the MTA and a special purpose entity controlled by Related-Oxford demising the WRY and the Severed Parcel Leases to be entered into upon the creation of Severed Parcels that may be severed from the WRY, at the option of the applicable Ground Lease Tenant, upon satisfaction of certain conditions, in order to construct improvements thereon in accordance with the terms of the applicable Severed Parcel Lease.

Both the ERY and WRY Ground Leases were pledged as security for the Series 2016A Hudson Yards Trust Obligations.

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

- the now-terminated ground lease demising Tower C, also known as 10 Hudson Yards, as to which the Ground Lease tenant closed on its exercise of its Fee Conversion Option on August 1, 2016 for which MTA received $120.
- the ground lease demising the Culture Shed, which does not pay any Monthly Ground Rent, and
- the ground lease demising the Open Space Severed Parcel which does not pay any Monthly Ground Rent.

The Severed Parcel Ground Leases required Ground Lease Tenants, at their sole cost and expense, to construct the Long Island Railroad Roof ("LIRR Roof") over the Long Island Railroad tracks in the Hudson Rail Yards, which LIRR Roof will serve as the foundation for substantial portions of the buildings and other improvements being constructed pursuant to each Severed Parcel Ground Lease. Each Ground Lease tenant 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 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 March 31, 2020 (unaudited):

Year	ERY	WRY	Total
2020	$ 9	$ 18	$ 27
2021	9	33	42
2022	9	33	42
2023	10	33	43
2024	10	36	46
Thereafter	4,010	14,317	18,327
Total	**$ 4,057**	**$ 14,470**	**$ 18,527**

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 $1.1 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 March 31, 2020, 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 52.8%, 7.5% and 39.7%, 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, and MTAHQ.

MTA reflected a capital lease obligation as of March 31, 2020 and December 31, 2019 of $237 and $237, respectively. The MTA made rent payments of $7 and $28 for the period ended March 31, 2020 and December 31, 2019, 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 2019, the total of the rental payments charged to MTA New York City Transit and MTA Bridges and Tunnels was $5.01 and $2.24 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 March 31, 2020 and December 31, 2019, is as follows (in millions):

	March 31, 2020 (Unaudited)	December 31, 2019
Capital lease - building	$196	$196
Less accumulated amortization	(96)	(95)
Capital lease - building - net	$100	$101

On April 8, 1994, the MTA amended its lease for the Harlem/Hudson line properties, including Grand Central Terminal. This amendment initially extends the lease term, previously expiring in 2031, an additional 110 years and, pursuant to several other provisions, an additional 133 years. In addition, the amendment grants the MTA an option to purchase the leased property after the 25th anniversary of the amended lease, subject to the owner's right to postpone such purchase option exercise date for up to an additional 15 years if the owner has not yet closed the sale, transfer or conveyance of an aggregate amount of 1,000,000 square feet or more of development rights appurtenant to Grand Central Terminal and the associated zoning lots. The amended lease comprises both operating (for the lease of land) and capital (for the lease of buildings and track structure) elements.

On February 28, 2020, the MTA exercised its right to purchase Grand Central Terminal for $32,782. Both the operating and capital leases were removed from the balance sheet and the building will now be depreciated as an asset.

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 $45 paid to Amtrak by the MTA under this agreement is included in other assets. This amount is being amortized over 30 years.

Total rent expense under operating leases approximated $17.1 and $19.1 for the periods ended March 31, 2020 and 2019, respectively.

At March 31, 2020, the future minimum lease payments under non-cancelable leases are as follows (in millions):

Years	**Operating**	**Capital**
	(Unaudited)	
2020	$ 67	$ 23
2021	76	23
2022	83	74
2023	82	18
2024	84	21
2025–2029	429	108
2030–2034	458	557
2035–2039	277	157
2040–2044	273	174
2045–2049	201	132
Thereafter	-	-
Future minimum lease payments	$ 2,030	1,287
Amount representing interest		(858)
Total present value of capital lease obligations		429
Less current present value of capital lease obligations		4
Noncurrent present value of capital lease obligations		$ 425

Capital Leases Schedule

For the period ended March 31, 2020

Description	**December 31, 2019**	**Increase**	**Decrease**	**March 31, 2020**
		(Unaudited)		(Unaudited)
Sumitomo	$ 15	$ -	$ -	$ 15
Met Life	6	-	-	6
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	42	-	9	33
Bank of America Equity	16	-	-	16
Sumitomo	24	-	1	23
Met Life Equity	58	-	-	58
Grand Central Terminal & Harlem Hudson Railroad Lines	13	-	13	-
2 Broadway Lease Improvement	179	-	-	179
2 Broadway	58	-	-	58
Total MTA Capital Lease	$ 452	$ -	$ 23	$ 429
Current Portion Obligations under Capital Lease	14			4
Long Term Portion Obligations under Capital Lease	$ 438			$ 425

Capital Leases Schedule

For the Year Ended December 31, 2019

Description	December 31, 2018	Increase	Decrease	December 31, 2019
Sumitomo	$ 15	$ -	$ -	$ 15
Met Life	6	-	-	6
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	39	3	-	42
Bank of America Equity	16	-	-	16
Sumitomo	27	1	4	24
Met Life Equity	55	3	-	58
Grand Central Terminal & Harlem Hudson Railroad Lines	14	-	1	13
2 Broadway Lease Improvement	177	2	-	179
2 Broadway	57	1	-	58
Total MTA Capital Lease	$ 447	$ 10	$ 5	$ 452
Current Portion Obligations under Capital Lease	4			14
Long Term Portion Obligations under Capital Lease	$ 443			$ 438

9. 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 March 31, 2020 and year ended December 31, 2019 is presented below (in millions):

	March 31, 2020 (Unaudited)	December 31, 2019
Balance - beginning of year	$ 4,587	$ 4,254
Activity during the year:		
Current year claims and changes in estimates	213	884
Claims paid	(108)	(551)
Balance - end of year	4,692	4,587
Less current portion	(502)	(501)
Long-term liability	$ 4,190	$ 4,086

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 will entail 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 and Metro-North Commuter Railroad (the "Train Hall"), as well as retail and commercial space (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 "TIFIA Loan"), with 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 TIFIA Loan are being used to pay for costs of the construction of the Train Hall. The TIFIA Loan is secured by a mortgage on the Train Hall property. The principal and interest on the 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 September, 2030 and is thereafter calculated based upon the assessed value of the properties as determined by New York City. The TIFIA Loan is further supported by a TIFIA Debt Service Reserve Account, which is funded in an amount equal to the sum of the highest aggregate TIFIA debt service amounts that will become due and payable on any two consecutive semi-annual payment dates in a five-year prospective period.

Simultaneously with the execution of the TIFIA Loan Agreement, the JSA was entered into by and among the MTA, the TIFIA Lender, ESD, and Manufacturers and Traders Trust Company (as Pilot trustee). 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 moneys 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 TIFIA Loan has been paid in full and (c) foreclosure by the TIFIA Lender under the Mortgage (as defined in the TIFIA Loan Agreement).

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 TIFIA Loan Agreement 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 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 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") whereby 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 $3 for the periods ended March 31, 2020 and 2019, respectively. A summary of the activity in pollution remediation liability at March 31, 2020 and December 31, 2019 were as follows:

	March 31, 2020	**December 31, 2019**
	(Unaudited)	
Balance at beginning of year	$ 151	$ 139
Current year expenses/changes in estimates	1	42
Current year payments	(2)	(30)
Balance at end of year	150	151
Less current portion	31	31
Long-term liability	$ 119	$ 120

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 March 31, 2020 and December 31, 2019 are presented below:

	Balance December 31, 2018	**Additions**	**Reductions**	**Balance December 31, 2019**	**Additions**	**Reductions**	**Balance March 31, 2020**
					(Unaudited)		**(Unaudited)**
Non-current liabilities:							
Contract retainage payable	$ 406	$ 24	$ -	430	$ -	$ (21)	$ 409
Other long-term liabilities	376	-	(4)	372	-	(5)	367
Total non-current liabilities	**$ 782**	**$ 24**	**$ (4)**	**$ 802**	**$ -**	**$ (26)**	**$ 776**

14. 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	Macquarie Energy LLC	Goldman Sachs	Goldman Sachs	BOA_ Merrill	Goldman Sachs	Goldman Sachs	Cargill	BOA_ Merrill
Trade Date	4/24/2018	5/29/2018	6/26/2018	7/31/2018	8/29/2018	9/25/2018	10/30/2018	11/27/2018
Effective Date	4/1/2019	5/1/2019	6/1/2019	7/1/2019	8/1/2019	9/1/2019	10/1/2019	11/1/2019
Termination Date	3/31/2020	4/30/2020	5/31/2020	6/30/2020	7/31/2020	8/31/2020	9/30/2020	10/31/2020
Price/Gal	$2.0795	$2.1590	$2.1755	$2.1730	$2.2145	$2.2885	$2.2455	$1.9213
Original Notional Quantity	2,799,258	2,841,090	2,841,069	2,820,856	2,831,924	2,831,922	2,831,934	3,023,197

Counterparty	BOA_ Merrill	Cargill	Cargill	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs
Trade Date	1/3/2019	1/29/2019	2/28/2019	3/28/2019	4/30/2019	5/28/2019	6/25/2019	7/30/2019
Effective Date	12/1/2019	1/1/2020	2/1/2020	3/1/2020	4/1/2020	5/1/2020	6/1/2020	7/1/2020
Termination Date	11/30/2020	12/31/2020	1/31/2021	2/28/2021	3/31/2021	4/30/2021	5/31/2021	6/30/2021
Price/Gal	$1.7885	$1.9390	$2.0518	$2.0045	$2.0650	$1.9675	$1.9200	$1.8875
Original Notional Quantity	2,856,019	2,856,014	2,793,123	2,849,714	2,874,889	2,851,286	2,851,258	2,788,533

Counterparty	Macquarie Energy LLC	BOA_ Merrill	Goldman Sachs	Goldman Sachs	BOA_ Merrill	BOA_ Merrill	Goldman Sachs	Cargill
Trade Date	8/27/2019	9/30/2019	10/29/2019	11/26/2019	12/30/2019	1/30/2020	2/25/2020	3/24/2020
Effective Date	8/1/2020	9/1/2020	10/1/2020	11/1/2020	12/1/2020	1/1/2021	2/1/2021	3/1/2021
Termination Date	7/31/2021	8/31/2021	9/30/2021	10/31/2021	11/30/2021	12/31/2021	1/31/2022	2/28/2022
Price/Gal	$1.7790	$1.8075	$1.8420	$1.8600	$1.9040	$1.7100	$1.6750	$1.3473
Original Notional Quantity	2,842,790	2,844,946	2,839,784	2,839,778	2,839,796	2,839,808	2,841,331	2,819,772

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 March 31, 2020, the total outstanding notional value of the ULSD contracts was 52.8 million gallons with a negative fair market value of $38.1 (unaudited). 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).

15. CONDENSED COMPONENT UNIT INFORMATION

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

March 31, 2020 (Unaudited)	MTA	Metro - North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	$ 7,719	$ 227	$ 240	$ 583	$ 1,021	$ (348)	$ 9,442
Capital assets	12,105	5,465	7,941	45,333	6,740	-	77,584
Other Assets	13,127	-	-	-	469	(12,495)	1,101
Intercompany receivables	1,783	75	254	661	38	(2,811)	-
Deferred outflows of resources	1,688	428	559	2,338	564	(231)	5,346
Total assets and deferred outflows of resources	**$ 36,422**	**$ 6,195**	**$ 8,994**	**$ 48,915**	**$ 8,832**	**$ (15,885)**	**$ 93,473**
Current liabilities	$ 4,285	$ 283	$ 256	$ 2,074	$ 823	$ (93)	$ 7,628
Non-current liabilities	41,699	2,157	3,772	21,943	10,372	(216)	79,727
Intercompany payables	1,724	156	233	1,006	443	(3,562)	-
Deferred inflows of resources	255	145	264	1,855	109	-	2,628
Total liabilities and deferred inflows of resources	**$ 47,963**	**$ 2,741**	**$ 4,525**	**$ 26,878**	**$ 11,747**	**$ (3,871)**	**$ 89,983**
Net investment in capital assets	$ (29,875)	$ 5,451	$ 7,912	$ 45,077	$ 2,282	$ (104)	$ 30,743
Restricted	2,254	-	-	-	919	(426)	2,747
Unrestricted	16,080	(1,997)	(3,443)	(23,040)	(6,116)	(11,484)	(30,000)
Total net position	**$ (11,541)**	**$ 3,454**	**$ 4,469**	**$ 22,037**	**$ (2,915)**	**$ (12,014)**	**$ 3,490**
For the period ended March 31, 2020 (Unaudited)							
Fare revenue	$ 50	$ 156	$ 162	$ 988	$ -	$ -	$ 1,356
Vehicle toll revenue	-	-	-	-	434	-	434
Rents, freight and other revenue	17	14	7	113	5	(10)	146
Total operating revenue	**67**	**170**	**169**	**1,101**	**439**	**(10)**	**1,936**
Total labor expenses	283	233	294	1,735	61	-	2,606
Total non-labor expenses	95	90	89	473	47	(10)	784
Depreciation	19	62	103	512	43	-	739
Total operating expenses	**397**	**385**	**486**	**2,720**	**151**	**(10)**	**4,129**
Operating (deficit) surplus	**(330)**	**(215)**	**(317)**	**(1,619)**	**288**	**-**	**(2,193)**
Subsidies and grants	277	44	-	110	2	(41)	392
Tax revenue	852	-	-	151	-	37	1,040
Interagency subsidy	125	107	205	38	-	(475)	-
Interest expense	(333)	-	-	(1)	(79)	(1)	(414)
Other	98	-	-	3	112	(184)	29
Total non-operating revenues (expenses)	**1,019**	**151**	**205**	**301**	**35**	**(664)**	**1,047**
Gain (Loss) before appropriations	689	(64)	(112)	(1,318)	323	(664)	(1,146)
Appropriations, grants and other receipts externally restricted for capital projects	122	58	164	(619)	(122)	582	185
Change in net position	811	(6)	52	(1,937)	201	(82)	(961)
Net position, beginning of period	(12,352)	3,460	4,417	23,974	(3,116)	(11,932)	4,451
Net position, end of period	**$ (11,541)**	**$ 3,454**	**$ 4,469**	**$ 22,037**	**$ (2,915)**	**$ (12,014)**	**$ 3,490**
For the period ended March 31, 2020 (Unaudited)							
Net cash (used in) / provided by operating activities	$ (416)	$ (152)	$ (218)	$ (945)	$ 330	$ 73	$ (1,328)
Net cash provided by / (used in) non-capital financing activities	136	195	306	1,245	(205)	(388)	1,289
Net cash (used in) / provided by capital and related financing activities	1,482	(4)	9	(199)	(55)	388	1,621
Net cash (used in) / provided by investing activities	(1,263)	(50)	(100)	(100)	12	(73)	(1,574)
Cash at beginning of period	312	37	7	49	149	-	554
Cash at end of period	**$ 251**	**$ 26**	**$ 4**	**$ 50**	**$ 231**	**$ -**	**$ 562**

December 31, 2019	MTA	Metro-North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	$ 6,051	$ 225	$ 228	$ 651	$ 702	$ (53)	$ 7,804
Capital assets	12,160	5,477	7,881	45,323	6,661	-	77,502
Other Assets	12,948	4	-	1	4	(11,904)	1,053
Intercompany receivables	724	90	167	1,372	739	(3,092)	-
Deferred outflows of resources	1,643	426	559	2,323	527	(178)	5,300
Total assets and deferred outflows of resources	**$ 33,526**	**$ 6,222**	**$ 8,835**	**$ 49,670**	**$ 8,633**	**$ (15,227)**	**$ 91,659**
Current liabilities	$ 4,210	$ 306	$ 258	$ 1,974	$ 823	$ (77)	$ 7,494
Non-current liabilities	39,106	2,171	3,771	21,867	10,318	(148)	77,085
Intercompany payables	2,306	140	125	-	499	(3,070)	-
Deferred inflows of resources	256	145	264	1,855	109	-	2,629
Total liabilities and deferred inflows of resources	**$ 45,878**	**$ 2,762**	**$ 4,418**	**$ 25,696**	**$ 11,749**	**$ (3,295)**	**$ 87,208**
Net investment in capital assets	$ (29,362)	$ 5,449	$ 7,853	$ 45,064	$ 2,097	$ 46	$ 31,147
Restricted	1,668	-	-	-	1,169	(857)	1,980
Unrestricted	15,342	(1,989)	(3,436)	(21,090)	(6,382)	(11,121)	(28,676)
Total net position	**$ (12,352)**	**$ 3,460**	**$ 4,417**	**$ 23,974**	**$ (3,116)**	**$ (11,932)**	**$ 4,451**
For the period ended March 31, 2019 (Unaudited)							
Fare revenue	$ 53	$ 173	$ 175	$ 1,068	$ -	$ (1)	$ 1,468
Vehicle toll revenue	-	-	-	-	452	-	452
Rents, freight and other revenue	22	15	12	122	5	(10)	166
Total operating revenue	**75**	**188**	**187**	**1,190**	**457**	**(11)**	**2,086**
Total labor expenses	279	230	286	1,615	61	-	2,471
Total non-labor expenses	107	92	88	504	52	(13)	830
Depreciation	25	58	101	481	41	-	706
Total operating expenses	**411**	**380**	**475**	**2,600**	**154**	**(13)**	**4,007**
Operating (deficit) surplus	**(336)**	**(192)**	**(288)**	**(1,410)**	**303**	**2**	**(1,921)**
Subsidies and grants	331	33	-	-	2	-	366
Tax revenue	2,625	-	-	180	-	(3)	2,802
Interagency subsidy	144	69	57	34	-	(304)	-
Interest expense	(258)	-	-	-	(69)	(2)	(329)
Other	272	-	-	5	1	(187)	91
Total non-operating revenues (expenses)	**3,114**	**102**	**57**	**219**	**(66)**	**(496)**	**2,930**
Gain (Loss) before appropriations	2,778	(90)	(231)	(1,191)	237	(494)	1,009
Appropriations, grants and other receipts externally restricted for capital projects	(66)	59	318	(302)	(140)	512	381
Change in net position	2,712	(31)	87	(1,493)	97	18	1,390
Net position, beginning of the period	(11,267)	3,194	3,545	22,925	(3,601)	(10,843)	3,953
Net position, end of period	**$ (8,555)**	**$ 3,163**	**$ 3,632**	**$ 21,432**	**$ (3,504)**	**$ (10,825)**	**$ 5,343**
For the period ended March 31, 2019 (Unaudited)							
Net cash (used in) / provided by operating activities	$ (306)	$ (102)	$ (140)	$ (813)	$ 354	$ (43)	$ (1,050)
Net cash provided by / (used in) non-capital financing activities	406	131	213	896	(201)	(324)	1,121
Net cash (used in) / provided by capital and related financing activities	422	4	(2)	(316)	(172)	357	293
Net cash provided by / (used in) investing activities	(546)	(35)	(70)	222	19	10	(400)
Cash at beginning of period	430	26	9	66	10	-	541
Cash at end of period	**$ 406**	**$ 24**	**$ 10**	**$ 55**	**$ 10**	**$ -**	**$ 505**

16. SUBSEQUENT EVENTS

On April 2, 2020, Fitch Ratings downgraded MTA's Transportation Revenue Bonds from 'AA-' to 'A+', and Transportation Revenue BANs from 'F1'+ to 'F1', and put the TRB on a Negative Outlook.

On April 3, 2020 Fitch downgraded Enhanced Transportation Revenue Bond Subseries 2005E-1, 2005E-3 ,2015E-4, 2005D-2, 2012G-1 to 'AA', as result of its downgrade of MTA's Transportation Revenue Bonds on the prior day.

On April 9, 2020, Fitch Ratings downgraded Enhanced DTF Subseries 2002B-1 (CUSIP 59259N2Z5) to 'AA' from 'AAA' as result of its downgrade of the LOC provider MUFG Bank, Ltd. the prior day.

On April 10, 2020, Fitch Ratings placed MTA's Dedicated Tax Fund bonds on negative outlook because of the same outlook being placed on the State of New York's Issuer Default Rating.

On April 16, 2020, Moody's downgraded MTA's Transportation Revenue Bonds from 'A1' to 'A2', and Transportation Revenue BANs from 'MIG 1' to 'MIG 2', and put the TRB on a Negative Outlook.

On April 20, 2020, MTA drew down $244 of its $967 RRIF Loan, bringing the total outstanding to $663.

On April 30, 2020, MTA executed a 2,819,762 gallon ultra-low sulfur diesel fuel hedge with Macquarie Energy LLC at an all-in price of $1.1800 (whole dollars) per gallon. The hedge covers the period from April 2021 through March 2022.

On May 4, 2020, S&P Global Ratings placed the following ratings on MTA's debt with negative implications: (1) 'AA/A-1+' dual rating on the MTA's series 2012G-2 and 2002G-1G variable-rate Transportation Revenue Bonds, with enhancement by letters of credit from Toronto Dominion Bank, and on the MTA's series 2015E-1 variable-rate Transportation Revenue Bonds, with enhancement by a letter of credit from U.S. Bank N.A.; (2) 'AA/A-1' dual rating on the MTA's series 2005E-2 and 2015E-3 variable-rate Transportation Revenue Bonds, with enhancement by letters of credit from Bank of America N.A., and on the MTA's series 2012A-2 variable-rate Transportation Revenue Bonds, with enhancement by a letter of credit from Bank of Montreal; (3) 'AA/A-1' dual rating on various other variable-rate Transportation Revenue Bond with enhancement by letters of credit from Barclays Bank PLC, PNC Bank, N.A., MUFG Bank Ltd., and Landesbank Hessen-Thueringen Girozentrale; (4) 'A-' long-term rating to the MTA's $250 million series 2015A-2 remarketed Transportation Revenue Bonds (mandatory tender bonds).

On May 14, 2020, MTA issued $1.725 billion MTA Transportation Revenue Green Bonds, Series 2020C ("the Series 2020C Bonds"), as $1.125 billion Subseries 2020C-1 with maturities of November 15, 2045, 2050, and 2055, and as $600 Subseries 2020C-2 maturing November 15, 2049. The Series 2020C Bonds were issued to (i) retire, together with other MTA funds, certain outstanding Transportation Revenue Bond Anticipation Notes, (ii) finance existing approved transit and commuter projects, (iii) pay capitalized interest, and (iv) pay certain financing, legal and miscellaneous expenses.

On May 14, 2020, MTA effectuated a mandatory tender and remarketed $248 Transportation Revenue Bonds, Subseries 2015A-2 (SIFMA Floating Rate Tender Notes), which will bear interest in the Term Rate Mode as described in the Remarketing circular.

On May 22, 2020, the MTA negotiated a $950 syndicated loan with JPMorgan Chase Bank National Association ("JPM") as administrative agent. This facility was authorized under the March 25, 2020 Board authorization and includes The Bank of China, New York Branch, and Industrial and Commercial Bank of China Limited, New York Branch as other lending participants. The syndicated loan does not have the revolving feature of the $1.2 billion facility with JPM ($800) and BANA (originally $200, now $400). The term of the loan is 2 years.

On May 27, 2020, MTA issued $525 MTA Bridges and Tunnels General Revenue Bonds, Series 2020A, ("the Series 2020A Bonds") to (i) finance bridge and tunnel projects in the MTA Bridges and Tunnels approved Capital Program and (ii) pay financing, legal, and miscellaneous expenses. The Series 2020A Bonds mature November 15, 2049 and November 15, 2054.

On May 27, 2020, MTA executed a 2,819,768 gallon ultra-low sulfur diesel fuel hedge with Goldman, Sachs & Co./J. Aron at an all-in price of $1.2640 (whole dollars) per gallon. The hedge covers the period from May 2021 through April 2022.

On June 30, 2020, MTA executed a 2,819,748 gallon ultra-low sulfur diesel fuel hedge with Merrill Lynch at an all-in price of $1.3685 (whole dollars) per gallon. The hedge covers the period from June 2021 through May 2022.

On June 30, 2020, Kroll Bond rating Agency ("KBRA") affirmed the MTA Triborough Bridge and Tunnel Authority General Revenue Bonds and Subordinate Revenue Bonds, assigned a developing outlook and removed them from Watch-Downgrade. The removal from Watch-Downgrade reflects the ongoing recovery of traffic on the MTA Triborough Bridge and Tunnel Authority's tolled bridges and tunnels. The Developing outlook reflects uncertainty regarding the extent of overall recovery on toll revenues due to the evolving nature of the COVID-19 crisis.

Assessment of Impacts from the COVID-19 Pandemic on MTA and MTA Bridges and Tunnels Finances and Operations

- ***Global Coronavirus Pandemic Background.*** The novel coronavirus ("COVID-19") outbreak is continuing to have an adverse and severe impact on MTA's financial condition and operating results. 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 12, 2020, the World Health Organization declared the COVD-19 outbreak to be a pandemic in the face of the global spread of the virus. The COVID-19 pandemic has dramatically altered the behavior of businesses and people in a manner that is having negative effects on global and local economies. In addition, stock markets in the U.S. and globally, have seen significant declines and volatility attributed to concerns over COVID-19, and capital markets remain disrupted. These adverse impacts have intensified and continue to evolve daily globally, nationally, and particularly within the State and MTA's service area. On March 7, 2020 Governor Cuomo declared a Disaster Emergency in the State of New York and on March 13, 2020 President Trump declared a national state of emergency as a result of the COVID-19 pandemic. In addition, by order of Governor Cuomo ("New York State on PAUSE"), as of Sunday, March 22nd, all non-essential businesses Statewide were required to be closed, among other restrictive social distancing and related measures. New York State on PAUSE restrictions remain in place through May 15, 2020. This intervention to fight the aggressive spread of the COVID-19 pandemic has further eroded already severely diminished public transportation and bridge and tunnel usage during the COVID-19 pandemic.

- ***Status of Federal Aid.*** Federal emergency legislation, the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act", received final passage by Congress and was signed into law by the President on March 27, 2020. The CARES Act through FTA's formula funding provisions is providing approximately $4 billion to MTA. Funding is being provided at a 100 percent federal share, with no local match required, and is available to support operating, capital 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. MTA's initial grant under the CARES Act for $3.9 billion has been approved. On June 25, 2020, FTA approved an amendment to the initial CARES Act grant adding approximately $98 million in additional formula grant allocations to MTA for a CARES Act grant total of $4.009 billion.

- ***Impact on Ridership and Traffic.*** Compared to 2019 results, ridership is down 82 percent on the subways, 52 percent for combined MTA New York City Transit and MTA Bus, 87 percent on MTA Metro-North Railroad, and 84 percent on the MTA Long Island Rail Road. Crossings at MTA Bridges and Tunnels facilities are down by an estimated 32% compared to 2019. Now with the aid of a detailed economic study led by McKinsey & Company (the "McKinsey Report"), the MTA expects a significant shortfall in fares and toll revenues. The McKinsey Report provided an estimate of the shortfalls through the end of calendar year 2020. The impact to MTA's finances is material and leaves a gap that must be filled in order to sustain normal operations. MTA has begun refining the fare and toll revenue loss projections to reflect these changes, as well as projecting losses in the tax and other subsidy revenues that generally make up approximately one-half of MTA's total revenue sources. McKinsey & Company was contracted by MTA to analyze the potential impact of the COVID-19 pandemic on MTA's 2020 calendar year revenues.

- ***MTA Liquidity Resources.*** MTA currently has liquidity resources, consisting of a current running cash balance, internal available flexible funds, OPEB resources and commercial bank lines of credit plus interest earnings totaling $1.852 billion (total commercial bank lines of credit are now $2.150 billion, of which $1.003 billion have been drawn by MTA, with $703 of that remaining unspent, together with $1.147 billion undrawn as of the date hereof). These funds provide a temporary funding "bridge" to a permanent solution to the lost revenue and higher expenses. They must be repaid or replaced. Use of these monies will leave MTA with a significant gap in funding for both the operating budget and capital plan over the longer term and will likely result in additional debt issuance and unfunded operating needs.

- ***Capital Plan Procurement and Construction Contract Delays.*** MTA Construction and Development Company ("MTACDC") is currently evaluating the impacts of the COVID-19 pandemic on MTA's Capital Plans. At this time, the awarding of contracts relating to projects in the Capital Program remains on hold, although certain previous commitments for existing work that is part of the 2015-19 capital projects are being accelerated to take advantage of the current overnight closure and low ridership. The full impact of the COVID-19 pandemic on Capital Plan implementation cannot be determined at this time.

- ***New York State Fiscal Year 2020-21 Budget Provisions of Importance to MTA.*** Several provisions in the State's fiscal year 2020-21 budget (as passed by both the State Assembly and State Senate and signed by the Governor on April 3, 2020 the "State FY 2020-21 Enacted Budget"), are intended to provide significant financial assistance and flexibility to aid MTA in addressing the adverse impacts caused by the COVID-19 pandemic. Among the provisions in the State FY 2020-21 Enacted Budget addressing MTA's needs are the following:

  (i) amends existing law to allow MTA to use monies in the Central Business District Tolling Lockbox Fund for two years (2020 and 2021) to offset decreases in revenue or increases in operating costs due in whole or in part to the State emergency disaster caused by the COVID-19 pandemic. The CBD Tolling Lockbox Fund currently includes Internet sales tax revenue and mansion tax revenue that will be used for operations.

(ii) amends existing law to increase MTA's bond cap from $55.497 billion to $90.1 billion through 2024;

(iii) creates new authorization for MTA to issue up to $10 billion of bonds for three years (2020-2022) to offset decreases in revenue or increases in operating costs of the MTA due in whole or in part to the State disaster emergency caused by the COVID-19 pandemic;

(iv) commits the State and the City to each pay $3 billion to fund capital costs of the MTA's 2020-2024 Capital Plan.

- ***Dedication of 341-7 Madison Avenue Redevelopment Proceeds to MTA Capital Program.*** MTA and the City of New York announced on April 2, 2020, an agreement on a site-specific value capture strategy to speed development of 341-7 Madison Avenue, the site of the MTA's former headquarters in midtown Manhattan. Real estate taxes and other revenue generated from the future ground lease for the redevelopment of the property will be dedicated to the MTA capital program to fund approved MTA New York City Transit projects.

- ***COVID-19 Family Benefits Agreement***. On April 14, 2020, the MTA, Transport Workers Union Local 100 (TWU), the International Association of Sheet Metal, Air, Rail and Transportation Workers (SMART), and International Brotherhood of Teamsters Local 808 (IBT) reached an agreement on COVID-19 family benefits for transportation workers tragically lost in the pandemic. The benefits include a payment of $500,000 from the MTA to the surviving family of any worker who lost their life as a result of COVID-19, in addition to providing health insurance to the spouse and dependents to the age of 26 of the surviving family for three years. The MTA continues to have ongoing discussions with all labor partners to extend the COVID-19 family benefits agreement to all members of its represented workforce. The agreement will also be extended to all non-represented employees. The agreement was approved by the Board on April 22, 2020.

- ***Municipal Liquidity Facility***. On June 4, 2020, New York State designated the MTA as an eligible issuer under the Federal Reserve's Municipal Liquidity Facility $500 billion lending program. The Federal Reserve Board established the program facility in late April 2020, under the CARES Act, to enable states and municipalities to borrow from a $500 billion fund to help manage cash flow stresses caused by the coronavirus pandemic. The termination date for the facility has been extended to December 31, 2020.

- ***13-Point Action Plan***. On June 5, 2020, the MTA unveiled its 13-Point Action Plan for a Safe Return as New York City began Phase 1 reopening on Monday, June 8. To continue moving essential workers, welcome back additional riders and invest in the future of the system, the MTA is reimagining operations with one core mission: doing everything possible to ensure the safety of all New Yorkers. The MTA's 13-Point Action Plan for A Safe Return includes:

  - Increased Service
  - Unprecedented Cleaning & Disinfecting
  - Mandatory Face Coverings
  - Enhanced Safety & Security
  - Nation-Leading Employee Safety Initiatives
  - Innovative Cleaning Solutions
  - Hand Sanitizer
  - Floor Markings, Directional Arrows and New Signage
  - Staggered Business Hours
  - 2 Million Mask Contribution from State & City
  - Contactless Payments
  - New Partnership & Technology to Make System Safer
  - Data Dashboard

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REQUIRED SUPPLEMENTARY INFORMATION

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

($ in thousands)

	Additional Plan					MaBSTOA Plan				
Plan Measurement Date (December 31):	2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Total pension liability:										
Service cost	$ 1,057	$ 1,874	$ 2,752	$ 3,441	$ 3,813	$ 86,979	$ 84,394	$ 82,075	$ 77,045	$ 72,091
Interest	97,611	101,477	104,093	106,987	110,036	256,084	246,284	236,722	232,405	223,887
Effect of economic / demographic (gains) or losses	213	1,890	15,801	6,735	-	5,412	11,826	13,784	(68,997)	-
Effect of assumption changes or inputs	-	-				-	6,347			
Differences between expected and actual experience	-	-	-	-	-	-	-	-	-	(1,596)
Benefit payments and withdrawals	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)	(213,827)	(209,122)	(187,823)	(179,928)	(175,447)
Net change in total pension liability	(60,684)	(54,476)	(35,947)	(39,908)	(43,125)	134,648	139,729	144,758	60,525	118,935
Total pension liability—beginning	1,471,828	1,526,304	1,562,251	1,602,159	1,645,284	3,676,476	3,536,747	3,391,989	3,331,464	3,212,529
Total pension liability—ending (a)	1,411,144	1,471,828	1,526,304	1,562,251	1,602,159	3,811,124	3,676,476	3,536,747	3,391,989	3,331,464
Plan fiduciary net position:										
Employer contributions	59,500	76,523	81,100	100,000	407,513	205,433	202,684	220,697	214,881	226,374
Nonemployer contributions	-	145,000	70,000	-	-	-	-	-	-	-
Member contributions	333	760	884	1,108	1,304	21,955	19,713	18,472	16,321	15,460
Net investment income	(31,098)	112,614	58,239	527	21,231	(87,952)	350,186	212,260	(24,163)	105,084
Benefit payments and withdrawals	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)	(213,827)	(209,122)	(187,823)	(179,928)	(175,447)
Administrative expenses	(1,180)	(1,070)	(611)	(1,218)	(975)	(196)	(208)	(186)	(88)	(74)
Net change in plan fiduciary net position	(132,010)	174,110	51,019	(56,654)	272,099	(74,587)	363,253	263,420	27,023	171,397
Plan fiduciary net position—beginning	951,327	777,217	726,198	782,852	510,753	2,918,989	2,555,736	2,292,316	2,265,293	2,093,896
Plan fiduciary net position—ending (b)	819,317	951,327	777,217	726,198	782,852	2,844,402	2,918,989	2,555,736	2,292,316	2,265,293
Employer's net pension liability—ending (a)-(b)	$ 591,827	$ 520,501	$ 749,087	$ 836,053	$ 819,307	$ 966,722	$ 757,487	$ 981,011	$ 1,099,673	$ 1,066,171
Plan fiduciary net position as a percentage of the total pension liability	58.06%	64.64%	50.92%	46.48%	48.86%	74.63%	79.40%	72.26%	67.58%	68.00%
Covered payroll	$ 13,076	$ 20,500	$ 29,312	$ 39,697	$ 43,267	$ 776,200	$ 749,666	$ 716,527	$ 686,674	$ 653,287
Employer's net pension liability as a percentage of covered payroll	4526.06%	2539.03%	2555.56%	2106.09%	1893.61%	124.55%	101.04%	136.91%	160.14%	163.20%

Note: 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.

REQUIRED SUPPLEMENTARY INFORMATION

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

($ in thousands)

	MNR Cash Balance Plan					MTA Defined Benefit Plan				
Plan Measurement Date (December 31):	2018	2017	2016	2015	2014	2018	2017	2016	2015	2014
Total pension liability:										
Service cost	$ -	$ -	$ -	$ -	$ -	$ 162,273	$ 148,051	$ 138,215	$ 124,354	$ 121,079
Interest	20	21	24	29	32	358,118	335,679	308,009	288,820	274,411
Effect of economic / demographic (gains) or losses	(11)	12	(15)	(10)	-	75,744	(27,059)	86,809	121,556	2,322
Effect of assumption changes or inputs	-	-	-	18	-	-	10,731	-	(76,180)	-
Effect of plan changes	-	-	-	-	-	61,890	76,511	73,521	6,230	-
Benefit payments and withdrawals	(58)	(71)	(77)	(113)	(88)	(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Net change in total pension liability	(49)	(38)	(68)	(76)	(56)	415,676	310,937	396,931	265,208	206,755
Total pension liability—beginning	528	566	634	710	766	5,072,814	4,761,877	4,364,946	4,099,738	3,892,983
Total pension liability—ending (a)	479	528	566	634	710	5,488,490	5,072,814	4,761,877	4,364,946	4,099,738
Plan fiduciary net position:										
Employer contributions	5	-	23	18	-	338,967	321,861	280,768	221,694	331,259
Member contributions	-	-	-	-	-	29,902	31,027	29,392	34,519	26,006
Net investment income	1	20	16	6	41	(150,422)	516,153	247,708	(45,122)	102,245
Benefit payments and withdrawals	(58)	(71)	(77)	(113)	(88)	(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Administrative expenses	-	-	-	3	(3)	(3,152)	(4,502)	(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position	(52)	(51)	(38)	(86)	(50)	(27,054)	631,563	345,194	9,557	258,853
Plan fiduciary net position—beginning	523	574	612	698	748	4,051,534	3,419,971	3,074,777	3,065,220	2,806,367
Plan fiduciary net position—ending (b)	471	523	574	612	698	4,024,480	4,051,534	3,419,971	3,074,777	3,065,220
Employer's net pension liability—ending (a)-(b)	$ 8	$ 5	$ (8)	$ 22	$ 12	$ 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	98.33%	99.05%	101.41%	96.53%	98.36%	73.33%	79.87%	71.82%	70.44%	74.77%
Covered payroll	$ 268	$ 471	$ 846	$ 1,474	$ 2,274	$ 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	2.99%	1.06%	-0.95%	1.49%	0.53%	72.09%	55.00%	75.20%	72.76%	61.59%

Note: 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.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the MTA's Proportionate Share of the Net Pension Liabilities of Cost-Sharing Multiple-Employer Pension Plans

($ in thousands)

	NYCERS Plan				
Plan Measurement Date:	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
MTA's proportion of the net pension liability	24.493%	23.682%	24.096%	23.493%	23.585%
MTA's proportionate share of the net pension liability	$ 4,536,510	$ 4,176,941	$ 5,003,811	$ 5,708,052	$ 4,773,787
MTA's actual covered payroll	$ 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	113.989%	129.846%	158.616%	186.294%	159.686%
Plan fiduciary net position as a percentage of the total pension liability	78.836%	78.826%	74.805%	69.568%	73.125%

	NYSLERS Plan				
Plan Measurement Date:	March 31, 2019	March 31, 2018	March 31, 2017	March 31, 2016	March 31, 2015
MTA's proportion of the net pension liability	0.345%	0.327%	0.311%	0.303%	0.289%
MTA's proportionate share of the net pension liability	$ 24,472	$ 10,553	$ 29,239	$ 48,557	$ 9,768
MTA's actual covered payroll	$ 109,252	$ 105,269	$ 96,583	$ 87,670	$ 87,315
MTA's proportionate share of the net pension liability as a percentage of the MTA's covered payroll	22.400%	10.025%	30.273%	55.386%	11.187%
Plan fiduciary net position as a percentage of the total pension liability	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.

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

($ in thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
Additional Plan*										
Actuarially Determined Contribution	$ 62,774	$ 59,196	$ 76,523	$ 83,183	$ 82,382	$ 112,513	$ -	$ -	$ -	$ -
Actual Employer Contribution	62,774	59,500	221,523	151,100	100,000	407,513	-	-	-	-
Contribution Deficiency (Excess)	$ -	$ (304)	$ (145,000)	$ (67,917)	$ (17,618)	$(295,000)	$ -	$ -	$ -	$ -
Covered Payroll	$ 7,236	$ 13,076	$ 20,500	$ 29,312	$ 39,697	$ 43,267	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	480.09%	466.49%	1080.62%	515.49%	251.91%	941.87%	N/A	N/A	N/A	N/A
MaBSTOA Plan										
Actuarially Determined Contribution	$ 209,314	$ 202,509	$ 202,924	$ 220,697	$ 214,881	$ 226,374	$ 234,474	$ 228,918	$ 186,454	$ 200,633
Actual Employer Contribution	206,390	205,434	202,684	220,697	214,881	226,374	234,474	228,918	186,454	200,633
Contribution Deficiency (Excess)	$ 2,924	$ (2,925)	$ 240	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 786,600	$ 776,200	$ 749,666	$ 716,527	$ 686,674	$ 653,287	$ 582,081	$ 575,989	$ 579,696	$ 591,073
Contributions as a % of Covered Payroll	26.59%	26.47%	27.04%	30.80%	31.29%	34.65%	40.28%	39.74%	32.16%	33.94%
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	$ 278	$ 268	$ 471	$ 846	$ 1,474	$ 2,274	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	2.99%	2.03%	0.00%	2.68%	0.96%	0.00%	N/A	N/A	N/A	N/A
MTA Defined Benefit Plan*										
Actuarially Determined Contribution	$ 349,928	$ 331,566	$ 316,916	$ 290,415	$ 273,700	$ 271,523	$ -	$ -	$ -	$ -
Actual Employer Contribution	343,862	339,800	321,861	280,767	221,694	331,259	-	-	-	-
Contribution Deficiency (Excess)	$ 6,066	$ (8,234)	$ (4,945)	$ 9,648	$ 52,006	$ (59,736)	$ -	$ -	$ -	$ -
Covered Payroll	$ 2,052,657	$ 2,030,695	$ 1,857,026	$ 1,784,369	$ 1,773,274	$ 1,679,558	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	16.19%	16.83%	17.33%	15.73%	12.50%	19.72%	N/A	N/A	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

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the MTA's Contributions for All Pension Plans for the Year Ended December 31,

($ in thousands)

	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
NYCERS											
Actuarially Determined Contribution	$ 952,616	$ 807,097	$ 800,863	$ 797,845	$ 736,212	$ 741,223	$ 736,361	$ 731,983	$ 657,771	$ 574,555	$ 548,721
Actual Employer Contribution	952,616	807,097	800,863	797,845	736,212	741,223	736,361	731,983	657,771	574,555	548,721
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 3,948,283	$ 3,974,494	$ 3,768,885	$ 3,523,993	$ 3,494,907	$ 3,617,087	$ 2,943,195	$ 2,925,834	$ 2,900,630	$ 2,886,789	$ 2,800,882
Contributions as a % of Covered Payroll	23.97%	20.31%	21.25%	22.64%	21.07%	20.49%	25.02%	25.02%	22.68%	19.90%	19.59%
NYSLERS **											
Actuarially Determined Contribution	$ 14,851	$ 14,501	$ 13,969	$ 12,980	$ 15,792	$ 13,816	$ -	$ -	$ -	$ -	$ -
Actual Employer Contribution	14,851	14,501	13,969	12,980	15,792	13,816	-	-	-	-	-
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 106,913	$ 109,210	$ 103,787	$ 94,801	$ 86,322	$ 84,041	$ -	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	13.60%	13.28%	13.46%	13.69%	18.29%	16.44%	N/A	N/A	N/A	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.

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans

	Additional Plan				
Valuation Dates:	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	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 17 year period beginning January 1, 2016) with level dollar payments.	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.	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%	3.00%
Actuarial assumptions:					
Discount Rate:	7.00%	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.	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.	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.	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.	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	N/A
Inflation/Railroad Retirement Wage Base:	2.50%; 3.50%	2.50%; 3.50%	2.50%; 3.50%	2.50%; 3.50%	2.50%; 3.50%
Cost-of-Living Adjustments:	N/A	N/A	N/A	N/A	N/A

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans

	MaBSTOA Plan				
Valuation Dates:	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Frozen Initial Liability (FIL)	Frozen Initial Liability (FIL)	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.	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.	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.	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:					
Discount Rate:	7.00%	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.	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 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.	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.	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.	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%	2.50%	2.50%
Cost-of-Living Adjustments:	1.375% per annum	1.375% per annum	1.375% per annum	1.375% per annum	1.375% per annum

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans (continued)

	MNR Cash Balance Plan				
Valuation Dates:	January 1, 2019	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2014
Measurement Date:	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Unit Credit Cost	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.	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.	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	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%	4.00%	4.00%	4.50%
Investment rate of return :	4.00%, net of investment expenses.	4.00%, net of investment expenses.	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 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.	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.	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.	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	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.30%	2.30%	2.50%
Cost-of-Living Adjustments:	N/A	N/A	N/A	N/A	N/A

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans (continued)

	MTA Defined Benefit Plan				
Valuation Dates:	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	December 31, 2018	December 31, 2017	December 31, 2016	December 31, 2015	December 31, 2014
Actuarial cost method:	Entry Age Normal Cost	Entry Age Normal Cost	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.	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.	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.	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.	Varies by years of employment, and employee group.
Actuarial assumptions:					
Discount Rate:	7.00%	7.00%	7.00%	7.00%	7.00%
Investment rate of return :	7.00%	7.00%	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 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 recommended by the Society of Actuaries Retirement Plans Experience Committee. Ortality 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.	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.	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	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.	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%	2.50%; 3.50%	2.50%; 3.00%
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.	55% of inflation assumption or 1.375%, if applicable.	55% of inflation assumption or 1.375%, if applicable.

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans (continued)

	NYCERS Plan				
Valuation Dates:	June 30, 2018	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013
Measurement Date:	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015
Actuarial cost method:	Entry Age Normal Cost	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.	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.	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.	3% per annum.
Actuarial assumptions:					
Discount Rate:	7.00%	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.	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 thorugh 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 thorugh 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 thorugh 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 thorugh 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 thorugh 2013.
Pre-retirement:	N/A	N/A	N/A	N/A	N/A
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A	N/A
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	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.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.

REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions for All Pension Plans (continued)

	NYSLERS Plan				
Valuation Dates:	April 1, 2018	April 1, 2017	April 1, 2016	April 1, 2015	April 1, 2014
Measurement Date:	March 31, 2019	March 31, 2018	March 31, 2017	March 31, 2016	March 31, 2015
Actuarial cost method:	Aggregate 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.	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.	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%	3.80%	3.80%	4.90%
Actuarial assumptions:					
Discount Rate:	7.00%	7.00%	7.00%	7.00%	7.50%
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.	7.5%, net of investment expenses.
Mortality:	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's 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's 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's 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's 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's Scale MP-2014.
Pre-retirement:	N/A	N/A	N/A	N/A	N/A
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A	N/A
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%	2.50%	2.70%
Cost-of-Living Adjustments:	1.3% per annum.	1.3% per annum.	1.3% per annum.	1.3% per annum.	1.4% per annum.

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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, 2018 valuation for the NYCERS plan.

There were no significant legislative changes in benefit for the April 1, 2018 valuation for the NYSLERS plan.

Changes of Assumptions:

There were no significant changes in the economic and demographic used in the June 30, 2018 valuation for the NYCERS plan.

There were no significant changes in the economic and demographic assumptions used in the April 1, 2018 valuation for the NYSLERS plan.

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REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

Schedule of Changes in the MTA's Net OPEB Liability and Related Ratios and Notes to Schedule

($ in thousands)

Plan Measurement Date (December 31):	2018	2017
Total OPEB liability:		
Service cost	$ 1,002,930	$ 884,548
Interest on total OPEB liability	734,968	731,405
Effect of plan changes	1,580	27,785
Effect of economic/demographic (gains) or losses	(19,401)	13,605
Effect of assumption changes or inputs	(1,800,135)	911,465
Benefit payments	(691,122)	(650,994)
Net change in total OPEB liability	(771,180)	1,917,814
Total OPEB liability—beginning	20,705,068	18,787,254
Total OPEB liability—ending (a)	19,933,888	20,705,068
Plan fiduciary net position:		
Employer contributions	691,122	650,994
Net investment income	(18,916)	47,370
Benefit payments	(691,122)	(650,994)
Administrative expenses	(56)	-
Net change in plan fiduciary net position	(18,972)	47,370
Plan fiduciary net position—beginning	370,352	322,982
Plan fiduciary net position—ending (b)	351,380	370,352
Net OPEB liability—ending (a)-(b)	$ 19,582,508	$ 20,334,716
Plan fiduciary net position as a percentage of the total OPEB liability	1.76%	1.79%
Covered payroll	$ 6,903,700	$ 5,394,332
Net OPEB liability as a percentage of covered payroll	283.65%	376.96%

Notes to Schedule:

Changes of benefit terms: In the July 1, 2017 actuarial valuation, there were no changes to the benefit terms.

Changes of assumptions: In the July 1, 2017 actuarial valuation, there was a change in assumptions. The discount rate used to measure liabilities was updated to incorporate GASB 75 guidance and changed to reflect the current municipal bond rate.

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.

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REQUIRED SUPPLEMENTARY INFORMATION

Schedule of the MTA's Contributions to the OPEB Plan for the years ended December 31:

($ in thousands)	**2019**	**2018**	**2017**
Actuarially Determined Contribution	N/A	N/A	N/A
Actual Employer Contribution (1)	$ 737,297	$ 696,065	$ 650,994
Contribution Deficiency (Excess)	N/A	N/A	N/A
Covered Payroll	$ 6,901,690	$ 6,903,700	$ 5,394,200
Actual Contribution as a Percentage of Covered Payroll	10.68%	10.08%	12.07%

(1) Actual employer contribution includes the implicit rate of subsidy adjustment of $76,758 and $74,484 for the years ended December 31, 2019 and 2018, 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.

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REQUIRED SUPPLEMENTARY INFORMATION

Notes to Schedule of the MTA's Contributions to the OPEB Plan:

Valuation date	July 1, 2017	July 1, 2017
Measurement date	December 31, 2018	December 31, 2017
Discount rate	4.10%, net of expenses	3.44%, net of expenses
Inflation	2.50%	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	4.50%	4.50%
Investment rate of return	6.50%	6.50%
Salary increases	3%. Varies by years of service and differs for members of the various pension plans.	3%. Varies by years of service and differs for members of the various pension 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.

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SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Fiduciary Net Position as of
December 31, 2019

($ in thousands)	Pension Funds			Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Company Plan for Additional Pensions	MaBSTOA Plan	Other Post-employment Benefit Plan	401K Plan	Total
ASSETS:						
Cash	$ 6,891	$ 1,114	$ 6,494	$ -	$ -	$ 14,499
Receivables:						
Employee loans	-	-	40,092	-	168,314	208,406
Participant and union contributions	-	21	-	-	-	21
Investment securities sold	-	104	1,036	-	-	1,140
Accrued interest and dividends	2,950	477	1,419	20	-	4,866
Other receivables	2,149	33	-	-	-	2,182
Total receivables	5,099	635	42,547	20	168,314	216,615
Investments at fair value:						
Investments measured at readily determined fair value	999,705	161,582	531,619	-	-	1,692,906
Investments measured at net asset value	3,776,051	676,685	2,730,245	414,929	2,887,279	10,485,189
Investments at contract value	-	-	-	-	1,435,218	1,435,218
Total investments	4,775,756	838,267	3,261,864	414,929	4,322,497	13,613,313
Total assets	$ 4,787,746	$ 840,016	$ 3,310,905	$ 414,949	$ 4,490,811	$ 13,844,427
LIABILITIES:						
Accounts payable and accrued liabilities	4,067	(342)	1,629	-	837	6,191
Payable for investment securities purchased	3,594	581	3,425	-	-	7,600
Accrued benefits payable	-	-	19	122	-	141
Accrued postretirement death benefits (PRDB) payable	-	-	3,360	-	-	3,360
Accrued 55/25 Additional Members Contribution (AMC) payable	-	-	5,787	-	-	5,787
Other liabiliities	516	69	-	-	-	585
Total liabilities	8,177	308	14,220	122	837	23,664
NET POSITION:						
Restricted for pensions	4,779,569	839,708	3,296,685	-	-	8,915,962
Restricted for postemployment benefits other than pensions	-	-	-	414,827	-	414,827
Restricted for other employee benefits	-	-	-	-	4,489,974	4,489,974
Total net position	4,779,569	839,708	3,296,685	414,827	4,489,974	13,820,763
Total liabilities and net position	$ 4,787,746	$ 840,016	$ 3,310,905	$ 414,949	$ 4,490,811	$ 13,844,427

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

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SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Fiduciary Net Position as of December 31, 2018

($ in thousands)	Pension Funds			Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Company Plan for Additional Pensions	MaBSTOA Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ASSETS:						
Cash	$ 13,224	$ 2,484	$ 5,977	$ -	$ -	$ 21,685
Receivables:						
Employee loans	-	-	36,804	-	159,462	196,266
Participant and union contributions	-	-	-	-	-	-
Investment securities sold	-	58	672	-	-	730
Accrued interest and dividends	2,745	516	1,331	14	-	4,606
Other receivables	1,845	92	-	-	-	1,937
Total receivables	4,590	666	38,807	14	159,462	203,539
Investments at fair value:						
Investments measured at readily determined fair value	787,191	147,855	433,543	-	-	1,368,589
Investments measured at net asset value	3,228,219	669,902	2,379,443	351,538	2,286,394	8,915,496
Investments at contract value	-	-	-	-	1,313,496	1,313,496
Total investments	4,015,410	817,757	2,812,986	351,538	3,599,890	11,597,581
Total assets	$ 4,033,224	$ 820,907	$ 2,857,770	$ 351,552	$ 3,759,352	$ 11,822,805
LIABILITIES:						
Accounts payable and accrued liabilities	5,752	1,035	1,380	-	721	8,888
Payable for investment securities purchased	2,699	507	2,148	-	-	5,354
Accrued benefits payable	-	-	937	172	-	1,109
Accrued postretirement death benefits (PRDB) payable	-	-	2,921	-	-	2,921
Accrued 55/25 Additional Members Contribution (AMC) payable	-	-	5,982	-	-	5,982
Other liabiliities	293	48	-	-	-	341
Total liabilities	8,744	1,590	13,368	172	721	24,595
NET POSITION:						
Restricted for pensions	4,024,480	819,317	2,844,402	-	-	7,688,199
Restricted for postemployment benefits other than pensions	-	-	-	351,380	-	351,380
Restricted for other employee benefits	-	-	-	-	3,758,631	3,758,631
Total net position	4,024,480	819,317	2,844,402	351,380	3,758,631	11,798,210
Total liabilities and net position	$ 4,033,224	$ 820,907	$ 2,857,770	$ 351,552	$ 3,759,352	$ 11,822,805

See Independent Auditors’ Review Report and notes to the consolidated interim financial statements.

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SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2019

($ in thousands)	Pension Funds			Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Additional Plan	MaBSTOA Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ADDITIONS:						
Contributions:						
Employer contributions	$ 344,713	$ 62,774	$ 206,389	$ 660,539	$ 4,402	1,278,817
Non-Employer contributions	-	-	-	-	-	-
Implicit rate subsidy contribution	-	-	-	69,618	-	69,618
Participant rollovers	-	-	-	-	23,941	23,941
Member contributions	31,504	249	23,552	-	298,185	353,490
Total contributions	376,217	63,023	229,941	730,157	326,528	1,725,866
Investment income:						
Net (depreciation) / appreciation in fair value of investments	604,139	108,457	429,415	60,104	609,308	1,811,423
Dividend income	48,512	8,308	31,364	5,078	-	93,262
Interest income	12,628	2,216	10,534	248	-	25,626
Less: Investment expenses	18,015	3,642	27,530	1,783	-	50,970
Investment income, net	647,264	115,339	443,783	63,647	609,308	1,879,341
Other additions: Loan repayments - interest	0	0	0	0	8,979	8,979
Total additions	1,023,481	178,362	673,724	793,804	944,815	3,614,186
DEDUCTIONS:						
Benefit payments and withdrawals	264,878	157,254	221,221	660,539	-	1,303,892
Implicit rate subsidy payments	-	-	-	69,618	-	69,618
Transfer to other plans	106	-	-	-	98,450	98,556
Distribution to participants	-	-	-	-	107,396	107,396
Administrative expenses	3,408	717	220	200	837	5,382
Other deductions	-	-	-	-	6,789	6,789
Total deductions	268,392	157,971	221,441	730,357	213,472	1,591,633
Net increase (decrease) in fiduciary net position	755,089	20,391	452,283	63,447	731,343	2,022,553
NET POSITION:						
Restricted for Benefits:						
Beginning of year	4,024,480	819,317	2,844,402	351,380	3,758,631	11,798,210
End of year	$ 4,779,569	$ 839,708	$ 3,296,685	$ 414,827	$ 4,489,974	$ 13,820,763

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

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SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2018

($ in thousands)	Pension Funds			Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Additional Plan	MaBSTOA Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ADDITIONS:						
Contributions:						
Employer contributions	$ 338,967	$ 59,500	$ 205,433	$ 616,638	$ 4,392	$ 1,224,930
Non-Employer contributions	-	-	-	-	-	-
Implicit rate subsidy contribution	-	-	-	74,484	-	74,484
Participant rollovers	-	-	-	-	21,673	21,673
Member contributions	29,902	333	21,955	-	283,818	336,008
Total contributions	368,869	59,833	227,388	691,122	309,883	1,657,095
Investment income:						
Net appreciation/ (depreciation) in fair value of investments	(169,255)	(35,344)	(97,896)	(22,591)	(139,054)	(464,140)
Dividend income	56,670	11,441	37,259	5,203	-	110,573
Interest income	9,254	1,715	7,891	161	-	19,021
Less: Investment expenses	47,091	8,910	35,206	1,689	-	92,896
Investment income, net	(150,422)	(31,098)	(87,952)	(18,916)	(139,054)	(427,442)
Other additions: Loan repayments - interest	0	0	0	0	7,529	7,529
Total additions	218,447	28,735	139,436	672,206	178,358	1,237,182
DEDUCTIONS:						
Benefit payments and withdrawals	242,149	159,565	213,827	616,638	-	1,232,179
Implicit rate subsidy payments	-	-	-	74,484	-	74,484
Transfer to other plans	200	-	-	-	93,187	93,387
Distribution to participants	-	-	-	-	87,379	87,379
Administrative expenses	3,152	1,180	196	56	721	5,305
Other deductions	-	-	-	-	5,410	5,410
Total deductions	245,501	160,745	214,023	691,178	186,697	1,498,144
Net increase (decrease) in fiduciary net position	(27,054)	(132,010)	(74,587)	(18,972)	(8,339)	(260,962)
NET POSITION:						
Restricted for Benefits:						
Beginning of year	4,051,534	951,327	2,918,989	370,352	3,766,970	12,059,172
End of year	$ 4,024,480	$ 819,317	$ 2,844,402	$ 351,380	$ 3,758,631	$ 11,798,210

See Independent Auditors' 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 MARCH 31, 2020
($ in millions)
(Unaudited)

Category	**Financial Plan Actual**	**Statement GAAP Actual**	**Variance**
REVENUE:			
Farebox revenue	$ 1,352	$ 1,356	$ 4
Vehicle toll revenue	434	434	-
Other operating revenue	172	146	(26)
Total revenue	1,958	1,936	(22)
OPERATING EXPENSES:			
Labor:			
Payroll	1,339	1,352	13
Overtime	226	227	1
Health and welfare	336	335	(1)
Pensions	361	370	9
Other fringe benefits	251	249	(2)
Postemployment benefits	170	162	(8)
Reimbursable overhead	(84)	(89)	(5)
Total labor expenses	2,599	2,606	7
Non-labor:			
Electric power	107	104	(3)
Fuel	40	40	-
Insurance	2	2	-
Claims	107	110	3
Paratransit service contracts	105	105	-
Maintenance and other operating contracts	149	138	(11)
Professional service contract	96	91	(5)
Pollution remediation project costs	1	1	-
Materials and supplies	148	149	1
Other business expenses	44	44	-
Total non-labor expenses	799	784	(15)
Depreciation	737	739	2
Other Expenses Adjustment	15	-	(15)
Total operating expenses	4,150	4,129	(21)
NET OPERATING LOSS	$ (2,192)	$ (2,193)	$ (1)

(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 MARCH 31, 2020
($ in millions)
(Unaudited)

Accrued Subsidies	Financial Plan Actual	Financial Statement GAAP Actual	Variance	
Mass transit trust fund subsidies	$ 95	$ 146	51	{1}
Mortgage recording tax 1 and 2	124	124	-	{1}
MRT transfer	-	(1)	(1)	{1}
Urban tax	147	146	(1)	{1}
Station maintenance	43	43	-	{1}
Connecticut Department of Transportation (CDOT)	44	44	-	{1}
Subsidy from New York City for MTA Bus and SIRTOA	139	172	33	{1}
Build American Bonds Subsidy	-	2	2	{1}
Mobility tax	370	581	211	{1}
Assistance Fund (For hire vehicle)	111	106	(5)	{1}
Real Property Transfer Tax Surcharge (Mansion Tax)	58	69	11	{1}
Internet Marketplace Tax	43	43	-	{1}
Transfer to Central Business District Capital Lockbox	(95)	-	95	{1}
Other non-operating income	-	(14)	(14)	{2}
Total accrued subsidies	1,079	1,461	382	
Net operating deficit before subsidies and debt service	(2,192)	(2,193)	(1)	
Debt Service	(699)	(414)	285	
Conversion to Cash basis: Depreciation	737	-	(737)	
Conversion to Cash basis: GASB 75 OPEB adjustment	(1)	-	1	
Conversion to Cash basis: GASB 68 pension adjustment	(4)	-	4	
Conversion to Cash basis: Pollution & Remediation	1	-	(1)	
Total net operating surplus/(deficit) before appropriations, grants and other receipts restricted for capital projects	$ (1,079)	$ (1,146)	$ (67)	

{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.

(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 MARCH 31, 2020
($ in millions)

Financial Plan Actual Operating Loss at March 31, 2020			**$ (2,192)**
The Financial Plan Actual Includes:			
1	Higher other operating revenues		(22)
2	Lower labor expense primarily from lower payroll expense projections		(7)
3	Higher non-labor expense primarily from higher maintenance and other operating contracts		15
4	Other expense adjustments		13
Total operating reconciling items			**(1)**
Financial Statements Operating Loss at March 31, 2020			**(2,193)**
Financial Plan Deficit after Subsidies and Debt Service			**(1,079)**
The Audited Financial Statements Includes:			
1	Debt service bond principal payments		285
2	Adjustments for non-cash liabilities:		
	Depreciation	(737)	
	Unfunded OPEB expense	1	
	Unfunded GASB No. 68 pension adjustment	4	
	Other non-cash liability adjustment	(1)	(733)
The Financial Statement includes:			
3	Higher subsidies and other non-operating revenues and expenses		382
4	Total operating reconciling items (from above)		(1)
Financial Statement Loss Before Capital Appropriations			**$ (1,146)**

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Metropolitan Transportation Authority Deferred Compensation Program

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the Years Ended December 31, 2019 and 2018, and Independent Auditors' Report

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

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INDEPENDENT AUDITORS' REPORT

To the Committee of the
Metropolitan Transportation Authority Deferred Compensation Program

Report on the Financial Statements

We have audited each of the accompanying statements of plan net position of the Metropolitan Transportation Authority Deferred Compensation Program, comprised of the Deferred Compensation Plan for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates (the "457 Plan") and the Thrift Plan for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates (the "401(k) Plan"), (collectively the "Plans") as of December 31, 2019 and 2018, and each of the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plans' basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plans' preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plans' internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, each of the Plans' financial statements referred to above present fairly, in all material respects, each of the Plans' net position as of December 31, 2019 and 2018, and the respective changes in each of the Plans' net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 20 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

The Deferred Compensation Program is comprised of the Deferred Compensation Plan for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates (the "457 Plan") and the Thrift Plan for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates (the "401(k) Plan"), collectively known as the "Plans" and the "Metropolitan Transportation Authority Deferred Compensation Plans". This management's discussion and analysis of the Plans' financial performance provides an overview of the Plans' financial activities for the years ended December 31, 2019 and 2018. It is meant to assist the reader in understanding the Plans' financial statements by providing an overall review of the financial activities during the year and the effects of significant changes. This discussion and analysis may contain opinions, assumptions, or conclusions by the MTA's management that should not be considered a replacement for, and is intended to be read in conjunction with the Plans' financial statements which begin on page 21.

OVERVIEW OF BASIC FINANCIAL STATEMENTS

The following discussion and analysis is intended to serve as an introduction to the financial statements. The basic financial statements are:

- **The Statement of Plans Net Position —** presents the financial position of the Plans at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan 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. Investments are shown at contract and net asset values ("NAV"). All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Plans Net Position** present the results of activities during the year. All changes affecting the assets and liabilities of the Plans are reflected on an accrual basis when the activity occurred regardless of the timing of the related cash flows. In that regard, changes in the contract and NAV of investments are included in the year's activity as net appreciation (depreciation) in contract and NAV values of investments.

- **The Notes to Financial Statements** provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plans' accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

The financial statements are prepared in accordance with Governmental Accounting Standards Board ("GASB") Pronouncements.

Financial Highlights

As a result of various Deferred Compensation Program changes, expanding participant eligibility through collective bargaining, a strong educational program and greater participant satisfaction, the Deferred Compensation Program has continued to grow. The assets of the 457 Plan exceeded its liabilities by

$3.219 billion and the assets of the 401(k) Plan exceeded its liabilities by $4.490 billion as of December 31, 2019. This net position restricted for benefits is held in trust for distribution to the Plans participants and/or beneficiaries.

The assets of the 457 Plan exceeded its liabilities by $2.713 billion and the assets of the 401(k) Plan exceeded its liabilities by $3.759 billion as of December 31, 2018. This net position restricted for benefits is held in trust for distribution to the Plans participants and/or beneficiaries. During 2018, the net positions held in trust for the 457 Plan and the 401(k) Plan decreased by $6.419 million and $8.339 million, respectively, due primarily to net decrease in investment income to the plans.

Deductions from the Plans' net position consist primarily of distributions to participant and transfers to other plans, and plan expenses in the amounts of $156.470 million and $130.782 million for the 457 Plan and $213.472 million and $186.697 million for the 401(k) Plan for the years ended December 31, 2019 and 2018, respectively.

Plans Net Position
As of December 31,
($ In Thousands)

457 Plan				**Amount of Change**		**Percentage Change**	
	2019	**2018**	**2017**	**(2019 - 2018)**	**(2018 - 2017)**	**(2019 - 2018)**	**(2018 - 2017)**
ASSETS:							
Investments	$ 3,134,275	$ 2,635,023	$ 2,645,243	$ 499,252	$ (10,220)	18.9 %	(0.4)%
Participant loans receivable	85,407	78,429	74,607	6,978	3,822	8.9	5.1
Total assets	3,219,682	2,713,452	2,719,850	506,230	(6,398)	18.7	(0.2)
LIABILITIES:							
Administrative expense reimbursement	420	377	356	43	21	11.4	5.9
Total liabilities	420	377	356	43	21	11.4	5.9
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 3,219,262	$ 2,713,075	$ 2,719,494	$ 506,187	$ (6,419)	18.7 %	(0.2)%

401(k) Plan				**Amount of Change**		**Percentage Change**	
	2019	**2018**	**2017**	**(2019 - 2018)**	**(2018 - 2017)**	**(2019 - 2018)**	**(2018 - 2017)**
ASSETS:							
Investments	$ 4,322,497	$ 3,599,890	$ 3,621,298	$ 722,607	$ (21,408)	20.1 %	(0.6)%
Participant loans receivable	168,314	159,462	146,347	8,852	13,115	5.6	9.0
Total assets	4,490,811	3,759,352	3,767,645	731,459	(8,293)	19.5	(0.2)
LIABILITIES:							
Administrative expense reimbursement	837	721	675	116	46	16.1	6.8
Total liabilities	837	721	675	116	46	16.1	6.8
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 4,489,974	$ 3,758,631	$ 3,766,970	$ 731,343	$ (8,339)	19.5 %	(0.2)%

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Changes in Plans Net Position
For the Years Ended December 31,
($ In Thousands)

457 Plan

	2019	2018	2017	Amount of Change (2019 - 2018)	Amount of Change (2018 - 2017)	Percentage Change (2019 - 2018)	Percentage Change (2018 - 2017)
ADDITIONS:							
Investment income/(loss)	$ 430,855	$ (96,820)	$ 292,040	$ 527,675	$ (388,860)	545.0 %	(133.2)%
Contributions and additional deposits	227,295	217,444	194,089	9,851	23,355	4.5	12.0
Loan repayments - interest	4,507	3,739	3,210	768	529	20.5	16.5
Total additions	662,657	124,363	489,339	538,294	(364,976)	432.8	(74.6)
DEDUCTIONS:							
Distribution to participants	82,974	67,372	53,784	15,602	13,588	23.2	25.3
Transfers to other plans	68,849	59,405	45,145	9,444	14,260	15.9	31.6
Net participant loan activity	3,293	2,472	1,938	821	534	33.2	27.6
Other	1,354	1,533	1,376	(179)	157	(11.7)	11.4
Total deductions	156,470	130,782	102,243	25,688	28,539	19.6	27.9
Increase/(decrease) in net position	506,187	(6,419)	387,096	512,606	(393,515)	7,985.8	(101.7)
TOTAL NET POSITION RESTRICTED FOR BENEFITS							
Beginning of year	2,713,075	2,719,494	2,332,398	(6,419)	387,096	(0.2)	16.6
End of year	$ 3,219,262	$ 2,713,075	$ 2,719,494	$ 506,187	$ (6,419)	18.7 %	(0.2)%

401(k) Plan

	2019	2018	2017	Amount of Change (2019 - 2018)	Amount of Change (2018 - 2017)	Percentage Change (2019 - 2018)	Percentage Change (2018 - 2017)
ADDITIONS:							
Investment Income/(loss)	$ 609,308	$ (139,054)	$ 416,584	$ 748,362	$ (555,638)	538.2 %	(133.4)%
Contributions and additional deposits	326,528	309,883	277,661	16,645	32,222	5.4	11.6
Loan repayments - interest	8,979	7,529	6,337	1,450	1,192	19.3	18.8
Total additions	944,815	178,358	700,582	766,457	(522,224)	429.7	(74.5)
DEDUCTIONS:							
Distribution to participants	107,396	87,379	73,733	20,017	13,646	22.9	18.5
Transfers to other plans	98,450	93,187	66,031	5,263	27,156	5.6	41.1
Net participant loan activity	5,057	3,408	2,789	1,649	619	48.4	22.2
Other	2,569	2,723	2,781	(154)	(58)	(5.7)	(2.1)
Total deductions	213,472	186,697	145,334	26,775	41,363	14.3	28.5
Increase/(decrease) in net position	731,343	(8,339)	555,248	739,682	(563,587)	8,870.2	(101.5)
TOTAL NET POSITION RESTRICTED FOR BENEFITS							
Beginning of year	3,758,631	3,766,970	3,211,722	(8,339)	555,248	(0.2)	17.3
End of year	$ 4,489,974	$ 3,758,631	$ 3,766,970	$ 731,343	$ (8,339)	19.5 %	(0.2)%

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Investment Options

The MTA Plans offer twelve (12) Target-Year Lifecycle Funds, which provide a diversified mix of certain of the Plans' investment options and allow a participant to choose the fund closest to their anticipated withdrawal date. The Target-Year Lifecycle Funds are designed to provide an asset allocation strategy appropriate for an individual's risk and return preferences in a single fund through a diversified portfolio of the Plans' domestic stock funds, international stock funds and fixed income funds. Some components are not offered to participants outside of the Target-Year Lifecycle Funds. Allocations are automatically rebalanced to their targets on a quarterly basis.

Fund Name	Asset Class	Portfolio Allocations
MTA Target-Year Lifecycle 2015 Fund	Large Cap 10.50% Small - Mid Cap 3.00% Intl Equity 13.40% Fixed Income 14.70% Real Asset 11.40% Stable Value 47.00%	MTA Large Cap Equity Index Fund 5.30% MTA Large Cap Equity Fund 5.20% MTA Small-Mid Cap Equity Fund 3.00% MTA International Equity Fund 13.40% MTA Bond Fund 14.70% MTA Real Asset Fund 11.40% MTA Stable Value Fund 47.00%
MTA Target-Year Lifecycle 2020 Fund	Large Cap 14.70% Small - Mid Cap 4.00% Intl Equity 18.80% Fixed Income 18.50% Real Asset 10.00% Stable Value 34.00%	MTA Large Cap Equity Index Fund 7.40% MTA Large Cap Equity Fund 7.30% MTA Small-Mid Cap Equity Fund 4.00% MTA International Equity Fund 18.80% MTA Bond Fund 18.50% MTA Real Asset Fund 10.00% MTA Stable Value Fund 34.00%
MTA Target-Year Lifecycle 2025 Fund	Large Cap 19.50% Small - Mid Cap 5.20% Intl Equity 24.60% Fixed Income 18.00% Real Asset 10.00% Stable Value 22.70%	MTA Large Cap Equity Index Fund 11.00% MTA Large Cap Equity Fund 8.50% MTA Small-Mid Cap Equity Fund 5.20% MTA International Equity Fund 24.60% MTA Bond Fund 18.00% MTA Real Asset Fund 10.00% MTA Stable Value Fund 22.70%
MTA Target-Year Lifecycle 2030 Fund	Large Cap 23.70% Small - Mid Cap 7.80% Intl Equity 31.50% Fixed Income 15.60% Real Asset 10.00% Stable Value 11.40%	MTA Large Cap Equity Index Fund 14.60% MTA Large Cap Equity Fund 9.10% MTA Small-Mid Cap Equity Fund 7.80% MTA International Equity Fund 31.50% MTA Bond Fund 15.60% MTA Real Asset Fund 10.00% MTA Stable Value Fund 11.40%
MTA Target-Year Lifecycle 2035 Fund	Large Cap 26.00% Small - Mid Cap 10.80% Intl Equity 36.80% Fixed Income 12.50% Real Asset 10.00% Stable Value 3.90%	MTA Large Cap Equity Index Fund 15.20% MTA Large Cap Equity Fund 10.80% MTA Small-Mid Cap Equity Fund 10.80% MTA International Equity Fund 36.80% MTA Bond Fund 12.50% MTA Real Asset Fund 10.00% MTA Stable Value Fund 3.90%

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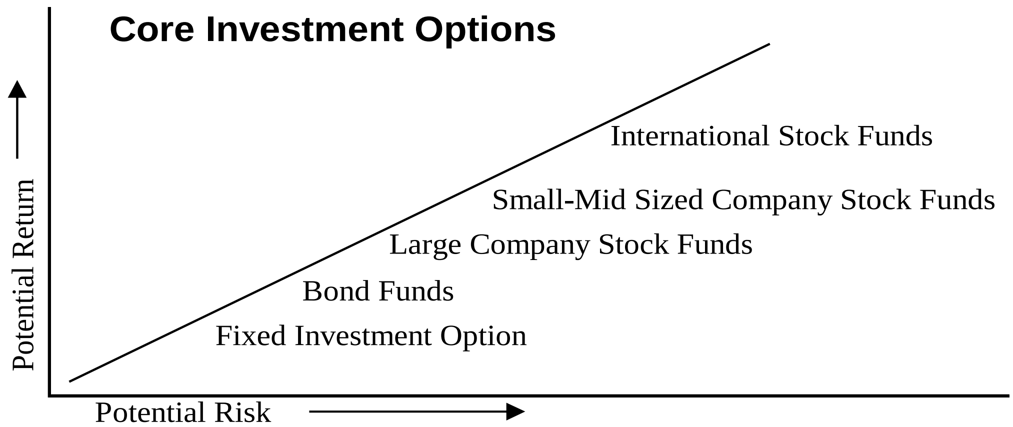
Fund Name	Asset Class	Portfolio Allocations
MTA Target-Year Lifecycle 2040 Fund	Large Cap 26.40% Small - Mid Cap 13.20% Intl Equity 39.60% Fixed Income 10.80% Real Asset 10.00%	MTA Large Cap Equity Index Fund 13.20% MTA Large Cap Equity Fund 13.20% MTA Small-Mid Cap Equity Fund 13.20% MTA International Equity Fund 39.60% MTA Bond Fund 10.80% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2045 Fund	Large Cap 26.50% Small - Mid Cap 15.20% Intl Equity 41.60% Fixed Income 6.70% Real Asset 10.00%	MTA Large Cap Equity Index Fund 11.30% MTA Large Cap Equity Fund 15.20% MTA Small-Mid Cap Equity Fund 15.20% MTA International Equity Fund 41.60% MTA Bond Fund 6.70% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2050 Fund	Large Cap 26.70% Small - Mid Cap 15.80% Intl Equity 42.50% Fixed Income 5.00% Real Asset 10.00%	MTA Large Cap Equity Index Fund 10.00% MTA Large Cap Equity Fund 16.70% MTA Small-Mid Cap Equity Fund 15.80% MTA International Equity Fund 42.50% MTA Bond Fund 5.00% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2055 Fund	Large Cap 26.70% Small - Mid Cap 15.80% Intl Equity 42.50% Fixed Income 5.00% Real Asset 10.00%	MTA Large Cap Equity Index Fund 8.90% MTA Large Cap Equity Fund 17.80% MTA Small-Mid Cap Equity Fund 15.80% MTA International Equity Fund 42.50% MTA Bond Fund 5.00% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2060 Fund	Large Cap 26.70% Small - Mid Cap 15.80% Intl Equity 42.50% Fixed Income 5.00% Real Asset 10.00%	MTA Large Cap Equity Index Fund 8.90% MTA Large Cap Equity Fund 17.80% MTA Small-Mid Cap Equity Fund 15.80% MTA International Equity Fund 42.50% MTA Bond Fund 5.00% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2065 Fund	Large Cap 26.70% Small - Mid Cap 15.80% Intl Equity 42.50% Fixed Income 5.00% Real Asset 10.00%	MTA Large Cap Equity Index Fund 8.90% MTA Large Cap Equity Fund 17.80% MTA Small-Mid Cap Equity Fund 15.80% MTA International Equity Fund 42.50% MTA Bond Fund 5.00% MTA Real Asset Fund 10.00%
MTA Income Fund	Large Cap 9.50% Small - Mid Cap 2.40% Intl Equity 11.90% Fixed Income 13.20% Real Asset 12.00% Stable Value 51.00%	MTA Large Cap Equity Index Fund 4.80% MTA Large Cap Equity Fund 4.70% MTA Small-Mid Cap Equity Fund 2.40% MTA International Equity Fund 11.90% MTA Bond Fund 13.20% MTA Real Asset Fund 12.00% MTA Stable Value Fund 51.00%

In addition to the twelve Target-Year lifecycle funds, the Plans offer a spectrum of investment options that include two international funds, four small-mid company stock funds, two large company stock funds, three bond funds, and the Stable Value Income Fund ("Fixed Investment Option").



The investment objective for each of the funds is described below. Additional information on each investment option, including a Fund Fact Sheet is available on the Plans' website at www.Prudential.com/MTA.

International Equity Funds

MTA International Equity Index Fund (Non-US Equity) - The fund invests wholly in State Street Global Advisors ("SSgA") Global All Cap Equity ex U.S. Index Fund – Class K (the Collective Investment Trust C.I.T.). The C.I.T. Fund seeks to match as closely as possible, before expenses, the performance of the MSCI ACWI ex-USA IMI Index over the long term.

MTA International Equity Fund (International Stock-Blend) - The Portfolio is managed by two complementary, but independent managers. The balances in the investments are rebalanced regularly to maintain the 50%/50% split. By employing two managers, this portfolio offers improved diversification compared to having a single investment manager. The underlying investments are:

1. **William Blair International Growth Fund** (International Stock-Growth) **-** The fund seeks to provide long-term growth of capital. The fund invests in a diversified portfolio of equity securities, including common stocks and other forms of equity investments (e.g., securities convertible into common stocks), issued by companies of all sizes domiciled outside the U.S. that William Blair believes have above-average growth, profitability and quality characteristics. William Blair will vary sector and geographic diversification for the fund based upon its ongoing evaluation of economic, market and political trends throughout the world. The fund seeks to provide long-term growth of capital.
2. **Mondrian All Countries World Ex-U.S. Equity** (International Stock-Value) – The Collective Investment Trust Fund is advised by Mondrian Investment Partners. Mondrian employs an active, value-oriented approach to managing international equities, and invests in securities where rigorous dividend discount analysis identifies value in terms of the long-term flow of income. The philosophy is built upon the assumption that dividend yield and future real growth are critical in determining a company's total expected return and that the dividend component will be a meaningful portion of the expected return over time.

Small-Mid Cap Equity Fund

MTA Small-Mid Cap Equity Index Fund (Mid Cap Stock-Blend) **-** The Fund invests wholly in the underlying collective investment trust SSgA Russell Small/Mid Cap Non-Lending Series- Class K (the "C.I.T."). The underlying collective investment trust seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Russell Small Cap Completeness Index (the "Index") over the long term.

MTA Small-Mid Cap Equity Fund (Mid Cap Stock-Blend) - The Fund is managed by four complementary, but independent managers. By employing four managers, this fund offers improved diversification compared to having a single investment manager. The underlying investments are:

1. **The William Blair Small-Mid Cap Growth Fund** (Small Growth) - is sub-advised by William Blair Investment Management, LLC. The strategy seeks capital appreciation to outperform its benchmark, the Russell 2500 Growth Index, and its peers over a full market cycle. The strategy is a diversified portfolio of 65-80 holdings, investing in common stocks of small and mid-cap quality companies that are expected to have solid growth in earnings.
2. **The DFA US Targeted Value I** (Small Value) – the fund is advised by Dimensional Fund Advisors LP. The investment seeks long-term capital appreciation. The fund, using a market capitalization weighted approach, purchases a broad and diverse group of the readily marketable securities of U.S. small and midcap companies that the Advisor determines to be value stocks. It may purchase or sell futures contracts and options on futures contracts for U.S. equity securities and indices, to adjust market exposure based on actual or expected cash inflows to or outflows from the fund. The fund does not intend to sell futures contracts to establish short positions in individual securities or to use derivatives for purposes of speculation or leveraging investment returns.
3. **AllianceBernstein US SMID Cap Value Equity Fund** (Small Value) – the fund is managed by AllianceBernstein. It seeks a deep-value service that invests in a portfolio of small and mid-capitalization stocks located primarily in the United States. Macroeconomic, industry or company-specific concerns often cause investors to react emotionally and overlook underlying company fundamentals, causing securities to become mispriced. Our investment strategy seeks to capitalize these short-term market inefficiencies created by enduring patterns of human behavior. The investment team employs a highly disciplined stock selection process that marries in-depth fundamental research with quantitative analysis to identify companies that are undervalued relative to their long-term earnings power and offer compelling return potential.
4. **Jackson Square Partners SMID Cap Growth Focus** (Small Value)- the fund is advised by Jackson Square Partners. They are growth investors. They seek superior returns through holding a concentrated portfolio of companies that they believe have advantaged business models and opportunities to generate consistent, long-term growth of intrinsic business value.

<u>Large-Cap Equity Funds</u>

MTA Large Cap Equity Index Fund (Large Cap Stock-Blend) - The Fund invests wholly in the Vanguard Institutional 500 Index Trust. The investment seeks to track the performance of a benchmark index that measures the investment return of large capitalization stocks. The fund employs an indexing investment approach designed to track the performance of the Standard & Poor's 500 Index, a widely recognized benchmark of U.S. stock market performance that is dominated by the stocks of large U.S. companies. It attempts to replicate the target index by investing all, or substantially all, of its assets in the stocks that make up the index, holding each stock in approximately the same proportion as its weighting in the index.

MTA Large Cap Equity Fund (Large Cap Stock-Blend) - The Portfolio is managed by two complementary, but independent managers. The balances in the investments are rebalanced regularly to maintain the 50%/50% split. By employing two managers, this portfolio offers improved diversification compared to having a single investment manager. The underlying investments are:

1. **T. Rowe Price US Large Cap Value Equity Fund** (Large Cap Stock-Value) - The Fund is advised by T. Rowe Price Associates, Inc. and seeks to provide long-term capital appreciation by investing in common stocks believed to be undervalued. Income is a secondary objective.

2. **Jennison Large Cap Growth Fund** (Large Cap Stock-Growth) **-** The Fund is sub-advised by Jennison Associates LLC, following its Large Cap Growth Equity investment strategy. It seeks to outperform, over the long term, both the Russell 1000 Growth and S&P 500 Indexes and to be the best performing manager among its peers, with a consistent risk profile.

Bond Funds

MTA Bond Index Fund (Fixed Income-Domestic) **-** The Fund invests wholly in the SSgA US Bond Index Non-Lending – Class C (the Collective Investment Trust C.I.T.). The Fund seeks an investment return that approximates, as closely as practicable, before expenses, the performance of the Blomberg Barclays U.S. Aggregate Bond Index over the long term.

MTA Bond Fund (Fixed Income-Domestic) **-** The Portfolio is managed by three complementary, but independent managers. The balances in the investments are rebalanced regularly to maintain the 34%/33%/33% split. By employing three managers, this fund offers improved diversification compared to having a single investment manager. The underlying investments are:

1. **TCW Core Plus Fund** (Fixed Income-Domestic) **-** This separate account is sub-advised by Metropolitan West Asset Management, LLC. The Fund seeks to outperform the broad bond market by applying specialized management expertise to and allocating capital among US government, corporate, high yield and mortgage-backed sectors. In addition, exposure to international and emerging markets fixed income assets are opportunistically incorporated into portfolio positioning. The strategy seeks to outperform the Bloomberg Barclays Aggregate Bond Index.

2. **Loomis Sayles Core Plus Fixed Income Trust** (Fixed Income) **-** The Trust seeks high total investment return through a combination of current income and capital appreciation and to outperform its benchmark, the Bloomberg Barclays US Aggregate Bond Index denominated in US dollars. This index is used for comparative purposes only and is not intended to parallel the risk or investment style of the fund.

3. **WTC CIF II World Bond Portfolio** (Fixed Income) **-** The Collective Investment Trust Fund is sub-advised by Wellington Management Company, LLP. The portfolio seeks to generate consistent total returns over a full market cycle. The investment process is designed to allocate capital to high quality sovereign countries while simultaneously identifying opportunistic investment ideas across a wide range of diversified fixed income strategies, and to transparently manage portfolio risk.

Stable Value Option

MTA Stable Value Fund (Stable Value) **-** The fund seeks to provide safety of principal and a stable credited rate of interest, while generating competitive returns over time compared to other comparable investments. The fund is managed by Galliard Capital Management and is primarily comprised of investment contracts issued by financial institutions and other eligible stable value investments. All contract issuers and securities utilized in the portfolio are rated investment grade by one of the Nationally Recognized Statistical Rating Organizations at time of purchase. The types of investment contracts in which the Fund may invest include Separate Account Guaranteed Investment Contracts ("GICs") and Security Backed Investment Contracts. These types of investment contracts seek to provide participants with safety of principal and accrued interest as well as a stable crediting rate.

Separate Account GICs are GICs issued by and insurance company and are maintained within a separate account. Separate Account GICs are typically backed by segregated portfolios of fixed income securities.

Security Backed Investment Contracts are comprised of two components: 1) investment contracts issued by a financial institution and 2) underlying portfolios of fixed income securities (i.e. bonds) whose market prices fluctuate. The investment contract is designed to allow participants to transact at book value (principal plus accrued interest) without reference to the price fluctuations of the underlying fixed income securities.

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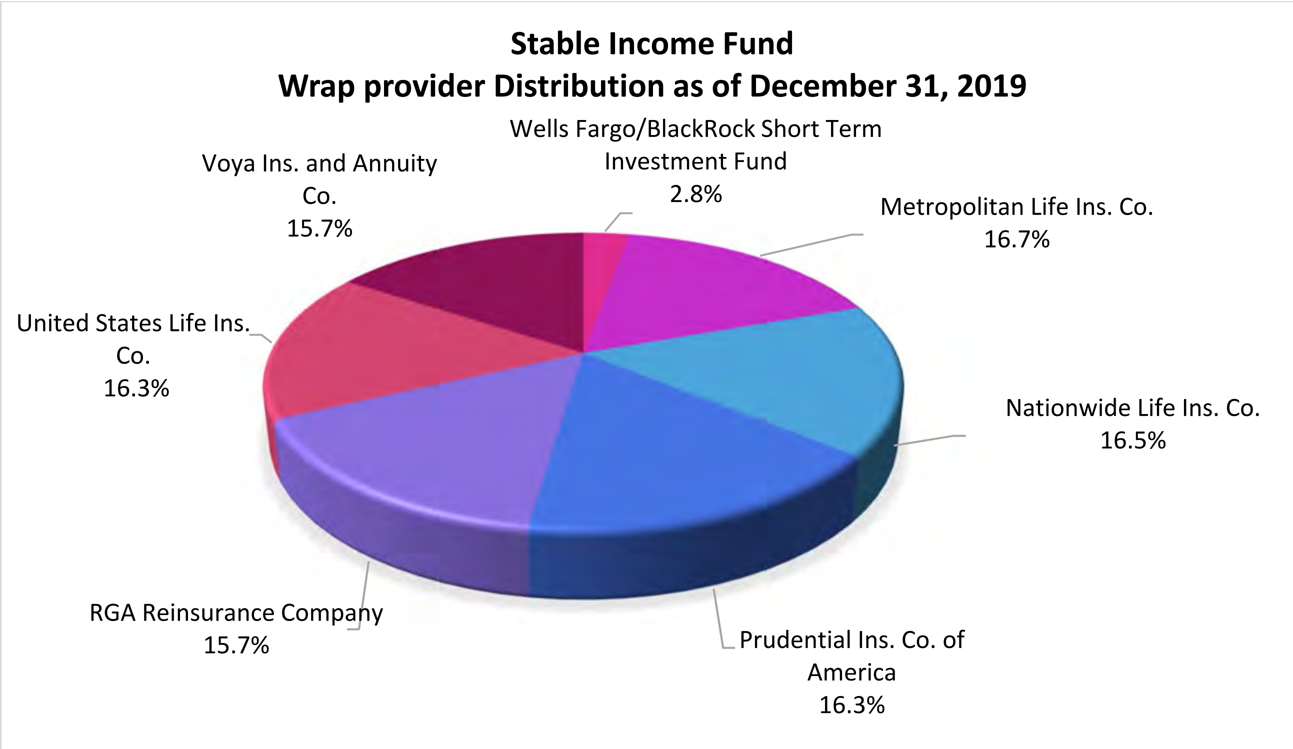
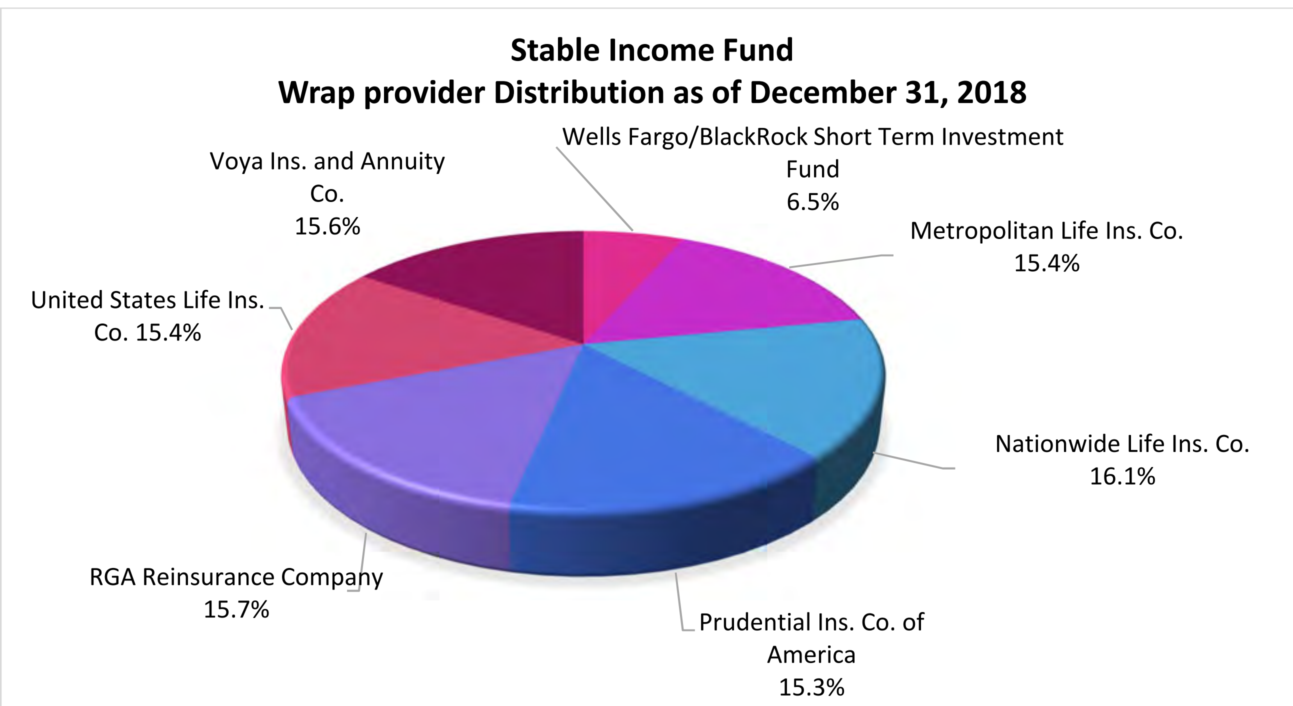
The following chart shows the underlying investments of the MTA Stable Value Fund as of December 31, 2019 and 2018.



*The Wells Fargo Stable Return Fund W and Wells Fargo/BlackRock STIF are not a part of the wrapped portfolio.



The MTA Plans' investment options performance is outlined in the following tables. The Plans, with the assistance of its independent investment consultant, continuously monitors the investment options in conformance with the investment policy for the Plans. Below each Fund listed below is the benchmark used to compare the investment results.

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Performance Summary

Year ended December 31, 2019

Stable Value

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Stable Value	0.6%	2.6%	2.3%	2.2%	2.1%
Galliard 3YrCMT+50bps	0.5%	2.5%	2.6%	2.2%	2.1%

Fixed Income

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA U.S. Bond Index Fund	0.2%	8.7%	4.0%	3.0%	2.7%
Barclays U.S. Aggregate	0.2%	8.7%	4.0%	3.0%	2.7%
Loomis Sayles Core Plus Bond Fund	0.5%	9.5%	4.8%	NA	NA
Barclays U.S. Aggregate	0.2%	8.7%	4.0%	3.0%	2.7%
TCW MetWest Core Plus Fixed Income	0.2%	9.0%	4.2%	NA	NA
Barclays U.S. Aggregate	0.2%	8.7%	4.0%	3.0%	2.7%
Wellington World Bond Fund	-0.3%	4.3%	3.8%	NA	NA
FTSE World Government Bond Index	-0.4%	5.9%	4.1%	2.0%	0.8%

Domestic Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
Vanguard Institutional 500 Index Trust	9.1%	31.5%	15.3%	11.7%	14.7%
S&P 500	9.1%	31.5%	15.3%	11.7%	14.7%
T. Rowe Price Large Cap Value Fund (Prudential Separate Account)	6.9%	27.1%	10.5%	8.7%	12.6%
Russell 1000 Value Index	7.4%	26.5%	9.7%	8.3%	12.2%
Jennison Large Cap Growth (Prudential Separate Account)	12.0%	33.7%	21.5%	14.9%	17.0%
Russell 1000 Growth Index	10.6%	36.4%	20.5%	14.6%	16.9%
SSgA Small/Mid Cap Index Fund	8.9%	27.9%	11.2%	9.1%	12.6%
Russell Small Cap Completeness Index	8.9%	28.0%	11.2%	9.1%	12.7%
AB US SMID Cap Value Equity (Separate Account)	6.6%	21.3%	NA	NA	NA
Russell 2500 Value Index	7.1%	23.6%	6.1%	7.2%	10.6%
DFA US Targeted Value Fund (MTA)	8.6%	21.5%	NA	NA	NA
Russell 2500 Value Index	7.1%	23.6%	6.1%	7.2%	10.6%
William Blair SMID Growth (Separate Account)	4.4%	31.3%	NA	NA	NA
Russell 2500 Growth Index	10.6%	32.7%	15.2%	10.8%	14.1%
Jackson Square SMID Cap Growth Focus (Separate Account)	10.9%	30.8%	NA	NA	NA
Russell 2500 Growth Index	10.6%	32.7%	15.2%	10.8%	14.1%

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Performance Summary

Year ended December 31, 2019 (continued)

International Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA MSCI ACWI ex-U.S. IMI Index Fund	9.2%	21.9%	10.1%	6.0%	NA
MSCI AC Wld ex US IMI (Net)	9.2%	21.6%	9.8%	5.7%	5.7%
William Blair Institutional International Growth All Cap (Separate Account)	10.6%	31.1%	12.4%	6.7%	6.9%
MSCI AC Wld Index ex USA.IMI Growth (Net)	9.8%	27.0%	12.6%	7.3%	7.0%
Mondrian ACWI ex US CIT	10.3%	17.9%	8.3%	NA	NA
MSCI AC Wld ex USA Value (Net)	8.2%	15.7%	6.9%	3.6%	3.9%

Diversified Inflation

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA Real Asset Fund	3.6%	13.6%	4.6%	2.4%	0.8%
SSgA Custom Real Asset Index	3.6%	13.7%	4.7%	2.4%	0.9%

Lifecycle

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Income	3.1%	10.2%	5.2%	4.3%	3.9%
MTA Income Composite Index	2.8%	10.0%	5.3%	4.3%	3.9%
MTA 2015	3.3%	11.2%	6.1%	4.8%	4.7%
MTA 2015 Composite Index	3.1%	11.2%	6.1%	4.8%	4.8%
MTA 2020	4.2%	13.8%	7.1%	5.4%	5.5%
MTA 2020 Composite Index	3.9%	13.8%	7.1%	5.4%	5.5%
MTA 2025	5.2%	16.7%	8.3%	6.2%	6.7%
MTA 2025 Composite Index	4.9%	16.5%	8.3%	6.2%	6.6%
MTA 2030	6.5%	19.9%	9.2%	6.7%	7.2%
MTA 2030 Composite Index	6.1%	19.6%	9.1%	6.7%	7.2%
MTA 2035	7.4%	22.2%	9.9%	7.2%	7.8%
MTA 2035 Composite Index	6.9%	21.7%	9.7%	7.0%	7.7%
MTA 2040	7.9%	23.3%	10.6%	7.7%	8.9%
MTA 2040 Composite Index	7.4%	22.8%	10.3%	7.5%	8.7%
MTA 2045	8.2%	24.0%	11.0%	8.0%	9.5%
MTA 2045 Composite Index	7.8%	23.4%	10.7%	7.7%	9.3%
MTA 2050	8.4%	24.2%	11.1%	7.9%	9.6%
MTA 2050 Composite Index	7.9%	23.6%	10.7%	7.6%	9.4%
MTA 2055	8.4%	24.2%	11.1%	NA	NA
MTA 2055 Composite Index	7.9%	23.6%	10.7%	7.6%	9.4%
MTA 2060	8.4%	24.3%	NA	NA	NA
MTA 2060 Composite Index	7.9%	23.6%	NA	NA	NA
MTA 2065	8.4%	24.3%	NA	NA	NA
MTA 2065 Composite Index	7.9%	23.6%	NA	NA	NA

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Year ended December 31, 2018

Stable Value

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Stable Value	0.6%	2.3%	2.1%	2.0%	2.2%
Galliard 3YrCMT+50bps	0.8%	3.1%	2.2%	2.1%	1.9%

Fixed Income

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA U.S. Bond Index Fund	1.6%	0.0%	2.0%	2.5%	2.1%
Barclays .U.S. Aggregate	1.6%	0.0%	2.1%	2.5%	2.1%
Loomis Sayles Core Plus Bond Fund	0.0%	-0.4%	4.0%	NA	NA
Barclays U.S. Aggregate	1.6%	0.0%	2.1%	2.5%	2.1%
TCW MetWest Core Plus Fixed Income	1.6%	0.3%	2.1%	NA	NA
Barclays U.S. Aggregate	1.6%	0.0%	2.1%	2.5%	2.1%
Wellington World Bond Fund	2.0%	4.2%	3.0%	NA	NA
FTSE World Government Bond Index	1.8%	-0.8%	2.7%	0.8%	0.2%

Domestic Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
Vanguard Institutional 500 Index Trust	-13.5%	-4.4%	9.2%	8.5%	12.7%
S&P 500	-13.5%	-4.4%	9.3%	8.5%	12.7%
T Rowe Price Large Cap Value Fund (Prudential Separate Account)	-12.1%	-9.1%	7.2%	6.2%	11.4%
Russell 1000 Value	-11.7%	-8.3%	7.0%	5.9%	11.0%
Jennison Large Cap Growth (Prudential Separate Account)	-16.3%	-1.4%	10.4%	10.5%	14.7%
Russell 1000 Growth	-15.9%	-1.5%	11.1%	10.4%	14.1%
SSgA Small/Mid Cap Index Fund	-17.9%	-9.1%	7.8%	5.4%	11.3%
Russell Small Cap Completeness Index	-18.0%	-9.2%	7.8%	5.4%	11.4%
AB US SMID Cap Value Equity (Separate Account)	-18.2%	-14.0%	NA	NA	NA
Russell 2500 Value Index	-17.1%	-12.4%	6.6%	4.2%	10.0%
DFA US Targeted Value Fund (MTA)	-20.0%	-15.8%	NA	NA	NA
Russell 2500 Value Index	-17.1	-12.4%	6.6%	4.2%	10.0%
William Blair SMID Growth (Separate Account)	-18.4%	-1.0%	NA	NA	NA
Russell 2500 Growth Index	-20.1%	-7.5%	8.1%	6.2%	12.0%
Jackson Square SMID Cap Growth Focus (Separate Account)	-16.7%	2.7%	NA	NA	NA
Russell 2500 Growth Index	-20.1%	-7.5%	8.1%	6.2%	12.0%

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Performance Summary

Year ended December 31, 2018 (continued)

International Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA MSCI ACWI ex-U.S. IMI Index Fund	-11.9%	-14.6%	4.8%	1.0%	NA
MSCI AC Wld ex US IMI (Net)	-11.9%	-14.8%	4.4%	0.8%	5.1%
William Blair Institutional International Growth All Cap Fund	-16.0%	-17.1%	1.8%	0.5%	6.1%
MSCI AC Wld Index ex USA IMI Growth (Net)	-12.7%	-15.0%	4.0%	1.8%	5.7%
Mondrian ACWI ex US CIT	-8.9%	-11.9%	NA	NA	NA
MSCI AC Wld ex USA Value (Net)	-10.7%	-14.0%	4.7%	-0.4%	4.0%

Diversified Inflation

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA Real Asset	-7.1%	-7.2%	4.8%	-0.4%	0.0%
SSgA Custom Real Asset Index	-7.1%	-7.1%	4.9%	-0.4%	0.1%

Lifecycle

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Income	-3.6%	-1.8%	3.5%	2.8%	3.4%
MTA Income Composite Index	-3.4%	-1.5%	3.7%	3.0%	3.3%
MTA 2015	-4.3%	-2.4%	4.0%	3.2%	4.4%
MTA 2015 Composite Index	-4.1%	-2.2%	4.3%	3.4%	4.3%
MTA 2020	-5.7%	-3.6%	-4.2%	3.4%	5.0%
MTA 2020 Composite Index	-5.4%	-3.5%	4.6%	3.6%	4.8%
MTA 2025	-7.4%	-5.1%	4.7%	3.7%	6.0%
MTA 2025 Composite Index	-7.1%	-5.1%	5.2%	4.0%	5.8%
MTA 2030	-9.5%	-6.8%	4.7%	3.7%	6.3%
MTA 2030 Composite Index	-9.1%	-6.8%	5.3%	4.0%	6.1%
MTA 2035	-10.9%	-8.1%	4.7%	3.8%	6.7%
MTA 2035 Composite Index	-10.4%	-8.1%	5.4%	4.0%	6.4%
MTA 2040	-11.8%	-8.8%	5.2%	4.1%	7.8%
MTA 2040 Composite Index	-11.3%	-8.9%	6.0%	4.4%	7.5%
MTA 2045	-12.4%	-9.3%	5.4%	4.2%	8.4%
MTA 2045 Composite Index	-11.9%	-9.3%	6.4%	4.4%	8.2%
MTA 2050	-12.6%	-9.5%	5.4%	4.1%	8.6%
MTA 2050 Composite Index	-12.1%	-9.5%	6.3%	4.2%	8.3%
MTA 2055	-12.6%	-9.5%	5.4%	NA	NA
MTA 2055 Composite Index	-12.1%	-9.5%	6.3%	4.2%	8.3%
MTA 2060	-12.7%	-9.5%	NA	NA	NA
MTA 2060 Composite Index	-12.1%	-9.5%	NA	NA	NA
MTA 2065	-12.7%	-9.5%	NA	NA	NA
MTA 2065 Composite Index	-12.1%	-9.5%	NA	NA	NA

At December 31, 2019, the investment option holding the largest portion of participants' funds in both the 457 and 401(k) Plans was the Stable Income Funds with 33.08% and 30.16% of invested funds, respectively. This was followed by the Large-Cap Equity Funds with 26.32% and 27.48% of invested 457 and 401(k) funds, respectively.

At December 31, 2018, the investment option holding the largest portion of participants' funds in both the 457 and 401(k) Plans was the Stable Income Funds with 36.37% and 33.47% of invested funds, respectively. This was followed by the Large-Cap Equity Funds with 24.65% and 25.65% of invested 457 and 401(k) funds, respectively.

The table below summarizes the Plans' investments by category at December 31, 2019:

Investment at Contract and NAV Values	**457** Allocation		**401(k)** Allocation	
Target-Year Lifecycle Funds	$477,548,084	15.24%	$702,824,357	16.26%
International Equity Funds	209,487,552	6.68%	309,252,305	7.15%
Small-Mid Cap Equity Funds	398,076,195	12.70%	536,231,629	12.41%
Large-Cap Equity Funds	824,808,485	26.32%	1,187,625,528	27.48%
Bond Funds	184,464,811	5.89%	278,199,872	6.44%
Stable Income Fund	1,036,674,998	33.08%	1,303,583,126	30.16%
Self-Directed Investment Option	3,214,721	0.10%	4,780,678	0.11%
Total Investments	$3,134,274,846	100.0%	$4,322,497,495	100%

The table below summarizes the Plans' investments by category at December 31, 2018:

2018
FUND INVESTMENT SUMMARY

Investment at Contract and NAV Values	**457** Allocation		**401(k)** Allocation	
Target-Year Lifecycle Funds	$394,716,241	14.98%	$588,041,812	16.34%
International Equity Funds	161,847,319	6.14	236,980,164	6.58
Small-Mid Cap Equity Funds	326,406,799	12.39	430,295,980	11.95
Large-Cap Equity Funds	649,534,667	24.65	923,279,089	25.65
Bond Funds	141,261,327	5.36	212,439,871	5.90
Stable Income Fund	958,439,519	36.37	1,204,877,263	33.47
Self-Directed Investment Option	2,817,576	0.11	3,975,818	0.11
Total Investments	$2,635,023,448	100%	$3,599,889,997	100%

Economic Factors

Market Overview and Outlook – 2019

In 2019 international markets turned cautiously optimistic, in contrast to 2018, when stocks were buffeted by uncertainty surrounding United States ("U.S.")-China trade negotiations. Equity markets ended a remarkable 2019 rally on a strong note, with major stock indexes reaching new all-time highs. Among growth assets, global equities outperformed high yield and emerging market debt. The U.S. dollar weakened broadly, most significantly against the Swiss franc, British pound and emerging market currencies. Equity, bond and currency volatility continued to ease in December to historically low levels. Investors favored riskier assets following declining trade tensions and easing geo-political headwinds. United Kingdom ("UK") and emerging markets, specifically China, Russia and Latin American, led the December rally, while the U.S. along with other developed markets lagged the Morgan Stanley Capital International All Country World Index ("MSCI ACWI"). Developed markets outperformed emerging markets overall in 2019.

The global economy slowed in 2019 and is now growing below trend. This was primarily driven by the trade war weighing on capital spending and the lagging effect from monetary tightening in 2018. While monetary policies were generally left unchanged in December-- which partly accounts for the stellar returns to both equities and bonds in 2019—further impetus to economic growth may have to come from fiscal measures: policy makers have recently paused easing efforts to evaluate the effect of prior rate cuts, and officials have indicated that monetary policy may have reached its limits. They are therefore considering greater use of fiscal tools to manage business cycles and to support economic growth. A recession in the U.S. appears unlikely in the near term while low interest rates and tame inflation levels continue to power higher equity valuations

Geo-political risks faded after the U.S. and China reached a preliminary trade agreement. Also, Brexit uncertainties fell after Prime Minister Boris Johnson's Conservative Party obtained a solid majority in Parliament. The UK parliament has passed a withdrawal agreement and will start the exit process at the end of January 2020. Markets looked past the political turmoil in the U.S., where a deeply divided House of Representatives passed two articles of impeachment against President Trump. However, macroeconomic stress related to tighter financial conditions in Argentina, geo-political tensions in Iran, and social unrest in Hong Kong, Venezuela, Libya, and Yemen still persisted. Additionally, climate concerns took center stage amid extreme weather around the globe, and protests against the political establishment reverberated through Hong Kong, Lebanon, Chile, Ecuador and many other places.

While current market dynamics may appear to favor equities over fixed income, one should be cognizant that valuations have been trending higher, creating limited attractive investment opportunities. To this end, many long-term forecasts for investment return, encompassing a 10-year time horizon, remain relatively muted. To prepare portfolios for this new decade, it may be essential for investors to start the year with a renewed emphasis on strategic asset allocation, heeding geo-political and portfolio risks to ensure that their investment horizon and governance structure are aligned with portfolio mission statements and return objectives. Even if the investment landscape encourages risk taking, uncertainties remain, making it critical for investors to reassess and rebalance their portfolio holdings considering their robust gains in 2019.

Macro Themes

- Asset allocation and portfolio implementation.
- Late stage of a market cycle.
- China's complex transition into a service and consumption-oriented economy from the manufacturing behemoth.
- The backlash against globalization—expressed through populism and trade wars—is here to stay.
- Central banks permanent interventions have created a new normal, where accommodative monetary policies and fiscal debt growth appear to exist in perpetuity, supporting equities relative to fixed income.

United States

2019 represented a triumphant year the U.S. capital markets compared to 2018 underperformance. Accommodative monetary policies, falling interest rates and subdued inflation helped investors not only to meet their return objectives, but, in many instances, to exceed them. Adding to this impressive string of wins: the U.S. economy completed a calendar decade without a recession—a historical first. While investors would love more of the same, it is unlikely this period of windfall gains and low market volatility will persist for the next decade.

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+31.5%) and (+31.3%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (+27.6%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return of (+25.4%). Of note, growth-oriented investments outperformed the value counterpart with the Russell 1000 Growth (+36.2%) outpacing the Russell 1000 Value (+26.4%).

Fixed income securities markets ended 2019 in the black, reversing declines experienced in 2018. Treasuries returned (+14.8%) for the year, with the assets strongest quarter coming in the first and second quarters of 2019. Municipal credit posted a return of (+7.5%) while the Bloomberg Barclays High Yield Index gained (+14.3%) in 2019. Spreads on high-yield credit narrowed for most part of 2019, but segments in the high-yield and bank loan markets showed signs of stress towards the end of 2019. On the other hand, the S&P LSTA Leveraged Loan Index returned (+10.6%) during the same period.

International Developed

International equity markets posted very strong results in 2019 and lagged behind U.S. equity markets, returning (+26.5%) as measured by the MSCI. In U.S. dollars, both Europe and Japan equities posted positive performance in 2019 with MSCI Europe returning (+23.7%) and MSCI Japan returning (+19.5%). Very strong returns in Europe were driven by the global positive market performance during 2019 unlike 2018 when Europe returned (-14.9%). The Small Cap portion of international developed markets posted even stronger returns in 2019, (+24.9%) compared with 2018, (-17.9%).

Fixed income markets in Europe and Japan are largely centered on government bonds, with corporate and asset-backed issuance making up a fraction of the overall markets. Global Treasuries were positive in 2019, following a negative year in 2018.

Emerging Markets

Emerging markets posted very strong returns in 2019, with performance lower than both U.S. and international developed markets across equity and debt. The broad MSCI emerging markets index returned (+18.3%) for the year. Emerging markets gained sharply in December, driven by hopes that the People's Bank of China will continue to ease its monetary policy to support growth.

The bond markets of emerging markets performed well in 2019 compared to its underperformance in 2018. Both hard currency and local currency bond posted a very strong year in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (+12.6%) in 2019. Local currency bonds, which are issued in the local currency, returned (+13.5%) for the year.

Commodities

The Bloomberg Commodity Index rose (+7.7%) for the year while the New York Mercantile Exchange West Texas Index Crude Spot rose (+35.3%) and Midstream energy ended the year up more than (+24.0%). Residential gas prices in the Midwest are forecast to be nearly (+8.0%) higher this winter than last, and prices in the South and West are seen about (+5.0%) and (+3.0%) higher, respectively, while Northeast prices are forecast to decline (6.0%), helped by relatively low global prices for Liquefied Natural Gas and lower household natural gas consumption. The overall slight decline in heating expenses is aided by generally declining commodity prices.

Market Outlook

Central banks and governments have demonstrated, to varying degrees, their willingness to administer monetary and fiscal stimulus. That accommodative stance should continue in 2020. The U.S. Federal Reserve has already signaled its intention to keep interest rates on hold, providing more certainty for businesses. The re-convergence of U.S. interest rates with other developed markets will reduce upward pressure on the dollar. In addition, the impact of looser monetary policy, combined with a better trade backdrop, could spur the necessary investment and reform to fuel increased labor force participation and renewed productivity improvements.

Political risk, both at national and international levels, remains the great unknown. The long-term path of U.S.-China trade and cooperation is uncertain. A damaging "no-deal Brexit" is not entirely off the table. Tensions in the Middle East could risk sparking full-blown conflict. At the same time, 2020 primaries and Presidential elections in the U.S. will create uncertainty and could cause volatility as markets react to the policies and promises of the various candidates. Notwithstanding all of this, however, the current improvement in geo-political backdrop as compared with 2018, together with stimulus measures should support a modest acceleration in global growth in 2020. That growth, in turn, should lead to a moderate increase in demand for oil, putting a floor under the price, especially when global demand is met with sensible supply-side control from Organization of the Petroleum Exporting Countries.

Many analysts continue to believe emerging markets offer the most investment value, especially following the recent truce in trade relations between the U.S. and China. Furthermore, the opportunities for active management and excess returns appear more abundant in emerging economies. As a result, investors may be encouraged to overweight emerging market equities relative to developed market stocks. They may also opt to reduce exposure to high-yield and return-seeking credit in 2020, since market returns do not offer adequate compensation for the risk they hold. Safe-haven fixed income for instance, Treasuries and core bonds, despite low yields—remain vital for balancing risks within a diversified portfolio.

Impact of Covid-19

Covid-19 has continued to spread at a rapid pace around the world and has now been declared a global pandemic by the World Health Organization. This has caused a severe shock to the global economy pushing it into a deep and far reaching recession. Financial markets have responded with a huge drop in equities values, a rise in credit spreads and a flight to the safety of governments bonds.

In anticipation of the economic growth fallout, Standards & Poor's Global ratings lowered its forecast for global growth to just (+0.4%) this year and predicts a rebound to (+) in 2021. According to Bloomberg, the current second Quarter Gross Domestic Product average estimate of (-11.2%) annualized would be the worst post World War II quarter on record. However, worldwide central banks and governments announced fiscal and monetary rescue packages to soften the economic impact of the virus and the associated business disruptions. Geo-political tensions such as the trade war issues between the U.S. and China have moved into the background.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

Contact Information

This financial report is designed to provide a general overview of the Metropolitan Transportation Authority Deferred Compensation Program's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Deferred Compensation Department, Metropolitan Transportation Authority, 2 Broadway 10th Floor, New York, NY 10004.

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

STATEMENTS OF PLANS NET POSITION
AS OF DECEMBER 31, 2019 AND DECEMBER 31, 2018
($ In THOUSANDS)

	2019		2018	
	457	**401(k)**	**457**	**401(k)**
ASSETS:				
Investments at contract value	$ 1,128,536	$ 1,435,218	$ 1,033,058	$ 1,313,496
Investments at fair value- net asset value	2,005,739	2,887,279	1,601,965	2,286,394
Total investments	3,134,275	4,322,497	2,635,023	3,599,890
Other plan assets:				
Participant loans receivable	85,407	168,314	78,429	159,462
Total other plan assets	85,407	168,314	78,429	159,462
Total assets	3,219,682	4,490,811	2,713,452	3,759,352
LIABILITIES:				
Administrative expense reimbursement	420	837	377	721
Total liabilities	420	837	377	721
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 3,219,262	$ 4,489,974	$ 2,713,075	$ 3,758,631

See notes to financial statements.

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

STATEMENTS OF CHANGES IN PLANS NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
($ In THOUSANDS)

	2019		2018	
	457	401(k)	457	401(k)
ADDITIONS:				
Investment Income:				
Net appreciation/(depreciation) in fair value of investments	$ 430,855	$ 609,308	$ (96,820)	$ (139,054)
Total investment income/(loss)	430,855	609,308	(96,820)	(139,054)
Contributions:				
Employee contributions, net	218,954	298,185	208,112	283,818
Participant rollovers	8,341	23,941	9,332	21,673
Employer contributions	-	4,402	-	4,392
Total contributions	227,295	326,528	217,444	309,883
Other additions:				
Loan repayments - interest	4,507	8,979	3,739	7,529
Total additions	662,657	944,815	124,363	178,358
DEDUCTIONS:				
Distribution to participants	82,974	107,396	67,372	87,379
Transfers to other plans	68,849	98,450	59,405	93,187
Net loan initiations/repayments	(127)	(117)	(72)	(184)
Loan defaults/offsets	3,156	4,566	2,544	3,592
Loan fees transfers to other plans	264	608	246	594
Other deductions	934	1,732	910	1,408
Administrative expense	420	837	377	721
Total deductions	156,470	213,472	130,782	186,697
Increase/(decrease) in net position	506,187	731,343	(6,419)	(8,339)
TOTAL NET POSITION RESTRICTED FOR BENEFITS				
Beginning of year	2,713,075	3,758,631	2,719,494	3,766,970
End of year	$ 3,219,262	$ 4,489,974	$ 2,713,075	$ 3,758,631

METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
($ in Thousands)

1. PLANS BACKGROUND AND DESCRIPTION

Description – The Deferred Compensation Program consists of two defined contribution plans that provide benefits based solely on the amounts 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.

In 1984, the MTA established the 457 Plan to provide benefits competitive with private industry. Only managerial employees were permitted to participate in the Plan and investment options were limited to five funds: a Guaranteed Interest Fund, a Common Stock Fund, a Money Market Fund, a Managed Fund, and a Stock Index Fund. Pursuant to Internal Revenue Code ("Code") Section 457, the MTA has established a trust or custodial account to hold plan assets for the exclusive benefit of the participants and their beneficiaries. Participation in the 457 Plan is now available to non-represented employees and, after collective bargaining, most represented employees. All amounts of compensation deferred under the 457 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 457 Plan is not reflected on the MTA's consolidated statements of net position.

In 1985, the MTA Board adopted the 401(k) Plan, a tax-qualified plan under section 401(k) of the Code. The 401(k) Plan remained dormant until 1988 when an IRS ruling "grandfathered" the plan under the Tax Reform Act of 1986. 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 MTA consolidated statements of net position. The 401(k) Plan received a favorable determination letter from the Internal Revenue Service dated October 27, 2016.

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 re-structured 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 Goalmaker. 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.

- Tier 4 – Self-Directed Mutual Fund Option is designed for the more experienced investors. 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.

The two Plans offer the same array of investment options. Eligible participants in the Deferred Compensation Program include employees (and in the case of Metropolitan Suburban Bus Authority, former employees) of:

- MTA
- The Long Island Rail Road Company ("MTA Long Island Rail Road")
- Triborough Bridge and Tunnel Authority ("MTA Bridges and Tunnels")
- Metropolitan Suburban Bus Authority ("MTA Long Island Bus")
- Metro-North Commuter Railroad Company ("MTA Metro-North Railroad")
- New York City Transit Authority ("MTA New York City Transit")
- Staten Island Rapid Transit Operating Authority ("MTA Staten Island Rapid Transit")
- MTA Capital Construction Company ("MTA Capital Construction")
- MTA Bus Company ("MTA Bus")

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting - The Deferred Compensation Program's ("Program") financial statements are prepared on the accrual basis of accounting under which deductions are recorded when the liability is incurred and revenues are recognized in the accounting period in which they are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plans. Contributions from members are recorded when the employer makes payroll deductions from plans' members. Additions to the Plans consist of contributions (member and employer) and net investment income. Investment purchases and sales are recorded as of trade date.

For financial reporting purposes, The MTA adheres to accounting principles generally accepted in the United States of America. The MTA Deferred Compensation Program applies all applicable pronouncements of the Governmental Accounting Standards Board ("GASB").

New Accounting Standards Adopted – The Plans adopted GASB Statement No. 84, *Fiduciary Activities.* This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

A fiduciary component unit, when reported in the fiduciary fund financial statements of a primary government, should combine its information with its component units that are fiduciary component units and aggregate that combined information with the primary government's fiduciary funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets. There was no material impact on the Program's financial statements as a result of the implementation of GASB Statement No. 84.

GASB Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance,* provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Recent Accounting Pronouncements — Not yet adopted but currently being reviewed

GASB Statement No.	GASB Accounting Standard	MTA DC Program Required Year of Adoption
92	*Omnibus 2020*	2022

Use of Estimates - The preparation of the Program's financial statements in conformity with accounting principles generally accepted in the United States of America as prescribed by Government Accounting Standards Board ("GASB"). These principles require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates which include fair market value of investments.

Investment Valuation and Income Recognition - Investments are stated at contract and NAV values as reported by Prudential (the "Trustee"). Net asset value is determined to be a practical expedient for measuring fair value. All investments are registered, with securities held by the Plans' Trustee, in the name of the Plans. The values of the Plans' investments are adjusted to contract and NAV values as of the last business day of the Plans' year. Gains and losses on investments that were sold during the year are included in net appreciation/(depreciation) in contract and NAV values of investments.

3. INVESTMENTS

Investment Objective - The primary investment objective of the Program is to offer a set of investment options such that:

- Sufficient options are offered to allow participants to build portfolios consistent with their investment risk/return preferences.
- Each option is adequately diversified.
- Each option has a risk profile consistent with its position in the overall structure.
- Each option is managed so as to implement the desired risk profile of the asset class it represents.

Investment Guidelines - The Deferred Compensation Committee selects and executes agreements with qualified investment managers and/or funds which fulfill the criteria of the identified investment option. The Program is participant-directed and participants select from among the available investment options.

The investment options used to fund the various asset classes may be separately managed portfolios, commingled funds, or mutual funds. The Committee may from time to time modify the number and characteristics of the investment vehicles to be made available to participants within each investment option.

The specific investment vehicles chosen by the Committee must have appropriate investment characteristics and be managed by organizations which, by their record and experience, have demonstrated their investment expertise.

Such investment vehicles also should:

- Have sufficient assets under management so that the MTA account is not more than 10% of total strategy assets; strategy is defined as assets in all vehicles (separate accounts, collective trusts and mutual funds),
- Be well diversified,
- Have a minimum of three years of verifiable investment performance information,
- Have acceptable volatility in line with investment philosophy and process,
- Have the liquidity and/or marketability to pay benefit amounts to participants due under the terms of the Program, and
- Have a reasonable expense ratio.

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Concentration of Credit Risk - Individual investments held by the Plans that represent 5.0% or more of the Plans' net position available for benefits at December 31, 2019 and 2018 are as follows:

Investment at contract value – December 31, 2019	**457 Value**	**401(k) Value**
MTA Stable Value Fund	$1,036,674,998	$1,303,583,126

Investment at NAV – December 31, 2019	**457 Value**	**401(k) Value**
MTA Large-Cap Core Portfolio	$430,131,189	$627,237,596
MTA Large-Cap Core Index Fund	394,677,297	560,387,932
MTA Small-Mid Cap Equity	274,670,108	394,182,932
MTA Bond Fund	-	236,727,139
MTA International Portfolio	183,396,605	279,204,071

Investment at contract value – December 31, 2018	**457 Value**	**401(k) Value**
MTA Stable Value Fund	$958,439,519	$1,204,877,264

Investment at NAV – December 31, 2018	**457 Value**	**401(k) Value**
MTA Large-Cap Core Portfolio	$344,305,037	$492,414,901
MTA Large-Cap Core Index Fund	305,229,629	430,864,188
MTA Small-Mid Cap Equity	224,531,708	314,375,533
MTA Bond Fund	-	189,732,351
MTA International Portfolio	140,622,695	211,308,400

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The following table shows the contract and NAV values of investment in the various investment options at December 31, 2019 and 2018.

Investments at Contract and NAV Values at December 31, 2019

Target-Year Lifecycle Funds	**457 Value**	**401(k) Value**
MTA Target-Year Lifecycle 2015 Fund	$ 40,860,493	$ 56,798,914
MTA Target-Year Lifecycle 2020 Fund	43,590,029	60,407,446
MTA Target-Year Lifecycle 2025 Fund	115,224,714	172,424,153
MTA Target-Year Lifecycle 2030 Fund	47,832,623	71,795,079
MTA Target-Year Lifecycle 2035 Fund	84,244,781	135,921,351
MTA Target-Year Lifecycle 2040 Fund	28,191,086	42,208,417
MTA Target-Year Lifecycle 2045 Fund	43,759,890	67,213,923
MTA Target-Year Lifecycle 2050 Fund	25,296,003	29,887,751
MTA Target-Year Lifecycle 2055 Fund	1,685,179	2,592,130
MTA Target-Year Lifecycle 2060 Fund	607,540	548,224
MTA Target-Year Lifecycle 2065 Fund	1,271,516	722,697
MTA Income Fund	44,984,230	62,304,272
International Equity Funds		
MTA International Portfolio	183,396,605	279,204,071
MTA International Index Fund	26,090,947	30,048,234
Small- Mid Cap Equity Funds		
MTA Small-Mid Cap Portfolio	274,670,108	394,182,932
MTA Small-Mid Cap Index	123,406,087	142,048,697
Large-Cap Equity Funds		
MTA Large Cap Portfolio	430,131,189	627,237,596
MTA Large Cap Core Index Fund	394,677,297	560,387,932
Bond Funds		
MTA Bond Core Plus Portfolio	152,887,491	236,727,139
MTA Bond Aggregate Index Fund	31,577,319	41,472,733
Stable Value Option		
MTA Stable Value Fund	1,036,674,998	1,303,583,126
Self-Directed Investment Account	3,214,721	4,780,678
Total	**$ 3,134,274,846**	**$ 4,322,497,495**

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Investments at Contract and NAV Values at December 31, 2018

Target-Year Lifecycle Funds		457 Value		401(k) Value
MTA Target-Year Lifecycle 2015 Fund	$	39,539,976	$	56,713,211
MTA Target-Year Lifecycle 2020 Fund		37,867,714		52,557,505
MTA Target-Year Lifecycle 2025 Fund		95,446,330		144,953,002
MTA Target-Year Lifecycle 2030 Fund		36,545,453		56,586,678
MTA Target-Year Lifecycle 2035 Fund		65,991,568		107,260,806
MTA Target-Year Lifecycle 2040 Fund		21,004,358		31,683,831
MTA Target-Year Lifecycle 2045 Fund		34,990,550		54,179,818
MTA Target-Year Lifecycle 2050 Fund		19,896,043		22,784,060
MTA Target-Year Lifecycle 2055 Fund		1,444,300		1,913,902
MTA Target-Year Lifecycle 2060 Fund		314,566		251,514
MTA Target-Year Lifecycle 2065 Fund		652,626		650,530
MTA Income Fund		41,022,758		58,506,954
International Equity Funds				
MTA International Portfolio		140,622,695		211,308,400
MTA International Index Fund		21,224,624		25,671,764
Small- Mid Cap Equity Funds				
MTA Small-Mid Cap Portfolio		224,531,708		314,375,533
MTA Small-Mid Cap Index		101,875,091		115,920,447
Large-Cap Equity Funds				
MTA Large Cap Portfolio		344,305,037		492,414,901
MTA Large Cap Core Index Fund		305,229,629		430,864,188
Bond Funds				
MTA Bond Core Plus Portfolio		122,073,473		189,732,351
MTA Bond Aggregate Index Fund		19,187,854		22,707,520
Fixed Investment Option				
MTA Stable Value Fund		958,439,519		1,204,877,264
Self-Directed Investment Account		2,817,576		3,975,818
Total	**$**	**2,635,023,448**	**$**	**3,599,889,997**

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The following tables show the interest and/or dividends earned on investments and net appreciation/ (depreciation) for the years ended December 31, 2019 and 2018.

457 Investments at December 31, 2019

Target-Year Lifecycle Funds	**Cash Earnings**	**Appreciation/Depreciation in Fair Market Value - Net**
MTA Target-Year Lifecycle 2015 Fund	$ -	$4,234,409
MTA Target-Year Lifecycle 2020 Fund	-	5,208,160
MTA Target-Year Lifecycle 2025 Fund	-	16,175,338
MTA Target-Year Lifecycle 2030 Fund	-	7,512,396
MTA Target-Year Lifecycle 2035 Fund	-	14,869,928
MTA Target-Year Lifecycle 2040 Fund	-	5,063,382
MTA Target-Year Lifecycle 2045 Fund	-	8,339,690
MTA Target-Year Lifecycle 2050 Fund	-	4,842,154
MTA Target-Year Lifecycle 2055 Fund	-	339,139
MTA Target-Year Lifecycle 2060 Fund	-	99,493
MTA Target-Year Lifecycle 2065 Fund	-	158,712
MTA Income Fund	-	4,146,475
International Equity Funds		
MTA International Portfolio	-	35,015,447
MTA International Index Fund	-	4,638,682
Small-Mid-Cap Equity Funds		
MTA Small-Mid Cap Portfolio	-	56,700,793
MTA Small-Mid Cap Index Fund	-	27,951,710
Large-Cap Equity Funds		
MTA Large Cap Portfolio	-	102,284,682
MTA Large Cap Index Fund	-	95,513,645
Bond Funds		
MTA Bond Portfolio	-	9,859,493
MTA Bond Index Fund	-	1,939,041
Stable Value Option		
MTA Stable Value Fund	1,378	25,348,891
Self-Directed Investment Account	-	612,858
Total	**$1,378**	**$430,854,518**

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457 Investments at December 31, 2018

Target-Year Lifecycle Funds	Cash Earnings	Appreciation/(Depreciation) In Fair Market Value - Net
MTA Target-Year Lifecycle 2015 Fund	$ -	($964,936)
MTA Target-Year Lifecycle 2020 Fund	-	(1,424,373)
MTA Target-Year Lifecycle 2025 Fund	-	(5,220,249)
MTA Target-Year Lifecycle 2030 Fund	-	(2,673,305)
MTA Target-Year Lifecycle 2035 Fund	-	(5,820,881)
MTA Target-Year Lifecycle 2040 Fund	-	(2,026,385)
MTA Target-Year Lifecycle 2045 Fund	-	(3,624,076)
MTA Target-Year Lifecycle 2050 Fund	(1)	(2,097,093)
MTA Target-Year Lifecycle 2055 Fund	-	(162,507)
MTA Target-Year Lifecycle 2060 Fund	-	(20,193)
MTA Target-Year Lifecycle 2065 Fund	-	(81,735)
MTA Income Fund	-	(778,921)
International Equity Funds		
MTA International Portfolio	(1)	(23,199,927)
MTA International Index Fund	30	(3,872,032)
Small-Mid-Cap Equity Funds		
MTA Small-Mid Cap Portfolio	-	(22,741,667)
MTA Small-Mid Cap Index Fund	(67)	(10,958,112)
Large-Cap Equity Funds		
MTA Large Cap Portfolio	(125)	(19,087,869)
MTA Large Cap Index Fund	31	(14,872,279)
Bond Funds		
MTA Bond Portfolio	-	1,716,501
MTA Bond Index Fund	62	16,549
Stable Value Option		
MTA Stable Value Fund	-	21,286,940
Self-Directed Investment Account	-	(213,733)
Total	**($71)**	**($96,820,285)**

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401 (k) Investments at December 31, 2019

Target-Year Lifecycle Funds	Cash Earnings	Appreciation/(Depreciation) In Fair Market Value - Net
MTA Target-Year Lifecycle 2015 Fund	$ -	$6,018,412
MTA Target-Year Lifecycle 2020 Fund	-	7,250,832
MTA Target-Year Lifecycle 2025 Fund	-	24,260,963
MTA Target-Year Lifecycle 2030 Fund	-	11,507,515
MTA Target-Year Lifecycle 2035 Fund	2	24,135,189
MTA Target-Year Lifecycle 2040 Fund	-	7,583,142
MTA Target-Year Lifecycle 2045 Fund	-	12,926,940
MTA Target-Year Lifecycle 2050 Fund	-	5,640,545
MTA Target-Year Lifecycle 2055 Fund	-	485,482
MTA Target-Year Lifecycle 2060 Fund	-	81,212
MTA Target-Year Lifecycle 2065 Fund	-	151,192
MTA Income Fund	-	5,861,494
International Equity Funds		
MTA International Portfolio	410	53,059,484
MTA International Index Fund	8	5,499,481
Small-Mid-Cap Equity Funds		
MTA Small-Mid Cap Portfolio	417	79,959,807
MTA Small-Mid Cap Index Fund	304	31,980,564
Large-Cap Equity Funds		
MTA Large Cap Portfolio	550	147,679,894
MTA Large Cap Index Fund	831	134,786,245
Bond Funds		
MTA Bond Portfolio	141	15,255,580
MTA Bond Index Fund	-	2,370,388
Stable Value Option		
MTA Stable Value Fund	218	31,833,545
Self-Directed Investment Account	-	980,340
Total	**$2,881**	**$609,308,245**

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401 (k) Investments at December 31, 2018

Target-Year Lifecycle Funds	**Cash Earnings**	**Appreciation/(Depreciation) In Fair Market Value - Net**
MTA Target-Year Lifecycle 2015 Fund	$ -	($1,391,585)
MTA Target-Year Lifecycle 2020 Fund	-	(1,992,155)
MTA Target-Year Lifecycle 2025 Fund	-	(7,809,841)
MTA Target-Year Lifecycle 2030 Fund	-	(4,179,497)
MTA Target-Year Lifecycle 2035 Fund	159	(9,458,960)
MTA Target-Year Lifecycle 2040 Fund	-	(3,056,802)
MTA Target-Year Lifecycle 2045 Fund	-	(5,497,456)
MTA Target-Year Lifecycle 2050 Fund	-	(2,397,076)
MTA Target-Year Lifecycle 2055 Fund	-	(224,092)
MTA Target-Year Lifecycle 2060 Fund	-	(32,207)
MTA Target-Year Lifecycle 2065 Fund	-	(79,557)
MTA Income Fund	151	(1,107,782)
International Equity Funds		
MTA International Portfolio	(80)	(34,878,408)
MTA International Index Fund	-	(4,774,905)
Small-Mid-Cap Equity Funds		
MTA Small-Mid Cap Portfolio	45	(31,691,127)
MTA Small-Mid Cap Index Fund	(11)	(12,339,239)
Large-Cap Equity Funds		
MTA Large Cap Portfolio	94	(26,646,239)
MTA Large Cap Index Fund	266	(20,492,874)
Bond Funds		
MTA Bond Portfolio	-	2,663,521
MTA Bond Index Fund	1	257
Stable Value Option		
MTA Stable Value Fund	(374)	26,700,986
Self-Directed Investment Account	-	(369,074)
Total	**$251**	**($139,054,109)**

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Credit Risk – The investment alternatives offered under the Program are not guaranteed by any governmental body, including the MTA, and are not risk-free. The credit risk of the investment strategy in the various investment accounts is based upon the performance of the securities in the underlying portfolios. Investments in these investment strategies can be expected to increase or decrease in value depending upon market conditions. The Deferred Compensation Committee (the "Committee"), with the assistance of its independent investment consultant continuously monitors the program investment strategies pursuant to the investment policy and objectives. When the investment strategies are determined to not meet the criteria, the strategy is terminated as outlined by the investment policy statement.

At December 31, 2019, the following credit quality rating has been assigned by a nationally recognized statistical rating organization ("NRSRO") to the Fixed Income Portfolio of the Plans:

Quality Rating	457	457 Percentage of Fixed Income Portfolio	401(k)	401(k) Percentage of Fixed Income Portfolio
AAA	$ 351,864,185	23.98%	$ 478,231,361	24.44%
AA	64,870,567	4.42%	86,372,538	4.41%
A	167,836,756	11.44%	220,706,912	11.28%
BBB	195,329,515	13.31%	258,281,663	13.20%
BB	9,372,795	0.64%	14,249,368	0.73%
Below BB	7,842,153	0.53%	12,109,964	0.62%
Credit Risk Debt Securities	797,115,971	54.32%	1,069,951,807	54.68%
U.S. Government Bonds	670,195,468	45.68%	886,854,583	45.32%
Total fixed income securities	1,467,311,439	100.00%	1,956,806,390	100.00%
Other securities not rated - equity, international funds and corporate bonds	1,666,963,407		2,365,691,105	
Total investments	$ 3,134,274,846		$ 4,322,497,495	

At December 31, 2018, the following credit quality rating has been assigned by a nationally recognized statistical rating organization ("NRSRO") to the Fixed Income Portfolio of the Plans:

Quality Rating	457	457 Percentage of Fixed Income Portfolio	401(k)	401(k) Percentage of Fixed Income Portfolio
AAA	$ 533,278,109	40.78%	$ 709,224,728	40.70%
AA	58,183,754	4.45	78,045,548	4.48
A	150,798,714	11.53	198,336,923	11.38
BBB	169,109,429	12.93	224,080,163	12.86
BB	8,848,180	0.68	13,527,691	0.78
Below BB	8,550,680	0.65	13,319,910	0.76
Credit Risk Debt Securities	928,768,866	71.02	1,236,534,963	70.96
U.S. Government Bonds	378,996,303	28.98	506,066,086	29.04
Total fixed income securities	1,307,765,169	100.00%	1,742,601,050	100.00%
Other securities not rated - equity, international funds and corporate bonds	1,327,258,279		1,857,288,947	
Total investments	$ 2,635,023,448		$ 3,599,889,997	

Interest Rate Risk - Interest rate risk is the risk that changes in interest rates will adversely affect the contract and NAV values of the investment. Duration is a measure of sensitivity to interest rate risk. The greater the duration of a portfolio, the greater its principle value will fluctuate in response to a change in interest rate risk and vice versa. Modified duration is an indicator of bond price's sensitivity and is the percentage change in a bond principle value given a 100-basis point parallel change in interest rates.

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2019

Investment Type	457	401(k)	Total	Duration
Galliard Stable Value Fund	$ 1,128,536,473	$ 1,435,218,180	$ 2,563,754,653	2.91 *
Loomis Sayles Core Plus Bond Fund	72,286,023	110,369,177	182,655,200	6.23
TCW Core Plus Bond Fund	74,476,509	113,713,698	188,190,206	5.97
SSgA Aggregate Bond Index Fund	72,286,023	110,369,177	182,655,200	2.55
SSgA Real Asset Fund	31,577,319	41,472,733	73,050,052	5.82
Wellington World Bond Fund	49,226,540	72,323,706	121,550,246	4.59
Total Fixed Income Portfolio Modified Duration	1,428,388,887	1,883,466,670	3,311,855,557	3.37
Investment with no duration reported	1,705,885,959	2,439,030,825	4,144,916,785	
Total investments	$ 3,134,274,846	$ 4,322,497,495	$ 7,456,772,341	

* Portfolio Duration - the price sensitivity to yield and the rate of change of price with respect to yield due to the passage of time.

2018

Investment Type	457	401(k)	Total	Duration
Galliard Stable Value Fund	$ 1,033,058,563	$ 1,313,495,662	$ 2,346,554,225	2.82 *
Loomis Sayles Core Plus Bond Fund	57,760,828	88,725,414	146,486,241	5.98
TCW Core Plus Bond Fund	60,434,612	92,832,568	153,267,180	5.86
SSgA Aggregate Bond Index Fund	19,187,854	22,707,520	41,895,374	5.86
SSgA Real Asset Fund	40,647,939	60,484,739	101,132,678	5.33
Wellington World Bond Fund	58,876,380	90,438,994	149,315,375	3.72
Total Fixed Income Portfolio Modified Duration	1,269,966,176	1,668,684,897	2,938,651,074	3.31
Investment with no duration reported	1,365,057,272	1,931,205,100	3,296,262,372	
Total investments	$ 2,635,023,448	$ 3,599,889,997	$ 6,234,913,446	

* Portfolio Duration - the price sensitivity to yield and the rate of change of price with respect to yield due to the passage of time.

Foreign Currency Risk - Foreign currency risk is the risk that changes in exchange rates will adversely affect the contract and NAV values of an investment or deposit. The Program has an indirect exposure to foreign currency fluctuations for the Plans' investments are as follows:

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2019 Currency	457 Holdings in U.S. Dollars	401(k) Holdings in U.S. Dollars	Total Holdings in U.S. Dollars
Argentina	$ 16,081	$ 18,731	$ 34,812
Australian Dollar	14,361,398	21,491,203	35,852,601
Austria	73,107	87,466	160,573
Bermudian Dollar	6,494	8,626	15,119
Brazil Cruzeiro Real	2,579,009	3,720,115	6,299,124
Canadian Dollar	10,457,182	15,124,126	25,581,308
Chilean Peso	(8,024)	(37,156)	(45,180)
Chinese Yuan Renminbi	3,797,845	4,964,117	8,761,962
Colombian Peso	(229)	(21,600)	(21,829)
Czech Krone	10,721	12,487	23,208
Danish Krone	10,187,421	15,400,833	25,588,254
Egyptian Pound	10,721	12,487	23,208
Euro	88,315,650	132,549,682	220,865,332
Guernsey Pound	21,585	28,672	50,257
Hong Kong Dollar	19,532,201	29,529,678	49,061,879
Hungarian Forint	(69,016)	(119,067)	(188,083)
Indian Rupee	4,891,387	7,222,910	12,114,297
Indonesia Rupiah	1,002,659	1,473,467	2,476,126
Israeli Shekel	194,184	240,179	434,364
Japanese Yen	71,701,589	107,877,889	179,579,478
Malaysian Ringgit	1,388,911	2,055,104	3,444,015
Mexican Peso	6,089,623	9,204,008	15,293,631
New Zealand Dollar	115,057	143,412	258,469
Norwegian Krone	2,666,142	4,035,102	6,701,244
Pakistan	40,758	58,842	99,600
Panamanian Balboa	29,824	39,616	69,440
Peruvian Nuevo Sol	111,834	158,978	270,812
Philippine Peso	175,920	222,719	398,639
Polish Zloty	(70,527)	(137,056)	(207,583)
Qatar Riyal	214,220	302,296	516,516
Russian Ruble	371,089	475,413	846,503
Saudi Arabia	331,580	433,312	764,892
Singapore Dollar	6,114,189	9,222,933	15,337,122
South African Rand	(154,219)	(392,161)	(546,380)
South Korean Won	6,959,013	10,278,647	17,237,660
Swedish Krona	14,065,860	21,279,933	35,345,793
Swiss Franc	23,678,975	35,512,038	59,191,013
New Taiwan Dollar	4,728,904	6,881,306	11,610,209
Thai Baht	928,420	1,348,518	2,276,938
Turkish Lira	30,878	32,222	63,100
United Arab Emirates Dirham	498,207	744,494	1,242,702
United Kingdom British Pound	54,930,919	82,450,490	137,381,408
Uruguayan Peses	220,973	336,926	557,899
Total	$ 350,548,518	$ 524,271,936	$ 874,820,454

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2018 Currency	457 Holdings in U.S. Dollars	401(k) Holdings in U.S. Dollars	Total Holdings in U.S. Dollars
Australian Dollar	$ 8,793,065	$ 13,050,739	$ 21,843,804
Bermudian Dollar	1,561	1,873	3,434
Brazil Cruzeiro Real	3,300,217	4,898,224	8,198,441
British Pound Sterling	45,599,328	68,534,733	114,134,061
Canadian Dollar	10,967,016	16,189,185	27,156,201
Chilean Peso	85,710	106,984	192,694
Chinese Yuan Renminbi	2,805,239	3,795,779	6,601,018
Colombian Peso	1,685	(16,488)	(14,803)
Czech Krone	8,743	10,724	19,467
Danish Krone	5,539,605	8,358,223	13,897,828
Egyptian Pound	8,743	10,724	19,467
Euro	75,414,803	113,476,315	188,891,118
Hong Kong Dollar	15,125,758	22,864,436	37,990,194
Hungarian Forint	77,715	109,340	187,055
Indian Rupee	4,745,537	7,056,646	11,802,183
Indonesia Rupiah	847,506	1,250,705	2,098,211
Israeli Shekel	231,185	315,494	546,679
Japanese Yen	55,337,539	83,589,901	138,927,440
Macau	2,510	3,012	5,522
Malaysian Ringgit	1,385,093	2,065,099	3,450,192
Mexican Peso	2,033,564	3,038,570	5,072,134
New Zealand Dollar	(1,239,769)	(1,952,319)	(3,192,088)
Norwegian Krone	712,940	1,042,566	1,755,506
Panamanian Balboa	13,720	16,465	30,185
Peruvian Nuevo Sol	(19,266)	(40,377)	(59,643)
Philippine Peso	340,739	491,751	832,490
Polish Zloty	680,970	1,032,334	1,713,304
Qatar Riyal	285,871	417,178	703,049
Russian Ruble	25,164	(21,601)	3,563
Singapore Dollar	5,871,826	8,878,327	14,750,153
South African Rand	836,168	1,168,649	2,004,817
South Korean Won	5,544,690	8,199,855	13,744,545
Swedish Krona	5,982,817	8,960,118	14,942,935
Swiss Franc	19,796,408	29,879,298	49,675,706
New Taiwan Dollar	2,963,673	4,313,629	7,277,302
Thai Baht	874,289	1,291,720	2,166,009
Turkish Lira	634,707	961,181	1,595,888
United Arab Emirates Dirham	462,995	693,358	1,156,353
Uruguayan Peses	199,653	307,275	506,928
Other	298,066	357,718	655,784
Total	$ 276,577,783	$ 414,707,343	$ 691,285,126

In year 2015, the MTA Deferred Compensation Program adopted GASB Statement No. 72 ("GASB 72"), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements.

Investments measured at Contract and NAV values
($ In thousands)

457 Plan	2019 December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large-cap equity funds	$ 922,233	$ -	Daily	None
Commingled Small-mid cap equity funds	123,406	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	209,357	-	Daily	None
Small-Mid cap equity mutual fund	103,116	-	Daily	None
Commingled international equity fund	185,325	-	Daily	None
Separate Manager Account: International equity mutual fund	159,234	-	Daily	None
Total equity securities	1,702,671	-		
Debt Securities				
Commingled debt funds	176,149	-	Daily	None
Separate Manager Account: debt funds	74,477	-	Daily	None
Total debt securities	250,626	-		
Real assets				
Commingled real asset equity fund	49,227	-	Daily	None
Total real assets	49,227	-		
Other:				
Self direct investment option	3,215	-	Daily	None
Total other	3,215	-		
Total investments measured at the NAV	2,005,739	-		
Investments measured at Contract Value	1,128,536	-		
Total investments	$ 3,134,275	$ -		

Investments measured at Contract and NAV values
($ In thousands)

401(k) Plan	2019 December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large-cap equity funds	$ 1,332,332	$ -	Daily	None
Commingled Small-mid cap equity funds	142,049	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	301,610	-	Daily	None
Small-Mid cap equity mutual fund	148,554	-	Daily	None
Commingled international equity fund	269,876	-	Daily	None
Separate Manager Account: International equity mutual fund	239,828	-	Daily	None
Total equity securities	2,434,249	-		
Debt Securities				
Commingled debt funds	262,211	-	Daily	None
Separate Manager Account: debt funds	113,714	-	Daily	None
Total debt securities	375,925	-		
Real assets				
Commingled real asset equity fund	72,324	-	Daily	None
Total real assets	72,324	-		
Other:				
Self direct investment option	4,781	-	Daily	None
Total other	4,781	-		
Total investments measured at the NAV	2,887,279	-		
Investments measured at Contract Value	1,435,218	-		
Total investments	$ 4,322,497	$ -		

Investments measured at Contract and NAV values
($ In thousands)

457 Plan	2018 December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large-cap equity funds	$ 730,411	$ -	Daily	None
Commingled Small-mid cap equity funds	101,875	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	171,439	-	Daily	None
Small-Mid cap equity mutual fund	84,439	-	Daily	None
Commingled international equity fund	147,650	-	Daily	None
Separate Manager Account: International equity mutual fund	126,425	-	Daily	None
Total equity securities	1,362,239	-		
Debt Securities				
Commingled debt funds	135,825	-	Daily	None
Separate Manager Account: debt funds	60,435	-	Daily	None
Total debt securities	196,260	-		
Real assets				
Commingled real asset equity fund	40,648	-	Daily	None
Total real assets	40,648	-		
Other:				
Self direct investment option	2,818	-	Daily	None
Total other	2,818	-		
Total investments measured at the NAV	1,601,965	-		
Investments measured at Contract Value	1,033,058	-		
Total investments	$ 2,635,023	$ -		

Investments measured at Contract and NAV values
($ In thousands)

401(k) Plan	2018 December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large-cap equity funds	$ 1,044,705	$ -	Daily	None
Commingled Small-mid cap equity funds	115,920	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	242,052	-	Daily	None
Small-Mid cap equity mutual fund	119,218	-	Daily	None
Commingled international equity fund	215,503	-	Daily	None
Separate Manager Account: International equity mutual fund	189,831	-	Daily	None
Total equity securities	1,927,229	-		
Debt Securities				
Commingled debt funds	201,872	-	Daily	None
Separate Manager Account: debt funds	92,832	-	Daily	None
Total debt securities	294,704	-		
Real assets				
Commingled real asset equity fund	60,485	-	Daily	None
Total real assets	60,485	-		
Other:				
Self direct investment option	3,976	-	Daily	None
Total other	3,976	-		
Total investments measured at the NAV	2,286,394	-		
Investments measured at Contract Value	1,313,496	-		
Total investments	$ 3,599,890	$ -		

Investments Measured at Contract Value

Stable Value Funds - Stable value funds typically have three components. The first component is primarily comprised of Investment Contracts issued by banks and insurance companies. The Investment Contracts help to assure that participants can transact at book value (principal plus accrued interest) as well as maintain a relatively stable return profile for the portfolio. Generally, contract issuers are rated "investment grade" by at least one of the Nationally Recognized Statistical Rating Organizations at time of purchase that are able to do business in New York State. The second component consists of an underlying portfolio of fixed income securities which are subject to the Investment Contracts and are often referred to as "underlying securities". Finally, the portfolio may also hold cash or cash equivalents. The Stable Value fund return is expected to be higher than that of a 3-year Constant Maturity Treasury + 0.5% with similar volatility over the long-term.

Investments Measured at NAV

Commingled Funds - The fair values of the investments of this type have been determined using the NAV per share of the investments. The commingled equity funds are comprised of large cap, small and mid-cap funds and international funds that invest in core indices across all industries, growth and value respectively. The commingled debt funds are comprised of corporate, treasuries and international fixed income securities.

Separate Manager Account (SMAs) – This investment vehicle follows a single-style strategy, with funds comprised of large cap fixed, large cap value and large cap growth. These three separate SMAs allow the MTA to impose reasonable stock and bonds sector preferences and restrictions on the securities in the accounts. The two equity SMAs are co-invested with external managers through Prudential Securities. The fair values of the investments in this vehicle are determined using the NAV per share of the investments by the external manager. Prudential Securities whom the MTA holds a contractual agreement with and whom controls the investments, revalues the NAV per share after certain expense deductions and provides the MTA with its percentage allocation on an annual basis.

Small-Mid Cap Funds - This investment option has four institutional investments funds - two growth and two value investment strategies with the objective of matching the return and risk characteristics of the Russell Small Cap Completeness Index or a similar index which measures the broad U.S. small and mid-capitalization equity market. The option's investment profile is long term capital growth through a combination of capital appreciation and to a lesser extent reinvested dividend income. The investment option is expected to have high volatility over a market cycle. The fair values of the investments in these types have been determined using the NAV per share of the investments.

Real Assets – The fund represents an optimal solution for an inflation hedging strategy and incorporates a diversified multi asset class approach. The fund strategic weights which are rebalanced monthly are as follows: 25% Bloomberg Roll Select Commodity Index; 25% Standard and Poor's (r) Global Larger Mid Cap Commodity & Resources Index; 10% Standard and Poor's Global Infrastructure Equity Index; 15% Dow Jones US Select REIT Index and 25% Barclays US TIPS Index. The fair values of the investments of this type have been determined using the NAV per share of the investments.

Self-Direct Brokerage Accounts – The Deferred Compensation program allows participants the option to invest up to twenty (20) percent of their account in over 500 mutual fund families comprising of more than 15,000 individual mutual funds. All investments under this option are in mutual funds and are measured at the respective fund NAVs.

4. CONTRIBUTIONS

Employer 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, 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 made 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 - For each plan year, the MTA shall make contributions to the Account of each eligible MTA Police Department Commanding Officers Association 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 – Business Services Center - 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 upon the first of the following to occur:

1. Completing 5 years of service,
2. Attaining the Normal Retirement Age of 62 while in continuous employment, or
3. 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.

Status - As of December 31, 2019 and 2018, 36.2% and 35.1% of the eligible employees were enrolled in the 457 Plan and 53.8% and 52.0% of the eligible employees were enrolled in the 401(k) Plan, respectively. There are 33,858 and 32,910 active participants in the 457 Plan and 48,217 and 46,849 active participants in the 401(k) Plan as of December 31, 2019 and 2018, respectively. The average account balance in the 457 Plan is $70,309 and $61,038 and in the 401(k) Plan is $72,068 and $62,023 in 2019 and 2018, respectively.

5. DISTRIBUTIONS

In-Service Withdrawals - A 457 Plan participant who experiences an unforeseeable emergency (as defined by the Code) may apply for a withdrawal. A 401(k) Plan participant who experiences an immediate and heavy financial need (as defined by the Code) may apply for a withdrawal by filing a hardship application. Distributions are subject to applicable taxes and penalties.

Direct Transfer for Purchasing Permissive Service Credit - Participants in the 457 or 401(k) Plans are eligible to use their Plan assets as a source of funding for the purchase of certain permissive service credits (as defined by the Code) in certain defined benefit plan or pension systems, via a direct transfer.

Distribution of Benefits - Upon a participant's severance from the MTA, the participant is entitled to receive an amount equal to the value of his or her vested account, to be paid in accordance with one of the methods described below. Participants can choose to remain in the Plans and are not required to withdraw, roll over or transfer their account upon severance.

Commencement date - Subject to required minimum distribution rules, a participant may elect any commencement date after severance. A participant has the option to cancel or change their distribution schedule at any time upon proper notice to the Plans Record-keeper. Upon reaching the later of April 1st of the calendar year following: (1) the calendar year he or she reaches age 70 ½, or (2) the calendar year in which he or she severs from the MTA, participants are required to receive a minimum distribution from their account.

Method of Distribution for Direct Payment - If a participant chooses; the following methods of distribution are available under the Plans:

- Full lump sum payment; or
- Substantially equivalent monthly, quarterly, semi-annual or annual installment payments; or
- Any other amount of payment, subject to the required minimum distribution rules.

Election of Length of Distribution - If a participant elects installment payments, he or she may specify either:

- the total number of installment payments, or
- the dollar amount of each payment.

In either case, distributions cannot be paid over a period of time which exceeds the life expectancy of the participant or, in certain circumstances, the joint life expectancy of the participant and a "designated beneficiary" (as defined by the Code). Installment payments will be recalculated annually and will be paid only until the account is exhausted.

Rollovers or Transfers Out of the Plans - If a participant chooses to transfer or roll over his or her Deferred Compensation account, or a portion thereof, it must be to an eligible retirement plan (401(a), 457, 401(k), 403(b) or rollover IRA). 457 Plan and 401(k) Plan participants are eligible to roll over or transfer their account balance(s) upon severance from service.

6. LOANS

The MTA Deferred Compensation Program offers participants the opportunity to borrow from either one or both Plans simultaneously. The MTA Plans permit one loan from the 457 Plan and up to two loans from the 401(k) Plan. However, participants are limited to a total of two loans. Thus, as a participant of both the 401(k) and the 457 Plans, a participant can have either two 401(k) loans or the combination of a 401(k) loan and a 457 loan. The MTA offers two types of loans: the first is a "General Purpose Loan", which is a five-year loan and can be for any purpose. The second is a "Residential Loan", which is a loan for a primary residence and is a 20-year loan. For the Residential Loan, a signed contract to purchase the residence is necessary. Loan re-payment is made through payroll deduction. If a participant with an outstanding loan leaves the employment of the MTA, the participant may request to make coupon payments.

The minimum loan amount is $1,000. The maximum amount of an approved loan may not exceed the lesser of: (i) 50 percent of the participant's 457 or 401(k) Plan account balance; or (ii) $50,000 less the combined balance of all outstanding loans that a participant may have under the Program. All loans are subject to interest at prime rate plus 1 percent. A loan origination fee of $75.00 is deducted from the approved loan amount. Active MTA employee participants may not borrow from amounts attributable to Metro-North contributions, MTA Police contributions, MTA Police Commanding Officers' Association contributions, MTA Business Service Center, Matching Contributions and Roth Elective Deferrals. The net loans outstanding for the 457 plan is $85.41 million and $78.43 million at December 31, 2019 and 2018, respectively, and for the 401(k) Plan was $168.31 million and $159.46 million at December 31, 2019 and 2018, respectively.

7. ADDITIONAL PLAN INFORMATION

Participation - Eligible employees are allowed to participate in the 401(k) Plan and/or the 457 Plan upon employment with the MTA and its affiliates or subsidiaries. The record-keeper/trustee maintains a website, along with a telephone voice response system, or participants may use paper enrollment forms, for Program activities. Participants may make or suspend deferrals; may increase or decrease, in multiples of 1 percent, the percentage of wages to be deferred or any whole dollar amount; may change the investment option of future deferrals or initiate account transfers between investment options in multiples of 1 percent or any dollar amount. There is no restriction on the number of times a participant may change the amount of future deferrals. An employee participating in both the 457 Plan and 401(k) Plan who wishes to make any changes must do so independently for each Plan. An employee who has severed service from the MTA may rejoin the 457 Plan, the 401(k) Plan, or both and become an active participant after returning to service to the MTA by following the procedures set forth above.

Excessive Trading Policy - MTA has an Excessive Trading policy in place for the Plans. This policy monitors trading activity in investment options, utilizing criteria such as frequency of trades, dollar amount of the trades, and number of buys and sells performed by the participant. Activity exceeding established thresholds can be deemed excessive trading. The Excessive Trading policy defines excessive trading as one or more trades into and out of the same investment option within a rolling 30-day period when each trade is over $25,000. Automatic or system-driven transactions are not considered excessive trading. This includes contributions or loan repayments by payroll deductions, re-mapping transactions, hardship withdrawals, regularly scheduled or periodic distributions or periodic rebalancing through a systematic rebalancing program that is not initiated by the Program.

Maximum Deferrals - A participant in the 457 Plan or the 401(k) Plan could have deferred up to $19,000 plus an additional $6,000 for participants age 50 and over in calendar year 2019 or up to $18,500 plus an additional $6,000 for participants age 50 and over in calendar year 2018. Alternatively, for the 457 Plan, under certain circumstances, a participant may double the annual maximum contribution during each of the last three years prior to reaching his or her designated "Normal Retirement Age" ("Retirement Catch-Up Amount") if less than the maximum was deferred during earlier years. Participants may not make both the Retirement Catch-Up and the Age 50 Catch-Up to the 457 Plan in the same year.

Membership – As of December 31, 2019 and 2018, the Plans' membership with balances consisted of:

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	2019		2018	
	457	401(k)	457	401(k)
Active employees	33,858	48,217	32,910	46,849
Terminated/Inactive employees	10,699	11,704	9,746	10,463
Total active and inactive members	44,557	59,921	42,656	57,312
Vested employees	44,557	59,687	42,656	57,057

Maintenance of Accounts - For both the 457 Plan and the 401(k) Plan, the record-keeper establishes an account for each participant to which any amounts deferred, transferred or distributed under the Plans are credited or charged, including, as specified in the Participation Agreement or any amendment thereto, any increase or decrease in the value of the investment options. The Plans are not responsible for any decrease in the value of a participant's account.

Plans' Funding and Expense Payment - The MTA Deferred Compensation Program charges participants' quarterly administrative fees. These fees cover participant directed activities, communications, and administrative expenses. They also cover the cost of the Program's third-party administrator, the investment advisor, outside legal counsel, in-house legal counsel and staff salaries and benefits.

8. TRUSTEE AND OTHER PROFESSIONAL SERVICES

The Trustee for the MTA is Prudential Bank & Trust, Federal Savings Bank. Record-keeper and/or Administrative Services are provided by Prudential Retirement Insurance & Annuity Company ("PRIAC"). Investment management services are provided by PRIAC and Galliard Capital Management: separate accounts are managed by Denver Investment Advisors, Conestoga Capital Advisors, and TCW-Metropolitan West Asset Management. The Financial Advisor is Mercer Investment Consulting Inc., which reviews the investment policies adopted by the Investment Committee, the Plans' portfolio and the Investment Managers' performance.

9. SUBSEQUENT EVENTS

On December 12, 2019, the Deferred Compensation Committee adopted changes to the hardship distribution rules. The 2018 Budget Act and Regulations relax 401(k) hardship distribution restrictions, generally making it easier for participants to take distributions. Participants no longer have to take a loan before taking a hardship distribution and the six-month suspension of contributions has been eliminated. Additional contribution sources now include earnings on contributions, including post-1988 earnings on 401(k) deferrals, safe harbor matching or non-elective employer contributions, QNECs and QMACs.

On April 8, 2020, the Deferred Compensation Committee adopted the CARES Act provisions. The Coronavirus, Aid, Relief and Economic Security ("CARES") Act was signed into law by President Trump on March 27, 2020. Participants can request a Coronavirus-related distribution ("CRD") which will allow them to withdraw up to $100,000 without the 10% early withdrawal penalty and without the typical 20% federal withholdings. They have to meet certain criteria but if eligible they can spread the tax liability over a three-year period. They also have the option to pay back the money into the Plan within three years. The maximum loan amount has been increased to $100,000 or 100% of the participants balance. Participants can also elect to suspend their loan repayments for the rest of 2020. The Required Minimum Distribution ("RMD") age has increased from age 70 ½ to 72. For 2020, RMDs can be waived if elected by the participant.

MTA Capital Construction Company has been renamed MTA Construction and Development Company, was pursuant to an amendment to Public Authorities Law Section 1266(5).and will be reported as such in the future.

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

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Metro-North Commuter Railroad Company Cash Balance Plan

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the
Years Ended December 31, 2019 and 2018,
Supplemental Schedules, and

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METRO-NORTH COMMUTER RAILROAD COMPANY
CASH BALANCE PLAN

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INDEPENDENT AUDITORS' REPORT

To the Board of Managers of Pensions of the
Metro-North Commuter Railroad Company Cash Balance Plan

Report on the Financial Statements

We have audited the accompanying statements of plan net position of the Metro-North Commuter Railroad Company Cash Balance Plan (the "Plan") as of December 31, 2019 and 2018, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the Plan net position as of December 31, 2019 and 2018, and the respective changes in Plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 7, Schedule of Changes in the Employer's Net Pension Liability and Related Ratios - Schedule I on page 23, Schedule of Employer Contributions - Schedule II on pages 24 through 26, and Schedule of Investment Returns - Schedule III on page 27 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

METRO-NORTH COMMUTER RAILROAD COMPANY
CASH BALANCE PLAN

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED)
DECEMBER 31, 2019 AND 2018

This narrative discussion and analysis of the Metro-North Commuter Railroad Company Cash Balance Plan (the "Plan") financial performance provides an overview of the Plan's financial activities for the years ended December 31, 2019 and 2018. It is meant to assist the reader in understanding the Plan's financial statements by providing an overall review of the financial activities during the past two years and the effects of significant changes, as well as a comparison with the prior year's activity and results. This discussion and analysis is intended to be read in conjunction with the Plan's financial statements which begin on page 8.

Overview of Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements. The basic financial statements are:

- **The Statements of Fiduciary Net Position** presents the financial position of the Plan at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan 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. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Fiduciary Net Position** present the results of activities during the year. All changes affecting the assets and liabilities of the Plan are reflected on an accrual basis when the activity occurred, regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.

- **The Notes to Financial Statements** provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plan's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information,** as required by the Government Accounting Standards Board ("GASB") includes the Schedule of Changes in the Employer's Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment Returns.

Financial Highlights

The Plan is a single employer, defined benefit pension plan. The Plan covers non-collectively bargained employees, formerly employed by Conrail, who joined Metro-North Commuter Railroad Company ("MNCR") as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees (the "Management Plan") and the Plan was closed to new participants. The assets of the Management Plan have been merged with the Metropolitan Transportation Authority Defined Benefit Plan for Non-Represented Employees as of the asset transfer date of July 14, 1995.

FINANCIAL ANALYSIS

Fiduciary Net Position
December 31, 2019, 2018, and 2017
(Dollars in thousands)

				Increase/(Decrease)	
	2019	**2018**	**2017**	**2019-2018**	**2018-2017**
Investments, at fair value	$ 455	$ 473	$ 527	$ (18)	$ (54)
Accrued interest	2	3	3	(1)	-
Other receivable	1	-	-	1	-
Receivable from investment securities sold	-	-	3	-	(3)
Total assets	458	476	533	(18)	(57)
Payable for investment securities purchased	3	5	10	(2)	(5)
Total liabilities	3	5	10	(2)	(5)
Net position - restricted for pension benefits	$ 455	$ 471	$ 523	$ (16)	$ (52)

<u>December 31, 2019 versus December 31, 2018</u>

Investments at December 31, 2019 were $455 thousand, a decrease of $18 thousand from 2018. The decrease is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and accrued interest at December 31, 2019 were $3 thousand, primarily due to accrued interest of $2 thousand and other receivables of $1 thousand for 2019.

Payables at December 31, 2019 were $3 thousand, a decrease of $2 thousand from 2018. The decrease is the result of a decrease in net securities purchased at the end of 2019.

Net position restricted for pension benefits at December 31, 2019 was $455 thousand, a decrease of $16 thousand from 2018 as a result of the changes noted above.

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December 31, 2018 versus December 31, 2017

Investments at December 31, 2018 were $473 thousand, a decrease of $54 thousand from 2017. The decrease is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and accrued interest at December 31, 2018 were $3 thousand, a net decrease of $3 thousand from 2017. The decrease is the result of a decrease in net securities sold at the end of 2018.

Payables at December 31, 2018 were $5 thousand, a decrease of $5 thousand from 2017. The decrease is the result of a decrease in net securities purchased at the end of 2018.

Net position restricted for pension benefits at December 31, 2018 was $471 thousand, a decrease of $52 thousand from 2017 as a result of the changes noted above.

Changes in Fiduciary Net Position
For the Years Ended December 31, 2019, 2018 and 2017
(Dollars in thousands)

				Increase/(Decrease)	
	2019	**2018**	**2017**	**2019-2018**	**2018-2017**
Additions:					
Net investment income/(loss)	$ 40	$ 1	$ 20	$ 39	$ (19)
Employer contributions	-	5	-	(5)	5
Other receipts	5	-	-	5	-
Total additions	45	6	20	39	(14)
Deductions:					
Benefits paid to participants	53	58	71	(5)	(13)
Other disbursements	8	-	-	8	-
Total deductions	61	58	71	3	(13)
Net decrease in net position	(16)	(52)	(51)	36	(1)
Net position-restricted for pension benefits:					
Beginning of year	471	523	574	(52)	(51)
End of year	$ 455	$ 471	$ 523	$ (16)	$ (52)

CHANGES IN FIDUCIARY NET POSITION

The Plan is a closed plan and has two active members as of January 1, 2019. Investments are primarily in bonds and asset backed securities to minimize exposure to market fluctuations. The net position is held in trust for the payment of future benefits to members and beneficiaries.

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December 31, 2019 versus December 31, 2018

Net investment income increased by $39 thousand in 2019 due to higher net investment gains of $40 thousand in 2019 versus net investment gains of $1 thousand in 2018.

Contributions decreased by $5 thousand in 2019 compared to 2018 as a result of the Actuarial Determined Contributions ("ADC") for 2019.

Other receipts increased by $5 thousand in 2019 due to higher securities received in-kind of $5 thousand in 2019 when compared to 2018.

Benefit payments decreased by $5 thousand in 2019 compared to 2018. In 2019, there were less retirees taking lump sum distributions when compared to 2018.

Other disbursements increased by $8 thousand in 2019 due to securities disbursed in-kind of $5 thousand and administrative expenses of $3 thousand when compared to 2018.

December 31, 2018 versus December 31, 2017

Net investment income decreased by $19 thousand in 2018 due to lower net investment gains of $1 thousand in 2018 versus net investment gains of $20 thousand in 2017.

Contributions increased by $5 thousand in 2018 compared to 2017 as a result of the Actuarial Determined Contributions ("ADC") for 2018.

Benefit payments decreased by $13 thousand in 2018 compared to 2017. In 2018, there were less retirees taking lump sum distributions when compared to 2017.

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INVESTMENTS

The table below summarizes the Plan’s investment allocations and investment returns.

Investment Summary
(Dollars in thousands)

Type of Investment	Fair Value		Allocation	Current Year Return
December 31, 2019				
U.S. government & agency securities	$	229	50.4 %	3.1 %
Corporate bonds & asset backed securities		210	46.1 %	3.3 %
Short-term investments		5	1.0 %	0.1 %
Other bonds & fixed income securities		11	2.5 %	4.8 %
Total	$	455	100.0 %	3.2 %
December 31, 2018				
U.S. government & agency securities	$	266	56.3 %	3.1 %
Corporate bonds & asset backed securities		184	38.8 %	3.7 %
Short-term investments		12	2.5 %	1.2 %
Other bonds & fixed income securities		11	2.4 %	4.9 %
Total	$	473	100.0 %	3.3 %
December 31, 2017				
U.S. government & agency securities	$	263	50.0 %	2.6 %
Corporate bonds & asset backed securities		223	42.4 %	3.5 %
U.S. Treasury bills		17	3.2 %	0.0 %
Short-term investments		12	2.2 %	0.8 %
Other bonds & fixed income securities		12	2.2 %	4.7 %
Total	$	527	100.0 %	2.9 %

Contact Information

This financial report is designed to provide a general overview of the Metro-North Commuter Railroad Company Cash Balance Plan’s finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Comptroller, Metropolitan Transportation Authority, 2 Broadway, 16th Floor, New York, NY 10004.

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METRO-NORTH COMMUTER RAILROAD COMPANY
CASH BALANCE PLAN

STATEMENTS OF FIDUCIARY NET POSITION
AS OF DECEMBER 31, 2019 AND 2018

	2019	2018
ASSETS:		
Investments, at fair value:		
U.S. government & agency securities	$ 229,232	$ 266,317
Corporate bonds & asset backed securities	209,516	183,867
Other bonds & fixed income securities	11,487	11,232
Short-term investments	4,526	11,871
Total investments	454,761	473,287
Accrued interest	2,193	2,255
Other receivable	1,433	-
Total assets	458,387	475,542
LIABILITIES:		
Payable for investment securities purchased	(3,625)	(4,993)
Total liabilities	(3,625)	(4,993)
NET POSITION - restricted for pension benefits	$ 454,762	$ 470,549

See notes to financial statements.

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METRO-NORTH COMMUTER RAILROAD COMPANY
CASH BALANCE PLAN

STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

	2019	2018
ADDITIONS:		
Investment income:		
Interest	$ 14,834	$ 15,716
Net appreciation/(depreciation) in fair value of investments	24,910	(15,436)
Other receipts	5,313	-
Total investment income	45,057	280
Contributions:		
Employer	-	5,444
Total additions	45,057	5,724
DEDUCTIONS:		
Benefits paid to participants	(52,824)	(57,938)
Other disbursements	(8,020)	-
Total deductions	(60,844)	(57,938)
NET DECREASE IN NET POSITION	(15,787)	(52,214)
NET POSITION - restricted for pension benefits		
Beginning of year	470,549	522,763
End of year	$ 454,762	$ 470,549

1. PLAN DESCRIPTION

The following description of the Metro-North Commuter Railroad Company Cash Balance Plan provides only general information. Participants should refer to the Plan document for a more complete description of the Plan's provisions.

General

The Plan is a single employer, defined benefit pension plan administered by Metro-North Commuter Railroad ("MNCR"). The Plan covers non-collectively bargained employees, formerly employed by Conrail, who joined MNCR as management employees between January 1 and June 30, 1983, and were still employed as of December 31, 1988. Effective January 1, 1989, these employees were covered under the Metro-North Commuter Railroad Defined Contribution Plan for Management Employees (the "Management Plan") and the Plan was closed to new participants. The assets of the Management Plan have been merged with the Metropolitan Transportation Authority Defined Benefit Plan for Non-Represented Employees as of the asset transfer date of July 14, 1995. The 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 Plan is tax-exempt and is not subject to the provisions of the Employee Retirement Income Security Act ("ERISA") of 1974.

Plan Administration

The MTA Board of Trustees shall appoint a Board of Managers of Pensions consisting of five individuals who may, but need not, be officers or employees of the company. The members of the Board of Managers shall hold office at discretion of the MTA Board, each to serve until his successor is appointed. The Board of Managers shall be the agent for the service of legal process with respect to the Plan. No bond or other security is required in any jurisdiction of the Board of Managers or any member thereof except as required by law.

The Board of Managers shall control and manage the operation and administration of the Plan. It shall have all the powers that within its judgment may be necessary or appropriate for that purpose, including, but not by way of limitation, power to adopt any rules consistent with the provisions of the Plan deemed necessary to effectuate the Plan, to conduct the affairs of the Board of Managers, to administer the Plan, to interpret the Plan, to determine the eligibility, status and rights of all persons under the Plan and, in general, to decide any dispute.

Benefits Provided

Pension Benefits - Participants of the Plan obtain a nonforfeitable right to their accrued benefit upon the earlier of (a) the completion of five years of service with the MTA Metro-North Railroad or (b) the attainment of age sixty-two. Vested participants are entitled to receive pension benefits commencing at age sixty-five. Vested participants may elect to receive early retirement benefits upon the attainment of age fifty-five through age sixty-four.

Participants may elect to receive the value of their accumulated plan benefits as a lump-sum distribution upon retirement or they may elect to receive their benefits as a life annuity payable monthly from retirement. Participants may also elect to receive their pension benefits in the form of a joint and survivor annuity.

Prior to a participant's annuity commencement date, each Participant's account balance shall be increased each month by a factor, which when compounded monthly for 12 months, would produce the benefit escalator for the applicable plan year.

The benefit escalator is defined as the Pension Benefit Guaranty Corporation immediate annuity rate in effect for December of the year preceding the year for which the determination is being made.

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.

Membership

Membership of the Plan consisted of the following as of January 1, 2019, the date of the latest actuarial valuation:

Active Plan Members	2
Retirees and beneficiaries receiving benefits	25
Vested formerly active members not yet receiving benefits	15
Total	42

Contributions

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

MNCR's funding policy with respect to the 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, distributions from the Plan have been made by the Trustee. MNCR anticipated that no further contributions would be made to the Plan. However, due to changes in actuarial assumptions and market performance, additional unfunded pension liabilities were paid to the Plan in several subsequent years. Per the January 1, 2019 valuation, the unfunded total pension liability was $5 thousand and paid to the Plan in 2018. Per the January 1, 2019 valuation, the unfunded total pension liability was $9 thousand and paid to the Plan in 2020.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting

The Plan's financial statements are prepared on the accrual basis of accounting.

Use of Estimates

The preparation of the Plan's 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 the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Estimates include the determination of the fair market value of investments, the actuarial determined contribution and the total pension liability.

Investment Valuation and Income Recognition

Fair value for the publicly traded government bonds and notes, corporate bonds and mortgage/asset backed securities represents the quoted market prices of a national securities exchange. Gains and losses on investments that were sold during the year are included in net appreciation or depreciation in fair value of investments. Interest income on the government and corporate bonds is recorded when earned. The Plan's investments are held in trust by Wells Fargo Bank (the "Trustee"), in the name of the Plan.

Benefits

Benefits are recognized when paid.

Administrative Expenses

The administrative expenses of the Plan are paid by MNCR. Administrative expenses were $13 thousand and $15 thousand for the years ended December 31, 2019 and 2018, respectively.

Federal Income Tax Status

The Internal Revenue Service ("IRS") has determined and informed the MNCR by a letter dated January 10, 1997, that the Plan and related trust were designed in accordance with the applicable regulations of the IRC. The Plan has been amended since receiving the determination letter. The MNCR believes that the Plan is currently designed and operated in compliance with the applicable requirements of the IRC and the Plan and related trust continue to be tax-exempt. Therefore, no provision for income taxes has been included in the Plan's financial statements.

New Accounting Standards Adopted

The Plan adopted the following GASB Statement for the year-ended December 31, 2019:

GASB Statement No. 84, *Fiduciary Activities*, improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of GASB Statement No. 84 are effective for reporting periods beginning after December 15, 2019. The adoption of this Statement had no impact on the Plan's financial statements.

GASB Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance*, provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Accounting Standards Issued but Not Yet Adopted

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

GASB Statement No.	GASB Accounting Standard	Plan Year of Adoption
92	*Omnibus 2020*	2022

Subsequent Events

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The actuarial present value of plan benefits is reported based on certain assumptions pertaining to interest rates and employee demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions will occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the actuarial present value of plan benefits.

Subsequent to December 31, 2019, the impact to the Plan of the COVID-19 pandemic during 2020 has resulted in significant reductions in values to many investments of the Plan. It has also significantly decreased interest rates and could impact employee demographics which could change assumption utilized in the future for the actuarial present value of plan benefits.

While management of the Plan currently expects to be able to continue to meet immediate contribution requirements, the long-term impact of the effects of the COVID-19 pandemic to the Plan and Plan sponsor as well as any relief from regulatory authorities are currently not known. The extent of the adverse impact of the COVID-19 pandemic on the Plan's net assets available for benefits and actuarial present value of plan benefits cannot be reasonably estimated at this time.

The COVID-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the

MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the COVID-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

3. INVESTMENTS

A professional investment management firm manages the Plan. The Plan utilizes various investment securities including U.S. government securities and corporate debt instruments. The investment guideline is included within the investment management agreement agreed to by the MTA Board of Trustees. The guideline grants the investment manager full discretion to buy, sell, invest and reinvest the Plan's assets in domestic fixed income investments. The investment objective is to achieve consistent, positive real returns and to maximize long-term total return within prudent levels of risk through a combination of income and capital appreciation. Investment securities, in general, are exposed to various risks, such as interest rate risk, credit risk, and overall market volatility. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such change could materially affect the amounts reported in the financial statements.

The investment management firm is required to maintain a diversified portfolio. All investment managers are expected to perform their fiduciary duties as prudent people would and to conform to all state and federal statutes governing the investment of retirement funds. Securities managers must be registered advisors under the Investment Advisors Act of 1940. The investment managers must comply with the risk management guidelines per the Investment Management Agreement.

Investment managers may not purchase inverse floating rate bonds, structured notes, commodities, securities on margin, sell short, lend securities, invest in private placements, commingled funds (except Short-Term Investment Funds), real estate investments, and oil, gas & mineral exploration investments without the written consent of the Plan. The Plan's fixed-income assets shall be invested in domestic marketable, fixed-income securities.

Fixed-income managers are expected to adhere to the following guidelines as a means of limiting credit risk:

- Commercial Paper, Eurodollar Commercial Paper and Variable Rate Notes rated P-1 by Moody's, A1 by Standard and Poor's, or F1 by Fitch.

- Certificates of Deposit and Bankers Acceptances of institutions whose long-term debt is rated Baa or better by Moody's Investor's Service or equivalent by Standard & Poor's.

- United States Treasury Bonds, Notes and Bills.

- Debt instruments of the U.S. Government or its Agencies and Instrumentalities.

- Marketable corporate debt, Yankee bonds, Eurodollar bonds, non-agency mortgage- backed securities, asset backed securities and taxable municipal securities rated the equivalent of Baa or better by Moody's Investors Services, Standard & Poor's, or Fitch Investor's Services, for an overall portfolio average of A or better. In the case of split ratings, the higher rating applies.

- Collateralized Mortgage Obligations ("CMO's") backed by pools of agency or non-agency mortgages including those that are re-constructed in their original proportions from the same pool (such as IO's/PO's, and floaters/inverse floaters). Companion tranches and support tranches are limited to 3% of the book value of the portfolio.

- 144A Privates (non-registered debt issued by corporations), non-convertible preferred stock and fully hedged non-dollar bonds rated A or better by Moody's Investors Services, Standard & Poor's, or Fitch Investor's Services are limited to 20% of the book value of the portfolio.

- Securities downgraded subsequent to purchase resulting in violation of quality guidelines may be held at the manager's discretion.

- Managers may not hold more than 5% at book value and 10% at market value of the portfolios in any one issuer's securities other than direct or moral obligations of the U.S. Government.

- Unrated securities other than those issued by the U.S. Government or its Agencies and Instrumentalities may not be purchased without the prior consent of the Plan.

GASB 72 Disclosure

In fiscal year 2015, the Plan adopted GASB Statement No. 72 ("GASB 72"), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements. The Plan 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 Plan has the following recurring fair value measurements as of December 31, 2019 and December 31, 2018:

GASB 72 Disclosure
(in thousands)

	2019			
INVESTMENTS - fair value level	**Level 1**	**Level 2**	**Level 3**	**Total**
Debt securities:				
U.S government agency	$ 57	$ 173	$ -	$ 230
Corporate bonds	-	176	-	176
Commerical mortgage-backed securities	-	33	-	33
Other bonds	-	11	-	11
Total debt securities	57	393	-	450
Total investments by fair value level	57	393	-	450
INVESTMENTS- measured at the net asset value (NAV)				
Short-term other				5
Total investments measured at the NAV				5
Total investments by fair value level	**$ 57**	**$ 393**	**$ -**	**$ 455**

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INVESTMENTS - fair value level	2018 Level 1		Level 2		Level 3		Total
Debt securities:							
U.S government agency	$	142	$	124	$	-	$ 266
Corporate bonds		-		164		-	164
Commerical mortgage-backed securities		-		20		-	20
Other bonds		-		11		-	11
Total debt securities		142		319		-	461
Total investments by fair value level		142		319		-	461
INVESTMENTS- measured at the net asset value (NAV)							
Short-term other							12
Total investments measured at the NAV							12
Total investments by fair value level	**$**	**142**	**$**	**319**	**$**	**-**	**$ 473**

Equity and Fixed Income Securities

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets issued by pricing vendors for these securities. Debt and equity securities classified in Level 2 of the fair value hierarchy are valued using prices determined by the use of matrix pricing techniques maintained by the various pricing vendors for these securities. Matrix pricing is used to value securities based on the securities' relationship to benchmark quoted prices. Debt and equity securities classified in Level 3 are securities whose stated market price is unobservable by the market place; many of these securities are priced by the issuers or industry groups for these securities. Fair value is defined as the quoted market value on the last trading day of the period. These prices are obtained from various pricing sources by our custodian bank.

Money-Weighted Rate of Return

For the years ended December 31, 2019 and December 31, 2018, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the Plan was 9.01% and 0.06%, respectively.

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the beginning of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

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Net appreciation/(depreciation) in Fair Value of Investments as Determined by Quoted Market Prices

The Plan's investments (including gains and losses on investments sold during the year) appreciated/ (depreciated) in value as follows:

	Year Ended December 31, 2019	Year Ended December 31, 2018
U.S. government & agency securities	$ 12,419	$ (5,051)
Corporate bonds & asset backed securities	12,237	(9,937)
Other bonds & fixed income securities	254	(448)
	$ 24,910	$ (15,436)

Credit Risk

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2019 and December 31, 2018, respectively, are as follows:

December 31, 2019 Quality Rating	Fair Value	Percentage of Portfolio
AAA	$ 41,438	9.11%
AA	5,270	1.16
A	14,345	3.15
AA-	5,286	1.16
A-	27,985	6.15
BBB+	67,163	14.77
BBB	21,266	4.68
BBB-	5,299	1.17
NR	34,628	7.62
Total credit risk debt securities	222,680	
U.S. government & agency securities*	232,081	51.03
Total investment portfolio	$ 454,761	100.00%

December 31, 2018 Quality Rating	Fair Value	Percentage of Portfolio
AAA	$ 46,775	9.88%
AA	4,846	1.02
A	13,315	2.81
AA-	4,913	1.04
A-	19,884	4.20
BBB+	53,515	11.31
BBB	28,716	6.07
BBB-	9,712	2.05
NR	25,294	5.35
Total credit risk debt securities	206,970	
U.S. government & agency securities*	266,317	56.27
Total investment portfolio	$ 473,287	100.00%

*Obligations of the U.S. government or obligations explicitly guaranteed by the U.S. government are not considered to have credit risk and do not have purchase limitations.

Custodial Credit Risk

The Plan does not have a general policy addressing custodial risk, but it is the practice of the Plan that all investments are registered or held by the Plan or its agent in the Plan's name. Deposits are to be registered or collateralized with securities held at fiscal agents in the Plan's name.

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 100 basis point change in interest rates.

December 31, 2019 Investment Type	Fair Value	Percentage of Portfolio	Duration (Years)
U.S. government & agency securities	$ 229,232	50.40%	6.13
Corporate bonds & asset backed securities	209,516	46.07	5.37
Other bonds & fixed income securities	11,487	2.53	4.54
Short-term investments	4,526	1.00	0.00
Total investment	$ 454,761	100.00%	
Portfolio average duration			5.72

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December 31, 2018 Investment Type	Fair Value	Percentage of Portfolio	Duration (Years)
U.S. government & agency securities	$ 266,317	56.27%	5.72
Corporate bonds & asset backed securities	183,867	38.85	5.86
Other bonds & fixed income securities	11,232	2.37	5.05
Short-term investments	11,871	2.51	0.00
Total investment	$ 473,287	100.00%	
Portfolio average duration			5.67

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. The Plan assets are invested in domestic fixed-income securities denominated in U.S. dollars and accounted for at fair market value. The Plan has no exposure to foreign currency fluctuation.

4. NET PENSION LIABILITY (ASSET)

The components of the net pension liability of the employer at December 31, 2019 and 2018, for the Plan, were as follows:

	2019	2018
Total pension liability	$ 448,268	$ 478,801
Plan's fiduciary net position	454,762	470,549
Employer's net pension (asset) liability	$ (6,494)	$ 8,252
Plan's fiduciary net position as a percentage of the total pension liability	101.45%	98.28%

The total pension liability was determined by an actuarial valuation as of the measurement date, calculated based on the discount rate and actuarial assumptions below.

Discount Rate

The plan's fiduciary net position was 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 pension liability is equal to the long-term expected rate of return.

	2019	2018
Discount rate	3.50%	4.00%
Long-term expected rate of return net of investment expense	3.50%	4.00%
Municipal bond rate	N/A	N/A

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Other Key Actuarial Methods and Assumptions for the years ended December 31, 2019 and December 31, 2018 were as follows:

The actuarial assumptions that determined the total pension liability as of December 31, 2019 and December 31, 2018 was based on an experience study for the period January 1, 2011 - January 1, 2016.

	2019	**2018**
Valuation date:	January 1, 2019	January 1, 2019
Measurement date:	December 31, 2019	December 31, 2018
Actuarial cost method:	Entry Age Normal	Entry Age Normal
Actuarial assumptions:		
Asset valuation method:	Market Value of Plan Asset	Market Value of Plan Asset
Projected salary increases:	N/A	N/A
COLAs:	N/A	N/A
Inflation:	2.50%	2.50%
Interest:	3.5% per annum, compounded annually	4.0% per annum, compounded annually
Benefit escalator:	1.5% per annum, compounded annually	3.0% per annum, compounded annually
Provision for Expenses:	None assumed from Plan assets	None assumed from Plan assets

Additional Actuarial Assumptions:

Termination: Withdrawal rates vary by age. The termination assumption has no impact on liabilities since all active members are retirement eligible. Illustrative rates shown below are for years 2019 and 2018:

Age	Rate	Age	Rate
20	11.46 %	45	0.67 %
25	6.29	50	0.63
30	3.43	55	0.59
35	1.73	60	0.55
40	0.90	64	0.00

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Retirement Assumption: Retirement rates vary by age. The retirement assumption is based on the eligibility provisions of this plan and on professional judgement. Illustrative rates shown below are for years 2019 and 2018:

Age	Rate	Age	Rate
55	12.0 %	61	15.0 %
56	8.0	62	35.0
57-58	6.0	63-64	20.0
59-60	7.0	65+	100.0

Mortality: The mortality assumption is based on a 2017 experience study for all MTA plans combined.

Pre-termination: RP-2000 Employee Mortality Table for Males and Females with blue collar adjustments, projected on a generational basis using Scale AA.

Post-termination: 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, both projected on a generational basis using Scale AA. As generational tables, they reflect mortality improvements both before and after the measurement date.

Form of Payment for Cash Balance Account: For active participants, lump sum at decrement. For terminated vested participants, lump sum on the valuation date. This is based on the majority of participants electing a lump sum upon retirement.

Benefits not valued: The Additional Benefit was not valued as the potential liability for this benefit is de minimus.

Changes in Actuarial Assumptions Since Prior Valuation: None.

Long-Term Expected Rate of Return

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2019 and 2018.

Asset Class	Index	Target Allocation	2019	2018
Core Fixed Income	Barclays Aggregate	100.00%	1.27%	1.58%
Assumed Inflation - Mean			2.25%	2.50%
Assumed Inflation - Standard Deviation			1.65%	1.65%
Portfolio Nominal Mean Return			3.54%	4.09%
Portfolio Standard Deviation			3.90%	3.90%
Long-Term Expected Rate of Return selected by MTA			**3.50%**	**4.00%**

Sensitivity Analysis

The following presents the net pension liability of the Metro-North Commuter Railroad Company Cash Balance Plan as of December 31, 2019 and December 31, 2018, respectively, calculated using the current discount rate, as well as what the Plan's 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 current rate.

	December 31, 2019			**December 31, 2018**		
	1% Decrease 2.50%	Discount Rate 3.50%	1% Increase 4.50%	1% Decrease 3.00%	Discount Rate 4.00%	1% Increase 5.00%
Net Pension Liability	$17,379	($6,494)	($27,526)	$35,157	$8,252	($15,544)

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METRO-NORTH COMMUTER RAILROAD COMPANY **Schedule I**
CASH BALANCE PLAN

Required Supplementary Information (Unaudited)
Schedule of Changes in the Employer's Net Pension Liability and Related Ratios ($ in Thousands)

	2019	2018	2017	2016	2015	2014
Total Pension Liability:						
Interest	$ 18	$ 20	$ 21	$ 24	$ 29	$ 32
Changes of economic/demographic (gains) or losses	-	(11)	12	(15)	(10)	-
Changes of assumptions	4	-	-	-	18	-
Benefit payments	(53)	(58)	(71)	(77)	(113)	(88)
Net change in total pension liability	(31)	(49)	(38)	(68)	(76)	(56)
Total pension liability - beginning	479	528	566	634	710	766
Total pension liability - ending (a)	$ 448	$ 479	$ 528	$ 566	$ 634	$ 710
Fiduciary Net Position:						
Employer contributions	$ -	$ 5	$ -	$ 23	$ 18	$ -
Net investment income	40	1	20	16	6	41
Benefit payments	(53)	(58)	(71)	(77)	(113)	(88)
Administrative expenses	(3)	-	-	-	3	(3)
Net change in plan fiduciary net position	(16)	(52)	(51)	(38)	(86)	(50)
Fiduciary net position - beginning	471	523	574	612	698	748
Fiduciary net position - ending (b)	455	471	523	574	612	698
Net pension liability - ending (a) - (b)	$ (7)	$ 8	$ 5	$ (8)	$ 22	$ 12
Fiduciary net position as a percentage of the total pension liability	101.45%	98.28%	99.01%	101.39%	96.56%	98.36%
Covered payroll	$ 277	$ 275	$ 268	$ 649	$ 995	$ 2,080
Net pension liability as a percentage of covered payroll	-2.35%	3.00%	1.95%	-1.22%	2.20%	0.56%

Schedule is intended to show information for 10 years. Additional years will be displayed as they become available.

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METRO-NORTH COMMUTER RAILROAD COMPANY **Schedule II**
CASH BALANCE PLAN

Required Supplementary Information (Unaudited)
Schedule of Employer Contributions

Fiscal Year Ending December 31	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of covered Payroll
2010	1,837	11,875	(10,038)	4,496,148	0.26%
2011	-	-	-	-	N/A
2012	-	-	-	-	N/A
2013	-	-	-	-	N/A
2014	4,977	14,124	(9,147)	2,080,077	0.68%
2015	-	-	-	-	N/A
2016	22,721	22,721	-	648,524	3.50%
2017	-	-	-	268,488	0.00%
2018	5,444	5,444	-	274,921	1.98%
2019	8,582	8,582	-	276,569	3.10%

The actual employer contribution for 2014 is the June 5, 2015 contribution that was recognized by the Plan as a receivable contribution for the 2014 plan year.

The actual employer contribution for 2019 is the April 15, 2020 contribution that was recognized by the Plan as a receivable contribution for the 2019 plan year.

Notes to Required Supplementary Information (Unaudited)
Schedule of Employer Contributions

Actuarial Methods and Assumptions

The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Date	January 1, 2019	January 1, 2019	January 1, 2018
Measurement Date	December 31, 2019	December 31, 2018	December 31, 2017
Valuation Timing	Actuarially determined contributions calculated as of December 31 for the fiscal year.	Actuarially determined contributions calculated as of December 31 for the fiscal year.	Actuarially determined contributions calculated as of December 31 for the fiscal year.
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal
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.
Asset Valuation Method	Actuarial value equals market value.	Actuarial value equals market value.	Actuarial value equals market value.
Inflation	2.50%	2.50%	2.50%
Salary Increases	N/A	N/A	N/A
Investment Rate of Return	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	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

Notes to Required Supplementary Information (Unaudited)
Schedule of Employer Contributions

Actuarial Methods and Assumptions

The methods and assumptions used to determine the actuarially determined contributions are as follows:

Valuation Date	January 1, 2017	January 1, 2016	January 1, 2014
Measuremenr Date	December 31, 2016	December 31, 2015	December 31, 2014
Valuation Timing	Actuarially determined contributions calculated as of December 31 for the fiscal year.	Actuarially determined contributions calculated as of December 31 for the fiscal year.	Actuarially determined contributions calculated as of December 31 for the fiscal year.
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Unit Credit
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 (closed 10 year period beginning Janaury 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.
Inflation	2.30%	2.30%	2.50%
Salary Increases	N/A	N/A	N/A - There were no projected salary increase assumptions used in the January 1, 2014 valuation as 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.
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	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

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METRO-NORTH COMMUTER RAILROAD COMPANY **Schedule III**
CASH BALANCE PLAN

Required Supplementary Information (Unaudited)
Schedule of Investment Returns

The following table displays annual money-weighted rate of return, net of investment expense.

Fiscal Year Ending December 31	Net Money-Weighted Rate of Return
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	5.96%
2015	0.93%
2016	2.75%
2017	3.67%
2018	0.06%
2019	9.01%

Schedule is intended to show information for 10 years. Information was not readily available for periods prior to 2014. Additional years will be displayed as they become available.

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Metropolitan Transportation Authority Retiree Welfare Benefits Plan (“Other Postemployment Benefits Plan” or “OPEB Plan”)

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the
Years Ended December 31, 2019 and 2018
Supplemental Schedules, and
Independent Auditors’ Report

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METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POST EMPLOYMENT BENEFITS PLAN

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INDEPENDENT AUDITORS' REPORT

To the Board of Managers of the
Metropolitan Transportation Authority Retiree Welfare Benefits Plan

Report on the Financial Statements

We have audited the accompanying statements of plan net position of the Metropolitan Transportation Authority Retiree Welfare Benefits Plan (the "Plan") as of December 31, 2019 and 2018, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the Plan net position as of December 31, 2019 and 2018, and the respective changes in Plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9, the Schedule of Changes in Employers' Net OPEB Liability and Related Ratios on page 35, the Schedule of Employer Contributions on page 36 and the Schedule of Investment Returns on page 37 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018

The purpose of the Metropolitan Transportation Authority ("MTA") Retiree Welfare Benefits Plan ("Other Postemployment Benefits Plan" or "OPEB Plan" or the "Plan") and the related Trust Fund is to provide a vehicle for the MTA organization to set aside funds to assist it in providing health and other welfare benefits to eligible retirees and their beneficiaries. The Plan and the Trust Agreement are exempt from federal income taxation under Section 115(1) of the Code. The MTA is not required by law or contractual agreement to provide funding for the Plan, other than the "pay-as-you-go" cost of providing current benefits to current eligible retirees, spouses and dependents ("Pay-Go").

This management's discussion and analysis of the Plan's financial performance provides an overview of the Plan's financial activities for the years ended December 31, 2019 and 2018. It is meant to assist the reader in understanding the Plan's financial statements by providing an overall review of the financial activities during the year and the effects of significant changes. This discussion and analysis may contain opinions, assumptions, or conclusions by the MTA's management that should not be considered a replacement for, and is intended to be read in conjunction with, the Plan's financial statements which begin on page 11.

Overview of Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the financial statements. The basic financial statements are:

- **The Statements of Plan Net Position** — presents the financial position of the Plan at year end. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan 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. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Plan Net Position** — present the results of activities during the year. All changes affecting the assets and liabilities of the Plan are reflected on an accrual basis when the activity occurred regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation/(depreciation) in fair value of investments.

- **The Notes to Financial Statements** — provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plan's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information** as required by the Governmental Accounting Standards Board ("GASB") is presented after the management discussion and analysis, the statement of Plan net position, the statement of changes in Plan net position and the notes to the combined financial statements.

The accompanying financial statements of the Plan are presented in conformity with accounting principles generally accepted in the United States of America as prescribed by the GASB.

Financial Highlights

Plan Net Position
December 31, 2019, 2018, and 2017
(Dollars in thousands)

				Amount of Change		Percentage Change	
	2019	2018	2017	(2019 - 2018)	(2018 - 2017)	(2019 - 2018)	(2018 - 2017)
ASSETS:							
Investments	$ 414,929	$ 351,538	$ 370,596	$ 63,391	$ (19,058)	18.0 %	(5.1)%
Receivables and other assets	20	14	7	6	7	42.9	100.0
TOTAL ASSETS	414,949	351,552	370,603	63,397	(19,051)	18.0	(5.1)
LIABILITIES:							
Benefits payable and accrued expenses	122	172	251	(50)	(79)	(29.1)	(31.5)
TOTAL LIABILITIES	122	172	251	(50)	(79)	(29.1)	(31.5)
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS	$ 414,827	$ 351,380	$ 370,352	$ 63,447	$ (18,972)	18.1 %	(5.1)%

Plan net position is held in trust for the payment of future benefits to members and beneficiaries. The assets of the Plan exceeded its liabilities by $414.8 million, $351.4 million, and $370.4 million as of December 31, 2019, 2018, and 2017, respectively. The net increase in 2019 is primarily a result of net appreciation on fair value of investments held offset by investment fees whereas the decrease in 2018 is primarily a result of net depreciation on fair value of investments held and investment fees charged to the Plan.

Changes in Plan Net Position
For the Years Ended December 31, 2019, 2018, and 2017
(Dollars in thousands)

	2019	2018	2017	Amount of Change (2019 - 2018)	Amount of Change (2018 - 2017)	Percentage Change (2019 - 2018)	Percentage Change (2018 - 2017)
ADDITIONS:							
Total investment income/(loss)	$ 65,430	$ (17,227)	$ 49,231	$ 82,657	$ (66,458)	479.8 %	(135.0)%
Less:							
Investment expenses	1,783	1,689	1,861	94	(172)	5.6	(9.2)
Net investment income/(loss)	63,647	(18,916)	47,370	82,563	(66,286)	436.5	(139.9)
Add:							
Employer contributions	660,539	616,638	579,893	43,901	36,745	7.1	6.3
Implicit rate subsidy contribution	70,138	74,484	71,101	(4,346)	3,383	(6.5)	4.8
Total additions	794,324	672,206	698,364	122,118	(26,158)	18.1	(3.7)
DEDUCTIONS							
Benefit payments	660,539	616,638	579,893	43,901	36,745	7.1	6.3
Implicit rate subsidy payments	70,138	74,484	71,101	(4,346)	3,383	(6.5)	4.8
Administrative expenses	200	56	-	144	56	257.1	-
Total deductions	730,877	691,178	650,994	39,699	40,184	5.7	6.2
Net increase/(decrease) in Plan net position	63,447	(18,972)	47,370	82,419	(66,342)	434.4	(140.1)
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYEMENT BENEFITS							
Beginning of year	351,380	370,352	322,982	(18,972)	47,370	(5.1)	14.7
End of year	$ 414,827	$ 351,380	$ 370,352	$ 63,447	$ (18,972)	18.1 %	(5.1)%

The Plan's net position held in trust increased by $63.4 million during 2019 and decreased by $19.0 million during 2018. In 2019, the Plan's net appreciation in fair market values were $65.4 million and the investment fees were $1.8 million. In 2018, the Plan's net depreciation in the fair market value was $17.3 million with investment fees of $1.7 million.

Investments

The table below summarizes the Plan's investment measured at fair value – net asset values.

December 31, 2019 (Dollars in thousands)	**Fair Value**	**Allocation**
Type of Investments		
Investment measured at the NAV	$ 414,929	100.00 %
	$ 414,929	100.00 %

December 31, 2018 (Dollars in thousands)	Fair Value	Allocation
Type of Investments		
Investment measured at the NAV	$ 351,538	100.00 %
	$ 351,538	100.00 %

Economic Factors

<u>Market Overview and Outlook – 2019</u>

In 2019 international markets turned cautiously optimistic, in contrast to 2018, when stocks were buffeted by uncertainty surrounding United States ("U.S.")-China trade negotiations. Equity markets ended a remarkable 2019 rally on a strong note, with major stock indexes reaching new all-time highs. Among growth assets, global equities outperformed high yield and emerging market debt. The U.S. dollar weakened broadly, most significantly against the Swiss franc, British pound and emerging market currencies. Equity, bond and currency volatility continued to ease in December to historically low levels. Investors favored riskier assets following declining trade tensions and easing geo-political headwinds. United Kingdom ("UK") and emerging markets, specifically China, Russia and Latin American, led the December rally, while the U.S. along with other developed markets lagged the Morgan Stanley Capital International All Country World Index ("MSCI ACWI"). Developed markets outperformed emerging markets overall in 2019.

The global economy slowed in 2019 and is now growing below trend. This was primarily driven by the trade war weighing on capital spending and the lagging effect from monetary tightening in 2018. While monetary policies were generally left unchanged in December-- which partly accounts for the stellar returns to both equities and bonds in 2019—further impetus to economic growth may have to come from fiscal measures: policy makers have recently paused easing efforts to evaluate the effect of prior rate cuts, and officials have indicated that monetary policy may have reached its limits. They are therefore considering greater use of fiscal tools to manage business cycles and to support economic growth. A recession in the U.S. appears unlikely in the near term while low interest rates and tame inflation levels continue to power higher equity valuations

Geo-political risks faded after the U.S. and China reached a preliminary trade agreement. Also, Brexit uncertainties fell after Prime Minister Boris Johnson's Conservative Party obtained a solid majority in Parliament. The UK parliament has passed a withdrawal agreement and will start the exit process at the end of January 2020. Markets looked past the political turmoil in the U.S., where a deeply divided House of Representatives passed two articles of impeachment against President Trump. However, macroeconomic stress related to tighter financial conditions in Argentina, geo-political tensions in Iran, and social unrest in Hong Kong, Venezuela, Libya, and Yemen still persisted. Additionally, climate concerns took center stage amid extreme weather around the globe, and protests against the political establishment reverberated through Hong Kong, Lebanon, Chile, Ecuador and many other places.

While current market dynamics may appear to favor equities over fixed income, one should be cognizant that valuations have been trending higher, creating limited attractive investment opportunities. To this end, many long-term forecasts for investment return, encompassing a 10-year time horizon, remain relatively muted. To prepare portfolios for this new decade, it may be essential for investors to start the year with a renewed emphasis on strategic asset allocation, heeding geo-political and portfolio risks to ensure that their investment horizon and governance structure are aligned with portfolio mission statements and return objectives. Even if the investment landscape encourages risk taking, uncertainties remain, making it critical for investors to reassess and rebalance their portfolio holdings considering their robust gains in 2019.

Macro Themes

- Asset allocation and portfolio implementation.
- Late stage of a market cycle.
- China's complex transition into a service and consumption-oriented economy from the manufacturing behemoth.
- The backlash against globalization—expressed through populism and trade wars—is here to stay.
- Central banks permanent interventions have created a new normal, where accommodative monetary policies and fiscal debt growth appear to exist in perpetuity, supporting equities relative to fixed income.

United States

2019 represented a triumphant year the U.S. capital markets compared to 2018 underperformance. Accommodative monetary policies, falling interest rates and subdued inflation helped investors not only to meet their return objectives, but, in many instances, to exceed them. Adding to this impressive string of wins: the U.S. economy completed a calendar decade without a recession—a historical first. While investors would love more of the same, it is unlikely this period of windfall gains and low market volatility will persist for the next decade.

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+31.5%) and (+31.3%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (+27.6%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return of (+25.4%). Of note, growth-oriented investments outperformed the value counterpart with the Russell 1000 Growth (+36.2%) outpacing the Russell 1000 Value (+26.4%).

Fixed income securities markets ended 2019 in the black, reversing declines experienced in 2018. Treasuries returned (+14.8%) for the year, with the assets strongest quarter coming in the first and second quarters of 2019. Municipal credit posted a return of (+7.5%) while the Bloomberg Barclays High Yield Index gained (+14.3%) in 2019. Spreads on high-yield credit narrowed for most part of 2019, but segments in the high-yield and bank loan markets showed signs of stress towards the end of 2019. On the other hand, the S&P LSTA Leveraged Loan Index returned (+10.6%) during the same period.

International Developed

International equity markets posted very strong results in 2019 and lagged behind U.S. equity markets, returning (+26.5%) as measured by the MSCI. In U.S. dollars, both Europe and Japan equities posted positive performance in 2019 with MSCI Europe returning (+23.7%) and MSCI Japan returning (+19.5%). Very strong returns in Europe were driven by the global positive market performance during 2019 unlike 2018 when Europe returned (-14.9%). The Small Cap portion of international developed markets posted even stronger returns in 2019, (+24.9%) compared with 2018, (-17.9%).

Fixed income markets in Europe and Japan are largely centered on government bonds, with corporate and asset-backed issuance making up a fraction of the overall markets. Global Treasuries were positive in 2019, following a negative year in 2018.

Emerging Markets

Emerging markets posted very strong returns in 2019, with performance lower than both U.S. and international developed markets across equity and debt. The broad MSCI emerging markets index returned (+18.3%) for the year. Emerging markets gained sharply in December, driven by hopes that the People's Bank of China will continue to ease its monetary policy to support growth.

The bond markets of emerging markets performed well in 2019 compared to its underperformance in 2018. Both hard currency and local currency bond posted a very strong year in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (+12.6%) in 2019. Local currency bonds, which are issued in the local currency, returned (+13.5%) for the year.

Commodities
The Bloomberg Commodity Index rose (+7.7%) for the year while the New York Mercantile Exchange West Texas Index Crude Spot rose (+35.3%) and Midstream energy ended the year up more than (+24.0%). Residential gas prices in the Midwest are forecast to be nearly (+8.0%) higher this winter than last, and prices in the South and West are seen about (+5.0%) and (+3.0%) higher, respectively, while Northeast prices are forecast to decline (6.0%), helped by relatively low global prices for Liquefied Natural Gas and lower household natural gas consumption. The overall slight decline in heating expenses is aided by generally declining commodity prices.

Market Outlook
Central banks and governments have demonstrated, to varying degrees, their willingness to administer monetary and fiscal stimulus. That accommodative stance should continue in 2020. The U.S. Federal Reserve has already signaled its intention to keep interest rates on hold, providing more certainty for businesses. The re-convergence of U.S. interest rates with other developed markets will reduce upward pressure on the dollar. In addition, the impact of looser monetary policy, combined with a better trade backdrop, could spur the necessary investment and reform to fuel increased labor force participation and renewed productivity improvements.

Political risk, both at national and international levels, remains the great unknown. The long-term path of U.S.-China trade and cooperation is uncertain. A damaging "no-deal Brexit" is not entirely off the table. Tensions in the Middle East could risk sparking full-blown conflict. At the same time, 2020 primaries and Presidential elections in the U.S. will create uncertainty and could cause volatility as markets react to the policies and promises of the various candidates. Notwithstanding all of this, however, the current improvement in geo-political backdrop as compared with 2018, together with stimulus measures should support a modest acceleration in global growth in 2020. That growth, in turn, should lead to a moderate increase in demand for oil, putting a floor under the price, especially when global demand is met with sensible supply-side control from Organization of the Petroleum Exporting Countries.

Many analysts continue to believe emerging markets offer the most investment value, especially following the recent truce in trade relations between the U.S. and China. Furthermore, the opportunities for active management and excess returns appear more abundant in emerging economies. As a result, investors may be encouraged to overweight emerging market equities relative to developed market stocks. They may also opt to reduce exposure to high-yield and return-seeking credit in 2020, since market returns do not offer adequate compensation for the risk they hold. Safe-haven fixed income for instance, Treasuries and core bonds, despite low yields—remain vital for balancing risks within a diversified portfolio.

Impact of Covid-19
Covid-19 has continued to spread at a rapid pace around the world and has now been declared a global pandemic by the World Health Organization. This has caused a severe shock to the global economy pushing it into a deep and far reaching recession. Financial markets have responded with a huge drop in equities values, a rise in credit spreads and a flight to the safety of governments bonds.

In anticipation of the economic growth fallout, Standards & Poor's Global ratings lowered its forecast for global growth to just (+0.4%) this year and predicts a rebound to (+) in 2021. According to Bloomberg, the current second Quarter Gross Domestic Product average estimate of (-11.2%) annualized would be the worst post World War II quarter on record. However, worldwide central banks and governments announced fiscal and monetary rescue packages to soften the economic impact of the virus and the associated business disruptions. Geo-political tensions such as the trade war issues between the U.S. and China have moved into the background.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

Contact Information

This financial report is designed to provide a general overview of the Metropolitan Transportation Authority Other Postemployment Benefits Plan's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Comptroller, Metropolitan Transportation Authority, 2 Broadway, 16th Floor, New York, NY 10004.

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METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

STATEMENTS OF PLAN NET POSITION
AS OF DECEMBER 31, 2019 AND 2018
(In thousands)

	2019	2018
ASSETS:		
Investments measured at fair value - net asset value	$414,929	$351,538
Interest receivable	20	14
Total assets	414,949	351,552
LIABILITIES:		
Benefits payable and accrued expenses	122	172
Total liabilities	122	172
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS	$414,827	$351,380

See notes to financial statements.

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METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

STATEMENTS OF CHANGES IN PLAN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In thousands)

	2019	2018
ADDITIONS:		
Net realized and unrealized gains/(loss)	$ 60,104	$ (22,591)
Dividends	5,077	5,203
Interest	249	161
Total investment income/(loss)	65,430	(17,227)
Less:		
Investment expenses	1,783	1,689
Net investment income /(loss)	63,647	(18,916)
Add:		
Employer contributions	660,539	616,638
Implicit rate subsidy contribution	70,138	74,484
Total additions	794,324	672,206
DEDUCTIONS:		
Benefit Payments	660,539	616,638
Implicit rate subsidy payments	70,138	74,484
Administrative expenses	200	56
Total deductions	730,877	691,178
Net increase / (decrease) in Plan net position	63,447	(18,972)
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS:		
Beginning of year	351,380	370,352
End of year	$ 414,827	$ 351,380

See notes to financial statements.

1. BACKGROUND AND ORGANIZATION

The Metropolitan Transportation Authority ("MTA") Retiree Welfare Benefits Plan ("Other Postemployment Benefits Plan" or "OPEB Plan" or the ("Plan") and the related Trust Fund was established effective January 1, 2009 for the exclusive benefit of The MTA Group's retired employees and their eligible spouses and dependents, to fund some of the OPEB benefits provided in accordance with the MTA's Group's various collective bargaining agreements and MTA policies. The MTA Group is comprised of the following current and former agencies:

- MTA New York City Transit
- MTA Long Island Rail Road
- MTA Metro-North Railroad
- MTA Bridges and Tunnels
- MTA Headquarters ("MTAHQ")
- MTA Long Island Bus
- MTA Staten Island Railway
- MTA Bus Company
- MTA Capital Construction

The Trust is tax exempt in accordance with Section 115 of the Internal Revenue Code. The Plan is classified as a single employer plan for Governmental Accounting Standards Board ("GASB") Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* ("GASB 74") purposes.

The MTA is not required by law or contractual agreement to provide funding for the Plan, other than the "pay-as-you-go" amount necessary to provide the current benefits to current eligible retirees, spouses and dependents (Pay-Go).

GASB 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* prescribes uniform financial reporting standards for other postemployment benefits ("OPEB") plans of all state and local governments. OPEB refers to postemployment benefits other than pension benefits and includes postemployment healthcare benefits which are covered under The MTA OPEB plan.

Plan Administration – The Other Postretirement Plan is administered by the Board of Managers, which is comprised of:

(a) the persons holding the following positions:
  (i) the Chairman of the MTA;
  (ii) the MTA Chief Financial Officer; and
  (iii) the MTA Director of Labor Relations.

(b) Designation of Others – Any member of the Board of Managers, serving as such by virtue of holding a position described in (a) of this section, may, by written authorization filed with the Secretary, designate another individual, not then a member, to serve in that member's stead, in accordance with procedures established with the approval of the Executive Director of the MTA. Any such authorization may be revoked by the designating member at any time in writing filed in the same manner.

Postemployment benefits are part of an exchange of salaries and benefits for employee services rendered. Most OPEB have been funded on a pay-as-you-go basis and have been reported in financial statements when the promised benefits are paid.

OPEB Funding - During 2012, MTA funded $250 million into a Trust allocated between MTA Headquarters and MTA New York City Transit and funded an additional $50 million during 2013 allocated between MTA Long Island Rail Road and MTA Metro-North Railroad. There have been no further contributions made to the Trust. Since the amount of benefits paid during 2019 exceeds the current market value of assets, a depletion date is assumed to occur immediately. Therefore, the discount rate is set equal to the municipal bond index. MTA elected the Bond Buyer 20-Bond GO Index. As a result, the discount rates as of December 31, 2019 and December 31, 2018 are 2.74% and 4.10%, respectively.

Blended and Age-adjusted Premium (in thousands)	**2019 Retirees**	**2018 Retirees**
Total blended premiums	$660,539	$616,638
Employment payment for retiree healthcare	70,138	74,484
Retiree Contributions	-	-
Net Payments	$730,677	$691,122

The $69,618 and $74,484 employer payments for retiree healthcare shown in the preceding table are cash payments in the years 2019 and 2018, respectively. Based on the premium rate structure of NYSHIP, it is part of the employers' payments for active-employee healthcare benefits; and reflects the higher costs among retirees than actives. The $69,618 and $74,484, therefore, are not payments for active-employee benefits; rather, but represents benefit payment for healthcare coverage for the years 2019 and 2018 for retirees.

Significant Changes - House of Representatives ("H.R.") Bill 1865 Further Consolidated Appropriations Act, 2020 repealed the Cadillac tax on health plans. This change decreased the liability by $742 million as of the valuation date using a discount rate of 4.10%.

2. PLAN DESCRIPTION, ELIGIBILITY AND MEMBERSHIP INFORMATION

The benefits provided by the MTA Group include medical, pharmacy, dental, vision, life insurance and a Medicare supplemental plan. The different types of benefits provided vary by MTA agency and relevant collective bargaining agreements. Certain benefits are provided upon retirement. "Retirement" is defined by the applicable pension plan. Certain MTA Group agencies provide benefits to certain former employees if separated from service within 5 years of attaining retirement eligibility. Employees of the MTA Group are members of the following pension plans: the MTA Defined Benefit Pension Plan ("MTADBPP"), the MTA

Long Island Rail Road Plan for Additional Pensions, the Metro-North Cash Balance Plan, the Manhattan and Bronx Surface Transit Operating Authority ("MaBSTOA") Pension Plan, the New York City Employees' Retirement System ("NYCERS") and the New York State and Local Employees' Retirement System ("NYSLERS"). Certain represented employees of Metro-North Railroad participate in the Thrift Plan for Employees of MTA, its Subsidiaries and Affiliates ("401(k) Plan"). Eligible employees of the MTA Group may elect to join the New York State Voluntary Defined Contribution Plan ("VDC").

The MTA Group 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. However, 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 Company represented employees do not participate in NYSHIP. These benefits are provided 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.

GASB 74 requires employers to perform periodic actuarial valuations to determine annual accounting costs, and to keep a running tally of the extent to which these amounts are over or under funded. The valuation must be performed at least biennially. The most recent biennial valuation was performed with a valuation date of July 1, 2019. The total number of plan participants as of July 1, 2019 receiving retirement benefits was approximately 47 thousand.

Plan Eligibility — Generally, to qualify for benefits under the Plan, a former employee of The MTA must:

- have retired, be receiving a pension (except in the case of the 401(k) Plan and the New York State VDC), and have at least 10 years of credited service as a member of NYCERS, NYSLERS, the MTADBPP, the MaBSTOA Pension Plan, the 401(k) Plan or the VDC and have attained a minimum age requirement (unless within 5 years of commencing retirement for certain members); provided, however, a represented retired employee may be eligible only pursuant to the relevant collective bargaining agreement.

- Surviving Spouse and Other Dependents:

  (i) 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.

  (ii) 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. For represented employees of MTA New York City Transit and MTA Staten Island Railway retiring on or after May 21, 2014 for TWU Local 100, September 24, 2014 for ATU Local 726, October 29, 2014 for ATU Local 1056, March, 25, 2015 for TCU and December 16, 2015 for UTU and ATDA, surviving spouse coverage continues until spouse is eligible for Medicare.

  (iii) 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.

(iv) 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.

Benefits are established and amended by the MTA, except to the extent that they have been established by collective bargaining agreement.

Plan Membership — As permitted under GASB 74, the Plan has elected to use July 1, 2019, as the valuation date of the OPEB actuarial valuation. The Plan's combined membership consisted of the following at July 1, 2019 and July 1, 2017, the date of the most recent OPEB actuarial valuation:

	July 1, 2019	July 1, 2017
Active Plan members	73,588	72,047
Inactive Plan members currently receiving Plan benefit payments	46,994	45,330
Inactive Plan members entitled to but not yet receiving benefit payments	186	254
Total number of participating employees	120,768	117,631

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting — The Plan's financial statements are prepared on the accrual basis of accounting under which deductions are recorded when the liability is incurred and revenues are recognized in the accounting period in which they are earned. Employer contributions are recognized when paid in accordance with the terms of the Plan. Additions to the Plan consist of employer contributions and net investment income. Investment purchases and sales are recorded as of trade date.

The financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America, as prescribed by Government Accounting Standards Board ("GASB").

New Accounting Standards Adopted – The Plans adopted GASB Statement No. 84, *Fiduciary Activities.* This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

A fiduciary component unit, when reported in the fiduciary fund financial statements of a primary government, should combine its information with its component units that are fiduciary component units and aggregate that combined information with the primary government's fiduciary funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets. There was no material impact on the Program's financial statements as a result of the implementation of GASB Statement No. 84.

GASB Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance*, provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Recent Accounting Pronouncements — Not yet adopted but currently being reviewed

GASB Statement No.	GASB Accounting Standard	MTA Welfare Benefits Plan Required Year of Adoption
92	*Omnibus 2020*	2022

Investments — The Plan's investments are those which are held in the Trust. Investments are reported on the statements of plan net position at fair value based on quoted market prices or Net Asset Value, which is determined to be a practical expedient for measuring fair value. Investment income, including changes in the fair value of investments, is reported on the Statements of changes in Plan net position during the reporting period.

Benefit Payments — The Plan Sponsor makes direct payments of insurance premiums for healthcare benefits to OPEB Plan members or beneficiaries. Payments made directly to the insurers by the Plan Sponsor which bypass the trust are treated as additions and deductions from the Plan's net position. Additionally, premium payments on behalf of retirees have been adjusted to reflect age-based claims cost.

Administrative Expenses — Administrative expenses of the Plan are paid for by the Plan.

4. INVESTMENTS

Investment Policy – The Plan's policy statement is issued for the guidance of fiduciaries, including the members of the Board of Managers, during the course of investing the assets of the Trust. The investments of the Trust will be made for the exclusive benefit of the Plan participants and their beneficiaries. Policy guidelines may be amended by the Board of Managers upon consideration of the advice and recommendations of investment professionals.

In order to have a reasonable probability of achieving the target return at an acceptable risk level, the Board has adopted the asset allocation policy outlined below. The actual asset allocation will be reviewed on, at least, annually. The following was the Board of Managers adopted asset allocation policy as at December 31, 2019.

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Asset Class	Target Allocation (%)	Policy Benchark
Global Equity	35.0	MSCI ACWI
Fixed Income	18.0	Manager Specific
Global Asset Allocation*	30.0	50% World Equity/ 50% Citigroup WGBI unhedged
Absolute Return	12.0	Manager Specific
Real Assets	5.0	Manager Specific
Total	100.0	

* The Global Asset Allocation managers will invest across numerous liquid asset classes including: stocks, bonds, commodities, TIPS and REITs.

Investment Objective — The investment objective of the Plan is to achieve the actuarial return target with an appropriate risk position.

Investment Guidelines — The Committee of the MTA Retiree Welfare Benefits Plan is in the process of creating investment guidelines with the Plan's investment advisor ("NEPC") that will address and execute investment management agreements with professional investment management firms to manage the assets of the Plan. However, the Committee of the MTA Retiree Welfare Benefits Plan allows the Plan to follow the Investment Guidelines established by the Board of Managers of Pensions for the MTA Defined Benefit Pension Plan.

Credit Risk — At December 31, 2019 and 2018 the following credit quality rating has been assigned by a nationally recognized rating organization:

	2019		2018	
Quality Rating	Fair Value	Percentage of Fixed Income Portfolio	Fair Value	Percentage of Fixed Income Portfolio
AAA	$ 45,811,863	26.11 %	$ 20,278,622	12.32 %
AA	16,151,651	9.20	19,107,945	11.61
A	14,159,173	8.07	6,172,007	3.75
BBB	15,574,742	8.88	18,148,858	11.03
BB	13,456,019	7.67	7,043,718	4.28
B	3,303,554	1.88	7,515,217	4.57
CCC	673,589	0.38	1,548,821	0.94
Not Rated	24,259,798	13.82	37,690,173	22.90
Credit risk debt securities	133,390,389	76.01	117,505,361	71.40
U.S. Government bonds	42,093,760	23.99	47,059,433	28.60
Total fixed income securities	175,484,149	100.00 %	164,564,794	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	239,445,245		186,973,564	
Total investments	$ 414,929,394		$ 351,538,358	

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Interest Rate Risk — Interest rate risk is the risk that changes in interest rates that will affect the fair value of an investment. Duration is a measure of sensitivity to 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. Modified duration is an indicator of bond price's sensitivity to a parallel 100 basis point change in interest rates.

	2019		2018	
Investment Fund	**Fair Value**	**Duration**	**Fair Value**	**Duration**
Allianz Structured Alpha	$ 23,540,148	0.13	$ 19,946,008	0.13
Baird Aggregate Bond Fund	37,499,321	5.87	26,964,426	5.87
Bridgewater Pure Alpha Major Markets Fund	13,181,218	(3.42)	13,922,247	(7.10)
Bridgewater All Weather Fund	45,835,342	5.60	39,301,664	8.30
GAM Unconstrained Bond Fund	-	-	5,847,591	0.10
Pimco All Asset Fund	36,898,507	4.40	32,883,226	3.41
State Street Real Asset Non-Lending Fund	15,141,135.61	4.67	-	-
Wellington Diversified Inflation Hedge Fund	-	-	14,004,652	0.40
Wellington Blended Emerging Markets Debt Fund	15,738,791	6.44	15,676,047	5.44
Wellington Opportunistic Investment Fund	19,388,978	5.80	27,903,228	1.40
Investments with duration	207,223,441		196,449,088	
Portfolio modified duration		4.25		3.21
Investments with no duration reported	207,705,953		155,089,270	
Total investments	$ 414,929,394		$ 351,538,358	

Credit Risk — For investments, custodial credit risk is the risk that in the event of the failure of the Trustee Bank, the Plan will not be able to recover the value of its investments or collateral securities that are in the possession of the outside party. Investment securities are exposed to credit risk if the securities are uninsured and are not registered in the name of the Trust.

Concentration of Credit Risk — The Plan places no limit on the amount the Trust may invest in any one issuer of a single issue. Individual investments held by the Plan that represents 5.0% or more of the Plan's net assets available for benefits at December 31, 2019 and 2018 is as follows:

	2019		2018	
Issuer	**% of Total Investments**	**of Total Investments**	**% of Total Investments**	**of Total Investments**
Artisan Global Opportunities Fund	16 %	$ 66,215,152	14 %	$ 48,703,546
Dreyfus Global Stock Fund	14	59,542,188	13	45,931,005
Hexavest World Equity Fund	12	50,222,157	12	41,550,013
Bridgewater All Weather Fund	11	45,835,342	11	39,301,664
PIMCO All Asset Fund	9	36,898,507	9	32,883,226
Wellington Opportunities Investment Fund **	-	-	8	27,903,229
Baird Aggregate Bond Fund	9	37,499,321	8	26,964,426
Allianz Structured Alpha Fund	6	23,540,148	6	19,946,008
Wellington Blended Emerging Markets Fund	5	19,388,978	*	*

* Amounts did not meet the 5.0% threshold, in the current year and thus are not shown.
** No longer included in portfolio

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Foreign Currency Risk — Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. Some of the Plan's investment managers will have foreign currency exposure through holdings of foreign securities, currency derivatives or private investments whose revenue will be non-USD based. The Plan's foreign currency exposures as of December 31, 2019 and 2018 is as follows:

Foreign Currency Holdings in US $	December 31, 2019	December 31, 2018
Argentine Peso	$ 134,304	$ 257,246
Asia ex Japan	714,336	939,508
Australian Dollar	4,563,089	2,325,107
Bermudian Dollar	-	167,419
Brazilian Cruzeiro Real	3,617,541	2,564,109
Canadian Dollar	1,005,600	2,343,303
Chilean Peso	336,808	440,572
Colombian Peso	302,558	581,350
Croatia Kuna	-	136,068
Chinese Yuan Renminbi	2,199,597	2,080,702
Czech Republic Koruna	334,359	379,664
Danish Krone	3,817,459	3,013,341
Dominican Peso	103,316	3,288
Egyptian Pound	314,883	194,987
Euro	19,395,092	25,299,785
Ghanaian Cedi	-	23,514
Great Britain Pound Sterling	17,398,569	17,872,933
Hong Kong Dollar	10,342,612	8,395,606
Hungarian Forint	518,878	706,468
Iceland Krona	313,202	558,065
Indian Rupee	2,988,547	2,181,171
Indonesia Rupiah	2,569,146	1,324,838
Israeli Shekel	105,033	296,203
Japanese Yen	13,137,118	12,587,155
Kazakhstan Tenge	14,759	13,153
Malaysian Ringgit	472,608	487,897
Mauritian Rupee	-	111,613
Mexican New Peso	1,444,613	967,953
New Zealand Dollar	210,221	(589,369)
Norwegian Krone	158,823	724,443
Pakistani Rupee	-	312
Peruvian Nuevo Sol	242,437	342,236
Philippine Peso	157,638	215,305
Polish Zloty	445,447	811,638
Qatar Riyal	6,355	6,464
Romanian Leu	194,558	258,975
Russian Federation Rouble	3,294,566	1,266,540
Saudi Riyal	14,041	-
Singapore Dollar	453,960	689,388
South African Rand	1,553,549	1,215,085
South Korean Won	3,208,043	1,659,753
Swedish Krona	579,480	902,973
Swiss Franc	10,172,713	9,937,130
Taiwanese New Dollar	1,337,877	429,289
Thai Baht	627,568	685,044
Turkish Lira	283,541	395,304
Ukrainian Hryvnia	89,292	23,018
UAE Dirham	1,332	9,757
Uruguayan Peso	3,690	6,577
Total	$ 109,179,158	$ 105,242,880

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In year 2015, the MTA Retiree Welfare Benefits Plan adopted GASB Statement No. 72 ("GASB 72"), *Fair Value Measurement and Application*. GASB 72 was issued to address accounting and financial reporting issues related to fair value measurements. For the years ended December 31, 2019 and 2018, the Plan reported all of its investments at Net Asset Value ("NAV") and thus fair value leveling measurement was not required.

Investments measured at NAV

	December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled international equity funds	$ 50,222,157	$ -	Daily	None
International equity mutual funds	125,757,340	-	Daily, monthly	None
Total equity investments measured at the NAV	175,979,497	-		
Debt Securities				
Commingled debt funds	72,627,090		Daily, monthly, quarterly	None
Mutual funds	16,334,205		Daily	None
Total debt investments measured at the NAV	88,961,295	-		
Absolute return:				
Directional	23,540,148	-	Monthly	3-60 days
Global macro	13,181,218	-	Monthly	3-30 days
Global tactical asset allocation	36,898,507	-	Daily, monthly	3-30 days
Risk parity	45,835,342	-	Monthly	3-30 days
Total absolute return measured at the NAV	119,455,215	-		
Real assets				
Commingled commodities fund	15,141,136	-	Not eligible	N/A
Total real assets measured at the NAV	15,141,136	-		
Short term investments measured at the NAV	15,392,251			
Total investments measured at the NAV	$ 414,929,394	$ -		

Investments measured at NAV

	December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled international equity funds	$ 41,550,013	$ -	Daily	None
International equity mutual funds	94,634,551	-	Daily, monthly	None
Total equity investments measured at the NAV	136,184,564	-		
Debt Securities				
Commingled debt funds	48,488,064		Daily, monthly, quarterly	None
Mutual funds	11,293,409		Daily	None
Total debt investments measured at the NAV	59,781,473	-		
Absolute return:				
Directional	19,946,008	-	Monthly	3-60 days
Global macro	13,922,247	-	Monthly	3-30 days
Global tactical asset allocation	60,786,454	-	Daily, monthly	3-30 days
Risk parity	39,301,664	-	Monthly	3-30 days
Total absolute return measured at the NAV	133,956,373	-		
Real assets				
Commingled commodities fund	14,004,652	-	Not eligible	N/A
Total real assets measured at the NAV	14,004,652	-		
Short term investments measured at the NAV	7,611,296			
Total investments measured at the NAV	$ 351,538,358	$ -		

5. NET OPEB LIABILITY

The components of the net OPEB liability of the Plan for the years ended December 31, 2019 and 2018 were as follows (in thousands):

	December 31, 2019	December 31, 2018
Total OPEB liability	$ 21,531,473	$ 19,933,888
Fiduciary net position	414,827	351,380
Net OPEB liability	21,116,646	19,582,508
Fiduciary net position as a percentage of the total OPEB liability	1.93%	1.76%

The total OPEB liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below, and was then projected forward to the measurement date. Any significant changes during this period have been reflected as prescribed by GASB Statement No.74. Covered payroll is based on salary information provided as of the valuation date.

Additional Important Actuarial Valuation Information

	2019	2018
Valuation date	July 1, 2019	July 1, 2017
Measurement date	December 31, 2019	December 31, 2018
Reporting date	December 31, 2019	December 31, 2018
Actuarial cost method	Entry Age Normal	Entry Age Normal
Normal cost increase factor	4.50%	4.50%

Discount Rate – 2.74% per annum as of December 31, 2019 (Bond Buyer General Obligation 20-Bond Municipal Bond Index) and 4.10% per annum as of December 31, 2018.

	2019	2018
Discount rate	2.74%	4.10%
Long-term expected rate of return, net of investment expense	5.75%	6.50%
Bond Buyer General Obligation 20-Bond Municipal Bond Index	2.74%	4.10%

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.

Sensitivity of the Net OPEB Liability to Changes in the Discount Rate and Healthcare Cost Trend Rate

The following presents the net OPEB liability of the Authority, calculated using the discount rate of 2.74 percent; as well as what the Authority’s net OPEB liability would be if it were calculated using a discount rate that is 1-percentage point lower (1.74 percent) or 1-percentage point higher (3.74 percent) than the current rate:

2019
(in thousands)

	1% Decrease 1.74%	Current Discount Rate 2.74%	1% Increase 3.74%
Net OPEB liability	$24,232,661	$21,116,646	$18,552,646

The following presents the net OPEB liability of the Authority, calculated using the current healthcare cost trend rates as well as what the Authority'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 current trend rates.

2019
(in thousands)

	1% Decrease	* Current Trend Rate	1% Increase
Net OPEB liability	$18,031,859	$21,116,646	$25,019,480

* See Health Care Cost Trend Rates table on page 30 of report.

The following presents the net OPEB liability of the Authority, calculated using the discount rate of 4.10 percent; as well as what the Authority's net OPEB would be if it were calculated using a discount rate that is 1-percentage point lower (3.10 percent) or 1-percentage point higher (5.10 percent) than the current rate:

2018
(in thousands)

	1% Decrease 3.10%	Current Discount Rate 4.10%	1% Increase 5.10%
Net OPEB liability	$22,402,766	$19,582,508	$17,257,324

The following presents the net OPEB liability of the Authority, calculated using the current healthcare cost trend rates as well as what the Authority'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 current trend rates.

2018
(in thousands)

	1% Decrease	* Current Trend Rate	1% Increase
Net OPEB liability	$16,727,628	$19,582,508	$23,171,172

* See Health Care Cost Trend Rates table on page 30 of report.

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Calculation on Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the middle of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

	Net External Cash Flows	Periods Invested	Period Weight	Cash Flows With Interest
Beginning Value - January 1, 2019	$351,380,483	12.00	1.00	$415,045,130
Monthly net external cash flows:				
January	(16,696)	11.50	0.96	(19,590)
February	(16,696)	10.50	0.88	(19,330)
March	(16,696)	9.50	0.79	(19,043)
April	(16,696)	8.50	0.71	(18,791)
May	(16,696)	7.50	0.63	(18,542)
June	(16,696)	6.50	0.54	(18,266)
July	(16,696)	5.50	0.46	(18,025)
August	(16,696)	4.50	0.38	(17,786)
September	(16,696)	3.50	0.29	(17,522)
October	(16,696)	2.50	0.21	(17,290)
November	(16,696)	1.50	0.13	(17,061)
December	(16,696)	0.50	0.04	(16,807)
Ending Value - December 31, 2019				$414,827,077
Money-Weighted Rate of Return	18.12%			

2018 Schedule of Calculations of Money-Weighted Rate of Return

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2018	$370,352,332	12.00	1.00	$351,435,005
Monthly net external cash flows:				
July	(4,664)	11.50	0.96	(4,435)
August	(4,664)	10.50	0.88	(4,454)
September	(4,664)	9.50	0.79	(4,475)
October	(4,664)	8.50	0.71	(4,494)
November	(4,664)	7.50	0.63	(4,512)
December	(4,664)	6.50	0.54	(4,534)
January	(4,664)	5.50	0.46	(4,553)
February	(4,664)	4.50	0.38	(4,572)
March	(4,664)	3.50	0.29	(4,594)
April	(4,664)	2.50	0.21	(4,613)
May	(4,664)	1.50	0.13	(4,632)
June	(4,664)	0.50	0.04	(4,654)
Ending Value - December 31, 2018				$351,380,483
Money-Weighted Rate of Return	-5.11%			

Calculation on Long-Term Expected Rate of Return

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2019 and 2018.

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2019

Asset Class	Index	Target Allocation*	Long-Term Expected Arithmetic Real Rate of Return
US Cash	BAML 3-Month Treasury Bill	3.50%	0.04%
US Core Fixed Income	Barclays Aggregate	13.00%	1.51%
US Inflation-Indexed Bonds	Barclays US TIPS	4.00%	0.71%
Emerging Market Bonds	JPM EMBI Plus	5.00%	3.36%
Global Equity	MSCI ACWI NR	42.00%	5.28%
Commodities	Dow Jones UBS	3.50%	2.79%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	29.00%	3.26%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			5.92%
Portfolio Standard Deviation			9.27%
Long-Term Expected Rate of Return selected by MTA			5.75%

* Based on March 2014 Investment Policy

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SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2018

Asset Class	Index	Target Allocation*	Long-Term Expected Arithmetic Real Rate of Return
US Core Fixed Income	Barclays Aggregate	13.00%	2.03%
Global Bonds	Citi WGBI	15.00%	41.00%
Emerging Market Bonds	JPM EMBI Plus	5.00%	3.76%
Global Equity	MSCI ACWI NR	35.00%	5.65%
Non-US Equity	MSCI ACWI xUS NR	15.00%	6.44%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.80%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	12.00%	3.28%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			6.65%
Portfolio Standard Deviation			10.39%
Long-Term Expected Rate of Return selected by MTA			6.50%

* Based on March 2014 Investment Policy

6. OPEB ACTUARIAL COSTS AND ASSUMPTIONS

Projections of benefits for financial reporting purposes are based on the substantive OPEB plan (the plan as understood by the employer and plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point. The MTA may not be obligated to provide the same types or levels of benefits to retirees in the future.

Actuarial Assumptions - The non-healthcare assumptions described below were adopted by the Authority based on experience analyses covering the period from January 1, 2006 – December 31, 2011 dated July 24, 2013 for members of the MaBSTOA Pension Plan and dated June 5, 2014 for members of the MTA DB Plan, in addition to a postretirement mortality study covering the period from January 1, 2011 – January 1, 2016 dated August 10, 2017. In addition, demographic assumptions are based on those used in the most recent NYCERS or NYSLRS actuarial valuations for MTA employees participating in these city-wide or state-wide pension plans.

Actuarial Cost Method — In accordance with GASB 74, the Entry Age Normal cost method was used for determining service costs and the actuarial accrued liability. Costs are determined as a level percent of pay.

Census data was collected as of July 1, 2019, which is the valuation date. Liabilities as of December 31, 2019 were determined using roll-forward methods, assuming no liability gains and losses. Past and future normal costs were assumed to increase 4.5% per year.

Changes since Prior Valuation — The discount rate has been changed from 4.10% as of December 31, 2018 to 2.74% as of December 31, 2019 due to changes in the applicable municipal bond index.

Certain actuarial assumptions have been updated to reflect the 2019 Experience Study for members participating in the MTA DB Plan and MaBSTOA pension plan and to reflect those used in the NYCERS June 30, 2017 Lag Valuation for members participating in NYCERS.

Various healthcare assumptions have been updated since the prior valuation including the per capita claim costs assumption, health cost trend assumptions.

The coverage election rates for the self-insured medical plans were revised as follows:

- For MTA Bus, the percentage electing Aetna Basic was decreased from 90% to 80% and the percentage electing Aetna Select was increased from 10% and 20%.
- For those electing a Medicare Advantage Plan, the percentage electing Aetna Option 1 was decreased from 67% to 60% and the percentage electing Aetna Option 2 was increased from 33% to 40%.

In addition, the dependent coverage assumption was reduced from 45% to 35% for female eligible members participating in NYSHIP and from 35% to 25% for female eligible members participating in self-insured programs administered by NYC Transit.

Inflation Rate — 2.5% per annum compounded annually.

Per Capita Claim Costs ("PCCC") — For members that participate in NYSHIP, Empire PPO plan premium rates paid by Participating Agencies for 2017 were adjusted to reflect differences by age in accordance with Actuarial Standard of Practice No. 6. Premiums paid by Participating Agencies differ based on Medicare-eligible status whereas premiums paid by Participating Employers do not. The age adjustments were based on manual rates developed from Milliman's Commercial Rating Structures and Ages 65 and Over Health Cost Guidelines® (HCGs), Empire PPO plan design information, and actuarial judgment. Pre and post-65 NYSHIP premium rates were adjusted separately to be consistent with the way in which demographic factors were developed. These per capita costs may be loaded to account for Agency specific coverage election assumptions. The Medicare Part B premium is not included. For spouses and beneficiaries under age 65, the age-adjusted premiums shown below are increased by 15% to reflect the additional cost of covered children. This load base on the total number of dependent children (3,900) for all MTA Agencies participating in NYSHIP multiplied by the 2019 per member cost per child ($322 per month) divided by expected age-adjusted cost for spouses under age 65.

Age Adjusted Monthly NYSHIP Empire PPO Premiums

Age Group	Males	Females	Age Group	Males	Females
<50	1,233.93	1,806.06	65 - 69	512.44	485.49
50 - 54	1,377.74	1,532.73	70 - 74	559.87	512.93
55 - 59	1,486.47	1,524.02	75 - 79	592.24	529.31
60 - 64	1,795.04	1,712.76	80 - 84	600.37	531.45
			85+	585.08	523.89

For the self-insured medical and pharmacy plan administered by MTA New York City Transit, PCCCs were determined for 2019 based upon a combination of MTA claim experience, MTA census data, MTA plan design information, manual rates from the Milliman Commercial Rating Structures and Ages 65 and Over Health Cost Guidelines® ("HCGs"), and actuarial judgment.

MTA and the carrier provided Milliman with summarized medical (Aetna Basic and Aetna Select plans) and pharmacy claim experience (Employer Group Waiver Plan ("EGWP") and non-EGWP plans), split between those eligible and not eligible for Medicare, for covered retirees of MTA Bus Company, MTA New York City Transit, and MTA Staten Island Railway for 2019. In addition, the MTA provided associated premium rates for each of the plans. Enrollment data was based on covered members provided by MTA as of the valuation date. Milliman used the HCGs to develop PCCC relativity factors that varied by benefit, age and gender. Finally, per capita costs were adjusted by an administrative load. Administrative costs were provided on a per contract basis by MTA and were $42.89 per month for Aetna Basic under 65, $45.50 for Aetna Select and $26.16 for Aetna Basic 65 and over.

EGWP PCCCs are based on the premium equivalents provided reflecting the Medicare subsidies available to this plan. Relativity factors varying by age and gender are based on Medicare slopes developed by Milliman.

In addition, PCCCs were developed for the Aetna Medicare plans based on the premium equivalents provided and reflecting relativity factors by age and gender based on Medicare slopes developed by Milliman. The following charts detail the monthly 2019 PCCCs used in this valuation.

Monthly Medical Per Capita Claim Cost

Age Group	Male Retirees	Female Retirees	Male Spouses	Female Spouses
		Aetna Basic		
Child	n/a	n/a	257.61	257.61
<50	859.95	1,292.86	581.24	726.83
50-54	964.60	1,093.52	696.21	814.57
55-59	1,037.79	1,074.21	796.23	877.62
60-64	1,257.26	1,209.43	998.03	991.30
65-69	175.03	185.04	175.03	185.04
70-74	211.76	210.41	211.76	210.41
75-79	246.67	232.79	246.67	232.79
80-84	278.57	265.41	278.57	265.41
85+	343.61	325.88	343.61	325.88
		Aetna Select		
Child	n/a	n/a	277.27	277.27
<50	918.85	1,391.77	619.98	780.93
50-54	1,021.19	1,171.38	736.18	871.72
55-59	1,094.72	1,145.84	839.19	935.54
60-64	1,321.35	1,283.08	1,048.29	1,051.10
		Aetna Medicare Option 1		
65-69	184.91	184.14	184.91	184.14
70-74	190.94	192.02	190.94	192.02
75-79	205.47	198.36	205.47	198.36
80-84	216.29	207.01	216.29	207.01
85+	232.67	223.55	232.67	223.55
		Aetna Medicare Option 2		
65-69	156.76	156.11	156.76	156.11
70-74	161.82	162.73	161.82	162.73
75-79	174.01	168.05	174.01	168.05
80-84	183.10	175.31	183.10	175.31
85+	196.85	189.19	196.85	189.19

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Monthly Pharmacy Per Capita Claim Cost

Age Group	Male Retirees	Female Retirees	Male Spouses	Female Spouses
		Basic Rx Plan		
Child	n/a	n/a	51.81	51.81
<50	220.57	287.01	147.93	160.05
50-54	227.54	253.44	163.33	187.99
55-59	245.09	268.68	187.29	218.88
60-64	275.29	288.91	217.92	236.21
65-69	296.39	272.19	296.39	272.19
70-74	317.27	284.08	317.27	284.08
75-79	328.31	285.26	328.31	285.26
80-84	321.42	275.25	321.42	275.25
85+	276.16	228.39	276.16	228.39
		EGWP Rx Plan		
65-69	246.13	217.19	246.13	217.19
70-74	219.74	191.12	219.74	191.12
75-79	207.02	177.44	207.02	177.44
80-84	196.84	159.95	196.84	159.95
85+	177.13	131.02	177.13	131.02

Monthly Medicare Part B premiums were assumed to be $135.5 for 2019 and $134 for 2018.

Premium rates for dental and vision benefits were used as provided by the Agencies.

Health 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 2.5% 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 the H. R. 1865 (December 2019), separately for NYSHIP and self-insured benefits administered by MTA New York City Transit. Long -term trend increases are 3.5% for dental and vision benefits and 4.5% for Medicare Part B reimbursements but not more than projected medical and pharmacy trends. The self-insured trend is applied directly for represented employees of MTA New York City NYC Transit, MTA Staten Island Railway and MTA Bus Company. The following lists illustrative rates for the NYSHIP and self-insured trend assumptions (amounts are in percentages).

Health Care Cost Trend Rates

Fiscal Year	NYSHIP		TBTA No Rx		Self-Insured	
	< 65	>=65	< 65	>=65	< 65	>=65
2019 to 2020	6.8	5.9	6.2	4.0	6.5	5.1
2020 to 2021	6.2	5.7	5.8	4.0	6.1	5.1
2021 to 2022	5.7	5.4	5.5	4.6	5.6	5.1
2022 to 2023	5.1	5.1	5.1	5.1	5.1	5.1
2023 to 2024	5.1	5.1	5.1	5.1	5.1	5.1
2024 to 2025	5.0	5.0	5.0	5.0	5.0	5.0
2025 to 2026	5.0	5.0	5.0	4.9	5.0	5.0
2026 to 2027	4.9	4.9	4.9	4.9	4.9	4.9
2027 to 2028	4.8	4.8	4.8	4.8	4.8	4.8
2028 to 2029	4.8	4.8	4.8	4.8	4.8	4.8
2038 to 2039	4.9	4.9	4.9	4.9	4.9	4.9
2048 to 2049	5.0	5.0	5.0	5.0	5.0	5.0
2058 to 2059	4.8	4.8	4.8	4.8	4.8	4.8
2068 to 2069	4.4	4.4	4.4	4.4	4.4	4.4
2078 to 2079	4.0	4.0	4.0	4.0	4.0	4.0
2088 to 2089	4.0	4.0	4.0	4.0	4.0	4.0
2098 to 2099	4.0	4.0	4.0	4.0	4.0	4.4

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

Participation — The table below summarizes the census data provided by each Agency utilized in the preparation of the actuarial valuation. The table shows the number of active and retired employees by Agency and provides a breakdown of the coverage elected and benefits offered to current retirees.

OPEB Participation By Agency as at July 1, 2019

	MTA New York City Transit	MTA Long Island Rail Road	MTA Metro-North Rail Road	MTA Bridges & Tunnels	MTAHQ	MTA Long Island Bus *	MTA Staten Island Railway	MTA Bus Company	Total
Active Members									
Number	51,454	7,719	6,773	1,350	1,957	N/A	328	4,007	73,588
Average Age	48.6	44.8	44.8	48.0	46.0	N/A	41.7	48.0	48.2
Average Service	12.8	12.7	11.8	14.8	12.3	N/A	9.9	11.5	13.4
Retirees									
Single Medical Coverage	13,967	714	470	561	258	95	34	979	17,078
Employee/Spouse Coverage	18,800	1,998	1,138	775	539	168	82	765	24,265
Employee/Child Coverage	1,145	104	76	46	22	17	3	30	1,443
No Medical Coverage	841	2,441	1,547	83	15	316	33	278	5,554
Total Number	34,753	5,257	3,231	1,465	834	596	152	2,052	48,340
Average Age of Retiree	72.2	70.1	71.1	70.6	66.3	69.6	66.5	71.3	71.5
Total Number with Dental	8,601	979	675	469	773	49	49	160	11,755
Total Number with Vision	32,166	979	675	469	773	49	119	1,761	36,991
Total No. with Supplement	26,522	2,019	438	875	-	448	112	1,488	31,902
Average Monthly Supplement Amount (Excluding Part B Premium)	$ 32	$ 239	$ 100	$ 215	$-	N/A	$ 70	$ 25	$ 50
Total No. with Life Insurance	7,722	4,883	841	434	746	494	117	1,883	17,120
Average Life Insurance Amount	$ 2,450	#######	######	######	######	######	######	#######	$ 9,215

* MTA LI Bus had 111 vestees as of date of valuation

Coverage Election Rates — The majority of members participating in NYSHIP are assumed to elect coverage in the Empire PPO plan. For certain agencies (MTA New York City Transit, MTA Bridges and Tunnels and MTA Staten Island Railway) a percentage of the membership is assumed to elect NYSHIP HIP plan and for the MTA Metro-North Railroad a percentage is assumed to elect ConnectiCare, an HMO plan.

Dependent Coverage - Spouses are assumed to be the same age as the employee/retiree. 80% of male and 35% of female eligible members participating in NYSHIP are assumed to elect family coverage upon retirement and 65% of male and 25% of female eligible members participating in self-insured programs administered by MTA New York City Transit are assumed to cover a dependent. Actual coverage elections for current retirees are used. Under age 65 spouses of over age 65 retirees are assumed to have elected the Aetna Select plan if the retiree elected Aetna Option 1 or Option 2. If a current retiree's only dependent is a child, eligibility is assumed for an additional 7 years from the valuation date.

Demographic Assumptions:

Mortality — Preretirement and postretirement health 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 post-retirement 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 mortality table for males and females.

Vestee Coverage — For members that participate in NYSHIP, Vestees (members who have terminated employment, but are not yet eligible to retire) are eligible for NYSHIP benefits provided by the Agency upon retirement, but must maintain NYSHIP coverage at their own expense from termination to retirement. Vestees are assumed to retire at first eligibility and would continue to maintain NYSHIP coverage based on the following percentages. This assumption is based on the Development of Recommended Actuarial Assumptions for New York State/SUNY GASB 45/75 Valuation report provided to Participating Employers of NYSHIP. These percentages were also applied to current vestees based on age at valuation date.

Age at Termination	Percent Electing
< 40	0 %
40–43	5
44	20
45–46	30
47–48	40
49	50
50–51	80
52+	100

7. TRUSTEE, CUSTODIAL AND OTHER PROFESSIONAL SERVICES

The Plan and the Trust are administered by the MTA, including the day-to-day administration of the health insurance program. JP Morgan Chase, the trustee and custodian makes payments to health insurers and to welfare funds for retiree benefits, and reimbursements of retiree Medicare Part B premiums, as directed by the MTA. The MTA OPEB Committee is advised by NEPC with respect to the investment of Plan assets. Actuarial services were provided to the Plan by Milliman Inc.

8. SUBSEQUENT EVENTS

On March 25, 2020, Allianz Global Investors U.S. LLC (“AllianzGI), managing member of AllianzGI Structured Alpha 1000 LLC (the “Fund”), informed the Plan that it was in the best interest of its investors to terminate the Fund and pursue an orderly liquidation program. AllianzGI stated that the Fund suffered signifcant losses due to the severe and tumultuous market volatility as a result, in part, of the coronavirus pandemic. No redemptions were permitted after the announcement of the Fund closure. The Plan lost nearly all of its investment. Fund investors will receive a pro-rata distribution of the remaining assets after accounting for Fund expenses and liabilities. So far, the Fund has returned $644,124. The Plan is exploring all options to recover its losses.

MTA Capital Construction Company has been renamed MTA Construction and Development Company, was pursuant to an amendment to Public Authorities Law Section 1266(5).and will be reported as such in the future.

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The actuarial present value of plan benefits is reported based on certain assumptions pertaining to interest rates and employee demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions will occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the value of plan benefits.

Subsequent to December 31, 2019, the impact to the Plan of the COVID-19 pandemic during 2020 has resulted in significant reductions in values to many investments of the Plan. It has also significantly decreased interest rates and could impact employee demographics which could change assumption utilized in the future for the actuarial present value of plan benefits.

While management of the Plan currently expects to be able to continue to meet immediate contribution requirements, the long-term impact of the effects of the COVID-19 pandemic to the Plan and Plan sponsor as well as any relief from regulatory authorities are currently not known. The extent of the adverse impact of the COVID-19 pandemic on the Plan's net assets available for benefits and actuarial present value of plan benefits cannot be reasonably estimated at this time.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

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REQUIRED SUPPLEMENTARY INFORMATION

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SCHEDULE I

METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET OPEB LIABILITY AND RELATED RATIOS
(in thousands)

		2019	2018	2017
Total OPEB liability:				
Service cost	$	928,573	1,011,981	876,723
Interest		840,532	758,494	757,860
Changes of benefit terms		-	8,543	24,446
Differences between expected and actual experience		247,871	(569,165)	(44,082)
Changes of assumptions		311,286	(1,964,746)	921,007
Benefit payments and withdrawals		(730,677)	(691,122)	(650,994)
Net change in total OPEB liability		1,597,585	(1,446,015)	1,884,960
Total OPEB liability – beginning		19,933,888	21,379,903	19,494,943
Total OPEB liability – ending (a)		21,531,473	19,933,888	21,379,903
Plan fiduciary net position:				
Employer contributions		730,677	691,122	650,994
Member contributions		-	-	-
Net investment income		63,647	(18,916)	47,370
Benefit payments and withdrawals		(730,677)	(691,122)	(650,994)
Administrative expenses & Transfer to investments		(200)	(56)	-
Net change in plan fiduciary net position		63,447	(18,972)	47,370
Plan fiduciary net position – beginning		351,380	370,352	322,982
Plan fiduciary net position – ending (b)		414,827	351,380	370,352
Employer's net OPEB liability – ending (a)-(b)	$	21,116,646	19,582,508	21,009,551
Plan fiduciary net position as a percentage of the total OPEB liability		1.93%	1.76%	1.73%
Covered payroll	$	5,608,536	5,394,332	5,041,030
Employer's net OPEB liability as a percentage of covered payroll		376.51%	363.02%	416.77%

In accordance with GASB No. 74, paragraph 39, such information was not readily available for periods prior to 2017.

METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT EMPLOYMENT

SCHEDULE II

Required Supplementary Information (Unaudited)
Schedule of Employer Contributions
(in thousands)

Fiscal Year Ending December 31	Actuarially Determined Contribution	* Actual Employer Contribution	Contribution Deficiency (Excess)		Covered Payroll	Actual Contribution as a % of Covered Payroll
2009	N/A	$ -	N/A		$ -	N/A
2010	N/A	-	N/A		-	N/A
2011	N/A	-	N/A		-	N/A
2012	N/A	-	N/A		-	N/A
2013	N/A	-	N/A		-	N/A
2014	N/A	-	N/A		-	N/A
2015	N/A	-	N/A		-	N/A
2016	N/A	-	N/A		-	N/A
2017	N/A	650,994	N/A	**	5,041,030	12.91%
2018	N/A	691,122	N/A		5,394,332	12.81%
2019	N/A	730,677	N/A		5,608,536	13.03%

* Actual Employer Contribution includes the implicit rate of subsidy adjustment.

** In accordance with GASB No. 74, paragraph 39, such information was not readily available for periods prior to 2017.

METROPOLITAN TRANSPORTATION AUTHORITY **SCHEDULE III**
OTHER POSTEMPLOYMENT PLAN

Required Supplementary Information (Unaudited)
Schedule of Investment Returns

The following table displays annual money-weighted rate of return, net of investment expense.

Fiscal Year Ending December 31	Net Money-Weighted Rate of Return
2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	N/A
2015	N/A
2016	N/A
2017	14.67%
2018	-5.11%
2019	18.12%

In accordance with GASB No. 74, paragraph 39, such information was not readily available for periods prior to 2017.

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The Long Island Rail Road Company Plan for Additional Pensions

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the Years Ended December 31, 2019 and 2018, Supplemental Schedules and Independent Auditors' Report

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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

TABLE OF CONTENTS

INDEPENDENT AUDITORS' REPORT

To the Participants and Administrator of
The Long Island Rail Road Company Plan
for Additional Pensions:

Report on the Financial Statements

We have audited the accompanying statements of plan net position of The Long Island Rail Road Company Plan for Additional Pensions (the "Additional Plan") as of December 31, 2019 and 2018, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Additional Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Additional Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Additional Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position as of December 31, 2019 and 2018, and the respective changes in plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

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Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9 and the Schedule of Changes in the Employers' Net Pension Liability and Related Ratios—Schedule I on page 35; Schedule of Employer Contributions—Schedule II on page 36 - 38; and Schedule of Investment Returns—Schedule III on page 39 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2019 AND 2018

OVERVIEW OF THE FINANCIAL STATEMENTS

Introduction—This management's discussion and analysis ("MD&A") of The Long Island Rail Road Company Plan for Additional Pensions (the "Additional Plan") financial performance for the years ended December 31, 2019 and 2018, provides an overview of the Additional Plan's financial activities. It is meant to assist the reader in understanding the Additional Plan's financial statements by providing an overview of the financial activities and the effects of significant changes, as well as a comparison with the prior year's activities and results. This discussion and analysis is intended to be read in conjunction with the Additional Plan document as well as the Additional Plan's financial statements. Additionally, an analysis of major economic factors and industry decisions that have contributed to significant changes is provided. It should be noted that for purposes of the MD&A, summaries of the financial statements and the various exhibits presented are extracted from the Additional Plan's financial statements, which are prepared in accordance with accounting principles generally accepted in the United States of America.

Overview of Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Additional Plan's financial statements. The basic financial statements are:

- **The Statements of Plan Net Position —** presents the financial position of the Additional Plan at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Additional Plan presently controls (assets), consumption of net assets by the Additional Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Additional Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Additional Plan 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. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Plan Net Position -** present the results of activities during the year. All changes affecting the assets and liabilities of the Additional Plan are reflected on an accrual basis when the activity occurred regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.

- **The Notes to Financial Statements -** provides additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plan's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information -** as required by the Government Accounting Standards Board ("GASB") includes the Schedule of Changes in the Employer's Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment returns.

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The accompanying financial statements of the Additional Plan are presented in conformity with accounting principles generally accepted in the United States of America as prescribed by the GASB.

Financial Highlights

Financial Analysis Plan
Net Position
As of December 31, 2019, 2018 and 2017
(Amounts in thousands)

				Increase/(Decrease)			
	2019	2018	2017	Amount of Change 2019–2018	% Change 2019–2018	Amount of Change 2018–2017	% Change 2018–2017
Cash	$ 1,114	$ 2,484	$ 1,575	$ (1,370)	(55)%	$ 909	58 %
Investments, at fair value	838,268	817,757	949,800	20,511	3 %	(132,043)	(14)%
Receivables	634	666	703	(32)	(5)%	(37)	(5)%
Total assets	840,016	820,907	952,078	19,109	2%	(131,171)	(14)%
Due to broker for securities purchased	581	507	900	74	15 %	(393)	(44)%
Forward Currency & Margin contracts	83	55	-	28	34 %	55	-
Due to broker for investment fee	(342)	1,035	(149)	(1,377)	(133)%	1,184	-
Due to broker for admin. fee	(14)	(7)	-	(7)	(52)%	(7)	-
Total liabilities	308	1,590	751	(1,282)	(81)%	839	112 %
Plan net position restricted for pensions	$ 839,708	$ 819,317	$ 951,327	$ 20,391	2 %	$ (132,010)	(14)%

December 31, 2019 versus December 31, 2018

The assets of the Additional Plan exceeded its liabilities by $840 million and $819 million as of December 31, 2019 and 2018, respectively. Plan net position restricted for pensions are held for the payment of future benefits to members and pensioners.

The Additional Plan's net position restricted for pensions increased by $20 million during 2019, representing an increase of 2% over 2018. The increase in 2019 was primarily due to a more positive investment activity during 2019.

Investments at December 31, 2019, were $838 million representing an increase of $21 million from 2018. The increase was a result of positive investment returns, the composite 2019 investment returns by money-weighted rate of return, for the fund was15.14% as opposed to the 2018 return of -3.49%.

Payables for investments purchased at December 31, 2019, amounted to $.6 million. Investments are purchased on a trade-date settlement basis and that generate timing differences in settlement dates, like receivables for investments sold.

December 31, 2018 versus December 31, 2017

The assets of the Additional Plan exceeded its liabilities by $819 million and $951 million as of December 31, 2018 and 2017, respectively. Plan net position restricted for pensions are held for the payment of future benefits to members and pensioners.

The Additional Plan's net position restricted for pensions decreased by $132 million during 2018, representing a decrease of 14% over 2017. The decrease in 2018 was primarily due to a weak investment activity in the fourth quarter of 2018

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Investments at December 31, 2018, were $818 million representing a decrease of $132 million from 2017. The decrease is a result of negative investment returns and no additional infusion of employer contributions from the MTA, as was done in the prior two years. The composite 2018 investment returns by money-weighted rate of return, for the fund was -3.49% as opposed to the 2017 return of 13.98%.

Payables for investments purchased at December 31, 2018, amounted to $.5 million. Investments are purchased on a trade-date settlement basis and that generate timing differences in settlement dates, like receivables for investments sold.

CHANGES IN PLAN NET POSITION

For the Years Ended December 31, 2019, 2018 and 2017
(Amounts in thousands)

	2019	2018	2017	Increase/(decrease) Amount of Change 2019–2018	% Change 2019–2018	Amount of Change 2018–2017	% Change 2018–2017
Additions:							
Net investment income	$ 115,340	$ (31,098)	$ 112,614	$ 146,438	(471)%	$ (143,712)	(128)%
Employer contributions	62,774	59,500	76,523	3,274	6 %	(17,023)	(22)%
Non - Employer contributions	-	-	145,000	-	100%	(145,000)	(100)%
Employee contributions	249	333	760	(84)	(25)%	(427)	(56)%
Total additions	178,363	28,735	334,897	149,628	521 %	(306,162)	(91)%
Deductions:							
Benefits paid directly to participants	157,254	159,565	159,717	(2,311)	-1%	(152)	0%
Administrative expenses	718	1,180	1,070	(462)	-39%	110	10 %
Total deductions	157,972	160,745	160,787	(2,773)	(2)%	(42)	(0)%
Net increase / (decrease)	20,391	(132,010)	174,110	$ 152,401	-115%	$ (306,120)	(176)%
Plan net position restricted for pinions							
Beg of Year	819,317	951,327	777,217				
End of year	$ 839,708	$ 819,317	$ 951,327				

December 31, 2019 versus December 31, 2018

At the end of 2019, the net investment income amounted to $115 million. This represents an increase of $146 million over the prior year, due to strong stock market conditions resulting in an increase in the investment portfolio in 2019.

Employer and employee contributions for the year ended December 31, 2019, totaled $63 million, which represents an increase of 6% from 2018. This increase was the result of higher employer contributions made by the MTA in 2019.

Benefit payments for the year ended December 31, 2019, totaled $157 million, which was slightly lower than benefit payments made in 2018, due to the plan participants maturing.

December 31, 2018 versus December 31, 2017

At the end of 2018, the net investment income amounted to ($31) million. This represents a decrease of $144 million over the prior year, due to strong stock market conditions resulting in an increase in the investment portfolio in 2018.

Employer, non-employer and employee contributions for the year ended December 31, 2018, totaled $60 million, which represents a decrease of 73% from 2017. This decrease was the result of no additional non-employer contributions made by the MTA in 2018.

Benefit payments for the year ended December 31, 2018, totaled $160 million, which was consistent with benefit payments made in 2017.

ECONOMIC FACTORS AND INDUSTRY DECISIONS

Market Overview and Outlook – 2019

In 2019 international markets turned cautiously optimistic, in contrast to 2018, when stocks were buffeted by uncertainty surrounding United States ("U.S.")-China trade negotiations. Equity markets ended a remarkable 2019 rally on a strong note, with major stock indexes reaching new all-time highs. Among growth assets, global equities outperformed high yield and emerging market debt. The U.S. dollar weakened broadly, most significantly against the Swiss franc, British pound and emerging market currencies. Equity, bond and currency volatility continued to ease in December to historically low levels. Investors favored riskier assets following declining trade tensions and easing geo-political headwinds. United Kingdom ("UK") and emerging markets, specifically China, Russia and Latin American, led the December rally, while the U.S. along with other developed markets lagged the Morgan Stanley Capital International All Country World Index ("MSCI ACWI"). Developed markets outperformed emerging markets overall in 2019.

The global economy slowed in 2019 and is now growing below trend. This was primarily driven by the trade war weighing on capital spending and the lagging effect from monetary tightening in 2018. While monetary policies were generally left unchanged in December-- which partly accounts for the stellar returns to both equities and bonds in 2019—further impetus to economic growth may have to come from fiscal measures: policy makers have recently paused easing efforts to evaluate the effect of prior rate cuts, and officials have indicated that monetary policy may have reached its limits. They are therefore considering greater use of fiscal tools to manage business cycles and to support economic growth. A recession in the U.S. appears unlikely in the near term while low interest rates and tame inflation levels continue to power higher equity valuations

Geo-political risks faded after the U.S. and China reached a preliminary trade agreement. Also, Brexit uncertainties fell after Prime Minister Boris Johnson's Conservative Party obtained a solid majority in Parliament. The UK parliament has passed a withdrawal agreement and will start the exit process at the end of January 2020. Markets looked past the political turmoil in the U.S., where a deeply divided House of Representatives passed two articles of impeachment against President Trump. However, macroeconomic stress related to tighter financial conditions in Argentina, geo-political tensions in Iran, and social unrest in Hong Kong, Venezuela, Libya, and Yemen still persisted. Additionally, climate concerns took center stage amid extreme weather around the globe, and protests against the political establishment reverberated through Hong Kong, Lebanon, Chile, Ecuador and many other places.

While current market dynamics may appear to favor equities over fixed income, one should be cognizant that valuations have been trending higher, creating limited attractive investment opportunities. To this end, many long-term forecasts for investment return, encompassing a 10-year time horizon, remain relatively muted. To prepare portfolios for this new decade, it may be essential for investors to start the year with a renewed emphasis on strategic asset allocation, heeding geo-political and portfolio risks to ensure that their investment horizon and governance structure are aligned with portfolio mission statements and return objectives. Even if the investment landscape encourages risk taking, uncertainties remain, making it critical for investors to reassess and rebalance their portfolio holdings considering their robust gains in 2019.

Macro Themes

- Asset allocation and portfolio implementation.
- Late stage of a market cycle.
- China's complex transition into a service and consumption-oriented economy from the manufacturing behemoth.
- The backlash against globalization—expressed through populism and trade wars—is here to stay.
- Central banks permanent interventions have created a new normal, where accommodative monetary policies and fiscal debt growth appear to exist in perpetuity, supporting equities relative to fixed income.

United States

2019 represented a triumphant year the U.S. capital markets compared to 2018 underperformance. Accommodative monetary policies, falling interest rates and subdued inflation helped investors not only to meet their return objectives, but, in many instances, to exceed them. Adding to this impressive string of wins: the U.S. economy completed a calendar decade without a recession—a historical first. While investors would love more of the same, it is unlikely this period of windfall gains and low market volatility will persist for the next decade.

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+31.5%) and (+31.3%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (+27.6%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return of (+25.4%). Of note, growth-oriented investments outperformed the value counterpart with the Russell 1000 Growth (+36.2%) outpacing the Russell 1000 Value (+26.4%).

Fixed income securities markets ended 2019 in the black, reversing declines experienced in 2018. Treasuries returned (+14.8%) for the year, with the assets strongest quarter coming in the first and second quarters of 2019. Municipal credit posted a return of (+7.5%) while the Bloomberg Barclays High Yield Index gained (+14.3%) in 2019. Spreads on high-yield credit narrowed for most part of 2019, but segments in the high-yield and bank loan markets showed signs of stress towards the end of 2019. On the other hand, the S&P LSTA Leveraged Loan Index returned (+10.6%) during the same period.

International Developed

International equity markets posted very strong results in 2019 and lagged behind U.S. equity markets, returning (+26.5%) as measured by the MSCI. In U.S. dollars, both Europe and Japan equities posted positive performance in 2019 with MSCI Europe returning (+23.7%) and MSCI Japan returning (+19.5%). Very strong returns in Europe were driven by the global positive market performance during 2019 unlike 2018 when Europe returned (-14.9%). The Small Cap portion of international developed markets posted even stronger returns in 2019, (+24.9%) compared with 2018, (-17.9%).

Fixed income markets in Europe and Japan are largely centered on government bonds, with corporate and asset-backed issuance making up a fraction of the overall markets. Global Treasuries were positive in 2019, following a negative year in 2018.

Emerging Markets

Emerging markets posted very strong returns in 2019, with performance lower than both U.S. and international developed markets across equity and debt. The broad MSCI emerging markets index returned (+18.3%) for the year. Emerging markets gained sharply in December, driven by hopes that the People's Bank of China will continue to ease its monetary policy to support growth.

The bond markets of emerging markets performed well in 2019 compared to its underperformance in 2018. Both hard currency and local currency bond posted a very strong year in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (+12.6%) in 2019. Local currency bonds, which are issued in the local currency, returned (+13.5%) for the year.

Commodities

The Bloomberg Commodity Index rose (+7.7%) for the year while the New York Mercantile Exchange West Texas Index Crude Spot rose (+35.3%) and Midstream energy ended the year up more than (+24.0%). Residential gas prices in the Midwest are forecast to be nearly (+8.0%) higher this winter than last, and prices in the South and West are seen about (+5.0%) and (+3.0%) higher, respectively, while Northeast prices are forecast to decline (6.0%), helped by relatively low global prices for Liquefied Natural Gas and lower household natural gas consumption. The overall slight decline in heating expenses is aided by generally declining commodity prices.

Market Outlook

Central banks and governments have demonstrated, to varying degrees, their willingness to administer monetary and fiscal stimulus. That accommodative stance should continue in 2020. The U.S. Federal Reserve has already signaled its intention to keep interest rates on hold, providing more certainty for businesses. The re-convergence of U.S. interest rates with other developed markets will reduce upward pressure on the dollar. In addition, the impact of looser monetary policy, combined with a better trade backdrop, could spur the necessary investment and reform to fuel increased labor force participation and renewed productivity improvements.

Political risk, both at national and international levels, remains the great unknown. The long-term path of U.S.-China trade and cooperation is uncertain. A damaging "no-deal Brexit" is not entirely off the table. Tensions in the Middle East could risk sparking full-blown conflict. At the same time, 2020 primaries and Presidential elections in the U.S. will create uncertainty and could cause volatility as markets react to the policies and promises of the various candidates. Notwithstanding all of this, however, the current improvement in geo-political backdrop as compared with 2018, together with stimulus measures should support a modest acceleration in global growth in 2020. That growth, in turn, should lead to a moderate increase in demand for oil, putting a floor under the price, especially when global demand is met with sensible supply-side control from Organization of the Petroleum Exporting Countries.

Many analysts continue to believe emerging markets offer the most investment value, especially following the recent truce in trade relations between the U.S. and China. Furthermore, the opportunities for active management and excess returns appear more abundant in emerging economies. As a result, investors may be encouraged to overweight emerging market equities relative to developed market stocks. They may also opt to reduce exposure to high-yield and return-seeking credit in 2020, since market returns do not offer adequate compensation for the risk they hold. Safe-haven fixed income for instance, Treasuries and core bonds, despite low yields—remain vital for balancing risks within a diversified portfolio.

Impact of Covid-19

Covid-19 has continued to spread at a rapid pace around the world and has now been declared a global pandemic by the World Health Organization. This has caused a severe shock to the global economy pushing it into a deep and far reaching recession. Financial markets have responded with a huge drop in equities values, a rise in credit spreads and a flight to the safety of governments bonds.

In anticipation of the economic growth fallout, Standards & Poor's Global ratings lowered its forecast for global growth to just (+0.4%) this year and predicts a rebound to (+) in 2021. According to Bloomberg, the current second Quarter Gross Domestic Product average estimate of (-11.2%) annualized would be the worst post World War II quarter on record. However, worldwide central banks and governments announced fiscal and monetary rescue packages to soften the economic impact of the virus and the associated business disruptions. Geo-political tensions such as the trade war issues between the U.S. and China have moved into the background.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

CONTACT INFORMATION

This financial report is designed to provide a general overview of the Long Island Rail Road Company for Additional Pensions' finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Controller, Long Island Rail Road, 146-01 Archer Avenue, Jamaica, New York 11435-4380.

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DRAFT

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

STATEMENTS OF PLAN NET POSITION AS OF DECEMBER 31, 2019 AND 2018

(Amounts in thousands)

	2019	2018
ASSETS:		
Cash	$ 1,114	$ 2,484
Investments at fair value (Notes 2 and 3):		
Investments measured at readily determined fair value	161,583	147,855
Investments measured at net asset value	676,685	669,902
Total investments	838,268	817,757
Receivables:		
Participant and union contributions	20	-
Accrued interest and dividends	477	516
Securities sold	104	58
Variation Margin	30	-
Forward currency contract receivable	-	89
Other	3	3
Total receivables	634	666
Total assets	840,016	820,907
LIABILITIES:		
Due to broker for securities purchased	581	507
Forward Currency & Margin contracts	83	55
Due to broker for admin. fees	(14)	(7)
Due to broker for investment fees	(342)	1,035
Total liabilities	308	1,590
PLAN NET POSITION RESTRICTED FOR PENSIONS	$ 839,708	$ 819,317

See notes to financial statements.

DRAFT

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

STATEMENTS OF CHANGES IN PLAN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(Amounts in thousands)

	2019	2018
ADDITIONS:		
Investment income / (loss):		
Net realized and unrealized gains / (losses)	$ 108,457	$ (35,344)
Interest income	2,216	1,715
Dividend income	8,309	11,441
Total investment income / (loss)	118,982	(22,188)
Less investment expenses	(3,642)	(8,910)
Total Net investment income	115,340	(31,098)
Contributions (Note 5):		
Employer	62,774	59,500
Participant and union	249	333
Total contributions	63,023	59,833
Total additions	178,363	28,735
DEDUCTIONS:		
Benefits paid to participants	157,254	159,565
Administrative expenses	718	1,180
Total deductions	157,972	160,745
NET INCREASE / (DECREASE) IN PLAN NET POSITION	20,391	(132,010)
PLAN NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	819,317	951,327
End of year	$ 839,708	$ 819,317

See notes to financial statements.

1. PLAN DESCRIPTION

The Long Island Rail Road Company Plan for Additional Pensions (the "Additional Plan") is a single-employer defined benefit plan administered by the Board of Pension Managers. The following brief description of the Additional Plan is provided for general information purposes only. Participants should refer to the Additional Plan document for more complete information.

General—Effective July 1, 1971, The Long Island Rail Road Company (the "Company") adopted two fully integrated defined benefit pension plans, The Long Island Rail Road Company Pension Plan (the "Plan") and the Additional Plan. These plans cover employees hired before January 1, 1988. Effective January 1, 1989, the Plan was amended to limit the accrual of credited service time and determination of average earnings through December 31, 1988. All pension plan benefits were frozen as of that date by virtue of a Plan amendment. All benefit accruals subsequent to that date are provided under the Additional Plan, which was amended to provide for accruals on and after January 1, 1989. The Additional Plan benefits are now the total benefit that would have been paid previously from the sum of the two plans reduced by any portion of benefits that a participant received from the frozen pension plan benefits. The total benefits payable to participants have not been changed. These financial statements do not include any amounts related to the Plan, as all Plan assets were transferred into the MTA Defined Benefit Pension Plan, effective October 2, 2006.

Both Company's pension plans are governmental plans and, accordingly, are not subject to funding and other requirements of the Employee Retirement Income Security Act of 1974 ("ERISA").

The Metropolitan Transportation Authority Defined Benefit Pension Plan and The Long Island Rail Road Company Plan for Additional Pensions comprise the Metropolitan Transportation Authority's Master Trust. The MTA Master Trust is governed by the Board of Pension Managers (the "Board"). The Board has contracted with JP Morgan Chase, as the Trustee for the Trust, and has provided the Master Trust Investment Guidelines to the respective Trustee. These guidelines provide the specific goals and objectives of the Trust as well as the allowable investments permitted under the Trust. Under the Investment Guidelines, the Trustee is permitted to invest in commingled funds on behalf of the Master Trust.

The total asset allocation of the 2019 Master Trust is 86.09% for the Metropolitan Transportation Authority Defined Benefit Pension Plan and 13.91% for the Long Island Rail Road Company Plan for Additional Pensions for the year ended December 31, 2019.

The total asset allocation of the 2018 Master Trust is 84.19% for the Metropolitan Transportation Authority Defined Benefit Pension Plan and 15.81% for the Long Island Rail Road Company Plan for Additional Pensions for the year ended December 31, 2018.

Pension Benefits—All full-time employees who were hired before January 1, 1988, are eligible for Additional Plan membership. At January 1, 2019 and 2018, the most recent valuation dates, the Additional Plan's membership consisted of the following:

	January 1 2019	**January 1 2018**
Active plan members	49	84
Terminated vested & other inactives	20	24
Retirees and beneficiaries receiving benefits	5,626	5,755
Total	5,695	5,863

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 Company, subject to the obligations of the Company under its collective bargaining agreements. The Company's Board of Directors must approve all amendments. 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.

The reduction of pension benefits for amounts payable under the Federal Railroad Retirement Act is as follows:

(i) 25% for an employee who had 20 years credited service prior to July 1, 1974,
(ii) 50% for any other employee first employed before July 1, 1974, and
(iii) 100% for any employee first employed on or after July 1, 1974

Beginning in 1999, for all represented employees who were hired between July 1, 1974, and December 31, 1987, who were employees after January 1, 1999, and were not retired when their collective bargaining agreement was ratified and approved by MTA Board after that date, the offset of Railroad Retirement Benefits is reduced to 50% (under the Additional Plan). For all management employees who were hired between July 1, 1974, and December 31, 1987, and who were employees on September 30, 1999, the offset of Railroad Retirement Benefits was reduced to 50% (under the Additional Plan).

For participants, the Additional Plan has both non-contributory and contributory requirements. 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 to the Additional Plan. The Company 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 $5,000 is payable upon death on behalf of a non-vested participant or vested participant whose pension rights were waived.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting—The Additional Plan's financial statements are prepared on the accrual basis of accounting under which deductions are recorded when the liability is incurred and revenues are recognized in the accounting period in which they are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Contributions from members are recorded when the employer makes payroll deductions from plan members. Employer contributions are recognized when due in accordance with the terms of the Plan. Additions to the Plan consist of contributions (member and employer) and net investment income. Investment purchases and sales are recorded as of trade date.

For financial reporting purposes, The Additional Plan adheres to accounting principles generally accepted in the United States of America. The Additional Plan applies all applicable pronouncements of the Governmental Accounting Standards Board ("GASB").

New Accounting Standards Adopted – The Plans adopted GASB Statement No. 84, Fiduciary Activities.

This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

A fiduciary component unit, when reported in the fiduciary fund financial statements of a primary government, should combine its information with its component units that are fiduciary component units and aggregate that combined information with the primary government's fiduciary funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets. There was no material impact on the Program's financial statements as a result of the implementation of GASB Statement No. 84.

GASB Statement No. 95, Postponement of Effective Dates of Certain Authoritative Guidance, provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Recent Accounting Pronouncements — GASB has issued the following pronouncements that may affect the future financial position, results of operations, or financial presentation of the Plan upon implementation. The Plan has not yet evaluated the effect of implementation of these standards.

GASB Statement No.	GASB Accounting Standard	MTA Pension Plan Required Year of Adoption
92	*Omnibus 2020*	2022

Use of Management's Estimates—The preparation of 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 amount of assets and liabilities and disclosure of contingent assets and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Estimates include fair market value of investments, the annual required contribution and the Net Pension liability.

Payment of Benefits—Benefits are recorded when paid.

Investment and Administrative Expenses—Investment and administrative expenses are paid by the Additional Plan assets and accordingly are reflected in the accompanying financial statements.

Income Tax Status—The Additional Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) of the Internal Revenue Code. Accordingly, the Additional Plan is tax-exempt and is not subject to the provisions of ERISA.

3. CASH AND INVESTMENTS

Investment Policy – The Plan's policy statement is issued for the guidance of fiduciaries, including the members of the Board and investment managers, in the course of investing the assets of the Trust. The investments of the Trust will be made for the exclusive benefit of the Plan participants and their beneficiaries. Policy guidelines may be amended by the Board upon consideration of the advice and recommendations of the investment professionals.

In order to have a reasonable probability of achieving the target return at an acceptable risk level, the Board has adopted the asset allocation policy outlined below. The actual asset allocation will be reviewed on, at least, a quarterly basis and will be readjusted when an asset class weighting is outside its target range. The following was the MTA Defined Benefit Pension Plan Board adopted asset allocation policy, which includes assets of the Additional Plan, as of December 31, 2019.

Asset Class	Target Allocation (%)	Target Range (%)	Policy Benchmark
Equities	29.0	24-34	
Domestic Large Cap	10.0	5-15	S&P 500
Domestic Small Cap	5.5	2-10	Russell 2000
International Developed Markets Equities	10.0	5-15	MSCI EAFE
Emerging Markets Equities	3.5	2-6	MSCI Emerging Markets
Fixed Income	15.0	9-21	Manager Specific
Global Asset Allocation*	20.0	15-33	50% World Equity/ 50% Citigroup WGBI unhedged
Opportunistic Investments	6.0	0-15	Manager Specific
Absolute Return	15.0	10-22	Manager Specific
Real Assets	5.0	0-10	Manager Specific
Real Estate	3.0	0-10	Manager Specific
Private Equity	7.0	0-10	Manager Specific
Total	**100.0**		

* The Global Asset Allocation managers will invest across numerous liquid asset classes including: stocks, bonds, commodities, TIPS and REITs.

Investment Objective —The investment objective of the funds is to achieve consistent positive real returns and to maximize long-term total return within prudent levels of risk through a combination of income and capital appreciation.

Investment Guidelines — The Board of Pension Managers executes investment management agreements with professional investment management firms to manage the assets of the Plan. The fund managers must adhere to guidelines that have been established to limit exposure to risk.

All Securities managers shall be registered advisors under the Investment Advisors Act of 1940.

The overall capital structure targets and permissible ranges for eligible asset classes of the Trust are detailed within the Investment Policy Statement. Full discretion, within the parameters of the guidelines described herein and in any individual investment policy associated with that allocation, is granted to the investment managers regarding the asset allocation, the selection of securities, and the timing of transactions. It is anticipated that the majority of investment managers will be funded through commingled funds, however, in some cases (likely equity and fixed income mandates) separate account vehicles may be utilized. For separate accounts, individual manager guidelines and/or exemptions are specified in each approved investment management agreement ("IMA"). Should there be conflicts, the individual manager guidelines set forth in the IMA supersede the general guidelines in the Investment Policy Statement. For commingled funds, investment guidelines and/or exemptions are specified in such vehicle's offering documents. Should there be conflicts, the individual vehicle's investment guidelines supersede the general guidelines in the Investment Policy Statement.

Individual investment manager benchmarks and performance requirements are specified within the Investment Policy Statement. Performance of the Trust will be evaluated on a regular basis. Evaluation will include the degree to which performance results meet the goals and objectives as herewith set forth. Toward that end, the following standards will be used in evaluating investment performance:

1. The compliance of each investment manager with the guidelines as expressed herein, and
2. The extent to which the total rate of return performance of the Trust achieves or exceeds the targeted goals.

Fixed Income Managers—Investment managers may not purchase inverse floating rate bonds, structured notes, commodities, securities on margin, sell short, lend securities, invest in private placements (other than 144A Privates), real estate investments, and oil, gas and mineral exploration investments without the written consent of the Board of Managers. The fixed-income portion of the Additional Plan's assets shall be invested in marketable, fixed income securities. The following are acceptable:

- Domestic fixed income investments are permitted, subject to the guidelines reflected in Investment Policy Statement. Yankee bonds, which are dollar denominated foreign securities, may be held by each domestic manager in proportions which each manager shall deem appropriate.

- International fixed income securities are permitted, subject to the guidelines reflected in Investment Policy Statement. Generally defined, the Citigroup World Government Bond Index represents the opportunity set for international developed markets. The J.P. Morgan Emerging Markets Bond Index-Global represents the opportunity set for international emerging markets denominated in USD. The J.P. Morgan GBI-EM Global Diversified Index represents the opportunity set for international emerging markets denominated in local currency. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- Investment managers are responsible for making an independent analysis of the credit worthiness of securities and their suitability as investments regardless of the classifications provided by rating agencies.

- The average duration (interest rate sensitivity) of an actively managed fixed income portfolio shall range within two years of the benchmark's duration.

- For domestic fixed income portfolios, individual manager account for the securities of an individual issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% at market at any time.

- For international bond portfolios, individual manager account for the securities of any non-governmental issuer shall not constitute more than 5% at market at any time.

Equity Investment Managers—The equities investment managers may not purchase commodities, securities on margin, sell short, lend securities, invest in private placements, real estate investments, oil, gas and mineral exploration investments, and nominally public issues without the written consent of the Board of Managers. The manager may purchase Rule 144A securities provided such securities are judged by the manager to be liquid and don't in the aggregate exceed 10% of the market value of the portfolio. The manager shall also be able to purchase securities if such securities are convertible into publicly traded equities.

- Domestic equity investments are permitted, subject to the guidelines. American Depository Receipts (ADRs), which are dollar denominated foreign securities traded on the domestic U.S. stock exchanges (e.g., Reuters, Nestle, Sony) may be held by each domestic stock manager in proportions which each manager shall deem appropriate.

- International equities are permitted, subject to the guidelines. Generally defined, the Morgan Stanley EAFE (Europe, Australasia and the Far East) Index represents the opportunity set for international developed markets. The Morgan Stanley Emerging Markets Free Index represents the opportunity set for international emerging markets. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- The equity specialists may vary equity commitment from 90% to 100% of assets under management.

- Individual manager account may hold no more than 8% at market or 1.5x the manager's benchmark weight (whichever is greater) of any single company's stock.

Overlay Managers

- For a variety of reasons, the investment program may carry large amounts of cash throughout the year. In order to achieve the actuarial assumed returns on the total investment program, the Board may retain a futures overlay manager. The overlay manager shall use exchange traded futures contracts to expose the cash to the long-term target asset allocation.

- In addition, the overlay manager may be utilized for the following:
  a) Expose un-invested assets of domestic and international equity investment managers to their respective equity benchmarks through the use of futures contracts,
  b) Assist the Board in rebalancing, transitions, and/or gaining exposure to approved asset classes,
  c) Provide the market (or "beta") exposures in a portable alpha program.
  d) The overlay manager shall ensure that all futures positions are fully collateralized and the manager is prohibited from leveraging any portion of the portfolio.

Alternative Investments Managers

Alternative investments are broadly categorized into the following categories:

- Opportunistic
- Real assets
- Real estate
- Absolute return
- Private equity

Common features of alternative investments are limited liquidity, the use of derivatives, leverage and shorting, lower regulatory oversight, limited transparency, and high fees. Compensating for these risks, these investments offer the potential of diversification and/or higher rates of return over time.

Derivatives Policy

Where appropriate, investment managers may use derivative securities for the following reasons:

- Hedging. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.

- Creation of Market Exposures. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.

- Management of Country and Asset Allocation Exposure. Investment managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for these purposes.

- Additional uses of derivatives shall be approved by the Board or set forth in the individual investment guidelines or the offering documents prior to implementation and shall be restricted to those specific investment managers.

Ineligible Investments (Separately Managed Accounts) —Unless specifically approved by the Board or set forth in the individual investment guidelines, certain securities, strategies and investments are ineligible for inclusion within separately managed accounts. Among these are:

- Privately-placed or other non-marketable debt, except securities issued under Rule 144a,
- Lettered, legend or other so-called restricted stock,
- Commodities
- Short sales, and,
- Direct investments in private placements, real estate, oil and gas and venture capital, or funds comprised thereof.

Exceptions:

The Board of Managers, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds) may, from time to time, allow investment in such funds. The Board recognizes that it cannot give specific policy directives to a fund whose policies are already established; therefore, the Board is relying on the investment consultant to assess and monitor the investment policies of any funds used by the Plan to ascertain whether they are appropriate.

Investment Valuation—Investments primarily include money market funds, equity securities, United States government securities, corporate bonds and debentures, asset backed securities, mortgage and commercial backed securities, mutual and commingled funds. All investments are registered with securities held by the trustee under a grantor trust, in the name of the Additional Plan. The values of Additional Plan investments are adjusted to fair value as of the last business day of each month based on quoted market prices or net asset value, which is determined to be a practical expedient for measuring fair value, except for certain cash equivalents, which are stated at cost and approximate market value. Purchases and sales of securities are recorded on a trade-date basis.

Income Recognition—Gains or losses from investment transactions are recognized on a trade date basis. Such investment gains or losses are determined using the average cost method. Dividend income is recorded on the ex-dividend date and interest income is recorded on the accrual basis.

Risks and Uncertainties— The Plan's investments are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and level of uncertainty related to changes in the value of investment securities, it is possible that changes in risks in the near term would materially affect the amounts reported in the Plan's financial statements.

The financial markets, both domestically and internationally, have demonstrated significant volatility on a daily basis, which affects the valuation of investments. The Plan utilizes asset allocation strategies that are intended to optimize investment returns over time in accordance with investment objectives and with acceptable levels of risk.

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Investments measured by fair value level				
(In thousands)		2019		
		Quoted Price in		
		Active Markets for	Significant Other	Significant
	December 31,	Identical Assets	Observable Inputs	Unobservable Inputs
	2019	Level 1	Level 2	Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 58,334,501	$ 58,334,501	$ -	$ -
Separate account small-cap equity funds	41,308,064	41,308,064	-	-
Separate account small-Real Estate Investments Trusts	8,580,245	8,580,245	-	-
Total equity investments	108,222,810	108,222,810		
Debt Securities				
Separate account debt funds	53,359,825	-	53,359,825	-
Total debt investments	53,359,825	-	53,359,825	-
Total investments by fair value	$ 161,582,635	$ 108,222,810	$ 53,359,825	$ -

Investments measured at NAV				
(In thousands)		2019		
	December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled large cap equity funds	$ 29,960,805	$ -		
Comingled international equity funds	99,143,539	-	Daily	None
Comingled emerging market equity funds	32,921,171	-	Daily, monthly	None
Total equity investments measured at the NAV	162,025,515	-		
Debt Securities				
Comingled debt funds	49,336,067	-	Daily, monthly, quarterly	None
Mutual fund	13,279,340	-	Daily	None
Total debt investments measured at the NAV	62,615,407	-		
Absolute return:				
Directional	26,680,510	-	Monthly	3-60 days
Direct lending	33,011,927	4,549,558	Bi-annually	60 plus days
Distressed securities	9,377,022	-	Not eligible	N/A
Credit long	9,180,131	-	Quarterly	3-30 days
Credit long/short	14,273,983	-	Quarterly	3-60 days
Equity long/short	9,847,110	-	Quarterly	3-60 days
Event driven	15,365,970	315,555	Quarterly, Bi-annually	60-120 days
Global macro	15,550,447	-	Monthly	3-30 days
Global tactical asset allocation	18,283,896	-	Daily, monthly	3-30 days
Multistrategy	20,620,671	-	Quarterly	3-60 days
Risk parity	65,641,424	-	Monthly	3-30 days
Structured credit	463,084	-	Not eligible	N/A
Total absolute return measured at the NAV	238,296,175	4,865,112		
Private equity - private equity partnerships	57,065,847	31,015,519	Not eligible	N/A
Real assets				
Comingled real estate funds	102,337,387	-	Not eligible	N/A
Energy	20,040,659	11,565,467	Not eligible	N/A
Infrastructure	4,661,214	735,346	Not eligible	N/A
Total real assets measured at the NAV	127,039,260	12,300,813		
Short term investments measured at the NAV	29,642,564			
Total investments measured at the NAV	$ 676,684,768	$ 48,181,444		
Total investments at fair value	$ 838,267,403			

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Investments measured at readily determined fair value (FV)

	December 31, 2018	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 49,096,910	$ 49,096,910	$ -	$ -
Separate account small-cap equity funds	37,058,405	37,058,405	-	-
Separate account real estate investment trust	7,571,850	7,571,850	-	-
Total equity investments	93,727,165	93,727,165	-	-
Debt Securities				
Separate account debt funds	54,127,719	-	54,127,719	-
Total debt investments	54,127,719	-	54,127,719	-
Total investments at readily determined FV	$ 147,854,884	$ 93,727,165	$ 54,127,719	$ -

Investments measured at the net asset value (NAV)

	December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 22,912,861	$ -	Daily	None
Commingled international equity funds	89,234,524	-	Daily	None
Commingled emerging market equity funds	21,286,863	-	Daily, monthly	None
Total equity investments measured at the NAV	133,434,248	-		
Debt Securities				
Commingled debt funds	45,843,152	-	Daily, monthly, quarterly	None
Mutual funds	13,949,778	-	Daily	None
Total debt investments measured at the NAV	59,792,930	-		
Absolute return:				
Directional	20,872,200	-	Monthly	3-60 days
Direct lending	33,843,348	9,822,183	Bi-annually	60 plus days
Distressed securities	11,534,338	-	Not eligible	N/A
Credit long	9,681,199	-	Quarterly	3-30 days
Credit long/short	15,165,904	-	Quarterly	3-60 days
Equity long/short	10,415,170	-	Quarterly	3-60 days
Event driven	16,322,094	358,610	Quarterly, Bi-annually	60-120 days
Global macro	17,737,840	-	Monthly	3-30 days
Global tactical asset allocation	45,817,868	-	Daily, monthly	3-30 days
Market neutral	-	-	Quarterly	3-60 days
Multistrategy	20,517,400	-	Quarterly	3-60 days
Risk parity	63,371,780	-	Monthly	3-30 days
Structured credit	1,390,686	-	Not eligible	N/A
Total absolute return measured at the NAV	266,669,827	10,180,793		
Private equity - private equity partnerships	55,327,432	28,963,929	Not eligible	N/A
Real assets				
Commingled real estate funds	102,822,741	2,651,662	Not eligible	N/A
Energy	16,886,417	11,859,259	Not eligible	N/A
Infrastructure	5,316,564	1,399,180	Not eligible	N/A
Total real assets measured at the NAV	125,025,723	15,910,101		
Short term investments measured at the NAV	29,652,175	-		
Total investments measured at the NAV	$ 669,902,334	$ 55,054,823		

Total investments at fair value	$ 817,757,218

Concentration of Credit Risk—Individual investments held by the Additional Plan that represent 5% or more of the Additional Plan's net assets available for benefits at December 31, 2019 and 2018, are as follows:

	2019	2018
Investments at fair value as determined by quoted market prices:		
JPMCB Strategic Property Fund	$ 66,360	$ 63,559

Credit Risk—The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2019 and 2018:

(Amount in thousands) Quality Rating—S&P	2019 Fair Value	Percentage of Fixed Income Portfolio	2018 Fair Value	Percentage of Fixed Income Portfolio
AAA	$ 54,784	21.09 %	$ 23,126	9.28 %
AA	20,507	7.89	33,898	13.61
A	20,159	7.76	12,454	5.00
BBB	20,248	7.79	19,221	7.72
BB	21,729	8.36	18,664	7.49
B	16,033	6.17	15,520	6.23
CCC	4,355	1.68	3,519	1.41
CC	1,002	0.39	27	0.01
C	639	0.25	258	0.10
D	1,167	0.45	1,197	0.48
Not rated	55,625	21.41	69,209	27.79
Total credit risk debt securities	216,247	83.23	197,093	79.12
U.S. Government bonds*	43,542	16.77	51,986	20.88
Total Fixed Income Securities	$ 259,789	100.00 %	$ 249,079	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	578,479		568,678	
Total investments	$ 838,268		$ 817,757	

* U.S. Treasury Bonds, Notes and Treasury-inflation protected securities are obligations of the U.S. government or explicitly guaranteed by the U.S. government and therefore not considered to have a credit risk.

Custodial Credit Risk—Deposits are exposed to custodial credit risk if they are uninsured and uncollateralized. Custodial credit risk is the risk that, in the event of a failure of the counterparty, the Additional Plan will not be able to recover the value of its investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Additional Plan and are held by either the counterparty or the counterparty's trust department or agent but not in the Additional Plan's name.

Consistent with the Additional Plan's trust custodial administration agreement, the investments are held by the Additional Plan's custodian and registered in the Additional Plan's name.

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 100-basis point change in interest rates. The lengths of investment maturities (in years), as of December 31, 2019 and 2018 are as follows:

(Amounts in thousands)	**2019**		**2018**	
Investment Type	**Fair Value**	**Duration**	**Fair Value**	**Duration**
Chase	$ 53,360	6.35	$ 54,128	12.90
Wellington Blended Emerging Market Debt	12,504	6.44	12,842	5.44
Bridgewater All Weather Fund	28,736	5.60	18,012	8.30
Wellington Opportunistic Fund	-	-	10,157	1.52
Bridgewater Pure Alpha Fund	5,770	1.30	26,690	(0.90)
Bridgewater Major Markets Fund	(1,113)	(2.90)	(3,091)	(7.10)
Northern Trust William Capital	1,467	-	1,625	-
Park Square Capital Credit Opportunities Fund	5,909	0.18	6,055	-
Libremax Partners Fund	22,029	2.82	15,166	2.63
Gramercy Distressed Opportunistic Fund	6,739	(0.07)	4,221	0.26
Makuria Credit Fund	3,161	5.38	3,318	5.38
Crescent Capital High Income Fund	6,496	2.92	9,676	2.56
Wellington Fixed Income	402	5.80	-	-
Wellington Global Managed Risk Fund	37,337	10.70	13,819	6.20
Orchard Landmark L.P.	17,177	1.18	17,936	1.44
PIMCO Distressed Sr Cr Opportunities FD II	9,180	2.83	9,681	2.18
Allianz Structured Alpha Fund	26,681	0.13	20,872	0.13
GAM Unconstrained Bond Fund	-	-	6,538	0.10
State Street Long US Treasury	5,349	18.06	5,294	17.38
State Street Real Asset Fund	4,520	4.67	4,519	5.84
EIG Energy Fund XV	290	-	655	-
EIG Energy XVI	837	-	916	-
Riverstone Credit Partners LP Fund II	3,951	4.00	3,270	4.00
RCP II NEPC Syndication Partners	854	4.00	324	4.00
Park SQ Capital Credit Opportunities Fund III	4,863	0.13	2,659	-
Canyon Value Realization Fund	3,291	2.44	3,797	3.26
Total fixed income	$ 259,789		$ 249,079	
Portfolio modified duration		4.35		5.20
Investments with no duration reported	578,479		568,678	
Total investments	$ 838,268		$ 817,757	

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Foreign Currency Risk—Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Each investment manager, through the purchase of units in a commingled investment trust fund or international equity mutual fund establishes investments in international equities. The Additional Plan also holds investments in American Depository Receipts ("ADRs"), which are not included in the below schedule since they are denominated in US dollars and accounted for at fair market value.

The Additional Plan's foreign currency exposures as December 31, 2019 and 2018 are follows (amounts in U.S. dollars):

	December 31,	
Foreign Currency	**2019**	**2018**
Argentina Peso	$ 132	$ 3,179
Australian Dollar	5,472	4,255
Bahraini Dinar	-	75
Bangladesh (Taka)	94	72
Bermudian Dollar	-	553
Botswana Pula	115	32
Brazil Cruzeiro Real	7,676	5,862
British Pound (Sterling)	11,757	8,513
Bulgarian Lev	5	3
Caymanian Dollar	52	156
Chilean Peso	932	1,394
China (Yuan Renminbi)	2,344	3,239
Colombian Peso	384	803
Croatia Kuna	111	97
Czech Koruna	11	242
Dominican Peso	51	2
Dollar (Canadian)	4,123	6,521
Dollar (Hong Kong)	3,277	2,463
Dollar (New Zealand)	559	(97)
Dollar (New Taiwan)	3,820	2,009
Egyptian Pound	308	225
Euro	17,443	18,613
Franc (Swiss)	1,243	2,894
Geogian Lari	194	181
Ghanaian Cedi	26	35
Hungary (Forint)	548	778
Iceland Krona	286	546
Indian Rupee	4,711	4,344
Indonesia Rupiah	2,990	1,408
Israel (Shekel)	104	268
Japanese Yen	2,409	2,245
Jordanian Dinar	108	72
Kazakhstanti Tenge	8	81
Kenyan Shilling	115	75
Krona (Swedish)	1,101	1,205
Krone (Danish)	1,636	1,301
Krone (Norwegian)	1,417	425
Kuwait Dinar	321	152
Lao Kip	29	88
Lebanese Pound	-	9
Malaysian (Ringgit)	1,049	834
Mauritius (Rupee)	111	178
Mexican New Peso	1,692	703
Morocco Dirham	115	69
Nigerian Naira	186	78
Omanian Rial	106	62
Pakistani Rupee	249	193
Panamanian Balboa	6	30
Peru New Sol	164	355
Philippines Peso	1,258	616
Polish (New Zloty)	(1)	(17)
Qatar Riyal	244	188
Romanian Leu	233	325
Russian Federation Ruble	2,477	25
Saudi Riyal	492	154
Singapore Dollar	1,767	(779)
South Africa Rand	1,854	2,177
South Korean Won	5,820	3,969
Sri Lankan Rupee	106	63
Thai Bhat	1,204	1,042
Tunisian Dinar	59	28
Turkish Lira	(211)	9
UAE Dirham	292	235
Ukrainian Hryvnia	66	13
Uruguayan New Peso	1	4
Vietnamese Dong	79	139
Yuan	211	-
Other	14	1,866
Totals	$ 95,551	$ 86,877

Additional Information—The Additional Plan is part of the MTA Master Trust of which the Additional Plan participates on a percentage basis. JP Morgan Chase is the trustee of the MTA Master Trust. The percentage of the Additional Plan ownership for the years ended December 31, 2019 and 2018, were 13.91% and 15.81%, respectively.

	December 31, 2019		December 31, 2018	
	Master Trust Total	Additional Plan	Master Trust Total	Additional Plan
Total Investments:				
Investments measured at readily determined fair value	$ 1,161,288	$ 161,583	$ 935,046	$ 147,855
Investments measured at the net asset value	4,320,014	610,324	3,834,562	606,343
Total investments measured at fair value	$ 5,481,302	$ 771,907	$ 4,769,608	$ 754,198

There are additional investments which reside outside of the Master Trust and are presented within these financial statements.

4. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2019 and 2018 were as follows (in thousands):

	2019	2018
Total pension liability	$ 1,411,570	$ 1,411,144
Fiduciary net position	839,708	819,317
Net pension liability	$ 571,862	$ 591,827
Fiduciary net position as a percentage of the total pension liability	59.49 %	58.06 %

Actuarial Methods and Assumptions—The total pension liability as of December 31, 2019 was determined by an actuarial valuation date of January 1, 2019, that was updated to roll forward the total pension liability to the respective year-end. Actuarial valuations are performed annually as of January 1.

Discount Rate—The discount rate used to measure the total liability as of December 31, 2019 was 6.50% and as of December 31, 2018 was 7%. The projection of cash flows used to determine the discount rate assumed that plan contributions will be made in accordance with the Employer funding policy as projected by the Plan's actuary. Based on those assumptions, the 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 projected benefit payments to determine the total pension liability.

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Sensitivity of the Net Pension Liability to Changes in the Discount Rate—The following presents the net pension liability of the Plan in 2019, calculated using the discount rate of 6.50%; as well as what the Plan's net pension would be if it were calculated using a discount rate that is 1-percentage point lower (5.50%) or 1-percentage point higher (7.50%) than the current rate:

2019 (In thousands)	**Decrease 5.50%**	**Discount Rate 6.50%**	**Increase 7.50%**
Net pension liability	$ 683,429	$ 571,862	$ 474,839

The following presents the net pension liability of the Plan in 2018, calculated using the discount rate of 7.00%; as well as what the Plan's net pension would be if it were calculated using a discount rate that is 1-percentage point lower (6.00%) or 1-percentage point higher (8.00%) than the current rate:

2018 (In thousands)	**Decrease 6.00%**	**Discount Rate 7.00%**	**Increase 8.00%**
Net pension liability	$ 701,222	$ 591,827	$ 496,547

Additional information of the latest actuarial valuation follows:

Valuation date	January 1, 2019	January 1, 2018
Valuation timing	Actuarially determined contributions calculated as of December 31, for the fiscal year and discounted to July 1 to reflect monthly payments throughout the year.	Actuarially determined contributions calculated as of December 31, for the fiscal year and discounted to July 1 to reflect monthly payments throughout the year.
Actuarial cost method	Entry age normal.	Entry age normal.
Amortization method	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.
Actuarial 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.
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
Actuarial assumptions:		
Investment rate of return	6.5%, net of investment expenses	7.0%, net of investment expenses
Projected salary increases	3.0%	3.0%
Inflation/Railroad Retirement wage base	2.25%; 3.25%	2.5%; 3.5%

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Calculation on Money-Weighted Rate of Return—The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the middle of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses.

2019 - Schedule of Calculations of Money-Weighted Rate of Return				
(Amounts in thousands)				**Net External**
	Net External	**Periods**	**Period**	**Cash Flows**
	Cash Flows	**Invested**	**Weight**	**With Interest**
Beginning value—January 1, 2019	$ 819,317	12.00	1.00	$ 943,327
Monthly net external cash flows:				
January	(13,144)	12.00	1.00	(15,133)
February	(8,169)	11.00	0.92	(9,299)
March	(8,169)	10.00	0.83	(9,182)
April	(8,169)	9.00	0.75	(9,079)
May	(8,169)	8.00	0.67	(8,977)
June	(8,169)	7.00	0.58	(8,864)
July	(8,169)	6.00	0.50	(8,765)
August	(8,169)	5.00	0.42	(8,667)
September	(8,169)	4.00	0.33	(8,557)
October	(8,169)	3.00	0.25	(8,461)
November	(8,169)	2.00	0.17	(8,367)
December	(120)	68.09	5.67	(267)
Ending Value—December 31, 2019				$ 839,708
Money—Weighted Rate of Return	15.14 %			

2018 - Schedule of Calculations of Money-Weighted Rate of Return				
(Amounts in thousands)				**Net External**
	Net External	**Periods**	**Period**	**Cash Flows**
	Cash Flows	**Invested**	**Weight**	**With Interest**
Beginning value—January 1, 2018	$ 951,327	12.00	1.00	$ 918,163
Monthly net external cash flows:				
January	(13,368)	12.00	1.00	(12,902)
February	(8,284)	11.00	0.92	(8,018)
March	(8,284)	10.00	0.83	(8,044)
April	(8,284)	9.00	0.75	(8,067)
May	(8,284)	8.00	0.67	(8,090)
June	(8,284)	7.00	0.58	(8,115)
July	(8,284)	6.00	0.50	(8,139)
August	(8,284)	5.00	0.42	(8,162)
September	(8,284)	4.00	0.33	(8,188)
October	(8,284)	3.00	0.25	(8,211)
November	(8,284)	2.00	0.17	(8,234)
December	(4,701)	1.76	0.15	(4,676)
Ending Value—December 31, 2018				$ 819,317
Money—Weighted Rate of Return	-3.49%			

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Calculation on Long-Term Expected Rate of Return—The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2019 and 2018.

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2019

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	9.00%	1.51%
US Long Bonds	Barclays LT Gvt/Credit	1.00%	2.41%
US Bank / Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	2.74%
US Inflation-Indexed Bonds	Barclays US TIPs	2.00%	0.71%
US High Yield Bonds	BAML High Yield	4.00%	3.13%
Emerging Markets Bonds	JPM EMBI Plus	2.00%	3.36%
US Large Caps	S&P 500	12.00%	4.33%
US Small Caps	Russell 2000	6.00%	5.65%
Foreign Developed Equity	MSCI EAFE NR	12.00%	5.95%
Emerging Markets Equity	MSCI EM NR	5.00%	8.05%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.50%
Private Real Estate Property	NCREIF Property	4.00%	3.80%
Commodities	Bloomberg Commodity	9.00%	9.50%
Private Equity	Cambridge Private Equity	1.00%	2.79%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.26%
Hedge Funds - Event-Driven	HFRI: Event-Driven	6.00%	3.41%
Hedge Funds - Equity Hedge	HFRI: Equity Hedge	3.00%	3.82%
Assumed Inflation - Mean			2.25%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Normal Mean Return			6.73%
Portfolio Standard Deviation			10.94%
Long-Term Expected Rate of Return selected by MTA			**6.50%**

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2018

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	9.00%	2.03%
US Long Bonds	Barclays LT Gvt/Credit	1.00%	2.44%
US Bank /Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	3.08%
US Inflation-Indexed Bonds	Barclays US TIPs	2.00%	1.16%
US High Yield Bonds	BAML High Yield	4.00%	3.93%
Emerging Markets Bonds	JPM EMBI Plus	2.00%	3.76%
US Large Caps	S&P 500	12.00%	4.71%
US Small Caps	Russell 2000	6.00%	5.93%
Foreign Developed Equity	MSCI EAFE NR	12.00%	6.15%
Emerging Markets Equity	MSCI EM NR	5.00%	8.22%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.80%
Private Real Estate Property	NCREIF Property	4.00%	3.69%
Commodities	Bloomberg Commodity	9.00%	9.50%
Private Equity	Cambridge Private Equity	1.00%	2.85%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.28%
Hedge Funds - Event-Driven	HFRI: Event-Driven	6.00%	3.38%
Hedge Funds - Equity Hedge	HFRI: Equity Hedge	3.00%	3.85%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Normal Mean Return			7.19%
Portfolio Standard Deviation			10.87%
Long-Term Expected Rate of Return selected by MTA			**7.00%**

5. CONTRIBUTIONS

Employer contributions are actuarially determined on an annual basis and are recognized when due. The Additional Plan 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 Company's Board of Managers of Pensions (1.5% in 2019 and 2018), 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 Company's Board of Managers of Pensions (1.5% in 2019 and 2018).

The Company performs a public service of providing essential passenger transportation between New York City and Long Island. Substantial deficits result from providing these services and the Company expects that such deficits will continue in the foreseeable future. Funding for the Additional Plan by the Company is provided by MTA, which obtains the required funds from New York State, federal grants, the sale of bonds to the public and other sources. Certain funding by MTA is made to the Company on a discretionary basis. The continuance of the Company's funding for the Additional Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

6. ACTUARIAL METHODS AND ASSUMPTIONS

A. ACTUARIAL VALUATION METHOD

The Plan's actuarial cost method is the Entry Age Normal method. Under this method, a projected benefit is determined at each active participant's assumed retirement age assuming future compensation increases. The plan's normal cost is the sum of each active participant's annual cost for the current year of service determined such that, if it were calculated as a level percentage of compensation each year, it would accumulate at the valuation interest rate over his total prior and future years of service to the assumed retirement date into an amount sufficient to fund the projected benefit. The plan's accrued liability is the (a) present value of each active participant's benefits plus (b) the present value of each inactive participant's future benefits, less (c) the present value of each active participant's normal costs attributable to all future years of service.

B. ASSET VALUATION METHOD

The Asset Valuation method smooths gains and losses over a 5-year period. The formula for the asset valuation method is as follows:

Actuarial Value of Assets = $MV_t - 0.8*UR_1 - 0.6*UR_2 - 0.4*UR_3 - 0.2*UR_4$

Where:

MV_t = Market Value of assets as of the valuation date.

UR_n = Unexpected return during the nth year preceding the valuation date. The unexpected return for a year equals the total investment return minus the total expected return. The total expected return equals the market value of assets at the beginning of the year plus the weighted net cash flow during the year multiplied by the expected rate of return.

The resulting value cannot be less than 80% or greater than 120% of the market value of assets.

C. ACTUARIAL ASSUMPTIONS

Interest—6.50% per annum, compounded annually, net of investment expenses.

Salary Scale—Salaries are assumed to increase 3.00% per year.

Valuation Compensation—The valuation compensation is equal to the annualized base salary as of December 31, 2018 projected six months at the assumed rate of salary increase.

Overtime/Unused Vacation Pay—Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented employees to account for unused vacation pay.

Railroad Retirement Wage Base—3.25% per year.

Consumer Price Index—2.25% per year.

Provision for Expenses—Estimated administrative expenses are added to the normal cost. Administrative expenses are based on the average of the prior two years reported administrate expenses and are assumed payable in the middle of the plan year.

Termination—Withdrawal rates vary by age. Illustrative rates are shown below:

Age	Rate	Age	Rate
20	2.12 %	45	0.96 %
25	1.64	50	0.80
30	1.44	55	0.60
35	1.36	60	0.00
40	1.16	65	0.00

Retirement—Assumed retirement age varies by year of eligibility.

Eligibility Period	Rate of Retirement
First year	40 %
Years 2–4	33
Year 5	37
Years 6–7	35
Years 8–9	33
Years 10–15	55
Years 16 and above	100

Mortality—Pre-Termination—RP-2000 Employee Mortality Table for Males and Females with blue-collar adjustments, projected on generational basis using Scale AA.

Post-Termination—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, both projected on a generational basis using Scale AA.

Marriage—80% of employees are assumed to be married with wives 3 years younger than husbands.

Interest on Employee Contributions—Assumed to be 3.5% per year for future years.

Tier 1 Railroad Offset—The Tier 1 Railroad offset, which is designed similar to a Social Security Benefit, was estimated by assuming that an individual would continue to earn compensation at the level in effect at his date of termination until eligibility for Railroad Benefits and further increased by 2% per year from the date of termination to age 65.

Participant Data—Retirement benefits are based on information provided in the JP Morgan file as of the valuation date; however, retirement benefits for members subject to DROs a similar order were reported by the System as such amounts include amounts payable to the member and the alternate payees. For inactive participants, offsets for Railroad Retirement benefits ate estimated and assumed to occur at the member's age 65.

Benefits Not Valued—Since the majority of active plan participants are at or close to retirement eligibility, the disability benefit has not been explicitly valued.

D. CHANGES IN ACTUARIAL ASSUMPTIONS

The provision for administrative expenses was changed from a 3-year average to a 2-year average of prior administrative expense charges.

7. PLAN TERMINATION

While the Company expects to continue the Additional Plan indefinitely, it may, subject to its collective bargaining agreements, amend, restrict, or terminate the Additional Plan at any time. In the event of termination, all participants will become fully vested to the extent of their then accrued benefits based on their compensation and service up to the date of termination. The net assets of the Additional Plan will be allocated to provide benefits in accordance with the disposition of the Additional Plan assets in a prescribed manner as defined in the Additional Plan document.

8. COMMINGLING OF PENSION ASSETS FOR INVESTMENT PURPOSES

On July 26, 2006, the MTA Board passed a resolution to transfer the responsibilities for the administration of the Additional Plan to the MTA Defined Benefit Pension Plan ("MTA DB") with no changes in the pension and death benefits and appeal rights provided by the Additional Plan. The trust agreement under the Additional Plan was replaced by the MTA Master Trust Agreement, which allows for the commingling of pension assets for investment purposes under the management of the MTA DB's Board of Managers of Pensions. The Additional Plan and Trust Agreements were amended in September 2006 and all Plan assets were commingled into the MTA Master Trust for investment purposes, effective October 2, 2006.

9. CUSTODIAL AND OTHER PROFESSIONAL SERVICES

JP Morgan Chase Bank is the custodian of plan assets and provides cash receipt and disbursement services to the Additional Plan. New England Pension Consultants reviews the Additional Plan's portfolio, the investment policies as stipulated by the Investment Committee and the performance of the Investment Managers. Actuarial services were provided to the Additional Plan by Milliman Inc.

10. SUBSEQUENT EVENTS

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The actuarial present value of benefits is reported based on certain assumptions pertaining to interest rates and employee demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions will occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the value of accumulated plan benefits.

Subsequent to December 31, 2019, the impact to the Plan of the COVID-19 pandemic during 2020 has resulted in significant reductions in values to many investments of the Plan. It has also significantly decreased interest rates and could impact employee demographics which could change assumption utilized in the future for the actuarial present value of benefits.

While the MTA management of the Plan currently expects to be able to continue to meet immediate contribution requirements, the long-term impact of the effects of the COVID-19 pandemic to the Plan and Plan sponsor as well as any relief from regulatory authorities remain uncertain. The extent of the adverse impact of the COVID-19 pandemic on the Plan's net assets available for benefits and actuarial present value of benefits cannot be reasonably estimated at this time.

The COVID-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the COVID-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

* * * * *

REQUIRED SUPPLEMENTAL SCHEDULES

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THE LONG ISLAND RAIL ROAD COMPANY PLAN **SCHEDULE I**
FOR ADDITIONAL PENSIONS

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS

(In thousands)

	2019	2018	2017	2016	2015	2014
Total pension liability:						
Service cost	$ 621	$ 1,057	$ 1,874	$ 2,752	$ 3,441	$ 3,813
Interest	93,413	97,611	101,477	104,093	106,987	110,036
Changes of benefit terms	-	-	-	-	-	-
Differences between expected and actual experience	13,455	213	1,890	15,801	6,735	-
Changes of assumptions	50,191	-	-	-	-	-
Benefit payments and withdrawals	(157,254)	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)
Net change in total pension liability	426	(60,684)	(54,476)	(35,947)	(39,908)	(43,125)
Total pension liability—beginning	1,411,144	1,471,828	1,526,304	1,562,251	1,602,159	1,645,284
Total pension liability—ending (a)	1,411,570	1,411,144	1,471,828	1,526,304	1,562,251	1,602,159
Plan fiduciary net position:						
Employer contributions	62,774	59,500	76,523	81,100	100,000	407,513
Non-Employer contributions	-	-	145,000	70,000	-	-
Member contributions	249	333	760	884	1,108	1,304
Net investment income	115,339	(31,098)	112,614	58,239	527	21,231
Benefit payments and withdrawals	(157,254)	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)
Administrative expenses	(718)	(1,180)	(1,070)	(611)	(1,218)	(975)
Net change in plan fiduciary net position	20,391	(132,010)	174,110	51,019	(56,654)	272,099
Plan fiduciary net position—beginning	819,317	951,327	777,217	726,198	782,852	510,753
Plan fiduciary net position—ending (b)	839,708	819,317	951,327	777,217	726,198	782,852
Employer's net pension liability—ending (a)-(b)	$ 571,862	$ 591,827	$ 520,501	$ 749,087	$ 836,053	$ 819,307
Plan fiduciary net position as a percentage of the total pension liability	59.49 %	58.06 %	64.64 %	50.92 %	46.48 %	48.86 %
Covered-employee payroll	$ 5,210	$ 7,894	$ 11,046	$ 18,216	$ 25,712	$ 29,334
Employer's net pension liability as a percentage of covered-employee payroll	10,976.25 %	7,496.90 %	4,711.97 %	4,112.20 %	3,251.65 %	2,793.05 %

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS — **SCHEDULE II**

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS
FOR THE YEARS ENDED DECEMBER 31
(In thousands)

Year Ending December 31	Actuarially Determined Contribution	Actual Employer Contribution *	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of Covered Payroll
2010	$ 107,249	$ 107,249	$ 0	$ 65,198	164.50 %
2011	$ 108,980	$ 108,285	$ 695	$ 51,159	211.66 %
2012	$ 116,011	$ 116,011	$ 0	$ 40,033	289.79 %
2013	$ 119,325	$ 199,336	$ (80,011)	$ 33,043	603.26 %
2014	$ 112,513	$ 407,513	$ (295,000)	$ 29,334	1,389.22 %
2015	$ 82,382	$ 100,000	$ (17,618)	$ 25,712	388.93 %
2016	$ 83,183	$ 151,100	$ (67,917)	$ 18,216	829.48 %
2017	$ 76,523	$ 221,523	$ (145,000)	$ 11,046	2,005.39 %
2018	$ 59,196	$ 59,500	$ (304)	$ 7,894	753.71 %
2019	$ 62,774	$ 62,774	$ 0	$ 5,210	1,204.87 %

* Employer contributions include amounts from both employer and non-employer contributing entities.

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REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:
The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan are as follows:

Valuation Dates	January 1, 2019	January 1, 2018	January 1, 2017
Actuarial cost method	Entry Age Cost Method	Entry Age Cost Method	Entry Age Cost Method
Amortization method	Period specified in current valuation report (closed 14-year period from January 1, 2019) with level dollar payments.	Period specified in current valuation report (closed 15-year period from January 1, 2018) with level dollar payments.	Period specified in current valuation report (closed 16-year period from January 1, 2017) with level dollar payments.
Actuarial 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.
Interest rate	Net rate of 6.5% for 2019, per annum, net of investment expenses	Net rate of 7.0% for 2018, per annum, net of investment expenses	Net rate of 7.0% for 2017, per annum, net of investment expenses
Inflation	2.25% per annum	2.5% per annum	2.5% per annum
Railroad retirement wage base	3.25% per year	3.5% per year	3.5% per year
Mortality	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.
Salary increases	3.0% per year	3.0% per year	3.0% per year
Overtime	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.
Provision for expenses	The provision for administrative expenses was modified to equal an average of the prior three years.	The provision for administrative expenses was modified to equal an average of the prior three years.	The provision for administrative expenses was modified to equal an average of the prior three years.

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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

SCHEDULE II

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:
The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan are as follows:

Valuation Dates	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Entry Age Cost Method	Entry Age Cost Method	Entry Age Cost Method
Amortization method	Period specified in current valuation report (closed 17-year period from January 1, 2016) with level dollar payments.	Period specified in current valuation report (closed 18-year period from January 1, 2015) with level dollar payments.	Period specified in current valuation report (closed 19-year period from January 1, 2014) with level dollar payments.
Actuarial 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.
Interest rate	Net rate of 7.0% for 2016, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses	Net rate of 7.0% for 2014, per annum, net of investment expenses
Inflation	2.5% per annum	2.5% per annum	2.5% per annum
Railroad retirement wage base	3.5% per year	3.5% per year	3.5% per year
Mortality	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.
Salary increases	3.0% per year	3.0% per year	3.0% per year
Overtime	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented emplyees to account for unused vacation pay.
Provision for expenses	The provision for administrative expenses was modified to equal an average of the prior three years.	$650,000 is added to the normal cost to account for administrative expenses paid by plan assets throughout the year.	$500,000 is added to the normal cost to account for administrative expenses paid by plan assets throughout the year.

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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS **SCHEDULE III**

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF INVESTMENT RETURNS
FOR THE YEARS ENDED DECEMBER 31

The following table displays annual money-weighted rate of return, net of investment expense.

Year Ended December 31	Net Money-Weighted Rate of Return
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	3.73 %
2015	0.07 %
2016	8.11 %
2017	13.38 %
2018	-3.49 %
2019	15.14 %

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

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Manhattan and Bronx Surface Transit Operating Authority Pension Plan

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the Years Ended December 31, 2019 and 2018, Supplemental Schedules, and Independent Auditors' Report

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

TABLE OF CONTENTS

INDEPENDENT AUDITORS' REPORT

To the Board of Administration of
The Manhattan and Bronx Surface Transit Operating Authority Pension Plan:

Report on the Financial Statements

We have audited the accompanying statements of plan net position of The Manhattan and Bronx Surface Transit Operating Authority Pension Plan (the "Plan") as of December 31, 2019 and 2018, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the Plan's net position as of December 31, 2019 and 2018, and the changes in Plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9 and the Changes in the Employers' Net Pension Liability and Related Ratios-Schedule I on page 54; Employer Contributions and Notes to Schedule-Schedule II on pages 55–57; and the Investment Returns-Schedule III on page 58 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

This management's discussion and analysis of The Manhattan and Bronx Surface Transit Operating Authority Pension Plan (the "Plan") financial performance provides an overview of the Plan's financial activities for the years ended December 31, 2019 and 2018. It is meant to assist the reader in understanding the Plan's financial statements by providing an overall review of the financial activities during the two years and the effects of significant changes, as well as a comparison with the prior years' activity and results. This discussion and analysis may contain opinions, assumptions, or conclusions by MTA management that should not be considered a replacement for and is intended to be read in conjunction with the plan's financial statements which begin on page 10.

Overview of Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements. The basic financial statements are:

- **The Statements of Plan Net Position —** presents the financial position of the Plan at fiscal yearend. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan 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. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Plan Net Position—** presents the results of activities during the year. All changes affecting the assets and liabilities of the Plan are reflected on an accrual basis when the activity occurred regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.

- **The Notes to Financial Statements—** provides additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plan's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information—** as required by the Government Accounting Standards Board ("GASB") includes the Schedule of Changes in the Employer's Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment returns.

The accompanying financial statements of the Plan are presented in conformity with accounting principles generally accepted in the United States of America as prescribed by the GASB.

CONDENSED FINANCIAL INFORMATION AND ANALYSIS

FINANCIAL ANALYSIS

Plan Net Position
As of December 31, 2019, 2018, and 2017
(Dollars in thousands)

				Increase / Decrease			
				2019-2018		2018-2017	
	2019	2018	2017	$	%	$	%
Cash and investments	$ 3,268,404	$ 2,818,963	$ 2,894,950	$ 449,441	15.9%	$ (75,987)	(2.6)%
Receivables and other assets	42,546	38,807	39,628	3,739	9.6	(821)	(2.1)
Total assets	**$ 3,310,950**	**$ 2,857,770**	**$ 2,934,578**	**$ 453,180**	**15.9**	**$ (76,808)**	**(2.6)**
Payable for investment securities purchased	3,425	2,148	2,250	1,277	59.5	(102)	(4.5)
Other liabilities	10,795	11,220	13,339	(425)	(3.8)	(2,119)	(15.9)
Total liabilities	**14,220**	**13,368**	**15,589**	**852**	**6.4**	**(2,221)**	**(14.2)**
Plan net position restricted for pensions	**$ 3,296,730**	**$ 2,844,402**	**$ 2,918,989**	**$ 452,328**	**15.9%**	**$ (74,587)**	**(2.6)%**

<u>December 31, 2019 versus December 31, 2018</u>

Cash and investments at December 31, 2019, were $3,268.4 million, an increase of $449.4 million or 15.9% from 2018. This increase is a result of strong investment activity in 2019 and plan contributions net of benefit payments and expenses during 2019.

Receivables and other assets less plan liabilities at December 31, 2019 increased by $2.9 million or 11.3%. The increase is a result of higher year end receivables for 2019 compared with 2018 and continued payments on post retirement death benefits and additional members contribution liabilities for Tiers 3 and 4 – 25 year and age 55 retirement programs.

The plan net position restricted for pensions increased by $452.3 million or 15.9% in 2019 as a result of the various changes noted above.

<u>December 31, 2018 versus December 31, 2017</u>

Cash and investments at December 31, 2018, were $2,819.0 million, a decrease of $76.0 million or 2.6% from 2017. This decrease is a result of weak investment activity in the fourth quarter of 2018 and plan contributions net of benefit payments and expenses during 2018.

Receivables and other assets less plan liabilities at December 31, 2018 decreased by $3.0 million or 12.6%. The decrease is a result of lower year end accrued expense for 2018 compared with 2017 and continued payments on post retirement death benefits and additional members contribution liabilities for Tiers 3 and 4 – 25 year and age 55 retirement programs.

The plan net position restricted for pensions decreased by $74.6 million or 2.6% in 2018 as a result of the various changes noted above.

Changes in Plan Net Position
For the Years Ended December 31, 2019, 2018 and 2017
(Dollars in thousands)

				Increase / Decrease			
				2019-2018		2018-2017	
	2019	2018	2017	$	%	$	%
Additions:							
Net investment income	$ 443,827	$ (87,952)	$ 350,186	$ 531,779	604.6%	$ (438,138)	(125.1)%
Transfers and contributions	229,941	227,388	222,397	2,553	1.1	4,991	2.2
Total net additions	**673,768**	**139,436**	**572,583**	**534,332**	**383.2**	**(433,147)**	**(75.6)**
Deductions:							
Benefit payments	221,221	213,827	209,121	$ 7,394	3.5	$ 4,706	2.3
Administrative expenses	219	196	208	23	11.7	(12)	(5.8)
Total deductions	**221,440**	**214,023**	**209,329**	**7,417**	**3.5**	**4,694**	**2.2**
Net increase	**452,328**	**(74,587)**	**363,254**	**526,915**	**706.4**	**(437,841)**	**(120.5)**
Plan net position restricted for pensions:							
Beginning of year	2,844,402	2,918,989	2,555,735	(74,587)	(2.6)	363,254	14.2
End of year	**$ 3,296,730**	**$ 2,844,402**	**$ 2,918,989**	**$ 452,328**	**15.9%**	**$ (74,587)**	**(2.6)%**

<u>December 31, 2019 versus December 31, 2018</u>

Net investment income increased by $531.8 million in 2019 due to net investment gains of $443.8 million in 2019 versus net investment losses of $88.0 million in 2018.

Contributions increased by $2.6 million or 1.1% in 2019 compared to 2018, as a result of the Actuarial Determined Contributions ("ADC") and member contributions.

Benefit payments increased by $7.4 million or 3.5% over the prior year due to a continuing trend of an increase in the number of retirees and cost-of-living adjustments provided to retirees and beneficiaries.

Administrative expenses increased by $23 thousand or 11.7% over 2018. This increase was due to an increase in fees for services provided to the Plan.

<u>December 31, 2018 versus December 31, 2017</u>

Net investment income decreased by $438.1 million in 2018 due to net investment loss of $88.0 million in 2018 versus net gains of $350.2 million in 2017.

Contributions increased by $5.0 million or 2.2% in 2018 compared to 2017, as a result of the Actuarial Determined Contributions ("ADC") and member contributions from 2017 to 2018.

Benefit payments increased by $4.7 million or 2.3% over the prior year due to a continuing trend of an increase in the number of retirees and cost-of-living adjustments provided to retirees and beneficiaries.

Administrative expenses decreased by $0.012 million or 5.8% over 2017. This decrease was due to a decrease in fees for services provided to the Plan.

Economic Factors

Market Overview and Outlook – 2019

In 2019 international markets turned cautiously optimistic, in contrast to 2018, when stocks were buffeted by uncertainty surrounding United States ("U.S.")-China trade negotiations. Equity markets ended a remarkable 2019 rally on a strong note, with major stock indexes reaching new all-time highs. Among growth assets, global equities outperformed high yield and emerging market debt. The U.S. dollar weakened broadly, most significantly against the Swiss franc, British pound and emerging market currencies. Equity, bond and currency volatility continued to ease in December to historically low levels. Investors favored riskier assets following declining trade tensions and easing geo-political headwinds. United Kingdom ("UK") and emerging markets, specifically China, Russia and Latin American, led the December rally, while the U.S. along with other developed markets lagged the Morgan Stanley Capital International All Country World Index ("MSCI ACWI"). Developed markets outperformed emerging markets overall in 2019.

The global economy slowed in 2019 and is now growing below trend. This was primarily driven by the trade war weighing on capital spending and the lagging effect from monetary tightening in 2018. While monetary policies were generally left unchanged in December-- which partly accounts for the stellar returns to both equities and bonds in 2019—further impetus to economic growth may have to come from fiscal measures: policy makers have recently paused easing efforts to evaluate the effect of prior rate cuts, and officials have indicated that monetary policy may have reached its limits. They are therefore considering greater use of fiscal tools to manage business cycles and to support economic growth. A recession in the U.S. appears unlikely in the near term while low interest rates and tame inflation levels continue to power higher equity valuations

Geo-political risks faded after the U.S. and China reached a preliminary trade agreement. Also, Brexit uncertainties fell after Prime Minister Boris Johnson's Conservative Party obtained a solid majority in Parliament. The UK parliament has passed a withdrawal agreement and will start the exit process at the end of January 2020. Markets looked past the political turmoil in the U.S., where a deeply divided House of Representatives passed two articles of impeachment against President Trump. However, macroeconomic stress related to tighter financial conditions in Argentina, geo-political tensions in Iran, and social unrest in Hong Kong, Venezuela, Libya, and Yemen still persisted. Additionally, climate concerns took center stage amid extreme weather around the globe, and protests against the political establishment reverberated through Hong Kong, Lebanon, Chile, Ecuador and many other places.

While current market dynamics may appear to favor equities over fixed income, one should be cognizant that valuations have been trending higher, creating limited attractive investment opportunities. To this end, many long-term forecasts for investment return, encompassing a 10-year time horizon, remain relatively muted. To prepare portfolios for this new decade, it may be essential for investors to start the year with a renewed emphasis on strategic asset allocation, heeding geo-political and portfolio risks to ensure that their investment horizon and governance structure are aligned with portfolio mission statements and return objectives. Even if the investment landscape encourages risk taking, uncertainties remain, making it critical for investors to reassess and rebalance their portfolio holdings considering their robust gains in 2019.

Macro Themes

- Asset allocation and portfolio implementation.
- Late stage of a market cycle.
- China's complex transition into a service and consumption-oriented economy from the manufacturing behemoth.
- The backlash against globalization—expressed through populism and trade wars—is here to stay.
- Central banks permanent interventions have created a new normal, where accommodative monetary policies and fiscal debt growth appear to exist in perpetuity, supporting equities relative to fixed income.

United States

2019 represented a triumphant year the U.S. capital markets compared to 2018 underperformance. Accommodative monetary policies, falling interest rates and subdued inflation helped investors not only to meet their return objectives, but, in many instances, to exceed them. Adding to this impressive string of wins: the U.S. economy completed a calendar decade without a recession—a historical first. While investors would love more of the same, it is unlikely this period of windfall gains and low market volatility will persist for the next decade.

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+31.5%) and (+31.3%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (+27.6%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return of (+25.4%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (+36.2%) outpacing the Russell 1000 Value (+26.4%).

Fixed income securities markets ended 2019 in the black, reversing declines experienced in 2018. Treasuries returned (+14.8%) for the year, with the assets strongest quarter coming in the first and second quarters of 2019. Municipal credit posted a return of (+7.5%) while the Bloomberg Barclays High Yield Index gained (+14.3%) in 2019. Spreads on high-yield credit narrowed for most part of 2019, but segments in the high-yield and bank loan markets showed signs of stress towards the end of 2019. On the other hand, the S&P LSTA Leveraged Loan Index returned (+10.6%) during the same period.

International Developed

International equity markets posted very strong results in 2019 and lagged behind U.S. equity markets, returning (+26.5%) as measured by the MSCI. In U.S. dollars, both Europe and Japan equities posted positive performance in 2019 with MSCI Europe returning (+23.7%) and MSCI Japan returning (+19.5%). Very strong returns in Europe were driven by the global positive market performance during 2019 unlike 2018 when Europe returned (-14.9%). The Small Cap portion of international developed markets posted even stronger returns in 2019, (+24.9%) compared with 2018, (-17.9%).

Fixed income markets in Europe and Japan are largely centered on government bonds, with corporate and asset-backed issuance making up a fraction of the overall markets. Global Treasuries were positive in 2019, following a negative year in 2018.

Emerging Markets

Emerging markets posted very strong returns in 2019, with performance lower than both U.S. and international developed markets across equity and debt. The broad MSCI emerging markets index returned
(+18.3%) for the year. Emerging markets gained sharply in December, driven by hopes that the People's Bank of China will continue to ease its monetary policy to support growth.

The bond markets of emerging markets performed well in 2019 compared to its underperformance in 2018. Both hard currency and local currency bond posted a very strong year in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (+12.6%) in 2019. Local currency bonds, which are issued in the local currency, returned (+13.5%) for the year.

Commodities

The Bloomberg Commodity Index rose (+7.7%) for the year while the New York Mercantile Exchange West Texas Index Crude Spot rose (+35.3%) and Midstream energy ended the year up more than (+24.0%). Residential gas prices in the Midwest are forecast to be nearly (+8.0%) higher this winter than last, and prices in the South and West are seen about (+5.0%) and (+3.0%) higher, respectively, while Northeast prices are forecast to decline (6.0%), helped by relatively low global prices for Liquefied Natural Gas and lower household natural gas consumption. The overall slight decline in heating expenses is aided by generally declining commodity prices.

Market Outlook

Central banks and governments have demonstrated, to varying degrees, their willingness to administer monetary and fiscal stimulus. That accommodative stance should continue in 2020. The U.S. Federal Reserve has already signaled its intention to keep interest rates on hold, providing more certainty for businesses. The re-convergence of U.S. interest rates with other developed markets will reduce upward pressure on the dollar. In addition, the impact of looser monetary policy, combined with a better trade backdrop, could spur the necessary investment and reform to fuel increased labor force participation and renewed productivity improvements.

Political risk, both at national and international levels, remains the great unknown. The long-term path of U.S.-China trade and cooperation is uncertain. A damaging "no-deal Brexit" is not entirely off the table. Tensions in the Middle East could risk sparking full-blown conflict. At the same time, 2020 primaries and Presidential elections in the U.S. will create uncertainty and could cause volatility as markets react to the policies and promises of the various candidates. Notwithstanding all of this, however, the current improvement in geo-political backdrop as compared with 2018, together with stimulus measures should support a modest acceleration in global growth in 2020. That growth, in turn, should lead to a moderate increase in demand for oil, putting a floor under the price, especially when global demand is met with sensible supply-side control from Organization of the Petroleum Exporting Countries.

Many analysts continue to believe emerging markets offer the most investment value, especially following the recent truce in trade relations between the U.S. and China. Furthermore, the opportunities for active management and excess returns appear more abundant in emerging economies. As a result, investors may be encouraged to overweight emerging market equities relative to developed market stocks. They may also opt to reduce exposure to high-yield and return-seeking credit in 2020, since market returns do not offer adequate compensation for the risk they hold. Safe-haven fixed income for instance, Treasuries and core bonds, despite low yields—remain vital for balancing risks within a diversified portfolio.

Impact of Covid-19
Covid-19 has continued to spread at a rapid pace around the world and has now been declared a global pandemic by the World Health Organization. This has caused a severe shock to the global economy pushing it into a deep and far reaching recession. Financial markets have responded with a huge drop in equities values, a rise in credit spreads and a flight to the safety of governments bonds.

In anticipation of the economic growth fallout, Standards & Poor's Global ratings lowered its forecast for global growth to just (+0.4%) this year and predicts a rebound to (+) in 2021. According to Bloomberg, the current second Quarter Gross Domestic Product average estimate of (-11.2%) annualized would be the worst post World War II quarter on record. However, worldwide central banks and governments announced fiscal and monetary rescue packages to soften the economic impact of the virus and the associated business disruptions. Geo-political tensions such as the trade war issues between the U.S. and China have moved into the background.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

Contact Information
This financial report is designed to provide a general overview of the Manhattan and Bronx Surface Transit Operating Authority Pension Plan's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Comptroller, Metropolitan Transportation Authority, 2 Broadway, 16th Floor, New York, NY 10004.

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MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

STATEMENTS OF PLAN NET POSITION
AS OF DECEMBER 31, 2019 AND 2018
(In thousands)

	2019	2018
ASSETS:		
Cash	$ 6,494	$ 5,977
Receivables:		
Investment securities sold	1,036	672
Interest and dividends	1,419	1,331
Employee loans	40,091	36,804
Total receivables	42,546	38,807
Investments at fair market value (Notes 2 and 3):		
Investments measured at readily determinable fair value	531,620	433,543
Investments measured at net asset value	2,730,290	2,379,443
Total investments	3,261,910	2,812,986
Total assets	3,310,950	2,857,770
LIABILITIES:		
Accounts payable	1,629	1,380
Payable for investment securities purchased	3,425	2,148
Accrued benefits payable	19	937
Accrued Post Retirement Death Benefits (PRDB) payable	3,360	2,921
Accrued 55/25 Additional Members Contribution (AMC) payable	5,787	5,982
Total liabilities	14,220	13,368
PLAN NET POSITION RESTRICTED FOR PENSIONS	$ 3,296,730	$ 2,844,402

See notes to financial statements.

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

STATEMENTS OF CHANGES IN PLAN NET POSITION FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018 (In thousands)

	2019	2018
ADDITIONS:		
Investment income:		
Interest income	10,534	7,891
Dividend income	31,364	37,259
Net appreciation/(depreciation) in fair value of investments	429,459	(97,896)
Total investment income/(loss)	471,357	(52,746)
Less investment expenses	27,530	35,206
Net investment income/(loss)	443,827	(87,952)
Contributions (Note 4):		
Employee contributions	$ 23,551	$ 21,955
Employer contributions	206,390	205,433
Total contributions	229,941	227,388
Total additions	673,768	139,436
DEDUCTIONS:		
Benefit payments and withdrawals	221,221	213,827
Administrative expenses	219	196
Total deductions	221,440	214,023
NET INCREASE/(DECREASE) IN PLAN NET POSITION	452,328	(74,587)
PLAN NET POSITION RESTRICTED FOR PENSIONS:		
Beginning of year	2,844,402	2,918,989
End of year	$ 3,296,730	$ 2,844,402

See notes to financial statements.

1. PLAN DESCRIPTION

Effective January 1, 1989, the Manhattan and Bronx Surface Transit Operating Authority (MaBSTOA) adopted a defined benefit qualified pension plan known as the MaBSTOA Pension Plan (the "Plan"). Prior to the adoption of the Plan, MaBSTOA pension benefits were funded on a pay-as-you-go basis.

The Plan is a single-employer public employee retirement system. MaBSTOA employees are specifically excluded from participating in the New York City Employees' Retirement System (NYCERS). Effective January 1, 1999, in order to afford managerial and non-represented MaBSTOA employees the same pension rights as like title employees in the Transit Authority, membership in the MaBSTOA Plan is optional.

The Board of Administration, established in 1963, determines eligibility of employees and beneficiaries for retirement and death benefits. The Board is composed of five members: two representatives from the Transport Workers Union, Local 100 (TWU) and three employer representatives.

Membership of the Plan consisted of the following as of January 1, 2019 and 2018, respectively, the date of the latest actuarial valuation:

	2019	2018
Active and inactive members	9,087	8,918
Retirees and beneficiaries currently receiving benefits	5,779	5,661
Vested formerly active members not yet receiving benefits	1,023	1,000
Total members	15,889	15,579

The Plan provides retirement, death, accident and disability benefits. The benefits provided by the Plan are generally similar to the benefits provided to participants in NYCERS. A participant may receive a vested benefit in accordance with the requirements of his or her Tier.

NYCERS has determined that Tier 4 employees are and have been eligible for a post retirement death benefit retroactive to members who retired no earlier than 1986. In June 2012, the Metropolitan Transportation Authority ("MTA") Board approved an amendment to the MaBSTOA Plan to provide for incorporation of this benefit. As of December 31, 2012, the Plan had estimated that $6 million is owed to beneficiaries of retirees who were deceased prior to January 1, 2013. As of December 31, 2019, the Plan has paid $13.7 million in post-retirement benefits and accrued an additional $3.4 million based on the updated valuation.

Funding Policy—Contribution requirements of 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 provides for actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due. It is MaBSTOA's policy to fund to the pension trust, at a minimum, the current year's normal cost plus amortization of the unfunded actuarial accrued liability.

The MaBSTOA Pension Plan includes the following retirement programs: (i) Tier 1 Age 50 and 20 Year, Age 55 and 1/100; (ii) Tier 2 Age 55 and 25 Year, Tier 2 Age 55 and 1/100; (iii) Tier 3 and Tier 4 Age 62 and 5 Year; (iv) Tier 6 Age 63 and 10 Year; (v) Tier 4 and Tier 6 25 Year and Age 55; (vi)

Tier 4 25 Year Early Retirement; (vii) Tier 4 Age 57 and 5 Year, and (viii) the Year 2000 amendments, which are all under the same terms and conditions as NYCERS.

The Plan may require mandatory employee contributions, 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). Prior to adoption of Tier 6, operating employees entering qualifying service on or after July 27, 1976, are required to contribute 2% of their salary and non-operating employees pay 3% of their salary for a 10-year period plus an additional member contribution of 1.85% of their salary. See Note 4 for 2000 Plan amendments.

Individuals joining the MaBSTOA Pension Plan on or after April 1, 2012 are members of Tier 6. 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 is 63 and includes early retirement penalties, which reduce pension allowances by 6.5 percent for each year of retirement prior to age 63 (excluding Transit Operating Employees).

- Vesting after 10 years of credited service; increased from 5 years of credited service under Tier 3 and Tier 4.

- Changes to the pension multiplier for calculating pension benefits (excluding Transit Operating Employees) for participants who retire with greater than 20 years of credited service is 35% of FAS for the first 20 years of credited service plus 2% times FAS for each year of credited service in excess of 20.

- Adjustments to the Final Average Salary (FAS) calculation changed from an average of the final 3 years to an average of the final 5 years. Pensionable overtime capped at $15,000 per year plus an inflation factor ($16,406 for 2018 and $16,779 for 2019).

- Pension buyback in Tier 6 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.

SUMMARY OF PRINCIPAL PLAN PROVISIONS ELIGIBILITY AND BENEFITS

All Tiers

1. Type of Plan	The Plan is a contributory, defined benefit plan. Contributions are not required for Tier 1 and Tier 2 members and vary for other members. Details can be found in the following sections.
2. Effective Date of Plan Qualification	January 1, 1989.
3. Compensation	The wages earned by the employee. Compensation is limited by Section 401(a)(17) of the Code. This limit is $275,000 for 2018 and $280,000 for 2019.
4. Credited Service	Credited Service is credited full-time employment from date of hire.

5. Pensioner Supplementations

(a) 1998 Supplement

Eligibility: Date of retirement is prior to 1993 for all disability pensioners and other pensioners who have attained (or will attain) age 62 or who have attained (or will attain) age 55 and have been retired for at least 10 years.

Benefit: Commencing with the payment for the month of September 1998, the cost-of-living adjustment is applied to the first $13,500 of the maximum retirement allowance, computed without option modification. If not eligible by September 1998, payment will commence first of the month following eligibility.

(b) 1999 Supplement

Eligibility: Date of retirement is prior to 1994 for all disability pensioners and other pensioners who have attained (or will attain) age 62 or who have attained (or will attain) age 55 and have been retired for at least 10 years.

Benefit: Commencing with the payment for the month of September 1999, the cost-of-living adjustment is applied to the first $14,000 of the maximum retirement allowance, computed without option modification. If not eligible by September 1999, payment will commence first of the month following eligibility.

(c) 2000 Supplement

Eligibility: Date of retirement is prior to 1997 and one of the following conditions is met:

(i) All disability pensioners who have been retired for at least 5 years,

(ii) Other pensioners who have attained (or will attain) age 62 and have been retired for at least 5 years,

(iii) Other pensioners who have attained (or will attain) age 55 and have been retired for at least 10 years and

(iv) All recipients of an accidental death benefit who have been in receipt of payments for at least 5 years.

Benefit: Commencing with the payment for the month of September 2000, the cost-of-living adjustment is applied to the first $18,000 of the maximum retirement allowance, computed without option modification. The cost-of-living adjustment is equal to the change in the CPI-U measured from year of retirement through 1997 multiplied by 50% (greater percentages exist if date of retirement is prior to 1968). If not eligible by September 2000, payment will commence first of the month following eligibility.

Surviving Spouse Eligibility: The surviving spouse of a deceased retired member who chose any joint and survivor option.

Surviving Spouse Benefit: Commencing with the payment for the month of September 2000, the benefit is equal to 50% of the 2000 supplementation which the pensioner would be receiving if living.

(d) Automatic Cost-of-Living Adjustment (COLA)

Eligibility: One of the following conditions is met:

(i) All disability pensioners who have been retired for at least 5 years,

(ii) Other pensioners who have attained (or will attain) age 62 and have been retired for at least 5 years,

(iii) Other pensioners who have attained (or will attain) age 55 and have been retired for at least 10 years and

(iv) All recipients of an accidental death benefit who have been in receipt of payments for at least 5 years.

Benefit: Commencing with the payment for the month of September 2001 and continuing each September thereafter, the COLA is applied to the first $18,000 of the maximum retirement allowance, computed without option modification plus any prior COLAs or supplementations. The cost-of-living adjustment is equal to the change in the CPI-U for the year ending March 31 multiplied by 50%. The resulting percentage is then rounded up to the next higher 0.1% and shall not exceed 3.0% nor be less than 1.0%. If not eligible by September 2001 or each September thereafter, payment will commence first of the month following eligibility.

Surviving Spouse Eligibility: The surviving spouse of a deceased retired member who chose any joint and survivor option.

Surviving Spouse Benefit: The benefit is equal to 50% of the automatic COLA benefit which the pensioner would be receiving if living and commence in the month following the death of the deceased member.

6. Normal and Optional Forms of Payment

The basic benefits described in the following sections are payable in the form of a life annuity. Other options are 100% and 50% contingent annuities with and without a popup feature, 5-year and 10-year certain and life annuities, and single life annuities with an insurance feature.

Benefits payable under the optional forms are actuarially adjusted to reflect the anticipated longer payment stream.

7. Maximum Benefit

Maximum benefits payable conforms to those legislated by the Tax Reform Act of 1986. For 2018, the maximum benefit is $220,000 and for 2019 it is $225,000.

8. Changes in Plan Provisions Since Prior Valuation

The deadline for filing a Notice of Participation in the World Trade Center Rescue, Recovery or Clean-Up Operations was further extended until September 11, 2022.

Effective December 18, 2017, certain members can use any surplus basic or additional member contributions to offset any deficits in such other contribution account.

I. Tier 1 Employees

1. Eligibility — Members hired before July 1, 1973.

2. Pensionable Compensation

   (a) Compensation — Greater of earned or earnable salary during the year prior to retirement.

   (b) Final Compensation — Highest average earnings over five consecutive years.

   (c) Compensation Limit — If hired after June 17, 1971, earnings in a year are limited to 120% of the preceding year.

3. Benefits

   (a) Service Retirement

   Eligibility: Attainment of age 50 and completion of 20 years of credited service.

   Benefit:

   1.5% 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 above, up to a maximum of 50%, is multiplied by the member's Compensation. Once the accumulated percentage 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.

   (b) Termination Benefits

   Eligibility: Completion of 20 years of credited service.

   Benefit: The Service Retirement Benefit with compensation and service calculated as of the date of termination. The benefit is deferred until age 50.

   (c) Ordinary Death Benefits

   Active Members

   Eligibility: Completion of 6 months of credited service, but the benefit described below requires completion of 20 years of credited service.

   Benefit: A lump sum equal to the present value of the retirement benefit under the Return of Reserve option.

   Terminated Vested Members

   If a member dies before age 50, a lump sum equal to the present value of the retirement benefit under the Return of Reserve option is payable (Death Gamble).

   (d) Accidental Death Benefits

   Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met.

   Benefit: The benefit equals 50% of Final Compensation.

(e) Ordinary Disability Benefits	Eligibility: Completion of 10 years of credited service. Benefit: The benefit equals the greater of the Service Retirement percentages described (a) above or 25% multiplied by Final Compensation. If eligible for a service retirement benefit, the greater of this benefit and the Service Retirement benefit is payable.
(f) Accidental Disability Benefits	Eligibility: Disability caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 75% of the Final Compensation reduced by 100% of any worker's compensation payments. If eligible for a service retirement benefit, the greater of this benefit and the Service Retirement benefit is payable.
4. Member Contributions	None
5. Changes in Plan Provisions Since Prior Valuation	None

II. Tier 2 Employees

1. Eligibility — Members hired on or after July 1, 1973, and before July 27, 1976.

2. Final Average Compensation

   (a) Final 3-Year Average Compensation: — Highest average earnings over three consecutive years.

   (b) Final 5-Year Average Compensation: — Highest average earnings over five consecutive years.

   (c) Compensation Limit: — Earnings in a year cannot exceed 120% of the average of the two preceding years.

3. Benefits

   (a) Service Retirement

   Eligibility: Attainment of age 55 and completion of 25 years of credited service.

   Benefit: The benefit equals 50% of Final 3-Year Average Compensation for the first 20 years of credited service, plus 1.5% of Final 5-Year Average Compensation per year of credited service in excess of 20 years.

   (b) Early Retirement

   Eligibility: Attainment of age 50 and completion of 20 years of credited service.

   Benefit: Determined in the same manner as the Service Retirement benefit but no greater than 2.0% of the Final 3-Year Average Compensation per year of credited service.

   (c) Termination Benefits

   Eligibility: Completion of 20 years of credited service.

   Benefit: The benefit equals the Early Retirement benefit, with compensation and service calculated as of the date of termination. The benefit is deferred until age 50. If a member dies before age 50, 50% of the ordinary death benefit (below) is payable.

   (d) Ordinary Death Benefit

   Eligibility: Completion of 90 days of credited service.

   Benefit: The benefit equals a lump sum equal to 3 times salary, raised to the next multiple of $1,000.

   (e) Accidental Death Benefit

   Eligibility: Death caused by on-the-job accident. World Trade Center Presumption benefits may apply if certain criteria are met.

   Benefit: The benefit equals 50% of the Final 5-Year Average Compensation.

   (f) Ordinary Disability Benefits

   Eligibility: Completion of 10 years of credited service

   Benefit: The benefit equals the greater of the Service Retirement percentage calculated in (a) above and 25% multiplied by Final 5-Year Average Compensation. If eligible for an Early or Service Retirement benefit, the greater of this benefit and the Early or Service Retirement benefit is payable.

(g) Accidental Disability Benefits	Eligibility: Disability caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 75% of the Final 5-Year Average Compensation reduced by any worker's compensation payments. If eligible for an Early or Service Retirement benefit, the greater of this benefit and the Early or Service Retirement benefit is payable.
4. Member Contributions	None
5. Changes in Plan Provisions Since Prior Valuation	None

III. Tier 3 and Tier 4—Basic Age

62 & 5 Year Retirement Program

1. Eligibility

   Non-operating Members hired prior to June 28, 1995, who have not elected the 55 & 25 Plan. Members hired on or after July 27, 1976, and before September 1, 1983, are in Tier 3. Members hired on or after September 1, 1983, are in Tier 4.

2. Final Average Compensation

   Highest average earnings during any three consecutive calendar-years periods, or the final 36 months immediately preceding the member's retirement date. Earnings used in the calculation cannot exceed 110% of the average of the two preceding years.

3. Benefits

   (a) Service Retirement

   Eligibility: Attainment of age 62 and completion of at least 5 years of credited service.

   Benefit: If at least 20 years of credited service is completed, the benefit equals 2.0% of Final Average Compensation for first 30 years of credited service plus 1.5% of Final Average Compensation for years of credited service in excess of 30. If completed less than 20 years of credited service, the benefit equals 1-2/3% of Final Average Compensation multiplied by years of credited service.

   (b) Early Retirement

   Eligibility: Attainment of age 55 and completion of at least 5 years of credited service.

   Benefit: 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.

   (c) Termination Benefits

   (i) Refund of Contributions

   Eligibility: Completion of less than 10 years of Credited Service.

   Benefit: The benefit equals a refund of the member's contributions accumulated with interest at a rate of 5.0%.

   (ii) Vested Benefit

   Eligibility: Completion of at least 5 years of credited service.

   Benefit: The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The benefit is deferred until age 62. A vested participant with less than 10 years of credited service may elect to receive the benefit in (i) above in lieu of this benefit. If a member with at least 10 years of credited service dies before commencing benefits, 50% of the ordinary death benefit (below) is payable. All accumulated regular contributions with interest are payable.

(d) Ordinary Death Benefits

Eligibility: all members.

Pre-retirement Death Benefit: The benefit equals a lump sum of annual salary times completed years of credited service up to 3 years of service. After age 60, the benefit is reduced 5% per year, to a maximum reduction of 50%. Accumulated regular member contributions with interest. Post-retirement Death Benefit: Upon retirement, the pre-retirement benefit shall be 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.

Spouse Benefit (Tier 3 only)

Eligibility: Vested and spouse is beneficiary.

Benefit: In lieu of the ordinary death benefit above, the spouse may elect 1/3 of the ordinary death benefit plus an annuity of 1.0% of Final Average Compensation per year of credited service, payable for life, or until remarriage. If the surviving spouse is more than 10 years younger, the annuity is actuarially reduced. The total of all payments will at least equal the amount of the full lump sum benefit.

(e) Accidental Death Benefits

Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met.

Benefit: The benefit equals 50% of compensation paid to eligible beneficiary as defined by priority:

(i) Spouse, until remarriage

(ii) Children, to age 25

(iii) Dependent parents

(iv) Any other dependent survivors, to age 21.

Total of all payments will at least equal the amount of the full ordinary death lump sum benefit

	(f) Ordinary and Accidental Disability Benefits	Eligibility: Completion of 10 years of credited service for ordinary. No minimum years of credited service required for accidental. Benefit: The benefit equals the greater of 1-2/3% of Final Average Compensation per year of credited service and 1/3 of Final Average Compensation. If eligible for a Service Retirement benefit, the greater of this benefit and the Service Retirement benefit is payable.
4.	Member Contributions	Regular contribution rate of 3.0%. Regular contributions cease at the later of October 1, 2000, or the later of 10 years of membership or 10 years of credited service.
5.	Changes in Plan Provisions Since Prior Valuation	None

IV. Tier 3 and Tier 4—25 Year and Age 55 Retirement Programs

1. Eligibility

All operating members hired prior to April 1, 2012 and non-operating members hired prior to July 26, 1994, who elected this program. Members hired on or after July 27, 1976, and before September 1, 1983, are in Tier 3. Members hired on or after September 1, 1983 and before April 1, 2012 are in Tier 4.

2. Final Average Compensation

Highest average earnings during any three consecutive calendar-year~~s~~ periods, or the final 36 months immediately preceding the member's retirement date. Earnings used in the calculation cannot exceed 110% of the average of the two preceding years.

3. Benefits

(a) Service Retirement

Eligibility: Attainment of age 55 and completion of at least 25 years of credited service, or attainment of age 62 and completion of at least 5 years of credited service.

Benefit: If completed less than 20 years of credited service, the benefit upon attainment of age 62 equals 1-2/3% of Final Average Compensation multiplied by years of credited service. If completed between 20 and 25 years of service, the benefit upon attainment of age 62 equals 2% of Final Average Compensation multiplied by years of credited service. If at least 25 years of credited service is completed, the benefit equals 2.0% of Final Average Compensation for the first 30 years of credited service plus 1.5% of Final Average Compensation for years of credited service in excess of 30. If age 62 with at least 20 years of credited service is completed, the benefit equals 2.0% of Final Average Compensation for the first 30 years of credited service plus 1.5% of Final Average Compensation for years of credited service in excess of 30. For non-operating employees who have attained age 62, a refund of one-half of the member's additional contributions accumulated at a rate of 5.0% is also payable.

(b) Termination Benefits

(i) Refund of Contributions

Eligibility: Less than 10 years of credited service.

Benefit: The benefit equals a refund of the basic member's accumulated contributions. All contributions are refunded with interest at a rate of 5.0% also payable.

(ii) Vested Benefit

Eligibility: Completion of at least 5 years of credited service.

Benefit: The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The benefit is deferred until age 62 if credited service is less than 25 years, else the benefit is deferred until age 55 for operating employees only. For non-operating employees the benefit is payable at age 62 with less than 25 years or if both age and service has not been fulfilled. A vested participant with less than 10 years of credited service may elect to receive the benefit in (i) above in lieu of this benefit. If a member with at least 10 years of credited service dies before commencing benefits, 50% of the salary-related ordinary death benefit (below) plus accumulated regular contributions with interest and one-half of accumulated additional member contributions with interest are payable.

(c) Ordinary Death Benefits

Eligibility: All members.

Pre-retirement Death Benefit: The benefit equals a lump sum of annual salary times the completed years of credited service up to 3 years of service. 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.

Post-retirement Death Benefit: Upon retirement, the pre-retirement benefit shall be 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.

Spouse Benefit (Tier 3 only)

Eligibility: Vested and spouse is beneficiary.

Benefit: In lieu of the ordinary death benefit above, the spouse may elect 1/3 of the ordinary death benefit plus an annuity of 1.0% of Final Average Compensation per year of credited service, payable for life, or until remarriage. If the surviving spouse is more than 10 years younger, the annuity is actuarially reduced. The total of all payments will at least equal the amount of the full lump sum benefit.

(d) Accidental Death Benefits	Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 50% of compensation paid to eligible beneficiary as defined by priority: (i) Spouse, until remarriage (ii) Children, to age 25 (iii) Dependent parents (iv) Any other dependent survivors, to age 21. Total of all payments will at least equal the amount of the full ordinary death lump sum benefit.
(e) Ordinary and Accidental Disability Benefits	Eligibility: Completion of 10 years of credited service for ordinary. No minimum years of credited service requirement for accidental. Benefit: The benefit equals the greater of 1-2/3% of Final Average Compensation per year of credited service and 1/3 of Final Average Compensation. If eligible for a Service Retirement benefit, the greater of this benefit and the Service Retirement benefit is payable. For non-operating employees, a refund of one-half of the member's additional contributions accumulated plus interest at a rate of 5.0% is also payable.
4. Member Contributions	Operating Employees: Regular contribution rate of 2.0%. Additional 55/25 contributions were made through 2000. These contributions may be refunded effective November 2007 for TWU Local 100 and April 2008 for TSO Local 106. Non-operating Employees: Regular contribution rate of 3.0%. Regular contributions cease at the later of October 1, 2000 or after the later of 10 years of membership or 10 years of credited service. Additional contribution rates were 4.35%, 2.85% and 1.85%, of which 1.85% ceases after 30 years of credited service.
5. Changes in Plan Provisions Since Prior Valuation	None

V. Tier 4—Age 57 & 5 Year

Retirement Program

1. Eligibility

Non-operating members hired on or after June 28, 1995 and prior to April 1, 2012. Members hired on or after September 1, 1983 and before April 1, 2012 are in Tier 4.

2. Final Average Compensation

Highest average earnings during any three consecutive calendar-year~~s~~ periods, or the final 36 months immediately preceding the member's retirement date. Earnings used in the calculation cannot exceed 110% of the average of the two preceding years.

3. Benefits

(a) Service Retirement

Eligibility: Attainment of age 57 and completion of at least 5 years of credited service.

Benefit: If less than 20 years of credited service are completed, the benefit equals 1.67% of Final Average Compensation multiplied by years of credited service. If between 20 and 30 years of credited service are completed, the benefit equals 2% of Final Average Compensation multiplied by years credited service. If more than 30 years are completed, 2% of Final Average Compensation multiplied by years of credited service plus 1.5% of Final Average Compensation multiplied by years of credited service in excess of 30. For non-operating employees who have attained age 62, a refund of one-half of the member's additional contributions accumulated plus interest at a rate of 5.0% is also payable.

(b) Termination Benefits

(i) Refund of Contributions

Eligibility: Completion of less than 10 years of credited service.

Benefit: The benefit equals a refund of the member's basic accumulated contributions and 50% of additional member contributions plus interest at a rate of 5.0%.

(ii) Vested Benefit

Eligibility: Completion of at least 5 years of credited service.

Benefit: The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The benefit is deferred until age 57. A vested participant with less than 10 years of credited service may elect to receive the benefit in (i) above in lieu of this benefit. If a member with at least 10 years of credited service dies before commencing benefits, 50% of the salary-related ordinary death benefit (below) is payable. All accumulated regular contributions with interest and one-half of accumulated additional member contributions with interest are payable.

(c) Ordinary Death Benefits	Eligibility: All members Pre-retirement Death Benefit: The benefit equals a lump sum of annual salary times completed years of credited service up to 3 years of service. 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. Post-retirement Death Benefit: Upon retirement, the pre-retirement benefit shall be 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.
(d) Accidental Death Benefits	Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 50% of final 1-year compensation paid to eligible beneficiary as defined by priority: (i) Spouse, until remarriage (ii) Children, to age 25 (iii) Dependent parents (iv) Any other dependent survivors, to age 21. Total of all payments will at least equal the amount of the full ordinary death lump sum benefit.
(e) Ordinary and Accidental Disability Benefits	Eligibility: Completion of 10 years of credited service for ordinary. No minimum years of credited service requirement for accidental. Benefit: The benefit equals the greater of 1-2/3% of Final Average Compensation per year of credited service and 1/3 of Final Average Compensation. If eligible for Service Retirement benefit, the greater of this benefit and the Service Retirement benefit is payable. For non-operating employees, a refund of one-half of the member's additional contributions accumulated at a rate of 5.0% is also payable.
4. Member Contributions	Regular contribution rate of 3.0%. Regular contributions cease at the later of October 1, 2000, or after the later of 10 years of membership or 10 years of credited service. Additional contribution rates were 4.35%, 2.85% and 1.85% of which 1.85%, ceases after 30 years of credited service.
5. Changes in Plan Provisions Since Prior Valuation	None

VI. Tier 6—25 and Age 55 Retirement Program

1. Eligibility	All operating members hired on or after April 1, 2012.
2. Final Average	Highest average pensionable earnings over five consecutive years. Pensionable earnings exclude any overtime earnings, defined as compensation paid at a rate greater than the standard rate, in excess of the overtime cap. The overtime cap is indexed annually and is $16,048 for 2017. Pensionable earnings also exclude wages in excess of the annual salary paid to the Governor of New York, lump sum payments for sick leave, accumulated vacation and other credits for time not worked, termination pay and any additional compensation paid in anticipation of retirement. Pensionable earnings in a year cannot exceed 110% of the average of the four preceding years.
3. Benefits	
(a) Service Retirement	Eligibility: Attainment of age 55 and completion of at least 25 years of credited service, or attainment of age 63 and completion of at least 10 years of credited service. Benefit: If completed at least 25 years of credited service, the benefit equals 2.0% of Final Average Salary for the first 30 years of credited service plus 1.5% of Final Average Salary for years of credited service in excess of 30. If completed less than 20 years of credited service, 1.67% of Final Average Salary multiplied by years of credited service. If completed between 20 to 25 of credited service, 35% of Final Average Salary for first 20 years of credited service, plus 2% of Final Average Salary for years of credited service in excess of 20.
(b) Termination Benefits	(i) Refund of Contributions Eligibility: Completion of less than 10 years of credited service. Benefit: The benefit equals a refund of the member’s contributions accumulated plus interest at a rate of 5.0%. (ii) Vested Benefit Eligibility: Completion of at least 10 years of credited service. Benefit: The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The vested benefit is deferred until age 63 if credited service is less than 25 years, else the benefit is deferred until age 55. If a member with at least 10 years of credited service dies before commencing benefits, 50% of the salary-related ordinary death benefit (below) plus accumulated regular contributions with interest are payable.

(c) Ordinary Death Benefits	Eligibility: All members Pre-retirement Death Benefit: The benefit equals a lump sum of annual salary times completed years of credited service up to 3 years of service. 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. Post-retirement Death Benefit: Upon retirement, the pre-retirement benefit shall be 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.
(d) Accidental Death Benefits	Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 50% of wages earned during last year of service or annual wage rate if less than one year of service, paid to eligible beneficiary as defined by priority: (i) Spouse, until remarriage (ii) Children, to age 25 (iii) Dependent parents (iv) Any other dependent survivors, to age 21. Total of all payments will at least equal the amount of the full ordinary death lump sum benefit.
(e) Ordinary and Accidental Disability Benefits	Eligibility: Completion of 10 years of credited service for ordinary. No minimum years of credited service requirement for accidental. Benefit: The benefit equals the greater of 1-2/3% of Final Average Salary per year of credited service and 1/3 of Final Average Salary. If eligible for a Service Retirement benefit, the greater of this benefit and the Service Retirement benefit is payable.

4. Member Contributions

Regular contribution rate varies based on gross wages earned during two plan years (January 1 to December 31) prior to applicable plan year based on following table. For first three years, a projection of annual wages will be used. The rate for the plan year ending March 31, 2013 for all Tier 6 employees is 2%.

Annual Wages Earned During Plan Year	Contribution Rate
Up to $45,000	3.00%
$45,001–$55,000	3.50%
$55,001–$75,000	4.50%
$75,001–$100,000	5.75%
Greater than $100,000	6.00%

5. Changes in Plan Provisions Since Prior Valuation

None

VII. Tier 6—Age 63 and 10 Year Retirement Program

1. Eligibility

All non-operating members hired on or after April 1, 2012.

2. Final Average Compensation

Highest average pensionable earnings over five consecutive years. Pensionable earnings exclude any overtime earnings, defined as compensation paid at a rate greater than the standard rate, in excess of the overtime cap. The overtime cap is indexed annually and is $16,048 for 2017. Pensionable earnings also exclude wages in excess of the annual salary paid to the Governor of New York, lump sum payments for sick leave, accumulated vacation and other credits for time not worked, termination pay and any additional compensation paid in anticipation of retirement. Pensionable earnings in a year cannot exceed 110% of the average of the four preceding years.

3. Benefits

(a) Service Retirement

Eligibility: Attainment of age 63 and completion of at least 10 years of credited service.

Benefit: If completed less than 20 years of credited service, the benefit equals 1.67%% of Final Average Salary multiplied by years of credited service. If completed at least 20 years of credited service, 35% of Final Average Salary for the first 20 years of credited service, plus 2% of Final Average Salary times each year of credited service in excess of 20.

(b) Early Retirement

Eligibility: Attainment of age 55 and completion of at least 10 years of credited service.

Benefit: The benefit equals the Service Retirement benefit reduced by 6.5% for each year prior to age 63.

(c) Termination Benefits

(i) Refund of Contributions

Eligibility: Completion of less than 10 years of credited service.

Benefit: The benefit equals a refund of the member's contributions accumulated plus interest at a rate of 5.0%.

(ii) Vested Benefit

Eligibility: Completion of at least 10 years of credited service.

Benefit: The benefit equals the Service Retirement benefit with compensation and service calculated as of the date of termination. The benefit is deferred until age 63. If a member with at least 10 years of credited service dies before commencing benefits, 50% of the salary-related ordinary death benefit (below) plus accumulated regular contributions with interest are payable.

(d) Ordinary Death Benefits	Eligibility: All members Pre-retirement Death Benefit: The benefit equals a lump sum of annual salary times the completed years of credited service up to 3 years of service. 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. Post-retirement Death Benefit: Upon retirement, the pre-retirement benefit shall be 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.
(e) Accidental Death Benefits	Eligibility: Death caused by on-the-job accident. World Trade Center Presumption may apply if certain criteria are met. Benefit: The benefit equals 50% of wages participant earned during last year of service or annual wage rate if less than one year of service, paid to eligible beneficiary as defined by priority: (i) Spouse, until remarriage (ii) Children, to age 25 (iii) Dependent parents (iv) Any other dependent survivors, to age 21. Total of all payments will at least equal the amount of the full ordinary death lump sum benefit.
(f) Ordinary and Accidental Disability Benefits	Eligibility: Completion of 10 years of credited service for ordinary. No minimum years of credited service requirement for accidental. Benefit: The benefit equals the greater of 1-2/3% of Final Average Salary per year of credited service and 1/3 of Final Average Salary. If eligible for Service Retirement benefit, the greater of this benefit and the Service Retirement benefit is payable.

4. Member Contributions

Regular contribution rate varies based on gross wages earned during two plan years (January 1 to December 31) prior to applicable plan year based on following table. For first three years, a projection of annual wages will be used. The rate for the plan year ending March 31, 2013 for all Tier 6 employees is 3%.

Annual Wages Earned During Plan Year	Contribution Rate
Up to $45,000	3.00%
$45,001–$55,000	3.50%
$55,001–$75,000	4.50%
$75,001–$100,000	5.75%
Greater than $100,000	6.00%

5. Changes in Plan Provisions Since Prior Valuation

None

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES AND PLAN ASSET MATTERS

Basis of Accounting—The Plan is accounted for on the accrual basis of accounting under which deductions are recorded when the liability is incurred and additions are recognized in the accounting period in which they are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Contributions from members are recorded when the employer makes payroll deductions from plan members. Employer contributions are recognized when due in accordance with the terms of the Plan. Additions to the Plan consist of contributions (member and employer) and net investment income.

The accounting and reporting policies of the Plan conform to accounting principles generally accepted in the United States of America (GAAP).

New Accounting Standards Adopted – The Plan adopted the following GASB Statement for the year-ended December 31, 2019:

GASB Statement No. 84, *Fiduciary Activities,* improves guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The requirements of GASB Statement No. 84 are effective for reporting periods beginning after December 15, 2019. The adoption of this Statement had no impact on the Plan's financial statements.

GASB Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance,* provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Accounting Standards Issued but Not Yet Adopted

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

GASB Statement No.	GASB Accounting Standard	MaBSTOA Pension Plan Required Year of Adoption
92	*Omnibus 2020*	2022

Methods Used to Value Investments—Investments are stated at fair value or Net Asset Value ("NAV") which approximates fair value. Fair value is the amount that the Plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller, that is, other than a forced or liquidation sale. All investments, with the exception of alternative investments are valued based on closing market prices or broker quotes.

Traded securities are stated at the last reported sales price on a national securities exchange on the last business day of the fiscal year. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Alternative investments are valued based on the most current net asset values.

Purchases and sales of securities are reflected on the trade date.

Dividend income is recorded on the ex-dividend date. Interest income is recorded as earned on an accrual basis.

Use of Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Authority to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from these estimates.

Risks and Uncertainties—The Plan's investments are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and level of uncertainty related to changes in the value of investment securities, it is possible that changes in risks in the near term would materially affect the amounts reported in the Plan's financial statements.

Income Taxes—The Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) of the Internal Revenue Code. Accordingly, the Plan is tax-exempt and is not subject to the provisions of ERISA. Therefore, income retained by the Plan is not subject to Federal income tax.

3. CASH AND INVESTMENTS

Investment Committee—The Plan's policy statement is issued for the guidance of fiduciaries, including the members of the Board and investment managers, in the course of investing the assets of the Trust. The investments of the Trust will be made for the exclusive benefit of the Plan participants and their beneficiaries. Policy guidelines may be amended by the Board upon consideration of the advice and recommendations of the investment professionals.

In order to have a reasonable probability of achieving the target return at an acceptable risk level, the Board has adopted the asset allocation policy outlined below. The actual asset allocation will be reviewed on, at least, a quarterly basis and will be readjusted when an asset class weighting is outside its target range. The following was the MaBSTOA Pension Plan Board adopted asset allocation policy as at December 31, 2019.

Asset Class	Target Allocation (%)	Target Range (%)	Policy Benchmark
Equities	29.0	24-34	
Domestic Large Cap	10.0	5-15	S&P 500
Domestic Small Cap	5.5	2-10	Russell 2000
International Developed Markets Equities	10.0	5-15	MSCI EAFE
Emerging Markets Equities	3.5	2-6	MSCI Emerging Markets
Fixed Income	15.0	9-21	Manager Specific
Global Asset Allocation*	20.0	15-33	50% World Equity/ 50% Citigroup WGBI unhedged
Opportunistic Investments	6.0	0-15	Manager Specific
Absolute Return	15.0	10-22	Manager Specific
Real Assets	5.0	0-10	Manager Specific
Real Estate	3.0	0-10	Manager Specific
Private Equity	7.0	0-10	Venture Economics
Total	**100.0**		

* The Global Asset Allocation managers will invest across numerous liquid asset classes including: stocks, bonds, commodities, TIPS and REITs.

Investment Objective — The investment objective of Plan is to achieve the actuarial return target with an appropriate risk position.

Investment Guidelines — The Board of Pension Managers executes investment management agreements with professional investment management firms to manage the assets of the Plan. The fund managers must adhere to guidelines that have been established to limit exposure to risk.

The overall capital structure targets and permissible ranges for eligible asset classes of the Trust are detailed within the Investment Policy Statement. Full discretion, within the parameters of the guidelines described herein and in any individual investment policy associated with that allocation, is granted to the investment managers regarding the asset allocation, the selection of securities, and the timing of transactions. It is anticipated that the majority of investment managers will be funded through commingled funds, however, in some cases (likely equity and fixed income mandates) separate account vehicles may be utilized. For separate accounts, individual manager guidelines and/or exemptions are specified in each approved investment management agreement (IMA). Should there be conflicts, the individual manager guidelines set forth in the IMA supersede the general guidelines in the Investment Policy Statement. For commingled funds, investment guidelines and/or exemptions are specified in such vehicle's offering documents. Should there be conflicts, the individual vehicle's investment guidelines supersede the general guidelines in the Investment Policy Statement.

Individual investment manager benchmarks and performance requirements are specified within the Investment Policy Statement. Performance of the Trust will be evaluated on a regular basis. Evaluation will include the degree to which performance results meet the goals and objectives as herewith set forth.

Toward that end, the following standards will be used in evaluating investment performance:

1. The compliance of each investment manager with the guidelines as expressed herein, and
2. The extent to which the total rate of return performance of the Trust achieves or exceeds the targeted goals.

Fixed Income Investment Managers

- Domestic fixed income investments are permitted, subject to the guidelines reflected in Investment Policy Statement. Yankee bonds, which are dollar denominated foreign securities, may be held by each domestic manager in proportions which each manager shall deem appropriate.

- International fixed income securities are permitted, subject to the guidelines reflected in Investment Policy Statement. Generally defined, the Citigroup World Government Bond Index represents the opportunity set for international developed markets. The J.P. Morgan Emerging Markets Bond Index-Global represents the opportunity set for international emerging markets denominated in USD. The J.P. Morgan GBI-EM Global Diversified Index represents the opportunity set for international emerging markets denominated in local currency. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- Investment managers are responsible for making an independent analysis of the credit worthiness of securities and their suitability as investments regardless of the classifications provided by rating agencies.

- The average duration (interest rate sensitivity) of an actively managed fixed income portfolio shall range within two years of the benchmark's duration.

- For domestic fixed income portfolios, individual manager account for the securities of an individual issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% at market at any time.

- For international bond portfolios, individual manager account for the securities of any non-governmental issuer shall not constitute more than 5% at market at any time.

Equity Investment Managers

- Domestic equity investments are permitted, subject to the guidelines. American Depository Receipts (ADRs), which are dollar denominated foreign securities traded on the domestic U.S. stock exchanges (e.g., Reuters, Nestle, Sony) may be held by each domestic stock manager in proportions which each manager shall deem appropriate.

- International equities are permitted, subject to the guidelines. Generally defined, the Morgan Stanley EAFE (Europe, Australasia and the Far East) Index represents the opportunity set for international developed markets. The Morgan Stanley Emerging Markets Free Index represents the opportunity set for international emerging markets. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- The equity specialists may vary equity commitment from 90% to 100% of assets under management.

- Individual manager account may hold no more than 8% at market or 1.5x the manager's benchmark weight (whichever is greater) of any single company's stock.

Overlay Manager(s)

- For a variety of reasons, the investment program may carry large amounts of cash throughout the year. In order to achieve the actuarial assumed returns on the total investment program, the Board may retain a futures overlay manager. The overlay manager shall use exchange traded futures contracts to expose the cash to the long-term target asset allocation.

- In addition, the overlay manager may be utilized for the following:
  a) Expose un-invested assets of domestic and international equity investment managers to their respective equity benchmarks through the use of futures contracts,
  b) Assist the Board in rebalancing, transitions, and/or gaining exposure to approved asset classes,
  c) Provide the market (or "beta") exposures in a portable alpha program.
  d) The overlay manager shall ensure that all futures positions are fully collateralized and the manager is prohibited from leveraging any portion of the portfolio.

Alternative Investments Managers

Alternative investments are broadly categorized into the following categories:

- Opportunistic
- Real assets
- Real estate
- Absolute return
- Private equity

Common features of alternative investments are limited liquidity, the use of derivatives, leverage and shorting, lower regulatory oversight, limited transparency, and high fees. Compensating for these risks, these investments offer the potential of diversification and/or higher rates of return over time.

Derivatives Policy

Where appropriate, investment managers may use derivative securities for the following reasons:

- Hedging. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.

- Creation of Market Exposures. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.

- Management of Country and Asset Allocation Exposure. Investment managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for these purposes.

- Additional uses of derivatives shall be approved by the Board or set forth in the individual investment guidelines or the offering documents prior to implementation and shall be restricted to those specific investment managers.

Ineligible Investments (Separately Managed Accounts)

Unless specifically approved by the Board or set forth in the individual investment guidelines, certain securities, strategies and investments are ineligible for inclusion within separately managed accounts. Among these are:

- Privately-placed or other non-marketable debt, except securities issued under Rule 144a,
- Lettered, legend or other so-called restricted stock,
- Commodities
- Short sales, and,
- Direct investments in private placements, real estate, oil and gas and venture capital, or funds comprised thereof.

Exceptions:

The Board of Managers, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds) may, from time to time, allow investment in such funds. The Board recognizes that it cannot give specific policy directives to a fund; therefore, the Board, with assistance of the investment advisor, will assess and monitor the investments of any funds used by the Plan to ascertain whether they are appropriate.

Investment Valuation and Income Recognition — Investments are presented at fair value based on information provided by JP Morgan Chase (the "trustee"), New England Pension Consultant ("NEPC"), and the investment managers. The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available, or net asset value, which is determined to be a practical expedient for measuring fair value. Many factors are considered in arriving at that value. All investments are registered, with securities held by the Plan's trustee, in the name of the Plan. Gains and losses on investments that were sold during the year are included in in the statement of plan net position.

Risks and Uncertainties — The Plan's investments are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and level of uncertainty related to changes in the value of investment securities, it is possible that changes in risks in the near term would materially affect the amounts reported in the Plan's financial statements.

The financial markets, both domestically and internationally, have demonstrated significant volatility on a daily basis, which affects the valuation of investments. The Plan utilizes asset allocation strategies that are intended to optimize investment returns over time in accordance with investment objectives and with acceptable levels of risk.

Investments measured at readily determined fair value (FV)

(In thousands)

	December 31, 2019	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 118,621	$ 118,621	$ -	$ -
Separate account small-cap equity funds	172,206	172,206	-	-
Separate account real estate investment trust funds	31,279	31,279	-	-
Total equity investments	322,106	322,106	-	
Debt Securities				-
Separate account debt funds	209,514	-	209,514	-
Total debt investments	209,514	-	209,514	-
Total investments at readily determined FV	$ 531,620	$ 322,106	$ 209,514	$ -

Investments measured at the net asset value (NAV)

(In thousands)

	December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 257,946	$ -	Daily	None
Commingled international equity funds	413,068	-	Daily	None
Commingled emerging market equity funds	142,108	-	Daily, monthly	None
Total equity investments measured at the NAV	813,122	-		
Debt Securities				
Commingled debt funds	143,605	-	Daily, monthly, quarterly	None
Mutual fund	47,234	-	Daily	None
Total debt investments measured at the NAV	190,839	-		
Absolute return:				
Directional	115,404	-	Monthly	3-60 days
Direct lending	148,369	29,019,538	Bi-annually	60 plus days
Distressed securities	40,435	-	Not eligible	N/A
Credit long	35,268	-	Quarterly	3-30 days
Credit long/short	64,127	-	Quarterly	3-60 days
Equity long/short	41,680	-	Quarterly	3-60 days
Event driven	56,173	2,093,427	Quarterly, Bi-annually	60-120 days
Global macro	97,028	-	Monthly	3-30 days
Global tactical asset allocation	123,807	-	Daily, monthly	3-30 days
Multistrategy	86,768	-	Quarterly	3-60 days
Risk parity	273,031	-	Monthly	3-30 days
Structured credit	1,997	-	Not eligible	N/A
Total absolute return measured at the NAV	1,084,087	31,112,965		
Private equity - private equity partnerships	259,111	157,623,294	Not eligible	N/A
Real assets				N/A
Commingled commodities fund	58,905	-	Not eligible	N/A
Commingled real estate funds	93,813	-	Not eligible	N/A
Energy	89,898	50,462,022	Not eligible	N/A
Infrastructure	19,395	3,059,682	Not eligible	N/A
Total real assets measured at the NAV	262,011	53,521,704		
Short term investments measured at the NAV	121,120	-		
Total investments measured at the NAV	2,730,290	$ 242,257,963		
Total investments at fair value	$ 3,261,910			

Investments measured at readily determined fair value (FV)
(In thousands)

	December 31, 2018	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 85,650	$ 85,650	$ -	$ -
Separate account small-cap equity funds	136,628	136,628	-	-
Separate account real estate investment trust funds	24,296	24,296	-	-
Total equity investments	246,574	246,574	-	
Debt Securities				-
Separate account debt funds	186,969	-	186,969	-
Total debt investments	186,969	-	186,969	-
Total investments at readily determined FV	$ 433,543	$ 246,574	$ 186,969	$ -

Investments measured at the net asset value (NAV)
(In thousands)

	December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 174,270	$ -	Daily	None
Commingled international equity funds	326,065	-	Daily	None
Commingled emerging market equity funds	81,142	-	Daily, monthly	None
Total equity investments measured at the NAV	581,477	-		
Debt Securities				
Commingled debt funds	161,192	-	Daily, monthly, quarterly	None
Mutual fund	43,662	-	Daily	None
Total debt investments measured at the NAV	204,854	-		
Absolute return:				
Directional	89,472	-	Monthly	3-60 days
Direct lending	134,954	9,046,957	Bi-annually	60 plus days
Distressed securities	43,766	-	Not eligible	N/A
Credit long	32,728	-	Quarterly	3-30 days
Credit long/short	59,953	-	Quarterly	3-60 days
Equity long/short	38,792	-	Quarterly	3-60 days
Event driven	53,418	2,093,427	Quarterly, Bi-annually	60-120 days
Global macro	96,755	-	Monthly	3-30 days
Global tactical asset allocation	162,712	-	Daily, monthly	3-30 days
Multistrategy	75,956	-	Quarterly	3-60 days
Risk parity	232,379	-	Monthly	3-30 days
Structured credit	5,277	-	Not eligible	N/A
Total absolute return measured at the NAV	1,026,162	11,140,384		
Private equity - private equity partnerships	222,078	148,578,605	Not eligible	N/A
Real assets				N/A
Commingled commodities fund	51,738	-	Not eligible	N/A
Commingled real estate funds	102,439	-	Not eligible	N/A
Energy	67,528	14,156,595	Not eligible	N/A
Infrastructure	19,466	5,526,340	Not eligible	N/A
Total real assets measured at the NAV	241,171	19,682,935		
Short term investments measured at the NAV	103,701	-		
Total investments measured at the NAV	2,379,443	$ 179,401,924		
Total investments at fair value	$ 2,812,986			

Concentration of Credit Risk – Individual investments held by the Plan that represents 5.0% or more of the Plan's net assets available for benefits at December 31, 2019 and 2018 are as follows:

(In thousands)	**2019**	**2018**
Investments at fair value as determined by quoted market prices:		
Johnston International	$ 164,632	$ -
Robert W. Baird and Company	177,380	158,405

Credit Risk — At December 31, 2019 and 2018, the following credit quality rating has been assigned by a nationally recognized rating organization:

(In thousands) **Quality Rating**	**2019 Fair Value**	**Percentage of Fixed Income Portfolio**	**2018 Fair Value**	**Percentage of Fixed Income Portfolio**
AAA	$ 296,012	25.49 %	$ 90,620	9.02 %
AA	77,508	6.67	142,058	14.14
A	111,021	9.56	56,656	5.64
BBB	92,029	7.92	67,683	6.73
BB	98,600	8.49	83,413	8.30
B	68,800	5.92	58,869	5.86
CCC	18,536	1.60	12,902	1.28
CC	4,482	0.39	113	0.01
C	2,785	0.24	993	0.10
D	5,032	0.43	4,544	0.45
Not Rated	235,827	20.30	253,222	25.20
Credit risk debt securities	1,010,632	87.01	771,073	76.73
U.S. Government bonds	150,818	12.99	233,849	23.27
Total fixed income securities	1,161,450	100.00 %	1,004,922	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	2,100,460		1,808,064	
Total investments	$ 3,261,910		$ 2,812,986	

Interest Rate Risk Exceptions — 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 sensitivity to 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. Modified duration is an indicator of bond price's sensitivity to a parallel 100 basis point change in interest rates.

(In thousands)	2019			2018		
Investment Fund		Fair Value	Duration		Fair Value	Duration
Chase	$	209,514	6.30	$	186,969	12.81
Wellington Blended Emerging Market Debt		46,412	6.44		42,167	5.44
Allianz Structured Alpha Fund		115,404	0.13		89,472	0.13
GAM Unconstrained Bond Fund		-	-		20,702	0.10
Bridgewater All Weather Fund		120,924	5.60		66,694	8.30
Wellington Opportunistic		-	-		39,390	1.52
Wellington Fixed Income		1,681	5.80		-	-
Bridgewater Pure Alpha		40,478	1.30		164,759	(0.90)
Northern Trust William Capital		10,537	-		10,272	-
Park Square Capital Credit Opportunities Fund II		23,300	0.18		25,529	-
Park Square Capital Credit Opportunities Fund III		25,280	0.13		10,009	-
Crescent Capital High Income Fund		28,908	2.92		37,893	2.56
EIG Energy Fund XV		2,083	-		2,761	-
EIG Energy Fund XVI		1,389	-		3,863	-
Libremax Partners Fund		98,967	2.82		59,954	2.63
Gramercy Distressed Opportunistic Fund		29,060	(0.07)		16,017	0.26
Makuria Credit Fund		13,253	5.38		12,182	5.38
Orchard Landmark Fund		76,747	1.18		70,511	1.44
PIMCO Distressed Credit Opportunities Fund		35,268	2.83		32,728	2.18
Wellington Global Managed Fund		168,843	10.70		55,285	6.20
State Street Real Asset Fund		58,905	4.67		12,947	5.84
State Street Long US Treasury Index Fund		22,603	18.06		19,682	17.38
Riverstone Credit Partners Fund		16,675	4.00		12,144	4.00
Riverstone Credit Partners Syndication Fund		3,603	4.00		1,202	4.00
Canyon Value		11,616	2.44		11,790	3.26
Total fixed income securities		1,161,450			1,004,922	
Portfolio modified duration			4.82			4.43
Investments with no duration reported	$	2,100,460		$	1,808,064	
Total investments	$	3,261,910		$	2,812,986	

Foreign Currency Risk — Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Some of the Plan's investment managers will have foreign currency exposure through holdings of foreign securities, currency derivatives or private investments whose revenue will be non-USD based. The Plan also holds investments in American Depository Receipts ("ADRs") which are not included in the below schedule since they are denominated in U.S. dollars and accounted for at fair market value.

The Plan's foreign currency exposures as of December 31, 2019 and 2018 are as follows (amounts in U.S. dollars, in thousands):

Foreign Currency Holdings in US $ (In thousands)	**December 31, 2019**	**December 31, 2018**
Argentina Peso	$ 724	$ 12,417
Dollar (Australian)	27,123	18,820
Bahraini Dinar	-	325
Bangladesh (Taka)	441	312
Bermudian Dollar	-	2,084
Botswana Pula	507	138
Brazil Cruzeiro Real	36,483	22,971
Bulgarian Lev	23	12
Dollar (Canadian)	14,915	25,792
Dollar (Caymanian)	224	591
Chilean Peso	5,350	6,308
China (Yuan Renminbi)	11,086	12,140
Colombian Peso	1,841	3,436
Croatia Kuna	520	408
Czech Koruna	(937)	416
Dominican Peso	365	6
Krone (Danish)	7,359	5,039
Egyptian Pound	1,420	809
Euro	72,441	81,204
Georgian Lari	772	607
Ghanaian Cedi	120	130
Dollar (Hong Kong)	13,357	6,266
Hungary (Forint)	2,600	2,731
Icelandic Krona	1,197	2,118
Indian Rupee	21,729	16,044
Indonesia Rupiah	12,904	5,103
Israeli (Shekel)	510	1,083
Yen (Japan)	9,156	6,297
Jordanian Dinar	506	310
Kazakhstani Tenge	55	342
Kenyan Shilling	539	325
Kuwait Dinar	1,506	657
Lebanese Pound	-	41
Laos Kip	126	332
Malaysian (Ringgit)	5,177	2,973
Mauritius (Rupee)	522	719
Mexican New Peso	4,847	(1,694)
Morocco Dirham	540	301
Dollar (New Zealand)	3,314	519
Nigerian Naira	811	327
Krone (Norwegian)	8,716	787
Omanian Rial	495	270
Pakistani Rupee	1,062	709
Panamanian Balboa	30	129
Peru Sol	909	1,365
Philippines Peso	5,555	2,399
Polish (New Zloty)	(1,043)	(2,316)
Pound (Sterling)	57,635	36,157
Qatar Riyal	1,137	802
Romanian Leu	1,156	1,201
Russian Federation Rouble	9,572	(3,505)
Saudi Riyal	2,215	665
Singapore Dollar	11,564	(7,183)
South Africa Rand	8,059	8,888
South Korean Won	27,366	13,882
Sri Lankan Rupee	495	273
Krona (Swedish)	4,976	6,157
Swiss Franc	7,171	14,221
Thai (Bhat)	7,070	3,738
Dollar (Taiwan, New)	16,794	7,055
Tunisian Dinar	278	122
Turkish Lira	(2,180)	(2,259)
Ukrainian Hryvnia	260	40
UAE Dirham	1,358	986
Uruguayan Pesos	10	11
Vietnamese Dong	346	600
Other	(556)	10,652
Total	**$ 430,623**	**$ 334,605**

4. CONTRIBUTIONS

The financial objective of the Plan is to fund, on an actuarial basis, the retirement and death benefits for eligible MaBSTOA employees and beneficiaries. MaBSTOA contributions to the fund are made annually. Contributions to MaBSTOA require the approval of the MaBSTOA Board.

Employer contributions amounted to $206.4 million and $205.4 million for the years ended December 31, 2019 and 2018, respectively. Employee contributions amounted to $23.6 million and $22.0 million for the years ended December 31, 2019 and 2018, respectively. Contributions made by employees are accounted for in separate accounts. Annually, these accounts are credited with interest at 5%. Effective April 1, 1990, MaBSTOA began to deduct employee contributions as pretax contributions under Section 414(h) of the Internal Revenue Code.

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. The Plan granted $19.0 million and $15.7 million in loans to members during 2019 and 2018, respectively. Loan repayments by members amounted to $13.8 million and $14.1 million in 2019 and 2018, respectively.

Upon termination of employment before retirement, certain participants are entitled to refunds of their own contributions including accumulated interest less any loans outstanding.

5. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2019 and 2018 were as follows (in thousands):

	December 31, 2019	December 31, 2018
Total pension liability	$ 4,122,934	$ 3,811,124
Fiduciary net position	3,296,730	2,844,402
Net pension liability	$ 826,204	$ 966,722
Fiduciary net position as a percentage of the total pension liability	79.96 %	74.63 %

Actuarial Methods and Assumptions—The total pension liability as of December 31, 2019 was determined by an actuarial valuation date of January 1, 2019, that was updated to roll forward the total pension liability to the respective year-end. Actuarial valuations are performed annually as of January 1.

Additional information of the latest actuarial valuation follows:

Valuation date	January 1, 2019	January 1, 2018
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For 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 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
Actuarial 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
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
Actuarial Assumptions:		
Investment rate of return	6.50%, net of investment related expenses	7.00%, net of investment related expenses
Projected salary increases	Reflecting general wage, merit and promotion increases of 3.5% to 4.0% per year for operating and nonoperating employees, respectively. Larger increases are assumed in the first 5 years of a member's career.	Reflecting general wage, merit and promotion increases of 3.5% to 4.0% per year for operating and nonoperating employees, respectively. Larger increases are assumed in the first 5 years of a member's career.
Overtime	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement
Cost-of-living adjustments	60% of inflation assumption or 1.35% per annum, if applicable	55% of inflation assumption or 1.375% per annum, if applicable
Inflation	2.25% per annum	2.50% per annum

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.

Until the inception of the Tier 6 provisions in 2012, amendments enacted by State legislation in 2000 reflected the most significant changes to the plan and are summarized as follows:

For operating employees (Chapter 10 of the Laws of 2000):

- All operating employees are automatically included in the 2000 55/25 plan.
- Elimination of the 2.3% additional employees' contributions applicable to members of the 55/25 plan.
- Reduction in the Tier 3 and 4 employee contribution rate from 3.0% to 2.0%.

For managerial and non-operating employees (Chapter 126 of the Laws of 2000):

- Vesting under the Age 57 plan required only five years of service versus ten.

- As of October 1, 2000, regular Tier 3 and 4 employee contributions ceased after the completion of ten years of service.

For retired members (Chapter 125 of the Laws of 2000):

- Automatic cost-of-living adjustments (COLAs). The COLAs apply to retired members as follows:

Retirees at Least age	**Retired or Receiving Benefits for at Least**
62	5 years
55	10
Disabled retirees	5
Accidental death beneficiaries	5

- Initial COLA payable September 30, 2000, based on the first $18,000 of the maximum retirement allowance.

- Thereafter, annual COLAs of 50% of the increase in the consumer price index (CPI), but not less than 1% or more than 3%, of the first $18,000 of maximum retirement allowance will be payable.

The benefit enhancements, as well as the automatic COLA for retirees, were reflected in the actuarial valuation beginning with the January 1, 2000, valuation.

The Plan adopted several amendments during 2002 as a result of state legislation. Amendments included changes to the definition of active service for Tier 1 and Tier 2 members, extension of the phase-in period from five years to ten years for funding liabilities created by Chapter 125 of the Laws of 2000 and increased accidental disability benefits for Tier 3 and Tier 4 members.

The Plan also adopted the legislative provisions of Chapter 379, which allow current and former members of the Transport Workers Union, Local 100 and Transit Supervisors Organization, Local 106, with an accumulated balance of additional member contributions (AMC) made in accordance with the MaBSTOA 55/25 Plan enacted in 1994, to apply for a refund of such contributions. The MaBSTOA Board additionally adopted legislative provisions of Chapter 428 of 2016, which provided eligible members a refund of the employee Additional Member Contributions made in the Tier 4 Age 57 and 5 Year Program and the Tier 4 Age 25 and Year 55 Early Retirement Program. AMC refunds amounted to approximately $871 thousand and $773 thousand as of December 31, 2019 and 2018, respectively.

At December 31, 2019 and 2018, assets were available to fund 79.9% and 74.6%, respectively, of the unfunded actuarial accrued liability (UAAL) when measured using the Entry Age Normal Cost Method per GASB 67 and the market value of assets.

Calculation on Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the middle of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month.

Schedule of Calculations of Money-Weighted Rate of Return

(In thousands)

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2019	$2,844,402	12.00	1.00	$3,287,751
Monthly net external cash flows:				
January	141	11.50	0.96	162
February	141	10.50	0.88	160
March	141	9.50	0.79	158
April	1,762	8.50	0.71	1,952
May	546	7.50	0.63	598
June	546	6.50	0.54	590
July	546	5.50	0.46	584
August	546	4.50	0.38	577
September	546	3.50	0.29	569
October	546	2.50	0.21	563
November	546	1.50	0.13	556
December	2,495	0.50	0.04	2,510
Ending Value - December 31, 2019				$3,296,730
Money-Weighted Rate of Return	15.59%			

Schedule of Calculations of Money-Weighted Rate of Return

(In thousands)

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2018	$2,918,989	12.00	1.00	$2,831,240
Monthly net external cash flows:				
January	1,114	11.50	0.96	1,082
February	1,114	10.50	0.88	1,084
March	1,114	9.50	0.79	1,087
April	1,114	8.50	0.71	1,090
May	1,114	7.50	0.63	1,092
June	1,114	6.50	0.54	1,095
July	1,114	5.50	0.46	1,098
August	1,114	4.50	0.38	1,101
September	1,114	3.50	0.29	1,104
October	1,114	2.50	0.21	1,107
November	1,114	1.50	0.13	1,110
December	1,114	0.50	0.04	1,112
Ending Value - December 31, 2018				$2,844,402
Money-Weighted Rate of Return	-3.01%			

Expected Rate of Return on Investments—The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension 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 allocation and best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of the December 31, 2019 and 2018 actuarial valuations are summarized in the following table:

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2019

Asset Class	Index	Target Allocation	Long-Term Expected Real Rate of Return
US Core Fixed Income	Barclays Aggregate	9.00%	1.51%
US Long Bonds	Barclays Long Term Government/Credit	1.00%	2.41%
US Bank/Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	2.74%
US Inflation-Indexed Bonds	Barclays US TIPS	2.00%	0.71%
US High Yield Bonds	BAML High Yield	4.00%	3.13%
Emerging Market Bonds	JPM EMBI Plus	2.00%	3.36%
US Large Caps	S&P 500	12.00%	4.33%
US Small Caps	Russell 2000	6.00%	5.65%
Foreigh Developed Equity	MSCI EAFE NR	12.00%	5.95%
Emerging Market Equity	MSCI EM NR	5.00%	8.05%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.50%
Private Real Estate Property	NCREIF Property	4.00%	3.80%
Private Equity	Cambridge Private Equity	9.00%	9.50%
Commodities	Commodity	1.00%	2.79%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.26%
Hedge Funds - Event Driven	HFRI Event Driven	6.00%	3.41%
Hedge Funds - Equity Hedge	HFRI Equity Driven	3.00%	3.82%
Total		100.00 %	
Assumed Inflation - Mean			2.25%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			6.73%
Portfolio Standard Deviation			10.94%
Long-Term Expected Rate of Return selected by MTA			6.50%

* Based on March 2014 Investment Policy

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SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2018

Asset Class	Index	Target Allocation	Long-Term Expected Real Rate of Return
US Core Fixed Income	Barclays Aggregate	9.00%	2.03%
US Long Bonds	Barclays Long Term Government/Credit	1.00%	2.44%
US Bank/Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	3.08%
US Inflation-Indexed Bonds	Barclays US TIPS	2.00%	1.16%
US High Yield Bonds	BAML High Yield	4.00%	3.93%
Emerging Market Bonds	JPM EMBI Plus	2.00%	3.76%
US Large Caps	S&P 500	12.00%	4.71%
US Small Caps	Russell 2000	6.00%	5.93%
Foreigh Developed Equity	MSCI EAFE NR	12.00%	6.15%
Emerging Market Equity	MSCI EM NR	5.00%	8.22%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.80%
Private Real Estate Property	NCREIF Property	4.00%	3.69%
Private Equity	Cambridge Private Equity	9.00%	9.50%
Commodities	Commodity	1.00%	2.85%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.28%
Hedge Funds - Event Driven	HFRI Event Driven	6.00%	3.38%
Hedge Funds - Equity Hedge	HFRI Equity Driven	3.00%	3.85%
Total		100.00 %	
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			7.19%
Portfolio Standard Deviation			10.87%
Long-Term Expected Rate of Return selected by MTA			7.00%

* Based on March 2014 Investment Policy

Discount Rate—The discount rate used to measure the total liability as of December 31, 2019 and 2018 was 6.5% and 7.0%, respectively. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that the Plans' contributions will be made in accordance with the statutory contributions determined by the Actuary. Based on those assumptions, the 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.

Sensitivity of the Net Pension Liability to Changes in the Discount Rate—The following presents the net pension liability of the Plan, calculated using the discount rates as of 2019 and 2018; as well as what the Plan's net pension would be if it were calculated using a discount rate that is 1-percentage point lower or 1-percentage point higher than the current rate for years 2019 and 2018 respectively:

2019 (in thousands)	1% Decrease 5.50%	Current Discount Rate 6.50%	1% Increase 7.50%
Net pension liability	$ 1,297,413	$ 826,204	$ 426,297

2018 (in thousands)	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	$ 1,388,193	$ 966,722	$ 607,684

6. CUSTODIAL AND OTHER PROFESSIONAL SERVICES

JP Morgan Chase Bank is custodian and trustee of plan assets with the exception of Mellon asset management investments in which Mellon Bank N.A. is the custodian. JP Morgan Chase also provides cash receipt and cash disbursement services to the Plan. NEPC reviews the Plan's portfolio, the investment policies as adopted by the Investment Committee and the performance of the Investment Managers. NEPC also provides audit services for the Plan's equity portfolios. Actuarial services were provided to the Plan by Milliman Inc.

7. SUBSEQUENT EVENTS

On March 25, 2020, Allianz Global Investors U.S. LLC ("AllianzGI), managing member of AllianzGI Structured Alpha 1000 LLC (the "Fund"), informed the Plan that it was in the best interest of its investors to terminate the Fund and pursue an orderly liquidation program. AllianzGI stated that the Fund suffered significant losses due to the severe and tumultuous market volatility as a result, in part, of the coronavirus pandemic. No redemptions were permitted after the announcement of the Fund closure. The Plan lost nearly all of its investment. Fund investors will receive a pro-rata distribution of the remaining assets after accounting for Fund expenses and liabilities. So far, the Fund has returned $3.1 million. The Plan is exploring all options to recover its losses.

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The actuarial present value of plan benefits is reported based on certain assumptions pertaining to interest rates and employee demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions will occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the value of plan benefits.

Subsequent to December 31, 2019, the impact to the Plan of the COVID-19 pandemic during 2020 has resulted in significant reductions in values to many investments of the Plan. It has also significantly decreased interest rates and could impact employee demographics which could change assumption utilized in the future for the actuarial present value of plan benefits.

While management of the Plan currently expects to be able to continue to meet immediate contribution requirements, the long-term impact of the effects of the COVID-19 pandemic to the Plan and Plan sponsor as well as any relief from regulatory authorities are currently not known. The extent of the adverse impact of the COVID-19 pandemic on the Plan's net assets available for benefits and actuarial present value of plan benefits cannot be reasonably estimated at this time.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES

Act”; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

* * * * * *

REQUIRED SUPPLEMENTARY INFORMATION
(UNAUDITED)

SCHEDULE I

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(in millions)

	2019	2018	2017	2016	2015	2014
Total pension liability:						
Service cost	$ 90	$ 87	$ 85	$ 82	$ 77	$ 72
Interest	265	256	246	237	232	224
Changes of benefit terms	-	-	6	-	-	-
Differences between expected and actual experience	9	6	12	14	(69)	(2)
Benefit payments and withdrawals	(221)	(214)	(209)	(188)	(180)	(175)
Net change in total pension liability	312	135	140	145	60	119
Total pension liability—beginning	3,811	3,676	3,536	3,391	3,331	3,212
Total pension liability—ending (a)	4,123	3,811	3,676	3,536	3,391	3,331
Plan fiduciary net position:						
Employer contributions	206	205	203	221	215	226
Employee contributions	24	22	20	18	16	15
Net investment income	444	(88)	350	212	(24)	105
Benefit payments and withdrawals	(221)	(214)	(209)	(188)	(180)	(175)
Net change in plan fiduciary net position	453	(75)	364	263	27	171
Plan fiduciary net position—beginning	2,844	2,919	2,555	2,292	2,265	2,094
Plan fiduciary net position—ending (b)	3,297	2,844	2,919	2,555	2,292	2,265
Employer's net pension liability—ending (a)-(b)	$ 826	$ 967	$ 757	$ 981	$ 1,099	$ 1,066
Plan fiduciary net position as a percentage of the total pension liability	79.96 %	74.63 %	79.40 %	72.26 %	67.58 %	68.00 %
Covered payroll	771	767	748	713	686	672
Employer's net pension liability as a percentage of covered payroll	107.13 %	126.11 %	101.32 %	137.54 %	160.30 %	158.74 %

Note: Information for periods prior to 2014 was not readily available.

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS
(in thousands)

Fiscal Year Ending December 31,	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency/ (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2019	$ 209,314	$ 206,390	$ 2,924	$ 771,201	26.76 %
2018	202,509	205,433	(2,924)	766,562	0.27
2017	202,897	202,684	213	747,651	27.11
2016	220,486	220,697	(211)	713,280	30.94
2015	214,881	214,881	-	685,998	31.32
2014	226,374	226,374	-	671,633	33.70
2013	234,474	234,474	-	582,081	40.28
2012	228,918	228,918	-	575,989	39.74
2011	186,454	186,454	-	579,696	32.16
2010	200,633	200,633	-	591,073	33.94

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

SCHEDULE II

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:
The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan are as follows:

Valuation Dates	January 1, 2019	January 1, 2018	January 1, 2017
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For FIL bases, period specified in current valuation report. 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 report. 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 report. 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
Actuarial 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
Interest rate	Net rate of 6.5% for 2019, per annum, net of investment expenses	Net rate of 7.0% for 2018, per annum, net of investment expenses	Net rate of 7.0% for 2017, per annum, net of investment expenses
Inflation	2.25% per annum	2.5% per annum	2.5% per annum
Deaths after retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80
Salary increases	Reflecting general, merit and promotion increases of 3.5% to 4.0% per year for operating and non-operating employees, repectively. Larger increases are assured in the first 5 years of a member's career.	Reflecting general, merit and promotion increases of 3.5% to 4.0% per year for operating and non-operating employees, repectively. Larger increases are assured in the first 5 years of a member's career.	Reflecting general, merit and promotion increases of 3.5% to 4.0% per year for operating and non-operating employees, repectively. Larger increases are assured in the first 5 years of a member's career.
Overtime	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap
Cost-of-living adjustments	60% of inflation assumption or 1.35% per annum if applicable (2)	55% of inflation assumption or 1.375% per annum if applicable (2)	55% of inflation assumption or 1.375% per annum if applicable (2)
Provision for expenses	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.
(2) Assumes a long-term consumer price inflation assumption of 2.5% per annum, compounded annually.

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

SCHEDULE II (continued)

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:
The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan are as follows:

Valuation Dates	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For FIL bases, period specified in current valuation report. 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 report. 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 report. 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
Actuarial 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 unrecogniz gains/losses over a 5-year period. Gains/losses are based on market value of assets
Interest rate	Net rate of 7.0% for 2016, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses	Net rate of 7.0% for 2014, per annum, net of investment expenses
Inflation	2.5% per annum	2.5% per annum	2.5% per annum
Deaths after retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80
Salary increases	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	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	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
Overtime	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap
Cost-of-living adjustments	55% of inflation assumption or 1.375% per annum if applicable (2)	55% of inflation assumption or 1.375% per annum if applicable (2)	55% of inflation assumption or 1.375% per annum if applicable (2)
Provision for expenses	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.
(2) Assumes a long-term consumer price inflation assumption of 2.5% per annum, compounded annually.

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF INVESTMENT RETURNS

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. The following table displays the annual money-weighted rate of return calculated net of investment expense for the Plan for:

Fiscal Year Ended December 31	Annual Money-Weighted Rate of Return
2019	15.59 %
2018	(3.01)%
2017	13.67
2016	9.16
2015	(1.05)
2014	4.95

Note: Information for periods prior to 2014 was not readily available.

DRAFT

Metropolitan Transportation Authority Defined Benefit Pension Plan

(A Fiduciary Component Unit of the Metropolitan Transportation Authority)

Financial Statements as of and for the Years Ended December 31, 2019 and 2018, Supplemental Schedules, and Independent Auditors' Report

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

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INDEPENDENT AUDITORS' REPORT

To the Board of Managers of Pensions
Metropolitan Transportation Authority Defined Benefit Pension Plan

Report on the Financial Statements

We have audited the accompanying statements of plan net position of the Metropolitan Transportation Authority Defined Benefit Pension Plan (the "Plan") as of December 31, 2019 and 2018, and the related statements of changes in plan net position for the years then ended, and the related notes to the financial statements, which collectively comprise the Plan's basic financial statements as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the Plan's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the plan net position as of December 31, 2019 and 2018, and the respective changes in plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9 and the Schedule of Changes in the Employers' Net Pension Liability and Related Ratios-Schedule I on page 51; Schedule of Employer Contributions-Schedule II on page 52-53; and Schedule of Investment Returns-Schedule III on page 54 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

July 22, 2020

This management's discussion and analysis of the Metropolitan Transportation Authority Defined Benefit Pension Plan (the "Plan") financial performance provides an overview of the Plan's financial activities for the years ended December 31, 2019 and 2018. It is meant to assist the reader in understanding the Plan's financial statements by providing an overall review of the financial activities during the two years and the effects of significant changes, as well as a comparison with the prior year's activity and results. This discussion and analysis may contain opinions, assumptions, or conclusions by the MTA's management that should not be considered a replacement for, and is intended to be read in conjunction with the Plan's financial statements which begin on page 10.

Overview of Basic Financial Statements

The following discussion and analysis is intended to serve as an introduction to the Plan's financial statements. The basic financial statements are:

- **The Statements of Plan Net Position —** presents the financial position of the Plan at fiscal year-end. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan 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. Investments are shown at fair value. All other assets and liabilities are determined on an accrual basis.

- **The Statements of Changes in Plan Net Position** - present the results of activities during the year. All changes affecting the assets and liabilities of the Plan are reflected on an accrual basis when the activity occurred regardless of the timing of the related cash flows. In that regard, changes in the fair values of investments are included in the year's activity as net appreciation (depreciation) in fair value of investments.

- **The Notes to Financial Statements** - provides additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Plan's accounting policies, significant account balances and activities, material risks, obligations, contingencies, and subsequent events, if any.

- **Required Supplementary Information** - as required by the Government Accounting Standards Board ("GASB") includes the Schedule of Changes in the Employer's Net Pension Liability and Related Ratios, Schedule of Employer Contributions, and Schedule of Investment returns.

The accompanying financial statements of the Plan are presented in conformity with accounting principles generally accepted in the United States of America as prescribed by the GASB.

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CONDENSED FINANCIAL INFORMATION AND ANALYSIS

Plan Net Position
December 31, 2019, 2018 and 2017
(Dollars in thousands)

				Increase / Decrease			
				2019-2018		2018-2017	
	2019	**2018**	**2017**	**$**	**%**	**$**	**%**
Cash and investments	$ 4,782,648	$ 4,028,634	$ 4,056,780	$ 754,014	18.7	$ (28,146)	(0.7)
Receivables and other assets	5,098	4,590	3,778	508	11.1	812	21.5
Total assets	**$ 4,787,746**	**$ 4,033,224**	**$ 4,060,558**	**$ 754,522**	**18.7**	**$ (27,334)**	**(0.7)**
Due to broker for securities purchased	3,594	2,699	3,575	895	33.2	(876)	(24.5)
Other liabilities	4,583	6,045	5,449	(1,462)	(24.2)	596	10.9
Total liabilities	**8,177**	**8,744**	**9,024**	**(567)**	**(6.5)**	**(280)**	**(3.1)**
Plan net position restricted for pensions	**$ 4,779,569**	**$ 4,024,480**	**$ 4,051,534**	**$ 755,089**	**18.8**	**$ (27,054)**	**(0.7)**

December 31, 2019 versus December 31, 2018

Cash and investments at December 31, 2019 were $4,782.6 million representing an increase of $754.0 million or 18.7% from 2018. This increase is a result of investment activity and plan contributions net of benefit payments and expenses during 2019.

Receivables and other assets net of liabilities at December 31, 2019 decreased by $0.02 million or 1.5% from 2018. The is due primarily to an increase in interest and dividend receivables in the amount of $0.5 million, offset by a decrease in liabilities of $0.5 in millions related to amount due to broker for securities purchased of $0.9, administrative expenses $0.3, other liabilities $0.2 offset by a decrease by investment management fees of $1.9 million.

The plan net position held in trust for pension benefits increased by $755.1 million or 18.8% in 2019 as a result of the changes noted above.

December 31, 2018 versus December 31, 2017

Cash and investments at December 31, 2018 were $4,028.6 million representing a decrease of $28.1 million or 0.7% from 2017. This decrease is a result of weak investment activity in the fourth quarter of 2018 and plan contributions net of benefit payments and expenses during 2018.

Receivables and other assets net of liabilities at December 31, 2018 decreased by $1.1 million or 13.8% from 2017. The is due primarily to an increase in interest and dividend receivables in the amount of $0.8 million, offset by a decrease in other liabilities of $0.2.

The plan net position held in trust for pension benefits decreased by $27.0 million or 0.7% in 2018 as a result of the changes noted above.

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Changes in Plan Net Position
For the Years Ended December 31, 2019, 2018 and 2017
(Dollars in thousands)

				Increase / Decrease			
				2019-2018		2018-2017	
	2019	**2018**	**2017**	**$**	**%**	**$**	**%**
Additions:							
Net investment income/(loss)	$ 647,264	$ (150,422)	$ 516,153	$ 797,686	503.3	$ (666,575)	(129.1)
Contributions	376,217	368,869	352,855	7,348	2.0	16,014	4.5
Total net additions	**1,023,481**	**218,447**	**869,008**	**805,034**	**368.5**	**(650,561)**	**(74.9)**
Deductions:							
Benefit payments	264,878	242,149	231,321	$ 22,729	9.4	$ 10,828	4.7
Tranfer to NYSLERs	106	200	1,622	(94)	(47.0)	(1,422)	(87.7)
Administrative expenses	3,408	3,152	4,502	256	8.1	(1,350)	(30.0)
Total deductions	**268,392**	**245,501**	**237,445**	**22,891**	**9.3**	**8,056**	**3.4**
Net increase / (decrease) in Plan net position	**755,089**	**(27,054)**	**631,563**	**782,143**	**2891.0**	**(658,617)**	**(104.3)**
Plan net position restricted for pensions:							
Beginning of year	4,024,480	4,051,534	3,419,971	(27,054)	(0.1)	631,563	18.5
End of year	**$ 4,779,569**	**$ 4,024,480**	**$ 4,051,534**	**$ 755,089**	**18.8**	**$ (27,054)**	**(0.7)**

December 31, 2019 versus December 31, 2018

Net investment income increased by $516.1 million in 2019 due to net investment gains of $647.3 million in 2019 versus net loss of $150.4 million experienced in 2018.

Contributions increased by $7.3 million or 2.0% in 2019 compared to 2018 as required by the Actuarial Determined Contributions ("ADC") and member contributions from 2018 to 2019.

Benefit payments increased by $22.7 million or 9.4% over the prior year due to a continuing trend of increases in the number of retirees and cost-of-living adjustments provided to retirees and beneficiaries.

Administrative expenses increased by $0.3 million, or 8.1% over 2018. This increase is due primarily to expenses charged in 2019 for various services provided to the Plan.

In 2019 and 2018, the Plan transferred $0.1 million and $0.2 million to New York State and Local Police and Fire Retirement System as required by New York State law due to transfers of membership.

December 31, 2018 versus December 31, 2017

Net investment income decreased by $666.6 million in 2018 due to net investment loss of $150.4 million in 2018 versus net gains of $516.2 million experienced in 2017.

Contributions increased by $16.0 million or 4.5% in 2018 compared to 2017 as required by the Actuarial Determined Contributions ("ADC") and member contributions from 2017 to 2018.

Benefit payments increased by $10.8 million or 4.7% over the prior year due to a continuing trend of increases in the number of retirees and cost-of-living adjustments provided to retirees and beneficiaries.

Administrative expenses decreased by $1.3 million, or 30.0% over 2017. The decrease is due primarily to non-recurring expenses charged in 2017 for various services provided to the Plan.

In 2017 and 2018, the Plan transferred $1.6 million and $0.2 million to New York State and Local Police and Fire Retirement System as required by New York State law due to transfers of membership.

Economic Factors

<u>Market Overview and Outlook – 2019</u>

In 2019 international markets turned cautiously optimistic, in contrast to 2018, when stocks were buffeted by uncertainty surrounding United States ("U.S.")-China trade negotiations. Equity markets ended a remarkable 2019 rally on a strong note, with major stock indexes reaching new all-time highs. Among growth assets, global equities outperformed high yield and emerging market debt. The U.S. dollar weakened broadly, most significantly against the Swiss franc, British pound and emerging market currencies. Equity, bond and currency volatility continued to ease in December to historically low levels. Investors favored riskier assets following declining trade tensions and easing geo-political headwinds. United Kingdom ("UK") and emerging markets, specifically China, Russia and Latin American, led the December rally, while the U.S. along with other developed markets lagged the Morgan Stanley Capital International All Country World Index ("MSCI ACWI"). Developed markets outperformed emerging markets overall in 2019.

The global economy slowed in 2019 and is now growing below trend. This was primarily driven by the trade war weighing on capital spending and the lagging effect from monetary tightening in 2018. While monetary policies were generally left unchanged in December-- which partly accounts for the stellar returns to both equities and bonds in 2019—further impetus to economic growth may have to come from fiscal measures: policy makers have recently paused easing efforts to evaluate the effect of prior rate cuts, and officials have indicated that monetary policy may have reached its limits. They are therefore considering greater use of fiscal tools to manage business cycles and to support economic growth. A recession in the U.S. appears unlikely in the near term while low interest rates and tame inflation levels continue to power higher equity valuations

Geo-political risks faded after the U.S. and China reached a preliminary trade agreement. Also, Brexit uncertainties fell after Prime Minister Boris Johnson's Conservative Party obtained a solid majority in Parliament. The UK parliament has passed a withdrawal agreement and will start the exit process at the end of January 2020. Markets looked past the political turmoil in the U.S., where a deeply divided House of Representatives passed two articles of impeachment against President Trump. However, macroeconomic stress related to tighter financial conditions in Argentina, geo-political tensions in Iran, and social unrest in Hong Kong, Venezuela, Libya, and Yemen still persisted. Additionally, climate concerns took center stage amid extreme weather around the globe, and protests against the political establishment reverberated through Hong Kong, Lebanon, Chile, Ecuador and many other places.

While current market dynamics may appear to favor equities over fixed income, one should be cognizant that valuations have been trending higher, creating limited attractive investment opportunities. To this end, many long-term forecasts for investment return, encompassing a 10-year time horizon, remain relatively muted. To prepare portfolios for this new decade, it may be essential for investors to start the year with a renewed emphasis on strategic asset allocation, heeding geo-political and portfolio risks to ensure that their investment horizon and governance structure are aligned with portfolio mission statements and return objectives. Even if the investment landscape encourages risk taking, uncertainties remain, making it critical for investors to reassess and rebalance their portfolio holdings considering their robust gains in 2019.

Macro Themes

- Asset allocation and portfolio implementation.
- Late stage of a market cycle.
- China's complex transition into a service and consumption-oriented economy from the manufacturing behemoth.
- The backlash against globalization—expressed through populism and trade wars—is here to stay.

- Central banks permanent interventions have created a new normal, where accommodative monetary policies and fiscal debt growth appear to exist in perpetuity, supporting equities relative to fixed income.

United States

2019 represented a triumphant year the U.S. capital markets compared to 2018 underperformance. Accommodative monetary policies, falling interest rates and subdued inflation helped investors not only to meet their return objectives, but, in many instances, to exceed them. Adding to this impressive string of wins: the U.S. economy completed a calendar decade without a recession—a historical first. While investors would love more of the same, it is unlikely this period of windfall gains and low market volatility will persist for the next decade.

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+31.5%) and (+31.3%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (+27.6%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return of (+25.4%). Of note, growth-oriented investments outperformed the value counterpart with the Russell 1000 Growth (+36.2%) outpacing the Russell 1000 Value (+26.4%).

Fixed income securities markets ended 2019 in the black, reversing declines experienced in 2018. Treasuries returned (+14.8%) for the year, with the assets strongest quarter coming in the first and second quarters of 2019. Municipal credit posted a return of (+7.5%) while the Bloomberg Barclays High Yield Index gained (+14.3%) in 2019. Spreads on high-yield credit narrowed for most part of 2019, but segments in the high-yield and bank loan markets showed signs of stress towards the end of 2019. On the other hand, the S&P LSTA Leveraged Loan Index returned (+10.6%) during the same period.

International Developed

International equity markets posted very strong results in 2019 and lagged behind U.S. equity markets, returning (+26.5%) as measured by the MSCI. In U.S. dollars, both Europe and Japan equities posted positive performance in 2019 with MSCI Europe returning (+23.7%) and MSCI Japan returning (+19.5%). Very strong returns in Europe were driven by the global positive market performance during 2019 unlike 2018 when Europe returned (-14.9%). The Small Cap portion of international developed markets posted even stronger returns in 2019, (+24.9%) compared with 2018, (-17.9%).

Fixed income markets in Europe and Japan are largely centered on government bonds, with corporate and asset-backed issuance making up a fraction of the overall markets. Global Treasuries were positive in 2019, following a negative year in 2018.

Emerging Markets

Emerging markets posted very strong returns in 2019, with performance lower than both U.S. and international developed markets across equity and debt. The broad MSCI emerging markets index returned (+18.3%) for the year. Emerging markets gained sharply in December, driven by hopes that the People's Bank of China will continue to ease its monetary policy to support growth.

The bond markets of emerging markets performed well in 2019 compared to its underperformance in 2018. Both hard currency and local currency bond posted a very strong year in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (+12.6%) in 2019. Local currency bonds, which are issued in the local currency, returned (+13.5%) for the year.

Commodities

The Bloomberg Commodity Index rose (+7.7%) for the year while the New York Mercantile Exchange West Texas Index Crude Spot rose (+35.3%) and Midstream energy ended the year up more than (+24.0%). Residential gas prices in the Midwest are forecast to be nearly (+8.0%) higher this winter than last, and prices in the South and West are seen about (+5.0%) and (+3.0%) higher, respectively, while Northeast prices are forecast to decline (6.0%), helped by relatively low global prices for Liquefied Natural Gas and lower household natural gas consumption. The overall slight decline in heating expenses is aided by generally declining commodity prices.

Market Outlook

Central banks and governments have demonstrated, to varying degrees, their willingness to administer monetary and fiscal stimulus. That accommodative stance should continue in 2020. The U.S. Federal Reserve has already signaled its intention to keep interest rates on hold, providing more certainty for businesses. The re-convergence of U.S. interest rates with other developed markets will reduce upward pressure on the dollar. In addition, the impact of looser monetary policy, combined with a better trade backdrop, could spur the necessary investment and reform to fuel increased labor force participation and renewed productivity improvements.

Political risk, both at national and international levels, remains the great unknown. The long-term path of U.S.-China trade and cooperation is uncertain. A damaging "no-deal Brexit" is not entirely off the table. Tensions in the Middle East could risk sparking full-blown conflict. At the same time, 2020 primaries and Presidential elections in the U.S. will create uncertainty and could cause volatility as markets react to the policies and promises of the various candidates. Notwithstanding all of this, however, the current improvement in geo-political backdrop as compared with 2018, together with stimulus measures should support a modest acceleration in global growth in 2020. That growth, in turn, should lead to a moderate increase in demand for oil, putting a floor under the price, especially when global demand is met with sensible supply-side control from Organization of the Petroleum Exporting Countries.

Many analysts continue to believe emerging markets offer the most investment value, especially following the recent truce in trade relations between the U.S. and China. Furthermore, the opportunities for active management and excess returns appear more abundant in emerging economies. As a result, investors may be encouraged to overweight emerging market equities relative to developed market stocks. They may also opt to reduce exposure to high-yield and return-seeking credit in 2020, since market returns do not offer adequate compensation for the risk they hold. Safe-haven fixed income for instance, Treasuries and core bonds, despite low yields—remain vital for balancing risks within a diversified portfolio.

Impact of Covid-19

Covid-19 has continued to spread at a rapid pace around the world and has now been declared a global pandemic by the World Health Organization. This has caused a severe shock to the global economy pushing it into a deep and far reaching recession. Financial markets have responded with a huge drop in equities values, a rise in credit spreads and a flight to the safety of governments bonds.

In anticipation of the economic growth fallout, Standards & Poor's Global ratings lowered its forecast for global growth to just (+0.4%) this year and predicts a rebound to (+) in 2021. According to Bloomberg, the current second Quarter Gross Domestic Product average estimate of (-11.2%) annualized would be the worst post World War II quarter on record. However, worldwide central banks and governments announced fiscal and monetary rescue packages to soften the economic impact of the virus and the associated business disruptions. Geo-political tensions such as the trade war issues between the U.S. and China have moved into the background.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

Contact Information

This financial report is designed to provide a general overview of the Metropolitan Transportation Authority Defined Benefit Pension Plan's finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Comptroller, Metropolitan Transportation Authority, 2 Broadway, 16th Floor, New York, NY 10004.

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

STATEMENTS OF PLAN NET POSITION
AS OF DECEMBER 31, 2019 AND 2018
(In tnousands)

	2019	2018
ASSETS:		
Cash	$ 6,892	$ 13,224
Investments at fair value (Notes 2 and 3):		
Investments measured at readily determined fair value	999,705	787,191
Investments measured at net asset value	3,776,051	3,228,219
Total investments	4,775,756	4,015,410
Receivables:		
Accrued interest and dividends	2,949	2,745
Other receivable	2,149	1,845
Total receivables	5,098	4,590
Total assets	4,787,746	4,033,224
LIABILITIES:		
Due to broker for securities purchased	3,594	2,699
Due to broker for investment fee	717	2,667
Due to broker for administrative expenses	220	267
Due to MTA for administrative expenses	3,130	2,818
Other liabilities	516	293
Total liabilities	8,177	8,744
PLAN NET POSITION RESTRICTED FOR PENSIONS	$ 4,779,569	$ 4,024,480

See notes to financial statements.

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

STATEMENTS OF CHANGES IN PLAN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2019 AND 2018
(In thousands)

	2019	2018
ADDITIONS:		
Investment (loss) / income:		
Net realized and unrealized gains / (losses)	$ 608,991	$ (169,255)
Dividends	48,512	56,670
Interest	12,628	9,254
Total investment income / (loss)	670,131	(103,331)
Less:		
Investment expenses	(22,867)	(47,091)
Net investment income	647,264	(150,422)
Contributions:		
Employer:		
Metro-North Commuter Railroad Company	123,663	116,005
Long Island Rail Road Company	121,740	114,854
Metropolitan Transportation Authority Headquarters	32,299	42,967
MTA Bus Company	59,768	57,264
Staten Island Rapid Transit Operating Authority	7,244	7,877
Employee	31,503	29,902
Total contributions	376,217	368,869
Total additions	1,023,481	218,447
DEDUCTIONS:		
Benefits paid to participants	264,878	242,149
Transfer of MTA Police Employer & Employee Contributions to NYSLERS	106	200
Administrative expenses	3,408	3,152
Total deductions	268,392	245,501
NET INCREASE / (DECREASE) IN PLAN NET POSITION	755,089	(27,054)
PLAN NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	4,024,480	4,051,534
End of year	$ 4,779,569	$ 4,024,480

See notes to financial statements.

1. PLAN DESCRIPTION

The following brief description of the Metropolitan Transportation Authority (the "Authority") Defined Benefit Pension Plan (the "Plan") is provided for general information purposes only. Participants should refer to the Plan document for more complete information.

General — The Plan represents a cost-sharing employer defined benefit pension plan sponsored by the Authority and administered by the Board of Managers of Pensions, covering:

(a) management employees of the Long Island Rail Road Company ("MTA Long Island Rail Road") hired after January 1, 1988 not governed by collective bargaining agreements;

(b) management employees of the Metro-North Commuter Railroad Company ("MTA Metro-North Railroad") not governed by collective bargaining agreements;

(c) represented MTA Long Island Rail Road employees hired after January 1, 1988, covered by collective bargaining agreements which provide for participation in the plan effective January 1, 2004;

(d) certain represented MTA Metro-North Railroad employees covered by collective bargaining agreements which provide for participation in the plan effective on or after January 1, 2004;

(e) represented and non-represented MTA Long Island Rail Road employees hired prior to January 1, 1988;

(f) Metropolitan Suburban Bus Authority ("MTA Long Island Bus") provided public service in Nassau and Queens Counties. The Authority's Lease and Operating Agreement with Nassau County, dated January 15, 1973, as amended, was terminated effective December 31, 2011. As of January 1, 2012, the MTA Long Island Bus is no longer a member of the MTA Group. Represented and management Metropolitan Suburban Bus Authority ("MTA Long Island Bus") employees hired prior to January 24, 1983 and any MTA Long Island Bus person employed by the MSBA Employees' Pension Trust prior to July 29, 1998 under the MSBA Employees' Pension Plan remained vested employees in the plan;

(g) represented and management employees of the Staten Island Rapid Transit Operating Authority ("MTA Staten Island Railway") effective January 1st, 2005;

(h) certain represented and management employees of MTA Bus Company ("MTA Bus"), including represented and non-represented employees who were formerly employed by Liberty Lines Express, Inc., New York Bus Tours, Inc., Command Bus Company, Green Bus Lines Inc., Jamaica Buses Inc., Triboro Coach Corporation and represented and most non-represented employees formerly employed by Queens Surface Corporation; and

(i) participants in the MTA Defined Benefit Pension Plan 20 Year Police Retirement program ("MTA Police").

The Plan contains multiple and distinct benefit structures for MTA Metro-North Railroad and MTA Long Island Rail Road management employees, for MTA Metro-North Railroad and MTA Long Island Rail Road represented employees, MTA Police, MTA Long Island Bus employees and MTA Staten Island Railway employees. In addition, there are multiple but distinct benefit structures for the employees of MTA Bus which are based on the plans covering those employees prior to their becoming MTA Bus employees. MTA Bus non-represented employees and employees represented by the UTLO are covered by separate programs. Assets and liabilities are pooled and a single cash contribution amount and annual pension cost is determined. The Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) and 501(b) of the Internal Revenue Code. Accordingly, the Plan is tax-exempt and is not subject to the provisions of the Employee Retirement Income Security Act ("ERISA") of 1974.

Membership of the Plan consisted of the following as of January 1, 2019 and 2018, respectively, the date of the latest actuarial valuations:

	2019	2018
Active Plan Members	19,074	18,631
Retirees and beneficiaries receiving benefits	11,249	11,132
Vested formerly active members not yet receiving benefits	1,481	1,472
Total	31,804	31,235

Funding for the Plan is provided by the Authority, MTA Metro-North Railroad, MTA Long Island Rail Road, MTA Bus and MTA Staten Island Railway which are public benefit corporations that receive a significant portion of their operating and capital financing requirements from New York City, New York State, federal and regional governmental units and from the sale of bonds to the public. Certain funding is made on a discretionary basis. The continuance of funding for the Plan has been, and will continue to be, dependent upon the receipt of adequate funds.

Plan Administration – The Defined Benefit Plan is administered by the Board of Managers of Pensions which is comprised of:

(a) the persons holding the following positions:
  (j) the Chairman of the MTA;
  (ii) the MTA Chief Financial Officer;
  (iii) the MTA Director of Labor Relations; and
  (iv) the agency head of each participating Employer.

(b) Designation of Others – Any member of the Board of Managers, serving as such by virtue of holding a position described in (a) of this section, may, by written authorization filed with the Secretary who shall notify the other members of the Board of Managers, designate another individual, not then a member of the Board of Managers, to serve in that member's stead, in accordance with procedures established with the approval of the Executive Director. Any such authorization may be revoked by the designating member at any time in writing filed in the same manner.

(c) The Board of Managers shall be the agent for the service of legal process with respect to the Plan. No bond or other security is required in any jurisdiction of the Board of Managers or any member thereof except as required by law.

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 requirement. 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 who are eligible for a deferred vested benefit are not eligible to receive a service retirement allowance or early retirement allowance. Deferred vested benefits are payable on an unreduced basis on the first day of the month following the participant sixty-second birthday. 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 20 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 65 and completed at least 5 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 5 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.

The MTA Bus retirement programs covering TWU, ATU and TSO represented employees are fixed dollar plans, i.e., the benefits are a product of credited service and a specific dollar amount.

The retirement benefits for certain former employees of the Alliance Companies are based on a participant's service and final average salary. A normal retirement benefit is payable when the participant attains age 62 with 5 years of service. An early retirement benefit is payable when the participant attains age 55 with 15 years of service. The retirement benefit is payable as a single life annuity or, for married participants, as an unreduced 75% joint and survivor annuity.

MTA Bus non-represented employees and employees represented by the UTLO as of January 1, 2017 will earn benefits under a new set of programs. For service prior to 2017, a component calculated by a flat monthly dollar rate multiplied by years of credited service will be added to a final average salary (FAS) component, based on the platforms provided to similarly situated MaBSTOA Pension Plan members. For service on or after January 1, 2017, the final average salary component platform will be based on date of hire, years of credited service and whether the participant holds an operating or non-operating title. Certain former Liberty Lines employees assigned to the former Liberty Lines bus routes also are eligible for a supplemental plan benefit of 0.75% of final average salary per year of Plan service. TWU Local 100 has been certified as the collective bargaining representative for certain titles previously not represented at MTA Bus. Affected employees will participate in these programs, as set forth in the relevant collective bargaining agreement.

An MTA Bus non-represented or UTLO operating employee hired prior to April 1, 2012 participates in a Tier 4 25/55 operating retirement platform. A Tier 4 25/55 operating retirement platform participant with 25 years of Allowable Service receives upon retirement at age 55 a flat rate benefit equal to $1,380.00 ($115 x 12) for each year of service prior to January 1, 2017, plus a FAS benefit equal to 2% multiplied by FAS multiplied by service accrued after January 1, 2017, up to 30 years of total service, plus 1.5% multiplied by FAS multiplied by service accrued after January 1, 2017 in excess of 30 years of total service.

An MTA Bus non-represented non-operating employee hired prior to April 1, 2012 participates in a Tier 4 57/5 non-operating retirement platform. A Tier 4 57/5 non-operating retirement platform participant receives upon retirement at age 57 a flat rate benefit equal to $1,380.00 ($115 x 12) for each year of service prior to January 1, 2017, plus a FAS benefit equal to, for those with less than 20 years of total service, 1 2/3% multiplied by FAS multiplied by total service accrued after January 1, 2017, or, for those with 20 or more years of total service, 2% multiplied by FAS multiplied by total service accrued after January 1, 2017, up to 30 years of total service, plus 1.5% multiplied by FAS multiplied by total service accrued after January 1, 2017 in excess of 30 years of total service.

An MTA Bus non-represented or UTLO operating employee hired on or after April 1, 2012 participates in a Tier 6 25/55 operating retirement platform. A Tier 6 25/55 operating retirement platform participant with 25 years of Allowable Service receives upon retirement at age 55 a flat rate benefit equal to $1,380.00 ($115 x 12) for each year of service prior to January 1, 2017, plus a FAS benefit equal to 2% multiplied by FAS multiplied by service accrued after January 1, 2017 up to 30 years of total service, plus 1.5% multiplied by FAS multiplied by service accrued after January 1, 2017 in excess of 30 years of total service. The flat rate benefit is vested after the completion of five years of total service and the FAS benefit is vested after the completion of ten years of total service.

An MTA Bus non-represented non-operating employee hired on or after April 1, 2012 participates in a Tier 6 63/10 non-operating retirement platform. A Tier 6 63/10 non-operating retirement platform participant receives upon retirement at age 63 a flat rate benefit equal to $1,380.00 ($115 x 12) for each year of service prior January 1, 2017, plus a FAS benefit equal to, for those with less than 20 years of total service, 1.67% multiplied by FAS multiplied by total service accrued after January 1, 2017, or, for those with 20 or more years of total service, 1.75% multiplied by FAS multiplied by total service accrued after January 1, 2017, up to 20 years of such service, plus 2% multiplied by FAS multiplied by total service accrued after January 1, 2017 in excess of 20 years of total service. The flat rate benefit is vested after the completion of five years of total service and the FAS benefit is vested after the completion of ten years of total service.

Reduced early retirement benefits are payable under all platforms. The Tier 6 definition of wages includes an overtime ceiling which limits overtime compensation for pension purposes to no more than $16,406 for 2018 and $16,799 for 2019, indexed annually thereafter. Any overtime compensation earned in excess of the overtime ceiling is excluded from the final average salary calculation. The Tier 6 definition of wages also excludes wages in excess of the annual salary paid to the New York State Governor, lump-sum payments for deferred compensation, sick leave, accumulated vacation or other credits for time not worked.

TWU, ATU and TSO members who retire after November 16, 2016, and UTLO members and non-represented employees who retire after January 1, 2017 will have their pension benefit increased by a Cost of Living Adjustment (COLA). The COLA is an annual adjustment to the retirement benefit based on the Consumer Price Index (CPI). The following retirees are eligible to receive a COLA: disability retirees, regardless of age, who have been retired for at least 5 years; retirees who are at least age 62 and have been retired for at least 5 years; and retirees who are at least age 55 and have been retired for at least 10 years. Surviving spouses receiving a joint-and-survivor option benefit are eligible to receive 50% of the monthly COLA that would have been paid to the retiree. For TWU, ATU and TSO members, the COLA calculation is based on the first $18,000 of the retiree's normal retirement benefit. For UTLO members and non-represented employees, the COLA calculation is based on the first $18,000 of the retiree's final average salary benefit component. The COLA amount may not be less than 1% nor more than 3% in any year. Once COLA payments begin, they continue automatically and increase each September.

Certain MTA Bus employees represented by TWU Local 100 were granted pension service credit for periods of employment at Liberty Lines Express, Inc. prior to January 3, 2005, with the increase in the Plan benefit offset by the benefit accrued under the TWU-Westchester Private Bus Lines Pension Plan.

Pre-1988 MTA Long Island Rail Road participants are eligible for a service retirement allowance upon termination if the participants have either: (a) attained age 65 and completed at least 5 years of credited service, or if an employee on January 1, 1988 completed at least 10 years of credited service, or (b) attained age 50 and has completed at least 20 years of credited service. Terminated participants who were not employees on January 1, 1988 with 5 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 ⅓ 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 10 years of credited Police service and is calculated based on the participant's credited Police service and FAS but not less than ⅓ 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 ¾ 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 calculated 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 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 sixty-one. 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, 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 18 (or 23, 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.

The dependent children of MTA Bus TWU employees of College Point, Baisley Park, and La Guardia hired prior to June 9, 2009 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 non-represented employees, retirement benefit adopted and modifications thereto, are presented to the MTA Board and must be accepted and approved by the MTA Board.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Accounting — The Plan's financial statements are prepared on the accrual basis of accounting under which deductions are recorded when the liability is incurred and additions are recognized in the accounting period in which they are earned. Benefits and refunds are recognized when due and payable in accordance with the terms of the Plan. Contributions from members are recorded when the employer makes payroll deductions from plan members. Employer contributions are recognized when due in accordance with the terms of the Plan. Additions to the Plan consist of contributions (member and employer) and net investment income. Investment purchases and sales are recorded as of trade date.

The accounting and reporting policies of the Plan conform to accounting principles generally accepted in the United States of America (GAAP).

New Accounting Standards Adopted – The Plan adopted GASB Statement No. 84, *Fiduciary Activities.* This Statement establishes criteria for identifying fiduciary activities of all state and local governments. The focus of the criteria generally is on (1) whether a government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. Separate criteria are included to identify fiduciary component units and postemployment benefit arrangements that are fiduciary activities.

A fiduciary component unit, when reported in the fiduciary fund financial statements of a primary government, should combine its information with its component units that are fiduciary component units and aggregate that combined information with the primary government's fiduciary funds. This Statement also provides for recognition of a liability to the beneficiaries in a fiduciary fund when an event has occurred that compels the government to disburse fiduciary resources. Events that compel a government to disburse fiduciary resources occur when a demand for the resources has been made or when no further action, approval, or condition is required to be taken or met by the beneficiary to release the assets. There was no material impact on the Program's financial statements as a result of the implementation of GASB Statement No. 84.

GASB Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance*, provides temporary relief to government and other stakeholders in light of the COVID-19 pandemic. This objective is accomplished by postponing the effective dates of certain accounting and financial reporting provisions in Statements and Implementation Guides that first became effective for periods beginning after June 15, 2018 and later. GASB Statement No. 95 is effective immediately. The adoption of this Statement had no impact on the Plan's financial statements. However, the Plan did update the required year of adoption for GASB Statement No. 92. Refer to Accounting Standards Issued but Not Yet Adopted for further details.

Recent Accounting Pronouncements — Not yet adopted but currently being evaluated

GASB Statement No.	GASB Accounting Standard	MTA Pension Plan Required Year of Adoption
92	*Omnibus 2020*	2022

Use of Estimates — The preparation of the Plan's 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 the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Estimates include fair market value of investments, the annual required contribution and the unfunded actuarial accrued liability.

Benefits — Benefits are recorded when paid.

Contributions - As a condition of participation in the MTA Defined Benefit Pension Plan ("MTADBPP" or the "Plan"), employers and employees are required to contribute to the Plan. The amount of the employer contributions is determined by the Plan actuaries. Employee contribution rates for represented employees are determined by collective bargaining. Employee contribution rates for non-represented employees are set forth in the Plan document as adopted by the MTA Board. If an employee terminates employment with less than 10 (ten) years of credited service in the Plan, the employee may request a refund of his employee contributions with interest. Upon receipt of this refund of contributions, the employee has no claim on any future benefit from the Plan. Employees with more than 10 years of credited service, except for a small group of MTA Bus participants, cannot withdraw their contributions.

Members of the MTA Police Program who have transferred pursuant to Retirement and Social Security Law Section 343 and have not been employed in the MTA Police Program for 15 years may, upon termination of employment, withdraw member contributions. The withdrawal of such transferred police service member contributions shall not terminate membership and rights in the MTA Police Program attributable to Credited Police Service.

Income - Dividend and interest income are recorded when earned.

Securities - Purchases and sales of securities are recorded on a trade-date basis.

Asset Transfers — No assets were transferred to the MTA Defined Benefit Pension Plan for the years 2019 and 2018 respectively.

Administrative Expenses — Administrative expenses of the Plan are paid for by the Plan.

3. CASH AND INVESTMENTS

Investment Policy – The Plan's policy statement is issued for the guidance of fiduciaries, including the members of the Board and investment managers, in the course of investing the assets of the Trust. The investments of the Trust will be made for the exclusive benefit of the Plan participants and their beneficiaries. Policy guidelines may be amended by the Board upon consideration of the advice and recommendations of investment professionals.

In order to have a reasonable probability of achieving the target return at an acceptable risk level, the Board has adopted the asset allocation policy outlined below. The actual asset allocation will be reviewed on, at least, a quarterly basis and will be readjusted when an asset class weighting is outside its target range. The following was the MTA Defined Benefit Pension Plan Board adopted asset allocation policy as at December 31, 2019.

Asset Class	Target Allocation (%)	Target Range (%)	Policy Benchark
Equities	**29.0**	**24-34**	
Domestic Large Cap	10.0	5-15	S&P 500
Domestic Small Cap	5.5	2-10	Russell 2000
International Developed Markets Equities	10.0	5-15	MSCI EAFE
Emerging Markets Equities	3.5	2-6	MSCI Emerging Markets
Fixed Income	**15.0**	**9-21**	Manager Specific
Global Asset Allocation*	**20.0**	**15-33**	50% World Equity/ 50% Citigroup WGBI unhedged
Opportunistic Investments	**6.0**	**0-15**	Manager Specific
Absolute Return	**15.0**	**10-22**	Manager Specific
Real Assets	**5.0**	**0-10**	Manager Specific
Real Estate	**3.0**	**0-10**	Manager Specific
Private Equity	**7.0**	**0-10**	Venture Economics
Total	**100.0**		

* The Global Asset Allocation managers will invest across numerous liquid asset classes including: stocks, bonds, commodities, TIPS and REITs.

Investment Objective — The investment objective of the Plan is to achieve the actuarial return target with an appropriate risk position.

Investment Guidelines — The Board of Pension Managers executes investment management agreements with professional investment management firms to manage the assets of the Plan. The fund managers must adhere to guidelines that have been established to limit exposure to risk. The overall capital structure targets and permissible ranges for eligible asset classes of the Trust are detailed within the Investment Policy Statement. Full discretion, within the parameters of the guidelines described herein and in any individual investment policy associated with that allocation, is granted to the investment managers regarding the asset allocation, the selection of securities, and the timing of transactions. It is anticipated that the majority of investment managers will be funded through commingled funds, however, in some cases (likely equity and fixed income mandates) separate account vehicles may be utilized. For separate accounts, individual manager guidelines and/or exemptions are specified in each approved investment management agreement (“IMA”). Should there be conflicts, the individual manager guidelines set forth in the IMA supersede the general guidelines in the Investment Policy Statement. For commingled funds, investment guidelines and/or exemptions are specified in such vehicle’s offering documents. Should there be conflicts, the individual vehicle’s investment guidelines supersede the general guidelines in the Investment Policy Statement.

Individual investment manager benchmarks and performance requirements are specified within the Investment Policy Statement. Performance of the Trust will be evaluated on a regular basis. Evaluation will include the degree to which performance results meet the goals and objectives as herewith set forth. Toward that end, the following standards will be used in evaluating investment performance:

1. The compliance of each investment manager with the guidelines as expressed herein, and
2. The extent to which the total rate of return performance of the Trust achieves or exceeds the targeted goals.

Fixed Income Investment Managers

- Domestic fixed income investments are permitted, subject to the guidelines reflected in Investment Policy Statement. Yankee bonds, which are dollar denominated foreign securities, may be held by each domestic manager in proportions which each manager shall deem appropriate.

- International fixed income securities are permitted, subject to the guidelines reflected in Investment Policy Statement. Generally defined, the Citigroup World Government Bond Index represents the opportunity set for international developed markets. The J.P. Morgan Emerging Markets Bond Index-Global represents the opportunity set for international emerging markets denominated in USD. The J.P. Morgan GBI-EM Global Diversified Index represents the opportunity set for international emerging markets denominated in local currency. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- Investment managers are responsible for making an independent analysis of the credit worthiness of securities and their suitability as investments regardless of the classifications provided by rating agencies.

- The average duration (interest rate sensitivity) of an actively managed fixed income portfolio shall range within two years of the benchmark's duration.

- For domestic fixed income portfolios, individual manager account for the securities of an individual issuer, excepting the U.S. government and U.S. government agencies, shall not constitute more than 5% at market at any time.

- For international bond portfolios, individual manager account for the securities of any non-governmental issuer shall not constitute more than 5% at market at any time.

Equity Investment Managers

- Domestic equity investments are permitted, subject to the guidelines. American Depository Receipts (ADRs), which are dollar denominated foreign securities traded on the domestic U.S. stock exchanges (e.g., Reuters, Nestle, Sony) may be held by each domestic stock manager in proportions which each manager shall deem appropriate.

- International equities are permitted, subject to the guidelines. Generally defined, the Morgan Stanley EAFE (Europe, Australasia and the Far East) Index represents the opportunity set for international developed markets. The Morgan Stanley Emerging Markets Free Index represents the opportunity set for international emerging markets. These index references are guidelines and do not prohibit investment in securities outside those indexes.

- The equity specialists may vary equity commitment from 90% to 100% of assets under management.

- Individual manager account may hold no more than 8% at market or 1.5x the manager's benchmark weight (whichever is greater) of any single company's stock.

Overlay Manager(s).

- For a variety of reasons, the investment program may carry large amounts of cash throughout the year. In order to achieve the actuarial assumed returns on the total investment program, the Board may retain a futures overlay manager. The overlay manager shall use exchange traded futures contracts to expose the cash to the long-term target asset allocation.

- In addition, the overlay manager may be utilized for the following:
  a) Expose un-invested assets of domestic and international equity investment managers to their respective equity benchmarks through the use of futures contracts,
  b) Assist the Board in rebalancing, transitions, and/or gaining exposure to approved asset classes,
  c) Provide the market (or "beta") exposures in a portable alpha program,
  d) The overlay manager shall ensure that all futures positions are fully collateralized and the manager is prohibited from leveraging any portion of the portfolio.

Alternative Investments Managers

Alternative investments are broadly categorized into the following categories:
- Opportunistic
- Real assets
- Real estate
- Absolute return
- Private equity

Common features of alternative investments are limited liquidity, the use of derivatives, leverage and shorting, lower regulatory oversight, limited transparency, and high fees. Compensating for these risks, these investments offer the potential of diversification and/or higher rates of return over time

Derivatives Policy

Where appropriate, investment managers may use derivative securities for the following reasons:

- Hedging. To the extent that the portfolio is exposed to clearly defined risks and there are derivative contracts that can be used to reduce those risks, the investment managers are permitted to use such derivatives for hedging purposes, including cross-hedging of currency exposures.

- Creation of Market Exposures. Investment managers are permitted to use derivatives to replicate the risk/return profile of an asset or asset class provided that the guidelines for the investment manager allow for such exposures to be created with the underlying assets themselves.

- Management of Country and Asset Allocation Exposure. Investment managers charged with tactically changing the exposure of their portfolio to different countries and/or asset classes are permitted to use derivative contracts for these purposes.

- Additional uses of derivatives shall be approved by the Board or set forth in the individual investment guidelines or the offering documents prior to implementation and shall be restricted to those specific investment managers.

Ineligible Investments (Separately Managed Accounts)

Unless specifically approved by the Board or set forth in the individual investment guidelines, certain securities, strategies and investments are ineligible for inclusion within separately managed accounts. Among these are:

- Privately-placed or other non-marketable debt, except securities issued under Rule 144a,
- Lettered, legend or other so-called restricted stock,
- Commodities
- Short sales, and,
- Direct investments in private placements, real estate, oil and gas and venture capital, or funds comprised thereof.

Exceptions:

The Board of Managers, in recognition of the benefits of commingled funds as investment vehicles (i.e., the ability to diversify more extensively than in a small, direct investment account and the lower costs which can be associated with these funds) may, from time to time, allow investment in such funds. The Board recognizes that it cannot give specific policy directives to a fund; therefore, the Board, with the assistance of the investment advisor, will assess and monitor the investments of any funds used by the Plan to ascertain whether they are appropriate.

Investment Valuation and Income Recognition — Investments are presented at fair value based on information provided by JP Morgan Chase (the “trustee”), NEPC, and the investment managers. The fair value of investments is based on published market prices and quotations from major investment brokers at current exchange rates, as available, or net asset value, which is determined to be a practical expedient for measuring fair value. Many factors are considered in arriving at that value. All investments are registered, with securities held by the Plan’s trustee, in the name of the Plan. Gains and losses on investments that were sold during the year are included in in the statement of plan net position.

Risks and Uncertainties — The Plan’s investments are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and level of uncertainty related to changes in the value of investment securities, it is possible that changes in risks in the near term would materially affect the amounts reported in the Plan’s financial statements.

The financial markets, both domestically and internationally, have demonstrated significant volatility on a daily basis, which affects the valuation of investments. The Plan utilizes asset allocation strategies that are intended to optimize investment returns over time in accordance with investment objectives and with acceptable levels of risk.

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Investments measured at readily determined fair value (FV)
(In Thousands)

	December 31, 2019	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 360,913	360,913	$ -	$ -
Separate account small-cap equity funds	255,571	255,571	-	-
Separate account small-Real Estate Investments Trusts	53,086	53,086	-	-
Total equity investments	669,570	669,570	-	-
Debt Securities				
Separate account debt funds	330,135	-	330,135	-
Total debt investments	330,135	-	330,135	-
Total investments by fair value	$ 999,705	669,570	330,135	$ -

Investments measured at the net asset value (NAV)
(In Thousands)

	December 31, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 185,366	$ -	Daily	None
Commingled international equity funds	613,397	-	Daily	None
Commingled emerging market equity funds	203,682	-	Daily, monthly	None
Total equity investments measured at the NAV	1,002,445	-		
Debt Securities				
Commingled debt funds	305,240	-	Daily, monthly, quarterly	None
Mutual fund	82,159	-	Daily	None
Total debt investments measured at the NAV	387,399	-		
Absolute return:				
Directional	165,071	-	Monthly	3-60 days
Direct lending	204,243	52,294	Bi-annually	60 plus days
Distressed securities	58,015	-	Not eligible	N/A
Credit long	56,797	-	Quarterly	3-30 days
Credit long/short	88,312	-	Quarterly	3-60 days
Equity long/short	60,924	-	Quarterly	3-60 days
Event driven	95,069	1,909	Quarterly, Bi-annually	60-120 days
Global macro	96,210	-	Monthly	3-30 days
Global tactical asset allocation	113,122	-	Daily, monthly	3-30 days
Multistrategy	127,579	-	Monthly	3-30 days
Risk parity	406,121	-	Not eligible	N/A
Structured credit	2,865	-	Not eligible	N/A
Total absolute return measured at the NAV	1,474,328	54,203	Not eligible	N/A
Private equity - private equity partnerships	353,064	168,787		
Real assets				
Commingled real estate funds	222,588	-	Not eligible	N/A
Energy	123,991	63,140	Not eligible	N/A
Infrastructure	28,839	7,449	Not eligible	N/A
Total real assets measured at the NAV	375,418	70,589		
Short term investments measured at the NAV	183,397			
Total investments measured at the NAV	3,776,051	$ 293,579		
Total investments at fair value	$ 4,775,756			

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Investments measured at readily determined fair value (FV)
(In Thousands)

	December 31, 2018	Quoted Price in Active Markets for Identical Assets Level 1	Significant Other Observable Inputs Level 2	Significant Unobservable Inputs Level 3
Equity Securities:				
Separate account large-cap equity funds	$ 261,396	261,396	$ -	$ -
Separate account small-cap equity funds	197,302	197,302	-	-
Separate account small-Real Estate Investments Trusts	40,313	40,313	-	-
Total equity investments	499,011	499,011	-	-
Debt Securities				
Separate account debt funds	288,180	-	288,180	-
Total debt investments	288,180	-	288,180	-
Total investments by fair value	$ 787,191	499,011	288,180	$ -

Investments measured at the net asset value (NAV)
(In Thousands)

	December 31, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 121,990	$ -	Daily	None
Commingled international equity funds	475,092	-	Daily	None
Commingled emerging market equity funds	113,333	-	Daily, monthly	None
Total equity investments measured at the NAV	710,415	-		
Debt Securities				
Commingled debt funds	244,072	-	Daily, monthly, quarterly	None
Mutual fund	74,270	-	Daily	None
Total debt investments measured at the NAV	318,342	-		
Absolute return:				
Directional	111,125	-	Monthly	3-60 days
Direct lending	180,185	52,294	Bi-annually	60 plus days
Distressed securities	61,410	-	Not eligible	N/A
Credit long	51,543	-	Quarterly	3-30 days
Credit long/short	80,745	-	Quarterly	3-60 days
Equity long/short	55,452	-	Quarterly	3-60 days
Event driven	86,900	1,909	Quarterly, Bi-annually	60-120 days
Global macro	94,438	-	Monthly	3-30 days
Global tactical asset allocation	243,938	-	Daily, monthly	3-30 days
Multistrategy	109,236	-	Monthly	3-30 days
Risk parity	337,396	-	Not eligible	N/A
Structured credit	7,404	-	Not eligible	N/A
Total absolute return measured at the NAV	1,419,772	54,203	Not eligible	N/A
Private equity - private equity partnerships	294,568	168,787		
Real assets				
Commingled real estate funds	209,041	-	Not eligible	N/A
Energy	89,905	63,140	Not eligible	N/A
Infrastructure	28,306	7,449	Not eligible	N/A
Total real assets measured at the NAV	327,252	70,589		
Short term investments measured at the NAV	157,870			
Total investments measured at the NAV	3,228,219	$ 293,579		
Total investments at fair value	$ 4,015,410			

Concentration of Credit Risk – Individual investments held by the Plan that represents 5.0% or more of the Plan’s net assets available for benefits at December 31, 2019 and 2018 are as follows:

(In Thousands)	2019	2018
Investments at fair value as determined by quoted market prices:		
Robert W. Baird and Company	$ 274,254	$ 239,340

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Credit Risk — At December 31, 2019 and 2018, the following credit quality rating has been assigned by a nationally recognized rating organization:

(In Thousands) Quality Rating	2019 Fair Value	Percentage of Fixed Income Portfolio	2018 Fair Value	Percentage of Fixed Income Portfolio
AAA	$ 338,946	21.09 %	$ 123,123	19.05 %
AA	126,878	7.89	180,474	3.37
A	124,722	7.76	66,304	10.32
BBB	125,274	7.79	102,332	14.41
BB	134,434	8.36	99,366	11.21
B	99,195	6.17	82,629	7.29
CCC	26,941	1.68	18,733	0.90
CC	6,201	0.39	143	0.11
C	3,951	0.25	1,376	0.01
D	7,219	0.45	6,375	-
Not Rated	344,148	21.41	368,472	16.64
Credit risk debt securities	1,337,909	83.24	1,049,327	83.31
U.S. Government bonds	269,394	16.76	276,776	16.69
Total fixed income securities	1,607,303	100.00 %	1,326,103	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	3,168,453		2,689,307	
Total investments	$ 4,775,756		$ 4,015,410	

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Interest Rate Risk Exceptions — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. Duration is a measure of sensitivity to 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. Modified duration is an indicator of bond price's sensitivity to a parallel 100 basis point change in interest rates.

Investment Fund (In Thousands)	2019 Fair Value	2019 Duration	2018 Fair Value	2018 Duration
Chase	$ 330,135	6.35	$ 288,180	12.90
Allianz Structured Alpha Fund	165,071	0.13	111,125	0.13
Wellington Blended Emerging Market Debt Fund	77,360	6.44	68,370	5.44
Bridgewater All Weather Fund	177,791	5.60	95,896	8.30
Wellington Opportunistic Fund	-	-	54,070	1.52
Wellington Fixed Income Fund	2,490	5.80	-	-
Bridgewater Pure Alpha Fund	35,698	1.30	142,098	(0.90)
Bridgewater Pure Alpha Markets Fund	(6,885)	(2.90)	(16,455)	(7.10)
GAM Unconstrained Bond Fund	-	-	34,810	0.10
Northern Trust William Capital Fund	9,073	-	8,651	-
Park Square Capital Credit Opportunities Fund II	36,561	0.18	32,238	-
Park Square Capital Credit Opportunities Fund III	30,088	0.13	14,156	-
Libremax Partners Fund	136,293	2.82	80,745	2.63
Gramercy Distressed Opportunistic Fund	41,694	(0.07)	22,474	0.26
Makuria Credit Fund	19,559	5.38	17,666	5.38
Crescent Capital High Income Fund	40,188	2.92	51,516	2.56
Orchard Landmark Fund	106,272	1.18	95,495	1.44
PIMCO Distressed Credit Opportunities Fund	56,797	2.83	51,543	2.18
Wellington Global Managed Risk Fund	231,000	10.70	73,571	6.20
State Stree Real Asset Fund	27,962	4.67	24,062	5.84
State Stree Long US Treasury Index Fund	33,095	18.06	28,183	17.35
EIG Energy Fund XV	1,793	-	3,487	-
EIG Energy Fund XVI	5,181	-	4,878	-
Riverstone Credit Partners Fund	24,442	4.00	17,408	4.00
NEPC Syndication Partners Fund	5,282	4.00	1,723	4.00
Canyon Value Realization Fund	20,363	2.44	20,213	3.26
Total fixed income securities	1,607,303		1,326,103	
Portfolio modified duration		4.95		5.20
Investments with no duration reported	$ 3,168,453		$ 2,689,307	
Total investments	$ 4,775,756		$ 4,015,410	

Foreign Currency Risk — Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment. Some of the Plan's investment managers will have foreign currency exposure through holdings of foreign securities, currency derivatives or private investments whose revenue will be non-USD based. The Plan also holds investments in American Depository Receipts ("ADRs") which are not included in the below schedule since they are denominated in U.S. dollars and accounted for at fair market value.

The Plan's foreign currency exposures as of December 31, 2019 and 2018 are as follows (amounts in U.S. dollars, in thousands):

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Foreign Currency Holdings in US $ (In Thousands)	December 31, 2019	December 31, 2018
Argentina Peso	$ 814	$ 16,926
Dollar (Australian)	33,857	22,656
Bahraini Dinar		400
Bangladesh (Taka)	582	384
Bermuda Dollar		2,943
Botswana Pula	713	170
Brazil Cruzeiro Real	47,494	31,211
Bulgarian Lev	31	15
Dollar (Canadian)	25,509	34,720
Cayman Island dollar	321	829
Chilean Peso	5,766	7,423
China (Yuan Renminbi)	15,461	17,250
Colombian Peso	2,721	4,274
Croatia Kuna	687	516
Czech Koruna	67	1,286
Krone (Danish)	10,119	6,926
Dominican Peso	314	10
Egyptian Pound	1,906	1,195
Euro	107,917	99,097
Ghanaian Cedi	158	187
Geogian Lari	1,197	962
Dollar (Hong Kong)	20,275	13,112
Hungary (Forint)	3,392	4,141
Icelandic Krona	1,772	2,907
Indian Rupee	29,144	23,127
Indonesia Rupiah	18,501	7,496
Israeli (Shekel)	641	1,427
Yen (Japan)	14,907	11,952
Jordanian Dinar	667	382
Kazakhstani Tenge	47	432
Kenyan Shilling	711	400
Kuwait Dinar	1,986	808
Lebanese Pound		50
Laos Kip	181	466
Malaysian (Ringgit)	6,489	4,438
Mauritius (Rupee)	689	946
Mexican New Peso	10,467	3,744
Morocco Dirham	713	370
Dollar (New Zealand)	3,456	(518)
Nigerian Naira	1,151	414
Krone (Norwegian)	8,765	2,265
Omanian Rial	654	332
Pakistani Rupee	1,538	1,030
Panama Balboa	39	159
Peru Sol	1,012	1,888
Philippines Peso	7,785	3,278
Polish (New Zloty)	(9)	(91)
Pound (Sterling)	72,738	45,323
Qatar Riyal	1,510	1,002
Romanian Leu	1,445	1,728
Russian Federation Rouble	15,325	132
Saudi Riyal	3,046	818
Singapore Dollar	10,933	(4,147)
South African Rand	11,468	11,592
South Korean Won	36,006	21,130
Sri Lankan Rupee	653	334
Krona (Swedish)	6,811	6,416
Franc (Swiss)	7,693	15,406
Thai (Bhat)	7,449	5,550
Dollar (Taiwan, New)	23,632	10,695
Tunisian Dinar	366	150
Turkish Lira	(1,306)	50
Ukraine Hryvnia	409	69
UAE Dirham	1,808	1,252
Uruguayan Pesos	8	20
Vietnam Dong	486	739
Other	86	9,934
Total	$ 591,173	$ 462,528

Additional Information — The Plan holdings are part of the MTA Master Trust of which the MTA Defined Benefit Plan participates on a percentage basis. The percentage of the Plan ownership for the year ended December 31, 2019 and December 31, 2018 was 86.09% and 84.19% respectively.

	Master Trust Total Plan	MTA Defined Benefit Plan	Master Trust Total Plan	MTA Defined Benefit Plan
	December 31, 2019		December 31, 2018	
	(In thousands)			
Total Investments:				
Investments measured at readily determined fair value	$ 1,161,288	$ 999,705	$ 935,046	$ 787,191
Investments measured at the NAV	4,386,375	3,776,051	3,898,121	3,228,219
Total investments measured at fair value	$ 5,547,663	$ 4,775,756	$ 4,833,167	$ 4,015,410

4. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2019 and 2018 were as follows (in thousands):

	December 31, 2019	December 31, 2018
Total pension liability	$ 6,510,686	$ 5,488,490
Fiduciary net position	4,779,569	4,024,480
Net pension liability	1,731,117	1,464,010
Fiduciary net position as a percentage of the total pension liability	73.41%	73.33%

Actuarial Methods and Assumptions

The total pension liability as of December 31, 2019 was determined by an actuarial valuation date of January 1, 2019, that was updated to roll forward the total pension liability to the respective year-end. Actuarial valuations are performed annually as of January 1.

Discount Rate

The discount rate used to measure the total liability as of December 31, 2019 and 2018 was 6.50% and 7.0%. The projection of cash flows used to determine the discount rate assumed that plan contributions will be made in accordance with the Employer funding policy as projected by the Plan's actuary. Based on those assumptions, the 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 projected benefit payments to determine the total pension liability.

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

The following presents the 2019 net pension liability of the Plan, calculated using the discount rate of 6.50 percent; as well as what the Plan's net pension would be if it were calculated using a discount rate that is 1-percentage point lower (5.50 percent) or 1-percentage point higher (7.50 percent) than the current rate:

2019
(in thousands)

	1% Decrease 5.50%	Current Discount Rate 6.50%	1% Increase 7.50%
Net pension liability	$2,556,206	$1,731,117	$1,036,341

The following presents the 2018 net pension liability of the Plan, calculated using the discount rate of 7.00 percent; as well as what the Plan's net pension would be if it were calculated using a discount rate that is 1-percentage point lower (6.00 percent) or 1-percentage point higher (8.00 percent) than the current rate:

2018
(in thousands)

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	$2,146,497	$1,464,010	$888,282

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Additional Important Actuarial Valuation Information

Valuation date	January 1, 2019
Valuation timing	Actuarially determined contributions calculated as of December 31, for the fiscal year and discounted to July 1 to reflect monthly payments throughout the year.
Actuarial cost method	Frozen Initial Liability cost method
Amortization method	For FIL bases, period specified in current valuation report for specific plan change bases. Fresh start base as of January 1, 2020 will be determined based on the Plan's unfunded Entry Age Normal liability less amortization balances of remaining plan change bases. 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.
Actuarial 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
Mortality	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA
Actuarial assumptions:	
Investment rate of return	6.50%, net of investment expenses
Projected salary increases	Varies by years of employment, and employee group; 2.75% GWI increases for TWU Local 100 MTA Bus hourly employees
COLAs	60% of inflation assumption or 1.35%, if applicable
Inflation/Railroad Retirement wage base	2.25%; 3.25%

Valuation date	January 1, 2018
Valuation timing	Actuarially determined contributions calculated as of December 31, for the fiscal year and discounted to July 1 to reflect monthly payments throughout the year.
Actuarial cost method	Frozen Initial Liability cost method
Amortization method	For 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.
Actuarial 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
Mortality	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA
Actuarial assumptions:	
Investment rate of return	7.0%, net of investment expenses
Projected salary increases	Varies by years of employment, and employee group; 3.0% GWI increases for TWU Local 100 MTA Bus hourly employees
COLAs	55% of inflation assumption or 1.375%, if applicable
Inflation/Railroad Retirement wage base	2.5%; 3.5%

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Calculation on Money-Weighted Rate of Return

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. External cash flows are determined on a monthly basis and are assumed to occur at the beginning of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month.

2019 Schedule of Calculations of Money-Weighted Rate of Return

(In thousands)

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2019	$4,024,480	12.00	1.00	$4,666,242
Monthly net external cash flows:				
January	(9,210)	12.00	1.00	(10,679)
February	8,084	11.00	0.92	9,263
March	8,084	10.00	0.83	9,140
April	8,210	9.00	0.75	9,174
May	8,210	8.00	0.67	9,066
June	8,104	7.00	0.58	8,830
July	8,210	6.00	0.50	8,841
August	8,210	5.00	0.42	8,736
September	8,210	4.00	0.33	8,621
October	8,210	3.00	0.25	8,519
November	8,210	2.00	0.17	8,419
December	35,293	0.26	0.02	35,397
Ending Value - December 31, 2019				$4,779,569
Money-Weighted Rate of Return	15.95%			

	Net External Cash Flows	Periods Invested	Period Weight	Cash Flows With Interest
Beginning Value - January 1, 2018	$4,051,534	12.00	1.00	$3,902,670
Monthly net external cash flows:				
January	(8,342)	12.00	1.00	(8,035)
February	8,976	11.00	0.92	8,672
March	8,976	10.00	0.83	8,701
April	8,976	9.00	0.75	8,727
May	8,976	8.00	0.67	8,753
June	9,189	7.00	0.58	8,992
July	9,189	6.00	0.50	9,019
August	9,356	5.00	0.42	9,210
September	9,831	4.00	0.33	9,710
October	9,557	3.00	0.25	9,468
November	9,917	2.00	0.17	9,854
December	38,768	0.26	0.02	38,739
Ending Value - December 31, 2018				$4,024,480
Money-Weighted Rate of Return	-3.67%			

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Calculation on Long-Term Expected Rate of Return

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2019 and 2018.

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2019			
Asset Class	**Index**	**Target Allocation***	**Real Rate of Return**
US Core Fixed Income	Barclays Aggregate	9.00%	1.51%
US Long Bonds	Barclays Long Term Government/Credit	1.00%	2.41%
US Bank/Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	2.74%
US Inflation-Indexed Bonds	Barclays US TIPS	2.00%	0.71%
US High Yield Bonds	BAML High Yield	4.00%	3.13%
Emerging Market Bonds	JPM EMBI Plus	2.00%	3.36%
US Large Caps	S&P 500	12.00%	4.33%
US Small Caps	Russell 2000	6.00%	5.65%
Foreigh Developed Equity	MSCI EAFE NR	12.00%	5.95%
Emerging Market Equity	MSCI EM NR	5.00%	8.05%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.50%
Private Real Estate Property	NCREIF Property	4.00%	3.80%
Private Equity	Cambridge Private Equity	9.00%	9.50%
Commodities	Commodity	1.00%	2.79%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.26%
Hedge Funds - Event Driven	HFRI Event Driven	6.00%	3.41%
Hedge Funds - Equity Hedge	HFRI Equity Driven	3.00%	3.82%
Assumed Inflation - Mean			2.25%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			6.73%
Portfolio Standard Deviation			10.94%
Long-Term Expected Rate of Return selected by MTA			6.50%

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2018

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	9.00%	2.03%
US Long Bonds	Barclays Long Term Government/Credit	1.00%	2.44%
US Bank/Leveraged Loans	Credit Suisse Leveraged Loan	7.00%	3.08%
US Inflation-Indexed Bonds	Barclays US TIPS	2.00%	1.16%
US High Yield Bonds	BAML High Yield	4.00%	3.93%
Emerging Market Bonds	JPM EMBI Plus	2.00%	3.76%
US Large Caps	S&P 500	12.00%	4.71%
US Small Caps	Russell 2000	6.00%	5.93%
Foreign Developed Equity	MSCI EAFE NR	12.00%	6.15%
Emerging Market Equity	MSCI EM NR	5.00%	8.22%
Global REITS	FTSE EPRA/NAREIT Developed	1.00%	5.80%
Private Real Estate Property	NCREIF Property	4.00%	3.69%
Private Equity	Cambridge Private Equity	9.00%	9.50%
Commodities	Commodity	1.00%	2.85%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	16.00%	3.28%
Hedge Funds - Event Driven	HFRI Event Driven	6.00%	3.38%
Hedge Funds - Equity Hedge	HFRI Equity Driven	3.00%	3.85%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			7.19%
Portfolio Standard Deviation			10.87%
Long-Term Expected Rate of Return selected by MTA			7.00%

* Based on March 2014 Investment Policy

5. CONTRIBUTIONS

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 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 types of employee contributions made to the Plan.

Effective January 1, 1994, covered MTA Metro-North Railroad and MTA Long Island Rail Road non-represented employees are required to contribute to the 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, non-represented employee contributions, if any, were eliminated after 10 years of making contributions to the Plan. MTA Metro-North Railroad employees may purchase prior service from January 1, 1983 through December 31, 1993 and MTA Long Island Rail Road 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 Plan been in effect for those years.

Police Officers who became participants of the MTA Police Program prior to January 9, 2010 contribute to that program at various rates. Police Officers who became 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.

MTA Bus represented participants make contributions in accordance with their respective collective bargaining agreements and arbitration awards. MTA Bus non-represented employees are accessed contributions for their flat rate benefit of $10.33 for each week for the period from January 1, 2012 through December 31, 2016. Effective January 1, 2017, MTA Bus non-represented operating employee hired prior to April 1, 2012 contribute 2% of gross wages. MTA Bus non-represented non-operating employee hired prior to April 1, 2012 contribute 4.85% of gross wages for ten years of service after January 1, 2017, and then 1.85% gross salary thereafter until retirement. Contributions levels for MTA Bus non-represented employees hired on or after April 1, 2012, which are required until retirement, are determined every year at the beginning of the calendar year, and are based on annual wages during the prior year and the following schedule:

Annual Wages Earned During the Prior Year	**Contribution Rate**
Up to $45,000	3.00%
$45,001 to $55,000	3.50%
$55,001 to $75,000	4.50%
$75,001 to $100,000	5.75%
Greater than $100,000	6.00%

In 2017, a reserve was established for fifteen former MTA employees in accordance with Chapter 533 of the Laws of 2015. As of December 31, 2019, total transfer in the amount of $1.9 million, to the New York State and Local Police and Fire Retirement System allowed former MTA Police employees to transfer membership and contributions to the New York State and Local Police and Fire Retirement System from the MTA Defined Benefit Plan.

Covered MTA Metro-North Railroad represented employees and MTA Long Island Rail Road represented employees who first became eligible to be 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 Rail Road 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 10 years of credited service. MTA Long Island Rail Road represented employees are required to make the employee contributions for 10 years, or 10 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. MTA Bus is required to make significant annual contributions to the MTA Plan on a current basis. Pursuant to the January 1, 2019 and January 1, 2018 actuarial valuations for the MTA Plan, which included amounts for actuarial assets and liabilities relating to both active and retired members for most portions of the former private plans (excepting, for example, members of the Transport Workers Union — New York City Private Bus Lines Pension Trust who were working on school bus routes which did not become part of MTA Bus service), MTA Bus recorded pension expense equal to the valuation annual required contribution of $59.8 and $57.3 for the calendar years ended December 31, 2019 and 2018, respectively. Both of these employer contributions were paid to the MTA Plan in their respective years.

6. ACTUARIAL METHODS AND ASSUMPTIONS

A. Actuarial Valuation Method

The Frozen Initial Liability method was used for determining the actuarial determined contribution comprising the normal cost-plus amortization payments of the frozen unfunded actuarial accrued liability. The Normal Cost equals the present value of future employer normal contributions divided by the average future working lifetime factor. This factor equals the present value of future compensation or service divided by current compensation or the member count (less certain retirements), depending if benefits are pay-related, and weighted by the present value of benefits. Service is used for MTA Bus members with hourly benefits and benefits indexed to general wage increases.

The Entry Age Normal (EAN) method is used for determining changes in the frozen unfunded actuarial accrued liability due to plan provisions and assumption changes. For MTA Bus members with benefits indexed to general wage increases, the entry age normal cost uses assumed general wage increases rather than payroll, which conforms to a method compliant for GASB 67 purposes. For MTA Bus members with hourly benefits that are not indexed, the entry age normal cost is based on a level dollar method. If the benefit style changed from one type to another, the plan change base is based on the EAN method in effect prior to the change in benefit. For MTA Bus non-represented members where benefits are bifurcated into a past service level dollar component and a future service MaBSTOA benefit component, the EAN normal cost assumes that the MaBSTOA style benefits were in effect for the member's entire career.

For groups where service was reported as of the valuation date, Entry Age is based on an effective date of hire equal to the valuation date less provided service plus any purchased service, but not reflecting any military service purchased.

B. Asset Valuation Method

The Asset Valuation method smooths gains and losses over a 5-year period. The formula for the asset valuation method is as follows:

Actuarial Value of Assets = $MV_t - .8UR_1 - .6UR_2 - .4UR_3 - .2UR_4$

Where

MV_t = Market Value of assets as of the valuation date.

UR_n = Unexpected return during the n^{th} year preceding the valuation date. The unexpected return for a year equals the total investment return minus the total expected return. The total expected return equals the market value of assets at the beginning of the year plus the weighted net cash flow during the year multiplied by the expected rate of return.

The resulting value cannot be less than 80% or greater than 120% of the market value of assets.

The market value of assets is adjusted for any contributions made in the current year attributable to a prior year less any contributions made in a prior year and attributable to a future year, determined for each Agency independently.

C. Actuarial Assumptions Universal to all Groups

The assumptions described below were primarily determined based on an experience analysis covering the period from January 1, 2006 to December 31, 2011, with certain assumptions modified subsequently. The postretirement mortality assumption is based on an experience analysis covering the period from January 1, 2011 to December 31, 2015.

Interest — 6.50% per annum, compounded annually.

Railroad Retirement Wage Base — 3.25% per year.

Consumer Price Index — 2.25% per year.

Cost of Living Increases - 60% of inflation assumption or 1.35% per annum, compounded annually for Police and MTA Bus members eligible for a cost of living adjustment.

Provision for Expenses — Estimated administrative expenses are added to the normal cost. Administrative expenses are based on the average of the prior three year's reported administrative expenses and are assumed payable in the middle of the plan year.

Valuation Compensation: The valuation compensation is equal to the annualized base salary as of December 31, 2018 adjusted for wage increases granted after the valuation date but retroactive to earlier periods, multiplied by the overtime assumption and assumed salary increases for the year. Salary increases are assumed to occur on average at mid-year. Retroactive wage adjustments are as follows:

- MTA Metro-North represented employees: 5.0625% for IBT and ACRE
- MTA Staten Island Railway represented employees: 5.0625% for UTU

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.

Preretirement — RP-2000 Employee Mortality Table for Males and Females with Blue collar adjustments.

Postretirement Healthy Lives — 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.

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

Post-termination Death Benefits - For current inactive participants eligible for post-retirement death benefits, an amount of $25,000 ($10,000 for certain M.S.B.A. inactive participants) is assumed to be payable at death. For current terminated vested members, $100,000 is assumed to be payable at death prior to retirement, except for Police officers. A load of 8.75% is applied to the liability for Police officers.

Participant Data — Service for MTA Police, MTA Metro-North Railroad and MTA Long Island Rail Road represented and management members is based on the sum of credited service, purchased service and military service provided by MTA. Retirement status and benefits based on information provided in JP Morgan file as of the valuation date, except if reported as disability retirement previously, the member continued to be treated as a disability retirement.

For inactive MTA Police, MTA Metro-North and MTA Long Island Rail Road represented and management participants, future offsets for Railroad Retirement benefits are estimated and assumed to occur at age 62 unless disabled or it appears the offset has occurred. For inactive MTA Long Island Rail Road Pension participants, offsets for Railroad Retirement benefits are estimated and assumed to occur at the member's age 65. Benefits, net of any Railroad Retirement benefits, are estimated for vested members who terminated during the past year if not provided by the Authority.

For inactive MTA Bus participants eligible for a COLA, including retroactive benefit increases that had not been reflected in the JP Morgan data, the increased benefits and basis for the COLA were estimated based on the terms of the Award.

D. Changes in Actuarial Assumptions Universal to all Groups

The provision for administrative expenses was changed from a 3-year average to a 2-year average of prior administrative expense charges.

E. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Management

Salary Scale — Salaries are assumed to increase in accordance with the following schedule:

Years of Service	Rate of Increase
0	6.00 %
1	5.00
2	4.25
3	4.00
4+	3.50

Termination — Withdrawal rates vary by years of service and sex. Illustrative rates are shown below:

Years of Service	Male	Female
0 - 1	5.00 %	7.50 %
2 - 3	3.25	4.00
4	2.50	4.00
5 - 9	2.25	3.50
10 - 19	1.50	3.00
20+	1.00	1.50

Retirement — Rates vary by age and type of retirement. Illustrative rates are shown below:

A. For Management employees hired prior to January 31, 2008.

Age	Reduced Early Retirement	Unreduced Early Retirement
55	5.00 %	10.00 %
56	5.00	7.50
57	5.00	5.00
58	5.00	5.00
59	5.00	5.00

B. For Management employees hired on or after January 31, 2008.

Age	Reduced Early Retirement	Unreduced Early Retirement
55	3.00 %	10.00 %
56	3.00	7.50
57	3.00	5.00
58	3.00	5.00
59	3.00	5.00
60	3.00	30.00
61	3.00	30.00

C. For all management employees at Normal Retirement (age 60 or age 62 and later):

- 5% per year if members have fewer than 10 years of service
- 15% per year if members have 10 but fewer than 20 years of service
- 30% per year if member have 20 or more years of service

Certain retirement age is age 80

Disability — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

	Ordinary		Accidental			Ordinary		Accidental	
Age	**M**	**F**	**M**	**F**	**Age**	**M**	**F**	**M**	**F**
20	0.015 %	0.020 %	0.010 %	0.005 %	45	0.176 %	0.147 %	0.039 %	0.010 %
25	0.020	0.020	0.010	0.005	50	0.240	0.221	0.044	0.010
30	0.024	0.024	0.015	0.005	55	0.245	0.245	0.049	0.010
35	0.039	0.029	0.024	0.005	60	0.245	0.245	0.049	0.010
40	0.103	0.069	0.034	0.010	64	0.245	0.245	0.049	0.010

Employee Contributions — No employee contributions have been anticipated for future years.

Changes in Actuarial Assumptions — None.

F. Actuarial Assumptions — MTA Defined Benefit Pension Plan — MTA Metro-North Represented Employees

Salary Scale — Salaries are assumed to increase in accordance with the following schedule:

Years of Service	Rate of Increase
0	3.25 %
1	10.50
2	10.00
3	9.75
4	9.25
5	14.75
6+	3.25

Overtime - Members hired on or prior to New Participant Date are assumed to earn overtime equal to 25% of their rate of pay for years when they are retirement eligible and for members on after New Participant Date are assumed to earn overtime equal to 20% of their rate of pay for years when they are retirement eligible. Otherwise, members are assumed to earn overtime equal to 18% of their rate of pay.

Termination — Withdrawal rates vary by years of service. Illustrative rates are shown below:

Years of Service	Termination Rate
0	3.50 %
1	3.25
2 - 3	2.50
4 - 9	2.25
10 - 19	1.50
20+	1.00

Retirement — Rates vary by age and type of retirement. Illustrative rates are shown below:

A. For represented employees hired prior on or prior to New Participant Date:

Age	Reduced Early Retirement	Unreduced Early Retirement
55	4.50 %	10.00 %
56	4.00	7.50
57	3.00	5.00
58	3.00	5.00
59	3.50	5.00

B. For represented employees hired after New Participant Date:

Age	Reduced Early Retirement	Unreduced Early Retirement
55	3.00 %	10.00 %
56	3.00	7.50
57	3.00	5.00
58	3.00	5.00
59	3.00	5.00
60	3.00	30.00
61	3.00	30.00

Unreduced early retirement is not available to non-ACRE represented employees hired after New Participant Date.

C. For all represented employees at Normal Retirement (age 60 or age 62 and later):

- 5% per year if members have fewer than 10 years of service
- 15% per year if members have 10 but fewer than 20 years of service
- 30% per year if member have 20 or more years of service

Certain retirement age is age 80

Disability — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

	Ordinary		Accidental			Ordinary		Accidental	
Age	**M**	**F**	**M**	**F**	**Age**	**M**	**F**	**M**	**F**
20	0.17 %	0.25 %	0.01 %	0.01 %	45	0.27 %	0.41 %	0.06 %	0.01 %
25	0.17	0.25	0.01	0.01	50	0.50	0.75	0.06	0.01
30	0.17	0.25	0.02	0.01	55	0.95	1.43	0.07	0.01
35	0.18	0.27	0.03	0.01	60	1.93	2.90	0.07	0.01
40	0.20	0.31	0.05	0.01	64	1.93	2.90	0.07	0.01

Changes in Actuarial Assumptions — None.

G. Actuarial Assumptions — MTA Defined Benefit Pension Plan — MTA Long Island Rail Road Represented Employees

Salary Scale — Salaries are assumed to increase in accordance with the following schedule:

Years of Service	Rate of Increase
0	3.25 %
1	10.50
2	10.00
3	9.75
4	9.25
5	14.75
6+	3.25

Overtime - Members hired prior to January 31, 2008 are assumed to earn overtime equal to 30% of their pay for years when they are retirement eligible. Otherwise, members are assumed to earn overtime equal to 20% of their rate of pay.

Termination — Withdrawal rates vary by years of service. Illustrative rates are shown below:

Years of Service	Termination Rate
0	4.25 %
1 - 4	2.75
5 - 9	2.25
10+	1.25

Retirement — Rates vary by age and type of retirement. Illustrative rates are shown below:

A. For represented employees hired prior to January 31, 2018:

Age	Reduced Early Retirement	Unreduced Early Retirement
55	4.50 %	10.00 %
56	4.00	7.50
57	3.00	5.00
58	3.00	5.00
59	3.50	5.00

B. For represented employees hired on or after January 31, 2008:

Age	Reduced Early Retirement	Unreduced Early Retirement
55	3.00 %	10.00 %
56	3.00	7.50
57	3.00	5.00
58	3.00	5.00
59	3.00	5.00
60	3.00	30.00
61	3.00	30.00

C. For all represented employees at Normal Retirement (age 60 or age 62 and later):

- 5% per year if members have fewer than 10 years of service
- 15% per year if members have 10 but fewer than 20 years of service
- 30% per year if member have 20 or more years of service

Certain retirement age is age 80

Disability — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

	Ordinary		Accidental			Ordinary		Accidental	
Age	M	F	M	F	Age	M	F	M	F
20	0.17 %	0.25 %	0.01 %	0.01 %	45	0.27 %	0.41 %	0.06 %	0.01 %
25	0.17	0.25	0.01	0.01	50	0.50	0.75	0.06	0.01
30	0.17	0.25	0.02	0.01	55	0.95	1.43	0.07	0.01
35	0.18	0.27	0.03	0.01	60	1.93	2.90	0.07	0.01
40	0.20	0.31	0.05	0.01	64	1.93	2.90	0.07	0.01

Changes in Actuarial Assumptions - None.

H. Actuarial Assumptions — MTA 20-Year Police Retirement Program

Salary Scale — Salary increases vary by years of Police Service. Illustrative rates are shown below.

Years of Service	Rate of Increase
1	12.5 %
2	14.5
3 – 4	15.5
5	39.5
6 – 9	3.5
10	4.5
11 – 14	3.5
15	5.5
16 – 19	3.5
20	4.5
21 – 24	3.5
25	4.5
26+	3.5

Overtime - Members are assumed to earn overtime equal to 30% of their rate of pay. Overtime for those hired on and after January 9, 2010 is limited to 15% of their rate of pay.

Termination — Withdrawal rates vary by length of service. Illustrative rates are shown below:

Years of Service	Termination Rate
0	6.50 %
1	2.50
2 – 4	2.00
5	0.50
6 – 9	0.35
10+	0.30

Retirement — Rates vary by year of eligibility. Illustrative rates are shown below:

For represented employees hired prior to January 31, 2018:

Years of Eligibility	Retirement Rate
1	17.00 %
2	12.00
3 – 9	10.00
10+	50.00

Certain retirement age is 62.

Disability — Rates vary by age and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary	Accidental	Age	Ordinary	Accidental
20	0.043 %	0.095 %	45	0.256 %	0.500 %
25	0.043	0.095	50	0.559	0.527
30	0.062	0.095	55	0.819	0.539
35	0.096	0.115	60	0.896	0.544
40	0.138	0.316			

Cost of Living Expenses — assumed to be 1.35% per annum, compounded annually.

Benefits Not Valued – Railroad benefit offset.

Changes in Actuarial Assumptions — None

I. Actuarial Assumptions — MSBA Employees Pension Plan

Benefit Estimates — Due to the insignificant number of active employees, benefits are estimated based on plan provisions and actuarial assumptions used for management benefits, except for the overtime assumption. No railroad offset is assumed.

Overtime – Members are assumed to earn overtime equal to the following percentage of their rates of pay:

Years of Service	Rate
Under 25 years of service	17.00 %
25 to 29 years of service	20.00
30 or more years of service	23.00

Changes in Actuarial Assumptions - None.

J. Actuarial Assumptions — MTA Defined Benefit Plan — MTA Staten Island Railway

Salary Scale — Salary increases vary by years of service. Illustrative rates are shown below.

Years of Service	Rate
0	10.00 %
1	9.50
2	9.25
3	9.00
4	8.75
5	6.00
6+	3.25

Overtime — Hourly employees are assumed to earn overtime equal to 7.50% of their rate of pay.

Termination — Withdrawal rates vary by years of service. Illustrative rates are shown below:

Year of Service	Termination Rate
0	9.00 %
1 - 3	5.50
4 - 9	3.50
10 - 19	1.40
20+	0.50

Retirement — Rates vary by age and type of retirement. Illustrative rates are shown below:

		Normal Retirement	
Age	Reduced Early Retirement	First Year Eligible	After First Eligibility
55	3.00 %	30.00 %	20.00 %
56	3.00	30.00	20.00
57	3.00	30.00	20.00
58	3.00	30.00	20.00
59	3.00	30.00	20.00
60	3.00	30.00	20.00
61	3.00	30.00	20.00

For all employees at Normal Retirement (age 60 or age 62 and later):

- 5% per year if members have fewer than 10 years of service
- 15% per year if members have 10 but fewer than 20 years of service
- 30% per year if member have 20 or more years of service

Certain retirement age is age 80

Disability — Rates vary by age and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary	Accidental	Age	Ordinary	Accidental
20	0.15 %	0.03 %	45	0.44 %	0.05 %
25	0.17	0.03	50	0.54	0.06
30	0.19	0.03	55	0.61	0.07
35	0.24	0.03	60	0.81	0.08
40	0.33	0.04			

Benefits Not Valued — Accidental death benefits.

Changes in Actuarial Assumptions — None.

K. Actuarial Assumptions — MTA Long Island Rail Road Pension Plan

Termination — Withdrawal rates vary by age. Illustrative rates are shown below:

Age	Rate	Age	Rate
20	2.12 %	45	0.96 %
25	1.64	50	0.80
30	1.44	55	0.60
35	1.36	60	0.00
40	1.16	65	0.00

Retirement — Assumed retirement rate varies by year of eligibility.

Eligibility Period	Rate of Retirement
First Year	40 %
Years 2–4	33
Years 5	37
Years 6–7	35
Years 8–9	33
Years 10–15	55
Years 16 and above	100

Terminated vested participants are assumed to retire upon first eligibility, or attained age if later.

Interest on Employee Contributions — Assumed to be 3.5% per year for future years.

Participant Data — Benefits under the Plan are frozen and based on information provided by MTA Headquarters, Consolidated Pensions.

Benefits Not Valued — Disability benefits since the majority of active plan participants are at or near retirement eligibility.

Changes in Actuarial Assumptions — None.

L. Actuarial Assumptions — MTA Bus

Salary Scale for Non-represented Employees - Salaries are assumed to increase in accordance with the following schedule for:

Years of Service	Rate
0	6.00 %
1	5.00
2	4.25
3	4.00
4+	3.50

General Wage Increase (GWI) - The benefit level and contribution rate is assumed to increase 3% each year based on the anniversary of the last scheduled increase for TWU Local 100, ATU 1179, and ATU 1181 represented employees.

Termination — Withdrawal rates vary by years of service. Illustrative rates are shown below:

Year of Service	Termination Rate
0	17.50 %
1	4.75
2 - 9	2.75
10+	2.75

Retirement — Rates vary by age, service, employee type, Tier, Operating/Non-operating distinction, and retirement eligibility. All members are assumed to retire by age 80. Terminated vested members are assumed to retire at first eligibility for an unreduced benefit. Illustrative rates are shown below:

For represented members:

	Years of Service at Retirement		
Age	≤5	5-10	10+
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30
80 +	100	100	100

For certain former non-represented employees of Alliance Companies (Article 18):

Age	Retirement Rate
55–56	6 %
57–58	8
59	9
60–61	13
62	25
63–64	15
65	100

For all other non-represented employees:

Tier	Operating/Non-operating	Age	<10	10-20	20-24	25+
4	Operating	55–61	N/A	N/A	N/A	30 %
4	Operating	62–64	5 %	20 %	40 %	40
4	Operating	65–79	5	20	25	25
4	Non-operating	57–79	5	15	30	30
6	Operating	55–62	N/A	N/A	N/A	30
6	Operating	63–64	N/A	20	20	40
6	Operating	65–79	N/A	20	20	25
6	Non-operating	55–59	N/A	0.5	1	1
6	Non-operating	60–61	N/A	1	2	2
6	Non-operating	62	N/A	3	6	6
6	Non-operating	63	N/A	25	50	50
6	Non-operating	64–79	N/A	15	30	30

100% retirement is assumed for employees age 80 and above

For employees hired prior to January 1, 2017, retirement conditions are modified to reflect a single commencement date at the earliest eligible retirement date among former MTA Bus Article 14, 15, 16, 17, and 19 provisions and MaBSTOA-style provisions. The retirement rates above are modified as follows:

- Former Article 14 Tier 4 operating members with between 10 and 20 years of service and between ages 62 and 64 were assumed to retire at 15% per year phasing into 20% per year over the next 10 calendar years

- Former Article 14 Tier 4 non-operating members with between 10 and 20 years of service and between ages 57 and 64 were assumed to retire at rates ranging from 2% to 10% per year phasing into 15% per year over the next 10 calendar years

- Former Article 14 Tier 4 operating members with between 20 and 25 years of service and between ages 57 and 61 were assumed to retire at rates ranging from 4% to 10% per year

- Former Article 14 Tier 4 operating members with 25 or more years of service and between ages 55 and 61 were assumed to retire at rates ranging from 1% to 10% per year phasing into 30% per year over the next 15 calendar years

- Former Article 14 Tier 4 non-operating members with 20 or more years of service and between ages 57 and 61 were assumed to retire at rates ranging from 4% to 10% per year phasing into 30% per year over the next 15 calendar years

- Former Article 14 Tier 4 and Tier 6 non-operating members with 20 or more years at age 62 were assumed to retire at 40% and 10% per year, respectively

- Former Article 14 Tier 6 operating with between 20 and 24 years of service and between ages 57 and 61 were assumed to retire at rates ranging from 1% to 2% per year and at age 62 at 10% per year

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- Former Article 15 Tier 4 operating members with between 10 and 20 years of service and between ages 62 and 64 were assumed to retire at 15% per year phasing into 20% per year over the next 10 calendar years

- Former Article 15 Tier 4 operating members with 20 or more years of service and between ages 57 and 61 were assumed to retire at 10% per year; slightly lower rates used at ages 55 and 56

- Former Article 15 Tier 4 operating members with 25 or more years of service and between ages 55 and 56 were assumed to retire at rates of 10% per year phasing into 30% per year over the next 15 calendar years

- Former Article 16 Tier 4 operating members with 25 or more years of service and between ages 57 and 61 were assumed to retire at rates of 10% per year; rates of 1% and 2% were used at ages 55 and 56, respectively

- Former Article 16 Tier 4 non-operating members with between 10 and 20 years of service and between ages 57 and 62 were assumed to retire at rates ranging from 2% to 5% per year phasing into 15% per year over the next 10 calendar years

- Former Article 16 Tier 4 non-operating members with 20 or more years of service and between ages 57 and 61 were assumed to retire at rates ranging from 4% to 10% per year phasing into 30% per year over the next 15 calendar years

- For members eligible to retire with less than 10 years of service, rates were reduced slightly

- Assumptions for former Article 17 members are consistent with former Article 15 members

- Assumptions for former Article 19 members are consistent with former Article 16 members

Disability — Rates vary by age. Illustrative rates are shown below:

Age	Rate	Age	Rate
20	0.03 %	45	0.27 %
25	0.04	50	0.48
30	0.08	55	0.87
35	0.11	60	1.30
40	0.16		

Disability rates cease upon attainment of unreduced retirement eligibility.

Marriage — 80% of members are assumed to be married with wives 3 years younger than their husbands.

Interest on Employee Contributions — Future years assumed to be 3.5% per year for represented employees and for the accumulated balances as of December 31, 2016 for non-represented employees.

Benefits Not Valued — The $2,500 post-retirement death benefit for represented members is not valued since premiums are paid outside of the plan trust.

The $10,000 post-retirement death benefit for former Queens Surface, Jamaica and Triboro Bus Service non-represented Employees (former Article 15) is not valued since premiums are paid outside of the plan trust.

The accidental death and dismemberment benefit for former Queens Surface, Jamaica and Triboro Bus Service non-represented Employees (former Article 15) is not valued as the costs are paid outside of the plan trust.

Form of payment - Normal Form, except that all former Liberty Lines Bus non-represented employees (former Article 13) members are assumed to elect the lump sum payment option. Lump sums valued using the current (2019) lump sum mortality table published by the IRS and a 4.5% assumed interest rate.

Changes in Actuarial Assumptions — None.

7. CUSTODIAL AND OTHER PROFESSIONAL SERVICES

JP Morgan Chase Bank is the custodian and trustee of plan assets with the exception of Mellon asset management investments in which Mellon Bank N.A. is the custodian. JP Morgan Chase also provides cash receipt and cash disbursement services to the Plan. NEPC reviews the Plan’s portfolio, the investment policies as stipulated by the Investment Committee and the performance of the Investment Managers. NEPC also provides audit services for the Plan’s equity portfolios. Actuarial services were provided to the Plan by Milliman Inc.

8. SUBSEQUENT EVENTS

On March 25, 2020, Allianz Global Investors U.S. LLC (“AllianzGI), managing member of AllianzGI Structured Alpha 1000 LLC (the “Fund”), informed the Plan that it was in the best interest of its investors to terminate the Fund and pursue an orderly liquidation program. AllianzGI stated that the Fund suffered significant losses due to the severe and tumultuous market volatility as a result, in part, of the coronavirus pandemic. No redemptions were permitted after the announcement of the Fund closure. The Plan lost nearly all of its investment. Fund investors will receive a pro-rata distribution of the remaining assets after accounting for Fund expenses and liabilities. So far, the Fund has returned $5.2 million. The Plan is exploring all options to recover its losses.

MTA Capital Construction Company has been renamed MTA Construction and Development Company, was pursuant to an amendment to Public Authorities Law Section 1266(5).and will be reported as such in the future.

The COVID-19 pandemic during 2020 has significantly disrupted financial markets, economies and other events subsequent to December 31, 2019. As noted in the risk and uncertainties note, investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities and the level of uncertainty related to changes in the value of investment securities, it is at least reasonably possible that changes in risks in the near term would materially affect the amounts reported in the statements of net assets available for benefits and the statement of changes in net assets available for benefits.

The actuarial present value of plan benefits is reported based on certain assumptions pertaining to interest rates and employee demographics. Due to the changing nature of these assumptions, it is at least reasonably possible that changes in these assumptions will occur in the near term and, due to the uncertainties inherent in setting assumptions, that the effect of such changes could be material to the value of plan benefits.

Subsequent to December 31, 2019, the impact to the Plan of the COVID-19 pandemic during 2020 has resulted in significant reductions in values to many investments of the Plan. It has also significantly decreased interest rates and could impact employee demographics which could change assumption utilized in the future for the actuarial present value of plan benefits.

While management of the Plan currently expects to be able to continue to meet immediate contribution requirements, the long-term impact of the effects of the COVID-19 pandemic to the Plan and Plan sponsor as well as any relief from regulatory authorities are currently not known. The extent of the adverse impact of the COVID-19 pandemic on the Plan's net assets available for benefits and actuarial present value of plan benefits cannot be reasonably estimated at this time.

The Covid-19 outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. In addition, the volatility and uncertainty of the financial market have negatively affected the investment earnings of retirement plans. Although the long-term impact of the Covid-19 outbreak on the financial market is still unpredictable, it could have a negative impact on the market value of the Plan in future years.

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SCHEDULE I

METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND RELATED RATIOS
(in thousands)

		2019	2018	2017	2016	2015	2014
Total pension liability:							
Service cost	$	173,095	162,273	148,051	138,215	124,354	121,079
Interest		387,193	358,118	335,679	308,009	288,820	274,411
Changes of benefit terms		-	61,890	76,511	73,521	6,230	-
Differences between expected and actual experience		35,935	75,744	(27,059)	86,809	121,556	2,322
Changes of assumptions		690,958	-	10,731	-	(76,180)	-
Benefit payments and withdrawals		(264,985)	(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Net change in total pension liability		1,022,196	415,676	310,937	396,931	265,208	206,755
Total pension liability – beginning		5,488,490	5,072,814	4,761,877	4,364,946	4,099,738	3,892,983
Total pension liability – ending (a)		6,510,686	5,488,490	5,072,814	4,761,877	4,364,946	4,099,738
Plan fiduciary net position:							
Employer contributions		344,714	338,967	321,861	280,768	221,694	331,259
Member contributions		31,504	29,902	31,027	29,392	34,519	26,006
Net investment income		647,264	(150,422)	516,153	247,708	(45,122)	102,245
Benefit payments and withdrawals		(264,985)	(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Administrative expenses & Transfer to investments		(3,408)	(3,152)	(4,502)	(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position		755,089	(27,054)	631,563	345,194	9,557	258,853
Plan fiduciary net position – beginning		4,024,480	4,051,534	3,419,971	3,074,777	3,065,220	2,806,367
Plan fiduciary net position – ending (b)		4,779,569	4,024,480	4,051,534	3,419,971	3,074,777	3,065,220
Employer's net pension liability – ending (a)-(b)	$	1,731,117	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		73.41%	73.33%	79.87%	71.82%	70.44%	74.77%
Covered payroll	$	1,996,090	1,984,629	1,805,156	1,724,219	1,603,924	1,544,050
Employer's net pension liability as a percentage of covered payroll		86.73%	73.77%	56.58%	77.83%	80.44%	67.00%

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

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METROPOLITAN TRANSPORTATION AUTHORITY **SCHEDULE II**
DEFINED BENEFIT PENSION PLAN

Required Supplementary Information (Unaudited)
Schedule of Employer Contributions
(in thousands)

Fiscal Year Ending December 31	Actuarially Determined Contribution	Actual Employer Contribution	Contribution Deficiency (Excess)	Covered Payroll	Contribution as a % of covered Payroll
2010	$ 155,318	$ 155,318	$ -	$ -	N/A
2011	166,188	166,188	-	-	N/A
2012	212,397	212,397	-	-	N/A
2013	242,980	242,980	-	-	N/A
2014	271,523	331,259	(59,736) *	1,544,050	21.45%
2015	273,730	221,694	52,036	1,603,924	13.82%
2016	290,415	280,768	9,647	1,724,219	16.28%
2017	316,916	321,861	(4,945)	1,805,156	17.83%
2018	331,566	338,967	(7,401)	1,984,629	17.08%
2019	349,928	344,714	5,214	1,996,090	17.27%

* Excess for 2014 reflects a prepaid contribution toward the 2015 Actuarially Determined Contribution.

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)
SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:
The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan for are as follows:

Valuation Dates	January 1, 2019	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For FIL bases, period specified in current valuation report for specific plan change bases. Fresh start base as of January 1, 2020 will be determined based on the Plan's unfunded Entry Age Normal liability less amortization balances remaining 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, of the projected population for each group	For FIL bases, period specified in current valuation report. 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 each group	For FIL bases, period specified in current valuation report. 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 each group	For FIL bases, period specified in current valuation report. 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 each group	For FIL bases, period specified in current valuation report. 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 each group	For FIL bases, period specified in current valuation report. 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 each group
Actuarial 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.	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.
Interest rate	Net rate of 6.50% for 2019, per annum, net of investment expenses	Net rate of 7.0% for 2018, per annum, net of investment expenses	Net rate of 7.0% for 2017, per annum, net of investment expenses	Net rate of 7.0% for 2016, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses
Inflation	2.25% per annum	2.5% per annum	2.5% per annum	2.5% per annum	2.5% per annum	2.5% per annum
Railroad retirement wage base	3.25% per year	3.5% per year	3.5% per year	3.5% per year	3.0% per year	3.0% per year
Mortality	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA	Based on experience of all MTA members reflecting mortality improvement ona generational basis using Scale AA
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.
Salary increases	Varies by years of employment, and employee group; 2.75% General Wage Increases ("GWI") for TWU MTA Bus hourly employees	Varies by years of employment, and employee group; 3.0% General Wage Increases ("GWI") for TWU MTA Bus hourly employees	Varies by years of employment, and employee group; 3.0% General Wage Increases ("GWI") for TWU MTA Bus hourly employees	Varies by years of employment, and employee group; 3.0% General Wage Increases ("GWI") for TWU 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
Overtime	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Cost-of-living adjustments	1.35% per annum (2)	1.375% per annum (2)	1.375% per annum (2)	1.375% per annum (2)	1.375% per annum (2)	1.375% per annum (2)
Provision for expenses	An average of the prior three years' administrative charges added to the normal cost	An average of the prior three years' administrative charges added to the normal cost	An average of the prior three years' administrative charges added to the normal cost	An average of the prior three years' administrative charges added to the normal cost	An average of the prior three years' administrative charges added to the normal cost	An average of the prior three years' administrative charges added to the normal cost

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.
(2) Assumes a long-term consumer price inflation assumption of 2.5% per annum, compounded annually.

DRAFT

Required Supplementary Information (Unaudited)
Schedule of Investment Returns

The following table displays annual money-weighted rate of return, net of investment expense.

Fiscal Year Ending December 31	Net Money-Weighted Rate of Return
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	3.58%
2015	(1.47%)
2016	7.97%
2017	14.94%
2018	(3.67%)
2019	15.95%

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

Calculation on Long-Term Expected Rate of Return

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2019.

Metropolitan Transportation Authority
(A Component Unit of the State of New York)

Financial Statements as of and
for the Years Ended December 31, 2019 and 2018,
Required Supplementary Information, Supplementary Information,
Independent Auditors’ Reports, Schedule of Expenditures of
Federal Awards, Schedule of State of New York Department of
Transportation Assistance Expended, and Schedule of Findings
and Questioned Costs

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METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

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INDEPENDENT AUDITORS' REPORT

To the Members of the Board of
Metropolitan Transportation Authority

Report on the Financial Statements

We have audited the accompanying consolidated financial statements of the business-type activities and the financial statements of the fiduciary activities (collectively, the "financial statements") of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of and for the years ended December 31, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the MTA's basic financial statements, as listed in the table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the MTA's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purposes of expressing an opinion on the effectiveness of the MTA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and fiduciary activities of the MTA as of December 31, 2019 and 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in Note 1 to the financial statements, the MTA is a component unit of the State of New York. The MTA requires significant subsidies from, and has material transactions with, the City of New York, the State of New York, and the State of Connecticut, and depends on certain tax revenues that are economically sensitive. Our opinions are not modified with respect to this matter.

As described in Note 2 to the financial statements, as of January 1, 2018, the Authority adopted Governmental Accounting Standards Board ("GASB") Statement No. 84, Fiduciary Activities. Our opinions are not modified with respect to this matter.

As discussed in Note 16 to the financial statements, *Subsequent Events,* the novel coronavirus (COVID-19) outbreak has resulted in a significant decline in ridership and vehicle crossings. The decline in ridership and vehicle crossings have caused a material impact on the MTA's results of operations, financial position, and cash flows in fiscal 2020. In response to the adverse conditions, the MTA has secured funding under the "Coronavirus Aid, Relief and Economic Security Act" or "CARES Act"; received State of New York authorization to increase debt issuing capacity, including $10 billion in deficit bonds; received State of New York authorization to use the Central Business District Tolling lockbox monies to fund COVID-19 operating costs; and has been granted flexibility to apply existing FTA grant program proceeds to operating costs or other purposes to address COVID-19 impacts. Our opinions are not modified with respect to this matter.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the required supplementary information on pages 5-20 and 105-119 as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audits of the financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Supplementary Information

Our audits were conducted for the purpose of forming an opinion on the financial statements that collectively comprise the MTA's basic financial statements. The supplementary information on pages 120-126 as listed in the table of contents are presented for the purposes of additional analysis and are not a required part of the basic financial statements.

The supplementary information on pages 120-126 as listed in the table of contents are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplementary information on pages 120-126 as listed in the table of contents is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated May 29, 2020 on our consideration of the MTA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MTA's internal control over financial reporting and compliance.

May 29, 2020

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INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Members of the Board of
Metropolitan Transportation Authority

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the consolidated financial statements of the business-type activities and the financial statements of the fiduciary activities (collectively, the "financial statements") of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the MTA's basic financial statements, as listed in the table of contents, and have issued our report thereon dated May 29, 2020, which contains emphasis of matter paragraphs regarding the MTA requiring significant subsidies from other governmental entities; the adoption of Governmental Accounting Standards Board Statement No. 84, *Fiduciary Activities*; and subsequent event related to the impact of COVID-19 the MTA.

Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered MTA's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of MTA's internal control. Accordingly, we do not express an opinion on the effectiveness of MTA's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the MTA's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the MTA’s financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the MTA’s internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the MTA’s internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

May 29, 2020

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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR FEDERAL PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND REPORT ON SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS REQUIRED BY THE UNIFORM GUIDANCE

To the Members of the Board of
Metropolitan Transportation Authority

Report on Compliance for Each Major Federal Program

We have audited the Metropolitan Transportation Authority's (the "MTA"), a component unit of the State of New York, compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the MTA's major federal programs for the year ended December 31, 2019. The MTA's major federal programs are identified in the summary of auditor's results section of the accompanying schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for each of the MTA's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations Part 200*, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the MTA's compliance with those requirements and performing such other procedures, as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the MTA's compliance.

Opinion on Each Major Federal Program

In our opinion, the MTA complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2019.

Report on Internal Control over Compliance

Management of the MTA is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the MTA's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal programs and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of MTA's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal programs on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance

We have audited the consolidated financial statements of the business-type activities and the financial statements of the fiduciary activities (collectively, the "financial statements") of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the MTA's basic financial statements. We issued our report thereon dated May 29, 2020, which contained unmodified opinions on those financial statements which included emphasis of matter paragraphs regarding the MTA requiring significant subsidies from other governmental entities; the adoption of Governmental Accounting Standards Board Statement No. 84, *Fiduciary Activities*; and subsequent event related to the impact of COVID-19 the MTA. Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The accompanying schedule of expenditures of federal awards is presented for purposes of additional analysis as required by the Uniform Guidance and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the schedule of expenditure of federal awards is fairly stated in all material respects in relation to the basic financial statements as a whole.

July 22, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS
YEAR ENDED DECEMBER 31, 2019

Federal CFDA Number	Federal Agency/Program Description/Grant Title	Pass-through Identifying Number	Grant Agreement Date	Pass-through to subrecipient	Federal Expenditures
	U.S. Department of Transportation/Federal Transit Administration				
20.500	**Federal Transit—Capital Investment Grants—Section 3 Discretionary Grants**				
	Direct - U.S. Department of Transportation/Federal Transit Administration:				
	Federal Transit Cluster:				
	Second Avenue Subway Final Design	NY-03-0408	8/4/2006	$ -	$ 20,220,681
	CNG BUSES	NY-04-0064	8/16/2011	-	1,025,163
	MTA NYCT Bus Radio & Command Center	NY-04-0086	9/12/2012	-	2,384,577
	SGR Bus Purchase	NY-04-0093	6/19/2013	-	12,971
	MTA FY11 FGM LIRR/MNR/NYCT Projects	NY-05-0115	2/23/2012	-	35,064,267
	MTA FY12 FGM LIRR/MNR/NYCT Projects	NY-05-0116	11/6/2012	-	(481,193)
	Subtotal Federal Transit—Capital Investment Grants—Section 3 Discretionary Grants			-	58,226,466
20.507	**Federal Transit—Formula Grants (Urbanized Area Formula Program)—Section 9 and 9A Formula Grants and Operating Assistance Grants**				
	Direct - U.S. Department of Transportation/Federal Transit Administration:				
	MTA Bus Sec 5307 FFY06 and 07/Security Projects	NY-90-X594	9/24/2008	-	212,961
	MTA Bus 5307 FFY08 and FFY 09	NY-90-X620	9/1/2010	-	1,107,257
	MTA FY10 §5307 LIRR/MNR/NYCT Projects	NY-90-X663	9/13/2011	-	(76,751)
	MTA FY11 §5307 LIRR/MNR/NYCT Projects	NY-90-X674	7/10/2012	-	205,940,154
	MTA Bus FY13 Formula	NY-90-X703	7/10/2013	-	5,057,768
	MTA FY 12 5307 LIRR/MN/NYCT Projects	NY-90-X722	9/19/2013	-	12,928,315
	MTA FY 12 5307 LIRR/MN/NYCT Projects	NY-90-X727	7/31/2014	-	61,329,779
	MTA Bus Radio Cmd Ctr (Cont'd)	NY-90-X738	9/19/2014	-	5,310,334
	MTA FY14 §5307 LIRR/MNR/NYCT Projects	NY-90-X749	3/13/2015	-	45,297,049
	MTA FY15 §5307 LIRR/MNR/NYCT	NY-90-X755	9/10/2015	-	240
	Transit/Commuter Flexible Funded Projects FFY 2007	NY-95-X002	9/14/2007	-	535,331
	MTA FLEX FFY 2012	NY-95-X037	1/4/2013	-	443,217
	MTA FLEX FFY 2013	NY-95-X042	11/1/2013	-	4,865,094
	MTA BUS §5307 FY10-FY14 Projects	NY-2016-025	8/24/2016	-	6,298,274
	MTA BUS - Bus Radio System Funding	NY-2016-029	8/24/2016	-	692,030
	MTA BUS §5307 FY10-FY14 Projects	NY-2016-046	8/24/2016	-	27,690,169
	MTA NYCT and MNR (Sixth Capital Program) 5307	NY-2017-044	9/18/2017	-	2,816,289
	MTA FY16-17 5307 NYCT/MNR/LIRR	NY-2017-047	9/18/2017	-	64,335,580
	MTA FLEX Second Avenue Subway, Phase 1	NY-2017-053	9/22/2017	-	5,790,952
	Commuter Flexible Funded Projects FFY 2017	NY-2018-013	6/13/2018	-	983,106
	MTA NYCT Section 5307 R211 Subway Car	NY-2018-059	9/10/2018	-	5,649,346
	MTA FY17 / FY18 § 5307 NYCT/MNR/LIRR	NY-2018-071	9/22/2017	-	80,888,993
	MTA NYCT/MNR (Flex)	NY-2019-052	9/3/2019	-	3,053,509
	MTA MNR Croton Falls Parking - CMAQ	NY-2019-055	8/26/2019	-	641,729
	Subtotal Federal Transit—Formula Grants (Urbanized Area Formula Program)—Section 9 and 9A Formula Grants and Operating Assistance Grants			-	541,790,725

(Continued)

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS – (CONTINUED)
YEAR ENDED DECEMBER 31, 2019

Federal CFDA Number	Federal Agency/Program Description/Grant Title	Pass-through Identifying Number	Grant Agreement Date	Pass-through to subrecipient	Federal Expenditures
20.525	**Federal Transit Administration—State of Good Repair Grants Program**				
	Direct - U.S. Department of Transportation/Federal Transit Administration:				
	MTA FY 13 SGR LIRR/MNR/NYCT §5337	NY-54-0001	5/7/2014	$ -	$ 5,505,861
	MTA FY14 SGR LIRR/MNR/NYCT §5337	NY-54-0004	3/3/2015	-	20,889,901
	MTA FY16 SGR LIRR/MNR/NYCT §5337	NY-2016-044	5/23/2017	-	248,742
	MTA FY16-17 SGR LIRR/MNR/NYCT §5337	NY-2017-043	9/12/2017	-	58,070,444
	MTA FY15 SGR LIRR/MNR/NYCT §5337	NY-2017-046	8/24/2015	-	23,866,168
	MTA NYCT Section 5337 R211 Subway Car	NY-2018-060	9/11/2018	-	38,195,757
	MTA FY15 SGR LIRR/MNR/NYCT §5337	NY-2018-072	9/20/2018	-	86,019,531
	MTA § 5337 NYCT ADA and Reconstruction Times Square	NY-2019-014	7/24/2019	-	24,542,658
	MTA FY18/FY19 § 5337 NYCT/LIRR	NY-2019-050	8/27/2019	-	59,828,846
				-	317,167,908
20.526	MTA BUS SEC.5339	NY-2016-040	9/16/2016	-	217,907
	MTA BUS SEC.5339	NY-2016-042	9/20/2016	-	7,381,825
				-	7,599,732
	Subtotal Federal Transit Administration—State of Good Repair Grants Program			-	324,767,640
	Total Federal Transit Cluster			-	**924,784,831**
	U.S. Department of Transportation/Federal Railroad Administration				
	Direct - U.S. Department of Transportation/Federal Railroad Administration:				
20.316	Railroad Rehabilitation and Improvement Financing Program	Z-C 2015X RRIF	5/5/2015	-	300,000,000
	Direct - U.S. Department of Transportation/Federal Transit Administration:				
20.514	Public Transportation Research - Wheel/Rail Character Monitor & Analytics	NY-26-7113	8/5/2015	-	122,068
20.521	GCT Elevator	NY-57-X018	9/10/2010	-	44,815
20.527	Public Transportation Emergency Relief Program				
	NY MTA Hurricane Sandy Relief 5324	NY-44-X007	1/28/2014	-	15,243,925
	NY MTA Hurricane Sandy Relief 5324	NY-44-X008	9/23/2014	-	29,351,919
	NY MTA Hurricane Sandy Relief 5324	NY-44-X011	5/11/2015	-	4,435,390
	NY MTA Hurricane Sandy Relief 5324	NY-44-X012	2/12/2015	-	144,071,526
	MNR Power&Signals Resiliency Improvement	NY-44-X015	8/18/2015	-	2,318,548
	Emergency Communications Enhancements	NY-44-X016	9/2/2015	-	13,043,845
	Internal Station Hardening NYCT	NY-44-X017	9/2/2015	-	979,082
	MTA NYCT CR Protection of Street Level Openings in Flood	NY-2017-032	8/22/2017	-	37,574,565
	MTA NYCT CR Sec. 5324 Emergency Communications	NY-2017-033	8/22/2017	-	921,632
	MTA LIRR Flood Resiliency for Long Island City Yard	NY-2017-034	8/24/2017	-	74,273
	NY MTA Hurricane Sandy Relief 5324	NY-2017-052	8/31/2017	-	93,736,146
	MNR Power&Signals Resiliency Improvement	NY-2018-016	6/13/2018	-	3,855
	MTA NYCT CR Sec. 5324 Internal Station Hardening	NY-2018-017	6/20/2018	-	3,776,425
	MTA NYCT CR Sec. 5324 Pumping Capacity Improvements	NY-2018-019	7/13/2018	-	1,484,789
	MTA NYCT Rockaway Line Protection CR - (Part 1: Hammels Wye)	NY-2018-025	7/17/2018	-	16,418,976
	MTA NYCT CR Sec. 5324 Protection of Tunnel Portals and Internal Sealing	NY-2018-028	7/17/2018	-	9,709,569
	MTA LIRR CR Sec. 5324 New York-New Jersey River to River Rail Resiliency	NY-2018-039	9/5/2018	-	208,493
	MTA NYCT CR Sec. 5324 Flood Mitigation in Yards	NY-2018-052	8/17/2018	-	35,917,604
	MTA NYCT CR Sec. 5324 Flood Resiliency for Critical Bus Depots	NY-2019-020	7/23/2019	-	6,673,727
	MTA NYCT CR Sec. 5324 Flood Resiliency for Critical Support Facilities	NY-2019-028	7/29/2019	-	2,405,371
	MTA NYCT CR Sec. 5324 Hardening of Substations	NY-2019-044	8/14/2019	-	730,742
	Total Public Transportation Emergency Relief Program			-	419,080,402
	TOTAL FROM U.S. DEPARTMENT OF TRANSPORTATION			-	**1,644,032,116**

(Continued)

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONCLUDED)
YEAR ENDED DECEMBER 31, 2019

Federal CFDA Number	Federal Agency/Program Description/Grant Title	Pass-through Identifying Number	Grant Agreement Date	Pass-through to subrecipient	Federal Expenditures
	U.S. Department of Homeland Security:				
	Pass-Through - State of New York Department of Emergency Management:				
97.036	Disaster Grants—Public Assistance	FEMA 4085 DRNY	1/20/2015	-	32,783,500
	Disaster Grants—Public Assistance	FEMA 4085 DRNYM	1/23/2014	-	3,292,352
	Disaster Grants—Public Assistance	FEMA 4085 DRNYC	2/24/2017	-	7,871,757
	Disaster Grants—Public Assistance (Presidentially Declared Disasters)	FEMA 4085 DRNYV	4/25/2013	-	1,781
	Disaster Grants—Public Assistance (Presidentially Declared Disasters)	FEMA 4085 DRNY	11/23/2012	-	53,300
	Total Disaster Grants—Public Assistance (Presidentially Declared Disasters) Program			-	44,002,690
	Direct - U.S. Department of Homeland Security:				
97.075	Rail and Transit Security Grant program	FE2017-RA-00024	9/1/2017	3,772,535	7,304,081
	Rail and Transit Security Grant program	FE2016-RA-00016	9/1/2016	2,838,202	7,988,446
	Rail and Transit Security Grant program	FE2018-RA-00017	9/14/2018	-	175,046
	Total Rail and Transit Security Grant Program			**6,610,737**	**15,467,573**
	TOTAL FROM U.S. DEPARTMENT OF HOMELAND SECURITY			6,610,737	59,470,263
	TOTAL EXPENDITURES OF FEDERAL AWARDS			**$ 6,610,737**	**$ 1,703,502,379**

See accompanying Notes to Schedule of Expenditures of Federal Awards. (Concluded)

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS YEAR ENDED DECEMBER 31, 2019

1. SIGNIFICANT ACCOUNTING POLICIES

Summary of Significant Accounting Policies — Expenditures reported on the Schedule are reported on the cash basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years.

Basis of Presentation - The accompanying schedule of expenditures of federal awards (the Schedule") includes the federal award activity of the MTA, a component unit of the State of New York under programs of the federal government for the year ended December 31, 2019. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("Uniform Guidance"). Because the Schedule presents only a selected portion of the operations of the MTA, it is not intended to and does not present the financial position, changes in net position, or cash flows of the MTA.

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 Primary Government 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 Primary Government 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 Primary Government 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")
  - Thrift Plan for Employees of the MTA, its Subsidiaries and Affiliates ("401 (k) Plan")

The financial results of the Primary Government are reported as consolidated financial statements.

All of the component units publish separate annual financial statements, which are available by writing to the MTA Comptroller, 2 Broadway, 16th Floor, New York, New York 10004.

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

2. INDIRECT RATE

The MTA has not elected to use the 10% de minimis indirect cost rate allowed under the Uniform Guidance.

3. PASS-THROUGH PROGRAMS

When the MTA receives Federal funds from a government entity other than the Federal government ("pass-through"), the funds are accumulated based upon the Catalog of Federal Domestic Assistance ("CFDA") number advised by the pass-through grantor.

4. RELATIONSHIP TO FEDERAL AND STATE FINANCIAL REPORTS

The regulations and guidelines governing the preparation of Federal and state financial reports vary by state and Federal agency and among programs administered by the same agency. Accordingly, the amounts reported in the Federal and state financial reports do not necessarily agree with the amounts reported in the accompanying Schedule of Expenditures of Federal Awards, which is prepared as explained in Note 1 above.

5. RAILROAD REVITALIZATION AND REGULATORY REFORM ACT OF 1976 LOAN (RRIF PROGRAM)

The RRIF program provided direct loans and loan guarantees to State and local governments, interstate compacts consented to by Congress under section 410(a) of the Amtrak Reform and Accountability Act of 1997 (49 U.S.C. 24101). During 2019, MTA expended $300,000,000 under the RRIF Program, which is administrated by U.S. Department of Transportation, Federal Railroad Administration. The opening balance and transactions relating to this program is included in the MTA's financial statements. During 2019, there were reimbursement and/or expenditures for Railroad Rehabilitation and Improvement Financing Positive Train Control Project, therefore is included in the Schedule of Expenditures of Federal Awards. The balance of loans outstanding as of December 31, consists of:

CFDA 20.316 - Railroad Rehabilitation and Improvement Financing - Positive Train Control Project

Outstanding Balance at December 31, 2018:	$	140,668,512
Addition to Loans		300,000,000
Deletions from Loans		(21,880,131)
Outstanding Balance at December 31, 2019:	$	418,788,381

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

SCHEDULE OF FINDINGS AND QUESTIONED COSTS
YEAR ENDED DECEMBER 31, 2019

1. SUMMARY OF AUDITORS' RESULTS

Financial Statements

Type of auditors' report issued: Unmodified

***Internal control over financial reporting*:**

Material weakness(es) identified	Yes	✓ No
Significant deficiency(ies) identified?	Yes	✓ None Reported
Noncompliance material to financial statements noted?	Yes	✓ No

Federal Awards

***Internal Control over major programs*:**

Material weakness(es) identified	Yes	✓ No
Significant deficiency(ies) identified?	Yes	✓ No

Type of auditor's report issued on compliance for Major Programs: Unmodified

Any audit findings disclosed that are required to be reported in accordance with Uniform Guidance? Yes ✓ No

Information of Major Programs:

CFDA Number(s)	Name of Federal Program
20.500/507/525/526	Federal Transit Cluster
20.316	Railroad Rehabilitation and Improvement Financing - Positive Train Control Project

Dollar threshold used to distinguish between Type A and Type B programs: $ 5,110,507

Auditee qualified as low-risk auditee? Yes

2. FINDINGS RELATING TO THE FINANCIAL STATEMENTS REPORTED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

None.

3. FINDINGS AND QUESTIONED COSTS RELATING TO FEDERAL AWARDS

None.

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INDEPENDENT AUDITORS' REPORT ON COMPLIANCE FOR EACH MAJOR STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION ASSISTANCE PROGRAM; REPORT ON INTERNAL CONTROL OVER COMPLIANCE; AND REPORT ON SCHEDULE OF STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION ASSISTANCE EXPENDED REQUIRED BY PART 43 OF THE NEW YORK STATE CODIFICATION OF RULES AND REGULATIONS

To the Members of the Board of
Metropolitan Transportation Authority

Report on Compliance for Each Major State of New York Department of Transportation Assistance Program

We have audited the Metropolitan Transportation Authority's (the "MTA"), a component unit of State of New York, compliance with the types of compliance requirements described in the Part 43 of the New York State Codification of Rules and Regulations ("NYSCRR") that could have a direct and material effect on each of the MTA's major State of New York Department of Transportation assistance program for the year ended December 31, 2019. The MTA's major State of New York Department of Transportation assistance program is identified in the summary of auditor's results section of the accompanying State of New York Department of Transportation assistance expended schedule of findings and questioned costs.

Management's Responsibility

Management is responsible for compliance with State of New York statutes, regulations, and the term and conditions of its state awards applicable to its State of New York Department of Transportation assistance program.

Auditors' Responsibility

Our responsibility is to express an opinion on compliance for the MTA's major State of New York Department of Transportation assistance program based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of NYSCRR. Those standards and NYSCRR require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major State of New York Department of Transportation assistance program occurred. An audit includes examining, on a test basis, evidence about the MTA's compliance with those requirements and performing such other procedures, as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for State of New York Department of Transportation assistance program. However, our audit does not provide a legal determination of the MTA's compliance.

Opinion on Each Major State of New York Department of Transportation Assistance Program

In our opinion, the MTA complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on its major State of New York Department of Transportation assistance program for the year ended December 31, 2019.

Report on Internal Control over Compliance

Management of the MTA is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the MTA's internal control over compliance with the types of requirements that could have a direct and material effect on each major State of New York Department of Transportation assistance program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major State of New York Department of Transportation assistance program and to test and report on internal control over compliance in accordance with NYSCRR, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the MTA's internal control over compliance.

A *deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a State of New York Department of Transportation assistance program on a timely basis. A *material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is reasonable possibility that material noncompliance with a type of compliance requirement of a State of New York Department of Transportation assistance program will not be prevented, or detected and corrected, on a timely basis. A *significant deficiency in internal control over compliance* is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a State of New York Department of Transportation assistance program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of NYSCRR. Accordingly, this report is not suitable for any other purpose.

Report on Schedule of State of New York Department of Transportation Assistance Expended Required by the Part 43 of the New York State Codification of rules and regulations

We have audited the consolidated financial statements of the business-type activities and the financial statements of the fiduciary activities (collectively, the "financial statements") of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of and for the year ended December 31, 2019, and the related notes to the financial statements, which collectively comprise the MTA's basic financial statements. We issued our report thereon dated May 29, 2020, which contained unmodified opinions on those financial statements which included emphasis of matter paragraphs regarding the MTA requiring significant subsidies from other governmental entities; the adoption of Governmental Accounting Standards Board Statement No. 84, *Fiduciary Activities*; and subsequent event related to the impact of COVID-19 the MTA. Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the basic financial statements. The accompanying Schedule of State of New York Department of Transportation Assistance Expended as required by Part 43 of the New York State Codification of Rules and Regulations is presented for purposes of additional analysis as required by the Part 43 of the New York State Codification of Rules and Regulations and is not a required part of the basic financial statements. Such information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. The information has been subjected to the auditing procedures applied in the audit of the financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the Schedule of State of New York Department of Transportation Assistance Expended is fairly stated in all material respects in relation to the basic financial statements as a whole.

July 22, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
SCHEDULE OF STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION
ASSISTANCE EXPENDED
YEAR ENDED DECEMBER 31, 2019

State Grantor Program Title	CFDA Number	State Contract Number	Expenditures
Statewide Mass Transportation Operating Assistance Program	N/A	-	$187,924,000
Total State Transportation Assistance Expended			$187,924,000

See accompanying Notes to Schedule of State of New York Department of Transportation Assistance Expended.

1. BASIS OF PRESENTATION

a. Reporting Entity—General

Principles of Consolidation— The consolidated financial statements of the business-type activities consist of MTA Headquarters, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Staten Island Railway, FMTAC, MTA Bus, MTA Capital Construction, 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.

The accompanying Schedule of State of New York Department of Transportation Assistance Expended of the MTA presents the activity of all financial assistance programs provided by the New York State Department of Transportation to the MTA.

b. Program Tested

For the MTA's purpose, a State Transportation Assistance Program, as defined by Part 43 of the NYCRR, is any program that exceeds $3,000,000 when the total State Transportation Assistance Expended of the reporting entity exceeds $100 million. Total expenditures incurred by the MTA for the State Transportation Assistance Programs were approximately $188 million.

c. Indirect Costs

Indirect costs are included in the reported expenditures to the extent they are included in the financial reports used as the source for the data presented.

2. BASIS OF ACCOUNTING

The accompanying 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*.

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

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 forecast-increased 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 year ended December 31, 2019 totaled $6.8 billion.

METROPOLITAN TRANSPORTATION AUTHORITY
(A Component Unit of the State of New York)

SCHEDULE OF FINDINGS AND QUESTIONED COSTS — STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION ASSISTANCE EXPENDED
YEAR ENDED DECEMBER 31, 2019

1. SUMMARY OF AUDITORS' RESULTS: STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION ASSISTANCE EXPENDED

Internal control over State of New York Department of Transportation Assistance Expended:

Material weakness(es) identified	___ Yes	✓ No
Significant deficiency(ies) identified?	___ Yes	✓ None Reported

Type of auditor's report issued on compliance for State Transportation Assistance Programs: Unmodified

Any audit findings disclosed that are required to be reported in accordance with the *Part 43 of the New York State Codification of Rules and Regulations*?	___ Yes	✓ No

Identification of State of New York Department of Transportation Assistance Program tested:

State Grantor Program Title	CFDA Number	State Contract Number	Expenditures
Statewide Mass Transportation Operating Assistance Program	N/A	-	$187,924,000

Dollar threshold used to determine program to be tested: $3,000,000

Auditee qualified as low-risk auditee?	✓ Yes	___ No

2. FINDINGS AND QUESTIONED COSTS RELATING TO STATE OF NEW YORK DEPARTMENT OF TRANSPORTATION ASSISTANCE EXPENDED

None.

* * * * * *

Deloitte.

DRAFT

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INDEPENDENT AUDITORS' REPORT

To the Members of the Board of
Metropolitan Transportation Authority

Dear Members of the Board:

We have audited, in accordance with auditing standards generally accepted in the United States of America, the consolidated financial statements of the business-type activities of the Metropolitan Transportation Authority (the "Authority"), a component unit of the State of New York, which comprise the consolidated statement of net position as of December 31, 2019, and the related consolidated statement of revenues, expenses and changes in net position and statement of consolidated cash flows for the year then ended, and the related notes to the consolidated financial statements, and have issued our report thereon dated May 29, 2020, which expresses an unmodified opinion and includes emphasis-of-matter paragraphs that the Authority requires significant subsidies from other governmental entities, has adopted Governmental Accounting Standards Board ("GASB") Statement No. 84, *Fiduciary Activities* and the impacts of COVID-19.

In connection with our audit, nothing came to our attention that caused us to believe that the Authority failed to comply with the Authority's Investment Guidelines, the New York State ("NYS") Comptroller's Investment Guidelines, Section 2925 of the NYS Public Authorities Law, or Section 201.3 of the NYS Public Authorities Law (collectively, the "Investment Guidelines"), insofar as they relate to accounting matters. However, our audit was not directed primarily toward obtaining knowledge of such noncompliance. Accordingly, had we performed additional procedures, other matters may have come to our attention regarding the Authority's noncompliance with the Investment Guidelines, insofar as they relate to accounting matters.

This report is intended solely for the information and use of the members of the board and management of the Authority, and the Office of the New York State Comptroller and is not intended to be and should not be used by anyone other than these specified parties.

May 29, 2020

INDEPENDENT ACCOUNTANTS' REPORT ON APPLYING AGREED-UPON PROCEDURES

The Audit Committee of the
Metropolitan Transportation Authority

We have performed the procedures enumerated below, which were agreed to by the Metropolitan Transportation Authority ("MTA"), the MTA Office of the Inspector General (the "IG") and the Auditor General of MTA, related to budget accountability for the IG for the year ended December 31,2019. The IG is responsible for its budget accountability. The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures enumerated below either for the purpose for which this report has been requested or for any other purpose.

The procedures and the associated findings are as follows:

1. We utilized a random number generator to randomly select five employees from the MTA Headquarters - IG payroll register for December 2019 and we compared each individual's salary to an approved Personnel Action Form.

   We found no exceptions as a result of the procedures.

2. We utilized a random number generator to randomly select two terminated employees from the listing of terminated employees for the year ended December 31, 2019 and we read each individual's Personnel Action Form. We read the payroll register subsequent to each employee's termination, and noted that these employees were removed from the payroll register.

   We found no exceptions as a result of the procedures.

3. We compared the IG's total payroll per the payroll register for the month of December 2019 to the MTA's monthly expense report for the month of December 2019 and noted they agreed.

   We found no exceptions as a result of the procedures.

4. We utilized a random number generator to randomly select five purchases made during the year from the general ledger for the year ended December 31, 2019, and noted that the related requisitions and purchase orders contained an approver's signature, and, where applicable, the bids were obtained.

   We found no exceptions as a result of the procedures.

5. We utilized a random number generator to randomly select fifteen disbursements from the IG's General Fund for the year ended December 31, 2019 and compared the selected disbursements to supporting documentation and noted that the disbursements were authorized and supported by proper documentation.

We found no exceptions as a result of the procedures.

6. We utilized a random number generator to randomly select five petty cash vouchers for the last quarter ended December 31, 2019, and noted the vouchers were approved.

   We found no exceptions as a result of the procedures.

7. We obtained the IG General Fund's bank reconciliation for the month of December 2019, and noted that the bank balance per the IG's General Fund's bank reconciliation agreed to the Authority's general ledger.

   We found no exceptions as a result of the procedures.

8. We utilized a random number generator to randomly select five employee reimbursements from listing of employee reimbursements for the year ended December 31, 2019 and noted the reimbursements were supported by explanations, invoices, reimbursement applications, refund requisitions, purchase orders, and payment details. We utilized a random number generator to randomly select five employee expense reports from the listing of employee expenses reports for the year ended December 31, 2019, and noted the expense reports were supported by explanations, invoices, expense reports, purchase orders, and payment details.

   We found no exceptions as a result of the procedures.

9. Management informed us that there were no fixed asset addition purchases made during the year ended December 31, 2019 for the IG.

10. Management informed us that there were no fixed asset disposals made during the year ended December 31, 2019 for the IG.

11. Management informed us that there was no depreciation expense during the year ended December 31, 2019 for the IG.

12. We compared the depreciation expense for the month of December 2019 to the MTA's general ledger and noted they were both $0.

    We found no exceptions as a result of the procedures.

13. We read and compared the IG's monthly expense report to the MTA's monthly expense report for the month of December 2019.

    We found no exceptions as a result of the procedures.

14. We compared the IG's 2019 expense budget to the actual expenditures for 2019, and noted total actual expenditures were less than the IG's 2019 expense budget by $3,550,105.

This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The agreed-upon procedures do not constitute an audit of financial statements or any part thereof, the objective of which is the expression of an opinion on the financial statements or a part thereof. Accordingly, we do not express such an opinion.

Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the MTA, the MTA Office of the IG, and the Auditor General of the MTA, and is not intended to be and should not be used by anyone other than the specified parties.

July 22, 2020

The Metropolitan Transportation Authority

Report to Management

Year Ended December 31, 2019

Deloitte.

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July 10, 2020

The Audit Committee
Metropolitan Transportation Authority
New York, New York

And

The Management of the Metropolitan Transportation Authority
New York, New York

Dear Members of the Audit Committee and Management:

In connection with our audits of the financial statements of the Metropolitan Transportation Authority, First Mutual Transportation Assurance Company, Long Island Rail Road Company, Metro-North Commuter Railroad Company, MTA Bus Company, New York City Transit Authority, Staten Island Rapid Transit Operating Authority and the Triborough Bridge and Tunnel Authority (collectively the "MTA") as of and for the year ended December 31, 2019 (on which we have issued our reports dated May 29, 2020 which contain three explanatory paragraphs including subsidies from other governmental entities, the adoption of GASB 84, *Fiduciary Activities*, and the impacts of COVID-19), performed in accordance with auditing standards generally accepted in the United States of America (generally accepted auditing standards), we considered the MTA's internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the MTA's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of the MTA's internal control over financial reporting.

Our consideration of internal control over financial reporting was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over financial reporting. However, in connection with our audits, we have identified, and included in the attached Appendix A, deficiencies related to the MTA's internal control over financial reporting and other matters as of December 31, 2019, that we wish to bring to your attention.

We also plan to issue our Uniform Guidance Reports in accordance with *Government Auditing Standards* and the U.S. Office of Management and Budget ("OMB") audit requirements of Title 2 U.S. Code of Federal Regulations (CFR) Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("OMB Uniform Guidance") and compliance with the types of compliance requirements described in the *Part 43 of the New York State Codification of Rules and Regulations* which will include (1) Independent Auditors' Report (2) Independent Auditors' Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in accordance with *Government Auditing Standards* (3) Independent Auditors' Report on Compliance for Each Major Federal Program; and Report on Internal Control Over Compliance; and Report on Schedule of Expenditures of Federal Awards Required by the Uniform Guidance, and (4) Independent Auditors' Report on Compliance for Each Major State of New York Department of Transportation Assistance Program; and Report on Internal Controls over Compliance; and Report on Schedule of State of New York Department of Transportation Assistance expended Required by Part 43 of the New York State Codification of Rules and Regulations.

The definitions of a deficiency is also set forth in the attached Appendix B

Although we have included management's written response to our comments in the attached Appendix A, such responses have not been subjected to the auditing procedures applied in our audits of the financial statements and, accordingly, we do not express an opinion or provide any form of assurance on the appropriateness of the responses or the effectiveness of any corrective actions described therein.

A description of the responsibility of management for establishing and maintaining internal control over financial reporting and of the objectives of and inherent limitations of internal control over financial reporting, is set forth in the attached Appendix C and should be read in conjunction with this report.

This report is intended solely for the information and use of management, the Audit Committee, Federal and State awarding agencies or pass-through entities, and others within the organization and is not intended to be, and should not be, used by anyone other than these specified parties.

Sincerely,

Deloitte & Touche LLP

THE METROPOLITAN TRANSPORTATION AUTHORITY
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APPENDIX A

METROPOLITAN TRANSPORTATION AUTHORITY- HEADQUARTERS

DEFICIENCIES

We identified, and included below, deficiencies involving the Metropolitan Transportation Authority-Headquarters' ("MTA HQ") internal control over financial reporting for the year ended December 31, 2019, that have not been previously communicated in writing or orally, by others within MTA HQ, or by us.

1. Controls related to the Accrual of Capital Assets

Criteria:
GASB Codification - Section 1800.113 and 1800.114, *Current Liabilities*, states the following:

The term *current liabilities* is used principally to designate obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets, or the creation of other current liabilities. Other liabilities whose regular and ordinary liquidation is expected to occur within one year also are intended for inclusion, such as short-term debts arising from the acquisition of capital assets, serial maturities of long-term obligations, amounts required to be expended within one year under sinking fund provisions, and certain agency obligations arising from the collection or acceptance of cash or other assets for the account of third parties.

This concept of current liabilities should include estimated or accrued amounts that are expected to be required to cover disbursements within the year for known obligations (a) the amount of which can be determined only approximately (as in the case of provisions for accruing bonus payments) or (b) in which the specific person or persons to whom payment will be made cannot as yet be designated (as in the case of estimated costs to be incurred in connection with guaranteed servicing or repair of products already sold). The current liability classification, however, is not intended to include debts to be liquidated by resources that have been accumulated in accounts of a type not properly classified as current assets, or long-term obligations incurred to provide increased amounts of working capital for long periods. When the amounts of the periodic payments of an obligation are, by contract, measured by current transactions, as, for example, by rents or revenues received in the case of equipment trust certificates or by the depletion of natural resources in the case of property obligations, the portion of the total obligation to be included as a current liability should be that representing the amount accrued at the date of the financial statements.

To appropriately account for all current liabilities, MTAHQ accrues for capital asset obligations each reporting period. The value of obligations is dependent on dates of goods received or services performed, as stated on the invoice associated with the obligation.

Condition:
In certain instances, MTAHQ failed to completely accrue for capital asset obligations incurred, as the dates of goods received and services performed were improperly input into the Oracle ERP system. Based on our testing procedures, we identified assets and liabilities associated with capital accruals were both understated by $98.8 million as of December 31, 2019.

Cause:
Upon evaluation of the internal controls utilized in the accrual, it was determined this misstatement was the result of a lack of accurate recording of dates of goods received and services performed dates into Oracle. These dates are used by the MTAHQ Accounting Department to record the related capital accruals as of December 31, 2019.

Effect:
Capital Assets – Land and Construction Work-in-Process and Capital Accruals Liability were each understated by $98.8 million as of December 31, 2019.

Recommendation:
As an enhancement to the process over accrued capital expenses, it is recommended that MTAHQ modify the accrual process to incorporate the receipt of the actual invoices received subsequent to December 31st. By performing the additional enhancement, management could review the actual invoices related to goods received and services performed for dates related to the current reporting period that may have been incorrectly recorded in the Oracle system.

Financial Statement Impact:
Management recorded an adjustment to increase both capital assets and accrued expenses – capital accrual liabilities by $98.8 million as of December 31, 2019.

Management Response (2019):
MTAHQ agrees with this recommendation. The capital accrual query has been modified to capture the additional criteria for invoices receipted subsequent to December 31st. The modified capital accrual query was put into effect for the December 31, 2019 financial reporting period. Going forward, MTAHQ will run this modified capital accrual query and communicate with the MTAHQ departments for confirmation on the dates of services for the goods received and services performed for the receipted invoices made subsequent to December 31st.

MTA CONSOLIDATED INFORMATION TECHNOLOGY (“IT”) DEPARTMENT

DEFICIENCIES

We identified, and included below, deficiencies involving the MTA Consolidated IT Department's internal control over financial reporting for the year ended December 31, 2019, that have not been previously communicated in writing or orally, by others within the MTA, or by us.

1. AFC and MMS (TALON) Application and Privileged Access

Agency:
New York City Transit Authority

Criteria:
Privileged-level access (e.g., security administrators) is authorized and appropriately restricted.

Condition:
During our audit procedures, D&T noted privileged access to the AFC and MMS applications was not appropriately restricted for one account.

Cause:
Although Management has a formal policy as it pertains to privileged access, they have not sufficiently reinforced the policy and haven't revoked accounts that no longer require elevated access.

Effect:
Given that privileged access has not been appropriately restricted, there is a risk of unauthorized user access modifications that would circumvent the provisioning and deprovisioning processes.

Recommendation:
We recommend that New York Transit Authority management appropriately restrict privileged access accounts when the access is no longer required.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2019):
Estimated Completion 2nd qtr. 2020
Management concurs: The one account has been remediated no access.

2. ORT Application Privileged Access

Agency:
Triborough Bridge and Tunnel Authority ("TBTA")

Criteria:
Privileged-level access (e.g., security administrators) is authorized and appropriately restricted.

Condition:
During our audit procedures, D&T noted there were 46 users with inappropriate access to security administrator permissions in the ORT application based on their assignment to the Executive Manager role.

Cause:
D&T noted that these users were appropriately provisioned when the accounts were created; however, because the Executive Manager role has permissions associated to it that would be utilized by personnel in multiple job roles the access creates an Serration Of Duties risk. The users assigned to this role require certain permissions to perform their job functions, but do not need the security administrator permissions.

Effect:
Given that privileged access has not been appropriately restricted, there is a risk of unauthorized user access modifications that would circumvent the provisioning and deprovisioning processes.

Recommendation:
We recommend that management remove the inappropriate user access and appropriately restrict privileged access for the ORT application.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2019):
Estimated Completion 3rd qtr. 2020
Management concurs: The vendor will make the following changes to the Executive Manager employee type, restricting their access to select items. We will create new employee types, with appropriate privileges, which will be assigned to a small select group of personnel to perform such functions as; add and remove users, assigning user roles, updating user passwords and modifying user roles.

3. Impact Application and Oracle Database Password Parameters

Agency:
MTAHQ

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
Application: The password setting for complexity is not enabled for the HQ AD Domain, and therefore the Impact application, given that authentication to the application is configured via Windows AD parameters. This is not in line with the MTA Corporate Policy and/or industry standards. Weak password parameters could potentially result in users gaining unauthorized access the applications.

Database: D&T noted that password settings for the DEFAULT profile on the Oracle database are not in line with the MTA Corporate Policy and/or industry standards. There are individual user accounts assigned to the profile and therefore passwords for those individuals do not adhere to the policy for minimum length, expiration, lockout, history, & complexity.

Cause:
Although Management has a formal policy as it pertains to password parameters, they have not sufficiently reinforced the policy and haven't monitored adherence to the policy. D&T noted that the root cause was attributed to oversight on behalf of management.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the Impact application and supporting Oracle Database which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that MTA HQ management align password complexity settings on the HQ network to align either to the MTA HQ security policies or industry best practices. We recommend that MTA HQ management either align the password parameters for the DEFAULT profile on the Oracle Database with MTA HQ security policies and industry best practices or restrict DEFAULT profile to system/generic accounts (i.e. removing the user accounts).

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2019):
Estimated Completion 3rd qtr. 2020
Management concurs: domain password policies for HQ Domain has been remediated.

4. AMS Application Password Parameters

Agency:
Metro-North Railroad Commuter Railroad Company ("MNR")

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
The password setting for complexity is not enabled for the MNR Active Directory ("AD") Domain, and therefore the AMS application, given that authentication to the application is configured for Single Sign On via Windows AD. This is not in line with the MTA Corporate Policy and/or industry standards. Weak password parameters could potentially result in users gaining unauthorized access the applications.

Cause:
Although Management has a formal policy as it pertains to password parameters, they have not sufficiently reinforced the policy and haven't monitored adherence to the policy. D&T noted that the root cause was attributed to oversight on behalf of management.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the AMS application, which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that MNR management align the password parameters for the MNR AD Domain with the MNR security policies and industry best practices.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2019):
Estimated Completion Date 3rd quarter 2020
The current domain password policies for all agencies MTABT/MNR/NYCT/HQ has been remediated.

5. Oracle Database Supporting the PeopleSoft Application Password Parameters

Agency:
Business Service Center ("BSC")

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
The password settings for one of the two Oracle profiles containing user accounts is not in line with the MTA Corporate Policy and/or industry standards. Weak password parameters could potentially result in users gaining unauthorized access the applications.

Cause:
Although Management has a formal policy as it pertains to password parameters, they have not sufficiently reinforced the policy and haven't monitored adherence to the policy.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the Oracle Database supporting the PeopleSoft application, which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that BSC management either remove user accounts from the DEFAULT Oracle profile or align the password parameters for DEFAULT profile with BSC security policies and industry best practices.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2019):
Management concurs: Estimated Completion Date 4th qtr. 2020
MTA Management will review Database profile 'Default' used for Service Account, PeopleSoft Application Owner Account, Oracle database internal Account, and Database Link accounts that is why password parameters like expiring password, Account lock after 3 unsuccessful attempts have not been setup. Frequently changing and expiring database service accounts can create unplanned application outages and can seriously effect business continuity. However, Management will review the users accounts assigned to Default profile and going to find out if someone else other than user accounts mentioned above is using Default profile. Any such account which is incorrectly assigned Default profile will be assigned BSC_DEFAULT profile. Also, password parameters such as length of the passwords for service accounts will be re-checked in all non-production and production databases and wherever necessary the password will be changed according to MTA IT Security policy.

We identified the following other deficiencies involving the Authority's internal control over financial reporting for the periods prior to the year ended December 31, 2019 that we wish to bring to your attention at this time.

6. ORT Application and Supporting SQL Database Password Parameters

Agency:
TBTA

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
ORT Application: D&T noted that current password parameters for the ORT application were not in compliance with the security policy as the current parameters do not enforce complexity nor lockout parameters. Weak password parameters could potentially result in users gaining unauthorized access to the application.

SQL Database: D&T noted that 5 service accounts are configured with SQL authentication and do not inherit Windows password parameters. As such, the passwords for these accounts are not set in accordance with MTA security policies/industry best practices.

Cause:
Although Management has a formal policy as it pertains to password parameters, they have not sufficiently reinforced the policy and haven't monitored adherence to the policy. D&T noted that the root cause was attributed to oversight on behalf of management.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the ORT application and supporting SQL database which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that TBTA management coordinate with ORT vendor management to align the password parameters with TBTA security policies and industry best practices. Given that the vendor is responsible for the password parameters, D&T recommends that management consider implementing a multi-factor authentication (MFA) solution (i.e. Microsoft Azure Multi-Factor Authentication, RSA, Okta) as part of the TBTA environment as an additional control over security.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2018):
Estimated completion date is the 3rd Quarter 2019.

Management concurs. The vendor has agreed to align passwords with MTA IT Security password policy. with MTA password policy.

Status Update (2019):
The identified observation has been partially addressed. The ORT application was noted to have complexity requirements enabled appropriately, however account lockout is not set in accordance with policy. The password parameters for the supporting SQL database were tested and noted to be appropriate; this portion of the observation is remediated. We reiterate our prior recommendation with respect to the account lockout setting on the ORT application.

Management Response (2019):
Estimated Completion date is the 2nd quarter 2020.
Management concurs: password security has been remediated and is aligned with MTA password policy.

7. AFC and MMS (TALON) Application and Supporting DB2 Database Password Parameters

Agency:
New York City Transit Authority

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
Password settings configured for the AFC and MMS applications as well as the supporting DB2 database are not in line with the MTA Corporate Policy and/or industry standards. Weak password parameters could potentially result in users gaining unauthorized access the applications.

Cause:
Although Management has a formal policy as it pertains to password parameters, they have not sufficiently reinforced the policy and haven't monitored adherence to the policy.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the mainframe applications and underlying DB2 databases which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that Transit Authority management align the password parameters for the mainframe applications and supporting DB2 databases with Transit Authority security policies and industry best practices.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by other controls and factors.

Management Response (2018):
Estimated completion date is the 4th Quarter of 2019.

Management concurred. MTA IT Security has been already working with the vendor on testing password settings and the effects on downstream applications. Management is also looking to create a separate directory group which will have the increased security requirements with the limited special character selection.

Status Update (2019):
The identified observation still remains open. AFC and MMS applications as well as the supporting DB2 database password parameters continue to not be in compliance with MTA security policies or industry best practices as the current password settings lack minimum length, password history, and complexity. We reiterate our prior recommendations.

Management Response (2019):
Estimated Completion 4th Quarter 2020.
Management Concurs: AFC application changes are required which require testing and coordination with both the Vendor and MTAIT Security to test and implement. Due to loss of key staff this project was delayed.

8. Impact Application Password Parameters

Agency:
Metropolitan Transportation Authority- Headquarters

Criteria:
The identity of users should be authenticated to the systems software through passwords or other authentication mechanisms, in compliance with entity security policies. The use of passwords incorporates policies on periodic change, confidentiality, and password format (e.g., password length, alphanumeric content, expiration, account lockout).

Condition:
D&T noted that passwords to the Impact application are not in compliance with MTA security policies or industry best practices as the current password settings lack complexity, password age, password history, and lockout requirements.

Cause:
The security policies and guidelines were not appropriately implemented for the Impact application.

Effect:
Security mechanisms are inadequate, ineffective, or inconsistent due to lack of established security policies and standards. This increases the risk of unauthorized access to the Impact application which could potentially lead to inappropriate changes to the application or underlying data.

Recommendation:
We recommend that MTA IT align the password parameters for the Impact application with MTAHQ security policies and industry best practices.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by the following controls and factors:

1. As users are approved by management based on job responsibilities prior to implementation in production, D&T noted an effective provisioning control assists to reduce the risk of users having inappropriate access to the application.

2. As users are removed in a timely manner following termination/transfer from departments, D&T noted an effective deprovisioning control also assists to reduce the risk of users having inappropriate access to the application.

Status Update (2016):
The identified observation still remains open.

Impact application password parameters continue to not be in compliance with MTA security policies or industry best practices as the current password settings lack password age, password history, and lockout requirements.

We reiterate our prior recommendations.

Status Update (2017):
The identified observation still remains open. Impact application password parameters continue to not be in compliance with MTA security policies or industry best practices as the current password settings lack password age, password history, and lockout requirements. We reiterate our prior recommendations.

Management Response (2017):
Estimated Completion date is the 3rd Quarter of 2018.

IMPACT uses WebLogic server's LDAP (Lightweight Directory Access Protocol) for authentication, where these password parameters such as password history are not built-in features. IMPACT does not have the resources to create custom password features. MTA IT is currently in the process of switching IMPACT's authentication from WebLogic's LDAP to MTA's agency-wide ADLDS (Active Directory Lightweight Directory Services).

Status Update (2018):
The identified observation still remains open.

While IMPACT's authentication from WebLogic's LDAP switched to the MTA's agency-wide ADLDS during the year, D&T noted that the current password parameters for the domain (governing authentication) were not in compliance with the security policy as the current parameters do not enforce complexity nor meet the minimum length requirements.

We reiterate our prior recommendations.

Management Response (2018):
Estimated completion date is the 3rd Quarter of 2019.

Management concurred. The Impact applications was already moved to ADLDS (Active Directory) Lightweight Directory Services in the 4th Quarter of 2018. To be compliant, the Impact applications relies on the Active Directory project to update passwords to align with IT Security and best practices, which work is already in progress.

Status Update (2019):
The identified observation is considered closed given that the authentication method for the Impact application was modified in 2019 to adopt Windows AD credentials. As is relates to Windows AD credentials, we identified a new observation noted at #3 ("Impact Application and Oracle Database Password Parameters") above.

Management Response (2019):
Estimated Completion 3rd qtr. 2020
Management concurs: domain password policies for HQ Domain has been remediated.

9. Change Management - Access to Production – CAMS-FS Application

Agency:
Long Island Rail Road ("LIRR")

Criteria:
Access to implement changes (including interface and database changes) into the application production environment should be appropriately restricted to the IT Security Administrator and the VP-IT Department and is segregated.

Condition:
D&T noted that there are improper segregation of duties between development and deployment for the CAMS-FS application as developers have the ability to develop and deploy changes. As such, it is possible for a developer to migrate their own change into the CAMS-FS production environment without appropriate change management testing and approvals. In response to this finding, MTA IT has implemented a two-tier production change process that consists of the programmer analysts submitting a ServiceNow Change Request to be implemented by the Maximo Administration personnel. In addition, an automated monitoring process for any changes to the Maximo enterprise archive (EAR) java file was implemented. This process notifies the application support manager and the quality assurance manager of any changes to date/time stamp of the production EAR file. However, D&T was unable to corroborate the design and implementation of these processes in the current year.

Cause:
MTA IT has not appropriately segregated logical access for developers; they are granted access to both development and production environments without sufficient monitoring controls.

Effect:
Given that logical access has not been appropriately segregated, there is a risk of unauthorized changes being implemented into the production environment that would circumvent the change management process.

Recommendation:
We recommend that MTA IT maintain sufficient appropriate documentation to evidence the design and implementation effectiveness of the monitoring procedures used to mitigate the risk arising from this segregation of duties deficiency.

Financial Statement Impact:
No Impact – risk associated with this deficiency mitigated by the following control:

1. As changes are required to be tested and approved prior to implementation in production as a part of the control, D&T noted that an effective control would mitigate the risk of inappropriate changes to the application or supporting database.

Status Update (2016):
The identified observation still remains open.

D&T noted that MTA IT has not appropriately segregated logical access for developers; they are granted access to both development and production environments without sufficient monitoring controls.

We reiterate our prior recommendations as management should restrict programmer access to the production environment or implement additional monitoring controls that would address the risk arising from this segregation of duties deficiency.

Status Update (2017):
The identified observation remains open until D&T is able to test the design & implementation effectiveness of the monitoring controls created for this environment.

Management Response (2017):
Implemented in the 1st Quarter of 2018.

MTA IT implemented a two-tier production change process that consists of the programmer analysts submitting a ServiceNow Change Request to be implemented by the Maximo Administration personnel. In addition, an automated monitoring process for any changes to the Maximo enterprise archive (EAR) java file was implemented. This process notifies the application support manager and the quality assurance manager of any changes to date/time stamp of the production EAR file.

Status Update (2018):
The identified observation remains open until D&T is able to test the design & implementation effectiveness of the monitoring controls created for this environment.

Management Response (2018):
Estimated completion date is the 3rd Quarter of 2019.

Management concurred: Currently, all changes are being monitored, and any changes detected are sent to the MTA Information Technology Quality Assurance group for their review. Additionally, all changes are being entered into Service Now. Going forward, management will set up a monthly review with Information Technology Quality Assurance group to go over all changes that were detected through the monitoring process in place; and further, these reviews will be documented in Service Now.

Status Update (2019):
The identified observation remains open until D&T is able to test the design & implementation effectiveness of the monitoring controls created for this environment.

Management Response (2019):
Completed 2Q/2020
Management concurred: In addition to the mitigating controls previously implemented, MTA-IT designated one employee from the CAMS-FS team as the system administrator to perform the production implementation tasks. Additionally, a resource outside of the CAMS-FS staff, but within the same application development section, was trained as a back-up.

All changes are being entered Service Now. Changes continue to be monitored, and any changes detected are sent to the MTA Information Technology Quality Assurance group for their review. When appropriate management meet with MTA Information Technology Quality Assurance to review any detected changes that are not documented in Service Now.

FIRST MUTUAL TRANSPORTATION ASSURANCE COMPANY

We identified the following other deficiency involving the First Mutual Transportation Assurance Company's ("FMTAC") internal control over financial reporting for the periods prior to the year ended December 31, 2019 that we wish to bring to your attention at this time.

DEFICIENCIES

We identified, and included below, deficiencies involving the First Mutual Transportation Assurance Company's ("FMTAC") internal control over financial reporting for the year ended December 31, 2019, that have not been previously communicated in writing or orally, by others within FMTAC, or by us.

1. Controls related to the Journal Entry Review Process

Criteria:
Internal controls should be designed to provide reasonable assurance regarding the preparation of reliable financial statements in accordance with the applicable financial reporting framework.

Condition:
Certain controls surrounding the review and approval of journal entries need improvement and strengthening. Based on our testing and discussions with FMTAC management during the audit, we note that evidence of review of journal entries is not documented as part of the review of the financial statement package.

Cause:
Evidence of review of journal entries is not maintained.

Effect:
There is no financial statement effect. There is no formal evidence that FMTAC management is performing reviews of journal entries.

Financial Statement Impact:
There is no financial statement impact as this deficiency relates to a lack of evidence of a review process control performed by FMTAC management.

Recommendation:
It is suggested that to further strengthen controls, FMTAC management should formally document and maintain evidence of their review of all journal entries posted to the general ledger.

Management Response (2017):
FMTAC agrees with the recommendation. We will implement a process documenting the review of the financial statements on an overall basis.

Status Update (2018):
In 2018, we noted there was a process documenting the review of the financial statements on an overall basis. However, we did not note any documentation, specifying a review of journal entries has occurred. We believe that within the documentation of the review of the financial statements, it should also be explicitly stated that a review of journal entries has occurred.

Management Response (2018):

FMTAC agrees with the recommendation. FMTAC will implement a process for the review of financial statements that includes Journal Entry review for overall reasonableness

Status Update (2019):
The identified observation still remains open. There is a process documenting the review of the financial statements on an overall basis. However, we did not note any documentation, specifying a review of journal entries has occurred. We believe that within the documentation of the review of the financial statements, it should also be explicitly stated that a review of journal entries has occurred.

Management Response (2019):
FMTAC agrees with the recommendation. We will implement a process for the review of financial statements that includes Journal Entry review for overall reasonableness.

METRO NORTH COMMUTER RAILROAD COMPANY

We identified, and included below, deficiencies involving the Metro North Commuter Railroad ("MNCR") internal control over financial reporting for the year ended December 31, 2019, that have not been previously communicated in writing or orally, by others within MNCR, or by us.

1. <u>Controls related to Inventory Count Procedures</u>

Criteria:

Management should follow established inventory count procedures and monitor compliance with those procedures regularly.

Condition:

During our inventory observation and counts on February 21, 2020, many discrepancies were noted related to the accuracy of inventory details at the Harmon Distribution Center Warehouse during the "Sheet to Floor" count (meaning selecting items from the inventory system detail ledger and tracing those items to the actual physical inventory) as well as the "Floor to Sheet" count (meaning selecting items on the warehouse floor and tracing them to the inventory system detail ledger).

Perspective:

The table below summarizes the discrepancies and error rates from our sample of inventory items counted:

	Sheet to Floor		Floor to Sheet		Combined	
	# of items	$ value of items	# of items	$ value of items	# of items	$ value of items
Items Counted per MNCR Detail	11,062	$2,632,599	17,763	$191,578	28,825	$2,824,177
Actual Items per Testing Procedures	11,831	2,679,787	18,105	195,278	29,936	2,875,065
Differences	769	47,188	342	3700	1,111	50,888
Error Rate	7%	2%	2%	2%	4%	2%

Cause:

In March 2019, Metro North Commuter Railroad Company (MNCRR) started to move all the inventory contained in the Harmon Yard Car Shop warehouse into the Distribution Center, due to the impending demolition of the building. To expedite the move, it was decided that the regular cycle counts would not be performed during this period and would be reinstated after the move. Starting in July 2019, an alternate procedure called "Item Area Maintenance", in which an employee is given an area of the warehouse to count and organize, was to be performed, however, this temporary procedure was not consistently performed. The move was completed by November 2019. The cycle counts were to resume on January 1, with the start of the annual file creation for the entire organization.

Upon evaluation of the internal controls over Inventory, it was noted that the following contributed to the failure of controls during or right after the move:

1) Ceased cycle counts during the move
2) Lack of "Item Area Maintenance" counts
3) Lack of following the proper Company procedures on documentation and inventory handling
4) Turn-over of three key employees in the warehouse right around the completion of the move

5) Lack of “hands-on-oversight” once the key employees departed
6) Known system limitations for automatically capturing inventory activity

Effect:

Failing to consistently apply and monitor inventory count procedures could lead to a misstatement of inventory on the financial statements and could provide opportunities for theft of inventory to go undetected.

Recommendation:

It is recommended that MNCRR Management perform the following: 1) Make improvements of the PeopleSoft Program, which captures inventory activity and balance, since there are some known limitations; 2) Make improvements in the warehouse areas and sections organization system in a manner that allows for an easier identification of where the items are located within the warehouses; 3) Implement a full-warehouse count of all items at least once a year, ideally at year-end; 4) Implement ways to ensure accountability and proper following of Company policies and procedures for inventory handling; and 5) Proper training of the warehouse employees.

Management Response (2019):

1) Recommendation: Make improvements to the PeopleSoft (PS) Program, which captures inventory activity and balance, since there are some known limitations.

   Response: Material Management agrees with this recommendation. In the short term we will make changes to department databases to include all the critically required information. Metro-North will also request IT/BSC provide the needed modifications to PeopleSoft so that information is more readily accessible.

   Responsible Party: PMM Interim Date: 4Q2020
   Responsible Party: PMM Long Term Date: TBD

2) Recommendation: Make improvements in the warehouse areas and sections organization system in a manner that allows for an easier identification of where the items are located within the warehouses.

   Response: Materials Management agrees with this recommendation. Currently material is in the system labeled by aisle and upright rack. We will add a shelf to the system locations, which will provide for easier identification.

   Responsible Party: PMM & IT/BSC Date: 2Q2021

3) Recommendation: Implement a full warehouse count of all items at least once a year, ideally at year-end.

   Response: Management agrees with the recommendation. We have begun a count of all items in the warehouse, which will be completed by the end of the year.

   Responsible Party: PMM Date: 4Q2020

4) Recommendation: Implement ways to ensure accountability and proper following of Company policies and procedures for inventory handling.

Response: Materials Management agrees with the recommendation. We will develop a Quality Assurance Program to ensure work is completed in accordance with agency policies and departmental procedures. The new Quality Assurance Program will be included in the annual Internal Control Review.

Responsible Party: PMM Date: 4Q2020

5) Recommendation: Proper training of the warehouse employees.

Response: Materials Management agrees with the recommendation.
All warehouse employees will be retrained on the Storeroom Operations Procedure Manual.

Responsible Party: PMM Date: 3Q2020

TRIBOROUGH BRIDGE AND TUNNEL AUTHORITY

DEFICIENCIES

We identified, and included below, deficiencies involving the Triborough Bridge and Tunnel Authority's ("TBTA") internal control over financial reporting for the year ended December 31, 2019, that have not been previously communicated in writing or orally, by others within TBTA, or by us.

1. Premium/Discount Amortization Review

Agency:
Triborough Bridge & Tunnel Authority (TBTA)

Cause:
TBTA identified discounts and premiums which were being amortized into interest expense in an accelerated manner and there were instances that the system did not charge an amortization expense.

Effect:
TBTA analyzed and identified that the correct balance of the interest expense related to bond premium and discount was $55M, versus the $74M booked to interest expense at December 31, 2019.

Recommendation:
Management should enhance its review process of the premium/discount amortization schedules and the system generating the amortization schedules.

Financial Statement Impact:
Management made a correcting entry in 2019 to adjust several bonds' discount and premiums. Out of the $19M difference between the amount of interest expense recorded at the time the error was identified and the correct balance per Management's analysis, $16.3M pertains to years 2018 and prior while the remaining $2.7M related to 2019.

Management Response (2019):
During the 2nd half of 2017 TBTA had to convert from a manual worksheet process to the PeopleSoft Subledger System in accounting of bond activities. In essence, by the end of 2017, TBTA had converted to the PeopleSoft subledger system in less than six months with minimal staff to assist with the conversion. In regard to bonds with "paydowns", the PeopleSoft System was accelerating the premium amortizations in the earlier years of the bonds and then switching to discount amortizations in the years of the "paydowns" to smooth out and make up for the over amortization of premiums in the earlier years. Upon discovery of this problem by management in 2019, TBTA implemented a new control to correct for this PeopleSoft system error. This issue has no impact on TBTA cash flow or cash position.

2. Mansion Tax and Internet Sales Tax Receivable

Agency:
Triborough Bridge & Tunnel Authority (TBTA)

Criteria:
Central Business District "CBD" related revenue (Internet Sales Tax and Mansion Tax) related to the current year, but not yet received as of year-end should be recorded as a receivable at December 31.

Conditions:
The New York State Fiscal Year 2019-2020 Enacted Budget established the Central Business District Tolling Program (CBD Tolling Program). TBTA was directed to establish the CBD Tolling Capital Lockbox Fund. The revenues will be collected by the New York State (NYS) Commissioner of Taxation and Finance and deposited in banks to the credit of the State Comptroller and held in trust for MTA. The revenues are transferred without appropriation directly to the CBD Tolling Capital Lockbox Fund. In 2019, revenues were generated from the Real Estate Transfer Tax (Mansion Tax) and Internet Sales Tax based on communications from NYS.

Cause:
Earlier New York Office of the State Comptroller (NYS OSC) communications indicated that there were no more 2019 receipts; however, NYS OSC was referring to cash already deposited to the MTA and not collections through the end of December 2019 that TBTA would record as a receivable. Per D&T's confirmation to NYS, they indicated that additional revenues were deposited in January 2020 but related to December 2019 in the amount of $15.78M.

Effect:
Mansion Tax Receivable and CBD Revenue (Other Non-Operating Revenue) were both understated by $15.78M as of December 31, 2019.

Recommendation:
Management should confirm directly with NYS the amount of cash still to be collected post year-end but related to the current year to establish a receivable as of December 31.

Financial Statement Impact:
Management booked a correcting entry establishing the $15.78M receivable and CBD (Other Non-Operating) Revenue.

Management Response (2019):
The Internet and Mansion Tax Revenues were transferred from MTA HQ to TBTA in December 2019. This is a very new process to TBTA. There was a miscommunication that led to the Mansion Tax being recorded on a cash basis versus an accrual basis of accounting. TBTA has implemented procedures to confirm directly with NY State regarding the amount of Internet and Mansion tax that should be recorded by TBTA as revenues on an accrual basis each quarter.

APPENDIX B

DEFINITION

The definition of a deficiency is as follows:

A *deficiency* in internal control over financial reporting exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A deficiency in design exists when (a) a control necessary to meet the control objective is missing, or (b) an existing control is not properly designed so that, even if the control operates as designed, the control objective would not be met. A deficiency in operation exists when a properly designed control does not operate as designed or when the person performing the control does not possess the necessary authority or competence to perform the control effectively.

APPENDIX C

MANAGEMENT'S RESPONSIBILITY FOR, AND THE OBJECTIVES AND INHERENT LIMITATIONS OF, INTERNAL CONTROL OVER FINANCIAL REPORTING

The following comments concerning management's responsibility for internal control over financial reporting and the objectives and inherent limitations of internal control over financial reporting are included in generally accepted auditing standards.

Management's Responsibility

The Company's management is responsible for the overall accuracy of the financial statements and their conformity with accounting principles generally accepted in the United States of America. In this regard, the Company's management is also responsible for designing, implementing and maintaining effective internal control over financial reporting.

Objectives of Internal Control over Financial Reporting

An entity's internal control over financial reporting is a process effected by those charged with governance, management, and other personnel, designed to provide reasonable assurance regarding the preparation of reliable financial statements in accordance with accounting principles generally accepted in the United States of America, An entity's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the entity; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of the entity are being made only in accordance with authorizations of management and those charged with governance; and (3) provide reasonable assurance regarding prevention, or timely detection and correction, of unauthorized acquisition, use, or disposition of the entity's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Control over Financial Reporting

Because of its inherent limitations, internal control over financial reporting may not prevent, or detect and correct, misstatements. Also, projections of any assessment of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

* * * * *

Corporate Compliance
Enterprise Risk Management
Status Report

Report to the Audit Committee
July 2020

Executive Summary

Period Snapshot
Preparing to conduct Vulnerability (Risk) Assessment for approximately 800 Business Processes in 2020
Identified Total Deficiencies 160 of which 7 or 4% are Significant Deficiencies
Departments are working on closing open remediation plans related to control deficiencies identified during 2019 internal control testing
End of life compliance system replacement with RSA Archer is ongoing- all modules are operable and fully functioning.
Findings generated by Compliance, Audit and others with the related remediation plans have been loaded into the RSA Archer.

Summary of Control Activities
2,296 Total business processes
1,431 Total number significant business processes of which 90% were reviewed
Approximately 4,338 total risks (all business processes)
Approximately 6,323 total controls (all business processes)

Strategic/Internal Driven Risk Change
Transformation
Archer Migration

External Driven Risk Change
Covid-19

Prior Period Comparison

	February 2020	September 2019	Change (+/-)	Change (+/-)
Significant Business Processes	1,431	1,441	-10	-0.69%
Total Activities / Business Process	2,296	2,347	-51	-2.17%
Total Risks	4,338	4,312	26	0.60%
Total Controls	6,323	6,299	24	0.38%

Remediation Plans Status

Significant Deficiencies

	February 2020 Reported	Closed	New	July 2020 Open
Total	12	6	0	6

Remediation Plans Status

Total Controls vs. % of Significant Deficiencies

Agency	Total Controls 2019	Open Significant Deficiencies July 2020	% Total Significant Deficiencies to Total Controls
B&T	466	-	0.00%
MTA HQ	602	1	0.17%
LIRR	1,450	1	0.07%
MNR	751	4	0.53%
MTA Bus	300	-	0.00%
MTA C&D	514	-	0.00%
NYCT	2,240	-	0.00%
Enterprise	6,323	6	0.09%

July 2020

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
Institutional Transformation
Reputational
Safety
Succession Planning

MTA's Internal Control Program

- Communicate Internal Control Timeline and Test Period to the Agencies
- Validate Vulnerability Assessments confirming business processes, risks and controls across the agencies
- Provide training and guidance on the internal control program and the new RSA Archer GRC System
- Develop self-assessment scope with departments based on risk and control ranking for the test period
- Review and approve the Departments internal control self-assessed test results, aid in developing and closing out corrective action plans (CAPs) timely
- Prepare and sign off on Fraud Risk Assessment and COSO Point of Focus for each agency
- Prepare and obtain Chairman, Executive Leaderships and Agency Presidents' sign offs for Internal Control Certification and Annual Summary Report
- Obtain approval from MTA Board before submitting report to NYS Internal Control Dept

MTA Archer GRC Program

Executive Summary

Objectives

- The MTA Archer GRC governance framework establishes an overarching vision, strategy and guiding principles for the program. The framework provides an approach to supporting GRC technology enablement services and collaboration between business and technology.

Purpose

- Establish a formal framework to effectively govern the objectives and goals of the GRC program and to manage the interactions between various stakeholders from program sponsors to delivery teams.

Outcomes

- Enable MTA to proactively manage critical risks by supporting an integrated GRC program via RSA Archer GRC SaaS technology.
- Create synergies between risk functions to promote consistency, reduce redundancy, and provide a complete and transparent view risk and compliance.
- Execute the vision and mission through enabling the three lines of defense model, supported by an integrated risk management framework.
- Support executive reporting around risk and compliance to MTA Board and ERM Committee.

Program goals and objectives

Executive Summary

Goals	Objectives
Establish an integrated governance, risk and compliance (GRC) system via RSA Archer that promotes a risk aware organization with transparent reporting.	▪ Implement enterprise Archer GRC solution that can manage information across agencies and business units, and that will become integral in MTA's strategy and transformation ▪ Establish and maintain an Archer GRC roadmap
Establish a formal governance framework for the GRC tool which is aligned with MTA strategic vision.	▪ Build a robust team with expertise and define roles and responsibilities that are long-term, and MTA focused ▪ Implement a governance model and decision-making framework to provide transparency and effective management ▪ Develop a prioritization matrix applicable to GRC change requests ▪ Design and implement management enablers for communications, reporting, and knowledge sharing
Provide high-level guidelines for operational support of the Archer GRC Platform.	▪ Establish a GRC operations team to support all instances of the Archer GRC Platform, optimize development, and support efforts (i.e. potential reduction in duplicate functionality, application conflicts, etc.) ▪ Adhere to a formal change management process that will provide adequate and consistent oversight over new initiatives and change requests

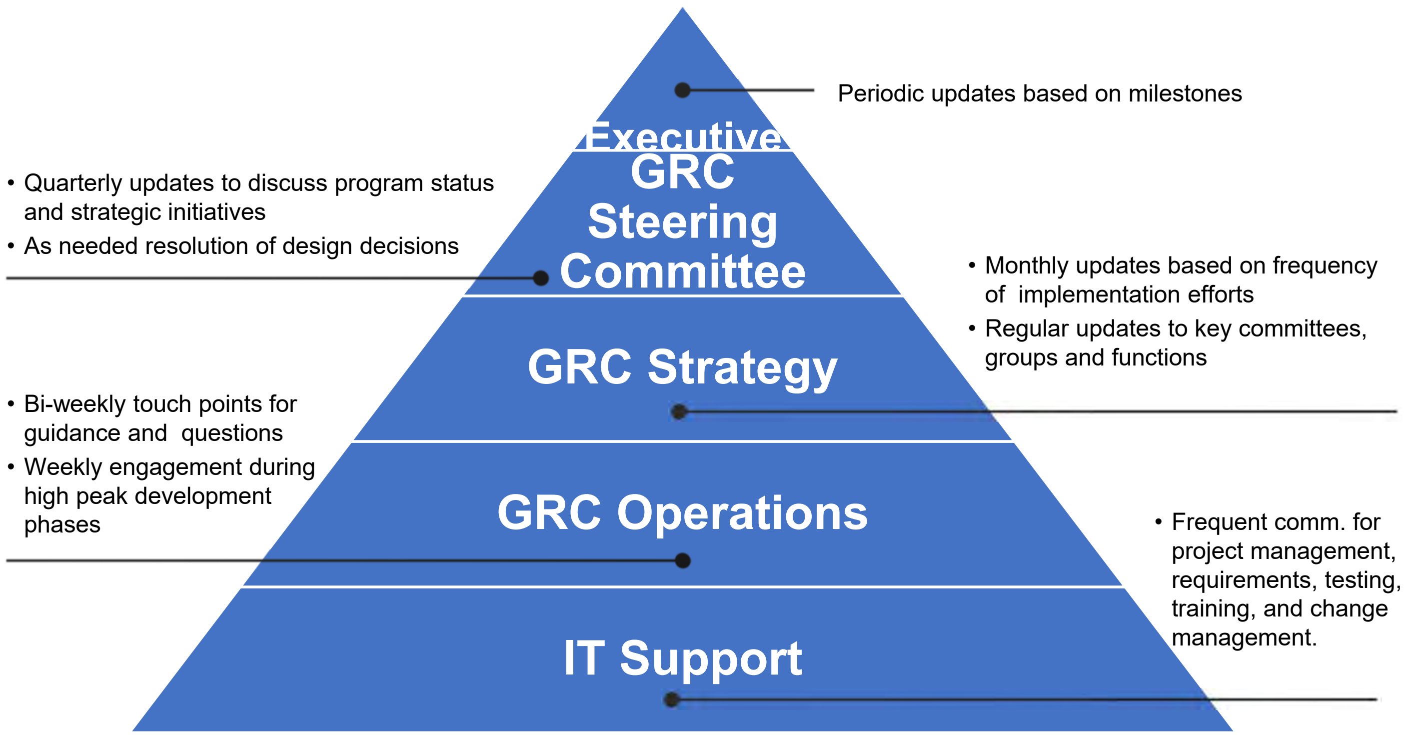
Critical success factors

Executive Summary

- Clearly defined roles and responsibilities and assigned resources to ensure accountability for key risk and compliance initiatives
- Defined operating models and guiding principles to navigate routine, complex or challenging changes in MTA business environment
- Prioritize new initiatives and change requests to prevent any impact to existing projects and timelines and to ensure alignment with the guiding principles
- Clearly defined change management process for all instances of the Archer GRC program
- Availability of resources for platform growth and sustainment

Governance Model

The governance model below provides a high-level view of the roles, accountabilities and responsibilities within the Archer GRC program



MTA GRC Capabilities

Archer GRC solutions in SaaS production

Solution	Description	MTA Owner	User Groups
Policy Management	Policy change request and authoring update process to keep policies and procedures up-to-date and published to MTA employees via the Policy Portal.	Corporate Compliance	All MTA Employees
Ethics Management	Public portal to submit ethics requests, outside activities and complete compliance certifications.	Corporate Compliance	All MTA Employees
Enterprise Management	Organizational data around MTA business hierarchy and operational infrastructure for risk and compliance governance and reporting.	Corporate Compliance	Archer Workflow Group
Issues Management	Manage issues generated by groups, such as audit, risk and compliance with workflow and reporting to manage findings, remediation plans and exceptions to non-compliance.	Corporate Compliance	Archer Workflow Group Audit Services
Enterprise Risk Management	Repository to manage process, risk and control data as well as state required risk and control assessments.	Corporate Compliance ERM Committee	Archer Workflow Group
Regulatory & Corporate Compliance	Document external regulatory obligations and establish a systematic review and approval process for tracking changes to those obligations, understanding the business impact, and prioritizing a response.	Corporate Compliance	Policy Management Admins Corporate Compliance
Business Resiliency	An automated approach to business continuity and disaster recovery planning and execution, enabling swift response in crisis situations to protect MTA ongoing operations.	Emergency Management	Business Resiliency Admins Corporate Compliance Admins Archer Workflow Group
Third Party Risk Management	Oversight of vendor relationships. The solution facilitates key activities necessary to fulfill regulatory obligations across the third-party management lifecycle.	Vendor Relations	Third Party Risk Management Admins Corporate Compliance Admins Archer Workflow Group
IT Security Risk Management	Identify and prioritize high risk cyber threats. Proactively manage IT security risks by combining asset business context, actionable threat intelligence, vulnerability assessment results, and comprehensive workflows.	IT Security	IT Security Admins Corporate Compliance Admins

RSA Archer GRC

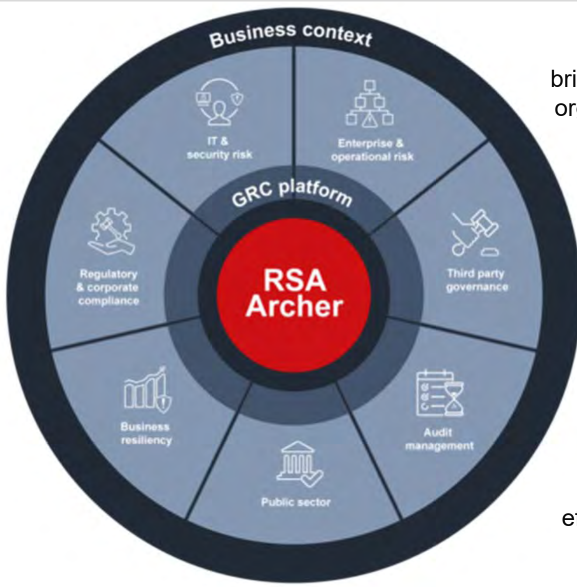
Solution Overview

RSA Archer GRC technology is a SaaS solution that provides a **common foundation** with standard processes and data to manage and report on policies, risks, assessments and deficiencies across all corporations and functional areas within the MTA

IT & Security Risk
bridges business context and process enablement to effectively address the complexity and cascading impact of cybersecurity risks

Regulatory & Corporate Compliance
ensures controls are defined, implemented and measured to meet changing compliance obligations

Business Resiliency
automates business continuity and disaster recovery planning and execution to protect your ongoing operations



Enterprise & Operational Risk
brings risk information together across the organization to identify, assess, evaluate, treat, and monitor risks

Third Party Governance
manages third party relationships and engagements while reducing risks and monitoring performance

Audit Management
executes audit plans using a consistent, risk-based approach to drive greater efficiency and gain control of the complete audit lifecycle (*not applicable to MTA)

Public Sector
leverages people, process, and technology for an integrated approach to public sector risk management (*not applicable to MTA)

MTA Corporate Compliance

Ethics and Compliance Program

Report to the Audit Committee
July 22, 2020

- EXECUTIVE SUMMARY
- COMPLIANCE PROGRAM OVERVIEW
  - Program Objectives
  - Strategic Alignment
  - Program Structure
- COMPLIANCE DETAILS
  - Inquiries and Issues
  - Training
  - Communications
- Compliance Program Future Initiatives
  - Policy Management
  - E-Code of Ethics

Executive Summary

Snapshot
Over 2,230 Ethics or Compliance Matters
Created MTA Ethics and Compliance Portal
Training /Certification Completions ??% Completion Rate

Strategy/Internal Driven Change	External Driven Change
Transformation	Increase in Number of FDS filers
Paperless Ethics Requests	JCOPE Exemption Review Project
Integration Third Party Management	Remote Work

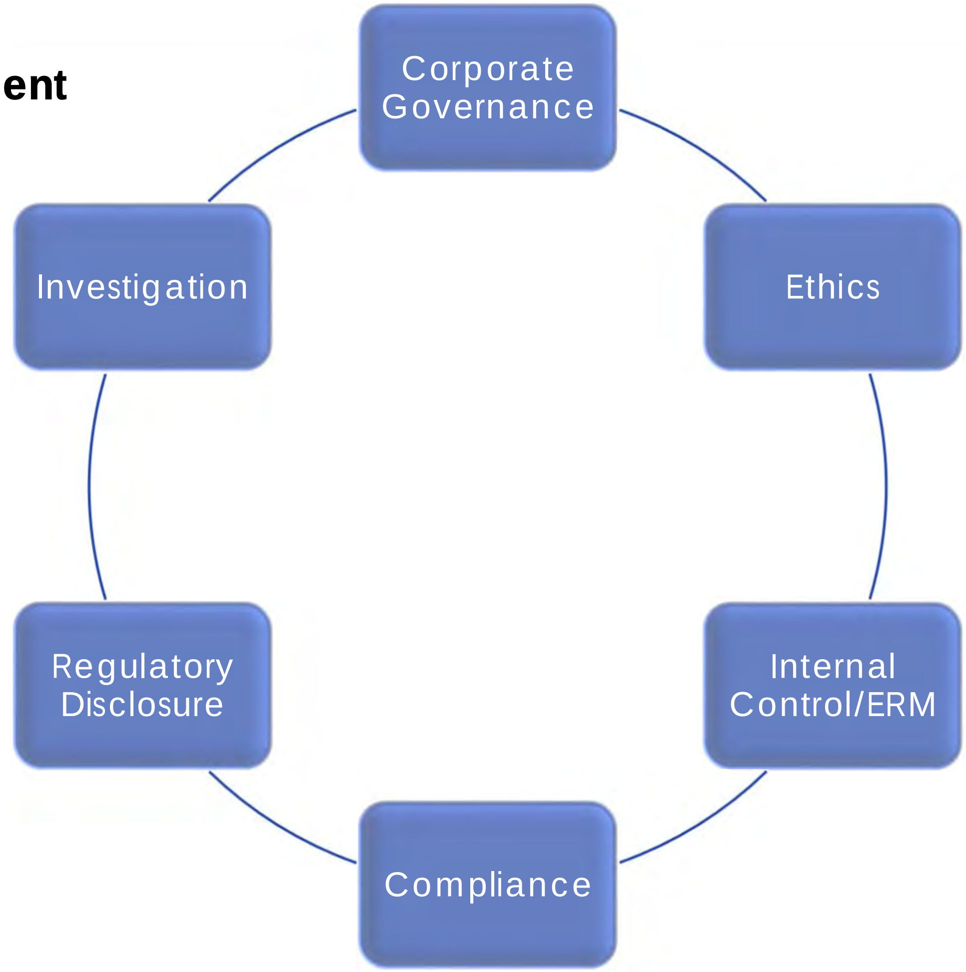
Objectives

- To **develop, maintain, and/or revise** the MTA Code of Ethics and
- To help **develop, maintain, and/or revise** all MTAHQ and agency policies and procedures.
- To **initiate educational programs** that enable MTA employees to understand the importance of compliance issues.
- To **act as a channel of communication** to receive compliance-related inquires and direct those inquires to appropriate resources within the MTA or other oversight agencies for investigation and resolution.
- To **act as a final internal resource** with which concerned parties may communicate after other formal channels and resources have been exhausted.
- To **respond to alleged violations** of rules, regulations, policies, procedures and Code of Ethics by evaluating or recommending the initiation of investigative procedures.

Objectives

- To **develop and oversee** an Authority system for uniform handling of ethics violations. To act as an independent review and evaluation body to ensure that compliance issues and concerns within the MTA are appropriately evaluated, investigated and resolved.
- To **identify potential areas of compliance vulnerability and risk** via Internal Controls and provide general guidance on how to avoid or handle similar situations in the future.
- To **ensure proper reporting of violations or potential violations** to duly authorized enforcement agencies as appropriate and/or required.
- To **establish an Ethics Helpline** and provide for its direction and management.
- To **institute and maintain an effective compliance communication program** for the MTA, including promoting (a) use of the Ethics Helpline; (b) heightened awareness of the Code of Ethics, and (c) understanding of new and existing compliance issues and related policies and procedures.
- To **develop an effective ethics and compliance training program**, including appropriate introductory training for new employees as well as ongoing training for all employees and managers.

Strategic Alignment

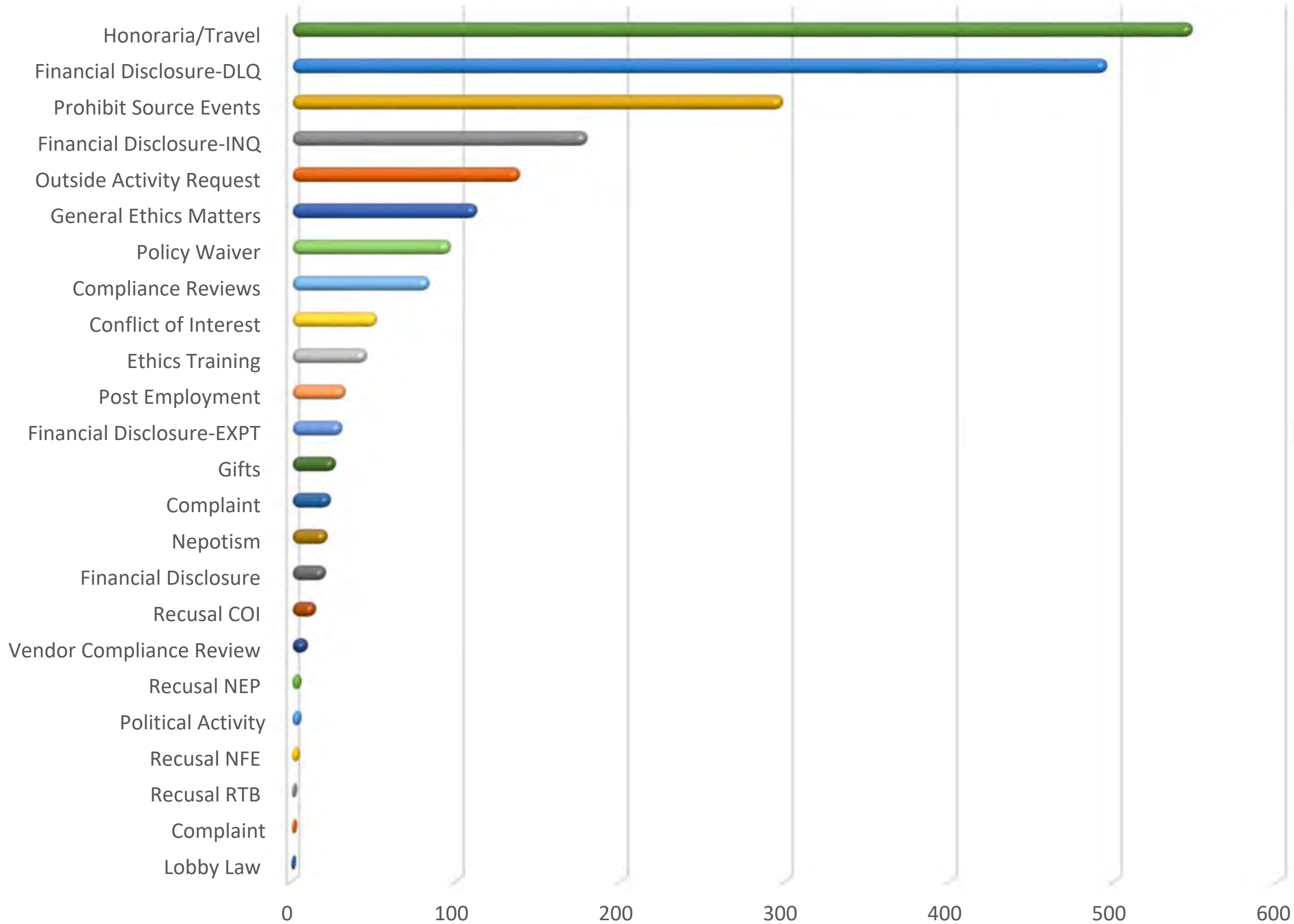


Coordination

Inquiries

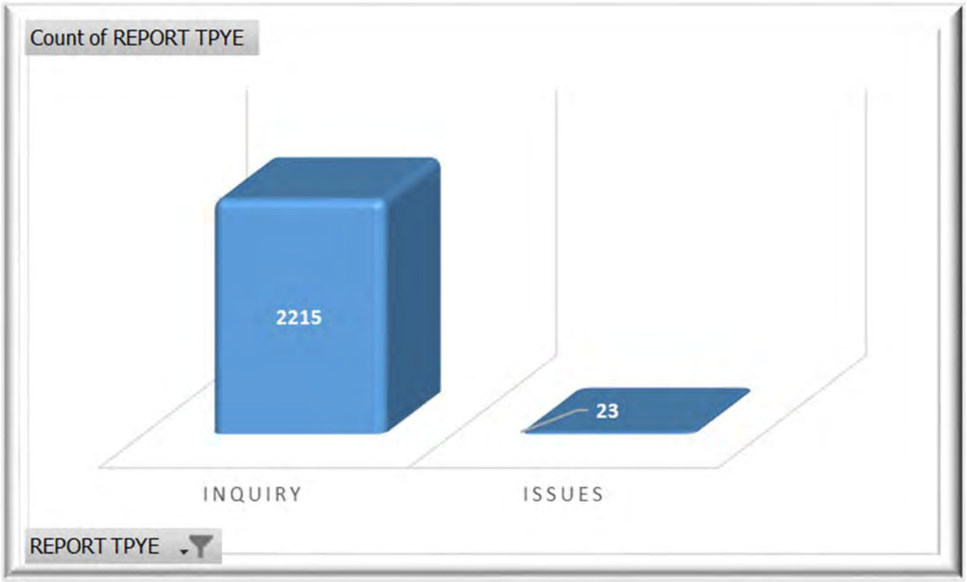
Over 2,230 handled during reporting period

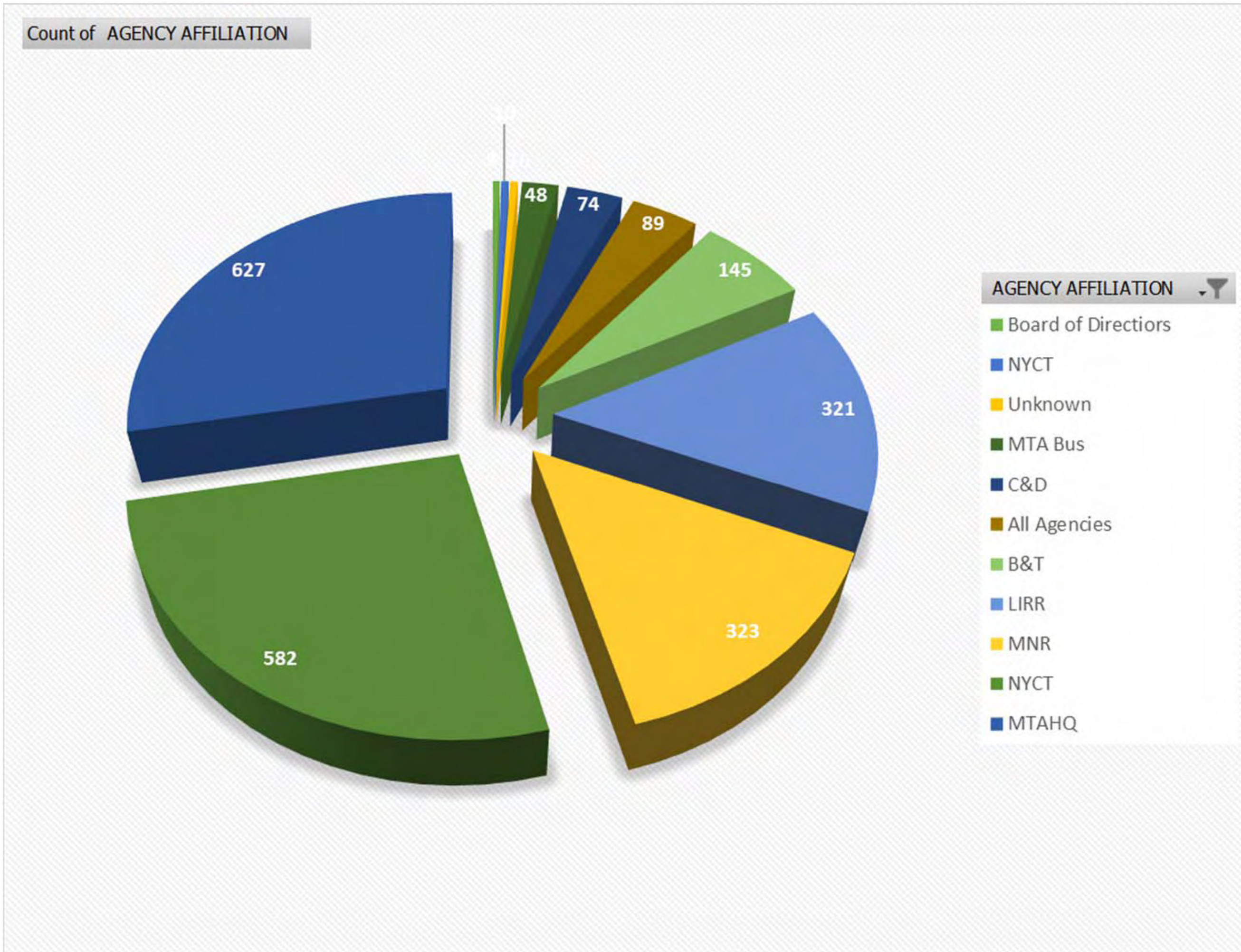
Inquiries and Issues



Inquiries v. Issues

Inquiry	2215
Issues	23





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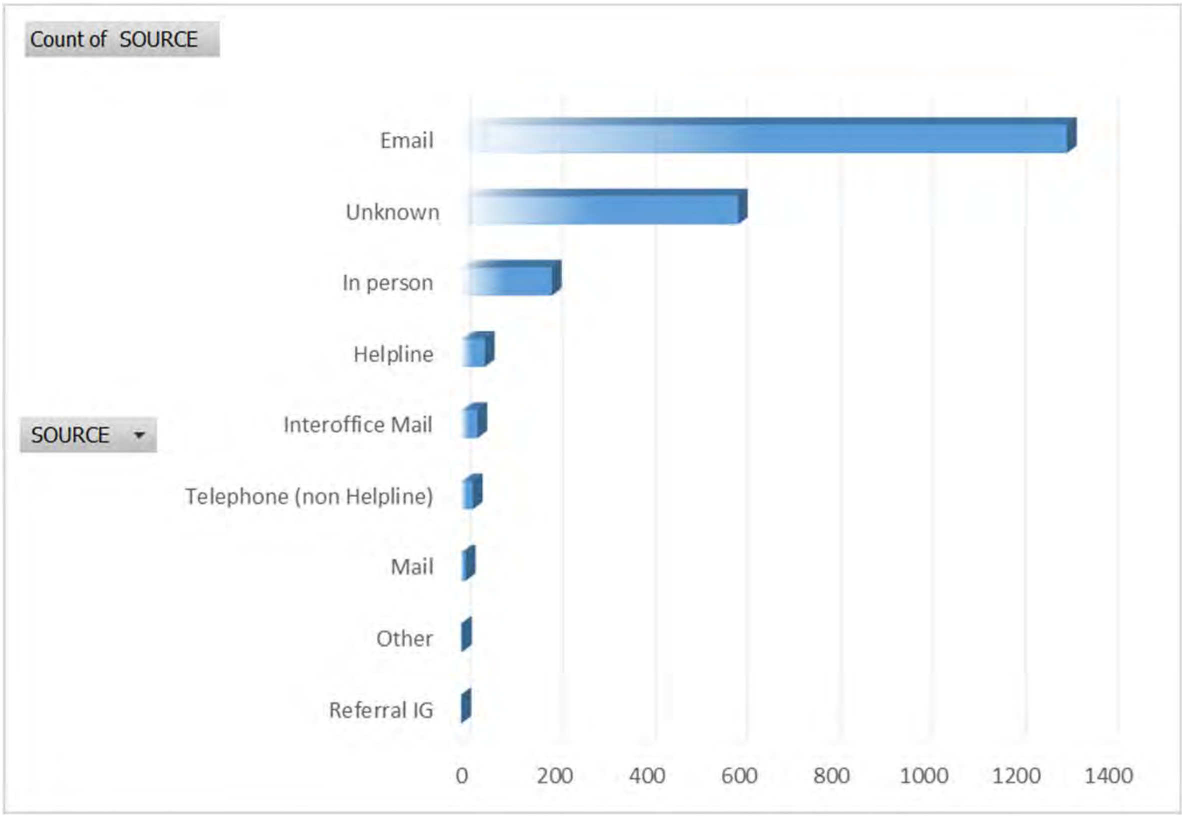
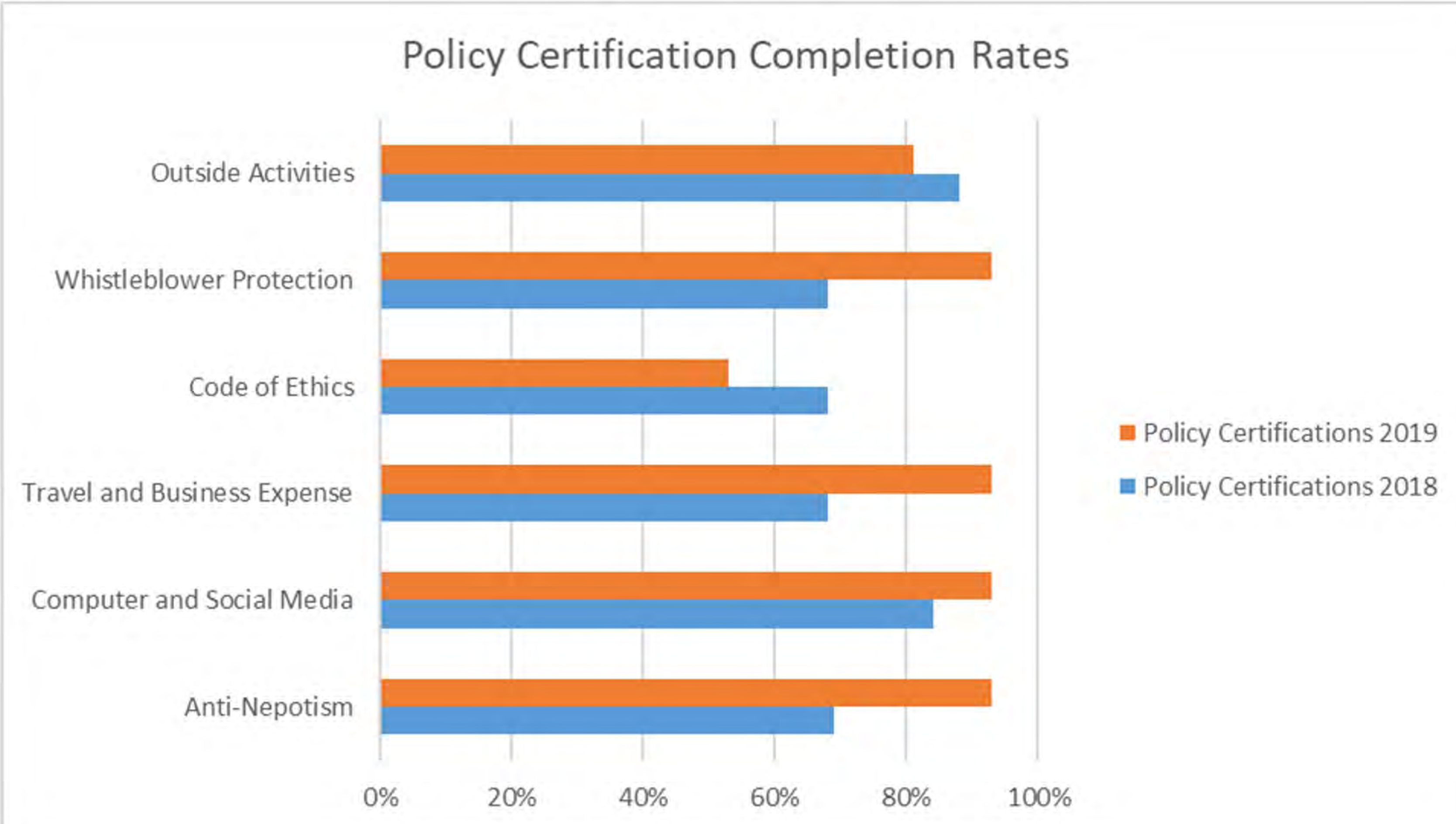
Reporting Method: This graph provides insight into employee awareness about available communication methods and which method they use the most in engaging with Compliance.

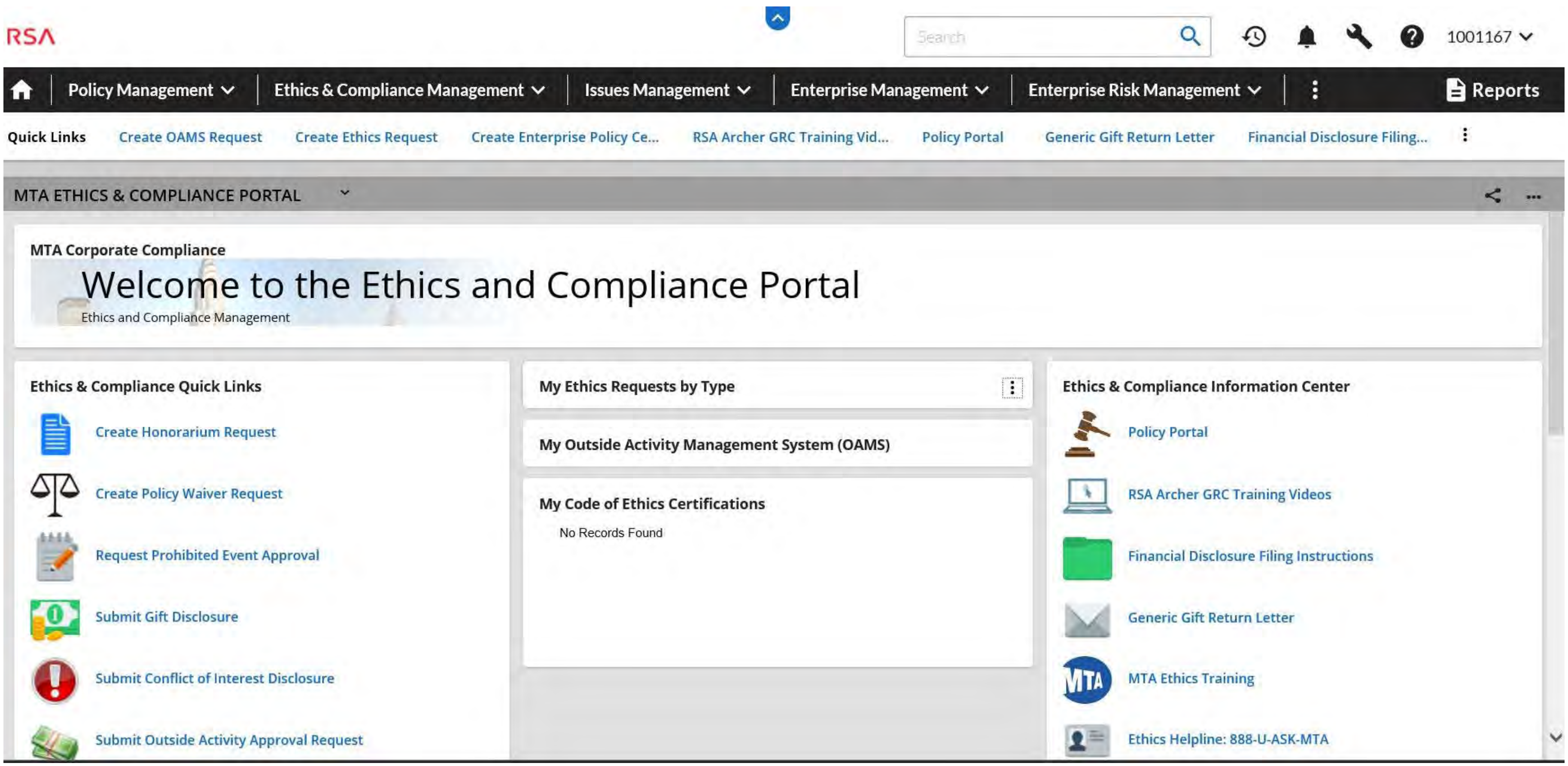



Training Completions
100%
80%
60%
40%
20%
0%
Equal Employment...
Sexual Harassment in the...
NYS Right to Know
Preventing Workplace...
Reasonable...
Reasonable...
NYS Internal Control
Cyber Security
Complance Policy Training
Reasonable...

Compliance Details



Over 3,900 employees enrolled and completed the JCOPE Ethics Training Course


RSA
Search
1001167
Policy Management
Ethics & Compliance Management
Issues Management
Enterprise Management
Enterprise Risk Management
Reports
Quick Links
Create OAMS Request
Create Ethics Request
Create Enterprise Policy Ce...
RSA Archer GRC Training Vid...
Policy Portal
Generic Gift Return Letter
Financial Disclosure Filing...
MTA ETHICS & COMPLIANCE PORTAL
MTA Corporate Compliance
Welcome to the Ethics and Compliance Portal
Ethics and Compliance Management
Ethics & Compliance Quick Links
Create Honorarium Request
Create Policy Waiver Request
Request Prohibited Event Approval
Submit Gift Disclosure
Submit Conflict of Interest Disclosure
Submit Outside Activity Approval Request
My Ethics Requests by Type
My Outside Activity Management System (OAMS)
My Code of Ethics Certifications
No Records Found
Ethics & Compliance Information Center
Policy Portal
RSA Archer GRC Training Videos
Financial Disclosure Filing Instructions
Generic Gift Return Letter
MTA Ethics Training
Ethics Helpline: 888-U-ASK-MTA

Memorandum

Metropolitan Transportation Authority
State of New York

Date July 22, 2020

To Audit Committee

From Lamond W. Kearse, Chief Ethics, Risk & Compliance Officer

Re Annual Report on 2019 Financial Interest Reporting Compliance

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At its January 1992 meeting, this Committee requested an annual report regarding compliance by MTA Headquarters and its Agencies ("MTA") with the financial interest reporting requirements established by Public Officers Law and the MTA All Agency Code of Ethics.

Pursuant to MTA's Code of Ethics and Public Officers Law §73-a, each year MTA identifies those employees who are required to file a Financial Disclosure Statement based upon earning in excess of the statutory amount and those employees who are designated policy makers. This information is sent to Joint Commission on Public Ethics ("Commission"). Employees in these categories receive notices from the Commission that they are required to complete a Financial Disclosure Statement which must be returned to the Commission by the statutory deadline of May 15 (extended to August 15 this year because of Covid-19).

At its January 1996 board meeting, the Board authorized and directed the Chairman or his designees to actively assist the Commission in its enforcement of the State's financial disclosure reporting requirements and to impose disciplinary action in appropriate cases.

In accordance with the Board's directive, and in order to reinforce in the minds of all MTA employees the MTA's commitment to compliance with the State's financial disclosure requirements, the annexed memoranda regarding compliance with financial disclosure was sent to all MTA employees and Board Members concurrently with the notice from the Commission.

The MTA will also continue actively to assist the Commission in its enforcement of the law. As of the date of this memorandum, there are no delinquent filers from 2019.

This year the MTA has over 7,356 filers. MTA Corporate Compliance will be monitoring compliance closely in the coming year.

c: Patrick J. Foye
Thomas Quigley
Agency Ethics Officers

Memorandum

Metropolitan Transportation Authority
State of New York

Date: April 23, 2020

To: All MTA Financial Disclosure Statement Filers

From: Lamond W. Kearse, Chief Compliance Officer

Re: Financial Disclosure Statement – 2020 Covering Calendar Year 2019

The New York State Joint Commission on Public Ethics ("JCOPE") has emailed notices regarding the New York State Annual Financial Disclosure Statement for 2020, covering calendar year 2019, to applicable employees. Please note that due to the COVID-19 pandemic, JCOPE has granted a three-month extension to all filers. All employees who have been designated FDS filers have an obligation to file a Financial Disclosure Statement with JCOPE. **Disregard any emails you receive with a filing deadline of May 15, 2018.**

This statement, whether completed on-line or hard copy, should be filled out carefully and thoughtfully and filed with JCOPE **no later than Monday, August 17, 2020** pursuant to JCOPE's instructions.

I urge all employees to review our MTA All Agency Code of Ethics. A copy of the code can be found on MTA's Intranet, Internet or obtained from MTA Corporate Compliance. As you complete your financial disclosure form, you should be aware of any or actual potential conflicts of interest that you may need to report.

There is no exemption from filing for anyone who is away from work for any part of the calendar year or is working a reduced work schedule.

New employees that are required to file, who commence service after the MTA submits its written list of financial filers, are required to file within 30 days of commencing employment.

Should you find yourself in a situation that raises any question as to your obligations concerning conflicts of interest or whether you are required to file a financial disclosure statement with JCOPE, I encourage you to contact the Ethics Helpline at 888 U-ASK-MTA (888-827-5682) for guidance.

Corporate Compliance

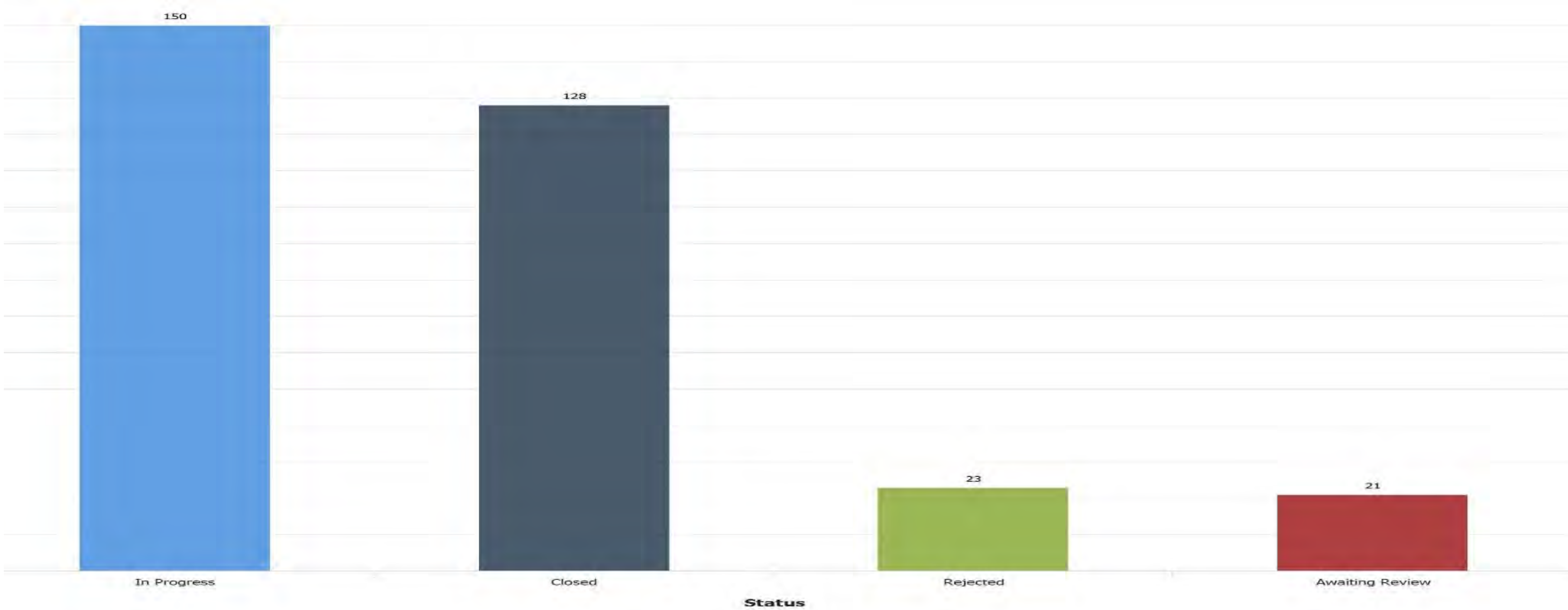
Remediation Plans Related to Audit Findings Six Months Past Due Report

Report to the Audit Committee
July 2020

Executive Summary

Period Snapshot
Remediation plans are being tracked and managed in RSA Archer
New review and approval process to close remediation plans and related findings
System provides increased transparency and accountability
Reviewing open remediation plans to determine actual implementation status
Currently 150 remediation in progress

Remediation Plans by Status



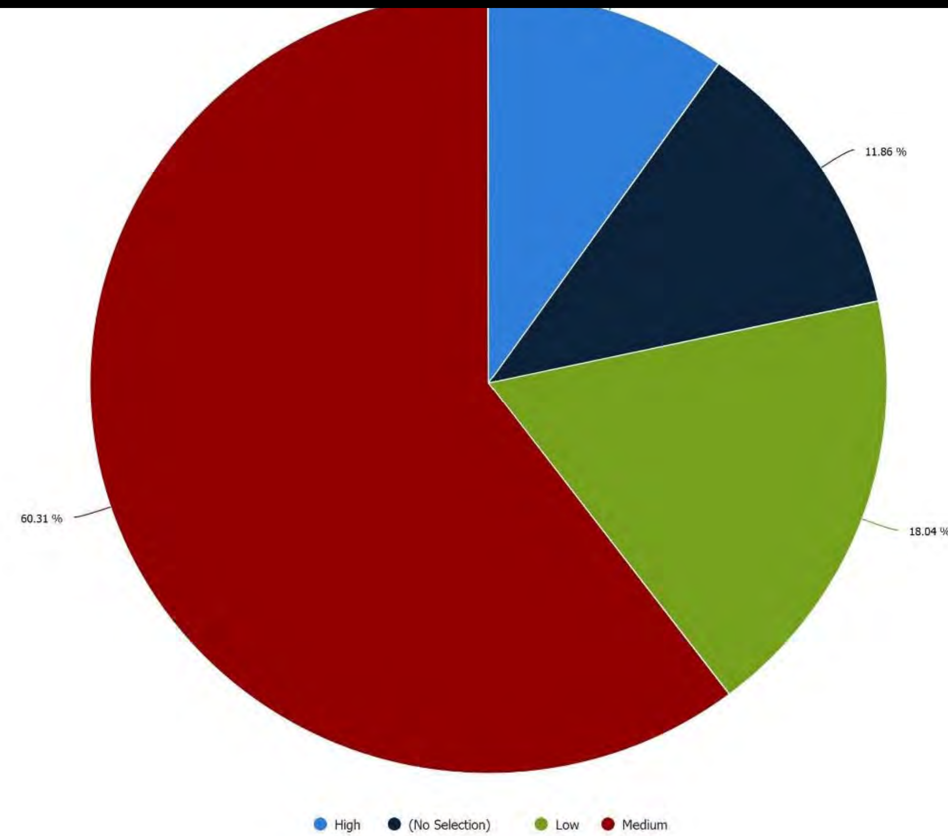
In Progress: Departments are ascertaining actual status, documenting completed plans and working on implementing incomplete plans

Closed: Departments submitted sufficient documentation that plans were implemented

Rejected: Departments submitted documentation that plans were implemented that was not excepted by Compliance or Audit

Awaiting Review: Departments submitted documentation that plans were implemented that is being reviewed Compliance or Audit

Remediation Plans by Finding Criticality



Metropolitan Transportation Authority
Department of Diversity and Civil Rights

Report to the Audit Committee

July 22, 2020

MTA Headquarters DDCR Update

Inactive Contracts – Status as of March 31, 2020

Inactive Contracts with Goals	#
1. Total Contracts Reviewed and Closed	1,184
2. Contracts Administratively Closed	305[1]
Sub-Total	1,489 (95%)
3. Closeouts in Progress	41
4. Contracts Pending Agency Action	34
Total	1,564 (100%)

1. Contracts administratively closed because of the age of the contract (beyond the established seven-year record retention period).

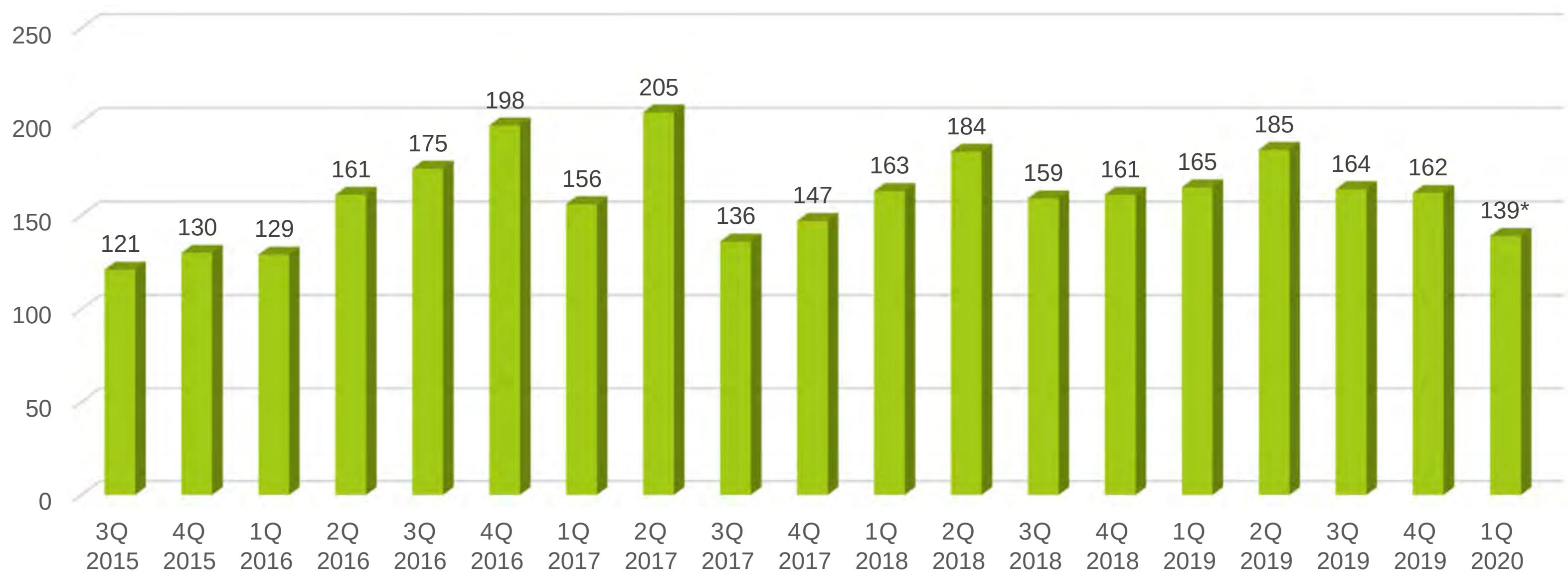
MTA Headquarters DDCR Update

2. **The decrease in closeouts between 3Q 2017 and 4Q 2017 is due to approx. 200 contracts being closed out in error, requiring subsequent re-activation.**

MTA Headquarters DDCR Update

DDCR Project Site Visits: 3Q 2015 – 1Q 2020

Total Site Visits Performed = 3,040



* Site visits were suspended on March 16, 2020 due to the COVID-19 outbreak, which has caused site visits to trend downward. The monthly average at the time of suspension was 54.5.

MTA Headquarters DDCR Update

Goal Attainment on LIRR'S Third Track Projects
As of 5/31/2020

Managed By	Contract #	Prime Contractor	Current Contract Value	Start Date	Projected End Date	Assigned Goals	Current Attainment	Percentage of Completion
MTAC&D	6240[3]	3rd Track Constructors	$1,814,829,836	1/12/2018	TBD	MBE - 15%	MBE – 7.2%	42%
						WBE - 15%	WBE – 9.0%	
						SDVOB - 6%	SDVOB – 0.2%	
MTAC&D	PS 868	Arup-Jacobs Joint Venture	$65,333,757	12/26/2017	TBD	MBE - 15%	MBE – 13.1%	53%
						WBE - 15%	WBE – 17.9%	
						SDVOB - 6%	SDVOB – 3.0%	

3. Goal attainment on these contracts is as of May 31, 2020; as per the New York State Contract System.

MTA AUDIT SERVICES

2020 Audit Plan Status

July 22, 2020

2020 Audit Plan Status

Financial/Operational/Technology

Projects Completed	28
Recommendations	51
Savings/Cost Efficiencies	$ 4.6 M

Contracts

Projects Completed	66
Pre-Award / Overhead Reviews	110
$ Audited	$ 634 M
Questioned Costs	$ 37.3M

2020 - Highlights

- Tree Clearing Services
- MetroCard Balance Protection Program
- CTBC Thales Transport & Security Inc.
- Third Party Contracts
- Pension QA

2020 – Sandy Audit Unit

Superstorm Sandy Audit Unit
Recovery Oversight Audits
(Since 2013)

Total Grant Expenditures	$2.84 Billion
Costs Audited	$503.8 Million
Projects/Recommendations	131/346
Follow-up Audits Completed	11
Total Cost Adjustments	$ 61.5 Million

2020 - On Board Program

Railroad Onboard Revenue Program:

MTA Audit Services On Board Program (Program) for LIRR and MNR was on hold from March 17 through July 1st due to the COVID emergency.

- The program was staffed with 15 Operatives (5 MTA employees & 10 P/T Temp Workers) that performed an average of 400 to 500 observation rides at MNR and LIRR respectively.

- The revised program includes five dedicated MTA employees who will perform approximately 250 to 300 rides at each commuter rail. Changes in the observation protocol include the following:
  - All tickets will be purchased electronically. Cash will no-longer be used on-board.
  - A check for conductors wearing masks will be added to observation of employee uniform/PPE compliance.

2020 Audit Areas

Service Delivery

Positive Train Control
207th Street Over-haul Shop
On-Time Performance
Vacuum Trains
R179 Warranties √
Paratransit
Bridge Inspection & Repair
Infrastructure
Car Equipment √
Rail Control Center √
Operations Training
Bus Depot Operations √
Bridge & Tunnel Operations
SIR Inspection & Maintenance

Finance

Timekeeping √
Overtime √
Accounts Payable √√, √
Other Business Expenses √
Pensions √√, √
Treasury/Investments √√
Year-End Financial Statements
Audit Recommendations √

Safety

Fare Evasion √
Homeless Outreach √ √
Sandy Project Safety/Oversight √
LIRR Drug Testing
MNR Environmental Review
B&T Hazardous Waste Management

Human Resources

FMLA
OPEB Current Payments √√
Other Fringe Benefits √
Health and Welfare √
Medical Claim/ & Eligibility
Employee Availability
Hiring Process

Revenue

Claims/Insurance/Other Revenue √
NYC Transit AFC Revenue √
Bus Farebox Revenue
LIRR/MNR eTIX √√
B&T Cashless Tolling √
MTA Rental & Advertising √
Railroads On-Board Revenue √√ √

Capital Program

Superstorm Sandy √√
EFA Charges √
Prevailing Wages √√, √
Contract Management
Consultant Management
Third Party Contracts √√, √

Procurement

Professional Services Contract √√
Materials & Supplies Contract √
Operating Contracts √
Procurement Cards

Technology

Back-up & Recovery √
Shadow IT Functions
Cybersecurity √
Change Management √
User Developed Applications
Business Continuity/D.R. √
IT Asset Management
Application Rationalization

Looking Ahead

- Reassess and redefine audits/projects due to COVID-19 priorities.
- Continue to coordinate audit activities with:
  - External Auditors
  - City/State Controller's Office
  - MTA Chief Compliance Office
  - MTA Inspector General Office
- Work with Internal Control Officers to validate the implementation of recommendations, and reduce the backlog of past due recommendations.

QUESTIONS?