Metropolitan Transportation Authority

Audit Committee Meeting

March 2020

Committee Members

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

Audit Committee Meeting

Wednesday, 3/25/2020
10:00 AM - 5:00 PM ET
MTA Board Room - 20th Floor
2 Broadway

MINUTES OF MEETING
AUDIT COMMITTEE OF THE BOARD
WEDNESDAY, SEPTEMBER 25, 2019 – 8:00 A.M.
RONAN BOARD ROOM – 20TH FLOOR
2 BROADWAY

The following were present:

<u>Honorable:</u>

Haeda Mihaltses	**David Jones**
Robert Linn	**Robert Mujica**

M. Woods -	**MTA**	**R. Foran**	**- MTA**	**C. Hickmann -**	**Deloitte**
N. Lopez -	**MTA**	**H. Fromm**	**- MTA**	**P. Zurita –**	**Deloitte**
M. Garner -	**MTA**				
R. Burke -	**MTA**				

Also in attendance:
M. Murray - MTA
R. Hakim - MTA

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1. <u>PUBLIC COMMENTS PERIOD</u>

There were no public speakers.

2. <u>AUDIT COMMITTEE WORK PLAN</u>

The Acting Auditor General noted that there are three changes to the Work Plan. Specifically, that both the Review of the MTA IG Office and ERM/Ethics Compliance Program Update will be moved to the meeting for January 2020, and the presentation on IT Security of Sensitive Data will be conducted once a fuller report is complete.

At the end of the meeting, a motion was made and seconded to accept the Work Plan.

3. <u>INDEPENDENT ACCOUNTANT'S REVIEW REPORT – 1ST AND 2nd QUARTERS 2019</u>

Chris Hickmann (Deloitte) first introduced Patricia Zurita from the Deloitte audit team and then presented the 1st and 2nd Quarter 2019 MTA Consolidated Financial Statements to the committee and stated that a quarterly review is substantially less in scope than an audit, and that it primarily consists of analytical procedures that are applied to financial data and of inquiries of management. The purpose of the quarterly review is to ensure that there are no material adjustments that need to be made to the financial statements in order for them to be in accordance with GAAP and to determine the appropriateness of the footnote disclosures. He stated that Deloitte will issue a clean independent auditor's report. There was one unrecorded misstatement that was communicated by management to Deloitte that resulted in the understatement of pension liability and the overstatement of net assets by $161 million pertaining to a multiple employer benefit plan (NYCERS). The required information provided by the MTA was correct but NYCR's management provided the incorrect information to their actuary that resulted in errors in the calculation that found its way into the MTA's financial statements. This error was deemed not material to the financial statements for either the MTA or the individual agencies. From an internal control perspective there is currently no process whereby the MTA management gets back the from NYCERs the underlying calculation for the plan, therefore Deloitte has recommended that the MTA get such information so that someone can evaluate and conclude whether the data is appropriate before recording such data in the financial statements. Member David Jones inquired whether this variance had any impact on the expense and budget going forward. Bob Foran replied that it was reflected in the July plan, and that it did increase the MTA's required contribution. However, the calculation was corrected and NYCERs allowed the MTA to stretch the recovery over time so that the MTA was not hit immediately with more than one adjustment which made it more manageable.

At the end of the meeting, a motion was made and seconded to accept the 1st and 2nd Quarter 2019 MTA Consolidated Financial Statements.

4. APPOINTMENT OF EXTERNAL AUDITORS

As part of the external auditor reappointment process, Chris Hickmann briefly discussed the most recent Public Company Accounting Oversight Board (PCAOB) report (2017 report) on Deloitte. He said that because Deloitte is registered with the PCAOB and that they do audits of publicly traded companies, the PCAOB is required under Sarbanes Oxley to select public workpapers to determine whether Deloitte is following appropriate auditing standards, GAAP, as well as their own firm policies. There were several "Part I" findings, but Deliotte had the lowest number of Part 1 findings among the Big 4 firms. Hickmann noted that its quality is improving and they are forever looking for ways to improve its audit quality and they learn from the PCAOB audit findings and incorporate their findings into their audits. Member Robert Linn inquired about what are Part I findings, Hickmann responded that Part 1 findings usually mean that there wasn't a sufficient amount of work done or that a firm did not follow their own policies. Foran added that he believes that the PCAOB findings are minor things that occur and noted that it is important that someone is reviewing Deloitte's work.

At the end of the meeting, a motion was made and seconded to reappoint Deloitte as the external auditor.

5. AUDIT APPROACH PLAN/COORDINATION WITH EXTERNAL AUDITOR

Chris Hickmann briefed the Committee on Deloitte's Audit Service Plan for the MTA. He said that its significant risk with respect to the MTA is management override, which is a presumed risk of fraud from an industry perspective whereby management being the architect of its own internal control environment has the unique opportunity to potentially circumvent controls. As a result, Deloitte will evaluate the design and implementation of the internal controls over the manual journal entry process. From a substantive testing perspective they will obtain a download all MTA journal entries and these entries will be analyzed using an audit tool known as OPTIC that allows them to search for "characteristics of audit interest" (e.g., entries that always have round dollar amounts, entries made on weekends, unusual descriptions, etc.). Such entries of interest will then be evaluated and Deloitte will then select those entries and review them with management in order to ensure that each one is an appropriate journal entry. Another specific area of coverage will be management estimates with the focus being on the risk of "management bias" since management can manipulate such estimates in order to achieve a certain outcome in the financial statements. Regarding timing, Deloitte has started its audit planning for the current year and will start their interim testing procedures in October. In January they will start their final audit procedures and will issue its independent auditor's opinion on the financial statements by the end of April 2020.

6. 2019 AUDIT PLAN STATUS

The Acting Auditor General (AAG) reported that 91 assurance projects were completed during the first eight-months of the year along with 281 recommendations, also 183 contract audits were completed. To address a concern raised by Commissioner Law during the special board meeting in August, and in line with the recommendations made by Alexi Partners, action is being taken to improve the recommendation follow-up process for both internal and external audit reports though implementation of the RSA Archer's GSC System. The AAG highlighted the impact of the audits and noted that the assurance audits have identified $21.4 million in cost savings and cost avoidance opportunities, and that $26.9 million in savings were identified during the review of capital contracts. The AAG also informed the Committee that 90% of planned audits are expected to be completed by year-end and noted that its current headcount is 60 out of 83 budgeted positions. MTA Audit will continue to work with Human Resources to fill the vacancies in line with the hiring freeze when identifying the needs for the 2020 Audit Plan. The AAG then provided a snap shot of the business functions which identified some 145 audits included on the Audit Plan. Such operational areas covered within the agencies include: track, signals, car equipment inspections, maintenance programs, bus depots, and bridges and tunnels operations. In addition, administrative areas such as payroll, human resources, procurement, and accounts payable were reviewed. Key audits on the 2019 Audit Plan included timekeeping, overtime, medical eligibility, fare evasion, operating contract audits such as Transit Wireless, cyber security, on-time performance, and Positive Train Control. Some of the key audits well received by management in 2019 included overtime audits at NYC Transit and Metro-North and an audit of the prescription drug plan which identified between $3.9 million and $7 million in potential savings based on the level of enrollment. The AAG noted that Audit continues to review "as needed contracts" in accordance with recommendations made by the MTA Office of the Inspector General, and that one such audit identified $1.4 million in potential cost reductions.

Audit also continues to conduct third-party contract audits which include a review of overhead rates, and special reviews such as the costs claimed by the vendor on the M-9 contract relative to the New York State Content and whether the contractor for the R211 subway cars provided the contractual committed number of USA jobs. The AAG also briefed the Committee about two support functions. Specifically, there is a QA process that validates the calculations made for two pension plans, and an on-board program to support both commuter rail roads to determine the fares not collected and improper fare collection rate. Audit also continues to provide independent oversight of Sandy projects, along with the MTA Inspector General, through the Sandy Oversight Committee. To date, $495 million of the $2.33 billion in awarded grants have been audited, 120 projects have been completed, and 325 recommendations have been made, and pursuant to the FTA agreement, all recommendations made are validated. Audit results are shared with the FTA through a quarterly report and the Sandy Oversight Committee participates with the quarterly meetings held by the FTA with Metro-North and NYC Transit. Looking ahead, MTA Audit is reviewing the remaining audits on the plan in order to prioritize audits based on risk and have met with the agency presidents (with LIRR scheduled for next week) to discuss the audits remaining on the plan in order to complete the plan.

With respect to the audit planning process for next year, MTA Audit has realigned its functional areas to coincide with the MTA's transformation plan and going forward will continue to partner with the external audit organizations and track recommendations in the GRC System. As previously noted, recommendations will be entered directly into the GRC System and the agencies will be required to upload documentation into the system to support implementation. The recommendations will also be risk ranked in order to ensure that appropriate testing is done and that the recommendation has achieved the desired outcome. Member Linn asked whether Audit, due to the large number of vacancies, is exempt from the ongoing hiring freeze and its role in auditing overtime, including its sampling methodology. With respect to filling vacancies, the AAG and MTA Chief Financial Officer Bob Foran noted that Audit is exempt, but that due to the MTA transformation, an assessment is being made to determine the right number of auditors. Foran noted that due to the consolidation there are fewer locations and processes and therefore less audit staffing may be needed. The AAG added that as part of the development of next year's plan, an assessment based on the MTA transformation has reduced the overall number of auditable units from over 600 units down to about 400 units. Regarding overtime, the AAG indicated that audit continues to include overtime audits on the Audit Plan and such audits are conducted at each agency since agency controls vary. She noted that although there is a movement to automate timekeeping systems, many departments continue to maintain paper based documentation systems and justification codes. Therefore, the audits are conducted at an agency and departmental basis and include an examination of the underlying source documents. The AAG discussed a recent overtime audit at Metro-North whereas audit worked with management to address the need for reporting on hours of service, and that this audit was well received by management. Lastly, Member Linn asked about receiving copies of such overtime reports and the AAG indicated that he will be provided with copies.

7. DDCR PERFORMANCE MEASURES UPDATE

Michael Garner (MTA Chief Diversity Officer) introduced Ray Burke who provided an update on DDCR's accomplishments in regards to close-outs, site visits, and monitoring procedures. Burke read from materials cited in the Committee Book and noted that of 1,469 total contracts; 1,090 contracts have been reviewed and closed; 305 contracts have been administratively closed; 42 were in progress; and 32 contracts were pending agency action. Garner provided additional commentary on the close-out process and noted that his office has been working with the operating agencies to ensure that contracts are being closed out timely, and has been working with MTA Audit to ensure that this close-out process is being done more effectively. With respect to site visits, Burke noted that DDCR averaged more than 50 site visits per month. Garner provided additional commentatory, and noted that their goal is to perform eight site visits per month and that site visits provide DDCR with an opportunity to observe whether M/W/BE firms are working in their certification areas, and to work with the MTA Inspector General to root out M/W/BE fraud. Any potential fraud identified during a site visit is then referred to the Inspector General for follow-up. Buke then discussed the goal attainment on the LIRR third-track project which consists of two contracts. The first contract is the $1.4 billion design-build contract. The overall goal for this contract was 36% (consisting of 15% MBE, 15% WBE and 6% SDVOB) and that the overall goal attainment to date is 10.4%. The second contract is the $66 million consultant contract whose overall goal for this contract was also 36% (consisting of 15% MBE, 15% WBE and 6% SDVOB) and the overall goal attainment to date for this contract is 35%. Garner commented that the LIRR third-track project is an important contract for DDCR and will go a long way in allowing the MTA to achieve the Governor's 30% M/W/BE goal. DDCR has been hands on with the third-track contract, along with other key mega contracts such as the $365 million-dollar Metro-North Croton-Harmon contract, in order to ensure that third-party contractors and consultants achieve their goals.

8. APPROVAL OF MINUTES

The minutes of the June 26th Audit Committee meeting were approved.

9. AUDIT COMMITTEE CHARTER

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

10. ANNUAL AUDIT COMMITTEE ACTIVITY REPORT

Chair Mihaltses noted that the four-page report covered the activities of the Audit Committee during the 12-months ended July 31, 2019 and that a draft had been previously circulated among the Committee members for review and comment.

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

11. <u>MOTION TO ADJOURN</u>

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

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
Information Technology Report	Chief Information Officer
Open Audit Recommendations	Agency ICOs/Chief Compliance Officer
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
Security of Sensitive Data & Systems (Executive Session)	Chief Information Officer

October 2020

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
Annual Audit Committee Report	Committee Chair
Open Audit Recommendations	Agency ICOs/Chief Compliance Officer

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.

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

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

Contingent Liabilities and Status of Third Party Lawsuits
The General Counsels from each agency, along with representatives from the independent accounting firm, will review in Executive Session the status of major litigation that may have a material effect on the financial position of their agency, or for which a contingency has been or will be established and/or disclosed in a footnote to the financial statements. In addition, the Committee will be briefed on the status of third party lawsuits for which there has been minimal or sporadic case activity.

JULY 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.

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.

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).

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.

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.

DRAFT

Metropolitan Transportation Authority

(A Component Unit of the State of New York)

Independent Auditors' Review Report

Consolidated Interim Financial Statements as of and for the Nine-Month Period Ended September 30, 2019

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DRAFT

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 net position of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of September 30, 2019, and the related consolidated interim statements of revenues, expenses and changes in net position and consolidated cash flows for the six-month periods ended September 30, 2019 and 2018 (the "consolidated interim financial information").

Management's Responsibility for the Consolidated Interim Financial Information

MTA management is responsible for the preparation and fair presentation of the consolidated 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 consolidated 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 consolidated interim financial information referred to above for it to be in accordance with the accounting principles generally accepted in the United States of America.

Emphasis of Matters

As discussed in the notes to the consolidated interim financial information, 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.

As described in Note 2 to the consolidated interim financial statements, the MTA adopted Governmental Accounting Standards Board ("GASB") Statement No. 83, *Certain Asset Retirement Obligations* and GASB Statement No. 84 *Fiduciary Activities*.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis, the Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for the Single Employer Pension Plans, the Schedule of the MTA's Proportionate Share of Net Pension Liabilities of Cost-Sharing Multiple-Employer Pension Plans, the Schedule of the MTA's Contributions for All Pension Plans, the Schedule of Changes in the MTA's Net OPEB Liability and Related Ratios, and the Schedule of the MTA's Contributions to the OPEB Plan, as listed in the table of contents, be presented to supplement the consolidated interim financial information. Such information, although not a part of the consolidated 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 consolidated 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, 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 consolidated interim financial information, and other knowledge we obtained during our reviews of the consolidated 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

Our reviews were conducted for the purpose of expressing limited assurance, as described under the Conclusion section above, on the MTA's consolidated interim financial information. The Schedule of Consolidated Reconciliation Between Financial Plan and Financial Statements, Schedule of Consolidated Subsidy Accrual Reconciliation Between Financial Plan and Financial Statements, and Schedule of Financial Plan to Financial Statements Reconciliation as well as the Pension and Other Employee Benefit Trust Funds - Combining Statement of Fiduciary Net Position as of December 31, 2018, Pension and Other Employee Benefit Trust Funds - Combining Statement of Fiduciary Net Position as of December 31, 2017, Pension and Other Employee Benefit Trust Funds - Combining Statement of Changes in Fiduciary Net Position for the Year-Ended December 31, 2018, and Pension and Other Employee Benefit Trust Funds - Combining Statement of Changes in Fiduciary Net Position for the Year-Ended December 31, 2017 are presented for the purposes of additional analysis and are not a required part of the consolidated interim financial information.

The Schedule of Consolidated Reconciliation Between Financial Plan and Financial Statements, Schedule of Consolidated Subsidy Accrual Reconciliation Between Financial Plan and Financial Statements, and Schedule of Financial Plan to Financial Statements Reconciliation as well as the Pension and Other Employee Benefit Trust Funds - Combining Statement of Fiduciary Net Position as of December 31, 2018, Pension and Other Employee Benefit Trust Funds - Combining Statement of Fiduciary Net Position as of December 31, 2017, Pension and Other Employee Benefit Trust Funds - Combining Statement of Changes in Fiduciary Net Position for the Year-Ended December 31, 2018, and Pension and Other Employee Benefit Trust Funds - Combining Statement of Changes in Fiduciary Net Position for the Year-Ended December 31, 2017, are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the consolidated interim financial information. Such information has been subjected to the analytical procedures and inquiries applied in the reviews of the basic consolidated interim financial information and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the consolidated interim financial information or to the consolidated interim financial information themselves, and other additional procedures and we are not aware of any material modifications that should be made thereto in order for such information to be in conformity with accounting principles generally accepted in the United States of America when considered in relation to the basic consolidated interim financial information taken as a whole.

Report on Consolidated Statement of Net Position as of December 31, 2018

We have previously audited, in accordance with auditing standards generally accepted in the United States of America, the consolidated statement of net position of the MTA as of December 31, 2018, 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 we expressed an unmodified audit opinion on those audited consolidated financial statements in our report dated June 26, 2019, which contains an explanatory paragraph that the MTA requires significant subsidies from other governmental entities. In our opinion, the accompanying consolidated statement of net position of the MTA as of December 31, 2018, is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

January XX, 2020

(A Component Unit of the State of New York)

MANAGEMENT'S DISCUSSION AND ANALYSIS

AS OF SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018

($ In Millions, except as noted)

OVERVIEW OF THE CONSOLIDATED INTERIM FINANCIAL STATEMENTS

Introduction

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

Management's Discussion and Analysis

This MD&A provides a narrative overview and analysis of the financial activities of the Metropolitan Transportation Authority and its consolidated subsidiaries and affiliates (the "MTA" or "MTA Group") as of September 30, 2019 and December 31, 2018 and for the nine-month periods ended September 30, 2019 and 2018. 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 interim 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 Statement 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 Statement 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 statement of fiduciary net position and the combining statement 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 interim statements of revenues, expenses and changes in net position.

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.

MTA Related Groups

The following entities, listed by their legal names, are subsidiaries (component units) of the MTA:

- 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 Capital Construction Company ("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.

The following entities, listed by their legal names, are affiliates (component units) of the MTA:

- 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.

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 September 30, 2019 and December 31, 2018 and for the nine-month periods ended September 30, 2019 and 2018. 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

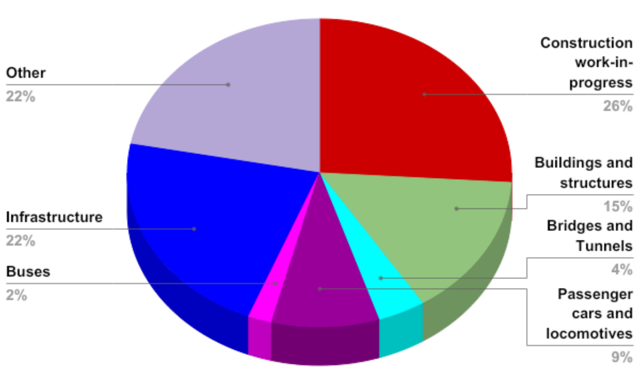
Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives.

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.

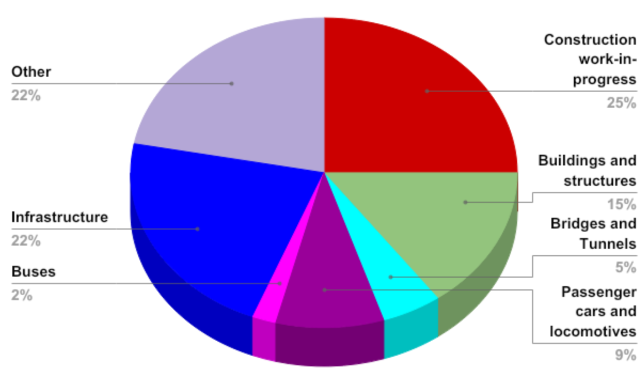
Deferred outflows of resources reflect: changes in fair market values of hedging derivative instruments that are determined to be effective, unamortized loss on refunding, deferred outflows from pension activities, and deferred outflows from OPEB activities.

(In millions)	September 30, 2019 (Unaudited)	December 31, 2018	Increase / (Decrease)
Capital assets — net (see Note 6)	$ 75,324	$ 72,511	$ 2,813
Other assets	11,014	7,827	3,187
Total Assets	86,338	80,338	6,000
Deferred outflows of resources	4,532	4,360	172
Total assets and deferred outflows of resources	$ 90,870	$ 84,698	$ 6,172

Capital Assets, Net - September 30, 2019 (Unaudited)



Capital Assets, Net - December 31, 2018



Significant Changes in Assets and Deferred Outflows of Resources Include:

September 30, 2019 versus December 31, 2018

- Net capital assets increased at September 30, 2019 by $2,813 or 3.9%. There was an increase in other capital assets of $1,196, an increase in construction in progress of $1,828, an increase in infrastructure of $864, an increase in buildings and structures of $284, an increase in bridges and tunnels of $30, an increase in passenger cars and locomotives of $322, and an increase in land of $3. This was offset by a decrease in buses of $162 due to disposal of buses and a net increase in accumulated depreciation of $1,552. 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 $3,187 or 40.7%. The major items contributing to this change include:
  - An increase in current and non-current receivables of $986 primarily due to an increase from State and regional mass transit tax of $1,173 and an increase in State and local operating assistance of $139. The increase was offset by a decrease in Federal and State grants for capital projects of $136, a decrease in New York City operating recovery subsidy to MTA New York City Transit, MTA Staten Island Railway, and MTA Bus of $88, a decrease in Station Maintenance receivable of $44, a net decrease in other current receivables of $31, a decrease in Mortgage Recording tax of $2, and a net decrease in other non-current receivables of $25.
  - An increase in cash of $41 from net cash flow activities.
  - An increase in investments of $2,157 mainly due to the issuance of new debt.
  - A net increase in various other current and noncurrent assets of $3.
- Deferred outflows of resources increased by $172 or 3.9%. This increase was primarily due to a change in the fair value of derivative instruments of $145, an increase in deferred outflows related to pensions of $89 and other post-employment benefits of $25. This increase was offset by a decrease in deferred outflows for unamortized loss of $87.

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

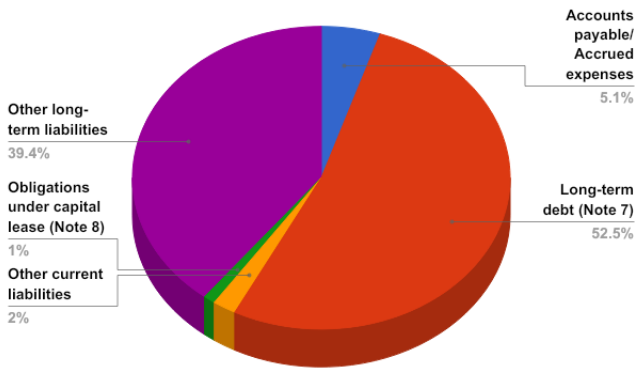
Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, capital lease obligations, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities.

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

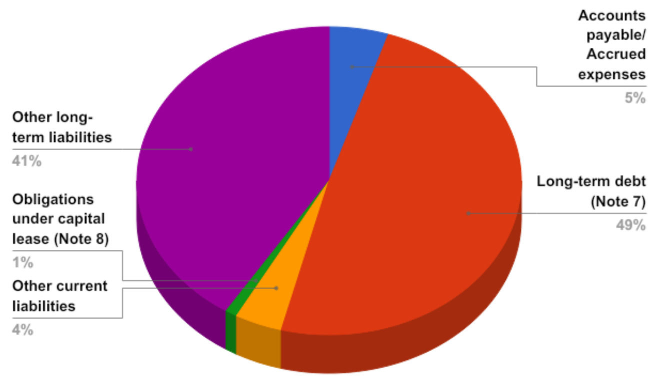
Deferred inflows of resources reflect unamortized gains on refunding, pension related deferred inflows, and deferred inflows from OPEB activities.

(In millions)	**September 30, 2019**	**December 31, 2018**	**Increase / (Decrease)**
	(Unaudited)		
Current liabilities	$ 6,280	$ 7,609	$ (1,329)
Non-current liabilities	77,950	72,022	5,928
Total liabilities	84,230	79,631	4,599
Deferred inflows of resources	1,112	1,114	(2)
Total liabilities and deferred inflows of resources	$ 85,342	$ 80,745	$ 4,597

Total Liabilities - September 30, 2019 (Unaudited)



Total Liabilities - December 31, 2018



Significant Changes in Liabilities and Deferred Inflows of Resources Include:

September 30, 2019 versus December 31, 2018

- Current liabilities decreased by $1,329 or 17.5%. The net decrease in current liabilities was primarily due to a decrease in the current portion of long-term debt of $1,481 due to the maturity of Bond Anticipation Notes and debt service payments, a decrease in capital accruals of $344, and a decrease in unearned premiums of $49, a decrease in unearned revenues of $18. The decrease was offset by an increase in interest payable of $420, an increase in employee related accruals of $71, and an increase in accounts payable due to vendors of $56. There was a net increase in various other current liabilities of $16.
- Non-current liabilities increased by $5,928 or 8.2%. This increase was mainly due to:
  - An increase in the non-current portion of long-term debt of $5,591 primarily due to 2019 bond issuances (See Note 7).
  - An increase in estimated liability arising from injuries to persons (Note 10) of $206 due to revised calculations of the workers' compensation reserve.
  - An increase in derivative liabilities of $138 resulting mainly from changes in market valuation and a reduction in the notional amount of derivative contracts.
  - A net decrease in other various non-current liabilities of $7.
- Deferred inflows of resources decreased by $2 or 0.2%, due to gain on refunding of debt of $2.

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

(In millions)	September 30, 2019	December 31, 2018	Increase / (Decrease)
	(Unaudited)		
Net investment in capital assets	$ 30,126	$ 30,000	$ 126
Restricted for debt service	1,720	454	1,266
Restricted for claims	229	206	23
Restricted for other purposes	1,080	1,230	(150)
Unrestricted	(27,627)	(27,937)	310
Total Net Position	$ 5,528	$ 3,953	$ 1,575

Significant Changes in Net Position Include:

September 30, 2019 versus December 31, 2018

At September 30, 2019, total net position increased by $1,575 or 39.8%, when compared with December 31, 2018. This change is a result of net non-operating revenues of $5,217 and appropriations, grants and other receipts externally restricted for capital projects of $1,881 offset by operating losses of $5,523.

The net investment in capital assets increased by $126 or 0.4%. Funds restricted for debt service, claims and other purposes increased by $1,139 or 60.3% in the aggregate, mainly due to scheduled debt service payments. Unrestricted net position increased by $310 or 1.1%.

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

(In millions)	Nine-Month Period Ended September 30, 2019 (Unaudited)	Nine-Month Period Ended September 30, 2018 (Unaudited)	Increase / (Decrease)
Operating revenues			
Passenger and tolls	$ 6,280	$ 6,059	$ 221
Other	466	431	35
Total operating revenues	6,746	6,490	256
Non-operating revenues			
Grants, appropriations and taxes	5,561	5,389	172
Other	748	593	155
Total non-operating revenues	6,309	5,982	327
Total revenues	13,055	12,472	583
Operating expenses			
Salaries and wages	4,719	4,651	68
Retirement and other employee benefits	2,319	2,236	83
Postemployment benefits other than pensions	483	1,585	(1,102)
Depreciation and amortization	2,135	2,010	125
Other expenses	2,613	2,570	43
Total operating expenses	12,269	13,052	(783)
Non-operating expenses			
Interest on long-term debt	1,089	1,097	(8)
Other net non-operating expenses	3	3	-
Total non-operating expenses	1,092	1,100	(8)
Total expenses	13,361	14,152	(791)
Loss before appropriations, grants and other receipts externally restricted for capital projects	(306)	(1,680)	1,374
Appropriations, grants and other receipts externally restricted for capital projects	1,881	1,204	677
Change in net position	1,575	(476)	2,051
Net position, beginning of period	3,953	5,224	(1,271)
Net position, end of period	$ 5,528	$ 4,748	$ 780

Revenues and Expenses, by Major Source:

Period ended September 30, 2019 versus 2018

- Total operating revenues increased by $256 or 3.9%. This increase was mainly due to an increase in fare and toll revenue of $221 primarily due to an increase in vehicle crossings for the period ended September 30, 2019, when compared to the period ended September 30, 2018. The increase in Other operating revenues of $35 was due to higher advertising revenues collected on behalf of agencies.
- Total non-operating revenues increased by $327 or 5.5%.
  - Total grants, appropriations, and taxes increased by $172. This was due to an increase in Mass Transportation operating assistance of $137, an increase in Payroll Mobility Tax of $142, an increase from New York City Assistance Fund of $260, an increase in Internet Sales Tax of $42, an increase in Mass Transportation Trust Fund from New York State of $16, an increase in Mortgage Recording Tax subsidies of $13 and a net increase in other subsidies of $8. The

increases were offset by a decrease in NYS/NYC Subway Action Plan of $411, a decrease in Urban Tax of $24, and a decrease in Aid Trust subsidies of $11.

- Other non-operating revenues increased by $155 primarily due to an increase in operating subsidies from New York City of $66 for MTA Bus and MTA Staten Island Railway, an increase in other net non-operating revenue of $92, and an increase in station maintenance, operation and use assessments of $2. This increase was offset by a decrease in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of $5.

- Labor costs decreased by $951 or 11.2%. The major changes within this category are:
  - Salaries, wages and overtime increased by $68 primarily due to increases in MTA New York City Transit to support various maintenance and weather-related requirements.
  - Retirement and employee benefits increased by $83.
  - Postemployment benefits other than pensions decreased by $1,102 based on changes in the accounting for OPEB. The 2019 financial results reflect accounting for OPEB under GASB 75. The 2019 financial results reflect accounting for OPEB under GASB45.
- Non-labor operating costs increased by $168 or 3.7%. The variance was primarily due to:
  - An increase in depreciation of $125 primarily due to assets placed in service in the current year.
  - An increase in paratransit service contracts of $28 primarily due to higher paratransit taxi expenses.
  - An increase in claims arising from injuries to persons of $20 based on the most recent actuarial valuations.
  - An increase in material and supplies by $15, mainly due to revised maintenance and repairs requirements for transit and commuter systems.
  - An increase in insurance of $13 primarily due to changes in insurance policy requirements.
  - An increase in maintenance and other contracts by $52 due to changes in maintenance work requirements.
  - A decrease in professional service contracts of $61 due to changes in consulting services requirements.
  - A decrease in electric power of $19 and fuel of $6 due to changes in rates and consumption.
  - A net increase in other various expenses of $1.
- Total net non-operating expenses decreased by $8 or 0.7% due to decreases in interest on long-term debt of $8.
- Appropriations, grants and other receipts externally restricted for capital projects increased by $677 or 56.2% 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 through the third quarter of 2019 increased relative to 2018, with ridership up by 4.8 million trips (0.3%). The increase was driven by MTA New York City Transit subway ridership, which rose by 12.8 million trips (1.0%). In addition, MTA Long Island Rail Road ridership rose by 1.6 million trips (2.4%) and MTA Metro-North Railroad rose by 0.3 million trips (0.5%). These increases through the third quarter were partially offset by ridership declines at MTA New York City Transit bus, which declined by 9.6 million trips (2.3%), MTA Bus, which declined by 0.2 million trips (0.2%), and MTA Staten Island Railway, which declined by 0.1 million trips (3.3%). The decline in bus ridership is consistent with a trend that began in 2009 and has been observed nationally, while the increase in subway ridership is the second quarterly increase after 12 consecutive year-on-year quarterly decreases that began in the second quarter of 2016. Vehicle traffic at MTA Bridges and Tunnels facilities through the third quarter increased by 7.0 million crossings (2.9%) compared with 2018 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.

Seasonally adjusted non-agricultural employment in New York City for the third quarter was higher in 2019 than in 2018 by 71.0 thousand jobs (1.6%). On a quarter-to-quarter basis, New York City employment modestly declined, by fewer than one thousand jobs, after increasing for thirty-five quarters consecutive quarters—the last decline occurred in the third quarter of 2010—and is just shy of last quarter when it was higher than at any time since 1950, when non-agricultural employment levels for New York City were first recorded by the Bureau of Labor Statistics.

National economic growth, as measured by Real Gross Domestic Product ("RGDP"), expanded at an annualized rate of 1.9% in the third quarter of 2019, according to the most recent advance estimate released by the Bureau of Economic Analysis. The increase in RGDP reflected positive contributions from personal consumption expenditures, federal government spending, fixed residential investment, state and local government spending, and exports. Partially offsetting these favorable impacts were negative contributions from nonresidential fixed investment and private inventory investment Imports, which are a subtraction in the RGDP calculation, increased. The deceleration in RGDP growth, over the second quarter's revised 2.0% growth rate, reflected downturns in federal government spending, and state and local government spending, and a larger decrease in nonresidential fixed investment, which were partially offset by a smaller decrease in private inventory investment, and upturns in exports and in residential fixed investment.

The New York City metropolitan area's price inflation, as measured by the Consumer Price Index for All Urban Consumers ("CPI-U"), was lower than the national average in the third quarter of 2019, with the metropolitan area index increasing 1.65% while the national index increased 1.76%, when compared with the third quarter of 2018. Decreases in both the regional and national price of energy products (4.60% for the region, and 3.72% nationally) contributed to the low inflation rates; in the metropolitan area, the CPI-U exclusive of energy products increased by 2.12%, while nationally, inflation exclusive of energy products increased 2.24%. Decreasing more sharply than overall energy prices, the spot price for New York Harbor conventional gasoline declined by 15.0%, from an average price of $2.08 per gallon to an average price of $1.77 per gallon between the third quarters of 2018 and 2019.

The Federal Open Market Committee ("FOMC") twice lowered its target for the Federal Funds rate during the third quarter of 2019, by a quarter point on August 1, 2019 and again by another quarter point on September 19, 2019 to the target range of 1.75% to 2.0%. Job gains have been solid, on average, in recent months, and the unemployment rate has remained low. Although household spending has been rising at a strong pace, business fixed investment and exports have weakened. On a twelve-month basis, overall inflation and inflation for items other than food and energy are running below 2 percent, and market-based measures of inflation compensation remain low and survey-based measures of longer-term inflation expectations are little changed. The target rate reduction supports the FOMC's view that sustained expansion of economic activity, strong labor market conditions and inflation near the FOMC's 2 percent objective remain the most likely outcomes, but uncertainties remain. The FOMC indicated that the timing and size of future adjustments to the target range would consider realized and expected economic conditions relative to its maximum employment objective and its 2 percent inflation objective, including measures of labor market conditions, indicators of inflation and inflation expectations, and financial and international developments.

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. Mortgage Recording Tax collections for the third quarter of 2019 were higher than the third quarter of 2018 by $12.0 (10.2%); receipts in the third quarter of 2019 were $30.2 (30.4%) higher than receipts from the second quarter. Despite the overall recovery of MRT receipts that began in 2012 following the financial crisis, average monthly receipts in the third quarter of 2019 remain $25.6 (40.2%) 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 $19.4 (11.5%) lower in the third quarter of 2019 than receipts for the third quarter of 2018; receipts in the third quarter of 2019 were $14.3 (10.6%) higher than receipts from the second quarter. Average monthly receipts in the third quarter of 2019 were $16.4 (22.2%) 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 September 30, 2019, operating revenue was $1.565 billion, an increase of $78 compared to the nine months ended September 30, 2018. Paid traffic through September 2019 totaled 247.4 million crossings, which was 7.0 million, or 2.9%, higher than the same period in 2018. The increase is primarily due to improvements in the regional economy, relatively favorable winter weather, stable gas prices and the substantial completion of Sandy restoration work at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel in the fourth quarter of 2018. Toll revenue through September 2019 totaled $1.548 billion, which was $77, or 5.2%, greater than the same period in 2018. The additional revenue was due to the higher traffic volume and a toll increase implemented on March 31, 2019.

The E-ZPass electronic toll collection system experienced year-to-year increases in market share. The total average market share as of September 30, 2019 was 94.8% compared to 94.2% as of September 30, 2018. The average weekday market share for passenger and commercial vehicles were 95.4% and 94.9% for the first three quarters of 2019 and 2018, respectively.

MTA New York City Transit - For the period ended September 30, 2019, revenue from fares was $3.423 billion, an increase of $104, or 3.1%, compared to September 30, 2018. For the same comparative period, total operating expenses were lower by $499, or 5.9%, totaling $8.002 billion for the nine months ended September 30, 2019.

MTA Long Island Rail Road – Total operating revenue for the period ended September 30, 2019 was $604, which was higher by $23, or 4.0%, compared to September 30, 2018. For the same comparative period, operating expenses were lower by $69, or 4.6%, totaling $1.423 billion for the nine months ended September 30, 2019.

MTA Metro-North Railroad – For the nine months ended September 30, 2019, operating revenues totaled $603, an increase of $19, or 3.3%, compared to September 30, 2018. During the same period, operating expenses decreased by $38, or 3.2%, to $1,168. For the nine months ended September 30, 2019, fare revenue increased by 2.4% to $561 compared to September 30, 2018. Passenger fares accounted for 93.0% and 93.8% of operating revenues in 2019 and 2018, 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 September 30, 2019 was $340 compared to $327 at September 30, 2018.

Capital Programs

At September 30, 2019, $22,874 had been committed and $11,209 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and $28,208 had been committed and $23,944 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and $24,134 had been committed and $23,772 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.

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 June 1, 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.

By September 30, 2019, the revised 2015-2019 Capital Programs provided $33,273 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; $5,324 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; $7,652 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 $7,968 in MTA Bonds, $2,936 in MTA Bridges and Tunnels dedicated funds, $8,640 in funding from the State of New York, $7,308 in Federal Funds, $2,667 from City Capital Funds, $2,145 in pay-as-you-go ("PAYGO") capital, $1,017 from asset sale/leases, and $592 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. By September 30, 2019, the 2010-2014 MTA Capital Programs reflected an overall decrease of $381 primarily due to reallocation of funds within the East Side Access and Regional Investment programs. Of the $31,640 in capital expenditures, $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; $5,920 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; $337 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 $7,551 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 $11,483 in MTA Bonds, $2,025 in MTA Bridges and Tunnels dedicated funds, $7,594 in Federal Funds, $132 in MTA Bus Federal and City Match, $719 from City Capital Funds, and $1,365 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 $6,329 in insurance and federal reimbursement proceeds (including interim borrowing by MTA to cover delays in the receipt of such proceeds), $235 in pay-as-you-go capital, supplemented, to the extent necessary, by external borrowing of up to $988 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 September 30, 2019, 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 2020-2024 MTA Capital Plan

On September 25, 2019, the MTA Board approved a $51.5 billion 2020-2024 Capital Plan ("2020-2024 Capital Plan" or "Plan"). If approved by the MTA Capital Program Review Board ("CPRB"), the Plan would authorize new capital spending for the region's subways, buses and railroads, building on the progress of the Subway Action Plan, and create a faster, more accessible, and more reliable public transportation system.

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 2019 MTA July Financial Plan

The 2019 MTA July Financial Plan (the "July Plan" or "Plan"), which includes the 2019 Mid-Year Forecast, the 2020 Preliminary Budget and a Financial Plan for the years 2020-2023, updates the February Financial Plan. The July Plan includes projected biennial fare and toll increases that generate a 4% net increase in farebox and toll revenue, maintains investments from prior plans, including maintenance of the Subway Action Plan funded from Phase 1 of Congestion Pricing through for-hire vehicle fees, and places a renewed emphasis on gaining control of, and reducing, fare evasion.

The July Plan also includes major deficit reduction actions intended to address annual deficits and place the MTA on a financially sustainable foundation consisting of annual recurring savings targets of $350, beginning in 2020, which do not compromise employee or customer safety and security, and additional savings targets from consolidation and efficiency efforts through the transformation of the MTA. To bridge the transition period until the transformation efforts fully produce the expected cost savings, the July Plan uses several "one-shot" actions to balance the budget.

The MTA 2019 Adopted Budget and February Financial Plan 2019-2022 (collectively, the "February Plan") was released in February 2019. The purpose of the February Plan was to incorporate adjustments approved by the MTA Board that were captured "below-the-line" and on a consolidated basis in the November Plan into MTA agencies' financial plan baseline budgets and forecasts. The February Plan also reflected certain technical adjustments to MTA and Agency forecasts and captures baseline changes that were not in the November Plan.

Changes to the November Plan

The February Plan also captures baseline changes that were not included in the November

Plan, as well as adjustments to below-the-line items:

- *Health & Welfare Premium Adjustment* – 2019 premiums for the New York State Health Insurance Program ("NYSHIP"), which covers about 40% of MTA employees and retirees, are lower than estimates used in the November Plan. The lower premiums are estimated to reduce expenses by $57 in 2019, and about $6 annually thereafter.
- *Insurance Policy Renewal Cost Adjustments* – Lower than forecasted renewal costs for excess liability, environmental liability, stations liability and force account liability policies with estimated savings of $8 annually through 2020 and $9 annually thereafter.
- *Timing Adjustments/Other Baseline Re-estimates* – The February Plan includes timing and other minor technical adjustments impacting expenses and subsidies that have been incorporated into the baseline.
- *City Subsidy for MTA Bus* – Reflects timing-related changes to subsidy payments from the City of New York.
- *Other Subsidies* – Reflects lower collection of For-Hire Vehicle fees, which was delayed following the filing of a lawsuit and a temporary restraining order, which order was lifted at the end of January.

The following MTA Plan Adjustments remain below-the-baseline and therefore are not captured within Agency baseline forecasts:

- *Fare and Toll Increase in March 2019* – A $316 annualized consolidated farebox and toll increase was assumed for implementation in March 2019, and estimated to yield 4%, for an additional $269 in 2019, $316 in both 2020 and 2021, and $317 in 2022. Factoring in the MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels adjustments, the net increase to the MTA was projected to be $262 in 2019, $308 in 2020, $307 in 2021, and $308 in 2022, unchanged from the estimate in the November Plan.
- *One-Month Delay in 2019 Fare and Toll Increase* – The November Plan, approved in December, anticipated the MTA Board would review and approve fare and toll increases in January 2019 for implementation in March. This Plan reflects a one-month delay in approval and implementation of the 2019 fare and toll increases, resulting in an estimated $27 reduction in 2019 revenues.
- *Fare and Toll Increase in March 2021* – A $329 annualized consolidated farebox and toll increase is assumed for implementation in March 2021, and is estimated to yield 4%, for an additional $280 in 2021 and $329 in 2022. Factoring in the MTA Bus, MTA Staten Island Railway and MTA Bridges and Tunnels adjustments, the net increase to the MTA is projected to be $273 in 2021 and $320 in 2022, which is unchanged from the estimate in the November Plan.
- *MTA Efficiencies – Not Yet Implemented* – The November Plan recognized identified savings from the Agencies – included in Agency baseline projections – totaling $84 in 2018, exceeding the target in that year, $207 in 2019, $209 in 2020, $213 in 2021 and $203 in 2022. Included in the total savings identified non-recurring savings of $69 in 2018 and $18 in 2019. Efficiencies yet to be implemented total $123 in 2019, $58 in 2020, $82 in 2021 and $86 in 2022; this is unchanged from the November Plan.
- *Service Guideline Adjustments* – Service guidelines have been reviewed and approved by the MTA Board. They are used to maintain an appropriate level of service based upon actual ridership on a route, minimizing occurrences when buses or trains are either overcrowded or underutilized and providing a standard for maximum loads for different times of day. Following these guidelines, MTA New York City Transit first proposed in the November Plan service guideline adjustments beginning in 2020 that result in net savings of $37 in 2020 and $41 in 2021 and 2022, of which $10 is for subway service and $31 for bus; this is unchanged from the November Plan.
- *Additional Savings Actions* – The November Plan included additional reductions and re-estimates resulting in savings beyond those captured in Agency Baseline projections. These savings programs are expected to be implemented in time for inclusion within Agency baselines in the 2019 July Financial Plan.

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 September 30, 2019, MTA has drawn down a total of $2.424 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.

MTA expects to submit grant requests for the $206 of remaining FTA emergency relief allocation in Federal Fiscal Year 2020.

Labor Update

During the third quarter of 2019, no new labor agreements were reached with represented employees at MTA agencies. However, with several labor agreements having expired or having become amendable in the quarter, the MTA is in the process of collective bargaining towards new terms for a majority of MTA's unionized employees. The following describes in greater detail the status of MTA's labor relations through the end of September 2019.

MTA Long Island Rail Road – During the third quarter of 2019, MTA Long Island Rail Road had approximately 7,570 employees. Approximately 6,567 of the railroad's employees were 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 now in position to begin a new round of collective bargaining. Meanwhile, under the Railway Labor Act, MTA Long Island Rail Road's represented population is covered by the amendable agreements.

MTA Metro-North Railroad – In June 2019, most of the agreements settled between MTA Metro-North Railroad and its unions for the 2017-2019 round of bargaining became amendable under the Railway Labor Act. Several others had already become amendable in prior months; and during the third quarter three large unions—the Transport Workers Union of America "TWU", the Association of Commuter Rail Employees Division 1 "ACRE 1" and the International Association of Machinists "IAM"--joined the list of MTA Metro-North Railroad represented employees who will be seeking new agreement terms in the coming months. Together, these three unions cover approximately 1,900 employees, or around 34% of MTA Metro-North Railroad total represented population. With this development, approximately 86% of MTA Metro-North Railroad's 5,598 represented employees are under agreements that are now considered amendable and will be engaged with the railroad in labor negotiations to establish new terms. The sole remaining effective MTA Metro-North Railroad agreement will become amendable in the last quarter 2019.

MTA Headquarters – Labor agreements with approximately 741 MTA Police members of the Police Benevolent Association ("PBA") and approximately 27 members of the Commanding Officers Association ("COA") expired in October 2018, and negotiations to establish new terms with these MTA Police unions, covering around half of MTA Headquarters' represented population, have continued throughout the third quarter of 2019. At the same time, agreements with the other unions that represent approximately 754 employees working at MTA Headquarters continue to remain in effect.

MTA New York City Transit Authority/Manhattan and Bronx Surface Transit Operating Authority – In May 2019, labor agreements with three bargaining units of MTA New York City Transit's largest unions-- the Transport Workers Union Local 100 ("TWU Local 100") and the Amalgamated Transit Union ("ATU 726" and "ATU 1056")—expired, and they remained unsettled throughout the third quarter. These agreements, together, cover approximately 38,000 employees, with TWU Local 100 alone representing more than 35,000 employees in operating titles. In July, agreements with other units of TWU Local 100 representing career and salary employees and employees in computer and telecommunications titles expired. With these developments, approximately 89% of MTA New York City Transit's represented population now have expired agreements.

MTA Bus Company – At the end of the third quarter of 2019, MTA Bus Company had 4,126 employees (full and part time), approximately 3,796 of whom are represented by three different unions (five bargaining units). The largest of these is TWU Local 100, whose members sat with their counterparts at MTA New York City Transit and MaBSTOA in the 2017-2019 round of collective bargaining and were co-parties to that agreement. As mentioned above, the second quarter saw the expiration of the agreement with TWU Local 100, including MTA Bus Company employees, and negotiations for new terms got underway. In the third quarter, MTA Bus Company's agreement with TWU Local 106 expired. Both of MTA Bus Company's other large unions, ATU Local 1179 and ATU Local 1181, will begin to look for new agreements in the final quarter of 2019 when their terms expire.

MTA Bridges and Tunnels – As of September 30, 2019, MTA Bridges and Tunnels had 1,315 employees, approximately 898 of whom were represented by three different labor unions (four bargaining units). Approximately 360 Maintainers who are members of DC 37 Local 1931 were MTA Bridges and Tunnels only represented employees who were covered by an effective labor agreement at the end of the third quarter. The recent Memorandum of Understanding between the agency and the Bridge and Tunnel Officers Benevolent Association "BTOBA" expired in September shortly after having been passed by the MTA Board in June. That agreement had covered the 88-month period beginning on May 18, 2012. In the third quarter, MTA Bridges and Tunnels continued to negotiate with DC 37 Local 1655, their agreement having expired in July 2017. The agency remained without agreement with the Superior Officers Benevolent Association, whose last agreement expired in 2012.

MTA Staten Island Railway – During the third quarter of 2019, MTA Staten Island Railway had 341 employees, approximately 317 of whom were represented by four different unions. In the third 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 SEPTEMBER 30, 2019 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2018

($ In millions)

	September 30, 2019 (Unaudited)	December 31, 2018
ASSETS AND DEFERRED OUTFLOWS OF RESOURCES		
CURRENT ASSETS:		
Cash (Note 3)	$ 582	$ 541
Unrestricted investments (Note 3)	2,489	2,915
Restricted investments (Note 3)	3,967	1,487
Restricted investments held under capital lease obligations (Notes 3 and 8)	108	4
Receivables:		
Station maintenance, operation, and use assessments	75	119
State and regional mass transit taxes	1,281	108
Mortgage Recording Tax receivable	41	43
State and local operating assistance	150	11
Other receivable from New York City and New York State	201	289
Due from Build America Bonds	3	1
Capital project receivable from federal and state government	7	143
Other	509	463
Less allowance for doubtful accounts	(207)	(128)
Total receivables — net	2,060	1,049
Materials and supplies	659	624
Prepaid expenses and other current assets (Note 2)	119	145
Total current assets	9,984	6,765
NON-CURRENT ASSETS:		
Capital assets (Note 6):		
Land and construction work-in-progress	20,100	18,269
Other capital assets (net of accumulated depreciation)	55,224	54,242
Unrestricted investments (Note 3)	71	46
Restricted investments (Note 3)	617	546
Restricted investments held under capital lease obligations (Notes 3 and 8)	285	382
Other non-current receivables	33	58
Receivable from New York State	10	10
Other non-current assets	14	20
Total non-current assets	76,354	73,573
TOTAL ASSETS	86,338	80,338
DEFERRED OUTFLOWS OF RESOURCES:		
Accumulated decreases in fair value of derivative instruments (Note 7)	474	329
Loss on debt refunding (Note 7)	1,051	1,138
Deferred outflows related to pensions (Note 4)	1,486	1,397
Deferred outflows related to OPEB (Note 5)	1,521	1,496
TOTAL DEFERRED OUTFLOWS OF RESOURCES	4,532	4,360
TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES	$ 90,870	$ 84,698

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 SEPTEMBER 30, 2019
AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2018
($ In millions)

	September 30, 2019 (Unaudited)	December 31, 2018
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION		
CURRENT LIABILITIES:		
Accounts payable	$ 526	$ 470
Accrued expenses:		
Interest	630	210
Salaries, wages and payroll taxes	358	327
Vacation and sick pay benefits	1,042	1,020
Current portion — retirement and death benefits	37	16
Current portion — estimated liability from injuries to persons (Note 10)	451	454
Capital accruals	393	737
Unearned premiums	215	264
Other	703	693
Total accrued expenses	3,829	3,721
Current portion — loan payable (Note 7)	13	15
Current portion — long-term debt (Note 7)	1,071	2,552
Current portion — obligations under capital lease (Note 8)	16	4
Current portion — pollution remediation projects (Note 12)	30	31
Derivative fuel hedge liability (Note 14)	9	12
Unearned revenues	786	804
Total current liabilities	6,280	7,609
NON-CURRENT LIABILITIES:		
Net pension liability (Note 4)	6,487	6,487
Estimated liability arising from injuries to persons (Note 10)	4,006	3,800
Post employment benefits other than pensions (Note 5)	20,335	20,335
Loan payable (Note 7)	113	104
Long-term debt (Note 7)	45,208	39,617
Obligations under capital leases (Note 8)	431	443
Pollution remediation projects (Note 12)	110	108
Contract retainage payable	426	406
Derivative liabilities (Note 7)	484	346
Other long-term liabilities	350	376
Total non-current liabilities	77,950	72,022
TOTAL LIABILITIES	84,230	79,631
DEFERRED INFLOWS OF RESOURCES:		
Gain on debt refunding	21	23
Deferred Inflows related to pensions (Note 4)	1,070	1,070
Deferred inflows related to OPEB (Note 5)	21	21
TOTAL DEFERRED INFLOWS OF RESOURCES	1,112	1,114
NET POSITION:		
Net investment in capital assets	30,126	30,000
Restricted for debt service	1,720	454
Restricted for claims	229	206
Restricted for other purposes (Note 2)	1,080	1,230
Unrestricted	(27,627)	(27,937)
TOTAL NET POSITION	5,528	3,953
TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION	$ 90,870	$ 84,698

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

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018

($ In millions)

	September 30, 2019 (Unaudited)	September 30, 2018 (Unaudited)
OPERATING REVENUES:		
Fare revenue	$ 4,732	$ 4,588
Vehicle toll revenue	1,548	1,471
Rents, freight, and other revenue	466	431
Total operating revenues	6,746	6,490
OPERATING EXPENSES:		
Salaries and wages	4,719	4,651
Retirement and other employee benefits	2,319	2,236
Postemployment benefits other than pensions (Note 5)	483	1,585
Electric power	338	357
Fuel	134	140
Insurance	6	(7)
Claims	302	282
Paratransit service contracts	360	332
Maintenance and other operating contracts	508	456
Professional service contracts	308	369
Pollution remediation projects (Note 12)	6	4
Materials and supplies	493	478
Depreciation (Note 2)	2,135	2,010
Other	158	159
Total operating expenses	12,269	13,052
OPERATING LOSS	(5,523)	(6,562)
NON-OPERATING REVENUES (EXPENSES):		
Grants, appropriations and taxes:		
Tax-supported subsidies — NYS:		
Mass Transportation Trust Fund subsidies	491	475
Metropolitan Mass Transportation Operating Assistance subsidies	1,824	1,687
Payroll Mobility Tax subsidies	1,446	1,304
MTA Aid Trust Account subsidies	216	227
Internet sales tax subsidies	42	-
Tax-supported subsidies — NYC and Local:		
Mortgage Recording Tax subsidies	340	327
Urban Tax subsidies	478	502
Other subsidies:		
New York State Service Contract subsidy	-	1
Operating Assistance - 18-B program	417	408
Build America Bond subsidy	47	47
NYS/NYC Subway Action Plan	-	411
NYC Assistance Fund	260	-
Subtotal grants, appropriations and taxes	$ 5,561	$ 5,389

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

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018

($ In millions)

	September 30, 2019 (Unaudited)	September 30, 2018 (Unaudited)
NON-OPERATING REVENUES (EXPENSES):		
Connecticut Department of Transportation	$ 90	$ 95
Subsidies paid to Dutchess, Orange, and Rockland Counties	(3)	(4)
Interest on long-term debt (Note 2)	(1,089)	(1,097)
Station maintenance, operation and use assessments	128	126
Operating subsidies recoverable from NYC	424	358
Other net non-operating expenses	106	15
Net non-operating revenues	5,217	4,882
LOSS BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	(306)	(1,680)
APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	1,881	1,204
CHANGE IN NET POSITION	1,575	(476)
NET POSITION— Beginning of period	3,953	5,224
NET POSITION — End of period	$ 5,528	$ 4,748

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
NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018
($ In millions)

	September 30, 2019 (Unaudited)	September 30, 2018 (Unaudited)
CASH FLOWS FROM OPERATING ACTIVITIES:		
Passenger receipts/tolls	$ 6,317	$ 6,085
Rents and other receipts	651	565
Payroll and related fringe benefits	(7,554)	(7,188)
Other operating expenses	(2,463)	(2,575)
Net cash used by operating activities	(3,049)	(3,113)
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:		
Grants, appropriations, and taxes	4,732	4,922
Operating subsidies from CDOT	80	88
Subsidies paid to Dutchess, Orange, and Rockland Counties	(8)	(8)
Net cash provided by noncapital financing activities	4,804	5,002
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
MTA bond proceeds	1,606	1,353
MTA Bridges and Tunnels bond proceeds	285	1,169
MTA bonds refunded/reissued	(174)	(828)
MTA Bridges and Tunnels bonds refunded/reissued	(101)	(497)
MTA anticipation notes proceeds	4,505	2,233
MTA anticipation notes redeemed	(1,500)	(512)
MTA credit facility proceeds	1	4
Capital lease payments and terminations	(1)	(1)
Federal and local grants	1,022	1,016
Other capital financing activities	(136)	(489)
Payment for capital assets	(4,941)	(4,881)
Debt service payments	(1,134)	(1,223)
Net cash used by capital and related financing activities	(568)	(2,656)
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of long-term securities	(2,871)	(5,270)
Sales or maturities of long-term securities	1,847	5,132
Net (purchases) sales or maturities of short-term securities	(204)	1,056
Earnings on investments	82	74
Net cash (used by) / provided by investing activities	(1,146)	992
NET INCREASE IN CASH	41	225
CASH — Beginning of period	541	283
CASH — End of period	$ 582	$ 508

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 CASH FLOWS
NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018

($ In millions)

	September 30, 2019 (Unaudited)	September 30, 2018 (Unaudited)
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:		
Operating loss (Note 2)	$ (5,523)	$ (6,562)
Adjustments to reconcile to net cash used in operating activities:		
Depreciation and amortization	2,135	2,010
Net increase in payables, accrued expenses, and other liabilities	218	1,513
Net decrease in receivables	112	(161)
Net decrease in materials and supplies and prepaid expenses	9	87
NET CASH USED BY OPERATING ACTIVITIES	$ (3,049)	$ (3,113)
NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:		
Noncash investing activities:		
Interest expense includes amortization of net (premium) / discount (Note 2)	$ 139	$ 73
Interest expense which was capitalized	29	37
Total Noncash investing activities	168	110
Noncash capital and related financing activities:		
Capital assets related liabilities	393	449
Capital leases related liabilities	447	441
Total Noncash capital and related financing activities	840	890
TOTAL NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES	$ 1,008	$ 1,000

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, 2018 AND 2017

($ In thousands)

	December 31, 2018 (Unaudited)	December 31, 2017
ASSETS:		
Cash	$ 13,744	$ 18,805
Receivables:		
Employee loans	195,776	183,952
Participant and union contributions	-	(6)
Investment securities sold	276	1,126
Accrued interest and dividends	5,062	3,554
Other receivables	1,938	1,843
Total receivables	203,052	190,469
Investments at fair value:		
Investments measured at readily determined fair value	1,369,063	1,247,701
Investments measured at net asset value	8,923,436	9,404,830
Investments at contract value	1,313,496	1,224,190
Total investments	11,605,995	11,876,721
Total assets	$ 11,822,791	$ 12,085,995
LIABILITIES:		
Accounts payable and accrued liabilities	$ 8,888	$ 6,823
Payable for investment securities purchased	5,359	6,735
Accrued benefits payable	2,150	2,498
Accrued postretirement death benefits (PRDB) payable	2,509	3,344
Accrued 55/25 Additional Members Contribution (AMC) payable	5,675	6,181
Other liabiliities	341	719
Total liabilities	24,922	26,300
NET POSITION:		
Restricted for pensions	7,687,858	7,922,373
Restricted for postemployment benefits other than pensions	351,380	370,352
Restricted for other employee benefits	3,758,631	3,766,970
Total net position	11,797,869	12,059,695
Total liabilities and net position	$ 11,822,791	$ 12,085,995

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, 2018 AND 2017

($ In thousands)

	December 31, 2018 (Unaudited)	December 31, 2017
ADDITIONS:		
Contributions:		
Employer contributions	$ 1,224,935	$ 1,185,070
Non-Employer contributions	-	145,000
Implicit rate subsidy contribution	74,484	71,101
Participant rollovers	21,673	22,430
Member contributions	335,762	302,589
Total contributions	1,656,854	1,726,190
Investment income:		
Net (depreciation) / appreciation in fair value of investments	(462,339)	1,465,223
Dividend income	110,573	73,632
Interest income	17,149	13,730
Less:		
Investment expenses	94,387	109,658
Investment income, net	(429,004)	1,442,927
Other additions:		
Loan repayments - interest	7,529	6,337
Total additions	1,235,379	3,175,454
DEDUCTIONS:		
Benefit payments and withdrawals	1,230,886	1,180,123
Implicit rate subsidy payments	74,484	71,101
Transfer to other plans	93,387	67,653
Distribution to participants	87,379	73,733
Administrative expenses	5,659	6,455
Other deductions	5,410	4,895
Total deductions	1,497,205	1,403,960
Net (decrease) / increase in fiduciary net position	(261,826)	1,771,494
NET POSITION:		
Restricted for Benefits:		
Beginning of year	12,059,695	10,288,201
End of year	$ 11,797,869	$ 12,059,695

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 SEPTEMBER 30, 2019 AND DECEMBER 31, 2018 AND FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2019 AND 2018

($ 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") as follows:

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 Capital Construction Company ("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 interim 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 September 30, 2019 and 2018 totaled $5.6 billion and $5.4 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's fiduciary funds 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.

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 September 30, 2019.

GASB Statement No. 83, *Certain Asset Retirement Obligations* establishes accounting and financial reporting standards for certain asset retirement obligations ("AROs"). An ARO is a legally enforceable liability associated with the retirement of a tangible capital asset that is permanently removed from service. This Statement requires that a liability must be recognized when incurred and reasonably estimated. The determination of when a liability is incurred should be based on the occurrence of external laws, regulations, contracts, or court judgments, together with the occurrence of an internal event that obligates a government to perform asset retirement activities. The requirements of this Statement are effective for reporting periods beginning after June 15, 2018. The adoption of this Statement had no material impact on the MTA's financial statements.

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, 2018. The adoption of this Statement resulted in the addition of fiduciary funds financial statements and supplementary information combining financial information of the MTA's fiduciary funds.

GASB Statement No. 88, "*Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*", requires that additional information be disclosed in the notes to financial statements related to direct borrowings and direct placements. It also clarifies which liabilities should be included when disclosing information related to debt. The Statement requires that additional information related to debt be disclosed in the notes to the financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences; significant termination events with finance-related consequences; and significant subjective acceleration clauses. GASB Statement No. 88 is effective for reporting periods beginning after June 15, 2018. The adoption of this Statement did not have a material impact to MTA's note disclosures.

GASB Statement No. 90, "*Majority Equity Interest- an Amendment of GASB Statements No. 14 and No. 61*", improves consistency in the measurement and comparability of the financial statement presentation of majority equity interests in legally separate organizations and improves the relevance of financial statement information for certain component units. The Statement defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. The Statement also establishes that ownership of a majority equity interest in a legally separate organization results in the government being financially accountable for the legally separate organization and, therefore, the government should report that organization as a component unit. In addition, the Statement also requires that a component unit in which a government has a 100 percent equity interest account for its assets, deferred outflows of resources, liabilities and deferred inflows of resources at acquisition value. GASB Statement No. 90 is effective for reporting periods beginning after December 15, 2018. The adoption of this Statement did not have a material impact to the MTA's financial statements.

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*	2020
89	*Accounting for Interest Cost Incurred Before the End of a Construction Period*	2020
91	*Conduit Debt Obligations 2021*	2021

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 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.

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

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

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

In accordance with the provisions of GASB Statement No. 72, *Fair Value Measurement and Application*, investments are recorded on the consolidated statement of net position at fair value, except for commercial paper, certificates of deposit, and repurchase agreements, which are recorded at amortized cost or contract value. All investment income, including changes in the fair value of investments, is reported as revenue on the consolidated statement of revenues, expenses and changes in net position. Fair values have been determined using quoted market values at September 30, 2019 and December 31, 2018.

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

Materials and Supplies — Materials and supplies are valued principally at average cost, net of obsolescence reserve at September 30, 2019 and December 31, 2018 of $181 and $171, 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 September 30, 2019, the MTA paid to Dutchess, Orange and Rockland Counties the 2018 excess amounts of MRT-1 and MRT-2 totaling $4.4.
- 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.

NYS/NYC Subway Action Plan — In April 2018, the approved 2018-2019 New York State Budget committed both New York State ("NYS") and New York City ("NYC") to equally cover the costs of the 2017-2018 Subway Action Plan ("SAP"), which was launched at the direction of Governor Andrew Cuomo in July 2017 to take extraordinary measures to stabilize and improve the more than 100-year old New York City subway system. The SAP includes a comprehensive $836 investment to address system failures, breakdowns, delays and deteriorating customer service, and position the New York City subway system for future modernization. The SAP provided the MTA with funds already used to advance the SAP, as well as additional operating and capital funding to cover the cost of the remaining SAP through the end of 2018. The MTA started receiving the SAP funding in April 2018 and received the full funding by the end of 2018. For the year-end December 31, 2018, the MTA received $508 related to operating needs and $189 related to capital needs for the Subway Action Plan. In 2019, the MTA will be using the remaining Subway Action Plan funds from New York State and New York City primarily for the signals modernization capital project.

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 2017 and 2018.

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 $2.4 in the nine months ended September 30, 2019 and $0 in the nine months ended September 30, 2018 from New York City for the reimbursement of transit police costs.

MTAHQ bills MTA Metro-North Railroad through its consolidated services for MTA police costs in the New Haven line of which MTA Metro-North Railroad recovers approximately 65% from Connecticut Department of Transportation. The amounts billed for the periods ended September 30, 2019 and 2018 were $17.1 and $17.1, respectively. The amounts recovered for the periods ended September 30, 2019 and 2018 were approximately $11.1 and $11.1, 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 $179.3 for the nine months ended September 30, 2019 and $163.6 for the nine months ended September 30, 2018.

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 September 30, 2019, the balance of the assets in this program was $163.4.

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, 2019, 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 $0.5 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, 2019, 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 $2 per occurrence limit excess of a $1 self-insured retention.

On December 15, 2018, 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.

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 June 2004, GASB issued Statement No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, which established standards for the measurement, recognition, and display of OPEB expense/expenditures and related liabilities (assets), note disclosures, and if applicable, required supplementary information in the financial reports of state and local governmental employers. The MTA reported under this standard for its Postemployment Benefits Other Than Pensions for the year ended December 31, 2017.

Effective for the year ended December 31, 2018, the MTA adopted the standards 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.

GASB has issued Statements No. 74 and 75, which replaced GASB Statements No. 43 and 45. The effective date of GASB Statement No. 74 (which applies to financial reporting on a plan basis) is the year ended December 31, 2017. The effective date of GASB Statement No. 75 (which applies to financial reporting by contributing employers) is the year ended December 31, 2018.

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. Cash, including deposits in transit, consists of the following at September 30, 2019 and December 31, 2018 (in millions):

	September 30, 2019		December 31, 2018	
	Carrying Amount	Bank Balance	Carrying Amount	Bank Balance
	(Unaudited)			
FDIC insured or collateralized deposits	$ 95	$ 97	$ 75	$ 62
Uninsured and not collateralized	487	430	466	406
Total Balance	$ 582	$ 527	$ 541	$ 468

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

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

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

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

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

The MTA had the following recurring fair value measurements as of September 30, 2019 and December 31, 2018 (in millions):

Investments by fair value level	September 30, 2019	Fair Value Measurements Level 1	Fair Value Measurements Level 2	December 31, 2018	Fair Value Measurements Level 1	Fair Value Measurements Level 2
	(Unaudited)	(Unaudited)				
Debt Securities:						
U.S. treasury securities	$ 5,316	$ 4,934	$ 382	$ 3,325	$ 2,984	$ 341
U.S. government agency	604	14	590	387	261	126
Commercial paper	640	-	640	758	-	758
Asset-backed securities	47	-	47	45	-	45
Commercial mortgage-backed securities	94	-	94	81	-	81
Foreign bonds	20	20	-	16	16	-
Corporate bonds	140	140	-	133	133	-
Tax Benefit Lease Investments:						
U.S. treasury securities	190	190	-	178	178	-
U.S. government agency	131	70	61	112	-	112
Repurchase agreements	233	233	-	223	223	-
Total investments by fair value level	7,415	$ 5,601	$ 1,814	5,258	$ 3,795	$ 1,463
Other	122			122		
Total Investments	$ 7,537			$ 5,380		

Investments classified as Level 1 of the fair value hierarchy, totaling $5,601 and $3,795 as of September 30, 2019 and December 31, 2018, 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 $651 and $238, U.S, treasury securities totaling $382 and $341, commercial paper totaling $640 and $758, asset-backed securities totaling $47 and $45, and commercial mortgage-backed securities totaling $94 and $81 as of September 30, 2019 and December 31, 2018, 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 1.98% and 2.36% for the nine months ended September 30, 2019 and year ended December 31, 2018, respectively.

Credit Risk — At September 30, 2019 and December 31, 2018, the following credit quality rating has been assigned to MTA investments by a nationally recognized rating organization (in millions):

Quality Rating Standard & Poor's	September 30, 2019 (Unaudited)	Percent of Portfolio	December 31, 2018	Percent of Portfolio
A-1+	$ 486	7%	$ 283	5%
A-1	640	9%	758	14%
AAA	231	3%	217	4%
AA+	61	1%	52	1%
AA	36	0%	31	1%
A	86	1%	76	1%
BBB	39	1%	38	1%
Not rated	260	4%	240	5%
U.S. Government	5,576	74%	3,563	68%
Total	7,415	100%	5,258	100%
Equities and capital leases	122		122	
Total investment	$ 7,537		$ 5,380	

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

	September 30, 2019 (Unaudited)		December 31, 2018	
(In millions)	Fair Value	Duration (in years)	Fair Value	Duration (in years)
U.S. Treasuries	$ 5,316	4.28	$ 3,325	3.00
Federal Agencies	604	6.15	387	5.91
Tax benefits lease investments	321	7.97	290	8.06
Repurchase agreement	232	-	223	-
Commercial paper	640	-	758	-
Asset-backed securities [1]	47	1.89	45	1.94
Commercial mortgage-backed securities [1]	95	4.31	81	5.55
Foreign bonds [1]	20	6.25	16	6.20
Corporates [1]	140	4.48	133	4.43
Total fair value	7,415		5,258	
Modified duration		4.08		3.01
Investments with no duration reported	122		122	
Total investments	$ 7,537		$ 5,380	

[1] These securities are only included in the FMTAC portfolio.

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

- obligations of the State or the United States Government;
- obligations of which the principal and interest are guaranteed by the State or the United States government;
- obligations issued or guaranteed by certain Federal agencies;
- repurchase agreements fully collateralized by the obligations of the foregoing United States Government and Federal agencies;
- certain certificates of deposit of banks or trust companies in the State;
- certain banker's acceptances with a maturity of 90 days or less;

- certain commercial paper;
- certain municipal obligations; and
- certain mutual funds up to $10 in the aggregate.

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

i. Public Authorities Law Sections 1265(4) (MTA), 1204(19) (MTA New York City Transit Authority) and 553(21) (MTA Bridges and Tunnels);

ii. Public Authorities Law Section 2925 Investment of funds by public authorities and public benefit corporations; general provisions; and

iii. State Finance Law Article 15 – EXCELSIOR LINKED DEPOSIT ACT.

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

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

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

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

- certain equities; and
- certain mutual funds.

FMTAC is prohibited from making the following investments:

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

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

4. EMPLOYEE BENEFITS

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

Plan Descriptions

1. Additional Plan —

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

The Board of Managers of Pensions is comprised of the Chairman of the MTA, MTA Chief Financial Officer, MTA Director of Labor Relations and the agency head of each participating Employer or the designee of a member of the Board of Managers. The Additional Plan for Additional Pensions may be amended by action of the MTA Board.

The 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 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 Rail Road 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 Rail Road 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 Rail Road, 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 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 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. 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 Rail Road 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 non represented 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 55/25 Plan 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, LaGuardia, 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, LaGuardia 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, LaGuardia 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, LaGuardia 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, Laguardia 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, Laguardia, 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 non represented 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, 2018, January 1, 2017 and January 1, 2016, the dates of the most recent actuarial valuations, membership data for the following pension plans are as follows:

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

Membership at:	**January 1, 2017**	**January 1, 2016**			
	MNR Cash Balance Plan	**Additional Plan**	**MaBSTOA Plan**	**MTA Defined Benefit Plan**	**TOTAL**
Active Plan Members	4	216	8,617	17,670	26,507
Retirees and beneficiaries receiving benefits	27	5,900	5,468	10,701	22,096
Vested formerly active members not yet receiving benefits	13	38	998	1,439	2,488
Total	44	6,154	15,083	29,810	51,091

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 Rail Road's Board of Managers of Pensions (1.5% in 2017 and 2016), 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 Rail Road's Board of Managers of Pensions (1.5% in 2017 and 2016).

Funding for the Additional Plan by the MTA Long Island Rail Road is provided by MTA. Certain funding by MTA is made to the MTA Long Island Rail Road on a discretionary basis. The continuance of the MTA Long Island Rail Road'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 (in thousands) 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 Rail Road 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 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 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 Rail Road 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 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 ten years of credited service. MTA Long Island Rail Road 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 Capital Construction 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, 2018 and 2017 are as follows:

Year-ended December 31,	**2019**	**2018**
($ in millions)	Actual Employer Contributions	Actual Employer Contributions
Additional Plan	$ 59.5	$ 221.5
MaBSTOA Plan	205.4	202.7
MNR Cash Balance Plan	- *	- *
MTA Defined Benefit Plan	339.8	321.9
NYCERS	807.1	800.9
NYSLERS	14.5	14.0
Total	$ 1,426.3	$ 1,561.0

*MNR Cash Balance Plan's actual employer contribution for the years ended December 31, 2018 and 2017 was $5 thousand and $0 thousand, respectively.

Net Pension Liability

The MTA's net pension liabilities for each of the pension plans reported at December 31, 2018 and 2017 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, 2017	January 1, 2017	December 31, 2016	January 1, 2016
MaBSTOA Plan	December 31, 2017	January 1, 2017	December 31, 2016	January 1, 2016
MNR Cash Balance Plan	December 31, 2017	January 1, 2018	December 31, 2016	January 1, 2017
MTA Defined Benefit Plan	December 31, 2017	January 1, 2017	December 31, 2016	January 1, 2016
NYCERS	June 30, 2018	June 30, 2016	June 30, 2017	June 30, 2015
NYSLERS	March 31, 2018	April 1, 2017	March 31, 2017	April 1, 2016

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, 2017**	**January 1, 2016**	**January 1, 2017**	**January 1, 2016**	**January 1, 2018**	**January 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 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, 2017**	**January 1, 2016**	**June 30, 2016**	**June 30, 2015**	**April 1, 2017**	**April 1, 2016**
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%
Cost-of Living Adjustments	55% of inflation assumption or 1.375%, if applicable.	55% of inflation assumption or 1.375%, if applicable.	1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees.	1.5% per annum for Tiers 1, 2, 4 and certain Tier 3 and Tier 6 retirees. 2.5% per annum for certain Tier 3 and Tier 6 retirees.	1.30% per annum.	1.30% per annum.

Mortality

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

The actuarial assumptions used in the January 1, 2018, 2017, and 2016 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, 2018 and January 1, 2017 valuations are based on an experience study for all MTA plans covering the period from January 1, 2011 to December 1, 2015. The mortality assumption used in the January 1, 2016 valuation is based on a 2012 experience study for all MTA plans. 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, 2017 valuation was the RP-2014 Disabled Annuitant mortality table for males and females. Assumption utilized in the January 1, 2016 valuation was the RP-2000 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, 2016 and June 30, 2015 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, 2017 and April 1, 2016 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 improvement 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, 2017	7.00%
MaBSTOA Plan	December 31, 2017	7.00%
MNR Cash Balance Plan	December 31, 2017	4.00%
MTA Defined Benefit Plan	December 31, 2017	7.00%
NYCERS	June 30, 2018	7.00%
NYSLERS	March 31, 2018	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	10.00%	1.96%	10.00%	1.96%
US High Yield Bonds	8.00%	4.62%	8.00%	4.62%
Global Bonds	10.00%	0.34%	10.00%	0.34%
Emerging Markets Bonds	3.00%	3.30%	3.00%	3.30%
US Large Caps	10.00%	4.31%	10.00%	4.31%
US Small Caps	5.50%	5.57%	5.50%	5.57%
Global Equity	10.00%	4.99%	10.00%	4.99%
Foreign Developed Equity	10.00%	5.57%	10.00%	5.57%
Emerging Markets Equity	3.50%	7.91%	3.50%	7.91%
Global REITs	5.00%	5.62%	5.00%	5.62%
Private Real Estate Property	3.00%	3.64%	3.00%	3.64%
Private Equity	7.00%	8.99%	7.00%	8.99%
Hedge Funds - MultiStrategy	15.00%	3.35%	15.00%	3.35%
	100.00%		100.00%	
Assumed Inflation - Mean		2.50%		2.50%
Assumed Inflation - Standard Deviation		1.85%		1.85%
Portfolio Nominal Mean Return		6.80%		6.80%
Portfolio Standard Deviation		11.54%		11.54%
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	10.00%	1.96%	100.00%	1.41%
US High Yield Bonds	8.00%	4.62%		
Global Bonds	10.00%	0.34%		
Emerging Markets Bonds	3.00%	3.30%		
US Large Caps	10.00%	4.31%		
US Small Caps	5.50%	5.57%		
Global Equity	10.00%	4.99%		
Foreign Developed Equity	10.00%	5.57%		
Emerging Markets Equity	3.50%	7.91%		
Global REITs	5.00%	5.62%		
Private Real Estate Property	3.00%	3.64%		
Private Equity	7.00%	8.99%		
Hedge Funds - MultiStrategy	15.00%	3.35%		
	100.00%		100.00%	
Assumed Inflation - Mean		2.50%		2.50%
Assumed Inflation - Standard Deviation		1.85%		1.85%
Portfolio Nominal Mean Return		6.80%		3.92%
Portfolio Standard Deviation		11.54%		4.55%
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%	6.30%	36.00%	4.55%
International Public Market Equities	13.00%	7.00%	14.00%	6.35%
Emerging Public Market Equities	7.00%	9.50%	0.00%	0.00%
Private Market Equities	7.00%	10.40%	10.00%	7.50%
Fixed Income	33.00%	2.20%	17.00%	1.31%
Alternatives (Real Assets, Hedge Funds)	11.00%	5.50%	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:

Year ended December 31,	**Discount Rate**			
	2018		**2017**	
Pension Plan	**Plan Measurement Date**	**Rate**	**Plan Measurement Date**	**Rate**
Additional Plan	December 31, 2017	7.00%	December 31, 2016	7.00%
MaBSTOA Plan	December 31, 2017	7.00%	December 31, 2016	7.00%
MNR Cash Balance Plan	December 31, 2017	4.00%	December 31, 2016	4.00%
MTA Defined Benefit Plan	December 31, 2017	7.00%	December 31, 2016	7.00%
NYCERS	June 30, 2018	7.00%	June 30, 2017	7.00%
NYSLERS	March 31, 2018	7.00%	March 31, 2017	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, 2018, based on the December 31, 2017 measurement date, and for the year ended December 31, 2017, based on the December 31, 2016 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, 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

	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, 2015	$ 1,562,251	$ 726,198	$ 836,053	$ 3,391,989	$ 2,292,316	$ 1,099,673
Changes for fiscal year 2016:						
Service Cost	2,752	-	2,752	82,075	-	82,075
Interest on total pension liability	104,093	-	104,093	236,722	-	236,722
Effect of economic /demographic (gains) or losses	15,801	-	15,801	13,784	-	13,784
Benefit payments	(158,593)	(158,593)	-	(187,823)	(187,823)	-
Administrative expense	-	(611)	611	-	(186)	186
Member contributions	-	884	(884)	-	18,472	(18,472)
Net investment income	-	58,239	(58,239)	-	212,259	(212,259)
Nonemployer contributions	-	70,000	(70,000)	-	-	-
Employer contributions	-	81,100	(81,100)	-	220,697	(220,697)
Balance as of December 31, 2016	$ 1,526,304	$ 777,217	$ 749,087	$ 3,536,747	$ 2,555,735	$ 981,012

	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

	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, 2015	$ 634	$ 612	$ 22	$ 4,364,946	$ 3,074,777	$ 1,290,169
Changes for fiscal year 2016:						
Service Cost	-	-	-	138,215	-	138,215
Interest on total pension liability	24	-	24	308,009	-	308,009
Effect of plan changes	-	-	-	73,521	-	73,521
Effect of economic / demographic (gains) or losses	(15)	-	(15)	86,809	-	86,809
Benefit payments	(77)	(77)	-	(209,623)	(209,623)	-
Administrative expense	-	-	-	-	(3,051)	3,051
Member contributions	-	-	-	-	29,392	(29,392)
Net investment income	-	16	(16)	-	247,708	(247,708)
Employer contributions	-	23	(23)	-	280,768	(280,768)
Balance as of December 31, 2016	$ 566	$ 574	$ (8)	$ 4,761,877	$ 3,419,971	$ 1,341,906

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, 2017**			**December 31, 2016**		
	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	$ 636,713	$ 520,501	$ 419,474	$ 871,350	$ 749,087	$ 642,973
MaBSTOA Plan	1,166,477	757,487	409,121	1,376,916	981,012	643,826
MTA Defined Benefit Plan	1,648,216	1,021,280	492,284	1,936,639	1,341,906	840,176

	1% Decrease (3.0%)	Discount Rate (4.0%)	1% Increase (5.0%)	1% Decrease (3.5%)	Discount Rate (4.5%)	1% Increase (5.5%)
	(in whole dollars)			(in whole dollars)		
MNR Cash Balance Plan	$ 35,109	$ 5,235	$ (21,154)	$ 25,200	$ (7,899)	$ (37,092)

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, 2016 and June 30, 2015 actuarial valuations, rolled forward to June 30, 2018 and June 30, 2017, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYCERS	
	June 30, 2018	June 30, 2017
	($ in thousands)	
MTA's proportion of the net pension liability	23.682%	24.096%
MTA's proportionate share of the net pension liability	$ 4,176,941	$ 5,003,811

The following table presents the MTA's proportionate share of the net pension liability of NYSLERS based on the April 1, 2017 and April 1, 2016 actuarial valuations, rolled forward to March 31, 2018 and March 31, 2017, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYSLERS	
	March 31, 2018	March 31, 2017
	($ in thousands)	
MTA's proportion of the net pension liability	0.327%	0.311%
MTA's proportionate share of the net pension liability	$ 10,553	$ 29,239

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, 2018 and 2017 and to NYSLERS for the plan's fiscal year-end March 31, 2018 and 2017, 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, 2018**			**June 30, 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%)
NYCERS	$ 6,402,891	$ 4,176,941	$ 2,298,962	$ 7,231,780	$ 5,003,811	$ 3,046,531

Measurement Date:	**March 31, 2018**			**March 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%)
NYSLERS	$ 79,847	$ 10,553	$ (48,067)	$ 93,385	$ 29,239	$ (24,995)

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

For the nine-month period ended September 30, 2019 and year ended December 31, 2018, the MTA recognized pension expense related to each pension plan as follows (in $ thousands):

Pension Plan	**September 30, 2019**	**December 31, 2018**
	(Unaudited)	
Additional Plan	$ 44,775	$ 47,936
MaBSTOA Plan	146,413	116,967
MNR Cash Balance plan	-	16
MTA Defined Benefit Plan	238,212	316,900
NYCERS	594,456	510,157
NYSLERS	10,876	13,885
Total	**$ 1,034,732**	**$ 1,005,861**

For the nine-month period ended September 30, 2019 and year ended December 31, 2018, the MTA reported deferred outflow of resources and deferred inflow of resources for each pension plan as follows (in $ thousands):

For the Period Ended September 30, 2019 (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	$ -	$ -	$ 19,549	$ 36,673	$ -	$ -	$ 141,294	$ 23,748
Changes in assumptions	-	-	5,370	-	-	-	9,406	46,880
Net difference between projected and actual earnings on pension plan investments	-	22,499	-	83,734	16	2	-	112,897
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	50,989	50,989
Employer contributions to the plan subsequent to the measurement of net pension liability	59,500	-	204,689	-	5	-	343,344	-
Total	$ 59,500	$ 22,499	$ 229,608	$ 120,407	$ 21	$ 2	$ 545,033	$ 234,514

For the Period Ended September 30, 2019 (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	$ -	$ 403,424	$ 3,763	$ 3,110	$ 164,606	$ 466,955
Changes in assumptions	63,653	-	6,998	-	85,427	46,880
Net difference between projected and actual earnings on pension plan investments	-	234,268	-	14,927	16	468,327
Changes in proportion and differences between contributions and proportionate share of contributions	46,817	36,998	3,363	66	101,169	88,053
Employer contributions to the plan subsequent to the measurement of net pension liability	512,824	-	14,501	-	1,134,863	-
Total	$ 623,294	$ 674,690	$ 28,625	$ 18,103	$ 1,486,081	$ 1,070,215

For the Year Ended December 31, 2018	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	$ -	$ -	$ 19,549	$ 36,673	$ -	$ -	$ 141,294	$ 23,748
Changes in assumptions	-	-	5,370	-	-	-	9,406	46,880
Net difference between projected and actual earnings on pension plan investments	-	22,499	-	83,734	16	2	-	112,897
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	50,989	50,989
Employer contributions to the plan subsequent to the measurement of net pension liability	59,500	-	205,433	-	5	-	339,800	-
Total	$ 59,500	$ 22,499	$ 230,352	$ 120,407	$ 21	$ 2	$ 541,489	$ 234,514

For the Year Ended December 31, 2018	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	$ -	$ 403,424	$ 3,763	$ 3,110	$ 164,606	$ 466,955
Changes in assumptions	63,653	-	6,998	-	85,427	46,880
Net difference between projected and actual earnings on pension plan investments	-	234,268	-	14,927	16	468,327
Changes in proportion and differences between contributions and proportionate share of contributions	46,817	36,998	3,363	66	101,169	88,053
Employer contributions to the plan subsequent to the measurement of net pension liability	426,474	-	14,501	-	1,045,713	-
Total	$ 536,944	$ 674,690	$ 28,625	$ 18,103	$ 1,396,931	$ 1,070,215

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	6.30
MNR Cash Balance Plan	1.00	N/A	1.00
MTA Defined Benefit Plan	8.10	8.10	8.10
NYCERS	6.01	6.01	6.01
NYSLERS	5.00	5.00	5.00

For the nine-month period ended September 30, 2019 and year ended December 31, 2018, $1,134.9 and $1,045.7 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, 2019 and December 31, 2018, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2018 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)			
2019	$ 1,989	$ (4,711)	$ 5	$ 25,730	$ 29,753	$ 3,386	$ 56,152
2020	(1,713)	(13,424)	7	6,224	(133,502)	2,884	(139,524)
2021	(12,173)	(50,126)	2	(45,688)	(259,448)	(7,083)	(374,516)
2022	(10,602)	(32,481)	-	(39,989)	(116,871)	(3,166)	(203,109)
2023	-	3,856	-	13,351	(83,319)	-	(66,112)
Thereafter	-	1,398	-	7,547	(833)	-	8,112
	$ (22,499)	$ (95,488)	$ 14	$ (32,825)	$ (564,220)	$ (3,979)	$ (718,997)

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 $18,500 dollars or $24,500 dollars for those over age 50 for the year ended December 31, 2018.

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 - 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 members shall vest in the amount in the member's account attributable to the matching contributions and basic contributions as follows:

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

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

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

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

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

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

i. Completing 5 years of service,

ii. Attaining the Normal Retirement Age of 62 while in continuous employment, or

iii. Death while in continuous employment.

Additional Deposits (Incoming Rollover or Transfers) - Participants in the Deferred Compensation Program are eligible to roll over both their before-tax and after-tax assets from other eligible retirement plans into the 401(k) and 457 Plans. Under certain conditions, both Plans accept 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, 2018	December 31, 2017
	(In thousands)	
Employer 401K contributions	$ 4,392	$ 4,109

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 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 year-ended December 31, 2018, the MTA paid $696.1 of PAYGO to the OPEB Plan.

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 2017 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, 2017 and December 31, 2016, the measurement dates, are 3.44% and 3.78%, 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 year ended December 31, 2017, the employer made a cash payment for retiree healthcare of $71,101 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	**2017 Retirees**
(in thousands)	
Total blended premiums	$579,893
Employment payment for retiree healthcare	71,101
Net Payments	$650,994

(2) Actuarial Assumptions

Actuarial valuation involve 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, 2017, the measurement date. 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
Measurement date	December 31, 2017
Discount rate	3.44%, net of expenses
Inflation	2.50%
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll
Normal cost increase factor	4.50%
Investment rate of return	6.50%
Salary increases	3%. Varies by years of service and differs for members of the various pension plans

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. The NYSHIP trend reflects actual increases in premiums to participating agencies through 2018. 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.

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, 2018, the MTA reported a net OPEB liability of $20,335. The MTA's net OPEB liability was measured as of the OPEB Plan's fiscal year-end of December 31, 2017. 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, 2017.

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 are 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%	1.96%
Global bonds	15.0%	0.34%
Emerging markets bonds	5.0%	3.30%
Global equity	35.0%	4.99%
Non-U.S. equity	15.0%	5.84%
Global REITs	5.0%	5.62%
Hedge funds - multistrategy	12.0%	3.35%
Total	100%	
Assumed Inflation - Mean		2.50%
Assumed Inflation - Standard Deviation		1.85%
Portfolio Nominal Mean return		6.29%
Portfolio Standard Deviation		11.37%
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, 2017 of 3.44%.

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

	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)
Administrative expenses	-	0	0
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 of 3.44%, 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:

	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 current healthcare cost trend rates, 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:

	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 nine-month period ended September 30, 2019 and year ended December 31, 2018, the MTA recognized OPEB expense of $483 and $1.75 billion, respectively.

At September 30, 2019 and December 31, 2018, the MTA reported deferred outflows of resources and deferred inflows of resources related to OPEB as follows ($ in thousands)**:**

	September 30, 2019		December 31, 2018	
	Deferred Outflows of Resources	**Deferred Inflows of Resources**	**Deferred Outflows of Resources**	**Deferred Inflows of Resources**
Differences between expected and actual experience	$11,767	$-	$11,767	$-
Changes of assumptions	788,294	-	788,294	-
Net difference between projected and actual earnings on OPEB plan investments	-	21,101	-	21,101
Employer contributions to the plan subsequent to the measurement of net OPEB liability	720,627	-	696,065	-
Total	**$1,520,688**	**$21,101**	**$1,496,126**	**$21,101**

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 nine-month period ended September 30, 2019 and year ended December 31, 2018, $720.6 and $696.1 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, 2019. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB at December 31, 2018 will be recognized in OPEB expense as follows (in thousands):

Year ended December 31, :	
2019	$119,734
2020	119,734
2021	119,734
2022	119,734
2023	125,010
Thereafter	175,014
	$778,960

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, 2017, December 31, 2018 and September 30, 2019 (in millions):

	Balance December 31, 2017	Additions / Reclassifications	Deletions / Reclassifications	Balance December 31, 2018	Additions / Reclassifications (Unaudited)	Deletions / Reclassifications (Unaudited)	Balance September 30, 2019 (Unaudited)
Capital assets not being depreciated:							
Land	$ 217	$ -	$ -	$ 217	$ 3	$ -	$ 220
Construction work-in-progress	16,978	7,528	6,454	18,052	5,179	3,351	19,880
Total capital assets not being depreciated	17,195	7,528	6,454	18,269	5,182	3,351	20,100
Capital assets being depreciated:							
Buildings and structures	17,716	746	5	18,457	284	-	18,741
Bridges and tunnels	3,604	550	-	4,154	30	-	4,184
Equipment:							
Passenger cars and locomotives	13,860	303	785	13,378	322	-	13,700
Buses	3,613	321	126	3,808	413	575	3,646
Infrastructure	23,834	2,438	14	26,258	864	-	27,122
Other	22,706	1,825	12	24,519	1,205	9	25,715
Total capital assets being depreciated	85,333	6,183	942	90,574	3,118	584	93,108
Less accumulated depreciation:							
Buildings and structures	6,923	495	4	7,414	388	-	7,802
Bridges and tunnels	783	23	-	806	18	-	824
Equipment:							
Passenger cars and locomotives	7,206	397	660	6,943	322	-	7,265
Buses	2,216	233	126	2,323	166	575	1,914
Infrastructure	9,286	803	17	10,072	573	-	10,645
Other	8,054	728	8	8,774	668	8	9,434
Total accumulated depreciation	34,468	2,679	815	36,332	2,135	583	37,884
Total capital assets being depreciated - net	50,865	3,504	127	54,242	983	1	55,224
Capital assets - net	$ 68,060	$ 11,032	$ 6,581	$ 72,511	$ 6,165	$ 3,352	$ 75,324

Interest capitalized in conjunction with the construction of capital assets for the periods ended September 30, 2019 and December 31, 2018 was $28.5 and $49.3, respectively.

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 September 30, 2019 and December 31, 2018, these securities, which are not included in these financial statements, totaled $97.4 and $81.7, respectively, and had a market value of $72.8 and $53.2, respectively.

7. LONG-TERM DEBT

(In millions)	Original Issuance	December 31, 2018	Issued	Retired	September 30, 2019
MTA:			(Unaudited)		(Unaudited)
Transportation Revenue Bonds					
1.37%–6.68% due through 2057	$ 37,300	$ 20,923	$ 1,354	$ -	$ 22,277
Bond Anticipation Notes*					
2.3% due through 2022	12,261	4,007	4,655	1,954	6,708
State Service Contract Bonds					
4.125%–5.70% due through 2031	2,395	-	-	-	-
Dedicated Tax Fund Bonds					
2.05%–5.00% due through 2057	11,039	5,184	-	-	5,184
	62,995	30,114	6,009	1,954	34,169
Net unamortized bond premium	-	1,559	457	273	1,743
	62,995	**31,673**	**6,466**	**2,227**	**35,912**
TBTA:					
General Revenue Bonds					
1.81%–4.18% due through 2047	16,932	7,663	252	144	7,771
Bond Anticipation Notes					
5.77% due through 2032	400	-	-	-	-
Subordinate Revenue Bonds					
3.13%-5.34% due through 2032	4,066	1,022	-	19	1,003
	21,398	8,685	252	163	8,774
Net unamortized bond premium	-	626	31	57	600
	21,398	**9,311**	**283**	**220**	**9,374**
MTA Hudson Rail Yards Trust:					
MTA Hudson Rail Yards Trust Obligations					
1.88%–2.65% due through 2056	1,057	1,057	-	173	884
Net unamortized bond premium	-	128	-	19	109
	1,057	**1,185**	**-**	**192**	**993**
Total	**$ 85,450**	**$ 42,169**	**$ 6,749**	**$ 2,639**	**$ 46,279**
Current portion		$ 2,552			$ 1,071
Long-term portion		$ 39,617			$ 45,208

* 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 will be evidenced by revenue anticipation notes ("RANs"). As of September 30, 2019 and December 31, 2018, the outstanding RAN was $8 and $7, respectively.

(In millions)	Original Issuance	December 31, 2017	Issued	Retired	December 31, 2018
MTA:					
Transportation Revenue Bonds					
1.37%–6.68% due through 2057	$ 36,369	$ 21,028	$ 680	$ 785	$ 20,923
Bond Anticipation Notes					
5.0% due through 2021*	7,607	1,516	3,003	512	4,007
State Service Contract Bonds					
4.125%–5.70% due through 2031	2,395	68	-	68	-
Dedicated Tax Fund Bonds					
2.05%–5.00% due through 2057	11,039	5,371	-	187	5,184
	57,410	27,983	3,683	1,552	30,114
Net unamortized bond premium	-	1,578	279	298	1,559
	57,410	**29,561**	**3,962**	**1,850**	**31,673**
TBTA:					
General Revenue Bonds					
4.00%–5.77% due through 2050	16,680	7,218	1,055	610	7,663
Bond Anticipation Notes					
5.77% due through 2032	400	165	-	165	-
Subordinate Revenue Bonds					
4.00%-5.77% due through 2032	4,066	1,386	-	364	1,022
	21,146	8,769	1,055	1,139	8,685
Net unamortized bond premium	-	581	129	84	626
	21,146	**9,350**	**1,184**	**1,223**	**9,311**
MTA Hudson Rail Yards Trust:					
MTA Hudson Rail Yards Trust Obligations					
1.88%–2.65% due through 2056	1,057	1,057	-	-	1,057
Net unamortized bond premium	-	130	-	2	128
	1,057	**1,187**	**-**	**2**	**1,185**
Total	**$ 79,613**	**$ 40,098**	**$ 5,146**	**$ 3,075**	**$ 42,169**
Current portion		$ 1,806			$ 2,552
Long-term portion		$ 38,292			$ 39,617

* Includes draws on a $700 taxable revolving credit agreement with JPMorgan Chase Bank, National Association, which is active through August 24, 2022. Draws under the JPMorgan Chase Agreement will be evidenced by revenue anticipation notes ("RANs"). As of December 31, 2018 and 2017, the outstanding RAN was $17 and $7, respectively.

MTA Transportation Revenue Bonds — Prior to 2019, MTA issued sixty-two 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 $31,891. The Transportation Revenue Bonds are MTA's special obligations payable solely from transit and commuter systems revenues and certain state and local operating subsidies.

On February 6, 2019, MTA issued $454 Transportation Revenue Green Bonds, Series 2019A. Proceeds from the transaction were used to pay off the existing outstanding 2017C-1 Transportation Revenue Bond Anticipation Notes in the amount of $500. The Series 2019A bonds were issued through a competitive bidding process as $191 Subseries 2019A- 1, $163 Subseries 2019A-2, and $100 Subseries 2019A-3. The Subseries 2019A-1 bonds were issued as mandatory tender bonds with an initial purchase date of November 15, 2024. The Subseries 2019A-2 and 2019A-3 bonds were issued as fixed rate tax-exempt bonds with final maturities of November 15, 2045, and November 15, 2046, respectively.

On March 28, 2019, MTA effectuated a mandatory tender and remarketed $50 MTA Transportation Revenue Bonds, Subseries 2012A-3 because its current interest rate period expired by its terms. The Series 2012A-3 Bonds were remarketed in Term Rate Mode as Floating Rate Tender Notes ("FRNs") with a purchase date of March 1, 2022 and with an interest rate of SIFMA plus 0.50%.

On May 1, 2019, MTA drew $300 on the Railroad Rehabilitation and Improvement Financing loan ("RRIF Loan") to finance the positive train control project for MTA Long Island Railroad and MTA Metro-North Railroad. The current principal amount outstanding on the Transportation Revenue Bond, Series 2015X is $441 as the first draw on the RRIF Loan (Series 2015X-1) was on September 20, 2016 in the amount of $146. MTA originally entered into a Financing Agreement with the Federal Railroad Administrator, acting on behalf of the United States Secretary of Transportation, on May 5, 2015 to establish the RRIF Loan which is not to exceed $967.

On May 14, 2019, MTA issued $177.185 Transportation Revenue Green Bonds, Series 2019B (Climate Bond Certified). Proceeds from the transaction were used to retire the existing outstanding $200 Transportation Revenue Bond Anticipation Notes, Series 2017C-2. The Series 2019B bonds were issued as fixed rate tax-exempt bonds with a final maturity of November 15, 2052.

On June 3, 2019, MTA effectuated a mandatory tender and remarketed $50 MTA Transportation Revenue Variable Rate Bonds, Subseries 2012A-2 because its current interest rate period was set to expire by its terms. The Subseries 2012A-2 bonds were remarketed as Variable Interest Rate Obligations in Weekly Mode supported by an irrevocable direct-pay Letter of Credit (LOC) issued by Bank of Montreal. The LOC will expire on June 2, 2022.

On August 14, 2019, MTA issued $422 Transportation Revenue Green Bonds, Series 2019C (Climate Bond Certified). Proceeds from the transaction were used to retire the existing outstanding MTA Transportation Revenue Bond Anticipation Notes, Series 2018A. The Series 2019C bonds were issued as fixed rate tax-exempt bonds with a final maturity of November 15, 2049.

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

On February 6, 2019, MTA issued $750 MTA Transportation Revenue Bond Anticipation Notes, Series 2019A to generate new money proceeds to finance existing approved transit and commuter projects and to retire the outstanding Taxable Revenue Anticipation Note. The Series 2019A Notes were priced through a competitive method of sale. The Series 2019A Notes were issued as fixed rate tax-exempt notes with a final maturity of February 3, 2020.

On May 22, 2019, MTA issued $1,200 MTA Transportation Revenue Bond Anticipation Notes, Series 2019B to generate new money proceeds to finance existing approved transit and commuter projects. The Series 2019B Notes were priced through a competitive method of sale. The Series 2019B Notes were issued as fixed rate tax-exempt notes with a final maturity of May 15, 2022.

On July 12, 2019, MTA issued $300 MTA Transportation Revenue Bond Anticipation Notes, Series 2019C to generate new money proceeds to finance existing approved transit and commuter projects related to the State funding commitment for the 2015-2019 Capital Program. The Series 2019C Notes were issued as fixed rate tax-exempt notes with a final maturity of July 1, 2020.

On September 6, 2019, MTA issued $1,200 MTA Transportation Revenue Bond Anticipation Notes, Series 2019D to generate new money proceeds to finance existing approved transit and commuter projects, $200 which is related to the State funding commitment for the 2015-2019 Capital Program. The Series 2019D Notes were issued as fixed rate tax-exempt notes with a final maturity of September 1, 2022. The Series 2019D Notes were issued as $1,000 Subseries 2019D-1 and $200 Subseries 2019D-2.

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 2019, 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 2019, MTA issued twenty-two Series of Dedicated Tax Fund Bonds secured under its Dedicated Tax Fund Obligation Resolution adopted on March 26, 2002, in the aggregate principal amount of $9,769. The Dedicated Tax Fund Bonds are MTA's special obligations payable solely from monies held in the Pledged Amounts Account of the MTA Dedicated Tax Fund. State law requires that the MTTF revenues and MMTOA revenues (described above in Note 2 under "Nonoperating Revenues") be deposited, subject to appropriation by the State Legislature, into the MTA Dedicated Tax Fund.

On March 19, 2019, MTA issued $750 MTA Dedicated Tax Fund Bond Anticipation Notes, Series 2019A to generate new money proceeds to finance existing approved transit and commuter projects. The Series 2019A Notes were priced through a competitive method of sale. The Series 2019A Notes were issued as fixed rate tax-exempt notes with a final maturity of March 1, 2022..

MTA Certificates of Participation — Prior to 2019, 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 Capital Construction, 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 2019, MTA Bridges and Tunnels issued thirty- one 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 $12,899. 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 May 23, 2019, MTA issued $150 Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2019A to finance bridge and tunnel capital projects. The Series 2019A bonds were issued as tax-exempt fixed rate bonds with a final maturity of November 15, 2049.

On September 30, 2019, MTA issued $102 Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds, Series 2019B. The Series 2019B bonds were issued as taxable fixed rate bonds with a final maturity of November 15, 2044. Proceeds from the transaction were used to refund $101 Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Series 2001B.

MTA Bridges and Tunnels Subordinate Revenue Bonds — Prior to 2019, 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 $34,849. The MTA expects that the current statutory ceiling will allow it to fulfill the bonding requirements of the approved Capital Programs.

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

At September 30, 2019 and December 31, 2018, the following amounts of MTA bonds, which have been refunded, remain valid debt instruments and are secured solely by and payable solely from their respective irrevocable trusts.

(In millions)	September 30, 2019 (Unaudited)	December 31, 2018
MTA Transit and Commuter Facilities:		
Transit Facilities Revenue Bonds	$ 148	$ 169
Commuter Facilities Revenue Bonds	150	172
Dedicated Tax Fund Bonds	22	42
MTA Bridges and Tunnels:		
General Purpose Revenue Bonds	628	674
Special Obligation Subordinate Bonds	89	102
Total	$ 1,037	$ 1,159

For the nine months ended September 30, 2019, MTA did not have any refunding transactions. For the nine months ended September 30, 2018, MTA refunding transactions decreased aggregate debt service payments by $25 and provided an economic gain of $49. Details of bond refunding savings as of December 31, 2018 are as follows:

Bonds Refunded in 2018 (In millions)	**Series**	**Date issued**	**Par value Refunded**	**Debt Service Savings**	**Net Present Value of Savings**
Transportation Revenue Bonds	TRB 2018B	08/23/2018	$ 207	$ 30	$ 28
MTA Bridges and Tunnels General Revenue Bonds	TBTA 2018B	08/30/2018	270	80	62
	TBTA 2018C	08/30/2018	159	(5)	21
			429	75	83
Total Bond Refunding Savings			$ 636	$ 105	$ 111

For the nine-month periods ended September 30, 2019 and 2018, the accounting loss on bond refundings totaled $0 and the accounting loss on bond refundings totaled $2, respectively.

Unamortized losses related to bond refundings were as follows:

(In millions)	**December 31, 2017**	**(Gain)/loss on refunding**	**2017 amortization**	**December 31, 2018**	**(Gain)/loss on refunding**	**Current year amortization**	**September 30, 2019**
					(Unaudited)	(Unaudited)	(Unaudited)
MTA:							
Transportation Revenue Bonds	$ 728	$ (2)	$ (56)	$ 670	$ -	$ (60)	$ 610
State Service Contract Bonds	(10)	-	(2)	(12)	-	-	(12)
Dedicated Tax Fund Bonds	254	-	(16)	238	-	(12)	226
	972	(2)	(74)	896	-	(72)	824
TBTA:							
General Revenue Bonds	233	1	(25)	209	-	(12)	197
Subordinate Revenue Bonds	30	-	3	33	-	(3)	30
	263	1	(22)	242	-	(15)	227
Total	$ 1,235	$ (1)	$ (96)	$ 1,138	$ -	$ (87)	$ 1,051

Debt Service Payments — Future principal and interest debt service payments at September 30, 2019 are as follows (in millions):

(Unaudited)	**MTA**		**MTA BRIDGES AND TUNNELS**		**Debt Service**	
	Principal	**Interest**	**Principal**	**Interest**	**Principal**	**Interest**
2019	$ 767	$ 1,471	$ 304	$ 157	$ 1,071	$ 1,628
2020	3,397	1,407	266	333	3,663	1,740
2021	1,992	1,296	317	318	2,309	1,614
2022	3,562	1,230	329	304	3,891	1,534
2023	975	1,148	355	289	1,330	1,437
2024-2028	5,284	4,355	2,100	1,167	7,384	5,522
2029-2033	6,332	3,219	2,314	698	8,646	3,917
2034-2038	5,479	2,211	1,346	399	6,825	2,610
2039-2043	3,579	1,160	711	135	4,290	1,295
2044-2048	2,073	477	687	30	2,760	507
2049-2053	987	160	45	1	1,032	161
2054-2058	626	29	-	-	626	29
Thereafter	-	-	-	-	-	-
Total	$ 35,053	$ 18,163	$ 8,774	$ 3,831	$ 43,827	$ 21,994

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 September 30, 2019 are as follows (in millions):

Year	(Unaudited)	Principal	Interest	Total
2019		$ 11	$ 1	$ 12
2020		15	2	17
2021		15	2	17
2022		13	2	15
2023		11	2	13
2024-2028		37	3	40
2029-2033		21	1	22
2034-2038		3	0	3
Total		$ 126	$ 13	$ 139

Current portion	$ 13
Long-term portion	113
Total NYPA Loans Payable	$ 126

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

Tax Rebate Liability — Under the Internal Revenue Code of 1986, the MTA may accrue a liability for an amount of rebateable arbitrage resulting from investing low-yielding, tax-exempt bond proceeds in higher-yielding, taxable securities. The arbitrage liability is payable to the federal government every five years. No accruals or payments were made during the periods ended September 30, 2019 and December 31, 2018.

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-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	TD Bank, N.A.	LOC	1/28/2020
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

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 September 30, 2019 and December 31, 2018, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2018 are as follows (in $ millions):

Derivative Instruments - Summary Information as of September 30, 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	2005B-[2,3,4]	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	567.900	(111.574)
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	$ 189.300	$ (37.191)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	22.650	(3.023)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	21.275	(1.490)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	324.670	(50.206)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(74.485)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	365.860	(76.203)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	356.775	(97.833)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	112.730	(9.018)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	84.520	(17.304)
					Total	**$ 2,245.680**	**$ (478.327)**

Derivative Instruments - Summary Information as of December 31, 2018

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							
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	$ 190.300	$ (24.025)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	570.900	(72.074)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	22.650	(2.339)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	40.275	(1.326)
MTA Bridges and Tunnels Subordinate Revenue Bonds	2000ABCD	SIFMA Fixed Payer	Cash Flow	Synthetic Instrument	8/12/1998	11.150	(0.264)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	324.670	(36.330)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(55.474)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	365.860	(53.882)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	356.775	(66.854)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	127.660	(7.869)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	69.590	(12.498)
					Total	**$ 2,279.830**	**$ (332.935)**

	Changes In Fair Value		Fair Value at September 30, 2019		
	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	$(145.393)	Debt	$(478.327)	$2,245.680

Swap Agreements Relating to Synthetic Fixed Rate Debt

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

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

Terms and Fair Values. The terms, fair values and counterparties of the outstanding swaps of MTA and MTA Bridges and Tunnels are reflected in the following tables (as of September 30, 2019).

Metropolitan Transportation Authority						
Related Bonds	**Notional Amount as of 9/30/19 (Unaudited)**	**Effective Date**	**Maturity Date**	**Terms**	**Counterparty and Ratings(S&P / Moody's / Fitch)**	**Fair Value as of 9/30/19 (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)	$ (74.485)
TRB 2005D & 2005E	274.395	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(57.152)
TRB 2005E	91.465	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products [(1)] (BBB+ / Baa1 / BBB+)	(19.051)
TRB 2012G	356.775	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(97.833)
DTF 2008A	324.670	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(50.206)
Total	**$ 1,247.305**					**$ (298.727)**

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

MTA Bridges and Tunnels						
Related Bonds	**Notional Amount as of 9/30/19 (Unaudited)**	**Effective Date**	**Maturity Date**	**Terms**	**Counterparty and Ratings (S&P / Moody's / Fitch)**	**Fair Value as of 9/30/19 (Unaudited)**
TBTA 2002F & 2003B-2	$ 189.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / Aa3 / A+)	$ (37.191)
TBTA 2005B-2	189.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa2 / AA)	(37.191)
TBTA 2005B-3	189.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas US Wholesale Holdings, Corp. [(1)] (A+ / Aa3 / A+)	(37.192)
TBTA 2005B-4	189.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / Aa3 / AA-)	(37.191)
TRB 2002G-1 & 2011B TBTA 2005A & 2001C [2]	120.588 [3]	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA-)	(15.418) [3]
TRB 2002G-1 & 2011B TBTA 2005A & 2001C [2]	120.587 [3]	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (A+ / Aa2 / AA-)	(15.417) [3]
Total	**$ 998.375**					**$ (179.600)**

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 September 30, 2019, all of the valuations were in liability positions to MTA and MTA Bridges and Tunnels; accordingly, no collateral was posted by any of the counterparties.

The following table shows, as of September 30, 2019, 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	$746,075	33.22%
UBS AG	A+	Aa3	AA-	463,695	20.65
The Bank of New York Mellon	AA-	Aa2	AA	324,670	14.46
Citibank, N.A.	A+	Aa3	A+	189,300	8.43
BNP Paribas US Wholesale Hodings, Corp..	A+	Aa3	A+	189,300	8.43
U.S. Bank National Association	AA-	A1	AA-	120,588	5.37
Wells Fargo Bank, N.A.	A+	Aa2	AA-	120,587	5.37
AIG Financial Products Corp.	BBB+	Baa1	BBB+	91,465	4.07
Total				**$2,245,680**	**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.	BelowBaa2 (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, 2035	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 September 30, 2019, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was ($256.505); as of this date, the MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of September 30, 2019, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was ($180.529); 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

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

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	**Variable-Rate Bonds**			
September 30, 2019	**Principal**	**Interest**	**Net Swap Payments**	**Total**
2019	55.6	48.6	(5.2)	99.0
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)	101.4
2023	65.7	40.1	(4.1)	101.6
2024-2028	328.7	173.3	(15.5)	486.6
2029-2033	790.8	423.2	(6.5)	1,207.6
2034-2038	108.4	22.7	(1.1)	130.1

MTA Bridges and Tunnels (in millions)				
Period Ended	**Variable-Rate Bonds**			
September 30, 2019	**Principal**	**Interest**	**Net Swap Payments**	**Total**
2019	43.4	38.0	(6.9)	74.5
2020	25.4	37.0	(6.9)	55.6
2021	26.6	36.0	(6.8)	55.8
2022	27.6	34.9	(6.8)	55.7
2023	28.6	33.8	(6.8)	55.6
2024-2028	201.9	144.5	(32.0)	314.4
2029-2033	644.2	43.2	(10.1)	677.3
2034-2038	-	2.5	-	2.5

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 September 30, 2019, the market value of total collateral funds was $38.5.

On January 12, 2009, MTA provided a short-term U.S.Treasury debt obligation as additional collateral in addition to the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 29, 2003. From time to time, additional collateral has been required to be added such that the total market value of the securities being held as additional collateral are expected to be sufficient to pay the remainder of the regularly scheduled lease rent payments under the lease. As of September 30, 2019, the market value of total collateral funds was $54.3.

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 September 30, 2019 (unaudited):

Year	ERY	WRY	Total
2019	$ 5	$ 4	$ 9
2020	19	16	35
2021	19	32	51
2022	19	33	52
2023	19	33	52
Thereafter	868	1,525	2,393
Total	**$ 949**	**$ 1,643**	**$ 2,592**

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 September 30, 2019, for the MTA New York City Transit, MTA Bridges and Tunnels and MTA (including MTA Bus, MTA Capital Construction Company and MTA Business Service Center) were 57.6%, 7.5% and 34.9%, 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 Capital Construction, and MTAHQ.

MTA reflected a capital lease obligation as of September 30, 2019 and December 31, 2018 of $234 and $234, respectively. The MTA made rent payments of $21 and $25 for the period ended September 30, 2019 and December 31, 2018, 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 2018, the total of the rental payments charged to MTA New York City Transit and MTA Bridges and Tunnels was $4.52 and $1.84 less, respectively, than the lease payment made by MTA on behalf of MTA New York City Transit and MTA Bridges and Tunnels.

The adjusted capital lease for the aforementioned building is being amortized over the remaining life of the lease. The cost of the building and related accumulated amortization at September 30, 2019 and December 31, 2018, is as follows (in millions):

	September 30, 2019 (Unaudited)	December 31, 2018
Capital lease - building	$196	$196
Less accumulated amortization	(95)	(92)
Capital lease - building - net	$101	$104

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.

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 $52.6 and $52.8 for the periods ended September 30, 2019 and 2018, respectively.

At September 30, 2019, the future minimum lease payments under non-cancelable leases are as follows (in millions):

Years	**Operating**	**Capital**
	(Unaudited)	
2019	$ 41	$ 24
2020	77	33
2021	75	24
2022	80	75
2023	80	19
2024–2028	416	107
2029–2033	446	557
2034–2038	313	158
2039–2043	275	175
2044–2048	264	174
Thereafter	261	200
Future minimum lease payments	$ 2,328	1,546
Amount representing interest		(1,099)
Total present value of capital lease obligations		447
Less current present value of capital lease obligations		16
Noncurrent present value of capital lease obligations		$ 431

Capital Leases Schedule

For the Period Ended September 30, 2019

Description	**December 31, 2018**	**Increase**	**Decrease**	**September 30, 2019**
		(Unaudited)		(Unaudited)
Sumitomo	$ 15	$ -	$ -	$ 15
Met Life	6	-	-	6
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	39	-	-	39
Bank of America Equity	16	-	-	16
Sumitomo	27	1	-	28
Met Life Equity	55	-	-	55
Grand Central Terminal & Harlem Hudson Railroad Lines	14	-	1	13
2 Broadway Lease Improvement	177	-	-	177
2 Broadway	57	-	-	57
Total MTA Capital Lease	$ 447	$ 1	$ 1	$ 447
Current Portion Obligations under Capital Lease	4			16
Long Term Portion Obligations under Capital Lease	$ 443			$ 431

Capital Leases Schedule

For the Year Ended December 31, 2018

Description	December 31, 2017	Increase	Decrease	December 31, 2018
Sumitomo	$ 15	$ -	$ -	$ 15
Met Life	6	-	-	6
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	37	2	-	39
Bank of America Equity	16	-	-	16
Sumitomo	31	1	5	27
Met Life Equity	52	3	-	55
Grand Central Terminal & Harlem Hudson Railroad Lines	14	-	-	14
2 Broadway Lease Improvement	173	4	-	177
2 Broadway	55	2	-	57
Total MTA Capital Lease	$ 440	$ 12	$ 5	$ 447
Current Portion Obligations under Capital Lease	4			4
Long Term Portion Obligations under Capital Lease	$ 436			$ 443

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 September 30, 2019 and year ended December 31, 2018 is presented below (in millions):

	September 30, 2019 (Unaudited)	December 31, 2018
Balance - beginning of year	$ 4,254	$ 3,851
Activity during the year:		
Current year claims and changes in estimates	604	870
Claims paid	(401)	(467)
Balance - end of year	4,457	4,254
Less current portion	(451)	(454)
Long-term liability	$ 4,006	$ 3,800

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 $6 and $4 for the periods ended September 30, 2019 and 2018, respectively. A summary of the activity in pollution remediation liability at September 30, 2019 and December 31, 2018 were as follows:

	September 30, 2019 (Unaudited)	December 31, 2018
Balance at beginning of year	$ 139	$ 79
Current year expenses/changes in estimates	6	106
Current year payments	(5)	(46)
Balance at end of year	140	139
Less current portion	30	31
Long-term liability	$ 110	$ 108

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. CURRENT AND NON-CURRENT LIABILITIES

Changes in the activity of current and non-current liabilities for the periods ended September 30, 2019 and December 31, 2018 are presented below:

	Balance December 31, 2017	Additions	Reductions	Balance December 31, 2018	Additions (Unaudited)	Reductions (Unaudited)	Balance September 30, 2019 (Unaudited)
Current liabilities:							
Accounts payable	$ 607	$ -	$ (137)	$ 470	$ 56	$ -	$ 526
Interest	204	6	-	210	420	-	630
Salaries, wages and payroll taxes	307	20	-	327	31	-	358
Vacation and sick pay benefits	988	32	-	1,020	22	-	1,042
Current portion — retirement and death benefits	14	2	-	16	21	-	37
Capital accrual	412	325	-	737	-	(344)	393
Unearned premiums	255	9	-	264	-	(49)	215
Other accrued expenses	606	87	-	693	10	-	703
Unearned revenues	594	210	-	804	-	(18)	786
Total current liabilities	**$ 3,987**	**$ 691**	**$ (137)**	**$ 4,541**	**$ 560**	**$ (411)**	**$ 4,690**
Non-current liabilities:							
Contract retainage payable	$ 376	$ 30	$ -	406	$ 20	$ -	$ 426
Other long-term liabilities	347	29	-	376	-	(26)	350
Total non-current liabilities	**$ 723**	**$ 59**	**$ -**	**$ 782**	**$ 20**	**$ (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	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Macquarie Energy LLC	Goldman Sachs
Trade Date	10/26/2017	11/29/2017	12/27/2017	1/31/2018	2/28/2018	3/28/2018	4/24/2018	5/29/2018
Effective Date	10/1/2018	11/1/2018	12/1/2018	1/1/2019	2/1/2019	3/1/2019	4/1/2019	5/1/2019
Termination Date	9/30/2019	10/31/2019	11/30/2019	12/31/2019	1/31/2020	2/29/2020	3/31/2020	4/30/2020
Price/Gal	$1.7635	$1.8520	$1.9050	$1.9570	$1.8815	$1.9805	$2.0795	$2.1590
Original Notional Quantity	2,612,515	2,870,561	2,870,574	2,870,565	2,786,237	2,853,500	2,799,258	2,841,090

Counterparty	Goldman Sachs	BOA_ Merrill	Goldman Sachs	Goldman Sachs	Cargill	BOA_ Merrill	BOA_ Merrill	Cargill
Trade Date	6/26/2018	7/31/2018	8/29/2018	9/25/2018	10/30/2018	11/27/2018	1/3/2019	1/29/2019
Effective Date	6/1/2019	7/1/2019	8/1/2019	9/1/2019	10/1/2019	11/1/2019	12/1/2019	1/1/2020
Termination Date	5/31/2020	6/30/2020	7/31/2020	8/31/2020	9/30/2020	10/31/2020	11/30/2020	12/31/2020
Price/Gal	$2.1755	$2.1730	$2.2145	$2.2885	$2.2455	$1.9213	$1.7885	$1.9390
Original Notional Quantity	2,841,069	2,820,856	2,831,924	2,831,922	2,831,934	3,023,197	2,856,019	2,856,014

Counterparty	Cargill	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Goldman Sachs	Macquarie Energy LLC	BOA_ Merrill
Trade Date	2/28/2019	3/28/2019	4/30/2019	5/28/2019	6/25/2019	7/30/2019	8/27/2019	9/30/2019
Effective Date	2/1/2020	3/1/2020	4/1/2020	5/1/2020	6/1/2020	7/1/2020	8/1/2020	9/1/2020
Termination Date	1/31/2021	2/28/2021	3/31/2021	4/30/2021	5/31/2021	6/30/2021	7/31/2021	8/31/2021
Price/Gal	$2.0518	$2.0045	$2.0650	$1.9675	$1.9200	$1.8875	$1.7790	$1.8075
Original Notional Quantity	2,793,123	2,849,714	2,874,889	2,851,286	2,851,258	2,788,533	2,842,790	2,844,946

The monthly settlements are based on the daily prices of the respective commodities whereby MTA will either receive a payment, or make a payment to the various counterparties depending on the average monthly price of the commodities in relation to the contract prices. At a contract's termination date, the MTA will take delivery of the fuel. As of September 30, 2019, the total outstanding notional value of the ULSD contracts was 52.4 million gallons with a negative fair market value of $9.3 (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).

September 30, 2019 (Unaudited)	MTA	Metro - North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	$ 8,242	$ 208	$ 215	$ 608	$ 998	$ (287)	$ 9,984
Capital assets	11,618	5,282	7,401	44,461	6,562	-	75,324
Other Assets	12,484	5	-	1	467	(11,927)	1,030
Intercompany receivables	1,804	89	177	517	32	(2,619)	-
Deferred outflows of resources	1,601	320	431	1,871	506	(197)	4,532
Total assets and deferred outflows of resources	**$ 35,749**	**$ 5,904**	**$ 8,224**	**$ 47,458**	**$ 8,565**	**$ (15,030)**	**$ 90,870**
Current liabilities	$ 2,945	$ 294	$ 225	$ 2,025	$ 904	$ (113)	$ 6,280
Non-current liabilities	40,188	2,070	3,709	21,774	10,390	(181)	77,950
Intercompany payables	1,603	151	114	902	534	(3,304)	-
Deferred inflows of resources	145	68	88	759	52	-	1,112
Total liabilities and deferred inflows of resources	**$ 44,881**	**$ 2,583**	**$ 4,136**	**$ 25,460**	**$ 11,880**	**$ (3,598)**	**$ 85,342**
Net investment in capital assets	$ (28,734)	$ 5,268	$ 7,402	$ 44,284	$ 2,033	$ (127)	$ 30,126
Restricted	2,608	-	-	-	850	(429)	3,029
Unrestricted	16,994	(1,947)	(3,314)	(22,286)	(6,198)	(10,876)	(27,627)
Total net position	**$ (9,132)**	**$ 3,321**	**$ 4,088**	**$ 21,998**	**$ (3,315)**	**$ (11,432)**	**$ 5,528**
For the period ended September 30, 2019 (Unaudited)							
Fare revenue	$ 174	$ 561	$ 574	$ 3,423	$ -	$ -	$ 4,732
Vehicle toll revenue	-	-	-	-	1,548	-	1,548
Rents, freight and other revenue	57	42	30	352	17	(32)	466
Total operating revenue	**231**	**603**	**604**	**3,775**	**1,565**	**(32)**	**6,746**
Total labor expenses	821	696	836	4,979	189	-	7,521
Total non-labor expenses	332	299	287	1,553	181	(39)	2,613
Depreciation	68	173	300	1,470	124	-	2,135
Total operating expenses	**1,221**	**1,168**	**1,423**	**8,002**	**494**	**(39)**	**12,269**
Operating (deficit) surplus	**(990)**	**(565)**	**(819)**	**(4,227)**	**1,071**	**7**	**(5,523)**
Subsidies and grants	980	90	-	237	7	(79)	1,235
Tax revenue	4,373	-	-	1,704	-	(1,240)	4,837
Interagency subsidy	595	271	420	205	-	(1,491)	-
Interest expense	(866)	-	-	(2)	(213)	(8)	(1,089)
Other	(458)	-	-	5	6	681	234
Total non-operating revenues (expenses)	**4,624**	**361**	**420**	**2,149**	**(200)**	**(2,137)**	**5,217**
Gain (Loss) before appropriations	3,634	(204)	(399)	(2,078)	871	(2,130)	(306)
Appropriations, grants and other receipts externally restricted for capital projects	(1,499)	331	942	1,151	(585)	1,541	1,881
Change in net position	2,135	127	543	(927)	286	(589)	1,575
Net position, beginning of period	(11,267)	3,194	3,545	22,925	(3,601)	(10,843)	3,953
Net position, end of period	**$ (9,132)**	**$ 3,321**	**$ 4,088**	**$ 21,998**	**$ (3,315)**	**$ (11,432)**	**$ 5,528**
For the period ended September 30, 2019 (Unaudited)							
Net cash (used in) / provided by operating activities	$ (893)	$ (308)	$ (484)	$ (2,585)	$ 1,226	$ (5)	$ (3,049)
Net cash provided by / (used in) non-capital financing activities	4,569	402	606	3,074	(593)	(3,254)	4,804
Net cash (used in) / provided by capital and related financing activities	(1,665)	(34)	(21)	(803)	(349)	2,304	(568)
Net cash (used in) / provided by investing activities	(1,979)	(50)	(100)	313	(285)	955	(1,146)
Cash at beginning of period	430	26	9	66	10	-	541
Cash at end of period	**$ 462**	**$ 36**	**$ 10**	**$ 65**	**$ 9**	**$ -**	**$ 582**

December 31, 2018	MTA	Metro-North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	$ 5,337	$ 206	$ 244	$ 633	$ 461	$ (116)	$ 6,765
Capital assets	11,032	5,092	6,826	43,195	6,366	-	72,511
Other Assets	11,825	5	-	-	4	(10,772)	1,062
Intercompany receivables	696	95	153	1,627	730	(3,301)	-
Deferred outflows of resources	1,528	315	435	1,738	487	(143)	4,360
Total assets and deferred outflows of resources	**$ 30,418**	**$ 5,713**	**$ 7,658**	**$ 47,193**	**$ 8,048**	**$ (14,332)**	**$ 84,698**
Current liabilities	$ 4,374	$ 316	$ 272	$ 1,900	$ 836	$ (89)	$ 7,609
Non-current liabilities	34,509	2,070	3,705	21,609	10,249	(120)	72,022
Intercompany payables	2,655	65	48	-	512	(3,280)	-
Deferred inflows of resources	147	68	88	759	52	-	1,114
Total liabilities and deferred inflows of resources	**$ 41,685**	**$ 2,519**	**$ 4,113**	**$ 24,268**	**$ 11,649**	**$ (3,489)**	**$ 80,745**
Net investment in capital assets	$ (26,670)	$ 5,079	$ 6,826	$ 43,018	$ 2,026	$ (279)	$ 30,000
Restricted	1,716	-	-	-	902	(728)	1,890
Unrestricted	13,687	(1,885)	(3,281)	(20,093)	(6,529)	(9,836)	(27,937)
Total net position	**$ (11,267)**	**$ 3,194**	**$ 3,545**	**$ 22,925**	**$ (3,601)**	**$ (10,843)**	**$ 3,953**
For the period ended September 30, 2018 (Unaudited)							
Fare revenue	$ 170	$ 548	$ 551	$ 3,319	$ -	$ -	$ 4,588
Vehicle toll revenue	-	-	-	-	1,471	-	1,471
Rents, freight and other revenue	59	36	30	322	16	(32)	431
Total operating revenue	**229**	**584**	**581**	**3,641**	**1,487**	**(32)**	**6,490**
Total labor expenses	936	744	912	5,647	224	9	8,472
Total non-labor expenses	361	290	290	1,488	184	(43)	2,570
Depreciation	76	172	290	1,366	106	-	2,010
Total operating expenses	**1,373**	**1,206**	**1,492**	**8,501**	**514**	**(34)**	**13,052**
Operating (deficit) surplus	**(1,144)**	**(622)**	**(911)**	**(4,860)**	**973**	**2**	**(6,562)**
Subsidies and grants	1,056	95	-	648	6	(489)	1,316
Tax revenue	4,046	-	-	2,155	-	(1,679)	4,522
Interagency subsidy	543	236	406	191	-	(1,376)	-
Interest expense	(878)	-	-	(2)	(205)	(12)	(1,097)
Other	(1,390)	-	1	3	2	1,525	141
Total non-operating revenues (expenses)	**3,377**	**331**	**407**	**2,995**	**(197)**	**(2,031)**	**4,882**
Gain (Loss) before appropriations	2,233	(291)	(504)	(1,865)	776	(2,029)	(1,680)
Appropriations, grants and other receipts externally restricted for capital projects	(1,729)	290	825	512	(444)	1,750	1,204
Change in net position	504	(1)	321	(1,353)	332	(279)	(476)
Net position, beginning of the period	(10,023)	3,838	4,246	21,148	(4,042)	(9,943)	5,224
Net position, end of period	**$ (9,519)**	**$ 3,837**	**$ 4,567**	**$ 19,795**	**$ (3,710)**	**$ (10,222)**	**$ 4,748**
For the period ended September 30, 2018 (Unaudited)							
Net cash (used in) / provided by operating activities	$ (949)	$ (274)	$ (484)	$ (2,473)	$ 1,175	$ (108)	$ (3,113)
Net cash provided by / (used in) non-capital financing activities	3,843	362	531	3,584	(557)	(2,761)	5,002
Net cash (used in) / provided by capital and related financing activities	(4,294)	(52)	23	(895)	(199)	2,761	(2,656)
Net cash provided by / (used in) investing activities	1,627	(35)	(70)	(220)	(418)	108	992
Cash at beginning of period	199	15	5	56	8	-	283
Cash at end of period	**$ 426**	**$ 16**	**$ 5**	**$ 52**	**$ 9**	**$ -**	**$ 508**

16. SUBSEQUENT EVENTS

On October 16, 2019, MTA issued $600 MTA Transportation Revenue Bond Anticipation Notes, Series 2019E to finance existing approved transit and commuter projects related to the State funding commitment for the 2015-2019 Capital Program. The Series 2019E Notes were issued as fixed rate tax-exempt notes with a final maturity of September 1, 2020.

On October 29, 2019, MTA executed a 2,839,784 gallon ultra-low sulfur diesel fuel hedge with Goldman, Sachs & Co./J. Aron at an all-in price of $1.8420 (whole dollars) per gallon. The hedge covers the period from October 2020 through September 2021.

On October 31, 2019, MTA effectuated a mandatory tender and remarketed $84 of Transportation Revenue Variable Rate Refunding Bonds, Subseries 2012G-1.

On October 31, 2019, MTA effectuated a mandatory tender and remarketed: (i) $85 of Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-2b, and (ii) $45 of Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008B-3c.

On November 7, 2019, MTA issued $242 MTA Transportation Revenue Refunding Green Bonds, Series 2019D, to (i) refund outstanding Transportation Revenue Bonds: $111 of Series 2008B-4, $100 of Series 2012D and $51 of Series 2015D-2, and (ii) pay certain financing, legal, and miscellaneous expenses. The Subseries 2019D-1 (Mandatory Tender Bonds) mature on November 15, 2034. The Subseries 2019D-2 (Federally Taxable bonds) mature on November 15 in the years 2046 through 2048.

On November 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 $12. This is due to the payment of Fee Purchase Payments in connection with the acquisition of certain residential condominium units.

On November 26, 2019, MTA executed a 2,839,778 gallon ultra-low sulfur diesel fuel hedge with Goldman, Sachs & Co./J. Aron at an all-in price of $1.8600 (whole dollars) per gallon. The hedge covers the period from November 2020 through October 2021.

On December 3, 2019, MTA effectuated a mandatory tender and remarketed $46 MTA Triborough Bridge and Tunnel Authority General Revenue Variable Rate Bonds, Subseries 2003B-2, to bear interest in the Term Rate Mode at a variable rate equal to an adjusted SIFMA rate as described in the Remarketing Circular.

On December 3, 2019, MTA issued $200 MTA Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2019C, to (i) finance bridge and tunnel projects in the MTA Bridges and Tunnels approved Capital Program and (ii) pay certain financing, legal, and miscellaneous expenses. The Series 2019C bonds, which are subject to redemption prior to maturity, mature on November 15 in the years 2040 through 2048.

On December 10, 2019, MTA issued $200 MTA Transportation Revenue Bond Anticipation Notes, Series 2019F ("the Series 2019F Notes") maturing on November 15, 2022. The Series 2019F Notes were issued to (i) finance existing approved transit and commuter projects, (ii) pay capitalized interest on the Series 2019F Notes accruing through maturity, and (iii) pay certain financing, legal, and miscellaneous expenses.

On December 30, 2019, MTA executed a 2,839,796 gallon ultra-low sulfur diesel fuel hedge with Merrill Lynch at an all-in price of $1.9040 (whole dollars) per gallon. The hedge covers the period from December 2020 through November 2021.

The New York State Fiscal Year 2019-2020 Enacted Budget established the Central Business District Tolling Program (CBD Tolling Program), the goals of which are to reduce traffic congestion in the Manhattan Central Business District, improve air quality, and provide a stable and reliable funding source for the repair and revitalization of the MTA's public transportation systems. The CBD Tolling Program revenues are not expected to begin to flow to MTA until at least early 2021. MTA Bridges and Tunnels is directed to establish the CBD Tolling Capital Lockbox Fund. Monies in the fund cannot be commingled with any other MTA Bridges and Tunnel monies. Funds on deposit in the CBD Tolling Capital Lockbox Fund shall be applied to: (1) operating, administration and other necessary expenses relating to the program, or to DOT pursuant to the MOU; and (2) costs of MTA capital projects included in the 2020-2024 Capital Program or any successor capital program. The 2019-2020 State Enacted Budget further provides that capital project costs paid for by the CBD Tolling Capital Lockbox Fund are subject to the following revenue split: (1) 80 percent for MTA New York City Transit, MaBSTOA, MTA Staten Island Railway and MTA Bus capital project costs, with priority given to subway system, new signaling, new subway cars, track and car repair, accessibility, buses and bus system improvements and further investments in expanding transit availability in the outer boroughs; (2) 10 percent for MTA Long Island Rail Road capital projects, including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability; and (3) 10 percent for MTA Metro-North Railroad capital projects including parking facilities, rolling stock, capacity enhancements, accessibility and expanding transit availability.

The 2019-2020 State Enacted Budget also establishes two additional sources of annually recurring MTA capital program subsidy revenues. These are (i) a portion of new City property derived real estate transfer tax receipts and (ii) certain incremental City-based internet sales tax allocations. The real estate transfer tax is derived from two new real estate transfer taxes imposed in the City on transfers of high value residential properties beginning with conveyances occurring on or after July 1, 2019. The internet sales tax is MTA's allocated portion of the State and City sales taxes, including those collected from Internet marketplace providers based outside the State under changes in the sales tax law effected in the 2019-2020 State Enacted Budget.

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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):	**2017**	**2016**	**2015**	**2014**	**2017**	**2016**	**2015**	**2014**
Total pension liability:								
Service cost	$ 1,874	$ 2,752	$ 3,441	$ 3,813	$ 84,394	$ 82,075	$ 77,045	$ 72,091
Interest	101,477	104,093	106,987	110,036	246,284	236,722	232,405	223,887
Effect of economic / demographic (gains) or losses	1,890	15,801	6,735	-	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	(159,717)	(158,593)	(157,071)	(156,974)	(209,122)	(187,823)	(179,928)	(175,447)
Net change in total pension liability	(54,476)	(35,947)	(39,908)	(43,125)	139,729	144,758	60,525	118,935
Total pension liability—beginning	1,526,304	1,562,251	1,602,159	1,645,284	3,536,747	3,391,989	3,331,464	3,212,529
Total pension liability—ending (a)	1,471,828	1,526,304	1,562,251	1,602,159	3,676,476	3,536,747	3,391,989	3,331,464
Plan fiduciary net position:								
Employer contributions	76,523	81,100	100,000	407,513	202,684	220,697	214,881	226,374
Nonemployer contributions	145,000	70,000	-	-	-	-	-	-
Member contributions	760	884	1,108	1,304	19,713	18,472	16,321	15,460
Net investment income	112,614	58,239	527	21,231	350,186	212,260	(24,163)	105,084
Benefit payments and withdrawals	(159,717)	(158,593)	(157,071)	(156,974)	(209,122)	(187,823)	(179,928)	(175,447)
Administrative expenses	(1,070)	(611)	(1,218)	(975)	(208)	(186)	(88)	(74)
Net change in plan fiduciary net position	174,110	51,019	(56,654)	272,099	363,253	263,420	27,023	171,397
Plan fiduciary net position—beginning	777,217	726,198	782,852	510,753	2,555,736	2,292,316	2,265,293	2,093,896
Plan fiduciary net position—ending (b)	951,327	777,217	726,198	782,852	2,918,989	2,555,736	2,292,316	2,265,293
Employer's net pension liability—ending (a)-(b)	$ 520,501	$ 749,087	$ 836,053	$ 819,307	$ 757,487	$ 981,011	$ 1,099,673	$ 1,066,171
Plan fiduciary net position as a percentage of the total pension liability	64.64%	50.92%	46.48%	48.86%	79.40%	72.26%	67.58%	68.00%
Covered payroll	$ 20,500	$ 29,312	$ 39,697	$ 43,267	$ 749,666	$ 716,527	$ 686,674	$ 653,287
Employer's net pension liability as a percentage of covered payroll	2539.03%	2555.56%	2106.09%	1893.61%	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):	**2017**	**2016**	**2015**	**2014**	**2017**	**2016**	**2015**	**2014**
Total pension liability:								
Service cost	$ -	$ -	$ -	$ -	$ 148,051	$ 138,215	$ 124,354	$ 121,079
Interest	21	24	29	32	335,679	308,009	288,820	274,411
Effect of economic / demographic (gains) or losses	12	(15)	(10)	-	(27,059)	86,809	121,556	2,322
Effect of assumption changes or inputs	-	-	18	-	10,731	-	(76,180)	-
Effect of plan changes	-	-	-	-	76,511	73,521	6,230	-
Benefit payments and withdrawals	(71)	(77)	(113)	(88)	(232,976)	(209,623)	(199,572)	(191,057)
Net change in total pension liability	(38)	(68)	(76)	(56)	310,937	396,931	265,208	206,755
Total pension liability—beginning	566	634	710	766	4,761,877	4,364,946	4,099,738	3,892,983
Total pension liability—ending (a)	528	566	634	710	5,072,814	4,761,877	4,364,946	4,099,738
Plan fiduciary net position:								
Employer contributions	-	23	18	-	321,861	280,768	221,694	331,259
Member contributions	-	-	-	-	31,027	29,392	34,519	26,006
Net investment income	20	16	6	41	516,153	247,708	(45,122)	102,245
Benefit payments and withdrawals	(71)	(77)	(113)	(88)	(232,976)	(209,623)	(199,572)	(191,057)
Administrative expenses	-	-	3	(3)	(4,502)	(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position	(51)	(38)	(86)	(50)	631,563	345,194	9,557	258,853
Plan fiduciary net position—beginning	574	612	698	748	3,419,971	3,074,777	3,065,220	2,806,367
Plan fiduciary net position—ending (b)	523	574	612	698	4,051,534	3,419,971	3,074,777	3,065,220
Employer's net pension liability—ending (a)-(b)	$ 5	$ (8)	$ 22	$ 12	$ 1,021,280	$ 1,341,906	$ 1,290,169	$ 1,034,518
Plan fiduciary net position as a percentage of the total pension liability	99.05%	101.41%	96.53%	98.36%	79.87%	71.82%	70.44%	74.77%
Covered payroll	$ 471	$ 846	$ 1,474	$ 2,274	$ 1,857,026	$ 1,784,369	$ 1,773,274	$ 1,679,558
Employer's net pension liability as a percentage of covered payroll	1.06%	-0.95%	1.49%	0.53%	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, 2018	June 30, 2017	June 30, 2016	June 30, 2015
MTA's proportion of the net pension liability	23.682%	24.096%	23.493%	23.585%
MTA's proportionate share of the net pension liability	$ 4,176,941	$ 5,003,811	$ 5,708,052	$ 4,773,787
MTA's actual covered payroll	$ 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	129.846%	158.616%	186.294%	159.686%
Plan fiduciary net position as a percentage of the total pension liability	78.826%	74.805%	69.568%	73.125%

	NYSLERS Plan			
Plan Measurement Date:	March 31, 2018	March 31, 2017	March 31, 2016	March 31, 2015
MTA's proportion of the net pension liability	0.327%	0.311%	0.303%	0.289%
MTA's proportionate share of the net pension liability	$ 10,553	$ 29,239	$ 48,557	$ 9,768
MTA's actual covered payroll	$ 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	10.025%	30.273%	55.386%	11.187%
Plan fiduciary net position as a percentage of the total pension liability	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)	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Additional Plan*										
Actuarially Determined Contribution	$ 59,196	$ 76,523	$ 83,183	$ 82,382	$ 112,513	$ -	$ -	$ -	$ -	$ -
Actual Employer Contribution	59,500	221,523	151,100	100,000	407,513	-	-	-	-	-
Contribution Deficiency (Excess)	$ (304)	$ (145,000)	$ (67,917)	$ (17,618)	$(295,000)	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 13,076	$ 20,500	$ 29,312	$ 39,697	$ 43,267	$ -	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	466.49%	1080.62%	515.49%	251.91%	941.87%	N/A	N/A	N/A	N/A	N/A
MaBSTOA Plan										
Actuarially Determined Contribution	$ 202,509	$ 202,924	$ 220,697	$ 214,881	$ 226,374	$ 234,474	$ 228,918	$ 186,454	$ 200,633	$ 204,274
Actual Employer Contribution	205,434	202,684	220,697	214,881	226,374	234,474	228,918	186,454	200,633	204,274
Contribution Deficiency (Excess)	$ (2,925)	$ 240	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 776,200	$ 749,666	$ 716,527	$ 686,674	$ 653,287	$ 582,081	$ 575,989	$ 579,696	$ 591,073	$ 569,383
Contributions as a % of Covered Payroll	26.47%	27.04%	30.80%	31.29%	34.65%	40.28%	39.74%	32.16%	33.94%	35.88%
Metro-North Cash Balance Plan*										
Actuarially Determined Contribution	$ 5	$ -	$ 23	$ -	$ 5	$ -	$ -	$ -	$ -	$ -
Actual Employer Contribution	5	-	23	14	-	-	-	-	-	-
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ (14)	$ 5	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 268	$ 471	$ 846	$ 1,474	$ 2,274	$ -	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	2.03%	0.00%	2.68%	0.96%	0.00%	N/A	N/A	N/A	N/A	N/A
MTA Defined Benefit Plan*										
Actuarially Determined Contribution	$ 331,566	$ 316,916	$ 290,415	$ 273,700	$ 271,523	$ -	$ -	$ -	$ -	$ -
Actual Employer Contribution	339,800	321,861	280,767	221,694	331,259	-	-	-	-	-
Contribution Deficiency (Excess)	$ (8,234)	$ (4,945)	$ 9,648	$ 52,006	$ (59,736)	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 2,030,695	$ 1,857,026	$ 1,784,369	$ 1,773,274	$ 1,679,558	$ -	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	16.83%	17.33%	15.73%	12.50%	19.72%	N/A	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, **(continued)**

($ in thousands)

	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
NYCERS										
Actuarially Determined Contribution	$ 807,097	$ 800,863	$ 797,845	$ 736,212	$ 741,223	$ 736,361	$ 731,983	$ 657,771	$ 574,555	$ 548,721
Actual Employer Contribution	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	$ 3,974,494	$ 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	20.31%	21.25%	22.64%	21.07%	20.49%	25.02%	25.02%	22.68%	19.90%	19.59%
NYSLERS **										
Actuarially Determined Contribution	$ 14,501	$ 13,969	$ 12,980	$ 15,792	$ 13,816	$ -	$ -	$ -	$ -	$ -
Actual Employer Contribution	14,501	13,969	12,980	15,792	13,816	-	-	-	-	-
Contribution Deficiency (Excess)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Covered Payroll	$ 109,210	$ 103,787	$ 94,801	$ 86,322	$ 84,041	$ -	$ -	$ -	$ -	$ -
Contributions as a % of Covered Payroll	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, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	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
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 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.
Salary increases:	3.00%	3.00%	3.00%	3.00%
Actuarial assumptions:				
Discount Rate:	7.00%	7.00%	7.00%	7.00%
Investment rate of return :	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	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.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%; 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

REQUIRED SUPPLEMENTARY INFORMATION

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

	MaBSTOA Plan			
Valuation Dates:	January 1, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	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)
Amortization method:	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.	For FIL bases, period specified in current valuation 30-year level dollar. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/ losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/ losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/ losses are based on market value of assets.	Actuarial value equals market value less unrecognized 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.	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%
Investment rate of return :	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	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.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	RP-2014 Disabled Annuitant mortality table for males and females.	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%
Cost-of-Living Adjustments:	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, 2018	January 1, 2017	January 1, 2016	January 1, 2014
Measurement Date:	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
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.	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.	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	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%	4.50%
Investment rate of return :	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 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.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.30%	2.30%	2.50%
Cost-of-Living Adjustments:	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, 2017	January 1, 2016	January 1, 2015	January 1, 2014
Measurement Date:	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
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.
Asset Valuation Method:	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/ losses over a 5-year period. Gains/ losses are based on market value of assets.
Salary increases:	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%
Investment rate of return :	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 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.
Post-retirement Healthy Lives:	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.	95% of the rates from the RP-2000 Healthy Annuitant mortality table for males with blue collar adjustments and 116% of the rates from the RP-2000 Healthy Annuitant mortality table for females.
Post-retirement Disabled Lives:	RP-2014 Disabled Annuitant mortality table for males and females	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%; 3.00%
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.

REQUIRED SUPPLEMENTARY INFORMATION

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

	NYCERS Plan			
Valuation Dates:	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013
Measurement Date:	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
Amortization method:	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfundeds.
Asset Valuation Method:	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.
Salary increases:	3% per annum.	3% per annum.	3% per annum.	3% per annum.
Actuarial assumptions:				
Discount Rate:	7.00%	7.00%	7.00%	7.00%
Investment rate of return :	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
Mortality:	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was 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
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%	2.50%
Cost-of-Living Adjustments:	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.	1.5% per annum for Auto COLA and 2.5% per annum for Escalation.

REQUIRED SUPPLEMENTARY INFORMATION

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

	NYSLERS Plan			
Valuation Dates:	April 1, 2017	April 1, 2016	April 1, 2015	April 1, 2014
Measurement Date:	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
Amortization method:	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.
Asset Valuation Method:	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%	4.90%
Actuarial assumptions:				
Discount Rate:	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.	7.5%, 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 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
Post-retirement Healthy Lives:	N/A	N/A	N/A	N/A
Post-retirement Disabled Lives:	N/A	N/A	N/A	N/A
Inflation/Railroad Retirement Wage Base:	2.50%	2.50%	2.50%	2.70%
Cost-of-Living Adjustments:	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, 2016 valuation for the NYCERS plan.

There were no significant legislative changes in benefit for the April 1, 2017 valuation for the NYSLERS plan.

Changes of Assumptions:

There were no significant changes in the economic and demographic assumptions used in the June 30, 2016 valuation for the NYCERS plan.

There were no significant changes in the economic and demographic assumptions used in the April 1, 2017 valuation for the NYSLERS plan.

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REQUIRED SUPPLEMENTARY INFORMATION

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

($ in thousands)	**OPEB Plan**
Plan Measurement Date (December 31):	**2017**
Total OPEB liability:	
Service cost	$ 884,548
Interest on total OPEB liability	731,405
Effect of plan changes	27,785
Effect of economic/demographic (gains) or losses	13,605
Effect of assumption changes or inputs	911,465
Benefit payments	(650,994)
Net change in total OPEB liability	1,917,814
Total OPEB liability—beginning	18,787,254
Total OPEB liability—ending (a)	20,705,068
Plan fiduciary net position:	
Employer contributions	650,994
Net investment income	47,370
Benefit payments	(650,994)
Net change in plan fiduciary net position	47,370
Plan fiduciary net position—beginning	322,982
Plan fiduciary net position—ending (b)	370,352
Net OPEB liability—ending (a)-(b)	$ 20,334,716
Plan fiduciary net position as a percentage of the total OPEB liability	1.79%
Covered payroll	$ 5,394,332
Net OPEB liability as a percentage of covered payroll	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)	**2018**	**2017**
Actuarially Determined Contribution	N/A	N/A
Actual Employer Contribution (1)	$ 696,065	$ 650,994
Contribution Deficiency (Excess)	N/A	N/A
Covered Payroll	$ 6,903,700	$ 5,394,200
Actual Contribution as a Percentage of Covered Payroll	10.08%	12.07%

(1) Actual employer contribution includes the implicit rate of subsidy adjustment of $74,484 and $71,101 for the years ended December 31, 2018 and 2017, 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
Measurement date	December 31, 2017
Discount rate	3.44%, net of expenses
Inflation	2.50%
Actuarial cost method	Entry Age Normal
Amortization method	Level percentage of payroll
Normal cost increase factor	4.50%
Investment rate of return	6.50%
Salary increases	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, 2018

($ in thousands)	Pension Funds				Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Company Plan for Additional Pensions	MaBSTOA Plan	Metro-North Cash Balance Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ASSETS:							
Cash	$ 6,539	$ 1,228	$ 5,977	$ -	$ -	$ -	$ 13,744
Receivables:							
Employee loans	-	-	36,314	-	-	159,462	195,776
Participant and union contributions	-	-	-	-	-	-	-
Investment securities sold	-	58	218	-	-	-	276
Accrued interest and dividends	2,745	516	1,785	2	14	-	5,062
Other receivables	1,845	93	-	-	-	-	1,938
Total receivables	4,590	667	38,317	2	14	159,462	203,052
Investments at fair value:							
Investments measured at readily determined fair value	787,191	147,855	433,543	474	-	-	1,369,063
Investments measured at net asset value	3,234,904	671,157	2,379,443	-	351,538	2,286,394	8,923,436
Investments at contract value	-	-	-	-	-	1,313,496	1,313,496
Total investments	4,022,095	819,012	2,812,986	474	351,538	3,599,890	11,605,995
Total assets	$ 4,033,224	$ 820,907	$ 2,857,280	$ 476	$ 351,552	$ 3,759,352	$ 11,822,791
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	-	-	5,359
Accrued benefits payable	-	-	1,978	-	172	-	2,150
Accrued postretirement death benefits (PRDB) payable	-	-	2,509	-	-	-	2,509
Accrued 55/25 Additional Members Contribution (AMC) payable	-	-	5,675	-	-	-	5,675
Other liabiliities	293	48	-	-	-	-	341
Total liabilities	8,744	1,590	13,690	5	172	721	24,922
NET POSITION:							
Restricted for pensions	4,024,480	819,317	2,843,590	471	-	-	7,687,858
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	2,843,590	471	351,380	3,758,631	11,797,869
Total liabilities and net position	$ 4,033,224	$ 820,907	$ 2,857,280	$ 476	$ 351,552	$ 3,759,352	$ 11,822,791

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

(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Fiduciary Net Position as of December 31, 2017

($ in thousands)	Pension Funds				Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Company Plan for Additional Pensions	MaBSTOA Plan	Metro-North Cash Balance Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ASSETS:							
Cash	$ 11,812	$ 1,575	$ 5,418	$ -	$ -	$ -	$ 18,805
Receivables:							
Employee loans	-	-	37,605	-	-	146,347	183,952
Participant and union contributions	-	(6)	-	-	-	-	(6)
Investment securities sold	-	363	760	3	-	-	1,126
Accrued interest and dividends	1,882	399	1,263	3	7	-	3,554
Other receivables	1,896	(53)	-	-	-	-	1,843
Total receivables	3,778	703	39,628	6	7	146,347	190,469
Investments at fair value:							
Investments measured at readily determined fair value	675,779	183,875	387,520	527	-	-	1,247,701
Investments measured at net asset value	3,369,189	765,925	2,502,012	-	370,596	2,397,108	9,404,830
Investments at contract value	-	-	-	-	-	1,224,190	1,224,190
Total investments	4,044,968	949,800	2,889,532	527	370,596	3,621,298	11,876,721
Total assets	$ 4,060,558	$ 952,078	$ 2,934,578	$ 533	$ 370,603	$ 3,767,645	$ 12,085,995
LIABILITIES:							
Accounts payable and accrued liabilities	4,730	(149)	1,567	-	-	675	6,823
Payable for investment securities purchased	3,575	900	2,250	10	-	-	6,735
Accrued benefits payable	-	-	2,247	-	251	-	2,498
Accrued postretirement death benefits (PRDB) payable	-	-	3,344	-	-	-	3,344
Accrued 55/25 Additional Members Contribution (AMC) payable	-	-	6,181	-	-	-	6,181
Other liabiliities	719	-	-	-	-	-	719
Total liabilities	9,024	751	15,589	10	251	675	26,300
NET POSITION:							
Restricted for pensions	4,051,534	951,327	2,918,989	523	-	-	7,922,373
Restricted for postemployment benefits other than pensions	-	-	-	-	370,352	-	370,352
Restricted for other employee benefits	-	-	-	-	-	3,766,970	3,766,970
Total net position	4,051,534	951,327	2,918,989	523	370,352	3,766,970	12,059,695
Total liabilities and net position	$ 4,060,558	$ 952,078	$ 2,934,578	$ 533	$ 370,603	$ 3,767,645	$ 12,085,995

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

(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

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

($ in thousands)	Pension Funds				Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Additional Plan	MaBSTOA Plan	Metro-North Cash Balance Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ADDITIONS:							
Contributions:							
Employer contributions	$ 338,967	$ 59,500	$ 205,433	$ 5	$ 616,638	$ 4,392	1,224,935
Non0Employer contributions	-	-	-	-	-	-	-
Implicit rate subsidy contribution	-	-	-	-	74,484	-	74,484
Participant rollovers	-	-	-	-	-	21,673	21,673
Member contributions	29,902	334	21,708	-	-	283,818	335,762
Total contributions	368,869	59,834	227,141	5	691,122	309,883	1,656,854
Investment income:							
Net (depreciation) / appreciation in fair value of investments	(169,255)	(35,344)	(96,080)	(15)	(22,591)	(139,054)	(462,339)
Dividend income	56,670	11,441	37,259	-	5,203	-	110,573
Interest income	9,254	1,715	6,003	16	161	-	17,149
Less: Investment expenses	47,091	8,547	37,060	-	1,689	-	94,387
Investment income, net	(150,422)	(30,735)	(89,878)	1	(18,916)	(139,054)	(429,004)
Other additions: Loan repayments - interest	0	0	0	0	0	7,529	7,529
Total additions	218,447	29,099	137,263	6	672,206	178,358	1,235,379
DEDUCTIONS:							
Benefit payments and withdrawals	242,149	159,565	212,476	58	616,638	-	1,230,886
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	1,544	186	-	56	721	5,659
Other deductions	-	-	-	-	-	5,410	5,410
Total deductions	245,501	161,109	212,662	58	691,178	186,697	1,497,205
Net increase (decrease) in fiduciary net position	(27,054)	(132,010)	(75,399)	(52)	(18,972)	(8,339)	(261,826)
NET POSITION:							
Restricted for Benefits:							
Beginning of year	4,051,534	951,327	2,918,989	523	370,352	3,766,970	12,059,695
End of year	$ 4,024,480	$ 819,317	$ 2,843,590	$ 471	$ 351,380	$ 3,758,631	$ 11,797,869

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

(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION

Pension And Other Employee Benefit Trust Funds
Combining Statement of Changes in Fiduciary Net Position for the year ended December 31, 2017

($ in thousands)	Pension Funds				Other Employee Benefit Trust Funds		
	Defined Benefit Pension Plan	LIRR Additional Plan	MaBSTOA Plan	Metro-North Cash Balance Plan	Other Post-employment Benefit Plan	Deferred Compensation 401K Plan	Total
ADDITIONS:							
Contributions:							
Employer contributions	$ 321,861	$ 76,523	$ 202,684	$ -	$ 579,893	$ 4,109	1,185,070
Non0Employer contributions	-	145,000	-	-	-	-	145,000
Implicit rate subsidy contribution	-	-	-	-	71,101	-	71,101
Participant rollovers	-	-	-	-	-	22,430	22,430
Member contributions	30,994	760	19,713	-	-	251,122	302,589
Total contributions	352,855	222,283	222,397	-	650,994	277,661	1,726,190
Investment income:							
Net appreciation/ (depreciation) in fair value of investments	527,182	115,106	363,877	4	42,470	416,584	1,465,223
Dividend income	35,211	7,599	24,125	-	6,697	-	73,632
Interest income	6,522	1,036	6,092	16	64	-	13,730
Less: Investment expenses	52,762	11,127	43,908	-	1,861	-	109,658
Investment income, net	516,153	112,614	350,186	20	47,370	416,584	1,442,927
Other additions: Loan repayments - interest	0	0	0	0	0	6,337	6,337
Total additions	869,008	334,897	572,583	20	698,364	700,582	3,175,454
DEDUCTIONS:							
Benefit payments and withdrawals	231,321	159,717	209,121	71	579,893	-	1,180,123
Implicit rate subsidy payments	-	-	-	-	71,101	-	71,101
Transfer to other plans	1,622	-	-	-	-	66,031	67,653
Distribution to participants	-	-	-	-	-	73,733	73,733
Administrative expenses	4,502	1,070	208	-	-	675	6,455
Other deductions	-	-	-	-	-	4,895	4,895
Total deductions	237,445	160,787	209,329	71	650,994	145,334	1,403,960
Net increase (decrease) in fiduciary net position	631,563	174,110	363,254	(51)	47,370	555,248	1,771,494
NET POSITION:							
Restricted for Benefits:							
Beginning of year	3,419,971	777,217	2,555,735	574	322,982	3,211,722	10,288,201
End of year	$ 4,051,534	$ 951,327	$ 2,918,989	$ 523	$ 370,352	$ 3,766,970	$ 12,059,695

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 SEPTEMBER 30, 2019
($ in millions)
(Unaudited)

Category	Financial Plan Actual	Statement GAAP Actual	Variance
REVENUE:			
Farebox revenue	$ 4,732	$ 4,732	$ -
Vehicle toll revenue	1,549	1,548	(1)
Other operating revenue	476	466	(10)
Total revenue	6,757	6,746	(11)
OPERATING EXPENSES:			
Labor:			
Payroll	3,973	3,989	16
Overtime	726	730	4
Health and welfare	994	998	4
Pensions	1,012	1,013	1
Other fringe benefits	670	669	(1)
Postemployment benefits	480	483	3
Reimbursable overhead	(343)	(361)	(18)
Total labor expenses	7,512	7,521	9
Non-labor:			
Electric power	338	338	-
Fuel	134	134	-
Insurance	6	6	-
Claims	302	302	-
Paratransit service contracts	360	360	-
Maintenance and other operating contracts	521	508	(13)
Professional service contract	336	308	(28)
Pollution remediation project costs	6	6	-
Materials and supplies	493	493	-
Other business expenses	160	158	(2)
Total non-labor expenses	2,656	2,613	(43)
Depreciation	2,135	2,135	-
Total operating expenses	12,303	12,269	(34)
NET OPERATING LOSS	$ (5,546)	$ (5,523)	$ 23

(A Component Unit of the State of New York)

SUPPLEMENTARY INFORMATION
SCHEDULE OF CONSOLIDATED SUBSIDY ACCRUAL RECONCILIATION BETWEEN FINANCIAL PLAN AND FINANCIAL STATEMENTS FOR THE PERIOD ENDED SEPTEMBER 30, 2019
($ in millions)
(Unaudited)

Accrued Subsidies	Financial Plan Actual	Financial Statement GAAP Actual	Variance	
Mass transportation operating assistance	$ 1,824	$ 1,824	$ -	
Mass transit trust fund subsidies	491	491	-	
Mortgage recording tax 1 and 2	340	340	-	
MRT transfer	-	(3)	(3)	{1}
Urban tax	478	478	-	
State and local operating assistance	341	417	76	{1}
Station maintenance	128	128	-	
Connecticut Department of Transportation (CDOT)	90	90	-	
Subsidy from New York City for MTA Bus and SIRTOA	475	424	(51)	{1}
Build American Bonds Subsidy	45	47	2	{1}
Mobility tax	1,662	1,662	-	
Internet sales tax	43	42	(1)	{1}
NYC Assistance Fund	252	260	8	{1}
Other non-operating income	-	106	106	{2}
Total accrued subsidies	6,169	6,306	137	
Net operating deficit before subsidies and debt service	(5,546)	(5,523)	23	
Debt Service	(1,528)	(1,089)	439	
Conversion to Cash basis: Depreciation	2,135	-	(2,135)	
Conversion to Cash basis: GASB 75 OPEB adjustment	(28)	-	28	
Conversion to Cash basis: GASB 68 pension adjustment	(108)	-	108	
Conversion to Cash basis: Pollution & Remediation	6	-	(6)	
Total net operating surplus/(deficit) before appropriations, grants and other receipts restricted for capital projects	$ 1,100	$ (306)	$ (1,406)	

{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.

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SUPPLEMENTARY INFORMATION
SCHEDULE OF FINANCIAL PLAN TO FINANCIAL STATEMENTS RECONCILIATION
RECONCILING ITEMS
FOR THE PERIOD ENDED SEPTEMBER 30, 2019
($ in millions)

Financial Plan Actual Operating Loss at September 30, 2019			**$ (5,546)**
The Financial Plan Actual Includes:			
1	Higher other operating revenues		(11)
2	Lower labor expenses		(9)
3	Higher non-labor expense primarily from higher professional service contract expense projections		43
Total operating reconciling items			**23**
Financial Statements Operating Loss at September 30, 2019			**(5,523)**
Financial Plan Surplus after Subsidies and Debt Service			**1,100**
The Audited Financial Statements Includes:			
1	Debt service bond principal payments		439
2	Adjustments for non-cash liabilities:		
	Depreciation	(2,135)	
	GASB 75 OPEB expense adjustment	28	
	Unfunded GASB No. 68 pension adjustment	108	
	Other non-cash liability adjustment	(6)	(2,005)
The Financial Statement includes:			
3	Higher dedicated taxes and subsidies		137
4	Total operating reconciling items (from above)		23
Financial Statement Loss Before Capital Appropriations			**$ (306)**

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Metropolitan Transportation Authority Deferred Compensation Program

Financial Statements as of and for the
Years Ended December 31, 2018 and 2017, and
Independent Auditors' Report

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METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

TABLE OF CONTENTS

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, 2018 and 2017, 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, 2018 and 2017, 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 21 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.

January 21, 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, 2018 and 2017. 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 22.

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 $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.

The assets of the 457 Plan exceeded its liabilities by $2.719 billion and the assets of the 401(k) Plan exceeded its liabilities by $3.767 billion as of December 31, 2017. 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.

During 2017, the net positions held in trust for the 457 Plan and the 401(k) Plan increased by $387.096 million and $555.248 million, respectively, due primarily to net investment income and employer and employee contributions to the plans. This was offset by distributions to participants and plan expenses.

Deductions from the Plans' net position consist primarily of distributions to participant and transfers to other plans, and plan expenses in the amounts of $130.782 million and $102.243 million for the 457 Plan and $186.697 million and $145.334 million for the 401(k) Plan for the year ended December 31, 2018 and 2017, respectively.

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

457 Plan

	2018	2017	2016	Amount of Change (2018 - 2017)	Amount of Change (2017 - 2016)	Percentage Change (2018 - 2017)	Percentage Change (2017 - 2016)
ASSETS:							
Investments	$ 2,635,023	$ 2,645,243	$ 2,262,973	$ (10,220)	$ 382,270	(0.4)%	16.9%
Participant loans receivable	78,429	74,607	69,815	3,822	4,792	5.1	6.9
Total assets	2,713,452	2,719,850	2,332,788	(6,398)	387,062	(0.2)	16.6
LIABILITIES:							
Administrative expense reimbursement	377	356	390	21	(34)	5.9	(8.7)
Total liabilities	377	356	390	21	(34)	5.9	(8.7)
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 2,713,075	$ 2,719,494	$ 2,332,398	$ (6,419)	$ 387,096	(0.2)%	16.6%

401(k) Plan

	2018	2017	2016	Amount of Change (2018 - 2017)	Amount of Change (2017 - 2016)	Percentage Change (2018 - 2017)	Percentage Change (2017 - 2016)
ASSETS:							
Investments	$ 3,599,890	$ 3,621,298	$ 3,076,148	$ (21,408)	$ 545,150	(0.6)%	17.7%
Participant loans receivable	159,462	146,347	136,075	13,115	10,272	9.0	7.5
Total assets	3,759,352	3,767,645	3,212,223	(8,293)	555,422	(0.2)	17.3
LIABILITIES:							
Administrative expense reimbursement	721	675	501	46	174	6.8	34.7
Total liabilities	721	675	501	46	174	6.8	34.7
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 3,758,631	$ 3,766,970	$ 3,211,722	$ (8,339)	$ 555,248	(0.2)%	17.3%

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

457 Plan

				Amount of Change		Percentage Change	
	2018	2017	2016	(2018 - 2017)	(2017 - 2016)	(2018 - 2017)	(2017 - 2016)
ADDITIONS:							
Investment (loss) /income	$ (96,820)	$ 292,040	$ 117,182	$ (388,860)	$ 174,858	(133.2)%	149.2 %
Contributions and additional deposits	217,444	194,089	177,851	23,355	16,238	12.0	9.1
Loan repayments - interest	3,739	3,210	2,964	529	246	16.5	8.3
Total additions	124,363	489,339	297,997	(364,976)	191,342	(74.6)	64.2
DEDUCTIONS:							
Distribution to participants	67,372	53,784	50,120	13,588	3,664	25.3	7.3
Transfers to other plans	59,405	45,145	48,242	14,260	(3,097)	31.6	(6.4)
Net participant loan activity	2,472	1,938	1,735	534	203	27.6	11.7
Other	1,533	1,376	1,672	157	(296)	11.4	(17.7)
Total deductions	130,782	102,243	101,769	28,539	474	27.9	0.5
(Decrease)/ increase in net position	(6,419)	387,096	196,228	(393,515)	190,868	(101.7)	97.3
TOTAL NET POSITION RESTRICTED FOR BENEFITS							
Beginning of year	2,719,494	2,332,398	2,136,170	387,096	196,228	16.6	9.2
End of year	$ 2,713,075	$ 2,719,494	$ 2,332,398	$ (6,419)	$ 387,096	(0.2)%	16.6 %

401(k) Plan

				Amount of Change		Percentage Change	
	2018	2017	2016	(2018 - 2017)	(2017 - 2016)	(2018 - 2017)	(2017 - 2016)
ADDITIONS:							
Investment (loss) / income	$ (139,054)	$ 416,584	$ 164,042	$ (555,638)	$ 252,542	(133.4)%	153.9 %
Contributions and additional deposits	309,883	277,661	254,327	32,222	23,334	11.6	9.2
Loan repayments - interest	7,529	6,337	5,713	1,192	624	18.8	10.9
Total additions	178,358	700,582	424,082	(522,224)	276,500	(74.5)	65.2
DEDUCTIONS:							
Distribution to participants	87,379	73,733	63,287	13,646	10,446	18.5	16.5
Transfers to other plans	93,187	66,031	69,067	27,156	(3,036)	41.1	(4.4)
Net participant loan activity	3,408	2,789	2,379	619	410	22.2	17.2
Other	2,723	2,781	2,040	(58)	741	(2.1)	36.3
Total deductions	186,697	145,334	136,773	41,363	8,561	28.5	6.3
(Decrease) /increase in net position	(8,339)	555,248	287,309	(563,587)	267,939	(101.5)	93.3
TOTAL NET POSITION RESTRICTED FOR BENEFITS							
Beginning of year	3,766,970	3,211,722	2,924,413	555,248	287,309	17.3	9.8
End of year	$ 3,758,631	$ 3,766,970	$ 3,211,722	$ (8,339)	$ 555,248	(0.2)%	17.3 %

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 11.40% Small - Mid Cap 3.40% Intl Equity 14.60% Market Bonds 16.00% Real Asset 10.90% Stable Value 43.70%	MTA Large Cap Equity Index Fund 5.70% MTA Large Cap Equity Fund 5.70% MTA Small-Mid Cap Equity Fund 3.40% MTA International Equity Fund 14.60% MTA Bond Fund 16.00% MTA Real Asset Fund 10.90% MTA Stable Value Fund 43.70%
MTA Target-Year Lifecycle 2020 Fund	Large Cap 15.470% Small - Mid Cap 4.20% Intl Equity 19.70% Market Bonds 18.20% Real Asset 10.00% Stable Value 32.20%	MTA Large Cap Equity Index Fund 7.90% MTA Large Cap Equity Fund 7.80% MTA Small-Mid Cap Equity Fund 4.20% MTA International Equity Fund 19.70% MTA Bond Fund 18.20% MTA Real Asset Fund 10.00% MTA Stable Value Fund 32.20%
MTA Target-Year Lifecycle 2025 Fund	Large Cap 20.50% Small - Mid Cap 5.40% Intl Equity 26.00% Market Bonds 18.20% Real Asset 10.00% Stable Value 19.90%	MTA Large Cap Equity Index Fund 12.00% MTA Large Cap Equity Fund 8.50% MTA Small-Mid Cap Equity Fund 5.40% MTA International Equity Fund 26.00% MTA Bond Fund 18.20% MTA Real Asset Fund 10.00% MTA Stable Value Fund 19.90%
MTA Target-Year Lifecycle 2030 Fund	Large Cap 24.40% Small - Mid Cap 8.40% Intl Equity 32.80% Market Bonds 14.60% Real Asset 10.00% Stable Value 9.80%	MTA Large Cap Equity Index Fund 15.10% MTA Large Cap Equity Fund 9.30% MTA Small-Mid Cap Equity Fund 8.40% MTA International Equity Fund 32.80% MTA Bond Fund 14.60% MTA Real Asset Fund 10.00% MTA Stable Value Fund 9.80%
MTA Target-Year Lifecycle 2035 Fund	Large Cap 26.20% Small - Mid Cap 11.20% Intl Equity 37.50% Market Bonds 12.60% Real Asset 10.00% Stable Value 2.50%	MTA Large Cap Equity Index Fund 15.00% MTA Large Cap Equity Fund 11.20% MTA Small-Mid Cap Equity Fund 11.20% MTA International Equity Fund 37.50% MTA Bond Fund 12.60% MTA Real Asset Fund 10.00% MTA Stable Value Fund 2.50%

Fund Name	Asset Class	Portfolio Allocations
MTA Target-Year Lifecycle 2040 Fund	Large Cap 26.30% Small - Mid Cap 13.80% Intl Equity 40.10% Market Bonds 9.80% Real Asset 10.00%	MTA Large Cap Equity Index Fund 12.60% MTA Large Cap Equity Fund 13.70% MTA Small-Mid Cap Equity Fund 13.80% MTA International Equity Fund 40.10% MTA Bond Fund 9.80% MTA Real Asset Fund 10.00%
MTA Target-Year Lifecycle 2045 Fund	Large Cap 26.50% Small - Mid Cap 15.40% Intl Equity 41.90% Market Bonds 6.20% Real Asset 10.00%	MTA Large Cap Equity Index Fund 11.10% MTA Large Cap Equity Fund 15.40% MTA Small-Mid Cap Equity Fund 15.40% MTA International Equity Fund 41.90% MTA Bond Fund 6.20% 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% Market Bonds 5.00% Real Asset 10.00%	MTA Large Cap Equity Index Fund 9.60% MTA Large Cap Equity Fund 17.10% 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% Market Bonds 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% Market Bonds 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% Market Bonds 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% Market Bonds 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%

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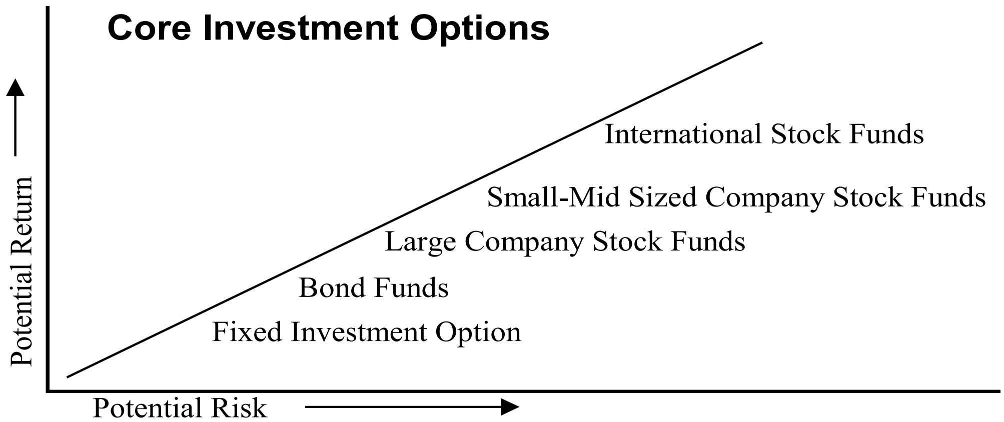
In addition to the twelve Target-Year lifecycle funds, the Plans offer a spectrum of investment options that include two international funds, four small-mid company stock funds, two large company stock funds, three bond funds, and the Stable Value Income Fund ("Fixed Investment Option").



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 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.
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.

Large-Cap Equity Funds

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 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 Separate Account 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 Separate Account 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 to match, as closely as possible, 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 portfolio 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 Collective Investment Trust Fund 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. **Wellington World Bond Portfolio** (Fixed Income) - The Collective Investment Trust Fund is sub-advised by Wellington Management Company, LLP. The objective of the World Bond approach is to generate consistent total returns over a full market cycle. World Bond 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.

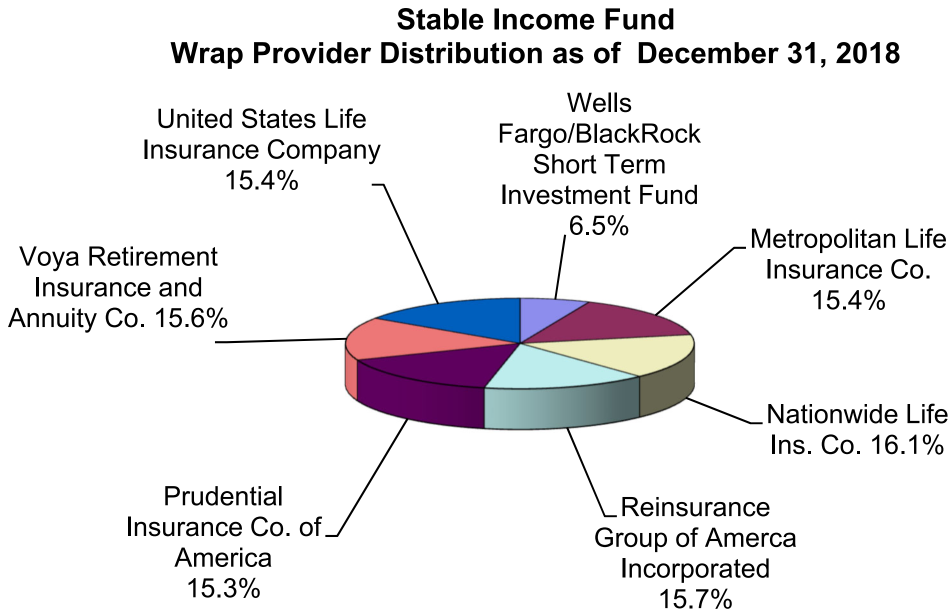
Stable Value Option

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.

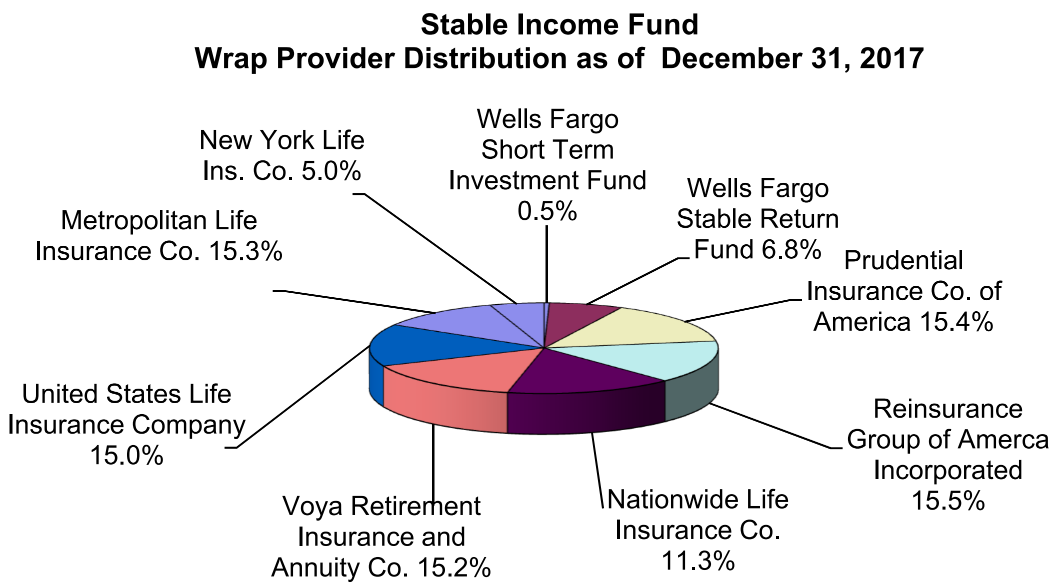
Separate Account GICs are GICs issued by and insurance company and are maintained within a separate account. Separate Account GICs are typically backed by segregated portfolios of fixed income securities.

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.

The following chart shows the underlying investments of the MTA Stable Value Fund as of December 31, 2018 and 2017.



*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, 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

Year ended December 31, 2017

Stable Value

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Stable Value	0.5%	2.0%	2.0%	2.0%	2.3%
Galliard 3YrCMT+50bps	0.6%	2.1%	1.8%	1.8%	1.8%

Fixed Income

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA Aggregate Bond Index Fund	0.4%	3.5%	2.2%	2.1%	3.2%
Barclays U.S. Aggregate	0.4%	3.5%	2.2%	2.1%	3.2%
Loomis Sayles Core Plus Bond	0.8%	5.4%	NA	NA	NA
Barclays U.S. Aggregate	0.4%	3.5%	2.2%	2.1%	3.2%
TCW MetWest Core Plus Fixed Income	0.4%	3.4%	NA	NA	NA
Barclays U.S. Aggregate	0.4%	3.5%	2.2%	2.1%	3.2%
Wellington World Bond Fund	0.6%	2.7%	NA	NA	NA
Citigroup World Government Bond	1.0%	7.5%	1.7%	0.1%	1.2%

Domestic Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
Vanguard Institutional Index Fund Institutional Plus	6.6%	21.8%	11.4%	15.8%	13.8%
S&P 500	6.6%	21.8%	11.4%	15.8%	13.8%
T Rowe Price Large Cap Value Fund (Prudential Separate Account)	5.5%	16.9%	9.5%	NA	NA
Russell 1000 Value	5.3%	13.7%	8.7%	14.0%	12.5%
Jennison Large Cap Growth (Prudential Separate Account)	6.8%	36.1%	14.9%	17.9%	15.0%
Russell 1000 Growth	7.9%	30.2%	13.8%	17.3%	14.8%
SSgA Small/Mid Cap Index Fund	4.9%	18.2%	10.0%	14.6%	12.3%
Russell Small Cap Completeness Index	4.9%	18.3%	10.0%	14.7%	12.3%
AB US SMID Cap Value Equity (Separate Account)	6.0%	12.9%	10.0%	14.8%	11.8%
Russell 2500 Value Index	4.3%	10.4%	9.3%	13.3%	11.5%
DFA US Targeted Value Fund (MTA)	4.5%	9.6%	9.4%	14.1%	11.6%
Russell 2500 Value Index	4.3%	10.4%	9.3%	13.3%	11.5%
William Blair SMID Growth (Separate Account)	5.6%	29.0%	13.1%	17.4%	14.0%
Russell 2500 Growth Index	6.3%	24.5%	10.9%	15.5%	13.0%
Jackson Square SMID Cap Growth Focus (Separate Account)	5.6%	21.1%	12.1%	15.5%	13.8%
Russell 2500 Growth Index	6.3%	24.5%	10.9%	15.5%	13.0%

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Performance Summary

Year ended December 31, 2017 (continued)

International Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA MSCI ACWI ex-U.S. IMI Index	5.2%	28.1%	8.8%	7.2%	NA
MSCI AC Wld ex US IMI Net	5.2%	27.8%	8.4%	7.2%	5.2%
William Blair Institutional International Growth Fund	5.1%	30.6%	8.4%	8.1%	6.7%
MSCI AC Wld ex U.S. Growth Net WHT	6.0%	32.2%	9.7%	8.3%	5.8%
Mondrian ACWI ex US CIT	3.8%	22.3%	NA	NA	NA
MSCI AC Wld ex US Value Net WHT	4.2%	22.7%	6.3%	5.6%	4.2%

Diversified Inflation

	3 Months	1 Year	3 Years	5 Years	7 Years
SSgA Real Asset	3.8%	8.6%	2.1%	0.1%	1.0%
SSgA Custom Real Asset Index	3.8%	8.6%	2.2%	0.2%	1.1%

Lifecycle

	3 Months	1 Year	3 Years	5 Years	7 Years
MTA Income	2.0%	7.7%	4.5%	3.8%	4.3%
MTA Income Composite Index	2.2%	7.7%	4.4%	3.8%	4.3%
MTA 2015	2.4%	10.0%	5.2%	5.0%	5.2%
MTA 2015 Composite Index	2.5%	10.0%	5.1%	5.0%	5.2%
MTA 2020	2.8%	11.9%	5.8%	5.8%	5.8%
MTA 2020 Composite Index	3.0%	11.8%	5.7%	5.8%	5.8%
MTA 2025	3.4%	14.7%	6.8%	7.3%	6.9%
MTA 2025 Composite Index	3.7%	14.7%	6.8%	7.2%	6.9%
MTA 2030	4.1%	16.5%	7.4%	7.9%	7.3%
MTA 2030 Composite Index	4.3%	16.5%	7.4%	7.8%	7.3%
MTA 2035	4.4%	18.0%	7.9%	8.5%	7.8%
MTA 2035 Composite Index	4.7%	18.0%	7.9%	8.4%	7.8%
MTA 2040	4.6%	20.3%	8.8%	10.0%	8.7%
MTA 2040 Composite Index	4.9%	19.8%	8.7%	9.9%	8.7%
MTA 2045	4.7%	21.7%	9.2%	10.9%	9.2%
MTA 2045 Composite Index	5.1%	21.1%	9.0%	10.7%	9.1%
MTA 2050	4.7%	21.8%	9.2%	11.1%	9.3%
MTA 2050 Composite Index	5.1%	21.1%	8.9%	10.8%	9.2%
MTA 2055	4.7%	21.8%	NA	NA	NA
MTA 2055 Composite Index	5.1%	21.1%	8.9%	10.8%	9.2%
MTA 2060	NA	NA	NA	NA	NA
MTA 2060 Composite Index	5.1%	NA	NA	NA	NA
MTA 2065	NA	NA	NA	NA	NA
MTA 2065 Composite Index	5.1%	NA	NA	NA	NA

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

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.

At December 31, 2017, the investment option holding the largest portion of participants' funds in both the 457 and 401(k) Plans was the Stable Income Funds with 33.94% and 30.87% of invested funds, respectively. This was followed by the Large-Cap Equity Funds with 25.41% and 26.70% of invested 457 and 401(k) funds, respectively.

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

FUND INVESTMENT SUMMARY

	457		401(k)	
Investment at Contract and NAV Values	**Allocation**		**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%

The table below summarizes the Plans' investments by category at December 31, 2017:

FUND INVESTMENT SUMMARY

	457		401(k)	
Investment at Contract and NAV Values	**Allocation**		**Allocation**	
Target-Year Lifecycle Funds	$419,330,251	15.85%	$623,334,937	17.21%
International Equity Funds	169,649,376	6.41	246,458,903	6.81
Small-Mid Cap Equity Funds	356,271,176	13.47	472,377,231	13.05
Large-Cap Equity Funds	672,142,635	25.41	966,983,440	26.7
Bond Funds	127,315,865	4.81	190,275,365	5.25
Stable Income Fund	897,665,767	33.94	1,117,748,970	30.87
Self-Directed Investment Option	2,867,973	0.11	4,118,703	0.11
Total Investments	$2,645,243,043	100.0%	$3,621,297,549	100%

Economic Factors

Market Overview and Outlook – 2018

Risk aversion and volatility marked the end of 2018, with geopolitical developments and concerns about slowing growth both contributing to the sell-off in global equity markets. U.S. stocks led the decline, contributing to the first calendar year with negative returns since 2008. Amid the equity underperformance, credit spreads widened, developed market yields fell, and the U.S. dollar weakened. In addition, the Federal Reserve ("Fed") hiked interest rates as expected, though trimmed its forecast for hikes in 2019.

Several factors contributed to heightened market volatility throughout 2018—most importantly, investor concerns brought on by rising trade tensions, particularly between the U.S. and China, the apparent shift to a moderately tighter monetary policy by central banks in major developed countries; and the potential for slower growth, especially in China and Europe. Most major indices closed in negative territory at the end fourth quarter. After a difficult start, emerging markets ("EM") held up better than their developed world counterparts in the fourth quarter, but still trailed for 2018 overall. The U.S. market was among the bottom-performing indices in the last quarter but led most major indices for the year, notwithstanding the S&P 500 Index's worst performance since the conclusion of the global financial crisis. As a result, global financial markets proved to be a challenging environment during the fourth quarter of 2018.

From a monetary policy perspective, the Fed raised rates 25bps as expected in December and signaled a slower pace of tightening in 2019 as it continued to unwind its extensive balance sheet. Investors divined a more dovish tone from the Fed's 2019 projections, but markets remained volatile through the end of the year. Globally, most developed-world central banks began moving towards modestly tighter stances, including the European Central Bank ("ECB"), which formally announced the end of its bond-buying program in December, concluding a roughly €2.6 trillion program. Across the channel, the Bank of England raised rates twice since the country's Brexit referendum in June 2016, but recently indicated it was prepared to pivot as necessary once the formal exit takes place in early 2019. The Bank of Japan has long been in its own monetary policy lane, remaining by far the most accommodative of the major global central banks.

Macro Themes

- Major indices post worst year since 2008 as trade, economic outlook and monetary policy weigh on investors
- Global growth modestly decelerates but remains positive
- Trade uncertainty

After reaching a new high in September, the S&P 500 lost nearly 14% during the fourth quarter to end the year, down more than 4.4%. The Dow Jones Industrial Index was off 11% for the quarter, as was Europe's Stoxx Limited Index, which ended the quarter 600 points lower. China's Shanghai Composite also lost 12% over the last quarter and nearly 25% for the year. The year's sharp drawdown seemed unlikely at the outset of 2018, given the relatively robust outlook at the time. The silver lining is that share prices now appear cheap from a forward price/earnings perspective compared to long-run averages and the outlook, although more challenging, is still largely positive for 2019.

Global growth slowed, rather than stalled, in the second half of 2018. The U.S. outperformed its peers in end-of-year data with annualized GDP up 3.4% in the third quarter. In contrast, growth in the Eurozone dropped to 0.2% in the third quarter (and 1.7% year-on-year). The German economy contracted due to disruption to the auto industry from tougher emissions rules, while the Italian economy stalled over its now-resolved budget standoff with the European Union. China's growth fell to 6.5% in the third quarter, although the government expects to beat its 6.5% growth target for the full year.

The extent of global growth deceleration is one unknown for markets; how central banks will react is another. The Fed softened its tone on potential hikes in 2019 but nevertheless, it remained too hawkish for some as it stuck to plans to unwind its balance sheet, contributing to year-end market volatility. In December, the ECB ended its bond-buying program but gave no guidance when negative interest rates might end. Loose monetary conditions also remained in force in the UK and Japan as policymakers balanced the competing needs of fragile growth, inflation and the desire to wean economies off support. Despite fears of heavy-handedness, the global approach remained measured.

The greatest concern for markets continues to be the tariff war. The pause in the dispute following the G20 meeting between the U.S. and China provided hope that a more permanent solution could be reached. However, stocks in China, as well as international companies with exposure to China, were affected by weakening sentiment and actual fallout. Apple became the latest U.S. corporation to point the finger at the trade war when it announced that fourth quarter revenues would be lower than expected. Declining consumer confidence in China and cheaper domestic alternatives were significant contributing factors.

The issue of confidence also hindered business. Uncertainty surrounding trade and political issues, such as further concern about a no-deal Brexit in the UK, held back capital investment, as Chief Executive Officers awaited greater clarity, thus creating a silver lining for equity investors. Supercharged earnings growth in 2018 resulted in record share buybacks as announced, and U.S. stock repurchases broke through the $1 trillion mark in December. Following the market retreat in the fourth quarter, more buybacks can be anticipated in the future. At the very least, the challenges of the fourth quarter present active investors with a more reasonable valuation and a very attractive starting point for 2019.

EM central banks have meanwhile faced their own travails, primarily centered around the security of central bank independence, particularly in Turkey and India. For now, the question in both countries seems to be largely settled in favor of independence—a positive for markets; but as is often the case in EM, that does not preclude the issue resurfacing down the road.

United States

Through mid-2018, U.S. capital markets enjoyed the longest equity bull market in their history. Valuations of stocks reached levels rarely-- and for some valuations measures, never-- seen before. However, in the fourth quarter of 2018, markets in the U.S. weakened tremendously with the S&P 500 ending the year down 13.5% with U.S. equities underperforming in 2018 compared to 2017.

Large Cap stocks were strongly negative, with the S&P 500 and Russell 1000 indices posting returns of
(-4.4%) and (-4.84%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (-10.0%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return loss of (-11.0%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (-1.5%) outpacing the Russell 1000 Value (-8.3%).

Fixed income markets took the four rate hikes by the Fed in stride in 2018. Treasuries returned (+0.9%) for the year, with the assets strongest quarter coming in the first quarter of 2018. Municipal credit outperformed Treasuries for the year, with (+4.8%), posting positive returns for four straight quarters. Following strong results in 2017, high yield debt underperformed and ended its upward trend in 2018, returning (-2.1%).

International Developed
International equity markets posted very weak results in 2018 and lagged behind U.S. equity markets, returning (-9.4%) as measured by the Morgan Stanley Capital International ("MSCI") All Country World Index. In U.S. dollars, both Europe and Japan equities posted negative performance in 2018 with MSCI Europe returning (-14.9%) and MSCI Japan returning (-12.9%). Weak returns in Europe were driven by the global negative market performance in the last quarter of 2018. The Small Cap portion of international developed markets posted even weaker returns in 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 negative in 2018, following a positive year in 2017.

Emerging Markets
Emerging markets posted very weak returns in 2018 with performance lower than both U.S. and international developed markets across equity and debt. The broad emerging markets index returned (-14.6%) for the year. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell state owned companies. Within the EM group, Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing EM sectors, losing 15.4% and 15.1%, respectively.

The bond markets of emerging markets underperformed in 2018. Both hard currency and local currency bond posted very weak years in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (-4.3%) in 2018. Local currency bonds, which are issued in the local currency, returned
(-6.2%) for the year.

Commodities
Commodities posted negative results in 2018, with the broad Bloomberg Commodity Index down (-11.2%). Energy was the worst performing sub-sector, as oil prices were dampened by concerns of oversupply based on high inventories and stronger-than-expected production in Iran. Natural gas posted losses of -2.3% in a volatile quarter marked by low inventory levels and fluctuating weather forecasts. Natural gas consumption is projected to decrease slightly in the residential and commercial sectors, as expected milder weather will require less energy for space heating in the winter and air conditioning in the summer, largely based on temperature projections from the National Oceanic and Atmospheric Administration. On the other hand, precious metals strengthened towards the end of 2018, bolstered by the sell-off in equities and expectations for higher real interest rates.

Market Outlook
Global economic growth is likely to slow modestly in 2019, but the prevalent view is that investors' worst fears are likely exaggerated, as most of the world's economies will continue to expand rather than contract. Therefore, for the time being there is not – expectation of recession on the horizon.

There are many reasons for investors to be to be optimistic. U.S. corporate profit margins should remain high after the boost from 2018 tax cuts, which should result in earnings growth in the high single-digits or better. Furthermore, a more dovish stance from the Fed could signal a cyclical peak for the U.S. dollar, helping U.S. manufacturing and also providing some welcome relief for embattled EM companies facing higher dollar-denominated borrowing costs.

The Eurozone is expected to increase economic activities in the first half of 2019. Disruption to the German auto industry from new emissions standards, potential for increased fiscal stimulus across major economies in the bloc and the positive developments in Italy signaling a stronger unity in the European Union ("EU") can be potential catalysts for improving growth. Nevertheless, the intense uncertainty around Brexit will be a drag on the UK in the first quarter of 2019 and may extend its impact across Europe should Britain leave the EU without a deal on March 29th 2019.

An agreement between Organization Petroleum Exporting Countries ("OPEC") and its oil-producing allies to cut output can lead to greater price stability in 2019. But oil, and the broader commodity sector, remains a leading global growth concern.

Intense uncertainty on global trade remains the big issue gripping investors. The pause in the U.S.-China trade war could pave the way for a more comprehensive agreement. Nonetheless, significant obstacles remain, such as China's real desire to follow through on promises to open up its economy and end forced technology transfers.

Objectively, there can be little doubt there are multiple risks globally in this late-cycle phase. However, the outlook is far from bleak, and there is substantial consensus that 2019 could be a good year for portfolio reallocations, taking advantage of dislocated sectors, oversold opportunities and market outperformance.

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, 2018 AND DECEMBER 31, 2017
($ In THOUSANDS)

	2018		2017	
	457	**401(k)**	**457**	**401(k)**
ASSETS:				
Investments at contract value	$ 1,033,058	$ 1,313,496	$ 971,709	$ 1,224,190
Investments at fair value- net asset value	1,601,965	2,286,394	1,673,534	2,397,108
Total investments	2,635,023	3,599,890	2,645,243	3,621,298
Other plan investments:				
Participant loans receivable	78,429	159,462	74,607	146,347
Total other plan investments	78,429	159,462	74,607	146,347
Total assets	2,713,452	3,759,352	2,719,850	3,767,645
LIABILITIES:				
Administrative expense reimbursement	377	721	356	675
Total liabilities	377	721	356	675
TOTAL NET POSITION RESTRICTED FOR BENEFITS	$ 2,713,075	$ 3,758,631	$ 2,719,494	$ 3,766,970

See notes to financial statements.

METROPOLITAN TRANSPORTATION AUTHORITY
DEFERRED COMPENSATION PROGRAM

STATEMENTS OF CHANGES IN PLANS NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
($ In THOUSANDS)

	2018		2017	
	457	401(k)	457	401(k)
ADDITIONS:				
Investment Income:				
Net (depreciation)/appreciation in fair value of investments	$ (96,820)	$ (139,054)	$ 292,040	$ 416,584
Total investment (loss) / income	(96,820)	(139,054)	292,040	416,584
Contributions:				
Employee contributions, net	208,112	283,818	186,703	251,122
Participant rollovers	9,332	21,673	7,386	22,430
Employer contributions	-	4,392	-	4,109
Total contributions	217,444	309,883	194,089	277,661
Other additions:				
Loan repayments - interest	3,739	7,529	3,210	6,337
Total additions	124,363	178,358	489,339	700,582
DEDUCTIONS:				
Distribution to participants	67,372	87,379	53,784	73,733
Transfers to other plans	59,405	93,187	45,145	66,031
Net loan initiations/repayments	(72)	(184)	(91)	(196)
Loan defaults/offsets	2,544	3,592	2,029	2,985
Loan fees transfers to other plans	246	594	242	556
Other deductions	910	1,408	778	1,550
Administrative expense	377	721	356	675
Total deductions	130,782	186,697	102,243	145,334
(Decrease) /increase in net position	(6,419)	(8,339)	387,096	555,248
TOTAL NET POSITION RESTRICTED FOR BENEFITS				
Beginning of year	2,719,494	3,766,970	2,332,398	3,211,722
End of year	$ 2,713,075	$ 3,758,631	$ 2,719,494	$ 3,766,970

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. 85, *Omnibus 2017.* There was no material impact on the Program's financial statements as a result of the implementation of GASB Statement No. 85.

Recent Accounting Pronouncements — Not yet adopted but currently being reviewed

GASB Statement No.	GASB Accounting Standard	MTA DC Program Required Year of Adoption
84	*Fiduciary Activities*	2019

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.

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, 2018 and 2017 are as follows:

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

Investment at contract value – December 31, 2017	**457 Value**	**401(k) Value**
MTA Stable Value Fund	$897,665,768	$1,117,748,971
Investment at NAV – December 31, 2017	**457 Value**	**401(k) Value**
MTA Large-Cap Core Portfolio	$361,001,732	$523,266,729
MTA Large-Cap Core Index Fund	311,140,903	443,716,711
MTA Small-Mid Cap Equity	243,343,575	340,756,221
MTA International Portfolio	144,536,799	215,207,216

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The following table shows the contract and NAV values of investment in the various investment options at December 31, 2018 and 2017.

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	65,991,567	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	1,444,299	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	58,506,955
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
Stable Value 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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Investments at Contract and NAV Values at December 31, 2017

Target-Year Lifecycle Funds	457 Value	401(k) Value
MTA Target-Year Lifecycle 2015 Fund	$ 44,162,152	$63,373,256
MTA Target-Year Lifecycle 2020 Fund	39,353,130	56,067,904
MTA Target-Year Lifecycle 2025 Fund	99,905,559	151,105,187
MTA Target-Year Lifecycle 2030 Fund	37,156,645	56,991,883
MTA Target-Year Lifecycle 2035 Fund	71,322,343	114,855,869
MTA Target-Year Lifecycle 2040 Fund	21,836,250	33,388,279
MTA Target-Year Lifecycle 2045 Fund	38,476,400	61,975,198
MTA Target-Year Lifecycle 2050 Fund	22,249,815	25,152,601
MTA Target-Year Lifecycle 2055 Fund	1,881,412	2,159,684
MTA Target-Year Lifecycle 2060 Fund	87,721	29,297
MTA Target-Year Lifecycle 2065 Fund	336,563	210,492
MTA Income Fund	42,562,260	58,025,287
International Equity Funds		
MTA International Portfolio	144,536,799	215,207,217
MTA International Index Fund	25,112,577	31,251,686
Small- Mid Cap Equity Funds		
MTA Small-Mid Cap Portfolio	243,343,576	340,756,222
MTA Small-Mid Cap Index	112,927,600	131,621,009
Large-Cap Equity Funds		
MTA Large Cap Portfolio	361,001,732	523,266,729
MTA Large Cap Core Index Fund	311,140,903	443,716,711
Bond Funds		
MTA Bond Core Plus Portfolio	109,178,205	168,338,190
MTA Bond Aggregate Index Fund	18,137,660	21,937,174
Stable Value Option		
MTA Stable Value Fund	897,665,768	1,117,748,971
Self-Directed Investment Account	2,867,973	4,118,703
Total	**$ 2,645,243,043**	**$ 3,621,297,549**

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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, 2018 and 2017.

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)**

457 Investments at December 31, 2017

Target-Year Lifecycle Funds	Cash Earnings	Appreciation/Depreciation In Fair Market Value - Net
MTA Target-Year Lifecycle 2015 Fund	$ -	$4,052,728
MTA Target-Year Lifecycle 2020 Fund	-	4,077,533
MTA Target-Year Lifecycle 2025 Fund	-	12,255,066
MTA Target-Year Lifecycle 2030 Fund	-	4,975,535
MTA Target-Year Lifecycle 2035 Fund	-	10,613,612
MTA Target-Year Lifecycle 2040 Fund	-	3,383,477
MTA Target-Year Lifecycle 2045 Fund	-	6,515,291
MTA Target-Year Lifecycle 2050 Fund	-	3,799,618
MTA Target-Year Lifecycle 2055 Fund	-	194,991
MTA Target-Year Lifecycle 2060 Fund	-	2,451
MTA Target-Year Lifecycle 2065 Fund	-	10,850
MTA Income Fund	(32)	2,895,302
International Equity Funds		
MTA International Portfolio	-	28,478,383
MTA International Index Fund	-	4,214,019
Small-Mid-Cap Equity Funds		
MTA Small-Mid Cap Portfolio	-	22,211,261
MTA Small-Mid Cap Index Fund	-	9,823,723
MTA Small Cap Core Portfolio	-	4,674,966
MTA Small Cap Core Index	-	1,904,992
MTA Mid Cap Core Portfolio	(452)	14,136,064
MTA Mid Cap Core Index Fund	-	3,499,431
Large-Cap Equity Funds		
MTA Large Cap Portfolio	-	73,986,281
MTA Large Cap Index Fund	-	53,978,392
Bond Funds		
MTA Bond Portfolio	-	3,667,169
MTA Bond Index Fund	-	574,868
Stable Value Option		
MTA Stable Value Fund	590	17,739,251
Self-Directed Investment Account	-	375,144
Total	**$106**	**$292,040,398**

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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)**

401(k) Investments at December 31, 2017

Target-Year Lifecycle Funds	**Cash Earnings**	**Appreciation/Depreciation in Fair Market Value - Net**
MTA Target-Year Lifecycle 2015 Fund	$ -	$5,879,723
MTA Target-Year Lifecycle 2020 Fund	-	5,710,028
MTA Target-Year Lifecycle 2025 Fund	-	18,595,814
MTA Target-Year Lifecycle 2030 Fund	-	7,891,204
MTA Target-Year Lifecycle 2035 Fund	-	17,110,203
MTA Target-Year Lifecycle 2040 Fund	-	5,219,254
MTA Target-Year Lifecycle 2045 Fund	-	10,710,957
MTA Target-Year Lifecycle 2050 Fund	-	4,279,846
MTA Target-Year Lifecycle 2055 Fund	-	212,408
MTA Target-Year Lifecycle 2060 Fund	-	2,804
MTA Target-Year Lifecycle 2065 Fund	-	3,093
MTA Income Fund	291	3,969,445
International Equity Funds		
MTA International Portfolio	(112)	42,378,226
MTA International Index Fund	152	5,289,746
Small-Mid Cap Equity Funds		
MTA Small-Mid Cap Portfolio	26	31,126,551
MTA Small-Mid Cap Index Fund	16	11,521,852
MTA Small Cap Core Portfolio	-	6,973,340
MTA Small Cap Core Index	-	2,309,598
MTA Mid Cap Core Portfolio	(56)	19,139,073
MTA Mid Cap Core Index Fund	-	4,094,206
Large-Cap Equity Funds		
MTA Large Cap Portfolio	(5,389)	107,585,793
MTA Large Cap Core Index Fund	(117)	77,775,644
Bond Funds		
MTA Bond Portfolio	10	5,646,930
MTA Bond Index Fund	3	704,006
Stable Value Option		
MTA Stable Value Fund	(1,246)	21,908,722
Self-Directed Investment Account	-	545,928
Total	**($6,422)**	**$416,584,394**

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, 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	

At December 31, 2017, the following credit quality rating has been assigned by a 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	$ 469,594,684	39.47%	$ 615,206,323	39.40%
AA	71,494,230	6.01	93,214,177	5.97
A	189,845,683	15.96	247,553,852	15.85
BBB	139,889,488	11.76	182,374,091	11.68
BB	9,536,646	0.80	14,561,400	0.93
Below BB	9,498,940	0.80	14,647,426	0.94
Credit Risk Debt Securities	889,859,671	74.80	1,167,557,269	74.77
U.S. Government Bonds	299,826,616	25.20	394,031,513	25.23
Total fixed income securities	1,189,686,287	100.00%	1,561,588,782	100.00%
Other securities not rated - equity, international funds and corporate bonds	1,455,556,756		2,059,708,767	
Total investments	$ 2,645,243,043		$ 3,621,297,549	

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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.

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.

2017

Investment Type	457	401(k)	Total	Duration
Galliard Stable Value Fund	$ 897,665,768	$ 1,117,748,970	$ 2,015,414,738	2.99 *
Loomis Sayles Core Plus Bond Fund	36,028,808	55,551,603	91,580,411	5.95
TCW Core Plus Bond Fund	37,120,588	57,234,985	94,355,573	5.68
SSgA Aggregate Bond Index Fund	18,137,660	21,937,174	40,074,834	5.94
SSgA Real Asset Fund	43,005,081	63,810,866	106,815,947	7.67
Wellington World Bond Fund	36,028,807	55,551,603	91,580,410	1.51
Total Fixed Income Portfolio Modified Duration	1,067,986,712	1,371,835,201	2,439,821,913	3.40
Investment with no duration reported	1,577,256,331	2,249,462,348	3,826,718,679	
Total investments	$ 2,645,243,043	$ 3,621,297,549	$ 6,266,540,592	

* 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:

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

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2017 Currency	457 Holdings in U.S. Dollars	401(k) Holdings in U.S. Dollars	Total Holdings in U.S. Dollars
Australian Dollar	$ 4,371,594	$ 6,153,851	$ 10,525,445
Bermudian Dollar	1,557	1,906	3,463
Brazil Cruzeiro Real	2,457,448	3,706,592	6,164,040
British Pound Sterling	48,864,611	72,679,843	121,544,454
Canadian Dollar	21,597,869	31,619,714	53,217,583
Chilean Peso	(7,946)	(16,553)	(24,499)
Chinese Yuan Renminbi	420,469	636,531	1,057,000
Colombian Peso	85,195	120,473	205,668
Czech Krone	29,543	45,482	75,025
Danish Krone	8,789,516	13,249,489	22,039,005
Egyptian Pound	516	650	1,166
Euro	75,260,037	111,343,273	186,603,310
Hong Kong Dollar	13,520,765	20,243,745	33,764,510
Hungarian Forint	(1,537)	(7,701)	(9,238)
Indian Rupee	2,224,363	3,361,740	5,586,103
Indonesia Rupiah	624,592	942,698	1,567,290
Israeli Shekel	384,422	544,508	928,930
Japanese Yen	47,044,922	69,617,801	116,662,723
Malaysian Ringgit	2,132,147	3,220,675	5,352,822
Mexican Peso	2,190,765	3,317,046	5,507,811
New Zealand Dollar	(137,376)	(225,304)	(362,680)
Norwegian Krone	2,392,576	3,630,896	6,023,472
Panamanian Balboa	11,342	13,881	25,223
Peruvian Nuevo Sol	65,548	98,022	163,570
Philippine Peso	31,085	38,625	69,710
Polish Zloty	1,424,107	2,189,430	3,613,537
Qatar Riyal	562,504	850,498	1,413,002
Russian Ruble	119,052	183,559	302,611
Singapore Dollar	6,690,302	10,037,539	16,727,841
South African Rand	2,066,093	3,114,835	5,180,928
South Korean Won	4,706,825	7,100,085	11,806,910
Swedish Krona	12,339,870	18,611,548	30,951,418
Swiss Franc	16,322,702	23,987,762	40,310,464
New Taiwan Dollar	2,547,361	3,849,592	6,396,953
Thai Baht	1,100,413	1,664,793	2,765,206
Turkish Lira	694,143	1,036,541	1,730,684
United Arab Emirates Dirham	452,373	684,076	1,136,449
Uruguayan Peses	83,079	125,141	208,220
Total	$ 281,462,847	$ 417,773,282	$ 699,236,129

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	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	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	$ -		

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

457 Plan	**2017 December 31, 2017**	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice Period**
Equity Securities:				
Commingled large-cap equity funds	$ 759,673	$ -	Daily	None
Commingled Small-mid cap equity funds	112,928	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	186,233	-	Daily	None
Small-Mid cap equity mutual fund	91,727	-	Daily	None
Commingled international equity fund	158,435	-	Daily	None
Separate Manager Account: International equity mutual fund	133,322	-	Daily	None
Total equity securities	1,442,318	-		
Debt Securities				
Commingled debt funds	128,493	-	Daily	None
Separate Manager Account: debt funds	56,850	-	Daily	None
Total debt securities	185,343	-		
Real assets				
Commingled real asset equity fund	43,005	-	Daily	None
Total real assets	43,005	-		
Other:				
Self direct investment option	2,868	-	Daily	None
Total other	2,868	-		
Total investments measured at the NAV	1,673,534	-		
Investments measured at Contract Value	971,709	-		
Total investments	$ 2,645,243	$ -		

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

401(k) Plan	**2017 December 31, 2017**	**Unfunded Commitments**	**Redemption Frequency**	**Redemption Notice Period**
Equity Securities:				
Commingled large-cap equity funds	$ 1,098,377	$ -	Daily	None
Commingled Small-mid cap equity funds	131,621	-	Daily	None
Separate Manager Account: Small-Mid cap equity funds	263,107	-	Daily	None
Small-Mid cap equity mutual fund	129,590	-	Daily	None
Commingled international equity fund	230,496	-	Daily	None
Separate Manager Account: International equity mutual fund	199,244	-	Daily	None
Total equity securities	2,052,435	-		
Debt Securities				
Commingled debt funds	190,109	-	Daily	None
Separate Manager Account: debt funds	86,634	-	Daily	None
Total debt securities	276,743	-		
Real assets				
Commingled real asset equity fund	63,811	-	Daily	None
Total real assets	63,811	-		
Other:				
Self direct investment option	4,119	-	Daily	None
Total other	4,119	-		
Total investments measured at the NAV	2,397,108	-		
Investments measured at Contract Value	1,224,190	-		
Total investments	$ 3,621,298	$ -		

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, 2018 and 2017, 35.1% and 38.9% of the eligible employees were enrolled in the 457 Plan and 52.0% and 55.7% of the eligible employees were enrolled in the 401(k) Plan, respectively. There are 32,910 and 31,806 active participants in the 457 Plan and 46,849 and 44,631 active participants in the 401(k) Plan. The average account balance in the 457 Plan is $61,038 and $63,859 and in the 401(k) Plan is $62,023 and $65,772 in 2018 and 2017, 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 $78.43 million and $74.61 million at December 31, 2018 and 2017, respectively, and for the 401(k) Plan was $159.46 million and $146.35 million at December 31, 2018 and 2017, 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 could have deferred up to $18,000 plus an additional $6,000 for participants age 50 and over in calendar years 2018 and 2017. However, 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. Alternatively, participants age 50 and over could have deferred an additional $18,000 in 2018 and 2017, irrespective of prior contributions ("Age 50 Catch-Up"). Participants may not make both the Retirement Catch-Up and the Age 50 Catch-Up to the 457 Plan in the same year.

Participants in both the 457 Plan and the 401(k) Plan are permitted to contribute the maximum to each Plan.

Membership – As of December 31, 2018 and 2017, the Plans' membership with balances consisted of:

	2018		2017	
	457	401(k)	457	401(k)
Active employees	32,910	46,849	31,806	44,631
Terminated/Inactive employees	9,746	10,463	9,612	10,369
Total active and inactive members	42,656	57,312	41,418	55,000
Vested employees	42,656	57,057	41,418	54,757

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 May 15, 2019, the Deferred Compensation Committee approved an Amendment to Galliard Capital Management's ("Galliard") Investment Objectives and Guidelines, which is part of the Program's Stable Value Fund investment advisory agreement with Galliard. Galliard updated the Investment Objective and Guidelines to allow for the addition of new investment vehicles to the Stable Value Fund or the removal of investments that are no longer in the Stable Value Fund. The Amendment also updated the maximum weighting of the investment vehicles so that Galliard can lower the required cash available in the Fund.

Subsequent events have been evaluated through January 21, 2020.

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Metro-North Commuter Railroad Company Cash Balance Plan

Financial Statements as of and for the
Years Ended December 31, 2018 and 2017,
Supplemental Schedules, and
Independent Auditors' Report

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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, 2018 and 2017, 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, 2018 and 2017, 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 22, Schedule of Employer Contributions - Schedule II on pages 23 through 25, and Schedule of Investment Returns - Schedule III on page 26 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.

January 21, 2020

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, 2018 and 2017. 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, 2018, 2017, and 2016
(Dollars in thousands)

				Increase/(Decrease)	
	2018	2017	2016	2018-2017	2017-2016
Investments, at fair value	$ 473	$ 527	$ 571	$ (54)	$ (44)
Accrued interest	3	3	3	-	-
Receivable from investment securities sold	-	3	30	(3)	(27)
Total assets	476	533	604	(57)	(71)
Payable for investment securities purchased	5	10	30	(5)	(20)
Total liabilities	5	10	30	(5)	(20)
Net position - restricted for pension benefits	$ 471	$ 523	$ 574	$ (52)	$ (51)

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.

December 31, 2017 versus December 31, 2016

Investments at December 31, 2017 were $527 thousand, a decrease of $44 thousand from 2016. The decrease is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and accrued interest at December 31, 2017 were $6 thousand, a net decrease of $27 thousand from 2016. The decrease is the result of a decrease in net securities sold at the end of 2017.

Payables at December 31, 2017 were $10 thousand, a decrease of $20 thousand from 2016. The decrease is the result of a decrease in net securities purchased at the end of 2017.

Net position restricted for pension benefits at December 31, 2017 was $523 thousand, a decrease of $51 thousand from 2016 as a result of the changes noted above.

Changes in Fiduciary Net Position
For the Years Ended December 31, 2018, 2017 and 2016
(Dollars in thousands)

				Increase/(Decrease)	
	2018	**2017**	**2016**	**2018-2017**	**2017-2016**
Additions:					
Net investment income/(loss)	$ 1	$ 20	$ 16	$ (19)	$ 4
Employer contributions	5	-	23	5	(23)
Total additions	6	20	39	(14)	(19)
Deductions:					
Benefits paid to participants	58	71	77	(13)	(6)
Total deductions	58	71	77	(13)	(6)
Net decrease in net position	(52)	(51)	(38)	(1)	(13)
Net position-restricted for pension benefits:					
Beginning of year	523	574	612	(51)	(38)
End of year	$ 471	$ 523	$ 574	$ (52)	$ (51)

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.

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.

December 31, 2017 versus December 31, 2016

Net investment income increased by $4 thousand in 2017 due to net investment gains of $20 thousand in 2017 versus net investment gains of $16 thousand in 2016.

Contributions decreased by $23 thousand in 2017 compared to 2016 as a result of the Actuarial Determined Contributions (“ADC”) for 2017.

Benefit payments decreased by $6 thousand in 2017 compared to 2016. In 2017, there were less retirees taking lump sum distributions when compared to 2016.

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, 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 %
December 31, 2016			
U.S. government & agency securities	$ 325	56.8 %	2.3 %
Corporate bonds & asset backed securities	221	38.7 %	3.9 %
U.S. Treasury bills	6	1.1 %	0.0 %
Short-term investments	8	1.4 %	0.3 %
Other bonds & fixed income securities	11	2.0 %	4.8 %
Total	$ 571	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, 2018 AND 2017

	2018	2017
ASSETS:		
Investments, at fair value:		
U.S. government & agency securities	$ 266,317	$ 263,261
Corporate bonds & asset backed securities	183,867	223,205
U.S. Treasury bills	-	16,995
Other bonds & fixed income securities	11,232	11,680
Short-term investments	11,871	11,722
Total investments	473,287	526,863
Accrued interest	2,255	2,604
Receivable from investment securities sold	-	3,238
Total assets	475,542	532,705
LIABILITIES:		
Payable for investment securities purchased	(4,993)	(9,942)
Total liabilities	(4,993)	(9,942)
NET POSITION - restricted for pension benefits	$ 470,549	$ 522,763

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, 2018 AND 2017

	2018	2017
ADDITIONS:		
Investment income:		
Interest	$ 15,716	$ 15,863
Net (depreciation)/appreciation in fair value of investments	(15,436)	3,745
Total investment income	280	19,608
Contributions:		
Employer	5,444	-
Other	-	52
Total additions	5,724	19,660
DEDUCTIONS:		
Benefits paid to participants	(57,938)	(71,061)
Total deductions	(57,938)	(71,061)
NET DECREASE IN NET POSITION	(52,214)	(51,401)
NET POSITION - restricted for pension benefits		
Beginning of year	522,763	574,164
End of year	$ 470,549	$ 522,763

METRO-NORTH COMMUTER RAILROAD COMPANY
CASH BALANCE PLAN

NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

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, 2017 valuation, the actuarial value of assets exceeded the actuarial accrued liability and as a result no payment is required for 2017. Per the January 1, 2018 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 2019.

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 $15 thousand and $18 thousand for the years ended December 31, 2018 and 2017, 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, 2018:

GASB Statement No. 85, *Omnibus 2017*, addresses practice issues identified during the implementation and application of certain GASB statements. The provisions of this Statement amend and clarify guidance under a variety of topics with the intent to enhance consistency in the application of accounting and reporting requirements. This Statement specifically addresses issues related to blending component units, goodwill, fair value measurement and application, and pensions and other postemployment benefits. The requirements of this Statement are effective for reporting periods beginning after June 15, 2017. The adoption of this Statement had no impact on the Plan's financial statements.

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	MNCR Pension Plan Required Year of Adoption
84	*Fiduciary Activities*	2019

Subsequent Events

As of January 21, 2020, there were no materially significant subsequent events.

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, 2018 and December 31, 2017:

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GASB 72 Disclosure
(in thousands)

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**

INVESTMENTS - fair value level	2017 Level 1	Level 2	Level 3	Total
Debt securities:				
U.S government agency	$ 145	$ 118	$ -	$ 263
Corporate bonds	-	203	-	203
U.S treasury securities	17	-	-	17
Commerical mortgage-backed securities	-	20	-	20
Other bonds	-	12	-	12
Total debt securities	162	353	-	515
Total investments by fair value level	162	353	-	515
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	**$ 162**	**$ 353**	**$ -**	**$ 527**

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, 2018 and December 31, 2017, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the Plan was 0.06% and 3.76%, 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.

Net (depreciation)/appreciation 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) (depreciated)/ appreciated in value as follows:

	Year Ended December 31, 2018	Year Ended December 31, 2017
U.S. government & agency securities	$ (5,051)	$ 600
Corporate bonds & asset backed securities	(9,937)	2,939
Other bonds & fixed income securities	(448)	206
	$ (15,436)	$ 3,745

Credit Risk

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2018 and December 31, 2017, respectively, are as follows:

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%

December 31, 2017 Quality Rating	Fair Value	Percentage of Portfolio
AAA	$ 37,761	7.17%
AA	4,937	0.94
A+	5,111	0.97
A	17,477	3.32
AA-	6,557	1.24
A-	21,178	4.02
BBB+	88,066	16.27
BBB	35,601	6.76
BBB-	10,177	1.93
NR	19,741	3.75
Total credit risk debt securities	246,607	
U.S. government & agency securities*	280,256	53.19
Total investment portfolio	$ 526,863	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, 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

December 31, 2017 Investment Type	Fair Value	Percentage of Portfolio	Duration (Years)
U.S. government & agency securities	$ 263,261	49.97%	5.44
Corporate bonds & asset backed securities	223,205	42.36	6.64
U.S. treasury bills	16,995	3.23	0.03
Other bonds & fixed income securities	11,680	2.22	5.98
Short-term investments	11,722	2.22	0.00
Total investment	$ 526,863	100.00%	
Portfolio average duration			5.66

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

The components of the net pension liability of the employer at December 31, 2018 and 2017, for the Plan, were as follows:

	2018	2017
Total pension liability	$ 478,801	$ 527,998
Plan's fiduciary net position	470,549	522,763
Employer's net pension liability	$ 8,252	$ 5,235
Plan's fiduciary net position as a percentage of the total pension liability	98.28%	99.01%

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.

	2018	2017
Discount rate	4.00%	4.00%
Long-term expected rate of return net of investment expense	4.00%	4.00%
Municipal bond rate	N/A	N/A

Other Key Actuarial Methods and Assumptions for the years ended December 31, 2018 and December 31, 2017 were as follows:

The actuarial assumptions that determined the total pension liability as of December 31, 2018 and December 31, 2017 was based on an experience study for the period January 1, 2011 - January 1, 2016.

	2018	**2017**
Valuation date:	January 1, 2019	January 1, 2018
Measurement date:	December 31, 2018	December 31, 2017
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:	4.0% per annum, compounded annually	4.0% per annum, compounded annually
Benefit escalator:	3.0% 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 2018 and 2017:

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

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 2018 and 2017:

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.

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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, 2018 and 2017.

Asset Class	Index	Target Allocation	2018	2017
Core Fixed Income	Barclays Aggregate	100.00%	1.58%	1.41%
Assumed Inflation - Mean			2.50%	2.50%
Assumed Inflation - Standard Deviation			1.65%	1.85%
Portfolio Nominal Mean Return			4.09%	3.92%
Portfolio Standard Deviation			3.90%	4.55%
Long-Term Expected Rate of Return selected by MTA			**4.00%**	**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, 2018 and 2017, respectively, calculated using the discount rate of 4.00%, 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 (3.00%) or 1 percentage point higher (5.00%) than the current rate.

	December 31, 2018			**December 31, 2017**		
	1% Decrease 3.00%	Discount Rate 4.00%	1% Increase 5.00%	1% Decrease 3.00%	Discount Rate 4.00%	1% Increase 5.00%
Net Pension Liability	$35,157	$8,252	($15,544)	$35,109	$5,235	($21,154)

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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)

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

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
2009	330	330	-	5,936,288	0.01%
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%

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, 2018	January 1, 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%	2.30%
Salary Increases	N/A	N/A	N/A
Investment Rate of Return	4.00%, 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, 2016	January 1, 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.
Actuarial Cost Method	Entry Age Normal	Unit Credit
Amortization Method	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.	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%	2.50%
Salary Increases	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	4.50%, 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

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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	5.96%
2015	0.93%
2016	2.75%
2017	3.67%
2018	0.06%

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”)

Financial Statements as of and for the
Years Ended December 31, 2018 and 2017
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, 2018 and 2017, 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, 2018 and 2017, 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 10, the Schedule of Changes in Employers' Net OPEB Liability and Related Ratios on page 34, the Schedule of Employer Contributions on page 35 and the Schedule of Investment Returns on page 36 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.

January 21, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017

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, 2018 and 2017. 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, 2018, 2017, and 2016
(Dollars in thousands)

				Amount of Change		Percentage Change	
	2018	**2017**	**2016**	**(2018 - 2017)**	**(2017 - 2016)**	**(2018 - 2017)**	**(2017 - 2016)**
ASSETS:							
Investments	$ 351,538	$ 370,596	$ 323,199	$ (19,058)	$ 47,397	(5.1)%	14.7%
Receivables and other assets	14	7	3	7	4	100.0	133.3
TOTAL ASSETS	351,552	370,603	323,202	(19,051)	47,401	(5.1)	14.7
LIABILITIES:							
Benefits payable and accrued expenses	172	251	220	(79)	31	(31.5)	14.1
TOTAL LIABILITIES	172	251	220	(79)	31	(31.5)	14.1
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS	$ 351,380	$ 370,352	$ 322,982	$ (18,972)	$ 47,370	(5.1)%	14.7%

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 $351.4 million, $370.4 million, and $323.0 million as of December 31, 2018, 2017, and 2016, respectively. The decrease in 2018 is primarily a result of net depreciation on fair value of investments held and investment fees whereas the net increase in 2017 is primarily a result of net appreciation on fair value of investments held offset by investment fees charged to the Plan.

Changes in Plan Net Position
For the Years Ended December 31, 2018, 2017, and 2016
(Dollars in thousands)

				Amount of Change		Percentage Change	
	2018	**2017**	**2016**	**(2018 - 2017)**	**(2017 - 2016)**	**(2018 - 2017)**	**(2017 - 2016)**
ADDITIONS:							
Total investment income/(loss)	$ (17,227)	$ 49,231	$ 27,177	$ (66,458)	$ 22,054	(135.0)%	81.1 %
Less:							
Investment expenses	1,689	1,861	1,743	(172)	118	(9.2)	6.8
Net investment income/(loss)	(18,916)	47,370	25,434	(66,286)	21,936	(139.9)	86.2
Add:							
Employer contributions	616,638	579,893	551,013	36,745	28,880	6.3	5.2
Implicit rate subsidy contribution	74,484	71,101	-	3,383	71,101	4.8	100.0
Total additions	672,206	698,364	576,447	(26,158)	121,917	(3.7)	21.1
DEDUCTIONS							
Benefit payments	616,638	579,893	551,013	36,745	28,880	6.3	5.2
Implicit rate subsidy payments	74,484	71,101	-	3,383	71,101	4.8	100.0
Administrative expenses	56	-	-	56	-	-	-
Total deductions	691,178	650,994	551,013	40,184	99,981	6.2	18.1
Net increase/(decrease) in Plan net position	(18,972)	47,370	25,434	(66,342)	21,936	(140.1)	86.2
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYEMENT BENEFITS							
Beginning of year	370,352	322,982	297,548	47,370	25,434	14.7	8.5
End of year	$ 351,380	$ 370,352	$ 322,982	$ (18,972)	$ 47,370	(5.1)%	14.7 %

The Plan's net position held in trust decreased by $19.0 million during 2018 whereas it increased by $47.4 million during 2017 and by $25.4 million during 2016. In 2018, the Plan's net depreciation in the fair market value was $17.3 million with investment fees of $1.7 million. In 2017, the Plan's net appreciation in fair market values were $49.2 million and the investment fees were $1.9 million and.

Investments

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

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 %

December 31, 2017 **(Dollars in thousands)**	**Fair Value**	**Allocation**
Type of Investments		
Investment measured at the NAV	$ 370,596	100.00 %
	$ 370,596	100.00 %

Economic Factors

Market Overview and Outlook – 2018

Risk aversion and volatility marked the end of 2018, with geopolitical developments and concerns about slowing growth both contributing to the sell-off in global equity markets. U.S. stocks led the decline, contributing to the first calendar year with negative returns since 2008. Amid the equity underperformance, credit spreads widened, developed market yields fell, and the U.S. dollar weakened. In addition, the Federal Reserve ("Fed") hiked interest rates as expected, though trimmed its forecast for hikes in 2019.

Several factors contributed to heightened market volatility throughout 2018—most importantly, investor concerns brought on by rising trade tensions, particularly between the U.S. and China, the apparent shift to a moderately tighter monetary policy by central banks in major developed countries; and the potential for slower growth, especially in China and Europe. Most major indices closed in negative territory at the end fourth quarter. After a difficult start, emerging markets ("EM") held up better than their developed world counterparts in the fourth quarter, but still trailed for 2018 overall. The U.S. market was among the bottom-performing indices in the last quarter but led most major indices for the year, notwithstanding the S&P 500 Index's worst performance since the conclusion of the global financial crisis. As a result, global financial markets proved to be a challenging environment during the fourth quarter of 2018.

From a monetary policy perspective, the Fed raised rates 25bps as expected in December and signaled a slower pace of tightening in 2019 as it continued to unwind its extensive balance sheet. Investors divined a more dovish tone from the Fed's 2019 projections, but markets remained volatile through the end of the year. Globally, most developed-world central banks began moving towards modestly tighter stances, including the European Central Bank ("ECB"), which formally announced the end of its bond-buying program in December, concluding a roughly €2.6 trillion program. Across the channel, the Bank of England raised rates twice since the country's Brexit referendum in June 2016, but recently indicated it was prepared to pivot as necessary once the formal exit takes place in early 2019. The Bank of Japan has long been in its own monetary policy lane, remaining by far the most accommodative of the major global central banks.

Macro Themes

- Major indices post worst year since 2008 as trade, economic outlook and monetary policy weigh on investors
- Global growth modestly decelerates but remains positive
- Trade uncertainty

After reaching a new high in September, the S&P 500 lost nearly 14% during the fourth quarter to end the year, down more than 4.4%. The Dow Jones Industrial Index was off 11% for the quarter, as was Europe's Stoxx Limited Index, which ended the quarter 600 points lower. China's Shanghai Composite also lost 12% over the last quarter and nearly 25% for the year. The year's sharp drawdown seemed unlikely at the outset of 2018, given the relatively robust outlook at the time. The silver lining is that share prices now appear cheap from a forward price/earnings perspective compared to long-run averages and the outlook, although more challenging, is still largely positive for 2019.

Global growth slowed, rather than stalled, in the second half of 2018. The U.S. outperformed its peers in end-of-year data with annualized GDP up 3.4% in the third quarter. In contrast, growth in the Eurozone dropped to 0.2% in the third quarter (and 1.7% year-on-year). The German economy contracted due to disruption to the auto industry from tougher emissions rules, while the Italian economy stalled over its now-resolved budget standoff with the European Union. China's growth fell to 6.5% in the third quarter, although the government expects to beat its 6.5% growth target for the full year.

The extent of global growth deceleration is one unknown for markets; how central banks will react is another. The Fed softened its tone on potential hikes in 2019 but nevertheless, it remained too hawkish for some as it stuck to plans to unwind its balance sheet, contributing to year-end market volatility. In December, the ECB ended its bond-buying program but gave no guidance when negative interest rates might end. Loose monetary conditions also remained in force in the UK and Japan as policymakers balanced the competing needs of fragile growth, inflation and the desire to wean economies off support. Despite fears of heavy-handedness, the global approach remained measured.

The greatest concern for markets continues to be the tariff war. The pause in the dispute following the G20 meeting between the U.S. and China provided hope that a more permanent solution could be reached. However, stocks in China, as well as international companies with exposure to China, were affected by weakening sentiment and actual fallout. Apple became the latest U.S. corporation to point the finger at the trade war when it announced that fourth quarter revenues would be lower than expected. Declining consumer confidence in China and cheaper domestic alternatives were significant contributing factors.

The issue of confidence also hindered business. Uncertainty surrounding trade and political issues, such as further concern about a no-deal Brexit in the UK, held back capital investment, as Chief Executive Officers awaited greater clarity, thus creating a silver lining for equity investors. Supercharged earnings growth in 2018 resulted in record share buybacks as announced, and U.S. stock repurchases broke through the $1 trillion mark in December. Following the market retreat in the fourth quarter, more buybacks can be anticipated in the future. At the very least, the challenges of the fourth quarter present active investors with a more reasonable valuation and a very attractive starting point for 2019.

EM central banks have meanwhile faced their own travails, primarily centered around the security of central bank independence, particularly in Turkey and India. For now, the question in both countries seems to be largely settled in favor of independence—a positive for markets; but as is often the case in EM, that does not preclude the issue resurfacing down the road.

United States

Through mid-2018, U.S. capital markets enjoyed the longest equity bull market in their history. Valuations of stocks reached levels rarely-- and for some valuations measures, never-- seen before. However, in the fourth quarter of 2018, markets in the U.S. weakened tremendously with the S&P 500 ending the year down 13.5% with U.S. equities underperforming in 2018 compared to 2017.

Large Cap stocks were strongly negative, with the S&P 500 and Russell 1000 indices posting returns of (-4.4%) and (-4.84%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (-10.0%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return loss of (-11.0%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (-1.5%) outpacing the Russell 1000 Value (-8.3%).

Fixed income markets took the four rate hikes by the Fed in stride in 2018. Treasuries returned (+0.9%) for the year, with the assets strongest quarter coming in the first quarter of 2018. Municipal credit outperformed Treasuries for the year, with (+4.8%), posting positive returns for four straight quarters. Following strong results in 2017, high yield debt underperformed and ended its upward trend in 2018, returning (-2.1%).

International Developed

International equity markets posted very weak results in 2018 and lagged behind U.S. equity markets, returning (-9.4%) as measured by the Morgan Stanley Capital International ("MSCI") All Country World Index. In U.S. dollars, both Europe and Japan equities posted negative performance in 2018 with MSCI Europe returning (-14.9%) and MSCI Japan returning (-12.9%). Weak returns in Europe were driven by the global negative market performance in the last quarter of 2018. The Small Cap portion of international developed markets posted even weaker returns in 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 negative in 2018, following a positive year in 2017.

Emerging Markets

Emerging markets posted very weak returns in 2018 with performance lower than both U.S. and international developed markets across equity and debt. The broad emerging markets index returned
(-14.6%) for the year. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell state owned companies. Within the EM group, Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing EM sectors, losing 15.4% and 15.1%, respectively.

The bond markets of emerging markets underperformed in 2018. Both hard currency and local currency bond posted very weak years in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (-4.3%) in 2018. Local currency bonds, which are issued in the local currency, returned
(-6.2%) for the year.

Commodities

Commodities posted negative results in 2018, with the broad Bloomberg Commodity Index down (-11.2%). Energy was the worst performing sub-sector, as oil prices were dampened by concerns of oversupply based on high inventories and stronger-than-expected production in Iran. Natural gas posted losses of -2.3% in a volatile quarter marked by low inventory levels and fluctuating weather forecasts. Natural gas consumption is projected to decrease slightly in the residential and commercial sectors, as expected milder weather will require less energy for space heating in the winter and air conditioning in the summer, largely based on temperature projections from the National Oceanic and Atmospheric Administration. On the other hand, precious metals strengthened towards the end of 2018, bolstered by the sell-off in equities and expectations for higher real interest rates.

Market Outlook

Global economic growth is likely to slow modestly in 2019, but the prevalent view is that investors' worst fears are likely exaggerated, as most of the world's economies will continue to expand rather than contract. Therefore, for the time being there is not – expectation of recession on the horizon.

There are many reasons for investors to be to be optimistic. U.S. corporate profit margins should remain high after the boost from 2018 tax cuts, which should result in earnings growth in the high single-digits or better. Furthermore, a more dovish stance from the Fed could signal a cyclical peak for the U.S. dollar, helping U.S. manufacturing and also providing some welcome relief for embattled EM companies facing higher dollar-denominated borrowing costs.

The Eurozone is expected to increase economic activities in the first half of 2019. Disruption to the German auto industry from new emissions standards, potential for increased fiscal stimulus across major economies in the bloc and the positive developments in Italy signaling a stronger unity in the European Union ("EU") can be potential catalysts for improving growth. Nevertheless, the intense uncertainty around Brexit will be a drag on the UK in the first quarter of 2019 and may extend its impact across Europe should Britain leave the EU without a deal on March 29th 2019.

An agreement between Organization Petroleum Exporting Countries ("OPEC") and its oil-producing allies to cut output can lead to greater price stability in 2019. But oil, and the broader commodity sector, remains a leading global growth concern.

Intense uncertainty on global trade remains the big issue gripping investors. The pause in the U.S.-China trade war could pave the way for a more comprehensive agreement. Nonetheless, significant obstacles remain, such as China's real desire to follow through on promises to open up its economy and end forced technology transfers.

Objectively, there can be little doubt there are multiple risks globally in this late-cycle phase. However, the outlook is far from bleak, and there is substantial consensus that 2019 could be a good year for portfolio reallocations, taking advantage of dislocated sectors, oversold opportunities and market outperformance.

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, 2018 AND 2017
(In thousands)

	2018	**2017**
ASSETS:		
Investments measured at fair value - net asset value	$ 351,538	$ 370,596
Interest receivable	14	7
Total assets	351,552	370,603
LIABILITIES:		
Benefits payable and accrued expenses	172	251
Total liabilities	172	251
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS	$ 351,380	$ 370,352

See notes to financial statements.

DRAFT

METROPOLITAN TRANSPORTATION AUTHORITY
OTHER POSTEMPLOYMENT BENEFITS PLAN

STATEMENTS OF CHANGES IN PLAN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(In thousands)

	2018	2017
ADDITIONS:		
Net realized and unrealized (loss) /gains	$ (22,591)	$ 42,470
Dividends	5,203	6,697
Interest	161	64
Total investment (loss)/income	(17,227)	49,231
Less:		
Investment expenses	1,689	1,861
Net investment (loss)/income	(18,916)	47,370
Add:		
Employer contributions	616,638	579,893
Implicit rate subsidy contribution	74,484	71,101
Total additions	672,206	698,364
DEDUCTIONS:		
Benefit Payments	616,638	579,893
Implicit rate subsidy payments	74,484	71,101
Administrative expenses	56	-
Total deductions	691,178	650,994
Net (decrease) / increase in Plan net position	(18,972)	47,370
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS:		
Beginning of year	370,352	322,982
End of year	$ 351,380	$ 370,352

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 Railroad and MTA Metro-North Railroad. There have been no further contributions made to the Trust. Since the amount of benefits paid during 2018 exceed 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, 2018 and December 31, 2017 are 4.10% and 3.44%, respectively.

Blended and Age-adjusted Premium (in thousands)	**2018 Retirees**	**2017 Retirees**
Total blended premiums	$616,638	$579,893
Employment payment for retiree healthcare	74,484	71,101
Retiree Contributions	-	-
Net Payments	$691,122	$650,994

The $74,484 and $71,101 employer payments for retiree healthcare shown in the preceding table are cash payments in the years 2018 and 2017, respectively. Based on the premium structure of NYSHIP, it is part of the employer's payment for active-employee healthcare benefits; but reflects the higher costs among retirees than actives. The $74,484 and $71,101, therefore, are not payments for active-employee benefits; rather, but represents benefit payment for healthcare coverage for the years 2018 and 2017 for retirees.

Significant Changes - This valuation reflects a change to the plan provisions that was adopted during the measurement period. Non-represented members of MTA Bus Company are now eligible for MaBSTOA style pension benefits, which include changes to retirement eligibility conditions. The change in retirement eligibility resulted in a change in the OPEB liability. In addition, spouses of International Brotherhood of Teamsters Local 808 members of MTA Metro-North who retire on or after July 1, 2017 will be eligible for a $100 per month supplemental benefit upon becoming eligible for Medicare, payable during the retiree's lifetime.

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 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, 2017. The total number of plan participants as of July 1, 2017 receiving retirement benefits was approximately 46 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 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, 2017, as the valuation date of the OPEB actuarial valuation. The Plan's combined membership consisted of the following at January 1, 2016, the date of the most recent OPEB actuarial valuation:

	July 1, 2017	**January 1, 2016**
Active Plan members	72,047	70,070
Inactive Plan members currently receiving Plan benefit payments	45,330	46,064
Inactive Plan members entitled to but not yet receiving benefit payments	254	155
Total number of participating employees	117,631	116,289

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").

Recent Accounting Pronouncements — The Plan adopted GASB Statement No. 85, *Omnibus 2017* ("GASB 85"). GASB 85 address practice issues that had been identified during implementation and application of certain GASB statements. The Plan has determined that GASB Statement No. 85 did not have a material impact on the December 31, 2018 financial statements.

Recent Accounting Pronouncements — Not yet adopted but currently being reviewed

GASB Statement No.	GASB Accounting Standard	MTA Welfare Benefits Plan Required Year of Adoption
84	*Fiduciary Activities*	2019

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.

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, 2018.

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, 2018 and 2017 the following credit quality rating has been assigned by a nationally recognized rating organization:

	2018		2017	
Quality Rating	**Fair Value**	**Percentage of Fixed Income Portfolio**	**Fair Value**	**Percentage of Fixed Income Portfolio**
AAA	$ 20,278,622	12.32 %	$ 12,784,627	7.08 %
AA	19,107,945	11.61	15,820,019	8.77
A	6,172,007	3.75	29,348,972	16.27
BBB	18,148,858	11.03	22,960,712	12.73
BB	7,043,718	4.28	12,735,163	7.06
B	7,515,217	4.57	4,775,609	2.65
CCC	1,548,821	0.94	107,298	0.06
Not Rated	37,690,173	22.90	35,768,932	19.83
Credit risk debt securities	117,505,361	71.40	134,301,334	74.45
U.S. Government bonds	47,059,433	28.60	46,092,991	25.55
Total fixed income securities	164,564,794	100.00 %	180,394,325	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	186,973,564		190,201,299	
Total investments	$ 351,538,358		$ 370,595,624	

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.

Investment Fund	2018 Fair Value	2018 Duration	2017 Fair Value	2017 Duration
Allianz Structured Alpha	$ 19,946,008	0.13	$ 20,434,253	0.13
Baird Aggregate Bond Fund	26,964,426	5.87	27,046,146	5.98
Bridgewater Pure Alpha Major Markets Fund	13,922,247	(7.10)	13,014,796	(5.78)
Bridgewater All Weather Fund	39,301,664	8.30	41,399,870	7.70
GAM Unconstrained Bond Fund	5,847,591	0.10	17,005,448	(0.17)
Pimco All Asset Fund	32,883,226	3.41	34,606,248	3.45
Wellington Diversified Inflation Hedge Fund	14,004,652	0.40	15,659,837	0.70
Wellington Blended Emerging Markets Debt Fund	15,676,047	5.44	16,663,943	5.70
Wellington Opportunistic Investment Fund	27,903,228	1.40	31,359,989	1.70
	196,449,088		217,190,532	
Portfolio modified duration		3.21		3.15
Investments with no duration reported	155,089,270		153,405,092	
Total investments	$ 351,538,358		$ 370,595,624	

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, 2018 and 2017 is as follows:

Issuer	2018 % of Total Investments	2018 of Total Investments	2017 % of Total Investments	2017 of Total Investments
Artisan Global Opportunities Fund	14 %	$ 48,703,546	14 %	$ 53,435,866
Dreyfus Global Stock Fund	13	45,931,005	13	46,709,730
Hexavest World Equity Fund	12	41,550,013	12	44,836,161
Bridgewater All Weather Fund	11	39,301,664	11	41,399,870
PIMCO All Asset Fund	9	32,883,226	9	34,606,248
Wellington Opportunities Investment Fund	8	27,903,229	9	31,359,989
Baird Aggregate Bond Fund	8	26,964,426	7	27,046,146
Allianz Structured Alpha	6	19,946,008	6	20,434,253
GAM Unconstrained Bond Fund	-	-	5	17,005,448
Wellington Blended Emerging Markets Debt Fund	-	-	5	16,663,943

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, 2018 and 2017 is as follows:

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Foreign Currency Holdings in US $	December 31, 2018	December 31, 2017
Argentine Peso	$ 257,246	$ 498,826
Asia ex Japan	939,508	-
Australian Dollar	2,325,107	5,571,875
Bermudian Dollar	167,419	122,304
Brazilian Cruzeiro Real	2,564,109	1,380,421
Canadian Dollar	2,343,303	1,905,487
Chilean Peso	440,572	837,601
Columbian Peso	581,350	823,287
Croatia Kuna	136,068	18,816
Chinese Yuan Renminbi	2,080,702	4,716,754
Czech Republic Koruna	379,664	302,465
Danish Krone	3,013,341	2,824,620
Dominican Peso	3,288	-
Egyptian Pound	194,987	542,807
Euro	25,299,785	26,033,881
Ghanaian Cedi	23,514	44,993
Great Britain Pound Sterling	17,872,933	17,228,009
Hong Kong Dollar	8,395,606	7,774,433
Hungarian Forint	706,468	315,702
Iceland Krona	558,065	746,368
Indian Rupee	2,181,171	4,660,494
Indonesia Rupiah	1,324,838	1,491,734
Israeli Shekel	296,203	234,820
Japanese Yen	12,587,155	17,870,874
Kazakhstan Tenge	13,153	34,496
Malaysian Ringgit	487,897	1,524,929
Mauritian Rupee	111,613	87,808
Mexican New Peso	967,953	801,974
New Zealand Dollar	(589,369)	244,708
Norwegian Krone	724,443	542,156
Pakistani Rupee	312	-
Peruvian Nuevo Sol	342,236	523,413
Philippine Peso	215,305	71,797
Polish Zloty	811,638	1,336,209
Qatar Riyal	6,464	4,484
Romanian Leu	258,975	51,909
Russian Federation Rouble	1,266,540	1,099,840
Singapore Dollar	689,388	948,228
South African Rand	1,215,085	1,423,040
South Korean Won	1,659,753	3,004,232
Swedish Krona	902,973	4,378,202
Swiss Franc	9,937,130	7,424,175
Taiwanese New Dollar	429,289	1,987,086
Thai Baht	685,044	718,909
Turkish Lira	395,304	676,234
Ukrainian Hryvnia	23,018	-
UAE Dirham	9,757	18,326
Uruguayan Peso	6,577	110,238
Other	-	(106,794)
Total	$ 105,242,880	$ 122,852,172

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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, 2018 and 2017, 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, 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			
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	$ -		

Investments measured at NAV

	December 31, 2017	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled international equity funds	$ 44,836,161	$ -	Daily	None
International equity mutual funds	100,145,597	-	Daily, monthly	None
Total equity investments measured at the NAV	144,981,758	-		
Debt Securities				
Commingled debt funds	60,715,538		Daily, monthly, quarterly	None
Total debt investments measured at the NAV	60,715,538	-		
Absolute return:				
Directional	13,014,796	-	Monthly	3-60 days
Global macro	20,434,253	-	Monthly	3-30 days
Global tactical asset allocation	65,966,238	-	Daily, monthly	3-30 days
Risk parity	41,399,870	-	Monthly	3-30 days
Total absolute return measured at the NAV	140,815,157	-		
Real assets				
Commingled commodities fund	15,659,837	-	Not eligible	N/A
Total real assets measured at the NAV	15,659,837	-		
Short term investments measured at the NAV	8,423,334			
Total investments measured at the NAV	$ 370,595,624	$ -		

5. NET OPEB LIABILITY

The components of the net OPEB liability of the Plan for the years ended December 31, 2018 and 2017 were as follows (in thousands):

	December 31, 2018	December 31, 2017
Total OPEB liability	$ 19,933,888	$ 21,379,903
Fiduciary net position	351,380	370,352
Net OPEB liability	19,582,508	21,009,551
Fiduciary net position as a percentage of the total OPEB liability	1.76%	1.73%

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

	2018	2017
Valuation date	July 1, 2017	January 1, 2016
Measurement date	December 31, 2018	December 31, 2017
Reporting date	December 31, 2018	December 31, 2017
Actuarial cost method	Entry Age Normal	Entry Age Normal
Normal cost increase factor	4.50%	4.50%

Discount Rate - 4.10% per annum as of December31, 2018 (Bond Buyer General Obligation 20-Bond Municipal Bond Index) and 3.44% per annum as of December 31, 2017.

	2018	2017
Discount rate	4.10%	3.44%
Long-term expected rate of return, net of investment expense	6.50%	6.50%
Bond Buyer General Obligation 20-Bond Municipal Bond Index	4.10%	3.44%

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 Plans'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 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.

The following presents the net OPEB liability of the Authority, calculated using the discount rate of 3.44 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 (2.44 percent) or 1-percentage point higher (4.44 percent) than the current rate:

2017
(in thousands)

	1% Decrease 2.44%	Current Discount Rate 3.44%	1% Increase 4.44%
Net OPEB liability	$24,111,362	$21,009,551	$18,464,564

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.

2017
(in thousands)

	1% Decrease	* Current Trend Rate	1% Increase
Net OPEB liability	$17,896,890	$21,009,551	$24,938,260

* See Health Care Cost Trend Rates table on page 30 of report.

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 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.

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%			

2017 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, 2017	$322,981,973	12.00	1.00	$370,352,332
Monthly net external cash flows:				
January	-	12.00	1.00	-
February	-	11.00	0.92	-
March	-	10.00	0.83	-
April	-	9.00	0.75	-
May	-	8.00	0.67	-
June	-	7.00	0.58	-
July	-	6.00	0.50	-
August	-	5.00	0.42	-
September	-	4.00	0.33	-
October	-	3.00	0.25	-
November	-	2.00	0.17	-
December	-	1.00	0.08	-
Ending Value - December 31, 2017				$370,352,332
Money-Weighted Rate of Return	14.67%			

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, 2017, which is the valuation date. Liabilities as of December 31, 2018 were determined using roll-forward methods, assuming no liability gains and losses. Future normal costs were assumed to increase 4.5% per year.

Changes since Prior Valuation — The discount rate has been changed from 3.44% as of December 31, 2017 to 4.10% as of December 31, 2018 due to changes in the applicable municipal bond index.

Various healthcare assumptions have been updated since the prior valuation including the per capita claim costs assumption, health cost trend assumption, and MTA Bus coverage elections.

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.

Age Adjusted Monthly NYSHIP Empire PPO Premiums

Age Group	Males	Females	Age Group	Males	Females
<50	1,167.85	1,538.98	65 - 69	491.78	462.70
50 - 54	1,144.45	1,299.15	70 - 74	547.98	504.57
55 - 59	1,291.31	1,337.64	75 - 79	578.32	527.62
60 - 64	1,609.78	1,548.15	80 - 84	590.78	540.02
			85+	597.13	547.75

For the self-insured medical and pharmacy plan administered by MTA New York City Transit, PCCCs were determined for 2017 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 2017. Enrollment data was based on covered members provided by MTA as of the valuation date. The provided distribution of claims between those eligible and not eligible for Medicare were credibility weighted with the distribution of claims provided between that implied by the manual rates developed from the HCGs. This was done for several reasons: 2017 was the first year claims were provided separately for eligible and not eligible Medicare coverage, carriers were changed in 2017, and the actual enrollment associated with claims was not available. 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.

EGWPPCCCs 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 2017 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	227.17	227.17
<50	795.75	1,060.40	503.03	629.70
50-54	795.67	897.48	610.03	697.88
55-59	897.49	916.36	704.62	772.68
60-64	1,127.29	1,066.06	908.14	872.68
65-69	151.03	158.05	151.03	158.05
70-74	179.55	177.52	179.55	177.52
75-79	205.64	197.09	205.64	197.09
80-84	229.30	217.78	229.30	217.78
85+	271.92	266.56	271.92	266.56
Aetna Select				
Child	n/a	n/a	235.07	235.07
<50	840.17	1,129.55	526.95	666.11
50-54	832.76	950.36	635.88	736.48
55-59	937.71	966.96	733.83	813.58
60-64	1,176.37	1,121.03	945.56	915.67
Aetna Medicare Option 1				
65-69	128.64	140.58	128.64	140.58
70-74	148.27	144.14	148.27	144.14
75-79	160.20	147.35	160.20	147.35
80-84	164.80	157.57	164.80	157.57
85+	171.11	154.35	171.11	154.35
Aetna Medicare Option 2				
65-69	109.49	119.51	109.49	119.51
70-74	125.97	122.50	125.97	122.50
75-79	135.98	125.20	135.98	125.20
80-84	139.84	133.77	139.84	133.77
85+	145.14	131.07	145.14	131.07

Monthly Pharmacy Per Capita Claim Cost

Age Group	Male Retirees	Female Retirees	Male Spouses	Female Spouses
		Basic Rx Plan		
Child	n/a	n/a	59.54	59.54
<50	266.30	314.13	165.59	183.91
50-54	242.36	276.16	184.24	213.23
55-59	272.30	301.56	212.34	253.13
60-64	315.97	334.20	253.36	272.32
65-69	408.81	361.64	408.81	361.64
70-74	423.79	371.39	423.79	371.39
75-79	432.57	369.77	432.57	369.77
80-84	420.77	355.16	420.77	355.16
85+	369.71	302.36	369.71	302.36
		EGWP Rx Plan		
65-69	247.21	207.32	247.21	207.32
70-74	216.62	187.49	216.62	187.49
75-79	205.11	168.15	205.11	168.15
80-84	191.16	149.55	191.16	149.55
85+	167.18	116.02	167.18	116.02

Monthly Medicare Part B premiums were assumed to be $109 for 2017 and $134 for 2018.

Except for MTA New York City Transit, premium rates for dental and vision benefits were used as provided by the
Agencies.

Health Care 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. The NYSHIP trends reflect actual increases in premiums to Participating Agencies through 2018. These assumptions are combined with long-term assumptions for dental and vision benefits (4%) plus Medicare Part B reimbursements (4.5%) but not more than projected medical and pharmacy trends. The self-insured trend is applied directly for represented employees of MTA New York City NYC Transit, MTA Staten Island Railway and MTA Bus Company. Note that 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 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
2017 to 2018	8.5	8.2	7.5	4.9	6.8	9.1
2018 to 2019	6.2	5.5	5.8	3.1	6.2	5.3
2019 to 2020	5.8	5.3	5.6	3.9	5.8	5.2
2020 to 2021	5.5	5.2	5.3	4.4	5.5	5.2
2021 to 2022	7.2	5.1	5.1	5.1	11.1	5.1
2022 to 2023	6.1	5.1	5.1	5.1	6.0	5.1
2023 to 2024	6.1	5.0	5.0	5.0	5.9	5.0
2024 to 2025	5.9	5.0	5.0	5.0	5.8	5.0
2025 to 2026	5.9	5.0	5.0	5.0	5.8	5.0
2026 to 2027	5.8	4.9	5.0	4.9	5.7	4.9
2036 to 2037	5.6	5.0	5.9	5.0	5.5	5.0
2046 to 2047	5.4	5.9	5.6	4.9	5.3	4.9
2056 to 2057	5.1	5.4	5.2	4.8	5.1	5.2
2066 to 2067	4.8	5.0	4.9	4.6	4.8	4.8
2076 to 2077	4.2	4.3	4.2	4.0	4.1	4.5
2086 to 2087	4.1	4.2	4.2	4.0	4.1	4.4
2096 to 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.

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, 2017

	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	50,309	7,394	6,720	1,423	1,867	N/A	294	4,040	72,047
Average Age	49.1	44.6	44.9	47.3	46.4	N/A	43.0	47.4	48.2
Average Service	13.4	12.4	12.1	14.2	12.6	N/A	11.0	11.2	13.4
Retirees									
Single Medical Coverage	13,426	650	455	633	217	94	29	915	16,419
Employee/Spouse Coverage	17,900	1,900	1,105	713	442	190	71	737	23,058
Employee/Child Coverage	1,145	114	74	55	26	20	3	28	1,465
No Medical Coverage	814	2,473	1,495	20	9	308	27	293	5,439
Total Number	33,285	5,137	3,129	1,421	694	612	130	1,973	46,381
Average Age of Retiree	72.1	69.1	70.0	69.9	66.0	68.7	65.1	70.9	71.5
Total Number with Dental	7,562	922	598	461	627	56	47	132	10,405
Total Number with Vision	29,345	922	598	461	627	56	100	1,663	33,772
Total No. with Supplement	25,070	2,005	100	856	-	458	96	1,472	30,057
Average Monthly Supplement Amount (Excluding Part B Premium)	$ 32	$ 246	$ 100	$ 211	$ -	N/A	$ 77	$ 25	$ 50
Total No. with Life Insurance	6,935	4,699	1,529	403	606	507	97	1,476	16,252
Average Life Insurance Amount	$ 2,521	$23,205	$3,184	$5,534	$5,000	$9,714	$3,021	$12,929	$ 9,215

* MTA LI Bus had 143 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 45% of female eligible members participating in NYSHIP are assumed to elect family coverage upon retirement and 65% of male and 35% 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

As of July 23, 2019, the Plan had redeemed its entire investment in the GAM Unconstrained Bond Fund, amid allegations of misconduct by a portfolio manager. The Plan suffered no loss on its investment.

* * * * * *

REQUIRED SUPPLEMENTARY INFORMATION

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)

		2018	2017
Total OPEB liability:			
Service cost	$	1,011,981	876,723
Interest		758,494	757,860
Changes of benefit terms		8,543	24,446
Differences between expected and actual experience		(569,165)	(44,082)
Changes of assumptions		(1,964,746)	921,007
Benefit payments and withdrawals		(691,122)	(650,994)
Net change in total OPEB liability		(1,446,015)	1,884,960
Total OPEB liability – beginning		21,379,903	19,494,943
Total OPEB liability – ending (a)		19,933,888	21,379,903
Plan fiduciary net position:			
Employer contributions		691,122	650,994
Member contributions		-	-
Net investment income		(18,916)	47,370
Benefit payments and withdrawals		(691,122)	(650,994)
Administrative expenses & Transfer to investments		(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
Employer's net OPEB liability – ending (a)-(b)	$	19,582,508	21,009,551
Plan fiduciary net position as a percentage of the total OPEB liability		1.76%	1.73%
Covered payroll	$	5,394,332	5,041,030
Employer's net OPEB liability as a percentage of covered payroll		363.02%	416.77%

In accordance with GASB No. 74, paragraph 39, such information was not readily available for periods prior to 2017.

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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%

* 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.

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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%

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

Financial Statements as of and for the Years Ended December 31, 2018 and 2017, Supplemental Schedules and Independent Auditors’ Report

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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

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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, 2018 and 2017, 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, 2018 and 2017, 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 36; Schedule of Employer Contributions—Schedule II on page 37 - 39; and Schedule of Investment Returns—Schedule III on page 40 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.

January 21, 2020

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2018 AND 2017

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, 2018 and 2017, 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.

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

(Amounts in thousands)	2018	2017	2016	Increase/(Decrease) Amount of Change 2018–2017	% Change 2018–2017	Amount of Change 2017–2016	% Change 2017–2016
Cash	$ 2,484	$ 1,575	$ 1,076	$ 909	58 %	$ 499	46 %
Investments, at fair value	817,757	949,800	770,199	(132,043)	(14)%	179,601	23 %
Receivables	666	703	6,519	(37)	(5)%	(5,816)	(89)%
Total assets	820,907	952,078	777,794	(131,171)	-14%	174,284	22 %
Due to broker for securities purchased	507	900	577	(393)	(44)%	323	56 %
Forward Currency & Margin contracts	55	-	-	55	100 %	-	-
Due to broker for investment fee	1,035	(149)	-	1,184	(795)%	(149)	-
Due to broker for admin. fee	(7)	-	-	(7)	(100)%	-	-
Total liabilities	1,590	751	577	839	112 %	174	30 %
Plan net position restricted for pensions	$ 819,317	$ 951,327	$ 777,217	$ (132,010)	(14)%	$ 174,110	22 %

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

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.

December 31, 2017 versus December 31, 2016

The assets of the Additional Plan exceeded its liabilities by $951 million and $777 million as of December 31, 2017 and 2016, 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 $174 million during 2017, representing an increase of 22% over 2016. The increase in 2017 was primarily due to $145 million for additional non-employer contributions from the, Metropolitan Transportation Authority ("MTA") as an infusion towards improving the funding for the Plan's unfunded pension liability.

Investments at December 31, 2017, were $950 million representing an increase of $180 million from 2016. The increase is a result of positive investment gains and reflective of the additional contributions invested in the portfolio during 2017. The composite 2017 investment returns for the fund was 14.94% as opposed to the 2016 return of 7.97%.

Payables for investments purchased at December 31, 2017, amounted to $0.9 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, 2018, 2017 and 2016
(Amounts in thousands)

				Increase/(decrease)			
	2018	**2017**	**2016**	**Amount of Change 2018–2017**	**% Change 2018–2017**	**Amount of Change 2017–2016**	**% Change 2017–2016**
Additions:							
Net investment income	$ (31,098)	$ 112,614	$ 58,239	$ (143,712)	(128)%	$ 54,375	93 %
Employer contributions	59,500	76,523	81,079	(17,023)	(22)%	(4,556)	(6)%
Non - Employer contributions	-	145,000	70,000	(145,000)	100%	75,000	107 %
Employee contributions	333	760	905	(427)	(56)%	(145)	(16)%
Total additions	28,735	334,897	210,223	(306,162)	(91)%	124,674	59 %
Deductions:							
Benefits paid directly to participants	159,565	159,717	158,593	(152)	0%	1,124	1%
Administrative expenses	1,180	1,070	717	110	10%	353	49 %
Other	-	-	(106)	-	0%	106	(100)%
Total deductions	160,745	160,787	159,204	(42)	(0)%	1,583	1 %
Net (decrease) increase	(132,010)	174,110	51,019	$ (306,120)	-176%	$ 123,091	241 %
Plan net position restriced for penions							
Beg of Year	951,327	777,217	726,198				
End of year	$ 819,317	$ 951,327	$ 777,217				

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 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.

December 31, 2017 versus December 31, 2016

At the end of 2017, the net investment income amounted to $113 million. This represents an increase of $54 million over the prior year, due to strong stock market conditions resulting in an increase in the investment portfolio in 2017.

Employer, non-employer and employee contributions for the year ended December 31, 2017, totaled $222 million, which represents a 46% increase from 2016. This increase was the result of the additional $145 million in non-contributing employer contributions the MTA infused into the plan in 2017.

Benefit payments for the year ended December 31, 2017, totaled $160 million, which was 1% higher than 2016.

ECONOMIC FACTORS AND INDUSTRY DECISIONS

Market Overview and Outlook – 2018

Risk aversion and volatility marked the end of 2018, with geopolitical developments and concerns about slowing growth both contributing to the sell-off in global equity markets. U.S. stocks led the decline, contributing to the first calendar year with negative returns since 2008. Amid the equity underperformance, credit spreads widened, developed market yields fell, and the U.S. dollar weakened. In addition, the Federal Reserve (“Fed”) hiked interest rates as expected, though trimmed its forecast for hikes in 2019.

Several factors contributed to heightened market volatility throughout 2018—most importantly, investor concerns brought on by rising trade tensions, particularly between the U.S. and China, the apparent shift to a moderately tighter monetary policy by central banks in major developed countries; and the potential for slower growth, especially in China and Europe. Most major indices closed in negative territory at the end fourth quarter. After a difficult start, emerging markets (“EM”) held up better than their developed world counterparts in the fourth quarter, but still trailed for 2018 overall. The U.S. market was among the bottom-performing indices in the last quarter but led most major indices for the year, notwithstanding the S&P 500 Index’s worst performance since the conclusion of the global financial crisis. As a result, global financial markets proved to be a challenging environment during the fourth quarter of 2018.

From a monetary policy perspective, the Fed raised rates 25bps as expected in December and signaled a slower pace of tightening in 2019 as it continued to unwind its extensive balance sheet. Investors divined a more dovish tone from the Fed’s 2019 projections, but markets remained volatile through the end of the year. Globally, most developed-world central banks began moving towards modestly tighter stances, including the European Central Bank (“ECB”), which formally announced the end of its bond-buying program in December, concluding a roughly €2.6 trillion program. Across the channel, the Bank of England raised rates twice since the country’s Brexit referendum in June 2016, but recently indicated it was prepared to pivot as necessary once the formal exit takes place in early 2019. The Bank of Japan has long been in its own monetary policy lane, remaining by far the most accommodative of the major global central banks.

Macro Themes

- Major indices post worst year since 2008 as trade, economic outlook and monetary policy weigh on investors
- Global growth modestly decelerates but remains positive
- Trade uncertainty

After reaching a new high in September, the S&P 500 lost nearly 14% during the fourth quarter to end the year, down more than 4.4%. The Dow Jones Industrial Index was off 11% for the quarter, as was Europe's Stoxx Limited Index, which ended the quarter 600 points lower. China's Shanghai Composite also lost 12% over the last quarter and nearly 25% for the year. The year's sharp drawdown seemed unlikely at the outset of 2018, given the relatively robust outlook at the time. The silver lining is that share prices now appear cheap from a forward price/earnings perspective compared to long-run averages and the outlook, although more challenging, is still largely positive for 2019.

Global growth slowed, rather than stalled, in the second half of 2018. The U.S. outperformed its peers in end-of-year data with annualized GDP up 3.4% in the third quarter. In contrast, growth in the Eurozone dropped to 0.2% in the third quarter (and 1.7% year-on-year). The German economy contracted due to disruption to the auto industry from tougher emissions rules, while the Italian economy stalled over its now-resolved budget standoff with the European Union. China's growth fell to 6.5% in the third quarter, although the government expects to beat its 6.5% growth target for the full year.

The extent of global growth deceleration is one unknown for markets; how central banks will react is another. The Fed softened its tone on potential hikes in 2019 but nevertheless, it remained too hawkish for some as it stuck to plans to unwind its balance sheet, contributing to year-end market volatility. In December, the ECB ended its bond-buying program but gave no guidance when negative interest rates might end. Loose monetary conditions also remained in force in the UK and Japan as policymakers balanced the competing needs of fragile growth, inflation and the desire to wean economies off support. Despite fears of heavy-handedness, the global approach remained measured.

The greatest concern for markets continues to be the tariff war. The pause in the dispute following the G20 meeting between the U.S. and China provided hope that a more permanent solution could be reached. However, stocks in China, as well as international companies with exposure to China, were affected by weakening sentiment and actual fallout. Apple became the latest U.S. corporation to point the finger at the trade war when it announced that fourth quarter revenues would be lower than expected. Declining consumer confidence in China and cheaper domestic alternatives were significant contributing factors.

The issue of confidence also hindered business. Uncertainty surrounding trade and political issues, such as further concern about a no-deal Brexit in the UK, held back capital investment, as Chief Executive Officers awaited greater clarity, thus creating a silver lining for equity investors. Supercharged earnings growth in 2018 resulted in record share buybacks as announced, and U.S. stock repurchases broke through the $1 trillion mark in December. Following the market retreat in the fourth quarter, more buybacks can be anticipated in the future. At the very least, the challenges of the fourth quarter present active investors with a more reasonable valuation and a very attractive starting point for 2019.

EM central banks have meanwhile faced their own travails, primarily centered around the security of central bank independence, particularly in Turkey and India. For now, the question in both countries seems to be largely settled in favor of independence—a positive for markets; but as is often the case in EM, that does not preclude the issue resurfacing down the road.

United States

Through mid-2018, U.S. capital markets enjoyed the longest equity bull market in their history. Valuations of stocks reached levels rarely-- and for some valuations measures, never-- seen before. However, in the fourth quarter of 2018, markets in the U.S. weakened tremendously with the S&P 500 ending the year down 13.5% with U.S. equities underperforming in 2018 compared to 2017.

Large Cap stocks were strongly negative, with the S&P 500 and Russell 1000 indices posting returns of (-4.4%) and (-4.84%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (-10.0%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return loss of (-11.0%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (-1.5%) outpacing the Russell 1000 Value (-8.3%).

Fixed income markets took the four rate hikes by the Fed in stride in 2018. Treasuries returned (+0.9%) for the year, with the assets strongest quarter coming in the first quarter of 2018. Municipal credit outperformed Treasuries for the year, with (+4.8%), posting positive returns for four straight quarters. Following strong results in 2017, high yield debt underperformed and ended its upward trend in 2018, returning (-2.1%).

International Developed

International equity markets posted very weak results in 2018 and lagged behind U.S. equity markets, returning (-9.4%) as measured by the Morgan Stanley Capital International ("MSCI") All Country World Index. In U.S. dollars, both Europe and Japan equities posted negative performance in 2018 with MSCI Europe returning (-14.9%) and MSCI Japan returning (-12.9%). Weak returns in Europe were driven by the global negative market performance in the last quarter of 2018. The Small Cap portion of international developed markets posted even weaker returns in 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 negative in 2018, following a positive year in 2017.

Emerging Markets

Emerging markets posted very weak returns in 2018 with performance lower than both U.S. and international developed markets across equity and debt. The broad emerging markets index returned (-14.6%) for the year. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell state owned companies. Within the EM group, Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing EM sectors, losing 15.4% and 15.1%, respectively.

The bond markets of emerging markets underperformed in 2018. Both hard currency and local currency bond posted very weak years in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (-4.3%) in 2018. Local currency bonds, which are issued in the local currency, returned
(-6.2%) for the year.

Commodities

Commodities posted negative results in 2018, with the broad Bloomberg Commodity Index down (-11.2%). Energy was the worst performing sub-sector, as oil prices were dampened by concerns of oversupply based on high inventories and stronger-than-expected production in Iran. Natural gas posted losses of -2.3% in a volatile quarter marked by low inventory levels and fluctuating weather forecasts. Natural gas consumption is projected to decrease slightly in the residential and commercial sectors, as expected milder weather will require less energy for space heating in the winter and air conditioning in the summer, largely based on temperature projections from the National Oceanic and Atmospheric Administration. On the other hand, precious metals strengthened towards the end of 2018, bolstered by the sell-off in equities and expectations for higher real interest rates.

Market Outlook
Global economic growth is likely to slow modestly in 2019, but the prevalent view is that investors' worst fears are likely exaggerated, as most of the world's economies will continue to expand rather than contract. Therefore, for the time being there is not – expectation of recession on the horizon.

There are many reasons for investors to be to be optimistic. U.S. corporate profit margins should remain high after the boost from 2018 tax cuts, which should result in earnings growth in the high single-digits or better. Furthermore, a more dovish stance from the Fed could signal a cyclical peak for the U.S. dollar, helping U.S. manufacturing and also providing some welcome relief for embattled EM companies facing higher dollar-denominated borrowing costs.

The Eurozone is expected to increase economic activities in the first half of 2019. Disruption to the German auto industry from new emissions standards, potential for increased fiscal stimulus across major economies in the bloc and the positive developments in Italy signaling a stronger unity in the European Union ("EU") can be potential catalysts for improving growth. Nevertheless, the intense uncertainty around Brexit will be a drag on the UK in the first quarter of 2019 and may extend its impact across Europe should Britain leave the EU without a deal on March 29th 2019.

An agreement between Organization Petroleum Exporting Countries ("OPEC") and its oil-producing allies to cut output can lead to greater price stability in 2019. But oil, and the broader commodity sector, remains a leading global growth concern.

Intense uncertainty on global trade remains the big issue gripping investors. The pause in the U.S.-China trade war could pave the way for a more comprehensive agreement. Nonetheless, significant obstacles remain, such as China's real desire to follow through on promises to open up its economy and end forced technology transfers.

Objectively, there can be little doubt there are multiple risks globally in this late-cycle phase. However, the outlook is far from bleak, and there is substantial consensus that 2019 could be a good year for portfolio reallocations, taking advantage of dislocated sectors, oversold opportunities and market outperformance.

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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THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

STATEMENTS OF PLAN NET POSITION
AS OF DECEMBER 31, 2018 AND 2017
(Amounts in thousands)

	2018	2017
ASSETS:		
Cash	$ 2,484	$ 1,575
Investments measured at fair value (Notes 2 and 3):		
Investments measured at readily determined fair value	147,855	183,875
Investments measured at net asset value	669,902	765,925
Total investments	817,757	949,800
Receivables:		
Participant and union contributions	-	(6)
Accrued interest and dividends	516	399
Securities sold	58	363
Forward currency contract receivable	89	-
Other	3	(53)
Total receivables	666	703
Total assets	820,907	952,078
LIABILITIES:		
Due to broker for securities purchased	507	900
Forward Currency & Margin contracts	55	-
Due to broker for admin. fees	(7)	-
Due to broker for investment fee	1,035	(149)
Total liabilities	1,590	751
PLAN NET POSITION RESTRICTED FOR PENSIONS	$ 819,317	$ 951,327

See notes to financial statements.

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

STATEMENTS OF CHANGES IN PLAN NET POSITION
FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Amounts in thousands)

	2018	2017
ADDITIONS:		
Investment income:		
Net realized and unrealized (loss) gains	$ (35,344)	$ 115,106
Interest income	1,715	1,036
Dividend income	11,441	7,599
Total investment income	(22,188)	123,741
Less investment expenses	(8,910)	(11,127)
Total Net investment income	(31,098)	112,614
Contributions (Note 5):		
Employer	59,500	76,523
Non-Employer	-	145,000
Participant and union	333	760
Total contributions	59,833	222,283
Total additions	28,735	334,897
DEDUCTIONS:		
Benefits paid to participants	159,565	159,717
Administrative expenses	1,180	1,070
Total deductions	160,745	160,787
NET (DECREASE) INCREASE IN PLAN NET POSITION	(132,010)	174,110
PLAN NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	951,327	777,217
End of year	$ 819,317	$ 951,327

See notes to financial statements.

THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

NOTES TO FINANCIAL STATEMENTS
AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2018 AND 2017
(Dollars in thousands)

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 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.

The total asset allocation of the 2017 Master Trust is 82.54% for the Metropolitan Transportation Authority Defined Benefit Pension Plan and 17.46% for the Long Island Rail Road Company Plan for Additional Pensions for the year ended December 31, 2017.

Pension Benefits—All full-time employees who were hired before January 1, 1988, are eligible for Additional Plan membership. At January 1, 2018 and 2017, the most recent valuation dates, the Additional Plan's membership consisted of the following:

	January 1 2018	January 1 2017
Active plan members	84	146
Terminated vested & other inactives	24	28
Retirees and beneficiaries receiving benefits	5,755	5,833
Total	5,863	6,007

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 Plan adopted GASB Statement No. *85 Omnibus 2017.*

This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits ("OPEB"). There was no material impact on the Plan's financial statements as a result of the implementation of GASB Statement No. 85.

Recent Accounting Pronouncements — Not yet adopted but currently being evaluated

GASB Statement No.	GASB Accounting Standard	MTA Pension Plan Required Year of Adoption
84	*Fiduciary Activities*	2019

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, 2018.

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.

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
Multistrategy	20,517,400	-	Monthly	3-30 days
Risk parity	63,371,780	-	No t eligible	N/A
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	31,702,560	Not eligible	N/A
Real assets				
Commingled real estate funds	102,822,741	-	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	125,025,722	13,258,439		
Short term investments measured at the NAV	29,652,175	-		
Total investments measured at the NAV	$ 669,902,334	$ 55,141,792		

Total investments at fair value	$ 817,757,218

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Investments measured at readily determined fair value (FV)

	December 31, 2017	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	$ 55,376,015	$ 55,376,015	$ -	$ -
Separate account small-cap equity funds	79,011,370	79,011,370	-	-
Separate account real estate investment trust	8,717,470	8,717,470	-	-
Total equity investments	143,104,855	143,104,855	-	-
Debt Securities				
Separate account debt funds	40,770,024	-	40,770,024	-
Total debt investments	40,770,024	-	40,770,024	-
Total investments at readily determined FV	$ 183,874,879	$ 143,104,855	$ 40,770,024	$ -

Investments measured at the net asset value (NAV)

	December 31, 2017	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 27,225,948	$ -	Daily	None
Commingled international equity funds	114,123,832	-	Daily	None
Commingled emerging market equity funds	29,328,976	-	Daily, monthly	None
Total equity investments measured at the NAV	170,678,756	-		
Debt Securities				
Commingled debt funds	73,497,792	-	Daily, monthly, quarterly	None
Mutual funds	13,455,266	-	Daily	None
Total debt investments measured at the NAV	86,953,058	-		
Absolute return:				
Directional	23,613,108	-	Monthly	3-60 days
Direct lending	33,478,233	2,369,618	Bi-annually	60 plus days
Distressed securities	8,860,531	-	Not eligible	N/A
Credit long	13,446,929	-	Quarterly	3-30 days
Credit long/short	15,571,119	-	Quarterly	3-60 days
Equity long/short	12,633,764	-	Quarterly	3-60 days
Event driven	18,894,170	396,008	Quarterly, Bi-annually	60-120 days
Global macro	17,866,288	-	Monthly	3-30 days
Global tactical asset allocation	57,519,740	-	Daily, monthly	3-30 days
Market neutral	-	-	Quarterly	3-60 days
Multistrategy	24,765,480	-	Quarterly	3-60 days
Risk parity	77,368,296	-	Monthly	3-30 days
Structured credit	3,391,126	-	Not eligible	N/A
Total absolute return measured at the NAV	307,408,784	2,765,626		
Private equity - private equity partnerships	58,569,874	40,015,478	Not eligible	N/A
Real assets				
Commingled real estate funds	104,382,454	-	Not eligible	N/A
Energy	12,048,446	3,779,108	Not eligible	N/A
Infrastructure	5,076,347	1,666,799	Not eligible	N/A
Total real assets measured at the NAV	121,507,247	5,445,907		
Short term investments measured at the NAV	20,807,562	-		
Total investments measured at the NAV	$ 765,925,281	$ 48,227,011		

Total investments at fair value	$ 949,800,160

1.

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, 2018 and 2017, are as follows:

(Amounts in thousands)	**December 31, 2018**	**December 31, 2017**
Investments at fair value as determined by quoted market prices:		
JPMCB Strategic Property Fund	$ 63,559	$ 58,831

Credit Risk—The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2018 and 2017:

(Amount in thousands) **Quality Rating—S&P**	**2018 Fair Value**	**Percentage of Fixed Income Portfolio**	**2017 Fair Value**	**Percentage of Fixed Income Portfolio**
AAA	$ 23,126	9.28 %	$ 33,492	19.05 %
AA	33,898	13.61	5,924	3.37
A	12,454	5.00	18,145	10.32
BBB	19,221	7.72	25,327	14.41
BB	18,664	7.49	19,705	11.21
B	15,520	6.23	12,820	7.29
CCC	3,519	1.41	1,575	0.90
CC	27	0.01	202	0.11
C	258	0.10	18	0.01
D	1,197	0.48	4	-
Not rated	69,209	27.79	29,254	16.64
Total credit risk debt securities	197,093	79.12	146,466	83.31
U.S. Government bonds*	51,986	20.88	29,346	16.69
Total Fixed Income Securities	$ 249,079	100.00 %	$ 175,812	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	568,678		773,988	
Total investments	$ 817,757		$ 949,800	

* 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, 2018 and 2017 are as follows:

(Amounts in thousands)	**2018**		**2017**	
Investment Type	**Fair Value**	**Duration**	**Fair Value**	**Duration**
Chase	$ 54,128	12.90	$ 40,634	11.44
Wellington Blended Emerging Market Debt	12,842	5.44	16,661	5.70
Bridgewater All Weather Fund	18,012	8.30	18,393	7.70
Wellington Opportunistic Fund	10,157	1.52	7,302	1.70
Bridgewater Pure Alpha Fund	26,690	(0.90)	(25,807)	(7.90)
Bridgewater Markets Fund	(3,091)	(7.10)	(2,948)	(6.80)
Northern Trust William Capital	1,625	-	1,765	-
Park Square Capital Credit Opportunities Fund	6,055	-	6,990	-
Libremax Partners Fund	15,166	2.63	3,317	3.87
Gramercy Distressed Opportunistic Fund	4,221	0.26	2,701	(0.05)
Makuria Credit Fund	3,318	5.38	6,653	5.50
Crescent Capital High Income Fund	9,676	2.56	6,390	2.43
Fir Tree Realization Value Fund	-	-	1	-
Wellington Global Managed Risk Fund	13,819	6.20	21,921	10.60
Orchard Landmark L.P.	17,936	1.44	-	-
PIMCO Distressed Sr Cr Opportunities FD II	9,681	2.18	-	-
Allianz Structured Alpha Fund	20,872	0.13	23,613	0.13
GAM Unconstrained Bond Fund	6,538	0.10	35,595	(0.17)
State Street Long US Treasury	5,294	17.38	-	-
State Street Real Asset Fund	4,519	5.84	5,339	5.84
EIG Energy Fund XV	655	-	869	-
EIG Energy XVI	916	-	1,193	-
Riverstone Credit Partners LP Fund II	3,270	4.00	-	-
RCP II NEPC Syndication Partners	324	4.00	-	-
Park SQ Capital Credit Opportunities Fund III	2,659	-	-	-
Canyon Value Realization Fund	3,797	3.26	5,228	2.50
Total fixed income	$ 249,079		$ 175,810	
Portfolio modified duration		5.20		7.06
Investments with no duration reported	568,678		773,990	
Total investments	$ 817,757		$ 949,800	

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, 2018 and 2017 are follows (amounts in U.S. dollars):

Foreign Currency	2018	2017
Argentina Peso	$ 3,179	$ 831
Australian Dollar	4,255	5,954
Bahraini Dinar	75	91
Bangladesh (Taka)	72	90
Bermudian Dollar	553	177
Botswana Pula	32	34
Brazil Cruzeiro Real	5,862	3,229
British Pound (Sterling)	8,513	15,494
Bulgarian Lev	3	4
Caymanian Dollar	156	-
Chilean Peso	1,394	1,264
China (Yuan Renminbi)	3,239	3,722
Colombian Peso	803	890
Croatia Kuna	97	113
Czech Koruna	242	(215)
Dominican Peso	2	-
Dollar (Canadian)	6,521	4,024
Dollar (Hong Kong)	2,463	3,258
Dollar (New Zealand)	(97)	1,156
Dollar (New Taiwan)	2,009	5,249
Egyptian Pound	225	593
Euro	18,613	16,131
Franc (Swiss)	2,894	2,211
Geogian Lari	181	447
Ghanaian Cedi	35	64
Hungary (Forint)	778	284
Iceland Krona	546	900
Indian Rupee	4,344	5,547
Indonesia Rupiah	1,408	3,339
Israel (Shekel)	268	275
Japanese Yen	2,245	2,006
Jordanian Dinar	72	97
Kazakhstanti Tenge	81	135
Kenyan Shilling	75	89
Krona (Swedish)	1,205	4,722
Krone (Danish)	1,301	528
Krone (Norwegian)	425	1,153
Kuwait Dinar	152	182
Lao Kip	88	-
Lebanese Pound	9	25
Malaysian (Ringgit)	834	1,645
Mauritius (Rupee)	178	196
Mexican New Peso	703	1,435
Morocco Dirham	69	91
Nigerian Naira	78	90
Omanian Rial	62	92
Pakistani Rupee	193	453
Panamanian Balboa	30	35
Peru New Sol	355	562
Philippines Peso	616	469
Polish (New Zloty)	(17)	623
Qatar Riyal	188	246
Romanian Leu	325	125
Russian Federation Ruble	25	1,141
Saudi Riyal	154	91
Singapore Dollar	(779)	1,218
South Africa Rand	2,177	2,042
South Korean Won	3,969	6,442
Sri Lankan Rupee	63	89
Thai Bhat	1,042	1,044
Tunisian Dinar	28	37
Turkish Lira	9	1,010
UAE Dirham	235	460
Ukrainian Hryvnia	13	-
Uruguayan Pesos	4	109
Vietnamese Dong	139	146
Other	1,866	(3,094)
Totals	$ 86,877	$ 100,890

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, 2018 and 2017, were 15.81% and 17.46%, respectively.

	December 31, 2018		December 31, 2017	
	Master Trust Total	Additional Plan	Master Trust Total	Additional Plan
Total Investments:				
Investments measured at readily determined fair value	$ 935,046	$ 147,855	$ 818,745	$ 142,966
Investments measured at the net asset value	3,898,121	669,902	4,074,473	705,284
Total investments measured at fair value	$ 4,833,167	$ 817,757	$ 4,893,218	$ 848,250

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, 2018 and 2017 were as follows (in thousands):

	2018	2017
Total pension liability	$ 1,411,144	$ 1,471,828
Fiduciary net position	819,317	951,327
Net pension liability	$ 591,827	$ 520,501
Fiduciary net position as a percentage of the total pension liability	58.06 %	64.64 %

Actuarial Methods and Assumptions—The total pension liability as of December 31, 2018 was determined by an actuarial valuation date of January 1, 2018, 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, 2018 and 2017 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.

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 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

2017 **(In thousands)**	**Decrease** **6.00%**	**Discount Rate** **7.00%**	**Increase** **8.00%**
Net pension liability	$ 636,713	$ 520,501	$ 419,474

Additional information of the latest actuarial valuation follows:

Valuation date	January 1, 2018	January 1, 2017
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 15-year period beginning January 1, 2018) with level dollar payments.	Period specified in current valuation report (closed 16-year period beginning January 1, 2017) with level dollar payments.
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	7.0%, net of investment expenses	7.0%, net of investment expenses
Projected salary increases	3.0%	3.0%
Inflation/Railroad Retirement wage base	2.5%; 3.5%	2.5%; 3.5%

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.

2018 - Schedule of Calculations of Money-Weighted Rate of Return
(Amounts in thousands)

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning value—January 1, 2017	$ 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, 2017				$ 819,317
Money—Weighted Rate of Return	-3.49%			

2017 - Schedule of Calculations of Money-Weighted Rate of Return
(Amounts in thousands)

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning value—January 1, 2017	$ 777,217	12.00	1.00	$ 881,191
Monthly net external cash flows:				
January	(13,336)	12.00	1.00	(15,120)
February	(6,527)	11.00	0.92	(7,327)
March	138,473	10.00	0.83	152,876
April	(6,527)	9.00	0.75	(7,172)
May	(6,527)	8.00	0.67	(7,100)
June	(6,527)	7.00	0.58	(7,020)
July	(6,527)	6.00	0.50	(6,950)
August	(6,527)	5.00	0.42	(6,881)
September	(6,527)	4.00	0.33	(6,803)
October	(6,527)	3.00	0.25	(6,735)
November	(6,527)	2.00	0.17	(6,668)
December	(4,896)	1.33	0.11	(4,964)
Ending Value—December 31, 2017				$ 951,327
Money—Weighted Rate of Return	13.38 %			

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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, 2018 and 2017.

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%
Commmodities	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: Equit 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%**

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2017

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	10.00%	1.96%
US High Yield Bonds	BAML High Yield	8.00%	4.62%
Global Bonds	Citi WGBI	10.00%	0.34%
Emerging Markets Bonds	JPM EMBI Plus	3.00%	3.30%
US Large Caps	S&P 500	10.00%	4.31%
US Small Caps	Russell 2000	5.50%	5.57%
Global Equity	MSCI ACWI NR	10.00%	4.99%
Foreign Developed Equity	MSCI EAFE NR	10.00%	5.57%
Emerging Markets Equity	MSCI EM NR	3.50%	7.91%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.62%
Private Real Estate Property	NCREIF Property	3.00%	3.64%
Private Equity	Cambridge Private Equity	7.00%	8.99%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	15.00%	3.35%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.85%
Portfolio Normal Mean Return			6.80%
Portfolio Standard Deviation			11.54%
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 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 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 Company's Board of Managers of Pensions (1.5% in 2018 and 2017).

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 smoothes gains and losses over a 5-year period. The formula for the asset valuation method is as follows:

Actuarial Value of Assets = $MV_1 - 0.8*UR_1 - 0.6*UR_2 - 0.4*UR_3 - 0.2*UR_4$

Where:

MV_1 = 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—7.00% 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, 2017 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—3.50% per year.

Consumer Price Index—2.50% per year.

Provision for Expenses—Estimated administrative expenses are added to the normal cost. Administrative expenses are based on the average of the prior three 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

None.

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 also 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

As of July 23, 2019, the Plan redeemed its entire investment in the GAM Unconstrained Bond Fund, amid allegations of misconduct by a portfolio manager. The Plan suffered no loss on its investment.

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REQUIRED SUPPLEMENTAL SCHEDULES

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)

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	$ 1,057	$ 1,874	$ 2,752	$ 3,441	$ 3,813
Interest	97,611	101,477	104,093	106,987	110,036
Changes of benefit terms	-	-	-	-	-
Differences between expected and actual experience	213	1,890	15,801	6,735	-
Changes of assumptions	-	-	-	-	-
Benefit payments and withdrawals	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)
Net change in total pension liability	(60,684)	(54,476)	(35,947)	(39,908)	(43,125)
Total pension liability—beginning	1,471,828	1,526,304	1,562,251	1,602,159	1,645,284
Total pension liability—ending (a)	1,411,144	1,471,828	1,526,304	1,562,251	1,602,159
Plan fiduciary net position:					
Employer contributions	59,500	76,523	81,100	100,000	407,513
Non-Employer contributions	-	145,000	70,000	-	-
Member contributions	333	760	884	1,108	1,304
Net investment income	(31,098)	112,614	58,239	527	21,231
Benefit payments and withdrawals	(159,565)	(159,717)	(158,593)	(157,071)	(156,974)
Administrative expenses	(1,180)	(1,070)	(611)	(1,218)	(975)
Net change in plan fiduciary net position	(132,010)	174,110	51,019	(56,654)	272,099
Plan fiduciary net position—beginning	951,327	777,217	726,198	782,852	510,753
Plan fiduciary net position—ending (b)	819,317	951,327	777,217	726,198	782,852
Employer's net pension liability—ending (a)-(b)	$ 591,827	$ 520,501	$ 749,087	$ 836,053	$ 819,307
Plan fiduciary net position as a percentage of the total pension liability	58.06 %	64.64 %	50.92 %	46.48 %	48.86 %
Covered-employee payroll	$ 7,894	$ 11,046	$ 18,216	$ 25,712	$ 29,334
Employer's net pension liability as a percentage of covered-employee payroll	7,497.18 %	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
2009	$ 108,677	$ 108,677	$ 0	$ 72,718	149.45 %
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 %

* Employer contributions include amounts from both employer and non-employer contributing entities.

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, 2018	January 1, 2017	January 1, 2016
Actuarial cost method	Entry Age Cost Method	Entry Age Cost Method	Entry Age Cost Method
Amortization method	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.	Period specified in current valuation report (closed 17-year period from January 1, 2016) 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 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
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.	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.

(Continued)

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, 2015	January 1, 2014
Actuarial cost method	Entry Age Cost Method	Entry Age Cost Method
Amortization method	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.
Interest rate	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
Railroad retirement wage base	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
Separations other than for normal retirement	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.
Salary increases	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.
Provision for expenses	$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.

(Concluded)

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
2009	N/A
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 %

In accordance with GASB No. 67, paragraph 50, such information was not readily available for periods prior to 2014.

DRAFT

Manhattan and Bronx Surface Transit Operating Authority Pension Plan

Financial Statements as of and for the
Years Ended December 31, 2018 and 2017,
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, 2018 and 2017, 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, 2018 and 2017, 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 8 and the Changes in the Employers' Net Pension Liability and Related Ratios-Schedule I on page 53; Employer Contributions and Notes to Schedule-Schedule II on pages 54–55; and the Investment Returns-Schedule III on page 56 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.

January 21, 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, 2018 and 2017. 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, 2018, 2017, and 2016
(Dollars in thousands)

				Increase / Decrease			
				2018-2017		2017-2016	
	2018	2017	2016	$	%	$	%
Cash and investments	$ 2,818,963	$ 2,894,950	$ 2,526,557	$ (75,987)	(2.6)%	$ 368,393	14.6 %
Receivables and other assets	38,807	39,628	39,441	(821)	(2.1)	187	0.5
Total assets	**$ 2,857,770**	**$ 2,934,578**	**$ 2,565,998**	**$ (76,808)**	**2.6**	**$ 368,580**	**14.4**
Payable for investment securities purchased	2,148	2,250	2,348	(102)	(4.5)	(98)	(4.2)
Other liabilities	11,220	13,339	7,915	(2,119)	(15.9)	5,424	68.5
Total liabilities	**13,368**	**15,589**	**10,263**	**(2,221)**	**(14.2)**	**5,326**	**51.9**
Plan net position restricted for pensions	**$ 2,844,402**	**$ 2,918,989**	**$ 2,555,735**	**$ (74,587)**	**(2.6)%**	**$ 363,254**	**14.2%**

December 31, 2018 versus December 31, 2017

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.

December 31, 2017 versus December 31, 2016

Cash and investments at December 31, 2017, were $2,895.0 million, an increase of $368.4 million or 14.6% from 2016. This increase is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and other assets less plan liabilities at December 31, 2017 decreased by $5.1 million or 17.6%. The increase is a result of the revaluation of 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 $363.3 million or 14.2% in 2017 as a result of the changes noted above.

Changes in Plan Net Position
For the Years Ended December 31, 2018, 2017 and 2016
(Dollars in thousands)

				Increase / Decrease			
				2018-2017		2017-2016	
	2018	2017	2016	$	%	$	%
Additions:							
Net investment (loss)/income	$ (87,952)	$ 350,186	$ 212,260	$ (438,138)	(125.1)%	$ 137,926	65.0 %
Transfers and contributions	227,388	222,397	239,169	4,991	2.2	(16,772)	(7.0)
Total net additions	**139,436**	**572,583**	**451,429**	**(433,147)**	**(75.6)**	**121,154**	**26.8**
Deductions:							
Benefit payments	213,827	209,121	187,823	$ 4,706	2.3	$ 21,298	11.3
Administrative expenses	196	208	186	(12)	(5.8)	22	11.8
Total deductions	**214,023**	**209,329**	**188,009**	**4,694**	**2.2**	**21,320**	**11.3**
Net increase	**(74,587)**	**363,254**	**263,420**	**(437,841)**	**(120.5)**	**99,834**	**37.9**
Plan net position restricted for pensions:							
Beginning of year	2,918,989	2,555,735	2,292,315	363,254	14.2	263,420	11.5
End of year	**$ 2,844,402**	**$ 2,918,989**	**$ 2,555,735**	**$ (74,587)**	**(2.6)%**	**$ 363,254**	**14.2 %**

<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.

<u>December 31, 2017 versus December 31, 2016</u>

Net investment income increased by $137.9 million in 2017 due to net investment gains of $350.2 million in 2017 versus net gains of $212.3 million in 2016.

Contributions decreased by $16.8 million or 7.0% in 2017 compared to 2016, as a result of the Actuarial Determined Contributions ("ADC") and member contributions from 2016 to 2017.

Benefit payments increased by $21.3 million or 11.3% 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 increased by $0.022 million or 11.8% over 2016. This increase was due to an increase of fees for services provided to the Plan.

Economic Factors

Market Overview and Outlook – 2018

Risk aversion and volatility marked the end of 2018, with geopolitical developments and concerns about slowing growth both contributing to the sell-off in global equity markets. U.S. stocks led the decline, contributing to the first calendar year with negative returns since 2008. Amid the equity underperformance, credit spreads widened, developed market yields fell, and the U.S. dollar weakened. In addition, the Federal Reserve ("Fed") hiked interest rates as expected, though trimmed its forecast for hikes in 2019.

Several factors contributed to heightened market volatility throughout 2018—most importantly, investor concerns brought on by rising trade tensions, particularly between the U.S. and China, the apparent shift to a moderately tighter monetary policy by central banks in major developed countries; and the potential for slower growth, especially in China and Europe. Most major indices closed in negative territory at the end fourth quarter. After a difficult start, emerging markets ("EM") held up better than their developed world counterparts in the fourth quarter, but still trailed for 2018 overall. The U.S. market was among the bottom-performing indices in the last quarter but led most major indices for the year, notwithstanding the S&P 500 Index's worst performance since the conclusion of the global financial crisis. As a result, global financial markets proved to be a challenging environment during the fourth quarter of 2018.

From a monetary policy perspective, the Fed raised rates 25bps as expected in December and signaled a slower pace of tightening in 2019 as it continued to unwind its extensive balance sheet. Investors divined a more dovish tone from the Fed's 2019 projections, but markets remained volatile through the end of the year. Globally, most developed-world central banks began moving towards modestly tighter stances, including the European Central Bank ("ECB"), which formally announced the end of its bond-buying program in December, concluding a roughly €2.6 trillion program. Across the channel, the Bank of England raised rates twice since the country's Brexit referendum in June 2016, but recently indicated it was prepared to pivot as necessary once the formal exit takes place in early 2019. The Bank of Japan has long been in its own monetary policy lane, remaining by far the most accommodative of the major global central banks.

Macro Themes

- Major indices post worst year since 2008 as trade, economic outlook and monetary policy weigh on investors
- Global growth modestly decelerates but remains positive
- Trade uncertainty

After reaching a new high in September, the S&P 500 lost nearly 14% during the fourth quarter to end the year, down more than 4.4%. The Dow Jones Industrial Index was off 11% for the quarter, as was Europe's Stoxx Limited Index, which ended the quarter 600 points lower. China's Shanghai Composite also lost 12% over the last quarter and nearly 25% for the year. The year's sharp drawdown seemed unlikely at the outset of 2018, given the relatively robust outlook at the time. The silver lining is that share prices now appear cheap from a forward price/earnings perspective compared to long-run averages and the outlook, although more challenging, is still largely positive for 2019.

Global growth slowed, rather than stalled, in the second half of 2018. The U.S. outperformed its peers in end-of-year data with annualized GDP up 3.4% in the third quarter. In contrast, growth in the Eurozone dropped to 0.2% in the third quarter (and 1.7% year-on-year). The German economy contracted due to disruption to the auto industry from tougher emissions rules, while the Italian economy stalled over its now-resolved budget standoff with the European Union. China's growth fell to 6.5% in the third quarter, although the government expects to beat its 6.5% growth target for the full year.

The extent of global growth deceleration is one unknown for markets; how central banks will react is another. The Fed softened its tone on potential hikes in 2019 but nevertheless, it remained too hawkish for some as it stuck to plans to unwind its balance sheet, contributing to year-end market volatility. In December, the ECB ended its bond-buying program but gave no guidance when negative interest rates might end. Loose monetary conditions also remained in force in the UK and Japan as policymakers balanced the competing needs of fragile growth, inflation and the desire to wean economies off support. Despite fears of heavy-handedness, the global approach remained measured.

The greatest concern for markets continues to be the tariff war. The pause in the dispute following the G20 meeting between the U.S. and China provided hope that a more permanent solution could be reached. However, stocks in China, as well as international companies with exposure to China, were affected by weakening sentiment and actual fallout. Apple became the latest U.S. corporation to point the finger at the trade war when it announced that fourth quarter revenues would be lower than expected. Declining consumer confidence in China and cheaper domestic alternatives were significant contributing factors.

The issue of confidence also hindered business. Uncertainty surrounding trade and political issues, such as further concern about a no-deal Brexit in the UK, held back capital investment, as Chief Executive Officers awaited greater clarity, thus creating a silver lining for equity investors. Supercharged earnings growth in 2018 resulted in record share buybacks as announced, and U.S. stock repurchases broke through the $1 trillion mark in December. Following the market retreat in the fourth quarter, more buybacks can be anticipated in the future. At the very least, the challenges of the fourth quarter present active investors with a more reasonable valuation and a very attractive starting point for 2019.

EM central banks have meanwhile faced their own travails, primarily centered around the security of central bank independence, particularly in Turkey and India. For now, the question in both countries seems to be largely settled in favor of independence—a positive for markets; but as is often the case in EM, that does not preclude the issue resurfacing down the road.

United States

Through mid-2018, U.S. capital markets enjoyed the longest equity bull market in their history. Valuations of stocks reached levels rarely-- and for some valuations measures, never-- seen before. However, in the fourth quarter of 2018, markets in the U.S. weakened tremendously with the S&P 500 ending the year down 13.5% with U.S. equities underperforming in 2018 compared to 2017.

Large Cap stocks were strongly negative, with the S&P 500 and Russell 1000 indices posting returns of

(-4.4%) and (-4.84%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (-10.0%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return loss of (-11.0%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (-1.5%) outpacing the Russell 1000 Value (-8.3%).

Fixed income markets took the four rate hikes by the Fed in stride in 2018. Treasuries returned (+0.9%) for the year, with the assets strongest quarter coming in the first quarter of 2018. Municipal credit outperformed Treasuries for the year, with (+4.8%), posting positive returns for four straight quarters. Following strong results in 2017, high yield debt underperformed and ended its upward trend in 2018, returning (-2.1%).

International Developed

International equity markets posted very weak results in 2018 and lagged behind U.S. equity markets, returning (-9.4%) as measured by the Morgan Stanley Capital International ("MSCI") All Country World Index. In U.S. dollars, both Europe and Japan equities posted negative performance in 2018 with MSCI Europe returning (-14.9%) and MSCI Japan returning (-12.9%). Weak returns in Europe were driven by the global negative market performance in the last quarter of 2018. The Small Cap portion of international developed markets posted even weaker returns in 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 negative in 2018, following a positive year in 2017.

Emerging Markets

Emerging markets posted very weak returns in 2018 with performance lower than both U.S. and international developed markets across equity and debt. The broad emerging markets index returned (-14.6%) for the year. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell state owned companies. Within the EM group, Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing EM sectors, losing 15.4% and 15.1%, respectively.

The bond markets of emerging markets underperformed in 2018. Both hard currency and local currency bond posted very weak years in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (-4.3%) in 2018. Local currency bonds, which are issued in the local currency, returned (-6.2%) for the year.

Commodities

Commodities posted negative results in 2018, with the broad Bloomberg Commodity Index down (-11.2%). Energy was the worst performing sub-sector, as oil prices were dampened by concerns of oversupply based on high inventories and stronger-than-expected production in Iran. Natural gas posted losses of -2.3% in a volatile quarter marked by low inventory levels and fluctuating weather forecasts. Natural gas consumption is projected to decrease slightly in the residential and commercial sectors, as expected milder weather will require less energy for space heating in the winter and air conditioning in the summer, largely based on temperature projections from the National Oceanic and Atmospheric Administration. On the other hand, precious metals strengthened towards the end of 2018, bolstered by the sell-off in equities and expectations for higher real interest rates.

Market Outlook

Global economic growth is likely to slow modestly in 2019, but the prevalent view is that investors' worst fears are likely exaggerated, as most of the world's economies will continue to expand rather than contract. Therefore, for the time being there is not – expectation of recession on the horizon.

There are many reasons for investors to be to be optimistic. U.S. corporate profit margins should remain high after the boost from 2018 tax cuts, which should result in earnings growth in the high single-digits or better. Furthermore, a more dovish stance from the Fed could signal a cyclical peak for the U.S. dollar, helping U.S. manufacturing and also providing some welcome relief for embattled EM companies facing higher dollar-denominated borrowing costs.

The Eurozone is expected to increase economic activities in the first half of 2019. Disruption to the German auto industry from new emissions standards, potential for increased fiscal stimulus across major economies in the bloc and the positive developments in Italy signaling a stronger unity in the European Union ("EU") can be potential catalysts for improving growth. Nevertheless, the intense uncertainty around Brexit will be a drag on the UK in the first quarter of 2019 and may extend its impact across Europe should Britain leave the EU without a deal on March 29th 2019.

An agreement between Organization Petroleum Exporting Countries ("OPEC") and its oil-producing allies to cut output can lead to greater price stability in 2019. But oil, and the broader commodity sector, remains a leading global growth concern.

Intense uncertainty on global trade remains the big issue gripping investors. The pause in the U.S.-China trade war could pave the way for a more comprehensive agreement. Nonetheless, significant obstacles remain, such as China's real desire to follow through on promises to open up its economy and end forced technology transfers.

Objectively, there can be little doubt there are multiple risks globally in this late-cycle phase. However, the outlook is far from bleak, and there is substantial consensus that 2019 could be a good year for portfolio reallocations, taking advantage of dislocated sectors, oversold opportunities and market outperformance.

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, 2018 AND 2017
(In thousands)

	2018	2017
ASSETS:		
Cash	$ 5,977	$ 5,418
Receivables:		
Investment securities sold	672	760
Interest and dividends	1,331	1,263
Employee loans	36,804	37,605
Total receivables	38,807	39,628
Investments at fair market value (Notes 2 and 3):		
Investments measured at readily determinable fair value	433,543	387,520
Investments measured at net asset value	2,379,443	2,502,012
Total investments	2,812,986	2,889,532
Total assets	2,857,770	2,934,578
LIABILITIES:		
Accounts payable	1,380	1,567
Payable for investment securities purchased	2,148	2,250
Accrued benefits payable	937	2,247
Accrued Post Retirement Death Benefits (PRDB) payable	2,921	3,344
Accrued 55/25 Additional Members Contribution (AMC) payable	5,982	6,181
Total liabilities	13,368	15,589
PLAN NET POSITION RESTRICTED FOR PENSIONS	$2,844,402	$2,918,989

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, 2018 AND 2017 (In thousands)

	2018	2017
ADDITIONS:		
Contributions (Note 4):		
Employee contributions	$ 21,955	$ 19,713
Employer contributions	205,433	202,684
Total contributions	227,388	222,397
Investment income:		
Interest income	7,891	6,092
Dividend income	37,259	24,125
Net (depreciation) /appreciation in fair value of investments	(97,896)	363,877
Total investment (loss) / income	(52,746)	394,094
Less investment expenses	35,206	43,908
Net investment (loss) / income	(87,952)	350,186
Total additions	139,436	572,583
DEDUCTIONS:		
Benefit payments and withdrawals	213,827	209,121
Administrative expenses	196	208
Total deductions	214,023	209,329
NET (DECREASE) / INCREASE IN PLAN NET POSITION	(74,587)	363,254
PLAN NET POSITION RESTRICTED FOR PENSIONS:		
Beginning of year	2,918,989	2,555,735
End of year	$ 2,844,402	$ 2,918,989

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, 2018 and 2017, respectively, the date of the latest actuarial valuation:

	2018	2017
Active and inactive members	8,918	8,739
Retirees and beneficiaries currently receiving benefits	5,661	5,523
Vested formerly active members not yet receiving benefits	1,000	1,006
Total members	15,579	15,268

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, 2018, the Plan has paid \$12.3 million in post-retirement benefits and accrued an additional \$2.9 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 ($16,048 for 2017 and $16,406 for 2018).
- 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 $270,000 for 2017 and $275,000 for 2018.
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 2017, the maximum benefit is $215,000 and for 2018 it is $220,000.

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-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 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-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 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 GASB Statement No. *85 Omnibus 2017.* This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits (“OPEB”). There was no material impact on the Plan’s financial statements as a result of the implementation of GASB Statement No. 85.

Recent Accounting Pronouncements — Currently being evaluated but have not yet been adopted.

GASB Statement No.	GASB Accounting Standard	MaBSTOA Pension Plan Required Year of Adoption
84	*Fiduciary Activities*	2019

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 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, 2018.

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 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 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, 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	38,079	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	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	40,172		
Private equity - private equity partnerships	222,078	154,653	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	45,077	Not eligible	N/A
Infrastructure	19,466	5,123	Not eligible	N/A
Total real assets measured at the NAV	241,171	50,200		
Short term investments measured at the NAV	103,701	-		
Total investments measured at the NAV	2,379,443	$ 245,025		
Total investments at fair value	$ 2,812,986			

Investments measured at readily determined fair value (FV)
(In thousands)

	December 31, 2017	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	$ 85,488	$ 85,488	$ -	$ -
Separate account small-cap equity funds	146,050	146,050	-	-
Separate account real estate investment trust funds	25,437	25,437	-	-
Total equity investments	256,975	256,975	-	
Debt Securities				-
Separate account debt funds	130,545	-	130,545	-
Total debt investments	130,545	-	130,545	-
Total investments at readily determined FV	$ 387,520	$ 256,975	$ 130,545	$ -

Investments measured at the net asset value (NAV)
(In thousands)

	December 31, 2017	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 184,948	$ -	Daily	None
Commingled international equity funds	380,935	-	Daily	None
Commingled emerging market equity funds	100,360	-	Daily, monthly	None
Total equity investments measured at the NAV	666,243	-		
Debt Securities				
Commingled debt funds	226,761	-	Daily, monthly, quarterly	None
Mutual fund	38,074	-	Daily	None
Total debt investments measured at the NAV	264,835	-		
Absolute return:				
Directional	91,662	-	Monthly	3-60 days
Direct lending	121,893	9,047	Bi-annually	60 plus days
Distressed securities	30,446	-	Not eligible	N/A
Credit long	41,165	-	Quarterly	3-30 days
Credit long/short	55,742	-	Quarterly	3-60 days
Equity long/short	41,257	-	Quarterly	3-60 days
Event driven	56,885	2,093	Quarterly, Bi-annually	60-120 days
Global macro	87,963	-	Monthly	3-30 days
Global tactical asset allocation	194,495	-	Daily, monthly	3-30 days
Multistrategy	83,030	-	Quarterly	3-60 days
Risk parity	258,962	-	Monthly	3-30 days
Structured credit	11,652	-	Not eligible	N/A
Total absolute return measured at the NAV	1,075,152	11,140		
Private equity - private equity partnerships	212,724	148,579	Not eligible	N/A
Real assets				N/A
Commingled commodities fund	55,646	-	Not eligible	N/A
Commingled real estate funds	107,002	-	Not eligible	N/A
Energy	45,027	14,157	Not eligible	N/A
Infrastructure	16,831	5,526	Not eligible	N/A
Total real assets measured at the NAV	224,506	19,683		
Short term investments measured at the NAV	58,552	-		
Total investments measured at the NAV	2,502,012	$ 179,402		
Total investments at fair value	$ 2,889,532			

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, 2018 and 2017 are as follows:

(In thousands)	**2018**	**2017**
Investments at fair value as determined by quoted market prices:		
Sanderson International Equity Fund	$ -	$ 156,606
Robert W. Baird and Company	158,405	-

Credit Risk — At December 31, 2018 and 2017, the following credit quality rating has been assigned by a nationally recognized rating organization:

(In thousands) **Quality Rating**	**2018 Fair Value**	**Percentage of Fixed Income Portfolio**	**2017 Fair Value**	**Percentage of Fixed Income Portfolio**
AAA	$ 90,620	9.02 %	$ 112,325	21.16 %
AA	142,058	14.14	(3,161)	(0.60)
A	56,656	5.64	45,135	8.50
BBB	67,683	6.73	69,916	13.17
BB	83,413	8.30	62,391	11.75
B	58,869	5.86	41,445	7.81
CCC	12,902	1.28	4,493	0.85
CC	113	0.01	823	0.16
C	993	0.10	-	-
D	4,544	0.45	10	-
Not Rated	253,222	25.20	78,990	14.88
Credit risk debt securities	771,073	76.73	412,367	77.68
U.S. Government bonds	233,849	23.27	118,466	22.32
Total fixed income securities	1,004,922	100.00 %	530,833	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	1,808,064		2,358,699	
Total investments	$ 2,812,986		$ 2,889,532	

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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.

(In thousands)	2018		2017	
Investment Fund	Fair Value	Duration	Fair Value	Duration
Chase	$ 186,969	12.81	$ 130,545	11.81
Wellington Blended Emerging Market Debt Fund	42,167	5.44	49,815	5.70
Allianz Structured Alpha Fund	89,472	0.13	91,662	0.13
GAM Unconstrained Bond Fund	20,702	0.10	102,061	(0.17)
Bridgewater All Weather Fund	66,694	8.30	61,675	7.70
Wellington Opportunistic Fund	39,390	1.52	25,845	1.70
Bridgewater Pure Alpha Fund	164,759	(0.90)	(144,266)	(7.90)
Northern Trust William Capital	10,272	-	10,103	-
Park Square Capital Credit Opportunities Fund II	25,529	-	26,688	-
Park Square Capital Credit Opportunities Fund III	10,009	-	-	-
Crescent Capital High Income Fund	37,893	2.56	22,661	2.43
EIG Energy Fund XV	2,761	-	3,319	-
EIG Energy Fund XVI	3,863	-	4,554	-
Fir Tree Value Realization Fund	-	-	3	-
Libremax Partners Fund	59,954	2.63	14,382	2.50
Gramercy Distressed Opportunistic Fund	16,017	0.26	1,769	(0.05)
Makuria Credit Fund	12,182	5.38	22,226	5.50
Orchard Landmark Fund	70,511	1.44	-	-
PIMCO Distressed Credit Opportunities Fund	32,728	2.18	-	-
Wellington Global Managed Fund	55,285	6.20	79,238	10.60
State Street Real Asset Fund	12,947	5.84	13,851	5.84
State Street Long US Treasury Index Fund	19,682	17.38	-	-
Riverstone Credit Partners Fund	12,144	4.00	-	-
Riverstone Credit Partners Syndication Fund	1,202	4.00	-	-
Canyon Value Fund	11,790	3.26	14,702	2.50
Total fixed income securities	1,004,922		530,833	
Portfolio modified duration		4.43		8.76
Investments with no duration reported	$ 1,808,064		$ 2,358,699	
Total investments	$ 2,812,986		$ 2,889,532	

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, 2018 and 2017 are as follows (amounts in U.S. dollars, in thousands):

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Foreign Currency Holdings in US $ (In thousands)	December 31, 2018	December 31, 2017
Argentina Peso	$ 12,417	$ 3,148
Dollar (Australian)	18,820	25,072
Bahraini Dinar	325	358
Bangladesh (Taka)	312	352
Bermudian Dollar	2,084	607
Botswana Pula	138	132
Brazil Cruzeiro Real	22,971	12,168
Bulgarian Lev	12	14
Dollar (Canadian)	25,792	14,493
Dollar (Caymanian)	591	-
Chilean Peso	6,308	4,148
China (Yuan Renminbi)	12,140	13,680
Colombian Peso	3,436	3,176
Croatia Kuna	408	436
Czech Koruna	416	(1,159)
Dominican Peso	6	-
Krone (Danish)	5,039	1,836
Egyptian Pound	809	2,191
Euro	81,204	68,054
Georgian Lari	607	1,359
Ghanaian Cedi	130	209
Dollar (Hong Kong)	6,266	13,310
Hungary (Forint)	2,731	551
Icelandic Krona	2,118	3,186
Indian Rupee	16,044	20,102
Indonesia Rupiah	5,103	12,038
Israeli (Shekel)	1,083	1,014
Yen (Japan)	6,297	7,031
Jordanian Dinar	310	380
Kazakhstani Tenge	342	514
Kenyan Shilling	325	348
Kuwait Dinar	657	714
Lebanese Pound	41	99
Laos Kip	332	-
Malaysian (Ringgit)	2,973	6,467
Mauritius (Rupee)	719	732
Mexican New Peso	(1,694)	3,886
Morocco Dirham	301	357
Dollar (New Zealand)	519	5,306
Nigerian Naira	327	351
Krone (Norwegian)	787	5,835
Omanian Rial	270	359
Pakistani Rupee	709	1,522
Panamanian Balboa	129	135
Peru Sol	1,365	1,936
Philippines Peso	2,399	1,859
Polish (New Zloty)	(2,316)	1,233
Pound (Sterling)	36,157	79,022
Qatar Riyal	802	952
Romanian Leu	1,201	554
Russian Federation Rouble	(3,505)	4,296
Saudi Riyal	665	357
Singapore Dollar	(7,183)	4,255
South Africa Rand	8,888	5,871
South Korean Won	13,882	24,351
Sri Lankan Rupee	273	349
Krona (Swedish)	6,157	19,137
Swiss Franc	14,221	10,474
Thai (Bhat)	3,738	4,507
Dollar (Taiwan, New)	7,055	18,458
Tunisian Dinar	122	145
Turkish Lira	(2,259)	3,149
Ukrainian Hryvnia	40	-
UAE Dirham	986	1,656
Uruguayan Pesos	11	338
Vietnamese Dong	600	571
Other	10,652	(17,199)
Total	$ 334,605	$ 400,782

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 $205.4 million and $202.7 million for the years ended December 31, 2018 and 2017, respectively. Employee contributions amounted to $22.0 million and $19.7 million for the years ended December 31, 2018 and 2017, respectively. Contributions made by employees are accounted for in separate accounts maintained for each employee. 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 $15.7 million and $18.2 million in loans to members during 2018 and 2017, respectively. Loan repayments by members amounted to $14.1 million and $14.9 million in 2018 and 2017, 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, 2018 and 2017 were as follows (in thousands):

	December 31, 2018	December 31, 2017
Total pension liability	$ 3,811,124	$ 3,676,476
Fiduciary net position	2,844,402	2,918,989
Net pension liability	$ 966,722	$ 757,487
Fiduciary net position as a percentage of the total pension liability	74.63 %	79.40 %

Actuarial Methods and Assumptions—The total pension liability as of December 31, 2018 was determined by an actuarial valuation date of January 1, 2018, 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, 2018	January 1, 2017
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	7.00%, 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	55% of inflation assumption or 1.375% per annum, if applicable	55% of inflation assumption or 1.375% per annum, if applicable
Inflation	2.50% 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 of 2007, 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 $773 thousand and $603 thousand as of December 31, 2018 and 2017, respectively.

At December 31, 2018 and 2017, assets were available to fund 74.6% and 79.4%, 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, 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%			

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, 2017	$2,555,735	12.00	1.00	$2,905,018
Monthly net external cash flows:				
January	2,671	11.50	0.96	3,020
February	809	10.50	0.88	906
March	809	9.50	0.79	896
April	809	8.50	0.71	886
May	809	7.50	0.63	877
June	809	6.50	0.54	867
July	809	5.50	0.46	859
August	809	4.50	0.38	850
September	809	3.50	0.29	840
October	809	2.50	0.21	832
November	809	1.50	0.13	823
December	2,303	0.50	0.04	2,315
Ending Value - December 31, 2017				$2,918,989
Money-Weighted Rate of Return	13.67%			

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, 2018 and 2017 actuarial valuations are summarized in the following table:

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

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2017

Asset Class	Index	Target Allocation	Long-Term Expected Real Rate of Return
U.S. Core Fixed Income	Barclays Aggregate	10.00 %	1.96 %
U.S. High Yield Bonds	BAML High Yield	8.00 %	4.62 %
Global Bonds	Citi WGBI	10.00 %	0.34 %
Emerging Market Bonds	JPM EMBI Plus	3.00 %	3.30 %
U.S. Large Cap	S&P 500	10.00 %	4.31 %
U.S. Small Cap	Russell 2000	5.50 %	5.57 %
Global Equities	MSCI ACWI NR	10.00 %	4.99 %
Foreign Developed Equities	MSCI EAFE NR	10.00 %	5.57 %
Emerging Market Equities	MSCI EM NR	3.50 %	7.91 %
GLOBAL REITs	FTSE EPRA/NAREIT Developed	5.00 %	5.62 %
Private Real Estate Property	NCREIF Property	3.00 %	3.64 %
Private Equity	Cambridge Private Equity	7.00 %	8.99 %
Hedge Funds - MultiStrategy	HFRI Fund Wtd Composite	15.00 %	3.35 %
Total		100.00 %	
Assumed Inflation—Mean			2.50 %
Assumed Inflation—Standard Deviation			1.85 %
Portfolio Arithmetic Mean Return			6.80 %
Portfolio Standard Deviation			11.54 %
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, 2018 and 2018 was 7.0%. 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 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 for years 2018 and 2017 respectively:

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

2017 (in thousands)	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	$ 1,166,477	$ 757,487	$ 409,121

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

As of July 23, 2019, the Plan redeemed its entire investment in the GAM Unconstrained Bond Fund, amid allegations of misconduct by a portfolio manager. The Plan suffered no loss on its investment.

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REQUIRED SUPPLEMENTARY INFORMATION
(UNAUDITED)

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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)

	2018	2017	2016	2015	2014
Total pension liability:					
Service cost	$ 87	$ 85	$ 82	$ 77	$ 72
Interest	256	246	237	232	224
Changes of benefit terms	-	6	-	-	-
Differences between expected and actual experience	6	12	14	(69)	(2)
Benefit payments and withdrawals	(214)	(209)	(188)	(180)	(175)
Net change in total pension liability	135	140	145	60	119
Total pension liability—beginning	3,676	3,536	3,391	3,331	3,212
Total pension liability—ending (a)	3,811	3,676	3,536	3,391	3,331
Plan fiduciary net position:					
Employer contributions	205	203	221	215	226
Employee contributions	22	20	18	16	15
Net investment income	(88)	350	212	(24)	105
Benefit payments and withdrawals	(214)	(209)	(188)	(180)	(175)
Net change in plan fiduciary net position	(75)	364	263	27	171
Plan fiduciary net position—beginning	2,919	2,555	2,292	2,265	2,094
Plan fiduciary net position—ending (b)	2,844	2,919	2,555	2,292	2,265
Employer's net pension liability—ending (a)-(b)	$ 967	$ 757	$ 981	$ 1,099	$ 1,066
Plan fiduciary net position as a percentage of the total pension liability	74.63 %	79.40 %	72.26 %	67.58 %	68.00 %
Covered payroll	767	748	713	686	672
Employer's net pension liability as a percentage of covered payroll	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
2018	$ 202,509	$ 205,433	$ (2,924)	$ 766,562	26.80 %
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
2009	204,274	204,274	-	569,383	35.88

(continued)

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY 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 are as follows:

Valuation Dates	January 1, 2018	January 1, 2017	January 1, 2016	January 1, 2015
Actuarial cost method	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. 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	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	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 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
Inflation	2.5% per annum	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	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	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	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.	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	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)	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	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.

(Continued)

MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY 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 are as follows:

Valuation Dates	January 1, 2014
Actuarial cost method	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
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
Interest rate	Net rate of 7.0% for 2014, per annum, net of investment expenses
Inflation	2.5% per annum
Deaths after retirement	Tables based on recent experience
Separations other than for normal retirement	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
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
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
Cost-of-living adjustments	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

(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.

(concluded)

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
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.

Metropolitan Transportation Authority Defined Benefit Pension Plan

Financial Statements as of and for the
Years Ended December 31, 2018 and 2017,
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, 2018 and 2017, 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, 2018 and 2017, 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 8 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.

January 21, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
DEFINED BENEFIT PENSION PLAN

MANAGEMENT'S DISCUSSION AND ANALYSIS
DECEMBER 31, 2018 AND 2017 (UNAUDITED)

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, 2018 and 2017. 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.

CONDENSED FINANCIAL INFORMATION AND ANALYSIS

Plan Net Position
December 31, 2018, 2017 and 2016
(Dollars in thousands)

				Increase / Decrease			
				2018-2017		2017-2016	
	2018	2017	2016	$	%	$	%
Cash and investments	$ 4,028,634	$ 4,056,780	$ 3,433,122	$ (28,146)	(0.7)	$ 623,658	18.2
Receivables and other assets	4,590	3,778	1,753	812	21.5	2,025	115.5
Total assets	**$ 4,033,224**	**$ 4,060,558**	**$ 3,434,875**	**$ (27,334)**	**(0.7)**	**$ 625,683**	**18.2**
Due to broker for securities purchased	2,699	3,575	2,391	(876)	(24.5)	1,184	49.5
Other liabilities	6,045	5,449	12,513	596	10.9	(7,064)	(56.5)
Total liabilities	**8,744**	**9,024**	**14,904**	**(280)**	**(3.1)**	**(5,880)**	**(39.5)**
Plan net position restricted for pensions	**$ 4,024,480**	**$ 4,051,534**	**$ 3,419,971**	**$ (27,054)**	**(0.7)**	**$ 631,563**	**18.5**

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.

December 31, 2017 versus December 31, 2016

Cash and investments at December 31, 2017 were $4,056.8 million representing an increase of $623.7 million or 18.2% from 2016. This increase is a result of investment activity and plan contributions net of benefit payments and expenses during 2017.

Receivables and other assets net of liabilities at December 31, 2017 decreased by $7.9 million or 60.1% from 2016. The is due primarily to an increase in interest and dividend receivables in the amount of $2.0 million, offset by a decrease in liabilities of $6.2 in millions related to the reversal of employer contributions due to the Long Island Railroad Additional Pension Plan, and other net liabilities of $0.4 million.

The plan net position held in trust for pension benefits increased by $631.6 million or 18.5% in 2017 as a result of the changes noted above.

Changes in Plan Net Position
For the Years Ended December 31, 2018, 2017 and 2016
(Dollars in thousands)

				Increase / Decrease			
				2018-2017		2017-2016	
	2018	2017	2016	$	%	$	%
Additions:							
Net investment (loss)/income	$ (150,422)	$ 516,153	$ 247,708	$ (666,575)	(129.1)	$ 268,445	108.4
Contributions	368,869	352,855	310,160	16,014	4.5	42,695	13.8
Total net additions	**218,447**	**869,008**	**557,868**	**(650,561)**	**(74.9)**	**311,140**	**55.8**
Deductions:							
Benefit payments	242,149	231,321	209,623	$ 10,828	4.7	$ 21,698	10.4
Tranfer to NYSLERs	200	1,622	-	(1,422)	(87.7)	1,622	100.0
Administrative expenses	3,152	4,502	3,051	(1,350)	(30.0)	1,451	47.6
Total deductions	**245,501**	**237,445**	**212,674**	**8,056**	**3.4**	**24,771**	**11.6**
Net increase in Plan net position	**(27,054)**	**631,563**	**345,194**	**(658,617)**	**(104.3)**	**286,369**	**83.0**
Plan net position restricted for pensions:							
Beginning of year	4,051,534	3,419,971	3,074,777	631,563	18.5	345,194	11.2
End of year	**$ 4,024,480**	**$ 4,051,534**	**$ 3,419,971**	**$ (27,054)**	**(0.7)**	**$ 631,563**	**18.5**

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.

December 31, 2017 versus December 31, 2016

Net investment income increased by $268.4 million in 2017 due to net investment gains of $516.2 million in 2017 versus net gains of $247.7 million experienced in 2016.

Contributions increased by $42.7 million or 13.8% in 2017 compared to 2016 as required by the Actuarial Determined Contributions ("ADC") and member contributions from 2016 to 2017.

Benefit payments increased by $21.7 million or 10.4% 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 $1.5 million, or 47.6% over 2016. This increase is due primarily to expenses charged in 2017 for various services provided to the Plan.

Economic Factors

Market Overview and Outlook – 2018

Risk aversion and volatility marked the end of 2018, with geopolitical developments and concerns about slowing growth both contributing to the sell-off in global equity markets. U.S. stocks led the decline, contributing to the first calendar year with negative returns since 2008. Amid the equity underperformance, credit spreads widened, developed market yields fell, and the U.S. dollar weakened. In addition, the Federal Reserve ("Fed") hiked interest rates as expected, though trimmed its forecast for hikes in 2019.

Several factors contributed to heightened market volatility throughout 2018—most importantly, investor concerns brought on by rising trade tensions, particularly between the U.S. and China, the apparent shift to a moderately tighter monetary policy by central banks in major developed countries; and the potential for slower growth, especially in China and Europe. Most major indices closed in negative territory at the end fourth quarter. After a difficult start, emerging markets ("EM") held up better than their developed world counterparts in the fourth quarter, but still trailed for 2018 overall. The U.S. market was among the bottom-performing indices in the last quarter but led most major indices for the year, notwithstanding the S&P 500 Index's worst performance since the conclusion of the global financial crisis. As a result, global financial markets proved to be a challenging environment during the fourth quarter of 2018.

From a monetary policy perspective, the Fed raised rates 25bps as expected in December and signaled a slower pace of tightening in 2019 as it continued to unwind its extensive balance sheet. Investors divined a more dovish tone from the Fed's 2019 projections, but markets remained volatile through the end of the year. Globally, most developed-world central banks began moving towards modestly tighter stances, including the European Central Bank ("ECB"), which formally announced the end of its bond-buying program in December, concluding a roughly €2.6 trillion program. Across the channel, the Bank of England raised rates twice since the country's Brexit referendum in June 2016, but recently indicated it was prepared to pivot as necessary once the formal exit takes place in early 2019. The Bank of Japan has long been in its own monetary policy lane, remaining by far the most accommodative of the major global central banks.

Macro Themes

- Major indices post worst year since 2008 as trade, economic outlook and monetary policy weigh on investors
- Global growth modestly decelerates but remains positive
- Trade uncertainty

After reaching a new high in September, the S&P 500 lost nearly 14% during the fourth quarter to end the year, down more than 4.4%. The Dow Jones Industrial Index was off 11% for the quarter, as was Europe's Stoxx Limited Index, which ended the quarter 600 points lower. China's Shanghai Composite also lost 12% over the last quarter and nearly 25% for the year. The year's sharp drawdown seemed unlikely at the outset of 2018, given the relatively robust outlook at the time. The silver lining is that share prices now appear cheap from a forward price/earnings perspective compared to long-run averages and the outlook, although more challenging, is still largely positive for 2019.

Global growth slowed, rather than stalled, in the second half of 2018. The U.S. outperformed its peers in end-of-year data with annualized GDP up 3.4% in the third quarter. In contrast, growth in the Eurozone dropped to

0.2% in the third quarter (and 1.7% year-on-year). The German economy contracted due to disruption to the auto industry from tougher emissions rules, while the Italian economy stalled over its now-resolved budget standoff with the European Union. China's growth fell to 6.5% in the third quarter, although the government expects to beat its 6.5% growth target for the full year.

The extent of global growth deceleration is one unknown for markets; how central banks will react is another. The Fed softened its tone on potential hikes in 2019 but nevertheless, it remained too hawkish for some as it stuck to plans to unwind its balance sheet, contributing to year-end market volatility. In December, the ECB ended its bond-buying program but gave no guidance when negative interest rates might end. Loose monetary conditions also remained in force in the UK and Japan as policymakers balanced the competing needs of fragile growth, inflation and the desire to wean economies off support. Despite fears of heavy-handedness, the global approach remained measured.

The greatest concern for markets continues to be the tariff war. The pause in the dispute following the G20 meeting between the U.S. and China provided hope that a more permanent solution could be reached. However, stocks in China, as well as international companies with exposure to China, were affected by weakening sentiment and actual fallout. Apple became the latest U.S. corporation to point the finger at the trade war when it announced that fourth quarter revenues would be lower than expected. Declining consumer confidence in China and cheaper domestic alternatives were significant contributing factors.

The issue of confidence also hindered business. Uncertainty surrounding trade and political issues, such as further concern about a no-deal Brexit in the UK, held back capital investment, as Chief Executive Officers awaited greater clarity, thus creating a silver lining for equity investors. Supercharged earnings growth in 2018 resulted in record share buybacks as announced, and U.S. stock repurchases broke through the $1 trillion mark in December. Following the market retreat in the fourth quarter, more buybacks can be anticipated in the future. At the very least, the challenges of the fourth quarter present active investors with a more reasonable valuation and a very attractive starting point for 2019.

EM central banks have meanwhile faced their own travails, primarily centered around the security of central bank independence, particularly in Turkey and India. For now, the question in both countries seems to be largely settled in favor of independence—a positive for markets; but as is often the case in EM, that does not preclude the issue resurfacing down the road.

United States

Through mid-2018, U.S. capital markets enjoyed the longest equity bull market in their history. Valuations of stocks reached levels rarely-- and for some valuations measures, never-- seen before. However, in the fourth quarter of 2018, markets in the U.S. weakened tremendously with the S&P 500 ending the year down 13.5% with U.S. equities underperforming in 2018 compared to 2017.

Large Cap stocks were strongly negative, with the S&P 500 and Russell 1000 indices posting returns of (-4.4%) and (-4.84%), respectively. Small Cap and Mid Cap indices underperformed large cap. Small Cap, as measured by the Russell 2500 Index, returned (-10.0%). The Russell Mid Cap Index measured by the Russell 2000 Index lagged the Small Cap and posted a return loss of (-11.0%). Of note, growth oriented investments outperformed the value counterpart with the Russell 1000 Growth (-1.5%) outpacing the Russell 1000 Value (-8.3%).

Fixed income markets took the four rate hikes by the Fed in stride in 2018. Treasuries returned (+0.9%) for the year, with the assets strongest quarter coming in the first quarter of 2018. Municipal credit outperformed Treasuries for the year, with (+4.8%), posting positive returns for four straight quarters. Following strong results in 2017, high yield debt underperformed and ended its upward trend in 2018, returning (-2.1%).

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International Developed

International equity markets posted very weak results in 2018 and lagged behind U.S. equity markets, returning (-9.4%) as measured by the Morgan Stanley Capital International ("MSCI") All Country World Index. In U.S. dollars, both Europe and Japan equities posted negative performance in 2018 with MSCI Europe returning (-14.9%) and MSCI Japan returning (-12.9%). Weak returns in Europe were driven by the global negative market performance in the last quarter of 2018. The Small Cap portion of international developed markets posted even weaker returns in 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 negative in 2018, following a positive year in 2017.

Emerging Markets

Emerging markets posted very weak returns in 2018 with performance lower than both U.S. and international developed markets across equity and debt. The broad emerging markets index returned
(-14.6%) for the year. Brazil was the best performing country, buoyed by President-elect Jair Bolsonaro's pick for chief economic advisor and his pledge to sell state owned companies. Within the EM group, Asia lagged, pulled down by declines in China, Korea and Taiwan. Healthcare and information technology were among the worst performing EM sectors, losing 15.4% and 15.1%, respectively.

The bond markets of emerging markets underperformed in 2018. Both hard currency and local currency bond posted very weak years in performance. Hard currency bonds, which are predominately issued in U.S. dollars, returned (-4.3%) in 2018. Local currency bonds, which are issued in the local currency, returned
(-6.2%) for the year.

Commodities

Commodities posted negative results in 2018, with the broad Bloomberg Commodity Index down (-11.2%). Energy was the worst performing sub-sector, as oil prices were dampened by concerns of oversupply based on high inventories and stronger-than-expected production in Iran. Natural gas posted losses of -2.3% in a volatile quarter marked by low inventory levels and fluctuating weather forecasts. Natural gas consumption is projected to decrease slightly in the residential and commercial sectors, as expected milder weather will require less energy for space heating in the winter and air conditioning in the summer, largely based on temperature projections from the National Oceanic and Atmospheric Administration. On the other hand, precious metals strengthened towards the end of 2018, bolstered by the sell-off in equities and expectations for higher real interest rates.

Market Outlook

Global economic growth is likely to slow modestly in 2019, but the prevalent view is that investors' worst fears are likely exaggerated, as most of the world's economies will continue to expand rather than contract. Therefore, for the time being there is not – expectation of recession on the horizon.

There are many reasons for investors to be to be optimistic. U.S. corporate profit margins should remain high after the boost from 2018 tax cuts, which should result in earnings growth in the high single-digits or better. Furthermore, a more dovish stance from the Fed could signal a cyclical peak for the U.S. dollar, helping U.S. manufacturing and also providing some welcome relief for embattled EM companies facing higher dollar-denominated borrowing costs.

The Eurozone is expected to increase economic activities in the first half of 2019. Disruption to the German auto industry from new emissions standards, potential for increased fiscal stimulus across major economies in the bloc and the positive developments in Italy signaling a stronger unity in the European Union ("EU") can be potential catalysts for improving growth. Nevertheless, the intense uncertainty around Brexit will be a drag on

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the UK in the first quarter of 2019 and may extend its impact across Europe should Britain leave the EU without a deal on March 29th 2019.

An agreement between Organization Petroleum Exporting Countries ("OPEC") and its oil-producing allies to cut output can lead to greater price stability in 2019. But oil, and the broader commodity sector, remains a leading global growth concern.

Intense uncertainty on global trade remains the big issue gripping investors. The pause in the U.S.-China trade war could pave the way for a more comprehensive agreement. Nonetheless, significant obstacles remain, such as China's real desire to follow through on promises to open up its economy and end forced technology transfers.

Objectively, there can be little doubt there are multiple risks globally in this late-cycle phase. However, the outlook is far from bleak, and there is substantial consensus that 2019 could be a good year for portfolio reallocations, taking advantage of dislocated sectors, oversold opportunities and market outperformance.

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, 2018 AND 2017
(In tnousands)

	2018	2017
ASSETS:		
Cash	$ 13,224	$ 11,812
Investments at fair value (Notes 2 and 3):		
Investments measured at readily determined fair value	787,191	675,779
Investments measured at net asset value	3,228,219	3,369,189
Total investments	4,015,410	4,044,968
Receivables:		
Accrued interest and dividends	2,745	1,882
Other receivable	1,845	1,896
Total receivables	4,590	3,778
Total assets	4,033,224	4,060,558
LIABILITIES:		
Due to broker for securities purchased	2,699	3,575
Due to broker for investment fee	2,667	1,909
Due to broker for administrative expenses	267	306
Due to MTA for administrative expenses	2,818	2,515
Other liabilities	293	719
Total liabilities	8,744	9,024
PLAN NET POSITION RESTRICTED FOR PENSIONS	$ 4,024,480	$ 4,051,534

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, 2018 AND 2017
(In thousands)

	2018	2017
ADDITIONS:		
Investment (loss) / income:		
Net realized and unrealized (losses) / gains	$ (169,255)	$ 527,182
Dividends	56,670	35,211
Interest	9,254	6,522
Total investment (loss) / income	(103,331)	568,915
Less:		
Investment expenses	(47,091)	(52,762)
Net investment income	(150,422)	516,153
Contributions:		
Employer:		
Metro-North Commuter Railroad Company	116,005	120,515
Long Island Rail Road Company	114,854	111,459
Metropolitan Transportation Authority Headquarters	42,967	33,276
MTA Bus Company	57,264	50,479
Staten Island Rapid Transit Operating Authority	7,877	6,132
Employee	29,902	30,994
Total contributions	368,869	352,855
Total additions	218,447	869,008
DEDUCTIONS:		
Benefits paid to participants	242,149	231,321
Transfer of MTA Police Employer & Employee Contributions to NYSLERs	200	1,622
Administrative expenses	3,152	4,502
Total deductions	245,501	237,445
NET (DECREASE) / INCREASE IN PLAN NET POSITION	(27,054)	631,563
PLAN NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	4,051,534	3,419,971
End of year	$ 4,024,480	$ 4,051,534

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, 2018 and 2017, respectively, the date of the latest actuarial valuations:

	2018	2017
Active Plan Members	18,631	18,048
Retirees and beneficiaries receiving benefits	11,132	10,861
Vested formerly active members not yet receiving benefits	1,472	1,433
Total	31,235	30,342

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 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 $16,048 for 2017 and $16,406 for 2018, 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. *85 Omnibus 2017.* This Statement addresses a variety of topics including issues related to blending component units, goodwill, fair value measurement and application, and postemployment benefits (pensions and other postemployment benefits ("OPEB"). There was no material impact on the Plan's financial statements as a result of the implementation of GASB Statement No. 85.

Recent Accounting Pronouncements — Not yet adopted but currently being evaluated

GASB Statement No.	GASB Accounting Standard	MTA Pension Plan Required Year of Adoption
84	*Fiduciary Activities*	2019

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 2018 and 2017 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, 2018.

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, 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			

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Investments measured at readily determined fair value (FV)
(In Thousands)

	December 31, 2017	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	$ 261,754	261,754	$ -	$ -
Separate account small-cap equity funds	180,105	180,105	-	-
Separate account small-Real Estate Investments Trusts	41,206	41,206	-	-
Total equity investments	483,065	483,065	-	-
Debt Securities				
Separate account debt funds	192,714	-	192,714	-
Total debt investments	192,714	-	192,714	-
Total investments by fair value	$ 675,779	483,065	192,714	$ -

Investments measured at the net asset value (NAV)
(In Thousands)

	December 31, 2017	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Commingled large cap equity funds	$ 128,693	$ -	Daily	None
Commingled international equity funds	539,445	-	Daily	None
Commingled emerging market equity funds	138,634	-	Daily, monthly	None
Total equity investments measured at the NAV	806,772	-		
Debt Securities				
Commingled debt funds	347,412	-	Daily, monthly, quarterly	None
Mutual fund	63,601	-	Daily	None
Total debt investments measured at the NAV	411,013	-		
Absolute return:				
Directional	111,615	-	Monthly	3-60 days
Direct lending	158,246	11,201	Bi-annually	60 plus days
Distressed securities	41,882	-	Not eligible	N/A
Credit long	63,562	-	Quarterly	3-30 days
Credit long/short	73,602	-	Quarterly	3-60 days
Equity long/short	59,718	-	Quarterly	3-60 days
Event driven	89,310	1,872	Quarterly, Bi-annually	60-120 days
Global macro	84,451	-	Monthly	3-30 days
Global tactical asset allocation	271,887	-	Daily, monthly	3-30 days
Multistrategy	117,063	-	Monthly	3-30 days
Risk parity	365,708	-	Not eligible	N/A
Structured credit	16,029	-	Not eligible	N/A
Total absolute return measured at the NAV	1,453,073	13,073	Not eligible	N/A
Private equity - private equity partnerships	276,850	189,147		
Real assets				
Commingled real estate funds	215,313	-	Not eligible	N/A
Energy	56,951	17,863	Not eligible	N/A
Infrastructure	23,995	7,879	Not eligible	N/A
Total real assets measured at the NAV	296,259	25,742		
Short term investments measured at the NAV	125,222			
Total investments measured at the NAV	3,369,189	$ 227,962		
Total investments at fair value	$ 4,044,968			

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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, 2018 and 2017 are as follows:

(In Thousands)	**2018**	**2017**
Investments at fair value as determined by quoted market prices:		
GAM Unconstrained Bond Fund	$ -	$ 174,184
Robert W. Baird and Company	239,340	-

Credit Risk — At December 31, 2018 and 2017, the following credit quality rating has been assigned by a nationally recognized rating organization:

(In Thousands) **Quality Rating**	**2018 Fair Value**	**Percentage of Fixed Income Portfolio**	**2017 Fair Value**	**Percentage of Fixed Income Portfolio**
AAA	$ 123,123	9.29 %	$ 158,310	19.05 %
AA	180,474	13.61	28,001	3.37
A	66,304	5.00	85,769	10.32
BBB	102,332	7.72	119,714	14.41
BB	99,366	7.49	93,143	11.21
B	82,629	6.23	60,596	7.29
CCC	18,733	1.41	7,443	0.90
CC	143	0.01	956	0.11
C	1,376	0.10	84	0.01
D	6,375	0.48	17	-
Not Rated	368,472	27.79	138,278	16.64
Credit risk debt securities	1,049,327	79.13	692,311	83.31
U.S. Government bonds	276,776	20.87	138,715	16.69
Total fixed income securities	1,326,103	100.00 %	831,026	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	2,689,307		3,213,942	
Total investments	$ 4,015,410		$ 4,044,968	

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)	2018 Fair Value	2018 Duration	2017 Fair Value	2017 Duration
Chase	$ 288,180	12.90	$ 192,071	11.44
Allianz Structured Alpha Fund	111,125	0.13	111,615	0.13
Wellington Blended Emerging Market Debt Fund	68,370	5.44	78,753	5.70
Bridgewater All Weather Fund	95,896	8.30	86,942	7.70
Wellington Opportunistic Fund	54,070	1.52	34,515	1.70
Bridgewater Pure Alpha Fund	142,098	(0.90)	(121,986)	(7.90)
Bridgewater Pure Alpha Markets Fund	(16,455)	(7.10)	(13,934)	(6.80)
GAM Unconstrained Bond Fund	34,810	0.10	168,253	(0.17)
Northern Trust William Capital Fund	8,651	-	8,341	-
Park Square Capital Credit Opportunities Fund II	32,238	-	33,041	-
Park Square Capital Credit Opportunities Fund III	14,156	-	-	-
Libremax Partners Fund	80,745	2.63	15,677	3.87
Gramercy Distressed Opportunistic Fund	22,474	0.26	12,765	(0.05)
Makuria Credit Fund	17,666	5.38	31,449	5.50
Crescent Capital High Income Fund	51,516	2.56	30,205	2.43
Orchard Landmark Fund	95,495	1.44	-	-
Fir Tree Realization Fund	-	-	6	-
PIMCO Distressed Credit Opportunities Fund	51,543	2.18	-	-
Wellington Global Managed Risk Fund	73,571	6.20	103,617	10.60
State Stree Real Asset Fund	24,062	5.84	25,237	5.84
State Stree Long US Treasury Index Fund	28,183	17.35	-	-
EIG Energy Fund XV	3,487	-	4,109	-
EIG Energy Fund XVI	4,878	-	5,638	-
Riverstone Credit Partners Fund	17,408	4.00	-	-
NEPC Syndication Partners Fund	1,723	4.00	-	-
Canyon Value Realization Fund	20,213	3.26	24,712	2.50
Total fixed income securities	1,326,103		831,026	
Portfolio modified duration		5.20		7.06
Investments with no duration reported	$ 2,689,307		$ 3,213,942	
Total investments	$ 4,015,410		$ 4,044,968	

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, 2018 and 2017 are as follows (amounts in U.S. dollars, in thousands):

Foreign Currency Holdings in US $ (In Thousands)	**December 31, 2018**	**December 31, 2017**
Argentina Peso	$ 16,926	$ 3,930
Dollar (Australian)	22,656	28,143
Bahraini Dinar	400	432
Bangladesh (Taka)	384	425
Bermuda Dollar	2,943	837
Botswana Pula	170	160
Brazil Cruzeiro Real	31,211	15,263
Bulgarian Lev	15	17
Dollar (Canadian)	34,720	19,021
Cayman Island dollar	829	-
Chilean Peso	7,423	5,975
China (Yuan Renminbi)	17,250	17,595
Colombian Peso	4,274	4,206
Croatia Kuna	516	536
Czech Koruna	1,286	(1,015)
Krone (Danish)	6,926	2,495
Dominican Peso	10	-
Egyptian Pound	1,195	2,801
Euro	99,097	76,248
Ghanaian Cedi	187	302
Geogian Lari	962	2,114
Dollar (Hong Kong)	13,112	15,402
Hungary (Forint)	4,141	1,344
Icelandic Krona	2,907	4,254
Indian Rupee	23,127	26,221
Indonesia Rupiah	7,496	15,783
Israeli (Shekel)	1,427	1,299
Yen (Japan)	11,952	9,483
Jordanian Dinar	382	458
Kazakhstani Tenge	432	638
Kenyan Shilling	400	419
Kuwait Dinar	808	862
Lebanese Pound	50	120
Laos Kip	466	-
Malaysian (Ringgit)	4,438	7,775
Mauritius (Rupee)	946	926
Mexican New Peso	3,744	6,784
Morocco Dirham	370	431
Dollar (New Zealand)	(518)	5,465
Nigerian Naira	414	423
Krone (Norwegian)	2,265	5,452
Omanian Rial	332	434
Pakistani Rupee	1,030	2,142
Panama Balboa	159	163
Peru Sol	1,888	2,655
Philippines Peso	3,278	2,215
Polish (New Zloty)	(91)	2,944
Pound (Sterling)	45,323	73,238
Qatar Riyal	1,002	1,164
Romanian Leu	1,728	590
Russian Federation Rouble	132	5,393
Saudi Riyal	818	430
Singapore Dollar	(4,147)	5,758
South African Rand	11,592	9,652
South Korean Won	21,130	30,450
Sri Lankan Rupee	334	421
Krona (Swedish)	6,416	22,321
Franc (Swiss)	15,406	10,449
Thai (Bhat)	5,550	4,937
Dollar (Taiwan, New)	10,695	24,812
Tunisian Dinar	150	175
Turkish Lira	50	4,774
Ukraine Hryvnia	69	-
UAE Dirham	1,252	2,175
Uruguayan Pesos	20	513
Vietnam Dong	739	689
Other	9,934	(14,625)
	-	
Total	$ 462,528	$ 476,893

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, 2018 and December 31, 2017 was 84.19% and 82.54% respectively.

	Master Trust Total Plan	MTA Defined Benefit Plan	Master Trust Total Plan	MTA Defined Benefit Plan
	December 31, 2018		December 31, 2017	
	(In thousands)			
Total Investments:				
Investments measured at readily determined fair value	$ 935,046	$ 787,191	$ 818,745	$ 675,779
Investments measured at the NAV	3,898,121	3,228,219	4,074,473	3,369,189
Total investments measured at fair value	$ 4,833,167	$ 4,015,410	$ 4,893,218	$ 4,044,968

4. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2018 and 2017 were as follows (in thousands):

	December 31, 2018	December 31, 2017
Total pension liability	$ 5,488,490	$ 5,072,814
Fiduciary net position	4,024,480	4,051,534
Net pension liability	1,464,010	1,021,280
Fiduciary net position as a percentage of the total pension liability	73.33%	79.87%

Actuarial Methods and Assumptions

The total pension liability as of December 31, 2018 was determined by an actuarial valuation date of January 1, 2018, 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, 2018 and 2017 was 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.

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 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

2017
(in thousands)

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	$1,648,216	$1,021,280	$492,284

Additional Important Actuarial Valuation Information

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%

Valuation date	January 1, 2017
Valuation timing	Actuarially determined contributions calculated as of December 31, for the fiscal year and discounted to expected payment dates (July 1 for these projections).
Actuarial cost method	Frozen Initial Liability
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%
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%

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.

2018 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	$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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2017 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, 2017	$3,419,971	12.00	1.00	$3,931,053
Monthly net external cash flows:				
January	(8,619)	12.00	1.00	(9,907)
February	6,311	11.00	0.92	7,174
March	6,275	10.00	0.83	7,044
April	7,808	9.00	0.75	8,667
May	6,830	8.00	0.67	7,498
June	9,802	7.00	0.58	10,626
July	9,802	6.00	0.50	10,509
August	9,802	5.00	0.42	10,392
September	8,180	4.00	0.33	8,564
October	9,802	3.00	0.25	10,149
November	9,802	2.00	0.17	10,037
December	39,617	0.25	0.02	39,728
Ending Value - December 31, 2017				$4,051,534
Money-Weighted Rate of Return	14.94%			

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, 2018 and 2017.

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%
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%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.65%
Portfolio Nominal Mean Return			7.19%
Portfolio Standard Deviation			10.87%

SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2017

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	10.00%	1.96%
US High Yield Bonds	BAML High Yield	8.00%	4.62%
Global Bonds	Citi WGBI	10.00%	0.34%
Emerging Market Bonds	JPM EMBI Plus	3.00%	3.30%
US Large Caps	S&P 500	10.00%	4.31%
US Small Caps	Russell 2000	5.50%	5.57%
Global Equity	MSCI ACWI NR	10.00%	4.99%
Foreigh Developed Equity	MSCI EAFE NR	10.00%	5.57%
Emerging Market Equity	MSCI EM NR	3.50%	7.91%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.62%
Private Real Estate Property	NCREIF Property	3.00%	3.64%
Private Equity	Cambridge Private Equity	7.00%	8.99%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	15.00%	3.35%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.85%
Portfolio Nominal Mean Return			6.80%
Portfolio Standard Deviation			11.54%
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. The transfer of this reserve in the amount of $1.6 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. Currently, non-represented employees at certain Depots, contribute $21.50 per week. Non-represented employees at Eastchester hired prior to 2007 contribute $25 per week. Represented employees at Baisley Park, College Point, Eastchester, Far Rockaway, JFK, LaGuardia and Yonkers Depots contribute $29.06 per week; Spring Creek represented employees contribute $32.00 per week. Certain limited number of represented employees promoted prior to the resolution of a bargaining impasse continue to participate in the 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.

MTA Bus is required to make significant annual contributions to the MTA Plan on a current basis. Pursuant to the January 1, 2018 and January 1, 2017 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 $57.3 and $50.5 for the calendar years ended December 31, 2018 and

2017, 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 — 7.00% per annum, compounded annually.

Railroad Retirement Wage Base — 3.50% per year.

Consumer Price Index — 2.50% per year.

Cost of Living Increases - 55% of inflation assumption or 1.375% 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, 2017 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: 2.5% for IBEW, ACRE, TWU and IBT
- MTA Long Island Rail Road represented employees: 2.5% for NCFO, IAM, and IRSA and 6.0% for BRS
- MTA Staten Island Railway represented employees: 2.5% for TCU, UTU, and ATDA
- MTA Police officers: $1,000 for all officers

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

There are no changes in actuarial assumptions since the prior valuation.

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.

Normal Retirement:

- 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

Marriage — 85% of members are assumed to be married with wives 3 years younger than their husbands.

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.

Normal Retirement:

- 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

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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

Marriage — 80% of members are assumed to be married with wives 3 years younger than their husbands.

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.

Normal Retirement:

- 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

Marriage — 80% of members are assumed to be married with wives 3 years younger than their husbands.

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 1.375% per annum, compounded annually.

Marriage — 85% of members are assumed to be married with wives 3 years younger than their husbands.

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			

Marriage — 80% of members are assumed to be married with wives 3 years younger than their husbands.

Benefits Not Valued — Accidental death benefits.

Changes in Actuarial Assumptions — None.

K. Actuarial Assumptions — MTA Long Island Rail Road Pension Plan – Base Benefits

Salary Scale — Rates of pay are assumed to increase at a rate of 3.0% per annum.

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.

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.

Marriage — 80% of members are assumed to be married with wives 3 years younger than their 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 his eligibility for Railroad Benefits and further increased by 2% per year from the date of termination to age 65.

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

- 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

- 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 (2018) lump sum mortality table published by the IRS and a 4.5% assumed interest rate.

Changes in Actuarial Assumptions — Retirement rates and Salary Scale were updated for MTA Bus members receiving benefit modifications similar to the MaBSTOA Pension Plan.

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

As of July 23, 2019, the Plan redeemed its entire investment in the GAM Unconstrained Bond Fund, amid allegations of misconduct by a portfolio manager. The Plan suffered no loss on its investment.

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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)

		2018	2017	2016	2015	2014
Total pension liability:						
Service cost	$	162,273	148,051	138,215	124,354	121,079
Interest		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		75,744	(27,059)	86,809	121,556	2,322
Changes of assumptions		-	10,731	-	(76,180)	-
Benefit payments and withdrawals		(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Net change in total pension liability		415,676	310,937	396,931	265,208	206,755
Total pension liability – beginning		5,072,814	4,761,877	4,364,946	4,099,738	3,892,983
Total pension liability – ending (a)		5,488,490	5,072,814	4,761,877	4,364,946	4,099,738
Plan fiduciary net position:						
Employer contributions		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		(150,422)	516,153	247,708	(45,122)	102,245
Benefit payments and withdrawals		(242,349)	(232,976)	(209,623)	(199,572)	(191,057)
Administrative expenses & Transfer to investments		(3,152)	(4,502)	(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position		(27,054)	631,563	345,194	9,557	258,853
Plan fiduciary net position – beginning		4,051,534	3,419,971	3,074,777	3,065,220	2,806,367
Plan fiduciary net position – ending (b)		4,024,480	4,051,534	3,419,971	3,074,777	3,065,220
Employer's net pension liability – ending (a)-(b)	$	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		73.33%	79.87%	71.82%	70.44%	74.77%
Covered payroll	$	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		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
DEFINED BENEFIT PENSION PLAN

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	Contribution as a % of covered Payroll
2009	$ 146,171	$ 146,171	$ -	$ -	N/A
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%

* 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, 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)
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 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.
Interest rate	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	2.5% per annum	2.5% per annum	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	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
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
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.
Salary increases	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
Cost-of-living adjustments	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

(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.

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METROPOLITAN TRANSPORTATION AUTHORITY **SCHEDULE III**
DEFINED BENEFIT PENSION 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	3.58%
2015	(1.47%)
2016	7.97%
2017	14.94%
2018	(3.67%)

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, 2018.

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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, 2018. 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 2018 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, 2018 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 2018 to the MTA's monthly expense report for the month of December 2018 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, 2018, 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, 2018 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. During the three months ended December 31, 2018, three petty cash vouchers were generated. We selected all three petty cash vouchers from the petty cash vouchers listing for the three months ended December 31, 2018, and noted these vouchers were approved.

   Because the last quarter of 2018 only had 3 petty cash vouchers, D&T did not utilize a random number generator and selected all three vouchers for testing.

   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 2018, 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, 2018 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, 2018, 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, 2018 for the IG.

10. Management informed us that there were no fixed asset disposals made during the year ended December 31, 2018 for the IG.

11. Management informed us that there was no depreciation expense during the year ended December 31, 2018 for the IG.

12. We compared the depreciation expense for the month of December 2018 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 2018.

    We found no exceptions as a result of the procedures.

14. We compared the IG's 2018 expense budget to the actual expenditures for 2018, and noted total actual expenditures were less than the IG's 2018 expense budget by $1,968,952.

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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.

January 21, 2020

METROPOLITAN TRANSPORTATION AUTHORITY
ENTERPRISE RISK MANAGEMENT AND
INTERNAL CONTROL GUIDELINES

Pursuant to Public Authorities Law Section 2931

Updated and Adopted by the Board on ~~November 16, 2016~~January 23, 2020

These guidelines apply to the Metropolitan Transportation Authority ("MTA") , the New York City Transit Authority, the Long Island Rail Road Company, The Metro-North Commuter Railroad Company, Staten Island Rapid Transit Operating Authority, Manhattan and Bronx Surface Transit Operating Authority, MTA ~~Capital~~ Construction & Development, MTA Bus Company, Triborough Bridge and Tunnel Authority, and to all future affiliated or subsidiary agencies of the MTA (each of which is referred to severally and together, as the "Authority").

Article I. Purpose of Guidelines

The purpose of these guidelines is to establish an effective system of internal controls for the Authority which complies with the requirements of the New York State Government Accountability, Audit and Internal Control Act of 1999 ("the Act") amending Public Authorities Law ("PAL") Sections 2930 through 2932, and is consistent with the Standards for Internal Control in New York State published by the Office of the State Comptroller ("Comptroller Standards"), Guidelines issued by the Independent Authority Budget Office ("IABO"), standards established by the U.S. Government Accountability Office (GAO), and the Commission of Sponsoring Organizations of the Treadway Commission ("COSO") standards.

Article II. Requirements of the Act

In compliance with the requirements of PAL Section 2931 the MTA Board is required to:

1. Establish and maintain for the Authority guidelines for a system of internal control that are in accordance with the Act and internal control standards;

2. Establish and maintain for the MTA a system of internal controls and a program of internal control review. The program of internal review shall be designated to identify internal control weaknesses, identify actions that are needed to correct these weaknesses, monitor the implementation of the necessary corrective actions and periodically assess the adequacy of the Authority's ongoing internal controls;

3. Make available to each member, officer and employee a clear and concise statement of the generally applicable managerial policies and standards with which he or she is expected to comply. Such statement shall emphasize the importance of effective internal controls to the Authority and the

responsibility of each member, officer and employee for effective internal control;

4. Designate an internal control officer who shall report to the head of the Authority to implement and review the internal control responsibilities established pursuant to this section; and

5. Implement education and training efforts to ensure that Board Members, officers and employees have achieved adequate awareness and understanding of internal control standards and, as appropriate, evaluation techniques.

Article III. Guidelines Maintenance

~~These guidelines replace MTA All Agency Policy Directive 11-008 Accountability & Internal Control issued June 8, 1990.~~

These guidelines are subject to annual review by the Audit Committee. In advance of submission of these guidelines for such review, the Enterprise Risk Management Committee ("the Committee" defined in Article IV(B)) shall be responsible for preparing any proposed revisions to the guidelines necessary to ensure that they continue to be in compliance with the Act and consistent with the Comptroller standards, IABO guidelines and COSO standards.

~~**Article IV. System of Internal Controls and Program of Internal Control Review**~~

Article IV. Enterprise Risk Management~~/~~ and Internal Controls

Section A. Internal Controls

~~**Enterprise Risk Management** ("ERM")/~~Internal ~~Controls~~control is ~~defined as~~ a process ~~conducted,~~ effected by ~~the Authority's Board~~an entity's board of directors, management, and other personnel, ~~applied in a strategic setting and across the Authority,~~ designed to ~~identify potential events that may affect the entity, and manage risk to be within risk appetite, to~~ provide reasonable assurance regarding the achievement of objectives ~~in the following categories:~~relating to operations, reporting, and compliance.

~~Strategic - high-level goals, aligned with and supporting Authority's mission~~
~~Operations - effective and efficient use of the Authority's resources~~
The definition emphasizes that internal control is:

- Geared to the achievement of objectives in one or more separate but overlapping categories – operations, reporting, and compliance

- A process consisting of ongoing tasks and activities - it is a means to an end, not an end in itself
- Effected by people – it is not merely about policy and procedure manuals, systems, and forms, but about people and the actions they take at every level of an organization to effect internal control
- Able to provide only reasonable assurance, but not absolute assurance, to an entity's senior management and board of directors
- Adaptable to the entity structure – flexible in application for the entire entity or for a particular subsidiary, division, operating unit, or business process

The Framework provides for three objectives, which allow Authority to focus on separate aspects of internal control:

Operations Objectives - These pertain to effectiveness and efficiency of the entity's operations, including operational and financial performance goals, and safeguarding assets against loss.

Reporting –*Objectives* - These pertain to internal and external financial and non-financial reporting and may encompass reliability, timeliness, transparency~~ of financial and non-financial reporting~~, or other terms as set forth by regulators, standard setters, or the Authority's policies.

Compliance ~~– compliance with applicable~~*Objectives* - These pertain to adherence to laws~~,~~ and regulations~~, contracts and policies~~ to which the entity is subject.

~~The definition reflects certain fundamental concepts regarding ERM/Internal Control management. ERM/Internal Control management is:~~

- ~~An ongoing and flowing process throughout the~~ A direct relationship exists between objectives, which are what an entity strives to achieve, components, which represent what is required to achieve the objectives, and Authority
- ~~Effected by people at every level within~~ structure (the ~~Authority~~
- ~~Applied in developing~~operating unit, legal entities, and ~~implementing strategy~~
- ~~Applied across the Authority, at every level and in all areas of responsibility~~
- ~~Designed to identify potential risks that, if they occur, will affect the Authority~~

~~ERM/~~other structure). Internal ~~Controls~~control consists of ~~eight~~five interrelated components~~. These components are:~~

~~1. **Control Environment** – The internal environment encompasses the tone of the Authority, and sets the basis for how risk is viewed and addressed by employees, including risk management philosophy, integrity and ethical values, and the environment in which they operate.~~

~~2. Objective Setting – Objectives must exist before management can identify potential events affecting their achievement. Internal control management ensures that management has in place a process to set objectives and that the chosen objectives support and align with the Authority's' mission.~~

~~3. Event Identification – Internal and external events affecting achievement of Authority's objectives must be identified, distinguishing between risks~~ and ~~opportunities.~~

seventeen principles.

~~4. **Risk Assessment** – Risks are analyzed by, considering likelihood and impact, as the basis for computing the overall risk rating. The vulnerability of the Authority to various risks determines how they should be managed.~~

~~5. Risk Response – Management evaluates the available risk response options (avoiding, accepting, reducing or sharing) and selects the strategy that optimizes the cost-benefit goals of the Authority.~~

~~6.~~1. ~~**Control Activities** – Policies and procedures are established and implemented to ensure that the risk responses strategy is established and effectively executed.~~

~~7. **Information and Communication** – Relevant information is identified, analyzed, and communicated in a form and timeframe that enable employees to effectively carry out their responsibilities.~~

~~8. **Monitoring** – Internal Controls are monitored and modifications made as necessary. Monitoring is accomplished through ongoing management activities, separate periodic evaluations, or both.~~

~~Internal Control Principles~~

All components and principles are relevant in establishing an effective internal control system for the Authority. In order for the authority to have an effective internal control system, the components of internal control must be successfully designed, implemented, and functioning sufficiently. The principles represent the fundamental concepts which are associated with particular components within the system and apply to strategic, operating, reporting and compliance objectives. ~~The principles supporting~~Below is a summary of each of the five components of internal ~~controls are listed below.~~control.

1. **Control Environment** – The control environment is the set of standards, processes, and structures that provide the basis for carrying out internal control across the organization. The board of directors and senior management establish the tone at the top regarding the importance of internal control including expected standards of conduct. Management reinforces expectations at the various levels of the organization. The control environment comprises the integrity and ethical values of the organization; the parameters enabling the board of directors to carry out its governance oversight responsibilities; the organizational structure and assignment of authority and responsibility; the process for attracting, developing, and retaining competent individuals; and the rigor around performance measures, incentives, and rewards to drive accountability for performance. The resulting control environment has a pervasive impact on the overall system of internal control.

2. **Risk Assessment** – Every entity faces a variety of risks from external and internal sources. Risk is defined as the possibility that an event will occur and adversely affect the achievement of objectives. Risk assessment involves a dynamic and iterative process for identifying and assessing risks to the achievement of objectives. Risks to the achievement of these objectives from across the entity are considered relative to established risk tolerances. Thus, risk assessment forms the basis for determining how risks will be managed.

   A precondition to risk assessment is the establishment of objectives, linked at different levels of the entity. Management specifies objectives within categories relating to operations, reporting, and compliance with sufficient clarity to be able to identify and analyze risks to those objectives. Management also considers the suitability of the objectives for the entity. Risk assessment also requires management to consider the impact of possible changes in the external environment and within its own business model that may render internal control ineffective.

3. **Control Activities** – Control activities are the actions established through policies and procedures that help ensure that management's directives to mitigate risks to the achievement of objectives are carried out. Control activities are performed at all levels of the entity, at various stages within business processes, and over the technology environment. They may be preventive or detective in nature and may encompass a range of manual and automated activities such as authorizations and approvals, verifications, reconciliations, and business performance reviews. Segregation of duties is typically built into the selection and development of control activities. Where segregation of duties is not practical, management selects and develops alternative control activities.

4. **Information and Communication** – Information is necessary for the entity to carry out internal control responsibilities to support the achievement of its objectives. Management obtains or generates and uses relevant and quality information from both internal and external sources to support the functioning of other components of internal control. Communication is the continual, iterative process of providing, sharing, and obtaining necessary information. Internal communication is the means by which information is disseminated throughout the organization, flowing up, down, and across the entity. It enables personnel to receive a clear message from senior management that control responsibilities must be taken seriously. External communication is twofold: it enables inbound communication of relevant external information, and it provides information to external parties in response to requirements and expectations.

5. **Monitoring** – Ongoing evaluations, separate evaluations, or some combination of the two are used to ascertain whether each of the five components of internal control, including controls to affect the principles within each component, is present and functioning.

   Ongoing evaluations, built into business processes at different levels of the entity, provide timely information. Separate evaluations, conducted periodically, will vary in scope and frequency depending on assessment of risks, effectiveness of ongoing evaluations, and other management considerations. Findings are evaluated against criteria established by regulators, recognized standard-setting bodies or management and the board of directors, and deficiencies are communicated to management and the board of directors as appropriate.

The principles supporting the components of internal controls are listed below:

Control Environment

1. Demonstrates commitment to integrity and ethical values
2. Exercises oversight responsibility
3. Establishes structure, authority and responsibility
4. Demonstrates commitment to competence
5. Enforces accountability

Risk Assessment

6. Specifies suitable objectives
7. Identifies and analyzes risk
8. Assesses fraud risk
9. Manages risk during change

Control Activities

10. Selects and develops control activities
11. Selects and develops general controls over technology
12. Deploys controls through policies and procedures

Information and Communication

13. Uses relevant information
14. Communicates internally
15. Communicates externally

Monitoring

16. Conducts ongoing and/or separate evaluations
17. Evaluates and communicates deficiencies

In the event that management determines that a principle is not relevant, such determination should be at a minimum be supported with documentation and a rational of how, in the absence of that principle, the control is operating effectively.

Supporting each principle are points of focus, representing important characteristics associated with the principles. Point of focus are intended to provide helpful guidance to assist management in designing, implementing and conducting internal control and in assessing whether relevant principles are present and functioning.

Section B. Enterprise Risk Management

Enterprise risk management addresses more than internal controls. It also addresses other topics such as strategy-setting, governance, communicating with stakeholders and measuring performance. Its principles apply at all levels of the organization and across all functions.

Enterprise Risk Management ("ERM") is defined as the culture, capabilities, and practices, integrated with strategy-setting and performance, that organizations rely on to manage risk in creating, preserving, and realizing value. Enterprise risk management is more than a risk listing. It addresses topics such as strategy-setting, governance, communicating with stakeholders, and measuring performance. Its principles apply at all levels of the organization and across all functions.

Enterprise risk management consists of five components and twenty principles. These components are:

1. **Governance & Culture** – Governance sets the Authority's tone, reinforcing the importance of, and establishing oversight responsibilities for, enterprise risk management. Culture pertains to ethical values, desired behaviors, and understanding of risk in the entity.

2. **Strategy and Objective-Setting** - Enterprise risk management, strategy, and objective-setting work together in the strategic-planning process. A risk appetite is established and aligned with strategy; business objectives put strategy into practice while serving as a basis for identifying, assessing, and responding to risk.

3. **Performance** - Risks that may impact the achievement of strategy and business objectives need to be identified and assessed. Risks are prioritized by severity in the context of risk appetite. The organization then selects risk responses and takes a portfolio view of the amount of risk it has assumed. The results of this process are reported to key risk stakeholders.

4. **Review and Revision** - By reviewing entity performance, an organization can consider how well the enterprise risk management components are functioning over time and in light of substantial changes, and what revisions are needed.

5. **Information, Communication, and Reporting** - Enterprise risk management requires a continual process of obtaining and sharing necessary information, from both internal and external sources, which flows up, down, and across the organization.

Enterprise Risk Management Principles

The five components are supported by a set of principles. These principles cover everything from governance to monitoring. These principles are:

Governance & Culture

1. Exercises board risk oversight
2. Establishes operating structures
3. Defines desired culture
4. Demonstrates commitment to core value
5. Attracts, develops, and retains capable individuals

Strategy & Objective-Setting

6. Analyzes business context
7. Defines risk appetite
8. Evaluates alternative strategies
9. Formulates business objectives

Performance

10. Identifies risk

11. Assesses severity of risk
12. Prioritizes risks
13. Implements risk responses
14. Develops portfolio view

Review & Revision

15. Assesses substantial change
16. Reviews risk and performance
17. Pursues improvement in enterprise risk management

Information, Communication, & Reporting

18. Leverages information and technology
19. Communicates risk information
20. Reports on risk, culture, and performance

~~Section B.~~Section C. Enterprise Risk Management Committee

The Enterprise Risk Management Committee ("the Committee") has the authority and responsibility for ensuring compliance by the Authority with the Act, Comptroller Standards, IABO guidelines and COSO standards. In addition, the Committee has authority to oversee the ERM program as it relates to ~~those~~all MTA Business ~~Processes and their associated risks and controls that~~ occur between multiple Agencies and may also:

- Advise on risk strategy,
- Assist with identifying risk appetite and tolerance
- Oversee risk exposures
- Review crisis management plans, and
- Support the internal control program

~~Authority Internal Control Officers or their designees~~Each Agency Risk Officer and other relevant MTA Staff may serve on the Committee, which is chaired by the MTA Chief Ethics, Risk and Compliance Officer. -The Committee will meet as needed but generally not less than every ~~six months~~quarter to review and suggest improvements to the ERM program.

~~Section C.~~Section D. Vulnerability Assessments

Part 1. Components

Vulnerability (Risk) Assessments ("VA") is an analysis of ~~the~~ potential ~~exposure~~threats to ~~a thing going wrong, what can happen if it does, and what~~critical business functions. The VA identifies existing controls~~, if any, are~~ and controls need to be added or ~~should be in place~~modified to manage risk.

The VA also defines how often and when controls are to be tested. Each VA must at a minimum contain the following:

- Identification of key business processes
- Objectives of each business process
- Risks to those objectives
- Effect and likelihood (in the absence of controls) of risks occurring and an overall vulnerability rating
- Controls in place to manage each risk to an acceptable level
- Testing frequency (based on vulnerability rating)
- Testing schedule (approximately when each control will be tested during a particular cycle)

Part 2. Controls

Controls will be classified as key, subordinate, secondary, or monitoring.

Key Controls ~~–~~ – an internal control that is assessed by management that provides reasonable assurance that material errors will be prevented or detected in a timely manner and that without which the business process will break down.

Subordinate Controls~~-~~ – those internal controls that are utilized to supplement key controls. Subordinate controls can be compensating, mitigating or redundant as it relates to the key control.

Secondary Controls – those controls which are not key or subordinate controls.

Monitoring Controls - those controls that are not designed to mitigate risk but are designed to monitor non-critical business process risks.

Part 3. Assessing Risk Effect, Probability, and Overall Risk Rating

Risk within a business process is the ~~inherent potential for events to occur~~probability that a hazard will ~~negatively~~adversely impact ~~that~~the business process, its ~~objectives~~objective, and/or related activities. ~~Vulnerability~~Risk within a business process can be assessed by defining what negative event can reasonably occur (risk), evaluating ~~their~~the significance (effects) and estimating the likelihood that ~~they~~the event can happen (probability). When assessing the risk effect if the risk occurs the following categories should be used in determining level of significance.

Significance Rating	Evaluation Criteria

High (5)	Will cause a failure of the business process to meet its objectives, or cause objective failure in other activities, which will, in turn, cause or expose the Authority to significant financial losses, interruptions in operations, failure to comply with laws and regulations, major waste of resources, failure to achieve stated goals, etc.
Med High (4)	May cause a failure of the business process to meet a significant part of its objectives, or impact the objectives of other activities, which may, in turn, expose the Authority to unacceptable financial losses, reductions to or ineffectiveness of operations, non-compliance with laws and regulations, sizable waste of resources, etc.
Medium (3)	May cause a failure of the business process to meet part of its objectives, which may, in turn, expose the Authority to unacceptable financial losses, inefficient operations, non-compliance with laws and regulations, waste of resources, etc.
Medium Low (2)	May cause the business process, or other activities, not to meet part of its objectives which, may, in turn, expose the Authority to potentially unacceptable financial losses, less effective or efficient operations, some non-compliance with laws and regulations, waste of resources, etc.
Low (1)	Unlikely to cause the activity not to meet part of its objectives. If the activity does not meet part of its objective, this, in turn, may cause or expose the Authority to potentially unacceptable financial losses, less efficient operations, some non-compliance with laws and regulations, less efficient use of resources, etc.

When assessing the likelihood, the risk will ~~occurs~~occur the following categories should be used in determining level of likelihood.

Likelihood Rating	Evaluation Criteria (Assumes No Controls in Place)
~~*Extreme (5)*~~*High*	Reasonable assumption that this risk will almost certainly occur
Medium High ~~*(4)*~~	Reasonable assumption that this risk will likely, but not certainly, occur
Medium ~~*(3)*~~	Reasonable assumption that this risk may occur
Medium Low ~~*(2)*~~	Reasonable assumption that this risk will likely not occur
~~*Negligible (1)*~~*Low*	Reasonable assumption that this risk will not occur

~~The~~Use the overall risk rating ~~is used~~ to identify the relative importance and required testing of each control. For ease of assessing, the impact of each risk multiply the numeric values associated with the significance rating and the likelihood rating to determine a relative overall risk rating to each risk: Effect x Probability = Vulnerability

Overall Risk Rating				
~~Very~~ High ~~(25-20)~~	Medium High ~~(19-16)~~	Medium ~~(15-9)~~	Medium Low ~~(8-4)~~	~~Very~~ Low ~~(3-1)~~

~~Section D.~~Section E. Control Testing

The frequency of performing an internal control test is determined by the overall risk rating. Risks with very high or high overall risk rating are considered to be more critical than those in lower categories given that controls are used to manage risks to acceptable levels. Therefore, controls over high risk activities must be tested more frequently. The Authority's testing cycle is classified as follows:

Vulnerability	Control Test Cycle
~~*Very*~~ *High*	Annually (Minimum)
Medium High	Not less than Every 2 years
~~*Moderate*~~*Medium*	Not less than Every 3 years
Medium Low	Not less than Every 4 years
~~*Very*~~ *Low*	Not less than Every 5 years

Each Business Process Owner along with ~~their Authority Internal Control Officer~~Risk Manager is responsible for creating test instructions. Test instructions should contain at a minimum the standard which will be used to judge the control, the methods which will be utilized to test the control, the sample size and test period. In addition, the test instructions should include criteria for what constitutes passing versus failing of any given test.

Business Process Owners must maintain records, both electronic and paper, for each test. The records must include when the test was performed, by whom, what was tested, how it was done, scope (period of time covered), number of records reviewed, personnel involved, personnel interviewed, actions observed, errors found, conclusions and corrective action plans to be implemented. Records must be maintained at a minimum through at least one internal control review cycle (1-5 years) or as required by Authority's records retention policy.

The Committee shall establish standards for testing for the ERM business processes.

The Business Process Owners must provide proof of testing, including copies of all testing records at the request of the MTA ~~Chief~~Corporate Compliance~~ Officer, the Authority ICO for their respective Agency~~, MTA Audit Services, or the MTA Inspector General Office. Failure to provide testing documentation must be reported to the Chief Compliance Officer and the Agency President.

~~Section E.~~Section F. Internal Control Review and Assessment

The Authority shall conduct an annual Internal Control Review and Assessment ("ICRA") which is an examination and evaluation of the Authority's system of internal controls to ascertain whether adequate controls exist to:

- Encourage adherence to Authority's policies and procedures
- Promote operational efficiency and effectiveness
- Safeguard assets
- Create and maintain a safe environment for employees and customers
- Ensure reliability of accounting data

The results of the ICRA, at a minimum, reaffirms that there is reasonable assurance that controls are functioning as intended.

Based upon the result of the ICRA, the Authority's shall complete, as part of its Annual Report, an annual assessment of the effectiveness of internal control structures and procedures. The assessment is a written statement from the MTA Chief Compliance Officer setting forth the Authority has conducted a formal, documented process to assess the effectiveness of its internal control structure and procedures, and indicating whether ~~or not~~ the internal controls are adequate.

~~Section F.~~Section G. Certification and Summary Reports

The Chairman/Chief Executive Officer on behalf of the Authority shall complete a signed certification and summary report that the Authority's internal control program is compliant with the Act. In support of this certification, each Agency President shall also sign a certification and summary report that their Agency is compliant with the Act.

~~Section G.~~Section H. Corrective Action Plans

If any control should fail the Control Testing or ICRA process, described in Section D and E above, a corrective action plan must be initiated. The corrective action plans will at a minimum list the severity of the issue as either:

- Material Weakness
- Significant Deficiency
- Deficiency
- Documentation Only

This corrective action plan shall also include:

- Actions to be undertaken
- Persons responsible for those actions
- Resources required to complete the corrective action
- Date corrective actions were completed or date by which they are expected to be achieved

~~rticle VI.~~Article V. Generally Applicable Managerial Policies and Standards

The Chairman/Chief Executive Officer of the Authority, together with Agency Presidents shall prepare and disseminate annually a statement emphasizing the tone at the top, the importance of effective internal controls and the responsibility of each officer and employee for effective internal controls. This statement should list the name and contact number of the ~~Authority Internal Control~~Risk Officer ~~for~~assigned to their respective Agency and any other individuals who can be contacted for further information on internal controls.

Managerial policies and procedures for the performance of specific functions shall be articulated in administrative manuals, employee handbooks, job descriptions and applicable policy and procedure manuals. While it is not necessary for all employees to possess all manuals, employees should be provided with, or have access to, applicable policies and procedures for their position.

Each Agency shall establish procedures for policy lifecycle management, including but not limited to the creation, approval, maintenance, storage, monitoring and review of Agency specific policies and procedures. MTA Corporate Compliance shall establish procedures for all agency policy lifecycle management, including but not limited to the creation, approval, maintenance, storage, monitoring and review of All Agency Policy Directives and Guidelines.

~~icle VII.~~Article VI. Designation of an Internal Control Officer

The MTA Chief Compliance Officer shall serve as Internal Control Officer for the Authority and shall report to the Chairman and Chief Executive Officer of the Authority or his/her designee. The Chief Compliance Officer shall implement and review the internal control responsibilities established by these guidelines to ensure compliance by the Authority.

~~Each MTA Agency President shall appoint an Authority Internal Control Officer, who shall report to the Agency President or to his/her designee within the executive office~~

~~ticle X.~~Article VII. Implementation of Education and Training Programs

Senior management and employees responsible for specific functions relating to the Authority's internal control program must attend recurring internal control training.

The training will utilize standardized material on Internal Controls developed by the Committee as well as the Office of the New York State Comptroller's Internal Control Guide-Compliance Road Map. –Agencies may augment this guide, if necessary, to provide specialized instruction.

The Committee shall determine at a minimum which classification of employees should attend internal control training, including the method, content and frequency of such training.

~~cle XI.~~Article VIII. MTA Audit Services

In order to maintain independence, MTA's Auditor General and MTA Audit Services shall not directly or indirectly manage the Authority's ERM/Internal Control program. MTA Audit Services shall evaluate the Authority's internal controls and operations, identify internal control weaknesses that have not been corrected and make recommendations to correct those weaknesses.

MTA AUDIT SERVICES

2020 Proposed Audit Plan

March 23, 2020

MTA Audit Services

2020 Audit Plan

Audit Plan Formulation

Factors Used For 2020 Audit Plan

- *Financial Exposure*
- *Nature of Operations*
- *Control Activities*
- *Previous Audit Results*
- *Management Input*

- **Conducted 82 Interviews**
- **Received 170 Suggestions**

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

Safety

Fare Evasion
Homeless Outreach
Sandy Project Safety/Oversight
LIRR Drug Testing
MNR Environmental Review
B&T Hazardous Waste Management

Capital Program

Superstorm Sandy
EFA Charges
Prevailing Wages
Contract Management
Consultant Management
Third Party Contracts

Human Resources

FMLA
OPEB Current Payments
Other Fringe Benefits
Health and Welfare
Medical Claim/ & Eligibility
Employee Availability
Hiring Process

Procurement

Professional Services Contract
Materials & Supplies Contract
Operating Contracts
Procurement Cards

Finance

Timekeeping
Overtime
Accounts Payable
Other Business Expenses
Pensions
Treasury/Investments
Year-End Financial Statements
Audit Recommendations

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

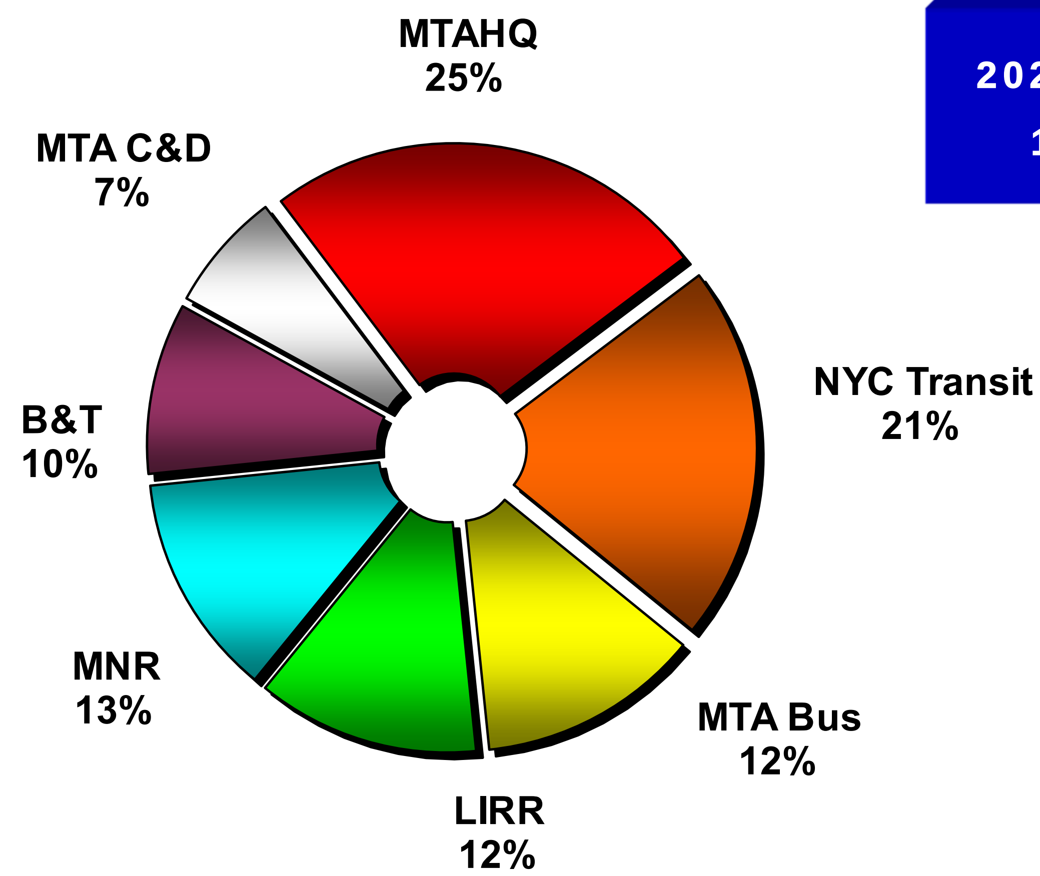
Technology

Back-up & Recovery
Shadow IT Functions
Cybersecurity
Change Management
User Developed Applications
Business Continuity/D.R.
IT Asset Management
Application Rationalization

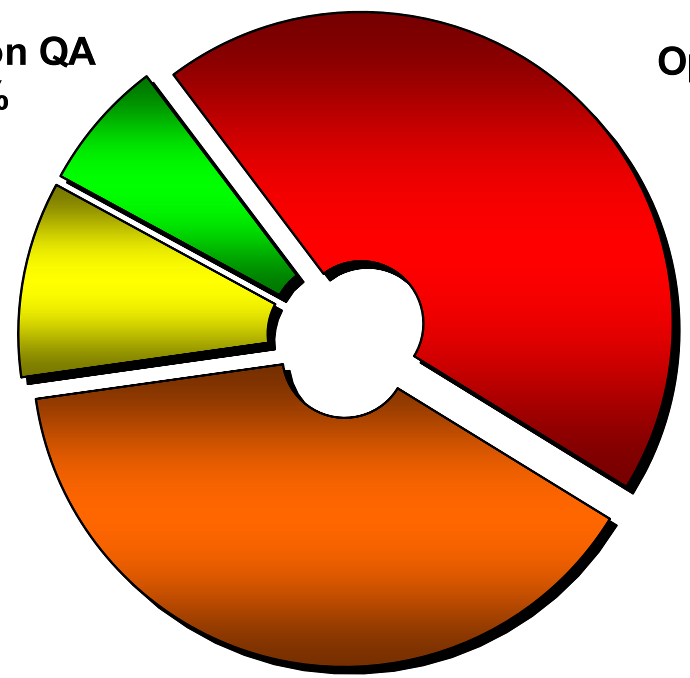
2020
Agency Assurance Audit Allocation

2020 Audit Plan

104 Audits



2020
Audit Resource Allocation



2020 Audit Strategy

- Support MTA Transformation
- Review Efficiency & Effectiveness of Operations
- Support Agency-wide Goals & Initiatives for Timekeeping and Overtime
- Evaluate Project Management Controls over Operating Contracts
- Coordinate Audit Activities with Internal and External Parties

QUESTIONS?