



**Metropolitan Transportation Authority**

# **Audit Committee Meeting**

## **January 2018**

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### **Committee Members**

J. Vitiello, Chair

C. Moerdler

J. Molloy

M. Pally

N. Zuckerman

# **Audit Committee Meeting**

**MTA Board Room - 20th Floor  
2 Broadway**

**Monday, 1/22/2018  
3:30 - 5:00 PM ET**

## **1. PUBLIC COMMENTS**

## **2. APPROVAL OF MINUTES**

*Minutes of November 13, 2017 Meeting - Page 3*

## **3. AUDIT COMMITTEE WORK PLAN**

*2018 WORKPLAN - Condensed - Page 6*

*2018 WORKPLAN - Detailed - Page 8*

## **4. 3RD QUARTER 2017 FINANCIAL STATEMENTS**

*Draft - Consolidated Financial Statements - 3Q 2017 - Page 12*

## **5. MANAGEMENT REVIEW - PENSION AUDITS**

*MTA Management's Review - Pension Financial Statements - Page 140*

## **6. 2016 PENSION PLAN AUDITS**

*Draft 2016 - MTA Deferred Compensation Program - Page 146*

*Draft 2016 - MNCR Company Cash Balance Plan - Page 191*

*Draft 2016 - MTA Retiree Welfare Benefits Plan - Page 217*

*Draft 2016 - LIRR Company Plan for Additional Pensions - Page 249*

*Draft 2016 - MaBSTOA Pension Plan - Page 290*

*Draft 2016 - MTA Defined Benefit Pension Plan - Page 347*

## **7. MTA ENTERPRISE RISK MANAGEMENT AND INTERNAL CONTROL GUIDELINES**

*Enterprise Risk Management and Internal Control Guidelines - Page 406*

*Enterprise Risk Management Committee Status Report - Report to the January 2018 Audit Committee - Page 416*

## **8. COMPLIANCE WITH THE REQUIREMENTS OF THE INTERNAL CONTROL ACT**

*Effectiveness of Internal Controls - Management Assessment - Page 425*

*Effectiveness of Internal Controls - FY 2017 Annual Commitment to Efficient and Effective Internal Controls - Page 426*

*Effectiveness of Internal Controls - 2016-2017 Certification - Page 427*

## **9. INFORMATION TECHNOLOGY REPORT**

*Information Technology - 2018 Audit Committee Report - Page 428*

## **10. DDCR PERFORMANCE MEASURES UPDATE**

*DDCR Update - Jan 2018 Audit Committee Presentation - Page 437*

## **11. 2017 AUDIT PLAN STATUS AND 2018 AUDIT PLAN**

*2017 Year-End and 2018 Audit Plan - Audit Committee Presentation - Page 441*

## **12. EXECUTIVE SESSION**

**MINUTES OF MEETING  
AUDIT COMMITTEE OF THE BOARD  
MONDAY, NOVEMBER 13, 2017 - 3:20 P.M.  
RONAN BOARD ROOM – 20<sup>TH</sup> FLOOR  
2 BROADWAY**

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The following were present:

**Honorable:**

**James Vitiello  
Mitchell Pally**

**John Molloy  
Andrew Albert**

**M. Fucilli - MTA  
L. Kears - MTA**

**R. Foran - MTA  
P. Kane - MTA**

**M. Fritz - Deloitte  
J. Strohmeyer - Deloitte  
C. Hickmann - Deloitte  
D. Patel - Deloitte  
E. Maguire - Deloitte**

**Also in attendance were:**

**J. Lhota - MTA  
R. Hakim - MTA  
H. Fromme - MTA**

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The meeting began past the 2:45 PM start time and, in the interest of time and quorum, the Chair indicated the agenda sequence has been re-arranged so that items requiring committee votes would be covered first.

**1. PUBLIC COMMENTS PERIOD**

There were no public speakers.

**2. INDEPENDENT ACCOUNTANT’S REVIEW REPORT – 2nd QUARTER 2017**

Mike Fritz (Deloitte) presented the draft 2<sup>nd</sup> Quarter 2017 MTA Consolidated Financial Statements to the committee, stating that the financial statements were prepared in accordance with Generally Accepted Accounting Principles (GAAP) and that their review noted no adjustments were required to the financial statements and resulted in a “clean opinion” as it related to the financial statements being consistently prepared in accordance with GAAP.

A motion was made and seconded to accept the 2<sup>nd</sup> Quarter 2017 MTA Consolidated Financial Statements.

**3. APPOINTMENT OF EXTERNAL AUDITOR**

As part of the external auditor reappointment process, Mike Fritz briefly discussed the most recent Public Company Accounting Oversight Board (PCAOB) report on Deloitte. He indicated PCAOB’s review covered Deloitte’s audits of 55 “public issuer” clients and the results were comments requiring changes in controls and processes but none requiring Deloitte to restate its original audit opinions. Mike said Deloitte takes the PCAOB’s report seriously. He also spoke about the internal quality control process employed at Deloitte and the independent peer reviews conducted of the firm and its partners. He noted that, overall, PCAOB’s comments on Deloitte were consistent to that of the Big-4 firms.

A motion was made and seconded to reappoint Deloitte as the auditor for the 2017 financial statements.

4. **AUDIT COMMITTEE CHARTER**

There were proposed minor changes to the Charter, essentially to provide more consistency and update some of the titles given the new organizational structure in the Chairman's Office. Lamond Kears (MTA Corporate Compliance) said no vote was required of the Committee and that the proposed changes would be presented by Corporate Governance to the full Board for ratification.

5. **ANNUAL AUDIT COMMITTEE ACTIVITY REPORT**

The Auditor General noted the report covered the activities of the Audit Committee during the 12 months ended July 31, 2017 which included such matters as the appointment of the external auditors, discussions of compliance, ethics and technology issues and that it has been prepared in the same format as the report submitted to the Board last year.

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

6. **REVIEW OF MTA INSPECTOR GENERAL'S OFFICE**

Mike Fritz (Deloitte) briefed the Committee on the results of their review of the operations and expenses of the MTA Inspector General's Office. The review was based on the "agreed-upon procedures," which included a review of terminated employees, payroll, expenditure reports, and fixed asset additions and disposals. He said their review noted only one minor exception involving the improper reversal of a journal entry.

A motion was made and seconded to accept Deloitte's review of the MTA IG's office operations and expenses.

7. **APPROVAL OF MINUTES**

The minutes of the June 19, 2017 Audit Committee meeting were approved.

8. **AUDIT COMMITTEE WORK PLAN**

There were no changes to the work plan. The Auditor General noted the next meeting in January will include the Pension Plan audits, the ERM and Internal Control Guidelines, the DDCR update, the MTA IT Report and the 2017 Audit Plan Status and the 2018 Audit Plan. Member Pally inquired if the technology issues would be discussed in the meeting. The Auditor General responded in the affirmative.

9. **AUDIT APPROACH PLAN/COORDINATION WITH EXTERNAL AUDITOR**

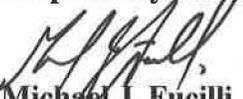
Mike Fritz (Deloitte) first introduced the senior members of the MTA audit engagement team, namely: Jill Strohmeier, Chris Hickmann, Darshan Patel and Emilia Maguire. He said these individuals have all worked on prior MTA audits and are familiar with the MTA's organization and controls. He then briefed the members of the Committee that the audit will be consistent with prior years and that as required by professional standards (GAAS) they will test for one specific area of significant risk, specifically as it relates to management override of controls. Other specific areas of focus will cover the adoption of any new accounting principles, post-employment obligations relating to unfunded portions of health and welfare plans, capital assets including Construction Work in Process. In addition, he said Deloitte will look at pensions and other post-employment benefits as it relates to actuaries and investment returns,

appropriations and major tax revenues. In the fare revenue area, he said they will modify their procedures due to the move by the MTA to open-road tolling and examine estimates for unpaid tolls. In regards to the Single Audit, their procedures will focus on Federal programs and grant procedures. Mike Fritz stated that they have already started interim procedures and currently are not aware of any significant issues. Lastly, with respect to the Pension Plan audits, he said their procedures will be consistent with prior years and will focus on actuary calculations, investments and management override of controls.

**10. MOTION TO ADJOURN**

A motion was made and seconded to adjourn the meeting.

**Respectfully submitted,**



**Michael J. Fucilli**  
**Auditor General**

## 2018 AUDIT COMMITTEE WORK PLAN

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### I. RECURRING AGENDA ITEMS

#### Responsibility

Approval of Minutes	Committee Chair & Members
Audit Work Plan	Committee Chair & Members
Pre-Approval of Audit and Non-Auditing Services	Committee Chair & Members
Follow-Up Items	As Appropriate
Status of Audit Activities	Auditor General/MTA IG/ Chief Compliance Officer/ Chief Financial Officers/ Controllers/External Auditor/As Appropriate
Executive Sessions	As Appropriate

### II. SPECIFIC AGENDA ITEMS

#### January 2018

Quarterly Financial Statements – 3 <sup>rd</sup> Quarter 2017	External Auditor/CFOs
Pension Audits	External Auditor
MTA Enterprise Risk Management Update and Internal Control Guidelines	Chief Compliance Officer
Compliance with the Requirements of the Internal Control Act	Chief Compliance Officer/Agency ICOs
Information Technology Report	Chief Information Officer
Security of Sensitive Data	Chief Information Officer
2017 Audit Plan Status Report	Auditor General
2018 Audit Plan	Auditor General
DDCR Performance Measures	Chief Diversity Officer

#### April 2018

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

Financial Interest Reports  
Open Audit Recommendations  
DDCR Performance Measures

Chief Compliance Officer  
Agency ICOs/Chief Compliance Officer  
Chief Diversity Officer

June 2018

Quarterly Financial Statements – 1<sup>st</sup> Quarter 2018  
Single Audit Report  
Investment Compliance Report  
Management Letter Reports  
Enterprise Risk Management Update  
Ethics and Compliance Program  
MTAAS Audit Plan Status Report

External Auditor/CFOs  
External Auditor/CFOs  
External Auditor  
External Auditor/CFOs/Controllers  
Chief Compliance Officer  
Chief Compliance Officer  
Auditor General

November 2018

Quarterly Financial Statements – 2<sup>nd</sup> Quarter 2018  
Appointment of External Auditors  
Audit Approach Plans/Coordination  
Review of MTA/IG's Office  
Review of Audit Committee Charter  
Annual Audit Committee Report

External Auditor/CFOs  
Committee Chair & Members  
External Auditor  
External Auditor/IG  
CCO and Committee Chair  
Committee Chair

# **2018 AUDIT COMMITTEE WORK PLAN**

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## **Detailed Summary**

### **I. RECURRING AGENDA ITEMS**

#### 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.

#### 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**

## **Detailed Summary**

### **JANUARY 2018**

#### Quarterly Financial Statements – 3<sup>rd</sup> Quarter 2017

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 2017.

#### Pension Audits

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.

### MTA 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 Requirements of 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.

### 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.

### Security of Sensitive Data

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

### 2017 Audit Plan Status Report

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.

### 2018 Audit Plan

A discussion by Audit Services of the areas scheduled to be reviewed in 2018 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.

## **APRIL 2018**

### Financial Statements and Audit Representation Letters

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. The MTA public accounting firm will review the results and conclusions of their examination of the 2017 Financial Statements.

### Management's Review of MTA Consolidated Financial Statements

The MTA Comptroller will present a management's review of the 2017 MTA consolidated financial statements, including changes in capital, net assets, other assets and operating revenues and expenses.

### Contingent Liabilities and Status of Third Party Lawsuits

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

### 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.

### 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.

### 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.

## **JUNE 2018**

### Quarterly Financial Statements – 1<sup>st</sup> Quarter 2018

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 2018.

### 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.

### 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

The MTA Chief Compliance Officer will 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 on selected aspects of the MTA Ethics Program.

### MTAAS 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.

## **NOVEMBER 2018**

### Quarterly Financial Statements - 2<sup>nd</sup> Quarter 2018

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 2018.

### 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 with External Auditors

Representatives of MTA's public accounting firm will review their audit approach for the 2018 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 the MTA Inspector General's Office

Representatives of MTA's public accounting firm will provide the results of their review of the MTA/IG's operation to ensure compliance with applicable office regulations, rules, policies and procedures.

### 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 2018 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 2018. This report is prepared in compliance with the Audit Committee's Charter. After Committee review and approval, the Committee Chair will present the report to the full MTA Board.

Metropolitan  
Transportation Authority  
(A Component Unit of the State of New York)

Independent Auditors' Review Report

Consolidated Interim Financial Statements as of and  
for the Nine-Month Period Ended September 30, 2017

DRAFT

**METROPOLITAN TRANSPORTATION AUTHORITY**  
**(A Component Unit of the State of New York)**

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## **INDEPENDENT AUDITORS' REVIEW REPORT**

To the Members of the Board of  
Metropolitan Transportation Authority

### **Report on the Consolidated Interim Financial Information**

We have reviewed the accompanying consolidated interim statement of net position of the Metropolitan Transportation Authority (the "MTA"), a component unit of the State of New York, as of September 30, 2017, and the related consolidated interim statements of revenues, expenses and changes in net position and consolidated cash flows for the nine-month periods ended September 30, 2017 and 2016 (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 a Matter***

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.

#### ***Other Matters***

##### ***Required Supplementary Information***

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 20, the Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for the Single Employer Pension Plans on page 115, the Schedule of the MTA's Proportionate Share of Net Pension Liabilities of

Cost-Sharing Multiple-Employer Pension Plans on page 116, the Schedule of the MTA's Contributions for All Pension Plans on pages 117-122, and the Schedule of Funding Progress for the MTA Postemployment Benefit Plan on page 123 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 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 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, 2016**

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, 2016, 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 September 30, 2017, 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, 2016, is consistent, in all material respects, with the audited consolidated financial statements from which it has been derived.

January 22, 2018

**METROPOLITAN TRANSPORTATION AUTHORITY  
(A Component Unit of the State of New York)**

**MANAGEMENT'S DISCUSSION AND ANALYSIS  
AS OF SEPTEMBER 30, 2017 AND DECEMBER 31, 2016 AND  
FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2017 AND 2016  
(\$ In Millions, except as noted)**

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**OVERVIEW OF THE CONSOLIDATED INTERIM FINANCIAL STATEMENTS**

***Introduction***

This report consists of five parts: Management's Discussion and Analysis ("MD&A"), Consolidated Interim Financial Statements, Notes to the Consolidated Interim Financial Statements, Required Supplementary Information, 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, 2017 and December 31, 2016 and for the nine-month periods ended September 30, 2017 and 2016. 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 period 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.

## ***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, employer contributions, actuarial assumptions used to calculate the net pension liability, historical trends, and other required supplementary information related to the MTA Group's cost-sharing multiple-employer and single-employer defined benefit pension plans as required by provisions for pensions under GASB Statement No. 68.

The Schedule of Funding Progress provides information concerning the MTA Group's progress in funding its obligation to provide pension benefits and postemployment benefits to its employees.

### ***Supplementary Information***

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

## **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, 2017 and December 31, 2016 and for the nine-month periods ended September 30, 2017 and 2016. 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**

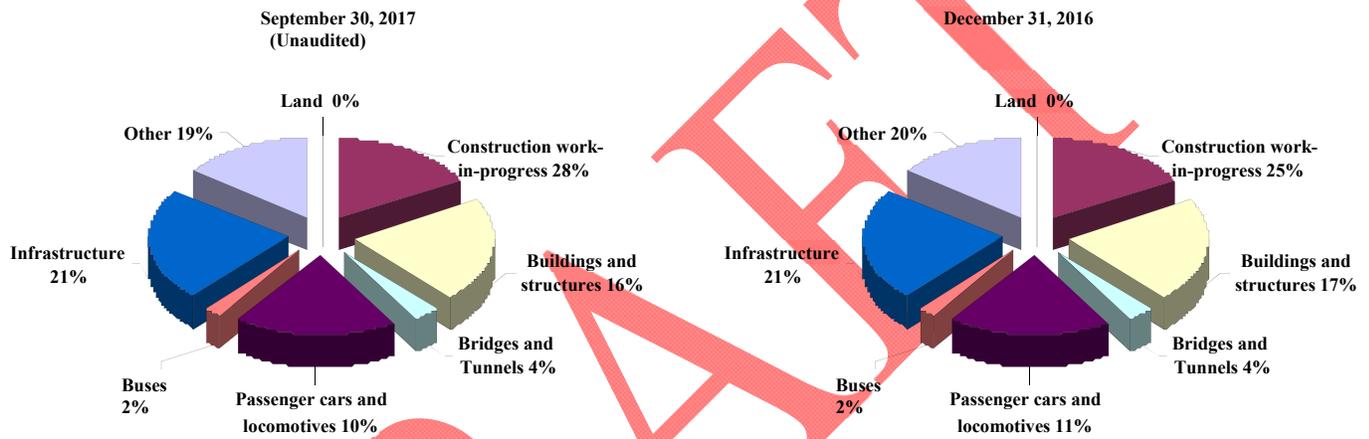
Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives.

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, and deferred outflows from pension activities.

(In millions)	September 30, 2017	December 31, 2016	Increase / (Decrease)
	(Unaudited)		
Capital assets — net (see Note 6)	\$ 66,971	\$ 64,518	\$ 2,453
Other assets	9,912	9,268	644
Deferred outflows of resources	4,015	3,832	183
Total assets and deferred outflows of resources	<u>\$ 80,898</u>	<u>\$ 77,618</u>	<u>\$ 3,280</u>

### Capital Assets, Net



#### *Significant Changes in Assets and Deferred Outflows of Resources Include:*

##### **September 30, 2017 versus December 31, 2016**

- Net capital assets increased at September 30, 2017 by \$2,453 or 3.8%. There was an increase in construction in progress of \$2,508, an increase in infrastructure of \$802, an increase in other capital assets of \$575, an increase in buildings and structures of \$175, an increase in buses of \$173, an increase in land of \$7, and an increase in bridges and tunnels of \$54. Passenger cars and locomotives declined by \$1. This was offset by a net increase in accumulated depreciation of \$1,840. Some of the more significant projects contributing to the net increase included:
  - Continued progress on the East Side Access, Second Avenue Subway and Number 7 Extension Project.
  - Infrastructure work including:
    - Repairs and improvements of all MTA Bridge and Tunnels' facilities.
    - 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 1<sup>st</sup> 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 \$644 or 6.9%. The major items contributing to this change include:
  - An increase in investments of \$499 primarily due to higher debt service funds and an increase in unspent proceeds from the issuances of Transportation Revenue Bonds, Dedicated Tax Funds Bonds and Bond Anticipation Notes in 2017.
  - An increase in current and non-current receivables of \$681 primarily due to an increase in State and regional mass transit tax of \$896 stemming from the approval of the New York State 2017-2018 budget in April, 2017, an increase in state and local operating assistance of \$136, and an increase in Federal and State grants for capital projects of \$61. Those increases were offset by a decrease in station maintenance of \$42, a decrease of \$8 in mortgage recording tax, a net decrease in other subsidies of \$23, and a decrease of \$38 in receivables from New York State. There was also a net decrease in other receivables of \$301 primarily due to the receipt of reinsurance recoveries related to Tropical Storm Sandy.
  - A decrease in cash of \$543 from net cash flow activities and a net increase in various other current and non-current assets of \$7.
- Deferred outflows of resources increased by \$183 or 4.8%. This increase was primarily due from higher deferred outflows related to pensions of \$119, an increase in the fair value of derivative instruments of \$69 and a decrease in deferred outflows for unamortized losses on refundings of \$5.

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

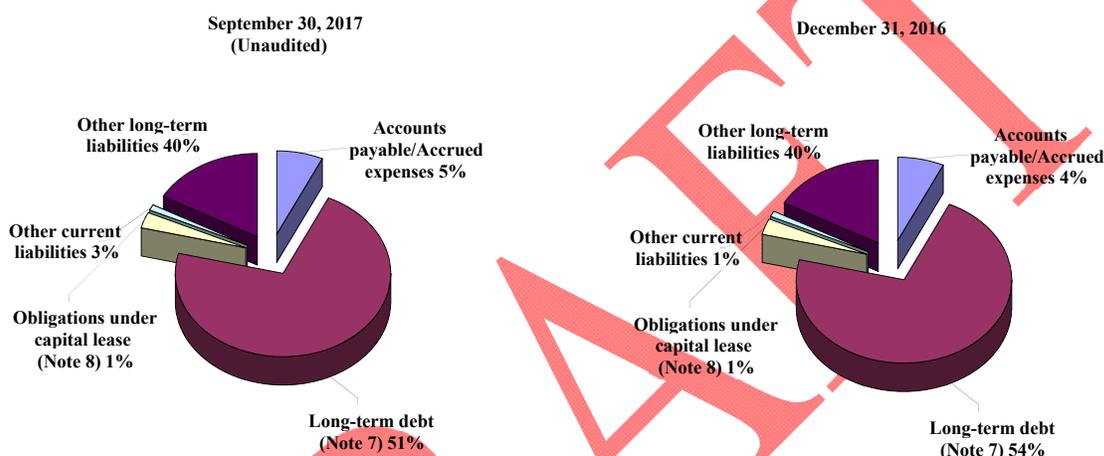
Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, capital lease obligations, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities.

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 and pension related deferred inflows.

(In millions)	September 30, 2017	December 31, 2016	Increase / (Decrease)
	(Unaudited)		
Current liabilities	\$ 6,445	\$ 6,003	\$ 442
Non-current liabilities	68,448	65,684	2,764
Deferred inflows of resources	322	324	(2)
Total liabilities and deferred inflows of resources	<u>\$ 75,215</u>	<u>\$ 72,011</u>	<u>\$ 3,204</u>

### Total Liabilities and Deferred Inflows of Resources



### *Significant Changes in Liabilities and Deferred Inflows of Resources Include:*

#### September 30, 2017 versus December 31, 2016

- Current liabilities increased by \$442 or 7.4%. The net increase in current liabilities was primarily due to an increase in accrued expenses of \$640, which resulted from a \$373 increase in interest payable for new bonds issued in 2017, a net increase of \$108 in employee related accruals, an increase in capital accruals of \$129, and a net increase of \$30 in other accrued expenses. In addition, there was an increase of \$60 in unearned revenues, largely due to unused fare cards and school fare subsidies, an increase of \$19 in accounts payable due to timing, an increase in loans payable to New York State Power Authority of \$12, offset by a decrease in the current portion of long-term debt by \$289, primarily from debt service payments made in the first nine months of 2017.
- Non-current liabilities increased by \$2,764 or 4.2%. This increase was mainly due:
  - An increase in the non-current portion of long-term debt of \$1,166 primarily due to 2017 bond issuances (See Note 7).
  - An increase in postemployment benefits other than pension liability (“OPEB”) of \$1,196 resulting from estimates of actuarial calculations as required by GASB Statement No. 45 (See Note 5).
  - An increase in estimated liability arising from injuries to persons (Note 10) of \$272 due to revised calculations of the workers’ compensation reserve.

- An increase in the non-current portion of loans payable of \$86 due to the Customer Installation Commitments (“CIC”) with New York Power Authority (“NYPA”).
- A net increase in other various non-current liabilities of \$44.
- Deferred inflows of resources decreased by \$2 or 0.6%.

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

(In millions)	September 30, 2017	December 31, 2016	Increase / (Decrease)
	(Unaudited)		
Net investment in capital assets	\$ 26,919	\$ 25,756	\$ 1,163
Restricted for debt service	1,535	352	1,183
Restricted for claims	146	178	(32)
Restricted for other purposes	1,020	935	85
Unrestricted	<u>(23,937)</u>	<u>(21,614)</u>	<u>(2,323)</u>
Total Net Position	<u>\$ 5,683</u>	<u>\$ 5,607</u>	<u>\$ 76</u>

**Significant Changes in Net Position Include:**

**September 30, 2017 versus December 31, 2016**

At September 30, 2017, total net position increased by \$76 or 1.4%, when compared with December 31, 2016. This change is a result of net non-operating revenues of \$4,205 and appropriations, grants and other receipts externally restricted for capital projects of \$1,795 offset by operating losses of \$5,924.

The net investment in capital assets increased by \$1,163 or 4.5%. Funds restricted for debt service, claims and other purposes increased by \$1,236 or 84.4% in the aggregate, mainly due to scheduled debt service payments. Unrestricted net position decreased by \$2,323 or 10.7%.

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

(In millions)	Nine-Month Period Ended		Increase/ (Decrease)
	September 30, 2017	September 30, 2016	
	(Unaudited)	(Unaudited)	
Operating revenues			
Passenger and tolls	\$ 6,020	\$ 5,905	\$ 115
Other	437	440	(3)
Total operating revenues	<u>6,457</u>	<u>6,345</u>	<u>112</u>
Non-operating revenues			
Grants, appropriations and taxes	4,763	4,945	(182)
Other	646	623	23
Total non-operating revenues	<u>5,409</u>	<u>5,568</u>	<u>(159)</u>
Total revenues	<u>11,866</u>	<u>11,913</u>	<u>(47)</u>
Operating expenses			
Salaries and wages	4,378	4,183	195
Retirement and other employee benefits	2,234	2,223	11
Postemployment benefits other than pensions	1,610	1,610	-
Depreciation and amortization	1,852	1,818	34
Other expenses	2,307	2,085	222
Net expenses related to asset impairment	-	2	(2)
Total operating expenses	<u>12,381</u>	<u>11,921</u>	<u>460</u>
Non-operating expenses			
Interest on long-term debt	1,201	1,100	101
Other net non-operating expenses	3	3	-
Total non-operating expenses	<u>1,204</u>	<u>1,103</u>	<u>101</u>
Total expenses	<u>13,585</u>	<u>13,024</u>	<u>561</u>
Loss before appropriations, grants and other receipts externally restricted for capital projects	<u>(1,719)</u>	<u>(1,111)</u>	<u>(608)</u>
Appropriations, grants and other receipts externally restricted for capital projects	<u>1,795</u>	<u>1,520</u>	<u>275</u>
Change in net position	76	409	(333)
Net position, beginning of period	<u>5,607</u>	<u>5,833</u>	<u>(226)</u>
Net position, end of period	<u>\$ 5,683</u>	<u>\$ 6,242</u>	<u>\$ (559)</u>

***Revenues and Expenses, by Major Source:***

**Period ended September 30, 2017 versus 2016**

- Total operating revenues increased by \$112 or 1.8%. The increase was mainly due to higher subway ridership and an increase in vehicle crossings.
- Total non-operating revenues decreased by \$159 or 2.9%.
  - Total grants, appropriations, and taxes decreased by \$182. This was primarily due to a decrease in tax-supported subsidies from New York City and local service areas of \$197 mainly from Urban Tax. Tax-supported subsidies from New York State increased by \$18 primarily due to an increase in Payroll Mobility Tax of \$36 offset by a decrease in Mass Transportation Trust Fund of \$16 and a decrease in MTA Aid of \$2. Various other subsidies decreased by \$3.
  - Other non-operating revenues increased by \$23 primarily due to a net increase in non-operating revenues of \$31 mainly from change in fair value of investments. This was offset by a decrease in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of \$8.
- Labor costs increased by \$206 or 2.6%. The major changes within this category are:
  - Salaries, wages and overtime increased by \$195 due largely to increases in MTA New York City Transit.
  - Retirement and employee benefits increased by \$11.
- Non-labor operating costs increased by \$254 or 6.5%. The variance was primarily due to:
  - An increase in claims arising from injuries to persons of \$83 based on the most recent actuarial valuations.
  - An increase in depreciation of \$34 primarily due to more assets placed in service in the current year.
  - An increase in insurance of \$33 primarily due to a new OCIP premium that was added in 2016 for the East Side Access project.
  - An increase in maintenance and other contracts by \$26 and professional service contracts of \$13 due to changes in consulting services requirements.
  - An increase in electric power of \$20 and fuel of \$18 due to changes in rates and consumption.
  - An increase in material and supplies by \$9, mainly due to revised maintenance and repairs requirements for transit and commuter systems.
  - A net increase in other various expenses of \$18 mainly due to higher operating expenses.
- Total net non-operating expenses increased by \$101 or 9.2% primarily due to increases in interest on long-term debt.

- Appropriations, grants and other receipts externally restricted for capital projects increased by \$275 or 18.1%, mainly due to timing in the availability of Federal and State grants for capital projects.

## **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. In order 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 2017 decreased relative to 2016, with ridership down by 52.4 million trips (2.6%). All agencies have experienced declines, with the most significant being Subway ridership, which declined by 20.9 million (1.6%), MTA New York City Transit Bus ridership, which declined by 28.4 million trips (5.9%), and MTA Bus ridership, which declined by 2.8 million trips (3.0%). In addition, MTA Staten Island Railway ridership declined by 3.9 thousand trips (0.1%), while MTA Metro-North Railroad ridership declined by 71.1 thousand trips (0.1%) and the MTA Long Island Rail Road experienced a decline of 95.0 thousand trips (0.1%). The overall decline in ridership through the third quarter of 2017 was comprised of a 15.7 million decline in the first quarter, a 14.7 million decline in the second quarter, and a 22.0 million decline in the third quarter. Much of the decline in ridership—around 60%—is driven by a general decline in bus utilization, a trend that began in 2009 and has been observed nationally. The decline in subway ridership is a more recent trend—beginning in the third quarter of 2016—which appears to be a reversion to a dynamic more consistent with the long-term historical relationship rather than that of the years immediately following the recession, when ridership surged. Vehicle traffic at MTA Bridges and Tunnels facilities decreased by 147.6 thousand crossings (0.1%) through the third quarter relative to 2016. However, crossings increased in the third quarter by 1.2 million, almost completely offsetting the 1.3 million decline through the first half of 2017.

Seasonally adjusted non-agricultural employment in New York City for the third quarter was higher in 2017 than in 2016 by 64.7 thousand jobs (1.5%). On a quarter-to-quarter basis, New York City employment has increased in each of the last twenty-eight quarters – the last decline occurred in the third quarter of 2010 – and is 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 3.0% in the third quarter of 2017 according to the most recent advance estimate released by the Bureau of Economic Analysis (“BEA”). The increase in RGDP reflected positive contributions from personal consumption expenditures, private inventory investment, nonresidential fixed investment, exports, and federal government spending; these were partially offset by negative contributions from residential fixed investment, and state and local government spending. Imports, which are a subtraction in the Gross Domestic Product (“GDP”) calculation, decreased. The deceleration in RGDP growth, relative to the second quarter's revised 3.1% growth rate, reflected decelerations in personal consumption expenditures, nonresidential fixed investment, and exports; these were partially offset by an acceleration in private inventory investment and a decrease in imports.

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 2017, with the metropolitan

area index increasing by 1.8%, while the national index increased by 2.0%, when compared with the third quarter of 2016. An 9.5% increase in the regional price of energy products, along with a 6.6% national increase, impacted overall inflation; in the metropolitan area, the CPI-U exclusive of energy products increased by 1.3%, while nationally, inflation exclusive of energy products was 1.6%. Increasing more than overall energy prices, the spot price for New York Harbor conventional gasoline rose by 22.7%, from an average price of \$1.39 per gallon to an average price of \$1.71 per gallon, between the third quarters of 2016 and 2017.

In March 2017, the Federal Open Market Committee (“FOMC”) raised rates again, with the target range set at 0.75% to 1%, and in June 2017 the Federal Funds rate was raised to its current target level of 1% to 1.25% in view of realized and expected labor market conditions and inflation. By maintaining the target rate of 1% to 1.25% in the third quarter of 2017, monetary policy continued to be accommodative, supporting some further strengthening in labor market conditions and a sustained return to 2 percent inflation. The FOMC noted that despite the particularly damaging and disruptive hurricane season, the unemployment rate continued to decline. Household spending has been expanding, while business fixed investment continued to expand. The increase in gasoline prices in the aftermath of the hurricanes boosted inflation in the third quarter, but inflation for items other than food and energy remained soft, and overall inflation is expected to remain below 2 percent in the short-term. Despite this, survey-based measures of longer-term inflation expectations were little changed. Consistent with its statutory mandate, the FOMC seeks to foster maximum employment and price stability. The FOMC expects that the economy will continue to expand at a moderate pace, labor market conditions will strengthen somewhat further, and inflation will stabilize around 2 percent over the medium term. Gradual increases in the Federal Funds rate can be expected, but that the rate will remain below long-term levels for quite some time. Near-term risks to economic outlook appear roughly balanced, and the FOMC continues to closely monitor inflation indicators and global economic and financial developments.

The influence of the Federal Reserve 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 2017 were higher than the third quarter of 2016 by \$10.4 million (9.2%); receipts in the third quarter of 2017 were \$13.1 million (11.9%) higher than receipts from the second quarter of 2017. Despite the gradual overall recovery of MRT receipts that began in 2012, average monthly receipts in 2017 remain \$24.7 million (38.9%) worse 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 transaction 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 \$63.2 million (32.7%) lower than receipts for the third quarter of 2016; receipts in the third quarter of 2017 were \$12.4 million (8.7%) lower than receipts from the second quarter of 2017. Average monthly receipts in 2017 were \$24.8 million (33.7%) lower than the monthly average for 2007, just prior to the steep decline in Urban Tax revenues.

### ***Results of Operations***

***MTA Bridges and Tunnels*** - Paid traffic through the third quarter of 2017 totaled 230.9 million crossings, which was 0.1 million, or 0.1% lower than January through September of 2016. Traffic had declined by 0.9% over the first half of 2017 primarily due to relatively harsh weather in March and Hurricane Sandy restoration construction at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel. There was also one less day in 2017 due to the 2016 leap year. However, these earlier traffic declines were largely offset by year-to-year growth of 1.5% in the third quarter of 2017. Although year-to-date traffic through September was slightly down, toll revenue was \$25.0, or 1.8% more than the first three quarters of 2016 due to the toll increase implemented in March 2017. Toll revenue through September 2017 was \$1.430 billion compared to \$1.405 billion last year at this time.

The E-ZPass electronic toll collection system experienced year-to-year increases in market share. Total average market share as of the September 30, 2017 was 89.3% compared to 85.7% as of September 30, 2016. The average weekday market shares were 90.6% and 87.3% for the first three quarters of 2017 and 2016, respectively.

*MTA New York City Transit* - Total revenue from fares were \$3.3 billion for the nine-month period ended September 30, 2017, an increase of \$46.1 or 1.4% compared to the nine-month period ended September 30, 2016. For the same comparative period, total operating expenses increased by \$162.3 or 2.1%, totaling \$8.1 billion for the nine months ended September 30, 2017.

*MTA Long Island Rail Road* – Total operating revenue for the nine months ended September 30, 2017 were \$582.4, which was higher by \$8.8 or 1.5% compared to the first nine months of 2016. For the same comparative period, operating expenses were higher by \$38.6 or 2.9%, totaling \$1.4 billion for the nine months ended September 30, 2017.

*MTA Metro-North Railroad* – During the first nine months of 2017, operating revenue increased by \$30.3 or 5.5% compared to the first nine months of 2016. During the same period, operating expenses increased by \$58.0 or 5.2%. Year-to-date 2017 fare revenue increased by 4.3% and ridership decreased by 0.3% compared to the same period in 2016. Ridership in the Hudson line increased by 2.2% while decreases in revenue and ridership occurred on the West-of-Hudson line by 2.8 and 5.4 percent for non-commutation and monthly commutation.

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, 2017 was \$341.8 compared to \$342.2 for the period ended September 30, 2016.

### **Capital Programs**

At September 30, 2017, \$8,759 had been committed and \$2,634 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and \$25,714 had been committed and \$19,134 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and \$24,075 had been committed and \$23,475 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 totaling \$26,600, as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program totaling \$2,856, 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 totaling \$26,719, 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.

As last approved by the CPRB in July 2017, the revised 2015-2019 Capital Programs for the Transit and Commuter systems provided \$29,517 in capital expenditures, of which \$16,315 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; \$5,370 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$7,135 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; \$321 relates to Planning and Customer Service; and \$376 relates to MTA Bus Company initiatives. The revised 2015-2019 MTA Bridges and Tunnels Capital Program, as last approved by the MTA Board in May 2017, provides for \$2,940 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 \$7,558 in MTA Bonds, \$2,940 in MTA Bridges and Tunnels dedicated funds, \$8,466 in funding from the State of New York, \$7,556 in Federal Funds, \$2,492 from City Capital Funds, \$2,270 in pay-as-you-go (“PAYGO”) capital, \$600 from asset sale/leases, and \$575 from Other Sources.

At September 30, 2017, \$8,759 had been committed and \$2,634 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program.

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.

As last amended by the MTA Board in 2014, the 2010–2014 MTA Capital Programs and the 2010–2014 MTA Bridges and Tunnels Capital Program provided for \$34,801 in capital expenditures. 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 \$2,018 in capital expenditures, was not subject to CPRB approval. By September 2017, the 2010-2014 MTA Capital Programs reflected an overall decrease of \$6 attributable to adjustments of the Security capital program budget. Of the \$32,017 in capital expenditures, \$11,371 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MaBSTOA and the rail system operated by MTA Staten Island Railway; \$3,876 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$6,329 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; \$338 relates to a multi-faceted security program including MTA Police Department; \$223 relates to MTA Interagency; \$297 relates to MTA Bus Company initiatives; \$2,018 relates to the ongoing repairs of, and replacements to, MTA Bridges and Tunnels facilities; and \$7,565 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 \$11,772 in MTA Bonds, \$2,018 in MTA Bridges and Tunnels dedicated funds, \$7,285 in Federal Funds, \$132 in MTA Bus Federal and City Match, \$729 from City Capital Funds, and \$1,746 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 \$6,343 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.

At September 30, 2017, \$25,714 had been committed and \$19,134 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program.

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, 2017, the 2005-2009 MTA Capital Programs budget increased by \$670 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 \$24,387 now provided in capital expenditures, \$11,527 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; \$3,716 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$168 relates to certain interagency projects; \$7,697 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 \$9,698 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, \$9,093 in Federal Funds, \$2,827 in City Capital Funds, and \$1,319 from other sources.

At September 30 2017, \$24,075 had been committed and \$23,475 had been expended for the combined 2005-2009 MTA Capital Programs and the 2005-2009 MTA Bridges and Tunnels Capital Program.

## **CURRENTLY KNOWN FACTS, DECISIONS, OR CONDITIONS**

### ***The 2017 February Plan and the July Plan***

The final 2017-2020 Financial Plan was released by the MTA in February 2017 (the "February Plan"). It included a final Adopted Budget for 2017 (the "2017 Adopted Budget") and a financial plan for the years 2017-2020. Subsequent changes and updates made to the February Plan, including the addition of the 2017 mid-year forecast, the 2018 preliminary budget and a Financial Plan for the years 2018-2021, was presented to the MTA Board on July 26, 2017 (the “July Plan”).

The February Plan was designed to continue a program of capital expenditures that would support the ongoing maintenance of the MTA's transportation network and provide needed improvements to enhance services to its customers, as well as expand service through a number of initiatives described in the MTA's "2010-2014 Capital Program" and "2015-2019 Capital Program," which can be found on the MTA's website under "MTA Info – Capital Programs.

The February Plan projected break-even cash balances through 2019 with a deficit of \$372 in 2020. The February Plan was based on three key inter-related elements: (i) fare and toll price increases of 4% in 2017 and 2019; (ii) annually recurring cost reduction and cost containment targets that will increase the level of annual savings to \$2 billion per year by 2020; and (iii) \$566 in debt service savings to support an additional \$2 billion of funding for the amended capital program. The February Plan also funded important new investments over the plan period, including: \$163 for improved maintenance and operations; \$160 to enhance the customer experience, including Open Road Tolling (“ORT”) on all MTA Bridges and Tunnels crossings; and \$72 for additional service and service support MTA-wide.

Changes and re-estimates worsening financial results over the plan period (2017-2020) include:

- Lower real estate transaction tax receipts (\$792).
- Lower farebox/toll revenue estimates (\$132).

Changes and re-estimates improving financial results over the plan period (2017-2020) include:

- Lower energy costs (\$183).
- Lower debt service (\$158).
- Higher Payroll Mobility Tax (“PMT”) receipts (\$138).
- Lower insurance costs (\$112).
- Lower health and welfare costs (\$99).
- Additional State appropriation for capital programs in 2017 allowing pay-as-you-go (“PAYGO”) capital funds to be reprogrammed for operating purposes (\$65).

Overall, these and other net re-estimates and changes through the July Plan period are projected to be \$385 unfavorable from the February Plan. By far, the largest driver of the unfavorable change is the reduction in real estate transaction tax receipts (“Urban Taxes”) which are projected to fall short of the February Plan by a total of \$792 over the 2017 to 2020 period, representing a 16% decline over that four-year period. The Urban Tax decline, which accounts for 92% of the plan-to-plan decline, has been affected by a continuing reduction in the value of New York City commercial property transactions and recorded mortgages. This decline began in 2016, and increases in real estate transaction activity are expected to resume in early 2018. Such increases, however, will be factored off a lower base that reflects the decline, resulting in plan-to-plan reductions in every year of the July Plan.

The July Plan continues to follow the approach reflected in earlier plans. The July Plan continues to project 4% biennial fare/toll increases (the equivalent of 2% per year). Consistent with recent financial plans, a March 1 implementation is assumed for both the 2019 and 2021 increases. The annualized yield of these increases is projected to be \$324 and \$338, respectively. The July Plan provides \$484 million over the plan period to fund investments in maintenance/operations and customer experience enhancements. It also provides \$90 over the plan period to fund investments in safety and security.

The July Plan retains the \$566 in debt service savings, which were identified in November, to support an additional \$2 billion of funding for the 2015-2019 Capital Program. Moreover, it provides support for an additional \$100 for the 2015-2019 Capital Program, as amended effective in July of 2017.

The July Plan includes other MTA actions to address unfavorable changes from the February Plan, most notably the reduction in real estate transaction tax receipts. The July Plan also:

- Assumes restoration of PMT Replacement Funds to \$307 a year (\$65 per year);
- Suspends contributions to the MTA Bridges and Tunnels Necessary Reconstruction Reserve Fund from 2018 through 2021 (\$158), increasing available MTA Bridges and Tunnels Surplus payment to MTA;
- Draws down \$135 of the \$155 in the 2017 General Reserve. Approximately \$58 of such amount will be used to fund Amtrak Penn Station emergency mitigation for which MTA will be seeking reimbursement from Amtrak; and
- Suspends planned contributions to the GASB 45 OPEB reserves for 2018 and the out-years (\$59).

Altogether, these changes, re-estimates, and recommendations, including the newly-proposed increases in targeted savings, result in a net improvement to MTA's financial forecast over the July Plan period.

Additional details of the February Plan and the July Plan are available on the MTA website, [www.mta.info](http://www.mta.info), under the caption "MTA Info – Budget and Financial Information – Budgets and Financial Statements".

### ***Tropical Storm Sandy Update***

The total allocation of emergency relief funding from the 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. FTA Emergency Relief Grants totaling \$4.23 billion have been executed, including six grants in the amounts of \$194, \$886, \$684.5, \$344, \$787.6, and \$1,090.3 respectively for repair/local priority resiliency; and six grants for competitive resiliency totaling \$240.91. As of September 30, 2017, MTA has drawn down a total of \$1.62 billion in grant reimbursement for eligible operating and capital expenses. The balance of funds to be drawn down from all 12 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. MTA is submitting grant requests for the remaining \$1.60 billion of allocated FTA emergency relief funding in Federal Fiscal Years 2018 and 2019.

### ***Labor Update***

Subsequent to the presentation of the February Plan to the MTA Board, certain of the unions representing employees at various MTA agencies reached agreement.

*MTA Metro-North Railroad Labor Agreements* – No changes since February Plan.

*MTA Headquarters* – To date, all expired bargaining agreements at MTA Headquarters have been settled. A 60-month agreement expiring December 31, 2019 was reached with the Transportation Communications Union ("TCU") Local 982 representing information technology workers from various agencies that were recently consolidated as an MTA Headquarters department. The agreement is consistent with other HQ bargaining unit agreements. The Transport Workers Union, Local 100 has also recently won the right to represent former non-represented MaBSTOA employees who were part of the IT Consolidation. Negotiations on an agreement for that bargaining unit have not yet begun. Pursuant to the Taylor Law, until a collective bargaining agreement is reached, terms and conditions of employment remain status quo. Finally, MTA HQ is in discussions with the TCU over titles affected by a newly forming consolidated Procurement Department that will handle non-core procurements for all MTA agencies.

*MTA New York City Transit Authority/Manhattan and Bronx Surface Transit Operating Authority* – The Transport Workers Union, Local 100 has recently won the right to represent non-represented MaBSTOA employees in certain computer titles. Negotiations on an agreement for that bargaining unit have not yet begun. Pursuant to the Taylor Law, until a collective bargaining agreement is reached, terms and conditions of employment remain status quo. MTA New York City Transit and the Doctors’ Council signed an agreement on June 8, 2016. It runs from November 1, 2010 through May 31, 2018. The agreement is consistent with the bargaining pattern. The Doctor’s Council represents 17 physicians and Deputy Medical Directors. The contract is pending MTA Board approval.

*MTA Bus Company* – A 60 month agreement was reached with TWU, Local 100 for the period from January 16, 2012 through January 15, 2017 consistent with pattern. The parties have agreed to refer the outstanding issue of pension enhancement to arbitration.

*MTA Bridges and Tunnels* – MTA Bridges and Tunnels continues to negotiate with its maintenance workers (DC 37 1931), Bridge & Tunnel Officers (BTOBA) and Superior Officers (SOBA).

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# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

## CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF SEPTEMBER 30, 2017

## AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2016

(\$ In millions)

	September 30, 2017 (Unaudited)	December 31, 2016
<b>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>		
<b>CURRENT ASSETS:</b>		
Cash (Note 3)	\$ 189	\$ 732
Unrestricted investments (Note 3)	3,344	3,995
Restricted investments (Note 3)	2,453	1,425
Restricted investments held under capital lease obligations (Notes 3 and 8)	3	93
Receivables:		
Station maintenance, operation, and use assessments	78	120
State and regional mass transit taxes	1,046	150
Mortgage Recording Tax receivable	37	45
State and local operating assistance	147	11
Other receivable from New York City and New York State	284	309
Due from Build America Bonds	3	1
Capital project receivable from federal and state government	283	222
Other	314	605
Less allowance for doubtful accounts	(49)	(130)
Total receivables — net	<u>2,143</u>	<u>1,333</u>
Materials and supplies	596	566
Prepaid expenses and other current assets (Note 2)	130	151
Total current assets	<u>8,858</u>	<u>8,295</u>
<b>NON-CURRENT ASSETS:</b>		
Capital assets (Note 6):		
Land and construction work-in-progress	18,974	16,459
Other capital assets (net of accumulated depreciation)	47,997	48,059
Unrestricted investments (Note 3)	54	28
Restricted investments (Note 3)	507	418
Restricted investments held under capital lease obligations (Notes 3 and 8)	370	273
Other non-current receivables	33	124
Receivable from New York State	76	114
Other non-current assets	14	16
Total non-current assets	<u>68,025</u>	<u>65,491</u>
<b>TOTAL ASSETS</b>	<u>76,883</u>	<u>73,786</u>
<b>DEFERRED OUTFLOWS OF RESOURCES:</b>		
Accumulated decreases in fair value of derivative instruments (Note 7)	434	439
Loss on debt refunding (Note 7)	1,037	968
Deferred outflows related to pensions (Note 4)	2,544	2,425
<b>TOTAL DEFERRED OUTFLOWS OF RESOURCES</b>	<u>4,015</u>	<u>3,832</u>
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<u>\$ 80,898</u>	<u>\$ 77,618</u>

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

(Continued)

# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

## CONSOLIDATED INTERIM STATEMENT OF NET POSITION AS OF SEPTEMBER 30, 2017 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2016

(\$ In millions)

	September 30, 2017 (Unaudited)	December 31, 2016
<b>LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 545	\$ 526
Accrued expenses:		
Interest	599	226
Salaries, wages and payroll taxes	321	251
Vacation and sick pay benefits	929	911
Current portion — retirement and death benefits	35	15
Current portion — estimated liability from injuries to persons (Note 10)	403	415
Capital accruals	565	436
Other	690	648
Total accrued expenses	<u>3,542</u>	<u>2,902</u>
Current portion — loan payable (Note 7)	12	-
Current portion — long-term debt (Note 7)	1,688	1,977
Current portion — obligations under capital lease (Note 8)	4	4
Current portion — pollution remediation projects (Note 12)	23	23
Unearned revenues	631	571
Total current liabilities	<u>6,445</u>	<u>6,003</u>
<b>NON-CURRENT LIABILITIES:</b>		
Net pension liability (Note 4)	8,983	8,983
Estimated liability arising from injuries to persons (Note 10)	3,298	3,026
Post employment benefits other than pensions (Note 5)	16,352	15,156
Loan payable (Note 7)	86	-
Long-term debt (Note 7)	38,111	36,945
Obligations under capital leases (Note 8)	430	429
Pollution remediation projects (Note 12)	63	65
Contract retainage payable	346	309
Derivative liabilities (Note 7)	446	454
Other long-term liabilities	333	317
Total non-current liabilities	<u>68,448</u>	<u>65,684</u>
<b>TOTAL LIABILITIES</b>	<u>74,893</u>	<u>71,687</u>
<b>DEFERRED INFLOWS OF RESOURCES:</b>		
Gain on debt refunding	27	29
Deferred Inflows related to pensions (Note 4)	295	295
<b>TOTAL DEFERRED INFLOWS OF RESOURCES</b>	<u>322</u>	<u>324</u>
<b>NET POSITION:</b>		
Net investment in capital assets	26,919	25,756
Restricted for debt service	1,535	352
Restricted for claims	146	178
Restricted for other purposes (Note 2)	1,020	935
Unrestricted	(23,937)	(21,614)
<b>TOTAL NET POSITION</b>	<u>5,683</u>	<u>5,607</u>
<b>TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</b>	<u>\$ 80,898</u>	<u>\$ 77,618</u>

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

(Concluded)

# METROPOLITAN TRANSPORTATION AUTHORITY

(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, 2017 AND 2016

(\$ In millions)

	September 30, 2017 <u>(Unaudited)</u>	September 30, 2016 <u>(Unaudited)</u>
OPERATING REVENUES:		
Fare revenue	\$ 4,590	\$ 4,500
Vehicle toll revenue	1,430	1,405
Rents, freight, and other revenue	<u>437</u>	<u>440</u>
Total operating revenues	<u>6,457</u>	<u>6,345</u>
OPERATING EXPENSES:		
Salaries and wages	4,378	4,183
Retirement and other employee benefits	2,234	2,223
Postemployment benefits other than pensions (Note 5)	1,610	1,610
Electric power	328	308
Fuel	109	91
Insurance	2	(31)
Claims	297	214
Paratransit service contracts	292	288
Maintenance and other operating contracts	445	419
Professional service contracts	248	235
Pollution remediation projects (Note 12)	2	6
Materials and supplies	435	426
Depreciation (Note 2)	1,852	1,818
Other	<u>149</u>	<u>129</u>
Total operating expenses	<u>12,381</u>	<u>11,919</u>
Net expenses related to asset impairment	<u>-</u>	<u>2</u>
OPERATING LOSS	<u>(5,924)</u>	<u>(5,576)</u>
NON-OPERATING REVENUES (EXPENSES):		
Grants, appropriations and taxes:		
Tax-supported subsidies — NYS:		
Mass Transportation Trust Fund subsidies	453	469
Metropolitan Mass Transportation Operating Assistance subsidies	1,668	1,668
Payroll Mobility Tax subsidies	1,258	1,222
MTA Aid Trust Account subsidies	224	226
Tax-supported subsidies — NYC and Local:		
Mortgage Recording Tax subsidies	342	342
Urban Tax subsidies	393	590
Other subsidies:		
New York State Service Contract subsidy	3	5
Operating Assistance - 18-B program	376	376
Build America Bond subsidy	<u>46</u>	<u>47</u>
Subtotal grants, appropriations and taxes	<u>\$ 4,763</u>	<u>\$ 4,945</u>

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

(Continued)

# METROPOLITAN TRANSPORTATION AUTHORITY

(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, 2017 AND 2016

(\$ In millions)

	<u>September 30,</u> <u>2017</u>	<u>September 30,</u> <u>2016</u>
	<u>(Unaudited)</u>	<u>(Unaudited)</u>
NON-OPERATING REVENUES (EXPENSES):		
Connecticut Department of Transportation	\$ 81	\$ 89
Subsidies paid to Dutchess, Orange, and Rockland Counties	(4)	(4)
Interest on long-term debt (Note 2)	(1,201)	(1,100)
Station maintenance, operation and use assessments	124	121
Operating subsidies recoverable from NYC	371	370
Other net non-operating expenses	<u>71</u>	<u>44</u>
Net non-operating revenues	<u>4,205</u>	<u>4,465</u>
LOSS BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	(1,719)	(1,111)
APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	<u>1,795</u>	<u>1,520</u>
CHANGE IN NET POSITION	76	409
NET POSITION — Beginning of period	<u>5,607</u>	<u>5,833</u>
NET POSITION — End of period	<u>\$ 5,683</u>	<u>\$ 6,242</u>
See Independent Auditors' Review Report and notes to the consolidated interim financial statements.		(Concluded)

# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

## CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2017 AND 2016

(\$ In millions)

	September 30, 2017 <u>(Unaudited)</u>	September 30, 2016 <u>(Unaudited)</u>
CASH FLOWS FROM OPERATING ACTIVITIES:		
Passenger receipts/tolls	\$ 6,047	\$ 6,174
Rents and other receipts	526	279
Payroll and related fringe benefits	(6,928)	(6,829)
Other operating expenses	<u>(2,572)</u>	<u>(2,113)</u>
Net cash used by operating activities	<u>(2,927)</u>	<u>(2,489)</u>
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:		
Grants, appropriations, and taxes	4,253	4,362
Operating subsidies from CDOT	87	92
Subsidies paid to Dutchess, Orange, and Rockland Counties	<u>(7)</u>	<u>(6)</u>
Net cash provided by noncapital financing activities	<u>4,333</u>	<u>4,448</u>
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:		
MTA bond proceeds	2,650	5,704
MTA Bridges and Tunnels bond proceeds	1,427	642
MTA bonds refunded/reissued	(1,663)	(2,604)
MTA Bridges and Tunnels bonds refunded/reissued	(1,080)	(288)
MTA anticipation notes proceeds	1,210	1,419
MTA anticipation notes redeemed	(1,424)	(1,643)
MTA credit facility proceeds	204	-
MTA credit facility refunded	(200)	-
Capital lease payments and terminations	(1)	(1)
Grants and appropriations	2,356	1,425
Payment for capital assets	(3,930)	(3,688)
Debt service payments	<u>(1,126)</u>	<u>(999)</u>
Net cash used by capital and related financing activities	<u>(1,577)</u>	<u>(33)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of long-term securities	(5,998)	(8,648)
Sales or maturities of long-term securities	6,406	6,008
Net sales (purchases) or maturities of short-term securities	(822)	539
Earnings on investments	<u>42</u>	<u>25</u>
Net cash used by investing activities	<u>(372)</u>	<u>(2,076)</u>
NET DECREASE IN CASH	(543)	(150)
CASH — Beginning of period	<u>732</u>	<u>454</u>
CASH — End of period	<u>\$ 189</u>	<u>\$ 304</u>

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

(Continued)

# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

## CONSOLIDATED INTERIM STATEMENTS OF CASH FLOWS

NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2017 AND 2016

(\$ In millions)

	<u>September 30,</u> <u>2017</u>	<u>September 30,</u> <u>2016</u>
	<u>(Unaudited)</u>	<u>(Unaudited)</u>
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:		
Operating loss (Note 2)	\$ (5,924)	\$ (5,576)
Adjustments to reconcile to net cash used in operating activities:		
Depreciation and amortization	1,852	1,818
Net increase in payables, accrued expenses, and other liabilities	1,205	1,159
Net decrease in receivables	(53)	39
Net decrease in materials and supplies and prepaid expenses	<u>(7)</u>	<u>71</u>
NET CASH USED BY OPERATING ACTIVITIES	<u>\$ (2,927)</u>	<u>\$ (2,489)</u>
NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:		
Noncash investing activities:		
Interest expense includes amortization of net (premium) / discount	\$ 339	\$ 761
Interest expense which was capitalized	<u>26</u>	<u>38</u>
Total Noncash investing activities	<u>365</u>	<u>799</u>
Noncash capital and related financing activities:		
Capital assets related liabilities	565	342
Capital leases related liabilities	<u>434</u>	<u>413</u>
Total Noncash capital and related financing activities	<u>999</u>	<u>755</u>
TOTAL NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES	<u>\$ 1,364</u>	<u>\$ 1,554</u>
See Independent Auditors' Review Report and notes to the consolidated interim financial statements.		(Concluded)

# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

## NOTES TO CONSOLIDATED INTERIM FINANCIAL STATEMENTS AS OF SEPTEMBER 30, 2017 AND DECEMBER 31, 2016 AND FOR THE NINE-MONTH PERIODS ENDED SEPTEMBER 30, 2017 AND 2016 (\$ In millions, except as noted)

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### 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, 16<sup>th</sup> 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, 2017 and 2016 totaled \$4.8 billion and \$4.9 billion, respectively.

## 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 Adopted**

The MTA adopted the following GASB Statements for the period ended September 30, 2017:

GASB Statement No. 80, *Blending Requirements for Certain Component Units* establishes an additional blending requirement for the financial statement presentation of component units. This Statement applies to component units that are organized as not-for-profit corporations in which the primary government is

the sole corporate member, as identified in the component unit's articles of incorporation or bylaws. The requirements of this Statement are effective for reporting periods beginning after June 15, 2016. The adoption of this Statement had no impact on the MTA's financial statements. No additional disclosures are required.

GASB Statement No. 81, *Irrevocable Split-Interest Agreements* establishes accounting and financial reporting standards for split-interest agreements, which are a type of giving agreement used by donors to provide resources to two or more beneficiaries, including governments. The Statement provides recognition and measurement guidance for situations in which a government is a beneficiary of the agreement by requiring the government to recognize assets, liabilities, and deferred inflows of resources at the inception of the agreement. The requirements of this Statement are effective for financial statements for periods beginning after December 15, 2016. The adoption of this Statement had no impact on the MTA's financial statements, as the MTA does not enter into such agreements.

### 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
74	<i>Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans</i>	2017
75	<i>Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions</i>	2018
82	<i>Pension Issues—an amendment of GASB Statements No. 67, No. 68, and No. 73</i>	2017
83	<i>Certain Asset Retirement Obligations</i>	2019
84	<i>Fiduciary Activities</i>	2019
85	<i>Omnibus 2017</i>	2018
86	<i>Certain Debt Extinguishment Issues</i>	2018
87	<i>Leases</i>	2020

**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, 2017 and December 31, 2016.

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

**Materials and Supplies** — Materials and supplies are valued principally at the lower of average cost or market value, net of obsolescence reserve.

**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 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.

**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, 2017, the MTA paid to Dutchess, Orange and Rockland Counties the 2015 excess amounts of MRT-1 and MRT-2 totaling \$3.6.
- 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 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.

*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 2014 and 2015 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 MTA for the full costs of the free/reduced fare program for students (the Student Fare Program). Beginning in 1996, the State and NYC each began paying \$45 per annum to the MTA toward the cost of the program. In 2009, the State reduced its \$45 reimbursement to \$6.3. Beginning in 2010, the State increased its annual commitment to \$25.3 while NYC's annual commitment remained at \$45. These commitments have been met by both the State and NYC for both 2015 and 2016.

Prior to April 1995, NYC was obligated to reimburse the MTA 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, NYC no longer reimburses the MTA 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 NYC's expense. The MTA continues to be responsible for certain capital costs and support services related to such police activities, a portion of which is reimbursed by NYC. The MTA received approximately \$6.2 and \$4.1 for the nine months ended September 30, 2017 and 2016, respectively, from NYC 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, 2017 and 2016 were \$16.6 and \$15.6, respectively. The amounts recovered for the periods ended September 30, 2017 and 2016 were approximately \$10.8 and \$10.1, 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 NYC and the MTA, MTA New York City Transit, effective July 1, 1993, assumed operating responsibility for all paratransit service required in NYC by the Americans with Disabilities Act of 1990. The services are provided by private vendors under contract with MTA New York City Transit. NYC reimburses the MTA for the lesser of 33.0% of net paratransit operating expenses defined as labor, transportation, and administrative costs less fare revenues and 6.0% of gross Urban Tax Subsidies, or an amount that is 20.0% greater than the amount paid by NYC for the preceding calendar year. Fare revenues and New York City reimbursement aggregated approximately \$145.7 and \$150.0 for the nine months ended September 30, 2017 and 2016, respectively.

*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 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, 2017, the balance of the assets in this program was \$118.1.

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, 2017, 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 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, 2017, the “Access-A-Ride” automobile liability policy program was renewed. This program provides third-party auto liability insurance protection for the MTA New York City Transit’s Access-A-Ride program, including the contracted operators. This policy provides a \$3 per occurrence limit with a \$1 per occurrence deductible.

On December 15, 2016, 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, 2017, FMTAC renewed the all-agency property insurance program. For the annual period commencing May 1, 2017, 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 \$675 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 \$675 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 83% of “certified” losses in 2017 and 82% of “certified” losses in 2018 and 81% of “certified” losses in 2019, as covered by the Terrorism Risk Insurance Program Reauthorization Act (“TRIPRA”) of 2015. The remaining 17% (2017), 18% (2018) and 19% (2019) 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 \$140 in 2017, \$160 in 2018 and \$180 in 2019. 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) 17% of any “certified” act of terrorism up to a maximum recovery of \$182.8 for any one occurrence and in the annual aggregate during 2017, 18% of any “certified” act of terrorism up to a maximum recovery of \$193.5 for any one occurrence and in the annual aggregate during 2018 and 19% of any “certified” act of terrorism up to a maximum recovery of \$204.5 for any one occurrence and in the annual aggregate during 2019, (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 \$140 TRIPRA trigger up to a maximum recovery of \$140 for any occurrence and in the annual aggregate during 2017, or 100% of any “certified” terrorism loss which exceeds \$5 and less than the \$160 TRIPRA trigger up to a maximum recovery of \$160 for any occurrence and in the annual aggregate during 2018 or 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.

Additionally, MTA purchases coverage for acts of terrorism which are not certified under TRIPRA to a maximum of \$182.8 in 2017, \$193.5 in 2018 and \$204.3 in 2019. Recovery under the terrorism policy is subject to a deductible of \$25 per occurrence and \$75 in the annual aggregate in the event of multiple losses during the policy year. Should the Related Entities’ deductible in any one year exceed \$75 future losses in that policy year are subject to a deductible of \$7.5. The terrorism coverages expire at midnight on May 1, 2019.

**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.

The GASB has not issued guidance on how to account for pension liabilities and related deferrals for interim financial reporting. The MTA has elected to record as pension expense the applicable first nine months of 2016 employer contributions made to the pension plans subsequent to the measurement of the net pension liability, which were recorded as deferred outflows for the year-ended December 31, 2016. In turn, any contributions made in the first nine months of 2017 were recorded as deferred outflows.

**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*. This Statement established standards for the measurement, recognition, and display of OPEB expense/expenditures and related liabilities (assets), note disclosures, and if applicable, required supplementary information (“RSI”) in the financial reports of state and local governmental employers. In June 2005, GASB issued Statement No. 47, *Accounting for Termination Benefits*. This statement established accounting standards for termination benefits. For termination benefits provided through an existing defined benefit OPEB plan, the provisions of this Statement should be implemented simultaneously with the requirements of GASB Statement No. 45. The MTA has adopted these standards for its Postemployment Benefits Other Than Pensions.

### 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. The bank balance consists of the following at September 30, 2017 and December 31, 2016 (in millions):

	September 30, 2017		December 31, 2016	
	(Unaudited)			
	Carrying Amount	Bank Balance	Carrying Amount	Bank Balance
<b>FDIC insured or collateralized deposits</b>	\$ 61	\$ 58	\$ 182	\$ 162
<b>Uninsured and not collateralized</b>	<u>128</u>	<u>76</u>	<u>550</u>	<u>155</u>
<b>Total Balance</b>	<u>\$ 189</u>	<u>\$ 134</u>	<u>\$ 732</u>	<u>\$ 317</u>

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 statutes 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, 2017 and December 31, 2016 (in millions):

Investments by fair value level	September 30,	Fair Value Measurements		December 31,	Fair Value Measurements	
	2017	Level 1	Level 2	2016	Level 1	Level 2
	(Unaudited)	(Unaudited)				
Debt Securities:						
U.S. treasury securities	\$ 4,307	\$ 4,041	\$ 266	\$ 3,546	\$ 3,359	\$ 187
U.S. government agency	313	-	313	549	-	549
Commercial paper	1,402	-	1,402	1,397	-	1,397
Asset-backed securities	36	-	36	35	-	35
Commercial mortgage-backed securities	26	-	26	33	-	33
Foreign bonds	11	11	-	13	13	-
Corporate bonds	150	150	-	165	165	-
Tax Benefit Lease Investments:						
U.S. treasury securities	177	177	-	172	172	-
U.S. government agency	111	-	111	103	-	103
Repurchase agreements	48	48	-	73	73	-
Money Market Funds	6	-	6	6	-	6
Total debt securities	6,587	4,427	2,160	6,092	3,782	2,310
Equity securities	24	24	-	21	21	-
<b>Total investments by fair value level</b>	<b>6,611</b>	<b>\$ 4,451</b>	<b>\$ 2,160</b>	<b>6,113</b>	<b>\$ 3,803</b>	<b>\$ 2,310</b>
Other	120			119		
<b>Total Investments</b>	<b>\$ 6,731</b>			<b>\$ 6,232</b>		

Investments classified as Level 1 of the fair value hierarchy, totaling \$4,451 and \$3,803 as of September 30, 2017 and December 31, 2016, 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 \$424 and \$652, U.S. treasury securities totaling \$266 and \$187, commercial paper totaling \$1,402 and \$1,397, asset-backed securities totaling \$36 and \$35, commercial mortgage-backed securities totaling \$26 and \$33, and money market instruments totaling \$6 and \$6, as of September 30, 2017 and December 31, 2016, 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 1.00% and 0.56% for the nine months ended September 30, 2017 and year ended December 31, 2016, respectively.

**Credit Risk** — At September 30, 2017 and December 31, 2016, 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, 2017	Percent of Portfolio	December 31, 2016	Percent of Portfolio
	(Unaudited)			
A-1+	\$ 262	4 %	\$ 504	8 %
A-1	1,389	21	1,397	23
AAA	100	1	88	1
AA+	50	1	46	1
AA	31	1	35	0
A	88	1	100	2
BBB	43	1	49	1
Not rated	79	1	101	2
U.S. Government	4,545	69	3,774	62
Total	6,587	100 %	6,094	100 %
Equities and capital leases	144		138	
Total investment	\$ 6,731		\$ 6,232	

**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.

(In millions)	September 30, 2017		December 31, 2016	
	Fair Value	Duration (in years)	Fair Value	Duration (in years)
U.S. Treasuries	\$ 4,307	2.62	\$ 3,546	5.44
Federal Agencies	313	4.08	549	2.95
Tax benefits lease investments	288	9.28	275	8.87
Repurchase agreement	48	-	73	-
Certificate of deposits	6	-	6	-
Commercial paper	1,402	0.02	1,397	0.04
Asset-backed securities <sup>(1)</sup>	36	1.09	35	1.04
Commercial mortgage-backed securities <sup>(1)</sup>	26	5.74	33	3.04
Foreign bonds <sup>(1)</sup>	11	0.00	13	0.00
Corporates <sup>(1)</sup>	150	5.24	165	2.56
Total fair value	6,587		6,092	
Modified duration		2.47		3.93
Equities <sup>(1)</sup>	24		21	
Total	6,611		6,113	
Investments with no duration reported	120		119	
Total investments	\$ 6,731		\$ 6,232	

<sup>(1)</sup> 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.

The 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](http://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. 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 to modify, amend or restrict the MaBSTOA Plan or to discontinue it altogether, subject, however, to the obligations under its collective bargaining agreements.

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 MaBSTOA Pension Plan, New

York City Transit Authority, Operations Accounting, 2 Broadway, 10<sup>th</sup> Floor, New York, New York, 10004 or at [www.mta.info](http://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 Metro-North Railroad Controller, 420 Lexington Avenue, New York, New York, 10170-3739. These statements are also available at [www.mta.info](http://www.mta.info).

### **4. MTA Defined Benefit Plan —**

The MTA Defined Benefit Pension Plan (the “MTA Plan” or the “Plan”) is a cost sharing, multiple-employer defined benefit pension plan. The Plan covers certain MTA Long Island Railroad non-represented employees hired after December 31, 1987, MTA Metro-North Railroad non-represented employees, certain employees of the former MTA Long Island Bus hired prior to January 23, 1983, MTA Police, MTA Long Island Railroad represented employees hired after December 31, 1987, certain MTA Metro-North Railroad represented employees, MTA Staten Island Railway represented and non-represented employees and certain employees of the MTA Bus Company (“MTA Bus”). The MTA, MTA Long Island Railroad, MTA Metro-North Railroad, MTA Staten Island Railway and MTA Bus contribute to the MTA Plan, which offers distinct retirement, disability retirement, and death benefit programs for their covered employees and beneficiaries.

The MTA Defined Benefit Plan is administered by the Board of Managers of Pensions. The MTA Plan, including benefits and contributions, may be amended by action of the MTA Board.

The 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](http://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](http://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. This report may be found at [www.osc.state.ny.us/retire/publications/index.php](http://www.osc.state.ny.us/retire/publications/index.php) or obtained by writing to the New York State and Local Retirement System, 110 State Street, Albany, NY 12244.

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.

The terms of the Additional Plan are established by, and may only be amended by the MTA Long Island Rail Road, subject to the obligations of the MTA Long Island Rail Road under its collective bargaining agreements.

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

Participants who entered qualifying service before July 1, 1978 are not required to contribute. Participants who entered qualifying service on or after July 1, 1978, are required to contribute 3% of their wages. The

MTA Long Island Railroad contributes additional amounts based on actuarially determined amounts that are designed to accumulate sufficient assets to pay benefits when due.

The Additional Plan also provides 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 nonvested participant or vested participant whose pension rights were waived.

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

## **2. MaBSTOA Plan —**

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

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

### *Tier 1 —*

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

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

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

*Ordinary Death Benefits* — For Tier 1 members the amount of the death benefit is a lump sum equal to six months' pay for members with less than 10 years of service; a lump sum equal to a 12 months of pay

for members with more than 10 but less than 20 years of service, and a lump sum equal to two times 12 months of pay for members with more than 20 years of service.

*Tier 2 —*

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

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

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

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

*Tiers 3, 4—*

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

Tier 3 and 4 members in the basic 55/25Plan must be at least age 55 with the completion of at least 25 years of service, or be at least age 62 with the completion of at least 5 years of service, to be eligible to collect a service retirement benefit. Generally, the benefit for members with at least 25 years of service, is equal to 2.0% of FAC for the first 30 years of service plus 1.5% of FAC for years of service in excess of 30. If the member completes less than 25 years of credited service, the benefit equals 1- 2/3% of FAC multiplied by years of service.

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

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

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

#### *Tier 6—*

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

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

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

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

### **3. MNR Cash Balance Plan —**

*Pension Benefits* — Participants of the MNR Cash Balance Plan are vested in their benefit upon the earlier of (a) the completion of 5 years of service with MTA Metro-North Railroad or (b) the attainment of age 62. The accrued benefit is a participant’s Initial Account Balance increased each month by the benefit escalator. The benefit escalator is defined as the Pension Benefit Guaranty Corporation (“PBGC”) immediate annuity rate in effect for December of the year preceding the year for which the determination

is being made) divided by 180. The accrued benefit is paid as an escalating annuity. Vested participants are entitled to receive pension benefits commencing at age sixty-five. Participants may elect to receive the value of their accumulated plan benefits as a lump-sum distribution upon retirement or they may elect a monthly life annuity. Participants may elect to receive their pension in the form of a joint and survivor annuity.

Participants of the MNR Cash Balance Plan are eligible for early retirement benefits upon termination of employment, the attainment of age 62, or age 60 and completion of 15 years of service, or age 55 and the completion of 30 years of service. The early retirement benefits paid is the normal retirement pension deferred to age 65 or an immediate pension equal to the life annuity actuarial equivalent of a participant's escalating annuity at normal retirement date indexed by the Initial Benefit Escalator from early retirement date to normal retirement date and reduced by 5/9 of 1% for each month retirement precedes age 65 up to 60 months and 5/18 of 1% for each month after 60 months.

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

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

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

#### **4. MTA Defined Benefit Plan —**

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

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

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

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

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

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

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

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

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

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

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

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

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

Death benefits are paid to the participant's beneficiary in the event of the death of a covered MTA Metro-North Railroad, post-1987 MTA Long Island Rail Road or MTA Staten Island Railway employee after completion of one year of credited service. The death benefit payable is calculated based on a multiple of a participant's salary based on years of credited service up to three years and is reduced beginning at age 61. There is also a post-retirement death benefit which, in the 1st year of retirement, is equal to 50% of the

pre-retirement death benefit amount, whichever is greater, 25% the 2nd year and 10% of the death benefit payable at age 60 for the 3rd and later years. For the Police 20 Year Retirement Program, the death benefit is payable after ninety days of credited MTA Police service, and is equal to three times their salary. For non-Police groups, this death benefit is payable in a lump sum distribution while for Police, the member or the beneficiary can elect to have it paid as an annuity. The MTA Police do not have a post retirement benefit.

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

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

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

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

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

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

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

#### **5. NYCERS —**

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

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

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

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

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

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

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

#### **6. NYSLERS —**

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

##### *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 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. For Tier 1 members who joined on or after June 17, 1971, each year of final average salary is limited to no more than 20 percent of 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. For Tier 3, 4 and 5 members, each year of final average salary is limited to no more than 110% of 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 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. For Tier 6 members, each year of final average salary is limited to no more than 110% of the average of the previous four years.

*Ordinary Disability Benefits —* Generally, 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.

*Accidental Disability Benefits —* 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, 2016, January 1, 2015 and January 1, 2014, the dates of the most recent actuarial valuations, membership data for the following pension plans are as follows:

Membership at:	January 1, 2016		January 1, 2015		TOTAL
	MNR Cash Balance Plan	Additional Plan	MaBSTOA Plan	MTA Defined Benefit Plan	
Active Plan Members	7	282	8,122	17,156	25,567
Retirees and beneficiaries receiving benefits	27	5,985	5,394	11,382	22,788
Vested formerly active members not yet receiving benefits	14	53	1,054	1,417	2,538
<b>Total</b>	<b>48</b>	<b>6,320</b>	<b>14,570</b>	<b>29,955</b>	<b>50,893</b>

Membership at:	January 1, 2014				TOTAL
	MNR Cash Balance Plan	Additional Plan	MaBSTOA Plan	MTA Defined Benefit Plan	
Active Plan Members	15	321	7,739	16,688	24,763
Retirees and beneficiaries receiving benefits	26	6,089	5,168	11,038	22,321
Vested formerly active members not yet receiving benefits	19	67	1,104	1,422	2,612
<b>Total</b>	<b>60</b>	<b>6,477</b>	<b>14,011</b>	<b>29,148</b>	<b>49,696</b>

## ***Contributions and Funding Policy***

### ***1. Additional Plan —***

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

Upon termination of employment before retirement, vested participants who have been required to contribute must choose to: (1) receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2014 and 2013), or (2) leave their contributions in the Additional Plan until they retire and become entitled to the pension benefits. Non-vested participants who have been required to contribute will receive a refund of their own contributions, including accumulated interest at rates established by the MTA Long Island Railroad's Board of Managers of Pensions (1.5% in 2015 and 2014).

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

### ***2. MaBSTOA Plan —***

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

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

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

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

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

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

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

### **3. MNR Cash Balance Plan —**

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

MTA Metro-North Railroad's funding policy with respect to the MNR Cash Balance Plan was to contribute the full amount of the pension benefit obligation ("PBO") of approximately \$2,977 to the trust fund in 1989. As participants retire, the Trustee has made distributions from the MNR Cash Balance Plan. MTA Metro-North Railroad anticipated that no further contributions would be made to the MNR Cash Balance Plan. However, due to changes in actuarial assumptions and market performance, additional contributions were made to the MNR Cash Balance Plan in several subsequent years.

### **4. MTA Defined Benefit Plan —**

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

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

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

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

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

MTA Bus is required to make significant annual contributions to the MTA Plan on a current basis. Pursuant to the January 1, 2014 and January 1, 2013 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 \$44.3 and \$45.9 for the years ended December 31, 2016 and 2015, respectively. Both of these employer contributions were paid to the MTA Plan in their respective years.

##### 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 and the respective contribution rates as a percent of covered payroll for the years ended December 31, 2016 and 2015 are as follows:

Year-ended December 31, (\$ in millions)	2016		2015	
	Actual Employer Contributions	Contributions as a percentage of covered payroll	Actual Employer Contributions	Contributions as a percentage of covered payroll
Additional Plan	\$ 151.1	562.13%	\$ 100.0	283.43%
MaBSTOA Plan	220.7	30.45%	214.9	30.97%
MNR Cash Balance Plan	- *	2.72%	- *	0.85%
MTA Defined Benefit Plan	280.8	15.62%	221.7	13.68%
NYCERS	797.9	24.59%	736.2	22.05%
NYSLERS	13.0	13.51%	15.8	17.93%
Total	\$ 1,463.5		\$ 1,288.6	

\* MNR Cash Balance Plan's actual employer contribution for the years ended December 31, 2016 and 2015 was \$23 thousand and \$14 thousand, respectively.

***Net Pension Liability***

The MTA's net pension liabilities for each of the pension plans reported at December 31, 2016 and December 31, 2015 were measured as of the fiscal year-end dates for each respective pension plan. The total pension liabilities used to calculate those net pension liabilities were determined by actuarial valuations as of each pension plan's valuation date, and rolled forward to the respective year-ends for each pension plan. Information about the fiduciary net position of each qualified pension plan's fiduciary net position has been determined on the same basis as reported by each respective qualified pension plan. For this purpose, benefits and refunds are recognized when due and payable in accordance with the terms of the respective qualified pension plan, and investments are reported at fair value. The following table provides the measurement and valuation dates used by each pension plan to calculate the MTA's aggregate net pension liability.

Year ended December 31,	2016		2015	
	Plan Measurement Date	Plan Valuation Date	Plan Measurement Date	Plan Valuation Date
<b>Pension Plan</b>				
<b>Additional Plan</b>	December 31, 2015	January 1, 2015	December 31, 2014	January 1, 2014
<b>MaBSTOA Plan</b>	December 31, 2015	January 1, 2015	December 31, 2014	January 1, 2014
<b>MNR Cash Balance Plan</b>	December 31, 2015	January 1, 2016	December 31, 2014	January 1, 2014
<b>MTA Defined Benefit Plan</b>	December 31, 2015	January 1, 2015	December 31, 2014	January 1, 2014
<b>NYCERS</b>	June 30, 2016	June 30, 2014	June 30, 2015	June 30, 2013
<b>NYSLERS</b>	March 31, 2016	April 1, 2015	March 31, 2015	April 1, 2014

***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.

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**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:

Valuation Date:	Additional Plan		MaBSTOA Plan		MNR Cash Balance Plan	
	January 1, 2015	January 1, 2014	January 1, 2015	January 1, 2014	January 1, 2016	January 1, 2014
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.	4.50% per annum, net of investment expenses.
Salary Increases	3.00%	3.00%	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 operating 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 operating employees per year, depending on years of service.	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%	2.30%	2.50%
Cost-of Living Adjustments	Not applicable	Not applicable	1.375% per annum.	1.375% per annum.	Not applicable	Not applicable
Valuation Date:	MTA Defined Benefit Plan		NYCERS		NYSLERS	
	January 1, 2015	January 1, 2014	June 30, 2014	June 30, 2013	April 1, 2015	April 1, 2014
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.	7.50% per annum, including inflation, net of investment expenses.
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.	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.	3.80% in ERS, 4.5% in PFRS	4.90% in ERS, 6.00% 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%	2.70%
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 4 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 4 retirees.	1.30% per annum.	1.40% per annum.

## *Mortality*

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

The actuarial assumptions used in the January 1, 2016, 2015, and 2014 valuations for the MTA plans are based on the results of an actuarial experience study for the period from January 1, 2006 through December 31, 2011. Mortality assumption 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 75% of the rates from the RP-2000 Disabled 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 female healthy rates, respectively. 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, 2014 valuation are based, in part, on the 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.

The actuarial assumptions used in the June 30, 2013 valuation are based on the results of an actuarial experience study published by Gabriel, Roeder, Smith & Company ("GRS") dated October 2015 and analyzed experience for Fiscal Years 2010 through 2013. GRS made recommendations with respect to the actuarial assumptions and methods based on their analysis.

### **NYSLERS:**

The actuarial assumptions used in the April 1, 2015 valuation 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.

The actuarial assumptions used in the April 1, 2014 valuation are based on the results of an actuarial experience study for the period April 1, 2005 through March 31, 2010. The annuitant mortality rates are based on the results of the 2010 experience study of the period April 1, 2005 through March 31, 2010, 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.

<b>Pension Plan</b>	<b>Plan Measurement Date</b>	<b>Rate</b>
Additional Plan	December 31, 2015	7.00%
MaBSTOA Plan	December 31, 2015	7.00%
MNR Cash Balance Plan	December 31, 2015	4.00%
MTA Defined Benefit Plan	December 31, 2015	7.00%
NYCERS	June 30, 2016	7.00%
NYSLERS	March 31, 2016	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:

<b>Asset Class</b>	<b>Additional Plan</b>		<b>MaBSTOA Plan</b>	
	<b>Target Asset Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>	<b>Target Asset Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
US Core Fixed Income	10.00%	2.11%	10.00%	2.11%
US High Yield Bonds	8.00%	4.32%	8.00%	4.32%
Global Bonds	10.00%	0.82%	10.00%	0.82%
Emerging Markets Bonds	3.00%	5.17%	3.00%	5.17%
US Large Caps	10.00%	5.09%	10.00%	5.09%
US Small Caps	5.50%	6.26%	5.50%	6.26%
Global Equity	10.00%	5.67%	10.00%	5.67%
Foreign Developed Equity	10.00%	6.06%	10.00%	6.06%
Emerging Markets Equity	3.50%	8.21%	3.50%	8.21%
Global REITs	5.00%	5.98%	5.00%	5.98%
Private Real Estate Property	3.00%	3.84%	3.00%	3.84%
Private Equity	7.00%	9.17%	7.00%	9.17%
Hedge Funds - MultiStrategy	15.00%	4.20%	15.00%	4.20%
	<u>100.00%</u>		<u>100.00%</u>	
Assumed Inflation - Mean		2.50%		2.50%
Assumed Inflation - Standard Deviation		1.89%		1.89%
Portfolio Arithmetic Mean Return as per Actuary		7.31%		7.31%
Portfolio Standard Deviation		11.67%		11.67%
Long Term Expected Rate of Return selected by MTA		7.00%		7.00%

Asset Class	MTA Defined Benefit Plan		MNR Cash Balance Plan	
	Target Asset Allocation	Long-Term	Target Asset Allocation	Long-Term
		Expected Real Rate of Return		Expected Real Rate of Return
US Core Fixed Income	10.00%	2.11%	100.00%	1.68%
US High Yield Bonds	8.00%	4.32%		
Global Bonds	10.00%	0.82%		
Emerging Markets Bonds	3.00%	5.17%		
US Large Caps	10.00%	5.09%		
US Small Caps	5.50%	6.26%		
Global Equity	10.00%	5.67%		
Foreign Developed Equity	10.00%	6.06%		
Emerging Markets Equity	3.50%	8.21%		
Global REITs	5.00%	5.98%		
Private Real Estate Property	3.00%	3.84%		
Private Equity	7.00%	9.17%		
Hedge Funds - MultiStrategy	15.00%	4.20%		
	<u>100.00%</u>		<u>100.00%</u>	
Assumed Inflation - Mean		2.50%		2.30%
Assumed Inflation - Standard Deviation		1.89%		1.89%
Portfolio Arithmetic Mean Return as per Actuary		7.31%		4.02%
Portfolio Standard Deviation		11.67%		4.64%
Long Term Expected Rate of Return selected by MTA		7.00%		4.00%

Asset Class	NYCERS		NYSLERS	
	Target Asset Allocation	Long-Term	Target Asset Allocation	Long-Term
		Expected Real Rate of Return		Expected Real Rate of Return
U.S. Public Market Equities	32.60%	2.15%	38.00%	7.30%
International Public Market Equities	10.00%	0.70%	13.00%	8.55%
Emerging Public Market Equities	6.90%	0.55%	0.00%	0.00%
Private Market Equities	7.00%	0.69%	10.00%	11.00%
Fixed Income	33.50%	0.90%	18.00%	4.00%
Alternatives (Real Assets, Hedge Funds)	10.00%	0.40%	3.00%	8.65%
Real Estate			8.00%	8.25%
Absolute Return Strategies			3.00%	6.75%
Opportunistic Portfolio			3.00%	8.60%
Cash			2.00%	2.25%
Inflation-indexed Bonds			2.00%	4.00%
	<u>100.00%</u>		<u>100.00%</u>	
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			
	2016		2015	
	Plan Measurement Date	Rate	Plan Measurement Date	Rate
<b>Pension Plan</b>				
<b>Additional Plan</b>	December 31, 2015	7.00%	December 31, 2014	7.00%
<b>MaBSTOA Plan</b>	December 31, 2015	7.00%	December 31, 2014	7.00%
<b>MNR Cash Balance Plan</b>	December 31, 2015	4.00%	December 31, 2014	4.50%
<b>MTA Defined Benefit Plan</b>	December 31, 2015	7.00%	December 31, 2014	7.00%
<b>NYCERS</b>	June 30, 2016	7.00%	June 30, 2015	7.00%
<b>NYS LERS</b>	March 31, 2016	7.00%	March 31, 2015	7.50%

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, 2016, based on the December 31, 2015 measurement date, and for the year ended December 31, 2015, based on the December 31, 2014 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, 2014	\$ 1,602,159	\$ 782,852	\$ 819,307	\$ 3,331,464	\$ 2,265,293	\$ 1,066,171
<b>Changes for fiscal year 2015:</b>						
Service Cost	3,441	-	3,441	77,045	-	77,045
Interest on total pension liability	106,987	-	106,987	232,405	-	232,405
Effect of economic /demographic (gains) or losses	6,735	-	6,735	(68,997)	-	(68,997)
Benefit payments	(157,071)	(157,071)	-	(179,928)	(179,928)	-
Administrative expense	-	(1,218)	1,218	-	(88)	88
Member contributions	-	1,108	(1,108)	-	16,321	(16,321)
Net investment income	-	527	(527)	-	(24,163)	24,163
Employer contributions	-	100,000	(100,000)	-	214,881	(214,881)
Balance as of December 31, 2015	<u>\$ 1,562,251</u>	<u>\$ 726,198</u>	<u>\$ 836,053</u>	<u>\$ 3,391,989</u>	<u>\$ 2,292,316</u>	<u>\$ 1,099,673</u>

	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, 2013	\$ 1,645,284	\$ 510,753	\$ 1,134,531	\$ 3,212,528	\$ 2,093,895	\$ 1,118,633
<b>Changes for fiscal year 2014:</b>						
Service Cost	3,813	-	3,813	72,091	-	72,091
Interest on total pension liability	110,036	-	110,036	223,887	-	223,887
Effect of assumption changes or inputs	-	-	-	(1,596)	-	(1,596)
Benefit payments	(156,974)	(156,974)	-	(175,446)	(175,446)	-
Administrative expense	-	(975)	975	-	(74)	74
Member contributions	-	1,304	(1,304)	-	15,460	(15,460)
Net investment income	-	21,231	(21,231)	-	105,084	(105,084)
Employer contributions	-	407,513	(407,513)	-	226,374	(226,374)
Balance as of December 31, 2014	\$ 1,602,159	\$ 782,852	\$ 819,307	\$ 3,331,464	\$ 2,265,293	\$ 1,066,171

	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, 2014	\$ 710	\$ 698	\$ 12	\$ 4,099,738	\$ 3,065,220	\$ 1,034,518
<b>Changes for fiscal year 2015:</b>						
Service Cost	-	-	-	124,354	-	124,354
Interest on total pension liability	29	-	29	288,820	-	288,820
Effect of plan changes	-	-	-	6,230	-	6,230
Effect of economic / demographic (gains) or losses	(10)	-	(10)	121,556	-	121,556
Effect of assumption changes or inputs	18	-	18	(76,180)	-	(76,180)
Benefit payments	(113)	(113)	-	(199,572)	(199,572)	-
Administrative expense	-	3	(3)	-	(1,962)	1,962
Member contributions	-	-	-	-	34,519	(34,519)
Net investment income	-	6	(6)	-	(45,122)	45,122
Employer contributions	-	18	(18)	-	221,694	(221,694)
Balance as of December 31, 2015	\$ 634	\$ 612	\$ 22	\$ 4,364,946	\$ 3,074,777	\$ 1,290,169

	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, 2013	\$ 766	\$ 748	\$ 18	\$ 3,892,983	\$ 2,806,367	\$ 1,086,616
<b>Changes for fiscal year 2014:</b>						
Service Cost	-	-	-	121,079	-	121,079
Interest on total pension liability	32	-	32	274,411	-	274,411
Differences between expected and actual experience	-	-	-	2,322	-	2,322
Benefit payments	(88)	(88)	-	(191,057)	(191,057)	-
Administrative expense	-	(3)	3	-	(9,600)	9,600
Member contributions	-	-	-	-	26,006	(26,006)
Net investment income	-	41	(41)	-	102,245	(102,245)
Employer contributions	-	-	-	-	331,259	(331,259)
Balance as of December 31, 2014	\$ 710	\$ 698	\$ 12	\$ 4,099,738	\$ 3,065,220	\$ 1,034,518

**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, 2015			December 31, 2014		
	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	\$ 963,427	\$ 836,053	\$ 725,673	\$ 951,790	\$ 819,307	\$ 704,647
MaBSTOA Plan	1,480,961	1,099,673	775,092	1,448,685	1,066,171	740,824
MTA Defined Benefit Plan	1,835,699	1,290,169	830,112	1,554,937	1,034,518	596,266
	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	\$ 60,689	\$ 21,847	\$ (12,361)	\$ 48,625	\$ 11,625	\$ (20,375)

**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, 2014 and June 30, 2013 actuarial valuations, rolled forward to September 30, 2016 and June 30, 2015, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYCERS	
	June 30, 2016	June 30, 2015
	(\$ in thousands)	
MTA's proportion of the net pension liability	23.493%	23.585%
MTA's proportionate share of the net pension liability	\$ 5,708,052	\$ 4,773,787

The following table presents the MTA’s proportionate share of the net pension liability of NYSLERS based on the April 1, 2015 and April 1, 2014 actuarial valuations, rolled forward to March 31, 2016 and March 31, 2015, respectively, and the proportion percentage of the aggregate net pension liability allocated to the MTA:

	NYSLERS	
	March 31, 2016	March 31, 2015
	(\$ in thousands)	
MTA's proportion of the net pension liability	0.303%	0.289%
MTA's proportionate share of the net pension liability	\$ 48,557	\$ 9,768

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 September 30, 2016 and 2015 and to NYSLERS for the plan’s fiscal year-end March 31, 2016 and 2015, 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, 2016			June 30, 2015		
	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	\$ 7,826,325	\$ 5,708,052	\$ 3,933,870	\$ 6,602,050	\$ 4,773,787	\$ 3,075,494
Measurement Date:	March 31, 2016			March 31, 2015		
	1% Decrease (6.0%)	Discount Rate (7.0%)	1% Increase (8.0%)	1% Decrease (6.5%)	Discount Rate (7.5%)	1% Increase (8.5%)
NYSLERS	\$ 109,494	\$ 48,557	\$ (2,931)	\$ 65,107	\$ 9,768	\$ (36,952)

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

For the nine-month period ended September 30, 2017 and year ended December 31, 2016, the MTA recognized pension expense related to each pension plan as follows (in \$ thousands):

Pension Plan	September 30, 2017	December 31, 2016
Additional Plan	\$ 61,275	\$ 78,604
MaBSTOA Plan	160,795	159,377
MNR Cash Balance plan	-	4
MTA Defined Benefit Plan	211,363	239,927
NYCERS	579,258	691,210
NYSLERS	9,726	17,880
<b>Total</b>	<b>\$ 1,022,417</b>	<b>\$ 1,187,002</b>

For the nine-month period ended September 30, 2017 and year ended December 31, 2016, 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, 2017**

	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	\$ -	\$ -	\$ -	\$ 59,108	\$ -	\$ -	107,691	-
Changes in assumptions	-	-	-	-	-	-	-	66,413
Net difference between projected and actual earnings on pension plan investments	52,949	-	174,012	-	19	(6)	266,166	-
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	3,230	3,230
Employer contributions to the plan subsequent to the measurement of net pension liability	296,100	-	205,809	-	23	-	290,784	-
<b>Total</b>	<b>\$ 349,049</b>	<b>\$ -</b>	<b>\$ 379,821</b>	<b>\$ 59,108</b>	<b>\$ 42</b>	<b>\$ (6)</b>	<b>\$ 667,871</b>	<b>\$ 69,643</b>

**For the Period Ended  
September 30, 2017**

	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	\$ -	\$ 162,021	\$ 245	\$ 5,756	\$ 107,936	\$ 226,885
Changes in assumptions	421,322	-	12,949	-	434,271	66,413
Net difference between projected and actual earnings on pension plan investments	308,781	-	28,807	-	830,734	(6)
Changes in proportion and differences between contributions and proportionate share of contributions	(41,334)	(1,352)	2,398	198	(35,706)	2,076
Employer contributions to the plan subsequent to the measurement of net pension liability	401,568	-	12,980	-	1,207,264	-
<b>Total</b>	<b>\$ 1,090,337</b>	<b>\$ 160,669</b>	<b>\$ 57,379</b>	<b>\$ 5,954</b>	<b>\$ 2,544,499</b>	<b>\$ 295,368</b>

**For the Year Ended  
December 31, 2016**

	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	\$ -	\$ -	\$ -	\$ 59,108	\$ -	\$ -	107,691	-
Changes in assumptions	-	-	-	-	-	-	-	66,413
Net difference between projected and actual earnings on pension plan investments	52,949	-	174,012	-	19	(6)	266,166	-
Changes in proportion and differences between contributions and proportionate share of contributions	-	-	-	-	-	-	3,230	3,230
Employer contributions to the plan subsequent to the measurement of net pension liability	151,100	-	220,697	-	23	-	280,767	-
<b>Total</b>	<b>\$ 204,049</b>	<b>\$ -</b>	<b>\$ 394,709</b>	<b>\$ 59,108</b>	<b>\$ 42</b>	<b>\$ (6)</b>	<b>\$ 657,854</b>	<b>\$ 69,643</b>

For the Year Ended December 31, 2016	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	\$ -	\$ 162,021	\$ 245	\$ 5,756	\$ 107,936	\$ 226,885
Changes in assumptions	421,322	-	12,949	-	434,271	66,413
Net difference between projected and actual earnings on pension plan investments	308,781	-	28,807	-	830,734	(6)
Changes in proportion and differences between contributions and proportionate share of contributions	(41,334)	(1,352)	2,398	198	(35,706)	2,076
Employer contributions to the plan subsequent to the measurement of net pension liability	422,768	-	12,980	-	1,088,335	-
Total	\$ 1,111,537	\$ 160,669	\$ 57,379	\$ 5,954	\$ 2,425,570	\$ 295,368

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, differences between employer contributions and proportionate share of contributions, and changes in actuarial assumptions, beginning the year in which the deferred amount occurs.

Pension Plan	Recognition Period (in years)		
	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	6.30	N/A	6.30
MNR Cash Balance Plan	0.50	N/A	0.50
MTA Defined Benefit Plan	7.80	7.80	7.80
NYCERS	3.33	3.33	3.33
NYSLERS	5.00	5.00	5.00

For the nine-month period ended September 30, 2017 and year ended December 31, 2016, \$1,207.3 and \$1,088.3 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, 2017 and December 31, 2016, respectively. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions at December 31, 2016 will be recognized as pension expense as follows:

	<u>Additional Plan</u>	<u>MaBSTOA Plan</u>	<u>MNR Cash Balance plan</u>	<u>MTA Defined Benefit Plan</u>	<u>NYCERS</u>	<u>NYSLERS</u>	<u>Total</u>
Year Ending December 31:				(in thousands)			
2017	\$ 14,163	\$ 34,463	\$ 3	\$ 77,537	\$ (7,058)	9,726	128,834
2018	14,163	34,463	3	77,537	111,094	9,726	246,986
2019	14,162	34,464	3	77,538	299,123	9,726	435,016
2020	10,461	25,751	4	58,030	124,941	9,267	228,454
2021	-	(10,952)	-	6,119	-	-	(4,833)
Thereafter	-	(3,285)	-	10,683	-	-	7,398
	<u>\$ 52,949</u>	<u>\$ 114,904</u>	<u>\$ 13</u>	<u>\$ 307,444</u>	<u>\$ 528,100</u>	<u>\$ 38,445</u>	<u>\$ 1,041,855</u>

### *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, pay for the administrative cost of running 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 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 Target-Year Lifecycle Funds, which are comprised of a mix of several funds, most of which are available as separate investments in the Deferred Compensation Program. The particular mix of investments for each Fund is determined by the "target" date, which is the date the money is intended to be needed for retirement income.

- 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 Russell Mid Cap Index.
- 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 a selected index. These institutional strategies provide participants with a diversified array of distinct asset classes, with a single fund option in each class to simplify the decision making process.
- 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.

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 \$18,000 dollars or \$24,000 dollars for those over age 50 for the year ended December 31, 2015.

The two Plans offer the same array of investment options to participants. Eligible participants for 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:

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

As a result of collective bargaining, these members were offered a one-time opportunity to opt-out of the matching contributions and employer basic contributions and, instead, participate in the MTA Defined Benefit Pension Plan. No further matching or employer basic contributions will be made for those who make such election.

**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:

<u>Years of Service</u>	<u>Vested Percentage</u>
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. Members are immediately 100% vested in these employer contributions. In addition, for each plan year, the MTA shall make a monthly contribution of \$125 (whole dollars) to the account of each eligible member represented by the Commanding Officers Association. Members are immediately 100% vested in these employer contributions.

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

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

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

**Forfeitures** – Nonvested contributions are forfeited upon termination of employment. Such forfeitures are used to cover a portion of the pension plan’s administrative expenses.

	<b>December 31,</b>	
	<u>2016</u>	<u>2015</u>
	(In thousands)	
Employer 401K contributions	<u>\$ 3,973</u>	<u>\$ 4,878</u>

## 5. OTHER POSTEMPLOYMENT BENEFITS

The MTA has implemented GASB Statement No. 45, *Accounting and Financial Reporting for Employers for Postemployment Benefits Other Than Pensions* (“GASB 45”). This Statement established the standards for the measurement, recognition, and display of Other Postemployment Benefits (“OPEB”) expense/expenditures and related liabilities (assets), note disclosures, and, if applicable, required supplementary information (“RSI”) in the financial reports of state and local governmental employers.

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. GASB 45 requires state and local government’s financial reports to reflect systematic, accrual-basis measurement and recognition of OPEB cost (expense) over a period that approximates employees’ years of service and provides information about actuarial accrued liabilities associated with the OPEB and to what extent progress is being made in funding the plan.

**Plan Description** — The benefits provided by the MTA Group include medical, pharmacy, dental, vision, and life insurance, plus monthly supplements for Medicare Part B or Medicare supplemental plan reimbursements and welfare fund contributions. The different types of benefits provided vary by agency and employee type (represented employees versus management). All benefits are provided upon retirement as stated in the applicable pension plan, although some agencies provide benefits to some members if terminated within 5 years of attaining retirement eligibility. Employees of the MTA Group 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.

The MTA Group participates in the New York State Health Insurance Program (“NYSHIP”) to provide medical and prescription drug benefits, including Medicare Part B reimbursements, to many of its employees and retirees. NYSHIP provides 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, 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.

GASB 45 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 for the year ended December 31, 2014, and was performed with a valuation date of January 1, 2014. Forty-Five thousand plan participants were receiving retirement benefits as of December 31, 2014, the last valuation reporting period.

During 2012, MTA funded \$250 into an OPEB Trust (“Trust”) allocated between MTA Headquarters and MTA New York City Transit and funded an additional \$50 during 2013 allocated between MTA Long Island Railroad and MTA Metro-North Railroad. There have been no further contributions made to the Trust. Under GASB 45, the discount rate is based on the assets in a trust, the assets of the employer or a blend of the two based on the anticipated funding levels of the employer. For this valuation, the discount

rate reflects a blend of Trust assets and employer assets. The assumed return on Trust assets is 6.5% whereas the assumed return on employer assets is 3.25% resulting in a discount rate under GASB 45 of 3.5%, which is slightly lower than the discount rate of 3.75% used in the prior valuation. This decrease is primarily due to the decrease in Treasury yields and thus, returns on employer assets since the prior valuation

**Annual OPEB Cost (“AOC”) and Net OPEB Obligation** — The MTA’s annual OPEB cost (expense) represents the accrued cost for postemployment benefits under GASB 45. Currently, the MTA expenses the actual benefits paid during a year. The cumulative difference between the annual OPEB cost (“new method”) and the benefits paid during a year (“old method”) will result in a net OPEB obligation (the “Net OPEB Obligation”), included in the consolidated statements of net position. The annual OPEB cost is equal to the annual required contribution (the “ARC”) less adjustments if a Net OPEB Obligation exists and plus the interest on Net OPEB Obligations. The ARC is equal to the normal cost plus an amortization of the unfunded liability.

**Actuarial Cost, Amortization Methods and Assumptions** - For determining the ARC, the MTA has chosen to use the Frozen Initial Liability cost method (the “FIL Cost Method”), one of the cost methods in accordance with the parameters of GASB 45. The initial liability is amortized over a 22-year period. As of the last valuation date, January 1, 2014, the remaining amortization period is 14 years.

In order to recognize the liability over an employee’s career, an actuarial cost method divides the present value into three pieces: the part that is attributed to past years (the “Accrued Liability” or “Past Service Liability”), the part that is being earned this year (the “Normal Cost”), and the part that will be earned in future years (the “Future Service Liability”). Under the FIL Cost Method, an initial past service liability is determined based on the Entry Age Normal (“EAN”) Cost Method and is amortized separately. This method determines the past service liability for each individual based on a level percent of pay. The Future Service Liability is allocated based on the present value of future compensation for all members combined to determine the Normal Cost. In future years, actuarial gains/losses will be incorporated into the Future Service Liability and amortized through the Normal Cost.

The Frozen Unfunded Accrued Liability is determined each year as the Frozen Unfunded Accrued Liability for the prior year, increased with interest, reduced by the end-of-year amortization payment and increased or decreased by any new bases established for the current year.

The difference between the Actuarial Present Value of Benefits and the Frozen Unfunded Accrued Liability equals the Present Value of Future Normal Cost. The Normal Cost equals the Present Value of Future Normal Cost divided by the present value of future compensation and multiplied by the total of current compensation for members less than certain retirement age.

The ARC is equal to the sum of the Normal Cost and the amortization for the Frozen Unfunded Accrued Liability with appropriate interest adjustments. Any difference between the ARC and actual plan contributions from the prior year are considered an actuarial gain/loss and thus, are included in the development of the Normal Cost. This methodology differs from the approach used for the pension plan where the difference between the ARC and actual plan contributions from the prior year, if any, will increase or decrease the Frozen Unfunded Accrued Liability and will be reflected in future amortization payments. A different approach was applied to the OPEB benefits because these benefits are not actuarially funded.

**Valuation Date** - The valuation date is the date that all participant and other pertinent information is collected and liabilities are measured. This date may not be more than 24 months prior to the beginning of the fiscal year. The valuation date for this valuation is January 1, 2014, which is 24 months prior to the

beginning of the 2016 calendar year. Census data for the next full valuation will be based on a valuation date of January 1, 2016.

**Inflation Rate** - 2.5% per annum compounded annually.

**Discount Rate** – GASB 45 provides guidance to employers in selecting the discount rate. The discount rate should be based on the estimated long-term investment yield on the investments that are expected to be used to finance the benefits. If there are no plan assets, assets of the employer should be used to derive the discount rate. This would most likely result in a lower discount rate and thus, liabilities significantly higher than if the benefits are prefunded. In recognition of the decrease in short-term investment yields partially offset by the establishment of a trust, the current discount rate is 3.50%.

**Healthcare Reform** - The results of this valuation reflect our understanding of the impact in future health costs due to the Affordable Care Act (“ACA”) passed into law in March 2010. An excise tax for high cost health coverage or “Cadillac” health plans was included in ACA. The provision levies a 40% tax on the value of health plan costs that exceed certain thresholds for single coverage or family coverage. If, between 2010 and 2018, the cost of health care insurance rises more than 55%, the threshold for the excise tax will be adjusted. Legislative changes passed in December 2015 have delayed the effective date of the excise tax until 2020. However, the calculation of the threshold amounts remains unchanged. Also included in ACA are various fees (including, but not limited to, the Patient-Centered Outcomes Research Institute fee, Transitional Reinsurance Program fee, and the Health Insurer fee) associated with the initiation of health exchanges in 2014. The current provisions of ACA should be reflected in the projection of benefits and therefore, the value of the excise tax and ACA fees which apply to the plan are not included. It is assumed that there will be no changes to the current law and that there will be no changes in plan design to help mitigate the impact of the excise tax.

The OPEB-specific actuarial assumptions used in the most recent biennial valuation are as follows:

Valuation date	January 1, 2014
Actuarial cost method	Frozen Initial Liability
Discount rate	3.50%
Price inflation	2.5% per annum, compounded annually
Per-Capita retiree contributions	*
Amortization method	Frozen Initial Liability
Remaining amortization period	14 years
Period closed or open	Closed

\* In general, all coverages are paid for by the MTA. However, for MTAHQ members retired prior to 1997, pay a portion of the premium, depending on the year they retired.

Actuarial valuation involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and that actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

**Per Capita Claim Costs** — Use of a blended premium rate for active employees and retirees under age 65 is a common practice. Health costs generally increase with age, so the blended premium rate is higher than the true underlying cost for actives and the blended premium is lower than the true underlying cost for retirees. For retirees, this difference is called the implicit rate subsidy. Since GASB 45 only requires an actuarial valuation for retirees, it requires the plan sponsor to determine the costs of these benefits by removing the subsidy. However, a plan sponsor may use the premiums without adjustment for age if the employer participates in a community-rated plan, in which the premium rates reflect projected health

claims experience of all participating employers, or if the insurer would offer the same premium rate if only non-Medicare-eligible retirees were covered.

Based on an initial 2006 report, as well as an updated 2014 report, from the Department of Civil Service of the State of New York regarding recommended actuarial assumptions used for New York State/SUNY's GASB 45 Valuation sent to all participating employers, it stated that the Empire Plan of NYSHIP is community-rated for all participating employers. Each MTA Agency participating in NYSHIP is no more than approximately 1%, and in total, the MTA is approximately 3% of the total NYSHIP population. The actual experience of the MTA will have little or no impact on the actual premium so it is reasonable to use the premium rates without age adjustments as the per capita claims cost.

The medical and pharmacy benefits provided to TWU Local 100, ATU 1056 and ATU 726 represented MTA New York City Transit members, represented MTA Bus members and represented MTA Staten Island Railway members are non-NYSHIP as well as some Pre-NYSHIP MTA New York City Transit members. For these benefits, a per capita claims cost assumptions was developed that vary by age, gender and benefit type. The per capita costs assumptions reflect medical and pharmacy claims information, including the Employer Group Waiver Plan ("EGWP") for providing pharmacy benefits to Medicare-eligible retirees, for 2014 and 2015.

**Medicare Part D Premiums** — GASB has issued a Technical Bulletin stating that the value of expected Retiree Drug Subsidy ("RDS") payments to be received by an entity cannot be used to reduce the Actuarial Accrued Liability of OPEB benefits nor the ARC. Furthermore, actual contributions made (equal to the amount of claims paid in a year if the plan is not funded) will not be reduced by the amount of any subsidy payments received. Accordingly, the 2014 valuation excludes any RDS payments expected to be received by the MTA and its agencies.

**Health Care Cost Trend:** The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2014 utilizing the baseline assumptions included in the model, except real Gross Domestic Product ("GDP") of 1.8% and inflation of 2.5%. 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 non-NYSHIP benefits. These assumptions are combined with long-term assumptions for dental and vision benefits (4%) plus Medicare Part B reimbursements (4.5%). The NYSHIP trend reflects actual increases in premiums through 2015. The NYSHIP trend is used for six agencies plus the non-represented employees of MTA Bus. This trend also reflects dental and vision benefits plus Medicare Part B reimbursements. The non-NYSHIP trend is applied directly for represented employees of MTA New York City Transit, MTA Staten Island Railway and MTA Bus. Due to the Excise Tax, the non-NYSHIP trends for MTA Bus and MTA New York City Transit differ. The following lists illustrative rates for the NYSHIP and self-insured trend assumptions for MTA New York City Transit and MTA Bus (amounts are in percentages).

## Health Care Cost Trend Rates

Fiscal Year	NYSHIP	MTA New York City Transit and MTA Staten Island Railway			
		Staten Island Railway		MTA Bus	
		< 65	>=65	< 65	>=65
2014	0.0*	7.5	9.5	7.5	8.1
2015	6.0	7.6	9.5	7.6	8.2
2016	6.0	6.7	8.1	6.7	7.3
2017	6.0	6.2	6.8	6.2	6.3
2018	5.3	5.4	5.4	5.4	5.4
2019	5.2	12.1	5.4	11.3	5.4
2024	5.2	6.1	5.4	6.2	5.4
2029	5.5	6.1	5.4	6.1	5.4
2034	6.4	6.1	5.5	6.1	5.5
2039	5.9	5.7	5.2	5.7	5.2
2044	5.7	5.5	5.1	5.5	5.1
2049	5.6	5.4	5.3	5.4	5.3
2054	5.5	5.3	5.3	5.3	5.3

\* Trend not applicable as actual 2015 premiums were valued.

**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 at January 1, 2014 (Valuation date for December 31, 2015 and December 31, 2016)

	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	Total
<b>Active Members</b>									
Number	47,447	6,772	6,288	1,569	1,641	-	260	3,539	67,516
Average Age	49.5	44.2	45.5	46.5	46.3	-	45.1	47.1	48.3
Average Service	14.4	11.8	13.4	13.3	12.9	-	13.6	11.7	13.8
<b>Retirees</b>									
Single Medical Coverage	12,400	674	417	612	158	105	19	624	15,009
Employee/Spouse Coverage	16,784	2,314	909	663	329	234	58	893	22,184
Employee/Child Coverage	916	136	54	36	20	23	3	43	1,231
No medical Coverage	867	2,308	2,423	5	8	468	15	126	6,220
Total Number	<u>30,967</u>	<u>5,432</u>	<u>3,803</u>	<u>1,316</u>	<u>515</u>	<u>830</u>	<u>95</u>	<u>1,686</u>	<u>44,644</u>
Average Age	71.9	67.6	74.0	68.9	65.2	67.6	63.9	69.8	71.2
Total Number with Dental/Vision	6,427	857	470	406	445	58	46	85	8,794
Total Number with Vision	25,858	857	470	406	445	58	67	1,529	29,690
Total Number with Supplement	25,442	1,747	-	910	-	459	22	1,454	30,034
Average Monthly Supplement Amount in whole dollars (Excluding Part B Premium)	\$33	\$218	\$ -	\$207	\$ -	\$ -	\$238	\$25	\$49
Total Number with Life Insurance	5,616	4,890	2,406	353	435	713	78	199	14,690
Average Life Insurance Amount	\$2,076	\$22,181	\$2,623	\$5,754	\$4,994	\$8,636	\$2,763	\$5,214	\$9,397

\* No active members as of January 1, 2014. In addition, there are 155 vestees not included in these counts.

**Coverage Election Rates** — For members that participate in NYSHIP, 100% of eligible members, including current retirees and surviving spouses, are assumed to elect coverage in the Empire PPO Plan. However, for MTA Bridges and Tunnels, 15% of represented members and 10% of non-represented members are assumed to elect the Health Insurance Plan (“HIP”), a HMO Plan. For MTA Metro-North Railroad represented members, 15% are assumed to elect ConnectiCare. For groups that do not participate in NYSHIP, notably MTA New York City Transit and MTA Bus members are assumed to elect Empire Blue Cross Blue Shield (“BCBS”) or Aetna/ United Healthcare with percentages varying by agency.

**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 non-NYSHIP programs administered by MTA New York City Transit are assumed to cover a dependent. Actual coverage elections for current retirees are used. 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 recommended by the Society of Actuaries Retirement Plans Experience Committee.

*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* — 75% of the rates from the RP-2000 Disabled Annuitant mortality table for males and females.

**Vestee Coverage** — For members that participate in NYSHIP, Vestees (members who have terminated, but 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 Valuation report provided to Participating Employers of NYSHIP. These percentages were also applied to current vestees based on age at valuation date.

<b>Age at Termination</b>	<b>Percent Electing</b>
< 40	0 %
40–43	5
44	20
45–46	30
47–48	40
49	50
50–51	80
52+	100

The following table shows the elements of the MTA's annual OPEB cost for the year, the amount actually paid, and changes in the MTA's net OPEB obligation to the plan for the nine-month period ended September 30, 2017 and year ended December 31, 2016. The portion of this actuarial present value allocated to a valuation year is called the Normal Cost. Calculations are based on the types of benefits provided under the terms of the substantive plan at the time of each valuation and on the pattern of sharing costs between the employer and plan members to that point. Calculations reflect a long-term perspective.

(In millions)	September 30, 2017 (Unaudited)	December 31, 2016
Annual required contribution ("ARC")	\$ 2,180.4	\$ 2,907.3
Interest on net OPEB obligation	356.0	474.6
Adjustment to ARC	(926.6)	(1,235.5)
OPEB cost	1,609.8	2,146.4
Payments made	(413.3)	(551.0)
Increase in net OPEB obligation	1,196.5	1,595.4
Net OPEB obligation — beginning of period	15,155.5	13,560.1
Net OPEB obligation — end of period	\$ 16,352.0	\$ 15,155.5

The MTA's annual OPEB cost, the percentage of annual OPEB cost contributed to, and the net OPEB obligation for the year ended December 31, 2016, 2015 and 2014 are as follows (in millions):

Year Ended	Annual OPEB Cost	% of Annual Cost Contributed	Net OPEB Obligation
December 31, 2016	\$ 2,146.4	25.7 %	\$ 15,155.5
December 31, 2015	1,997.2	25.2	13,560.1
December 31, 2014	2,522.9	19.2	12,066.3

The MTA funded status of the Plan is as follows (in millions):

Year Ended	Valuation Date	Actuarial Value of Assets {a}	Actuarial Accrued Liability (AAL)* {b}	Unfunded Actuarial Accrued Liability (UAAL) {c}={b}-{a}	Funded Ratio {a}/{b}	Covered Payroll {d}	Ratio of UAAL to Covered Payroll {c}/{d}
December 31, 2016	January 1, 2014	\$ 299.7	\$ 18,471.6	\$ 18,171.9	1.6%	\$ 4,669.8	389.1 %

\* Based on Entry Age Normal

The required schedule of funding progress for the MTA Postemployment Benefit Plan immediately following the notes to the financial statements presents multiyear trend information about whether the actuarial value of plan assets is increasing or decreasing over time relative to the actuarial accrued liability for benefits.

## 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, 2015, December 31, 2016 and September 30, 2017 (in millions):

	Balance December 31, 2015	Additions / Reclassifications	Deletions / Reclassifications	Balance December 31, 2016	Additions / Reclassifications	Deletions / Reclassification	Balance September 30, 2017
					(Unaudited)	(Unaudited)	(Unaudited)
Capital assets not being depreciated:							
Land	\$ 208	\$ 2	\$ 7	\$ 203	\$ 7	\$ -	\$ 210
Construction work-in-progress	12,949	5,915	2,608	16,256	4,490	1,982	18,764
Total capital assets not being depreciated	13,157	5,917	2,615	16,459	4,497	1,982	18,974
Capital assets being depreciated:							
Buildings and structures	17,104	354	-	17,458	205	30	17,633
Bridges and tunnels	3,195	121	-	3,316	54	-	3,370
Equipment:							
Passenger cars and locomotives	13,764	102	3	13,863	-	1	13,862
Buses	3,229	217	-	3,446	181	8	3,619
Infrastructure	21,423	661	6	22,078	822	20	22,880
Other	19,356	773	7	20,122	578	3	20,697
Total capital assets being depreciated	78,071	2,228	16	80,283	1,840	62	82,061
Less accumulated depreciation:							
Buildings and structures	6,194	489	-	6,683	395	-	7,078
Bridges and tunnels	717	29	-	746	21	-	767
Equipment:							
Passenger cars and locomotives	6,427	415	3	6,839	268	1	7,106
Buses	1,782	223	-	2,005	194	8	2,191
Infrastructure	8,031	607	3	8,635	450	3	9,082
Other	6,667	684	35	7,316	524	-	7,840
Total accumulated depreciation	29,818	2,447	41	32,224	1,852	12	34,064
Total capital assets being depreciated — net	48,253	(219)	(25)	48,059	(12)	50	47,997
Capital assets — net	\$ 61,410	\$ 5,698	\$ 2,590	\$ 64,518	\$ 4,485	\$ 2,032	\$ 66,971

Interest capitalized in conjunction with the construction of capital assets for the periods ended September 30, 2017 and December 31, 2016 was \$26.2 and \$57.9, 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, 2017 and December 31, 2016, these securities, which are not included in these financial statements, totaled \$110.7 and \$100.5, respectively, and had a market value of \$95.0 and \$95.4, respectively.

## 7. LONG-TERM DEBT

(In millions)

	Original Issuance	December 31, 2016	Issued (Unaudited)	Retired (Unaudited)	September 30, 2017 (Unaudited)
<b>MTA:</b>					
Transportation Revenue Bonds					
1.37%–6.68% due through 2057	\$ 32,873	\$ 21,209	\$ 987	\$ 877	\$ 21,319
Bond Anticipation Notes					
2.0% due through 2018	4,600	948	1,204	1,424	728
State Service Contract Bonds					
4.125%–5.70% due through 2031	2,395	145	-	77	68
Dedicated Tax Fund Bonds					
2.05%–5.00% due through 2056	11,039	5,009	993	387	5,615
	<u>50,907</u>	<u>27,311</u>	<u>3,184</u>	<u>2,765</u>	<u>27,730</u>
Net unamortized bond premium		1,345	330	181	1,494
	<u><b>50,907</b></u>	<u><b>28,656</b></u>	<u><b>3,514</b></u>	<u><b>2,946</b></u>	<u><b>29,224</b></u>
<b>TBTA:</b>					
General Revenue Bonds					
4.00%–5.77% due through 2050	14,788	6,817	1,203	921	7,099
Subordinate Revenue Bonds					
4.00%–5.77% due through 2032	3,958	1,520	-	163	1,357
	<u>18,746</u>	<u>8,337</u>	<u>1,203</u>	<u>1,084</u>	<u>8,456</u>
Net unamortized bond premium		735	224	27	932
	<u><b>18,746</b></u>	<u><b>9,072</b></u>	<u><b>1,427</b></u>	<u><b>1,111</b></u>	<u><b>9,388</b></u>
<b>MTA Hudson Rail Yards Trust:</b>					
MTA Hudson Rail Yards Trust Obligations					
1.88%–2.65% due through 2056	1,057	1,057	-	-	1,057
Net unamortized bond premium		137	-	7	130
	<u><b>1,057</b></u>	<u><b>1,194</b></u>	<u><b>-</b></u>	<u><b>7</b></u>	<u><b>1,187</b></u>
Total	<u><b>\$ 70,710</b></u>	<u><b>\$ 38,922</b></u>	<u><b>\$ 4,941</b></u>	<u><b>\$ 4,064</b></u>	<u><b>\$ 39,799</b></u>
Current portion		<u>\$ 1,977</u>			<u>\$ 1,688</u>
Long-term portion		<u>\$ 36,945</u>			<u>\$ 38,111</u>

(In millions)	Original Issuance	December 31, 2015	Issued	Retired	December 31, 2016
<b>MTA:</b>					
Transportation Revenue Bonds					
1.37%–6.68% due through 2056	\$ 31,886	\$ 20,728	\$ 3,113	\$ 2,632	\$ 21,209
Bond Anticipation Notes					
2.0% due through 2018	3,400	1,700	1,400	2,152	948
State Service Contract Bonds					
4.125%–5.70% due through 2031	2,395	218	-	73	145
Dedicated Tax Fund Bonds					
2.05%–5.00% due through 2040	10,046	4,857	1,168	1,016	5,009
Certificates of Participation					
5.30%–5.625% due through 2030	807	71	-	71	-
	<u>48,534</u>	<u>27,574</u>	<u>5,681</u>	<u>5,944</u>	<u>27,311</u>
Net unamortized bond discount and premium		564	808	27	1,345
	<b><u>48,534</u></b>	<b><u>28,138</u></b>	<b><u>6,489</u></b>	<b><u>5,971</u></b>	<b><u>28,656</u></b>
<b>TBTA:</b>					
General Revenue Bonds					
1.83%–5.85% due through 2050	13,585	6,750	541	474	6,817
Subordinate Revenue Bonds					
2.39%–5.34% due through 2032	3,958	1,584	-	64	1,520
	<u>17,543</u>	<u>8,334</u>	<u>541</u>	<u>538</u>	<u>8,337</u>
Net unamortized bond premium		656	48	(31)	735
	<b><u>17,543</u></b>	<b><u>8,990</u></b>	<b><u>589</u></b>	<b><u>507</u></b>	<b><u>9,072</u></b>
<b>MTA Hudson Rail Yards Trust:</b>					
MTA Hudson Rail Yards Trust Obligations					
1.88%–2.65% due through 2056	1,057	-	1,057	-	1,057
Net unamortized bond premium		-	132	(5)	137
	<b><u>1,057</u></b>	<b><u>-</u></b>	<b><u>1,189</u></b>	<b><u>(5)</u></b>	<b><u>1,194</u></b>
<b>Total</b>	<b><u>\$ 67,134</u></b>	<b><u>\$ 37,128</u></b>	<b><u>\$ 8,267</u></b>	<b><u>\$ 6,473</u></b>	<b><u>\$ 38,922</u></b>
Current portion		<u>\$ 2,587</u>			<u>\$ 1,977</u>
Long-term portion		<u>\$ 34,541</u>			<u>\$ 36,945</u>

**MTA Transportation Revenue Bonds** — Prior to 2017, MTA issued sixty 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 \$31,230. 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 March 9, 2017, MTA issued \$325.585 MTA Transportation Revenue Green Bonds, Series 2017A. The Series 2017A bonds were issued as \$188.950 MTA Transportation Revenue Green Bonds, Subseries 2017A-1 and \$136.635 MTA Transportation Revenue Green Bonds, Subseries 2017A-2. Proceeds from the transaction were used to pay off a draw on the line of credit that provided interim funding for the existing outstanding 2016A-2 Bond Anticipation Notes, in the amount of \$200 and to refund \$48.090 MTA Transportation Revenue Bonds, Series 2013B and \$88.545 MTA Transportation Revenue Bonds, Series 2013C. The Subseries 2017A-1 bonds were issued as tax-exempt fixed rate bonds with a final maturity of November 15, 2057. The Subseries 2017A-2 bonds were issued as tax-exempt fixed-rate bonds with a final maturity of November 15, 2030.

On March 28, 2017, MTA effectuated a mandatory tender and remarketed \$100 MTA Transportation Revenue Variable Rate Refunding Bonds, Subseries 2002D-2a because its current interest rate period was set to expire by its terms.

On June 7, 2017, Fitch Ratings issued a press release announcing an upgrade of MTA Transportation Revenue Bonds to 'AA-' from 'A,' with a stable outlook.

On September 28, 2017, MTA issued \$662.025 MTA Transportation Revenue Refunding Green Bonds, Series 2017B to refinance certain outstanding indebtedness. The proceeds from the Series 2017B bonds were used to refund: \$138.570 Transportation Revenue Bonds, Series 2005G; \$174.180 Transportation Revenue Bonds, Series 2010D; \$61.935 Transportation Revenue Bonds, Series 2011A; \$115.465 Transportation Revenue Bonds, Series 2011D; \$40.540 Transportation Revenue Bonds, Series 2012C; \$150.000 Transportation Revenue Bonds, Series 2012D; \$35.285 Transportation Revenue Bonds, Series 2012E; and \$10.445 Transportation Revenue Bonds, Series 2012H. The Series 2017A bonds were issued as tax-exempt fixed rate bonds with a final maturity of November 15, 2028.

**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 14, 2017, MTA issued \$700 of MTA Transportation Revenue Bond Anticipation Notes, Series 2017A to generate new money proceeds to finance existing approved transit and commuter projects. The Series 2017A Notes were issued as fixed rate tax-exempt notes with a final maturity of October 2, 2017. On June 7, 2017, Fitch Ratings also upgraded the outstanding MTA Transportation Revenue BANs to 'F1+' from 'F1'.

On June 29, 2017, MTA issued \$500 of MTA Transportation Revenue Bond Anticipation Notes, Series 2017B, having a stated interest rate of 2% per annum and a maturity date of February 1, 2018. The Series 2017B Notes were issued to finance existing approved transit and commuter projects. A series of bonds is expected to be issued to retire the Series 2017B Notes.

**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.

**MTA State Service Contract Bonds** — Prior to 2017, 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, the outstanding bonds are \$68. 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 2017, MTA issued twenty 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 \$9,147. 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 February 23, 2017, MTA issued \$312.825 of MTA Dedicated Tax Fund Green Bonds, Series 2017A to retire \$350 MTA Dedicated Tax Fund Bond Anticipation Notes, Series 2016A-1. The Series 2017A bonds were issued as fixed rate tax-exempt bonds with a final maturity of November 15, 2047.

On May 17, 2017, MTA issued \$680.265 of MTA Dedicated Tax Fund Green Bonds, Series 2017B. The Series 2017B bonds were issued as \$309.225 MTA DTF Green Bonds, Series 2017B-1 and \$371.040 MTA DTF Refunding Green Bonds, Series 2017B-2. Proceeds from the transaction were used to pay off the existing outstanding 2016A-2 Bond Anticipation Notes in the amount of \$350 and to refund the following outstanding series of DTF bonds: \$65.035 of Series 20004B-1; \$65.435 of Series 2004B-4; and \$256.425 of Series 2009B. The Series 2017B-1 bonds were issued as tax-exempt fixed rate bonds with a final maturity of November 15, 2057. The Series 2017B-2 bonds were issued as tax-exempt fixed-rate bonds with a final maturity of November 15, 2034.

On May 25, 2017, MTA effectuated a mandatory tender and remarketed \$82.575 of MTA Dedicated Tax Fund Bonds, Subseries 2008A-2a because its current interest rate period was set to expire by its terms.

On June 14, 2017, MTA effectuated a mandatory tender and remarketed \$167.435 of MTA Dedicated Tax Fund Variable Rate Refunding Bonds, Subseries 2008A-1 due to substituting the irrevocable direct-pay letter of credit issued by Royal Bank of Canada, acting through its New York branch, with an irrevocable direct-pay letter of credit issued by TD Bank, N.A.

**MTA Certificates of Participation** — Prior to 2017, 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 2017, MTA Bridges and Tunnels issued twenty-seven 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 \$11,922. The General Revenue Bonds are MTA Bridges and Tunnels' general obligations payable generally from the net revenues collected on the bridges and tunnels operated by MTA Bridges and Tunnels.

On January 12, 2017, MTA issued \$300.000 Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2017A and \$902.975 Triborough Bridge and Tunnel Authority General Revenue Refunding Bonds, Series 2017B. The proceeds from the Series 2017A bonds will be used to finance bridge and tunnel projects. The proceeds from the Series 2017B bonds were used to refund \$37.980 of Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2007A; \$529.110 of Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2008A and B; \$223.865 of Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2008C; \$94.550 of Triborough Bridge and Tunnel Authority General Revenue Bonds, Series 2009A-2; and \$125.935 of Triborough Bridge and Tunnel Authority Subordinate Revenue Bonds, Series 2008D. The Series 2017A bonds were issued as tax-exempt fixed rate

bonds with a final maturity of November 15, 2047. The Series 2017B bonds were issued as \$33.575 Triborough Bridge and Tunnel Authority General Revenue Bonds, Subseries 2017B-1; \$471.630 Triborough Bridge and Tunnel Authority General Revenue Bonds, Subseries 2017B-2; \$313.395 Triborough Bridge and Tunnel Authority General Revenue Bonds, Subseries 2017B-3; and \$84.375 Triborough Bridge and Tunnel Authority General Revenue Bonds, Subseries 2017B-4. The Series 2017B bonds were issued as tax-exempt fixed rate bonds with a final maturity of November 15, 2047.

**MTA Bridges and Tunnels Subordinate Revenue Bonds** — Prior to 2017, 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 depository (“Depository”), 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 Depository, 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 Depository.

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 \$33,948. 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, 2017 and December 31, 2016, 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.

<b>(In millions)</b>	<b>September 30, 2017</b>	<b>December 31, 2016</b>
	<u>(Unaudited)</u>	<u></u>
MTA Transit and Commuter Facilities:		
Transit Facilities Revenue Bonds	\$ 189	\$ 208
Commuter Facilities Revenue Bonds	193	214
Transit and Commuter Facilities Service Contract Bonds	28	65
Dedicated Tax Fund Bonds	61	80
MTA New York City Transit — Transit Facilities Revenue Bonds (Livingston Plaza Project)	8	15
MTA Bridges and Tunnels:		
General Purpose Revenue Bonds	694	735
Special Obligation Subordinate Bonds	115	128
Mortgage Recording Tax Bonds	-	14
Total	<u>\$ 1,288</u>	<u>\$ 1,459</u>

For the nine months ended September 30, 2017, MTA refunding transactions decreased aggregate debt service payments by \$360 and provided an economic gain of \$271. For the nine months ended September 30, 2016, MTA refunding transactions decreased aggregate debt service payments by \$578 and provided an economic gain of \$448. For the nine months ended September 30, 2017 and 2016, the accounting loss on bond refundings totaled \$133 and \$399, respectively.

Unamortized losses related to bond refundings were as follows:

(In millions)	December 31, 2015		Net increase/ (decrease)		December 31, 2016		(Gain)/Loss on Refunding (Unaudited)		Current Year Amortization (Unaudited)		September 30, 2017	
	<b>MTA:</b>											
Transportation Revenue Bonds	\$	335	\$	222	\$	557	\$	22	\$	(38)	\$	541
State Service Contract Bonds		(5)		(2)		(7)		-		(2)		(9)
Dedicated Tax Fund Bonds		101		114		215		54		(12)		257
		431		334		765		76		(52)		789
<b>TBTA:</b>												
General Revenue Bonds		161		23		184		57		(23)		218
Subordinate Revenue Bonds		34		(15)		19		-		11		30
		195		8		203		57		(12)		248
<b>Total</b>	<b>\$</b>	<b>626</b>	<b>\$</b>	<b>342</b>	<b>\$</b>	<b>968</b>	<b>\$</b>	<b>133</b>	<b>\$</b>	<b>(64)</b>	<b>\$</b>	<b>1,037</b>

**Debt Service Payments** — Future principal and interest debt service payments at September 30, 2017 are as follows (in millions):

	MTA		MTA BRIDGES AND TUNNELS		Debt Service	
	Principal	Interest	Principal	Interest	Principal	Interest
2017	\$ 1,471	\$ 1,425	\$ 217	\$ 192	\$ 1,688	\$ 1,617
2018	737	1,429	325	368	1,062	1,797
2019	747	1,383	338	355	1,085	1,738
2020	747	1,340	343	339	1,090	1,679
2021	788	1,259	349	323	1,137	1,582
2022-2026	4,776	5,122	1,996	1,354	6,772	6,476
2027-2031	5,996	3,781	2,355	851	8,351	4,632
2032-2036	5,977	2,537	1,366	456	7,343	2,993
2037-2041	4,515	1,270	812	181	5,327	1,451
2042-2046	1,441	382	288	57	1,729	439
2047-2051	525	186	67	7	592	193
Thereafter	1,067	65	-	-	1,067	65
	<u>\$ 28,787</u>	<u>\$ 20,179</u>	<u>\$ 8,456</u>	<u>\$ 4,483</u>	<u>\$ 37,243</u>	<u>\$ 24,662</u>

The above interest amounts include both fixed - 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 on SubSeries 2002D-2 taking into account the interest rate swap
- *Transportation Revenue Refunding Bonds, Series 2002G* — 3.542% per annum on SubSeries 2002G-1 taking into account the interest rate swap and 4.00% per annum 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 and 4.00% per annum on the unhedged portion
- *Transportation Revenue Bonds, Series 2012A* — 4.00% per annum
- *Transportation Revenue Bonds, Series 2012G* — 3.563% per annum taking into account the interest rate swaps
- *Transportation Revenue Bonds, Series 2015E* — 4.00% per annum
- *Dedicated Tax Fund Bonds, Series 2002B* — 4.00% per annum
- *Dedicated Tax Fund Variable Rate Refunding Bonds, Series 2008A* — 3.316% per annum on the hedged portion related to the interest rate swaps, and 4.00% per annum on the unhedged portion
- *MTA Bridges and Tunnels Subordinate Refunding Bonds, Series 2000ABCD* — 6.08% per annum on the hedged portion related to the interest rate swaps, and 4.00% per annum on the unhedged portion
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2001B and Series 2001C* — 4.00% per annum
- *MTA Bridges and Tunnels General Revenue Refunding Bonds, Series 2002F* — 5.404% and 3.076% per annum taking into account the interest rate swaps and 4.00% per annum on portions not covered by the interest rate swaps
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2003B* — 4.00% per annum
- *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 thereafter
- *MTA Bridges and Tunnels General Revenue Bonds, Series 2008B* — 4.00% per annum, after the mandatory tender date

**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 debt service requirements at September 30, 2017 are as follows:

**Loans Payable**  
(in millions)

<b>Year</b>	<b>Principal</b>	<b>Interest</b>	<b>Total</b>
2017	\$ 3.08	\$ 0.24	\$ 3.32
2018	12.37	0.90	13.27
2019	12.19	0.78	12.97
2020	11.57	0.66	12.23
2021	10.69	0.55	11.24
2022-2026	31.39	1.54	32.93
2027-2031	13.31	0.54	13.85
2032-2036	4.23	0.05	4.28
<b>Total</b>	<b>\$ 98.83</b>	<b>\$ 5.26</b>	<b>\$ 104.09</b>
Current portion	\$ 12.38		
Long-term portion	86.45		
Total NYPA loans Payable	<b>\$ 98.83</b>		

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 semi-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, 2017 and December 31, 2016.

**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.

<b>Resolution</b>	<b>Series</b>	<b>Swap</b>	<b>Provider (Insurer)</b>	<b>Type of Facility</b>	<b>Exp. Date</b>
Transportation Revenue	2005D-1	Y	Helaba	LOC	11/7/2018
Transportation Revenue	2005D-2	Y	Helaba	LOC	11/10/2022
Transportation Revenue	2005E-1	Y	Bank of Montreal	LOC	8/24/2018
Transportation Revenue	2005E-2	Y	Royal Bank of Canada	LOC	12/15/2017
Transportation Revenue	2005E-3	Y	Bank of Montreal	LOC	8/24/2018
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	2001B	N	State Street	LOC	9/28/2018
MTA Bridges and Tunnels General Revenue	2001C	Y	Bank of Tokyo Mitsbishi	SBPA	8/17/2018
MTA Bridges and Tunnels General Revenue	2002F	Y	Helaba	SBPA	11/1/2018
MTA Bridges and Tunnels General Revenue	2003B-1	N	PNC Bank	LOC	1/26/2018
MTA Bridges and Tunnels General Revenue	2003B-3	N	Wells Fargo	LOC	1/26/2018
MTA Bridges and Tunnels General Revenue	2005A	Y	TD Bank	LOC	1/28/2020
MTA Bridges and Tunnels General Revenue	2005B-2	Y	Wells Fargo	LOC	1/26/2018
MTA Bridges and Tunnels General Revenue	2005B-3	Y	Bank of Tokyo Mitsbishi	LOC	6/29/2018

**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, 2017 and December 31, 2016, classified by type, and the changes in fair value of such derivative instruments from the year ended December 31, 2016 are as follows:

**Derivative Instruments**

**Summary Information**

(in \$ millions)

Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Cash Flow or Fair Value Hedge	Effective Methodology	Trade/Hedge Association Date	As of September 30, 2017	
						Notional Amount	Fair Value
						(Unaudited)	
<b>Cashflow Hedges</b>							
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	191.300	(31.703)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	573.900	(95.110)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	22.765	(3.301)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	57.475	(2.911)
MTA Bridges and Tunnels Subordinate Revenue Bonds	2000ABCD	SIFMA Fixed Payer	Cash Flow	Synthetic Instrument	8/12/1998	34.150	(1.498)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	328.980	(49.328)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(68.356)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	394.980	(72.204)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	357.500	(85.206)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	142.015	(12.997)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	56.220	(15.747)
Total						\$ 2,359.285	\$ (438.362)

**Derivative Instruments****Summary Information**

(in \$ millions)

Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Cash Flow or Fair Value Hedge	Effective Methodology	Trade/Hedge Association Date	As of December 31, 2016	
						Notional Amount	Fair Value
<b>Cashflow Hedges</b>							
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	192.200	(31.348)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	576.600	(94.044)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	23.230	(3.524)
MTA Bridges and Tunnels Senior Revenue Bonds	2005C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	70.500	(4.058)
MTA Bridges and Tunnels Subordinate Revenue Bonds	2000ABCD	Libor Fixed Payer	Cash Flow	Synthetic Instrument	8/12/1998	55.800	(3.920)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	328.980	(51.300)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(67.214)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	394.980	(73.319)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	357.500	(83.394)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	155.815	(15.244)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	46.555	(15.442)
					Total	<u>\$ 2,402.160</u>	<u>\$ (442.807)</u>

	Changes In Fair Value		Fair Value at September 30, 2017		Notional (in millions)
	Classification	Amount (in millions)	Classification	Amount (in millions)	
<b>Government activities</b>		(Unaudited)		(Unaudited)	(Unaudited)
Cash Flow hedges:					
Pay-fixed interest rate swaps	Deferred outflow of resources	\$ 4.445	Debt	\$ (438.362)	\$ 2,359.285

### 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, 2017).

Metropolitan Transportation Authority						
Related Bonds	Notional Amount as of 9/30/17 (Unaudited)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 9/30/17 (Unaudited)
TRB 2002D-2	\$200.000	01/01/07	11/01/32	Pay 4.45%; receive 69% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa3 / AA-)	\$ (68.356)
TRB 2005D & 2005E	296.235	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / A1 / AA-)	(54.153)
TRB 2005E	98.745	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	AIG Financial Products <sup>1</sup> (BBB+ / Baa1 / BBB+)	(18.051)
TRB 2012G	357.500	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa3 / AA-)	(85.206)
DTF 2008A	328.980	03/24/05	11/01/31	Pay 3.3156%; receive 67% 1M LIBOR	Bank of New York Mellon (AA- / Aa2 / AA)	(49.328)
<b>Total</b>	<b>\$1,281.460</b>					<b>\$ (275.094)</b>

<sup>1</sup>Guarantor: American International Group, Inc., parent of AIG Financial Products.

MTA Bridges and Tunnels						
Related Bonds	Notional Amount as of 9/30/17 (Unaudited)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 9/30/17 (Unaudited)
TBTA 2002F & 2003B-2	\$191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	Citibank, N.A. (A+ / A1 / A+)	\$ (31.703)
TBTA 2005B-2	191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa3 / AA-)	(31.703)
TBTA 2005B-3	191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas North America (A / Aa3 / A+)	(31.703)
TBTA 2005B-4	191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / A1 / AA-)	(31.703)
TBTA 2000ABCD	34.150	01/01/01	01/01/19	Pay 6.08%; receive SIFMA - 15 bp <sup>1</sup>	JPMorgan Chase Bank, NA (A+ / Aa3 / AA-)	(1.498)
TRB 2002G-1 & 2011B, TBTA 2005A & 2001C <sup>2</sup>	139.237 <sup>3</sup>	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	U.S. Bank N.A. (AA- / A1 / AA)	(17.478) <sup>3</sup>
TRB 2002G-1 & 2011B, TBTA 2005A & 2001C <sup>2</sup>	139.238 <sup>3</sup>	04/01/16	01/01/30	Pay 3.52%; receive 67% 1M LIBOR	Wells Fargo Bank, N.A. (AA- / Aa2 / AA)	(17.478) <sup>3</sup>
<b>Total</b>	<b>\$1,077.825</b>					<b>\$ (163.268)</b>

<sup>1</sup>In accordance with a swaption entered into on August 12, 1998, TBTA received an upfront option premium of \$22.740, which is being amortized over the life of the swap agreement.

<sup>2</sup>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.

<sup>3</sup>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

SIFMA: Securities Industry and Financial Markets Association Index

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, 2017, 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, 2017, 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
JPMorgan Chase Bank, NA	A+	Aa3	AA-	\$782,950	33.19%
UBS AG	A+	A1	AA-	487,535	20.66
The Bank of New York Mellon	AA-	Aa2	AA	328,980	13.94
Citibank, N.A.	A+	A1	A+	191,300	8.11
BNP Paribas North America, Inc.	A	Aa3	A+	191,300	8.11
U.S. Bank National Association	AA-	A1	AA	139,237	5.9
Wells Fargo Bank, N.A.	AA-	Aa2	AA	139,238	5.9
AIG Financial Products Corp.	BBB+	Baa1	BBB+	98,745	4.19
<b>Total</b>				<b>\$2,359,285</b>	<b>100.00%</b>

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

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

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

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

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

<b>MTA Transportation Revenue</b>		
<b>Counterparty Name</b>	<b>MTA</b>	<b>Counterparty</b>
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.

<b>MTA Dedicated Tax Fund</b>		
<b>Counterparty Name</b>	<b>MTA</b>	<b>Counterparty</b>
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.

<b>MTA Bridges and Tunnels Senior Lien</b>		
<b>Counterparty Name</b>	<b>MTA Bridges and Tunnels</b>	<b>Counterparty</b>
BNP Paribas North America, Inc.; 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.

<b>MTA Bridges and Tunnels Subordinate Lien</b>		
<b>Counterparty Name</b>	<b>MTA Bridges and Tunnels</b>	<b>Counterparty</b>
JPMorgan Chase Bank, NA	Swap Insurer below A3 (Moody's) and A- (S&P); and MTA Bridges and Tunnels Senior Lien rating below Baa3 (Moody's) and BBB- (S&P)	Below Baa2 (Moody's) or BBB (S&P)
U.S. Bank National Association; Wells Fargo Bank, N.A.	Below Baa2 (Moody's) or BBB (S&P)*	Below Baa2 (Moody's) or BBB (S&P)**

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

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

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

outstanding transactions and net the amounts so that a single sum will be owed by, or owed to, the non-defaulting party.

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

Associated Bond Issue	Bond Maturity Date	Swap Termination Date
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2001C (swaps with U.S. Bank/Wells Fargo)	January 1, 2032	January 1, 2030
MTA Bridges and Tunnels General Revenue Variable Rate Refunding Bonds, Series 2002F (swap with Citibank, N.A.)	November 1, 2032	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2003B (swap with Citibank, N.A.)	January 1, 2033	January 1, 2032
MTA Bridges and Tunnels General Revenue Variable Rate Bonds, Series 2005A (swaps with U.S. Bank/Wells Fargo and Citibank, N.A.)	November 1, 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, 2017, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was (\$232.270); 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, 2017, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was (\$162.889); 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.*

<b>MTA Dedicated Tax Fund</b>		
<b>Counterparty</b>	<b>MTA Collateral Thresholds</b>	<b>Counterparty Collateral Thresholds (based on lowest rating)</b>
Bank of New York Mellon	N/A – MTA does not post collateral	Aa3/AA-: \$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.*

<b>MTA Bridges and Tunnels Senior Lien</b>		
<b>Counterparty</b>	<b>MTA Bridges and Tunnels Collateral Thresholds (based on highest rating)</b>	<b>Counterparty Collateral Thresholds (based on highest rating)</b>
BNP Paribas North America, Inc.; 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.*

<b>MTA Bridges and Tunnels Subordinate Lien</b>		
<b>Counterparty</b>	<b>MTA Bridges and Tunnels Collateral Thresholds (based on lowest rating)</b>	<b>Counterparty Collateral Thresholds (based on lowest rating)</b>
JPMorgan Chase Bank, NA	N/A – MTA Bridges and Tunnels does not post collateral	\$1,000,000
U.S. Bank National Association; Wells Fargo Bank, N.A.	Baa3/BBB- & below: Zero <i>(note: only applicable as cure for Termination Event)</i>	Aa3/AA-: \$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 Tunnel's 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) (Unaudited)				
Period Ended September 30, 2017	Variable-Rate Bonds		Net Swap Payments	Total
	Principal	Interest		
2017	34.4	51.5	(5.5)	80.4
2018	35.8	50.1	(5.4)	80.6
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
2022-2026	331.6	186.9	(18.9)	499.6
2027-2031	617.0	351.7	(10.5)	958.3
2032-2035	370.8	152.3	(1.9)	521.2

MTA Bridges and Tunnels (in millions) (Unaudited)				
Period Ended September 30, 2017	Variable-Rate Bonds		Net Swap Payments	Total
	Principal	Interest		
2017	59.2	42.2	(6.0)	95.4
2018	62.5	39.7	(6.6)	95.7
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
2022-2026	175.1	159.6	(32.7)	302.0
2027-2031	543.0	95.3	(22.8)	615.4
2032-2035	184.1	1.5	(0.1)	185.5

## 8. LEASE TRANSACTIONS

**Leveraged Lease Transactions: Subway Cars** — During 1995, MTA Bridges and Tunnels entered into a sale/leaseback transaction with a third party whereby MTA Bridges and Tunnels sold certain subway cars, which were contributed by MTA New York City Transit, for net proceeds of \$84.2. These cars were subsequently leased back by MTA Bridges and Tunnels under a capital lease. The advanced credit of \$34.2 was netted against the carrying value of the leased assets, and the assets were recontributed to the MTA New York City Transit. MTA Bridges and Tunnels transferred \$5.5 to the MTA, representing the net economic benefit of the transaction. The remaining proceeds, equal to the net present value of the lease obligation, of which \$71.3 was placed in an irrevocable deposit account at ABN AMRO Bank N.V. and \$7.5 was invested in U.S. Treasury Strips. The estimated yields and maturities of the deposit account and the Treasury Strips are expected to be sufficient to meet all of the regularly scheduled obligations under the lease as they become due. In 2016, the balance in the irrevocable deposit account and the investments in U.S. Treasury Strips were liquidated and used to settle the obligations related to the subway car lease.

**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 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, 2017, the market value of total collateral funds was \$37.4.

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, 2017, the market value of total collateral funds was \$52.7.

**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:

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

- a. The lease transfers ownership of the property to the lessee by the end of the lease term.
- b. The lease contains a bargain purchase option.
- c. The lease term is equal to 75 percent or more of the estimated economic life of the leased property.
- d. 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, 2017 (Unaudited):

Year	ERY	WRY	Total
2017	2	-	2
2018	9	14	23
2019	18	16	34
2020	19	16	35
2021	19	32	51
Thereafter	906	1,591	2,497
Total	<b>\$ 973</b>	<b>\$ 1,669</b>	<b>\$ 2,642</b>

**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, for an initial stated term of approximately 50 years, an office building at Two Broadway in lower Manhattan. The lease term expires on July 30, 2048, and, pursuant to certain provisions, is renewable for two additional 15-year terms. The lease comprises both operating (for the lease of land) and capital (for the lease of the building) elements. 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 MTA made rent payments of \$19 and \$25 for the period ended September 30, 2017 and December 31, 2016, respectively. In connection with the renovation of the building and for tenant improvements, the MTA issued \$121 and \$328 in 2000 and 1999, respectively, of certificates of participation. In 2004, it issued approximately \$358 of certificates of participation that partially refunded the two previously issued certificates. During October 2016, the MTA outstanding principal amount of \$70.5, along with accrued interest, was prepaid using certain cash amounts made available as a result of the issuance of MTA Transportation Revenue Refunding Bonds, Series 2016D, along with other available moneys of MTA Bridges and Tunnels (see Note 7). The office building at 2 Broadway, is principally occupied by MTA New York City Transit, MTA Bridges and Tunnels, MTA Capital Construction, and MTAHQ.

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 \$50.2 and \$33.3 for the periods ended September 30, 2017 and 2016, respectively.

At September 30, 2017, the future minimum lease payments under non-cancelable leases are as follows (in millions):

Years	<u>Operating</u> <u>(Unaudited)</u>	<u>Capital</u> <u>(Unaudited)</u>
2017	\$ 37	\$ 18
2018	62	19
2019	61	22
2020	60	30
2021	60	21
2022–2026	234	140
2027–2031	291	102
2032–2036	283	545
2037–2041	253	139
2042–2046	256	153
Thereafter	430	249
Future minimum lease payments	<u>\$ 2,027</u>	1,438
Amount representing interest		<u>(1,004)</u>
Total present value of capital lease obligations		434
Less current present value of capital lease obligations		4
Noncurrent present value of capital lease obligations		<u>\$ 430</u>

**Capital Leases Schedule**  
For the Period Ended September 30, 2017  
(in millions)

Description	December 31, 2016	Increase	Decrease	June 30, 2017
		(Unaudited)		(Unaudited)
Sumitomo	\$ 15	\$ -	\$ -	\$ 15
Met Life	5	-	-	5
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	34	-	-	34
Bank of America Equity	16	-	-	16
Sumitomo	35	1	-	36
Met Life Equity	50	-	-	50
Grand Central Terminal & Harlem Hudson Railroad Lines	14	-	-	14
2 Broadway Lease Improvement	169	-	-	169
2 Broadway	54	-	-	54
<b>Total MTA Capital Lease</b>	<u>\$ 433</u>	<u>\$ 1</u>	<u>\$ -</u>	<u>\$ 434</u>
Current Portion Obligations under Capital Lease	<u>4</u>			<u>4</u>
Long Term Portion Obligations under Capital Lease	<u>\$ 429</u>			<u>\$ 430</u>

**Capital Leases Schedule**  
**For the Year Ended December 31, 2016**  
(in millions)

Description	December 31, 2015	Increase	Decrease	December 31, 2016
Sumitomo	\$ 15	\$ -	\$ -	\$ 15
Met Life	5	-	-	5
Met Life Equity	19	-	-	19
Bank of New York	22	-	-	22
Bank of America	32	2	-	34
Bank of America Equity	16	-	-	16
Sumitomo	38	1	4	35
Met Life Equity	47	3	-	50
Grand Central Terminal & Harlem Hudson Railroad Lines	14	-	-	14
2 Broadway Lease Improvement	166	9	6	169
2 Broadway	53	1	-	54
Subway Cars	107	1	108	-
<b>Total MTA Capital Lease</b>	<b>\$ 534</b>	<b>\$ 17</b>	<b>\$ 118</b>	<b>\$ 433</b>
Current Portion Obligations under Capital Lease	9			4
Long Term Portion Obligations under Capital Lease	<u>\$ 525</u>			<u>\$ 429</u>

**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 are due 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, 2017 and year ended December 31, 2016 is presented below (in millions):

	<u>September 30</u> <u>2017</u>	<u>December 31,</u> <u>2016</u>
	<b>(Unaudited)</b>	
Balance — beginning of year	\$ 3,441	\$ 2,883
Activity during the year:		
Current year claims and changes in estimates	602	1,448
Claims paid	<u>(342)</u>	<u>(890)</u>
Balance — end of year	3,701	3,441
Less current portion	<u>(403)</u>	<u>(415)</u>
Long-term liability	<u>\$ 3,298</u>	<u>\$ 3,026</u>

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 the 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. The MTA recognized pollution remediation expenses of \$2 and \$5 for the periods ended September 30, 2017 and 2016, respectively. A summary of the activity in pollution remediation liability at September 30, 2017 and December 31, 2016 were as follows:

	<b>September 30, 2017</b>	<b>December 31, 2016</b>
	<b>(Unaudited)</b>	
Balance at beginning of year	\$ 88	\$ 100
Current year expenses/changes in estimates	2	12
Current year payments	(4)	(24)
Balance at end of year	<u>86</u>	<u>88</u>
Less current portion	<u>23</u>	<u>23</u>
Long-term liability	<u>\$ 63</u>	<u>\$ 65</u>

## 13. CURRENT AND NON-CURRENT LIABILITIES

Changes in the activity of current and non-current liabilities for the periods ended September 30, 2017 and December 31, 2016 are presented below:

	Balance December 31, 2015	Additions	Reductions	Balance December 31, 2016	Additions	Reductions	Balance September 30, 2017
<b>Current liabilities:</b>						(Unaudited)	(Unaudited)
Accounts payable	\$ 409	\$ 117	\$ -	\$ 526	\$ 19	\$ -	\$ 545
Interest	210	16	-	226	373	-	599
Salaries, wages and payroll taxes	256	-	(5)	251	70	-	321
Vacation and sick pay benefits	880	31	-	911	18	-	929
Current portion — retirement and death benefits	15	-	-	15	20	-	35
Capital accrual	479	-	(43)	436	129	-	565
Other accrued expenses	560	88	-	648	42	-	690
Unearned revenues	563	8	-	571	60	-	631
<b>Total current liabilities</b>	<b>\$ 3,372</b>	<b>\$ 260</b>	<b>\$ (48)</b>	<b>\$ 3,584</b>	<b>\$ 731</b>	<b>\$ -</b>	<b>\$ 4,315</b>
<b>Non-current liabilities:</b>							
Contract retainage payable	\$ 281	\$ 28	\$ -	\$ 309	\$ 37	\$ -	\$ 346
Other long-term liabilities	307	10	-	317	16	-	333
<b>Total non-current liabilities</b>	<b>\$ 588</b>	<b>\$ 38</b>	<b>\$ -</b>	<b>\$ 626</b>	<b>\$ 53</b>	<b>\$ -</b>	<b>\$ 679</b>

#### 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	J. Aron & Company	Bank of America Merrill Lynch	J. Aron & Company	J. Aron & Company	JPM - Ventures Energy Corp	Macquarie Energy LLC	Macquarie Energy LLC	Macquarie Energy LLC
Trade Date	10/29/2015	11/24/2015	12/17/2015	1/27/2016	2/23/2016	3/29/2016	4/28/2016	5/26/2016
Effective Date	2/1/2016	11/1/2016	12/1/2016	1/1/2017	2/1/2017	3/1/2017	4/1/2017	5/1/2017
Termination Date	9/30/2017	10/31/2017	11/30/2017	12/31/2017	1/31/2018	2/28/2018	3/31/2018	4/30/2018
Price/Gal	\$1.7100	\$1.6515	\$1.4825	\$1.2760	\$1.3100	\$1.3820	\$1.5535	\$1.6225
Original Notional Quantity	5,631,317	4,863,189	4,266,180	3,745,930	3,845,749	3,926,350	4,527,533	4,728,640
Counterparty	J. Aron & Company	J. Aron & Company	Macquarie Energy LLC	J. Aron & Company	Macquarie Energy LLC	J. Aron & Company	J. Aron & Company	JPM - Ventures Energy Corp
Trade Date	6/30/2016	7/28/2016	8/24/2016	9/22/2016	10/26/2016	11/22/2016	12/20/2016	1/26/2017
Effective Date	6/1/2017	7/1/2017	8/1/2017	9/1/2017	10/1/2017	11/1/2017	12/1/2017	1/1/2018
Termination Date	5/30/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018	10/31/2018	11/30/2018	12/31/2018
Price/Gal	\$1.6515	\$1.5020	\$1.6350	\$1.5975	\$1.6240	\$1.6670	\$1.7657	\$1.7485
Original Notional Quantity	4,813,146	4,498,206	4,780,987	4,671,339	4,801,475	4,879,859	5,122,068	5,111,306
Counterparty	Cargill	J. Aron & Company	J. Aron & Company	J. Aron & Company	J. Aron & Company	J. Aron & Company	J. Aron & Company	J. Aron & Company
Trade Date	2/28/2017	3/28/2017	4/27/2017	5/30/2017	6/27/2017	7/26/2017	8/29/2017	9/22/2017
Effective Date	2/1/2018	3/1/2019	4/1/2019	5/1/2019	6/1/2019	7/1/2019	8/1/2019	9/1/2019
Termination Date	1/31/2019	2/29/2020	3/31/2020	4/30/2020	5/31/2020	6/30/2020	7/31/2020	8/31/2020
Price/Gal	\$1.6824	\$1.6090	\$1.5915	\$1.6085	\$1.5225	\$1.6180	\$1.6315	\$1.7205
Original Notional Quantity	4,918,086	4,703,517	4,594,937	4,687,603	4,436,967	4,715,260	4,754,602	5,013,957

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, 2017, the total outstanding notional value of the ULSD contracts was 53.8 million gallons with a positive fair market value of \$7 (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, 2017 (Unaudited)	MTA	Metro-North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	\$ 7,329	\$ 208	\$ 206	\$ 574	\$ 567	\$ (26)	\$ 8,858
Capital assets	9,810	4,704	5,938	40,674	5,845	-	66,971
Other Assets	10,916	5	-	1	627	(10,496)	1,054
Intercompany receivables	797	80	132	1,564	(4)	(2,569)	-
Deferred outflows of resources	1,621	242	366	1,918	538	(670)	4,015
<b>Total assets and deferred outflows of resources</b>	<b>\$ 30,473</b>	<b>\$ 5,239</b>	<b>\$ 6,642</b>	<b>\$ 44,731</b>	<b>\$ 7,573</b>	<b>\$ (13,761)</b>	<b>\$ 80,898</b>
Current liabilities	\$ 3,571	\$ 270	\$ 246	\$ 1,837	\$ 851	\$ (330)	\$ 6,445
Non-current liabilities	32,824	1,096	2,202	21,913	10,441	(28)	68,448
Intercompany payables	2,280	71	18	106	589	(3,064)	-
Deferred inflows of resources	54	25	24	741	40	(563)	322
<b>Total liabilities and deferred inflows of resources</b>	<b>\$ 38,729</b>	<b>\$ 1,462</b>	<b>\$ 2,490</b>	<b>\$ 24,597</b>	<b>\$ 11,921</b>	<b>\$ (3,985)</b>	<b>\$ 75,215</b>
Net investment in capital assets	\$ (25,395)	\$ 4,690	\$ 5,938	\$ 40,505	\$ 1,255	\$ (74)	\$ 26,919
Restricted	2,289	-	-	-	880	(468)	2,701
Unrestricted	14,850	(913)	(1,786)	(20,371)	(6,483)	(9,234)	(23,937)
<b>Total net position</b>	<b>\$ (8,256)</b>	<b>\$ 3,777</b>	<b>\$ 4,152</b>	<b>\$ 20,134</b>	<b>\$ (4,348)</b>	<b>\$ (9,776)</b>	<b>\$ 5,683</b>
<b>For the period ended September 30, 2017 (Unaudited)</b>							
Fare revenue	\$ 168	\$ 542	\$ 541	\$ 3,339	\$ -	\$ -	\$ 4,590
Vehicle toll revenue	-	-	-	-	1,430	-	1,430
Rents, freight and other revenue	58	43	41	322	14	(41)	437
<b>Total operating revenue</b>	<b>226</b>	<b>585</b>	<b>582</b>	<b>3,661</b>	<b>1,444</b>	<b>(41)</b>	<b>6,457</b>
Total labor expenses	916	721	845	5,531	235	(26)	8,222
Total non-labor expenses	312	268	294	1,312	168	(47)	2,307
Depreciation	80	176	253	1,225	118	-	1,852
<b>Total operating expenses</b>	<b>1,308</b>	<b>1,165</b>	<b>1,392</b>	<b>8,068</b>	<b>521</b>	<b>(73)</b>	<b>12,381</b>
<b>Operating (deficit) surplus</b>	<b>(1,082)</b>	<b>(580)</b>	<b>(810)</b>	<b>(4,407)</b>	<b>923</b>	<b>32</b>	<b>(5,924)</b>
Subsidies and grants	628	81	-	237	6	(79)	873
Tax revenue	3,972	-	-	2,112	-	(1,746)	4,338
Interagency subsidy	573	280	578	197	-	(1,628)	-
Interest expense	(952)	-	-	(2)	(232)	(15)	(1,201)
Other	(1,071)	-	-	(1)	2	1,265	195
<b>Total non-operating revenues (expenses)</b>	<b>3,150</b>	<b>361</b>	<b>578</b>	<b>2,543</b>	<b>(224)</b>	<b>(2,203)</b>	<b>4,205</b>
<b>Income (Loss) before appropriations</b>	<b>2,068</b>	<b>(219)</b>	<b>(232)</b>	<b>(1,864)</b>	<b>699</b>	<b>(2,171)</b>	<b>(1,719)</b>
<b>Appropriations, grants and other receipts externally restricted for capital projects</b>	<b>(915)</b>	<b>250</b>	<b>510</b>	<b>563</b>	<b>(570)</b>	<b>1,957</b>	<b>1,795</b>
<b>Change in net position</b>	<b>1,153</b>	<b>31</b>	<b>278</b>	<b>(1,301)</b>	<b>129</b>	<b>(214)</b>	<b>76</b>
Net position, beginning of period	(9,409)	3,746	3,874	21,435	(4,477)	(9,562)	5,607
<b>Net position, end of period</b>	<b>\$ (8,256)</b>	<b>\$ 3,777</b>	<b>\$ 4,152</b>	<b>\$ 20,134</b>	<b>\$ (4,348)</b>	<b>\$ (9,776)</b>	<b>\$ 5,683</b>
<b>For the period ended September 30, 2017 (Unaudited)</b>							
Net cash (used in) / provided by operating activities	\$ (985)	\$ (340)	\$ (615)	\$ (1,974)	\$ 1,036	\$ (49)	\$ (2,927)
Net cash provided by / (used in) non-capital financing activities	3,826	368	615	2,621	(560)	(2,537)	4,333
Net cash (used in) / provided by capital and related financing activities	(3,053)	(29)	(7)	(733)	(291)	2,536	(1,577)
Net cash (used in) / provided by investing activities	(205)	-	-	76	(293)	50	(372)
Cash at beginning of period	524	14	13	61	120	-	732
<b>Cash at end of period</b>	<b>\$ 107</b>	<b>\$ 13</b>	<b>\$ 6</b>	<b>\$ 51</b>	<b>\$ 12</b>	<b>\$ -</b>	<b>\$ 189</b>

December 31, 2016	MTA	Metro-North Railroad	Long Island Railroad	New York City Transit Authority	Triborough Bridge and Tunnel Authority	Eliminations	Consolidated Total
Current assets	\$ 7,269	\$ 221	\$ 220	\$ 593	\$ 424	\$ (432)	\$ 8,295
Capital assets	8,982	4,616	5,714	39,906	5,229	71	64,518
Other Assets	10,457	5	-	72	4	(9,565)	973
Intercompany receivables	382	70	89	2,124	470	(3,135)	-
Deferred outflows of resources	1,525	231	366	1,402	488	(180)	3,832
<b>Total assets and deferred outflows of resources</b>	<b>\$ 28,615</b>	<b>\$ 5,143</b>	<b>\$ 6,389</b>	<b>\$ 44,097</b>	<b>\$ 6,615</b>	<b>\$ (13,241)</b>	<b>\$ 77,618</b>
Current liabilities	\$ 3,406	\$ 271	\$ 246	\$ 1,710	\$ 812	\$ (442)	\$ 6,003
Non-current liabilities	31,821	1,047	2,207	20,741	10,011	(143)	65,684
Intercompany payables	2,741	54	39	-	259	(3,093)	-
Deferred inflows of resources	56	25	23	210	10	-	324
<b>Total liabilities and deferred inflows of resources</b>	<b>\$ 38,024</b>	<b>\$ 1,397</b>	<b>\$ 2,515</b>	<b>\$ 22,661</b>	<b>\$ 11,092</b>	<b>\$ (3,678)</b>	<b>\$ 72,011</b>
Net investment in capital assets	\$ (25,258)	\$ 4,602	\$ 5,714	\$ 39,809	\$ 911	\$ (22)	\$ 25,756
Restricted	1,383	-	-	-	511	(429)	1,465
Unrestricted	14,466	(856)	(1,840)	(18,373)	(5,899)	(9,112)	(21,614)
<b>Total net position</b>	<b>\$ (9,409)</b>	<b>\$ 3,746</b>	<b>\$ 3,874</b>	<b>\$ 21,436</b>	<b>\$ (4,477)</b>	<b>\$ (9,563)</b>	<b>\$ 5,607</b>
<b>For the period ended September 30, 2016 (Unaudited)</b>							
Fare revenue	\$ 166	\$ 510	\$ 532	\$ 3,293	\$ -	\$ (1)	\$ 4,500
Vehicle toll revenue	-	-	-	-	1,405	-	1,405
Rents, freight and other revenue	63	45	42	312	23	(45)	440
<b>Total operating revenue</b>	<b>229</b>	<b>555</b>	<b>574</b>	<b>3,605</b>	<b>1,428</b>	<b>(46)</b>	<b>6,345</b>
Total labor expenses	880	682	844	5,408	229	(27)	8,016
Total non-labor expenses	213	251	257	1,258	157	(49)	2,087
Depreciation	66	175	252	1,240	84	1	1,818
<b>Total operating expenses</b>	<b>1,159</b>	<b>1,108</b>	<b>1,353</b>	<b>7,906</b>	<b>470</b>	<b>(75)</b>	<b>11,921</b>
<b>Operating (deficit) surplus</b>	<b>(930)</b>	<b>(553)</b>	<b>(779)</b>	<b>(4,301)</b>	<b>958</b>	<b>29</b>	<b>(5,576)</b>
Subsidies and grants	299	89	-	237	6	252	883
Tax revenue	3,954	-	-	2,027	-	(1,464)	4,517
Interagency subsidy	576	242	478	199	-	(1,495)	-
Interest expense	(845)	-	-	(7)	(244)	(4)	(1,100)
Other	(1,825)	(1)	-	-	1	1,990	165
<b>Total non-operating revenues (expenses)</b>	<b>2,159</b>	<b>330</b>	<b>478</b>	<b>2,456</b>	<b>(237)</b>	<b>(721)</b>	<b>4,465</b>
<b>Income (Loss) before appropriations</b>	<b>1,229</b>	<b>(223)</b>	<b>(301)</b>	<b>(1,845)</b>	<b>721</b>	<b>(692)</b>	<b>(1,111)</b>
<b>Appropriations, grants and other receipts externally restricted for capital projects</b>	<b>(252)</b>	<b>180</b>	<b>347</b>	<b>1,130</b>	<b>(575)</b>	<b>690</b>	<b>1,520</b>
<b>Change in net position</b>	<b>977</b>	<b>(43)</b>	<b>46</b>	<b>(715)</b>	<b>146</b>	<b>(2)</b>	<b>409</b>
Net position, beginning of period	(8,961)	3,699	3,829	21,303	(4,556)	(9,481)	5,833
Restatement of beginning net position	-	-	-	-	-	-	-
<b>Net position, end of period</b>	<b>\$ (7,984)</b>	<b>\$ 3,656</b>	<b>\$ 3,875</b>	<b>\$ 20,588</b>	<b>\$ (4,410)</b>	<b>\$ (9,483)</b>	<b>\$ 6,242</b>
<b>For the period ended September 30, 2016 (Unaudited)</b>							
Net cash (used in) / provided by operating activities	(859)	(335)	(496)	(1,942)	1,155	(12)	(2,489)
Net cash provided by / (used in) non-capital financing activities	4,048	334	506	2,537	(563)	(2,414)	4,448
Net cash (used in) / provided by capital and related financing activities	(1,386)	(2)	(6)	(769)	(295)	2,425	(33)
Net cash (used in) / provided by investing activities	(1,945)	-	-	165	(297)	1	(2,076)
Cash at beginning of period	357	15	5	63	14	-	454
<b>Cash at end of period</b>	<b>\$ 215</b>	<b>\$ 12</b>	<b>\$ 9</b>	<b>\$ 54</b>	<b>\$ 14</b>	<b>\$ -</b>	<b>\$ 304</b>

## 16. SUBSEQUENT EVENTS

On October 6, 2017, MTA Bridges and Tunnels issued \$400 General Revenue Bond Anticipation Notes, Series 2017A. The bonds, which mature February 15, 2018, were issued to finance existing approved bridge and tunnel projects.

On October 20, 2017, MTA effectuated a mandatory tender for the purchase and remarketing of \$99 Transportation Revenue Variable Rate Bonds, Series 2011B, and \$73 Transportation Revenue Variable Rate Refunding Bonds, Subseries 2012G-4, because its current interest period expired by its terms. The bonds have a maturity of November 1, 2022.

On October 25, 2017, MTA issued \$1,000 of MTA Transportation Revenue Bond Anticipation Notes, Series 2017C, to finance existing approved transit and commuter projects.

On October 26, 2017, MTA executed a 2,612,515 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.7635 (whole dollars) per gallon. The hedge covers the period from October 2018 through September 2019.

On November 3, 2017, MTA effectuated a mandatory tender and remarketed \$165 of MTA Transportation Revenue Variable Rate Refunding Bonds, Subseries 2014D-2 because its current interest rate period expired by its terms. The bonds have a maturity of November 15, 2044.

On November 17, 2017, MTA Bridges and Tunnels issued \$521 General Revenue Refunding Bonds, Subseries 2017C-1 and \$200 General Revenue Bonds, Subseries 2017C-2. The Subseries 2017C-1 bonds were issued to refinance certain outstanding indebtedness issued by MTA Bridges and Tunnels to finance bridge and tunnel projects. The Subseries 2017C-2 bonds were issued to retire certain MTA Bridges and Tunnels General Revenue Bond Anticipation Notes.

On November 29, 2017, MTA executed a 2,870,561 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.8520 (whole dollars) per gallon. The hedge covers the period from November 2018 through October 2019.

On December 13, 2017, the MTA Board approved a one-year extension of the (1) long-term contract with the New York Power Authority ("NYPA") to supply electricity to all the MTA agencies for facilities and operations within the City of New York and Westchester County and (2) Energy Services Program Agreement between NYPA and the MTA. The extension is through December 31, 2018.

On December 13, 2017, MTA effectuated a mandatory tender and remarketed \$71 of MTA Transportation Revenue Variable Rate Bonds, Subseries 2005E-2 because its current interest rate period expired by its terms. The bonds have a maturity of November 1, 2035.

On December 14, 2017, MTA issued \$1,821 Transportation Revenue Refunding Green Bonds, Subseries 2017C-1 and \$200 Transportation Revenue Refunding Green Bonds, Subseries 2017C-2. The bonds were issued to refund certain outstanding Transportation Revenue Bonds.

On December 21, 2017, MTA issued \$643 Transportation Revenue Refunding Bonds, Series 2017D with maturities through November 15, 2039. The bonds were issued to refund certain outstanding Transportation Revenue Bonds.

On December 27, 2017, MTA executed a 2,870,574 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.9050 (whole dollars) per gallon. The hedge covers the period from December 2018 through November 2019.

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**METROPOLITAN TRANSPORTATION AUTHORITY  
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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		MNR Cash Balance Plan		MTA Defined Benefit Plan	
	2015	2014	2015	2014	2015	2014	2015	2014
<b>Plan Measurement Date (December 31):</b>								
<b>Total pension liability:</b>								
Service cost	\$ 3,441	\$ 3,813	\$ 77,045	\$ 72,091	\$ -	\$ -	\$ 124,354	\$ 121,079
Interest	106,987	110,036	232,405	223,887	29	32	288,820	274,411
Effect of economic / demographic (gains) or losses	6,735	-	(68,997)	-	(10)	-	121,556	-
Effect of assumption changes or inputs	-	-	-	-	18	-	(76,180)	-
Effect of plan changes	-	-	-	-	-	-	6,230	-
Differences between expected and actual experience	-	-	-	(1,596)	-	-	-	2,322
Benefit payments and withdrawals	(157,071)	(156,974)	(179,928)	(175,447)	(113)	(88)	(199,572)	(191,057)
<b>Net change in total pension liability</b>	<b>(39,908)</b>	<b>(43,125)</b>	<b>60,525</b>	<b>118,935</b>	<b>(76)</b>	<b>(56)</b>	<b>265,208</b>	<b>206,755</b>
<b>Total pension liability—beginning</b>	<b>1,602,159</b>	<b>1,645,284</b>	<b>3,331,464</b>	<b>3,212,529</b>	<b>710</b>	<b>766</b>	<b>4,099,738</b>	<b>3,892,983</b>
<b>Total pension liability—ending(a)</b>	<b>1,562,251</b>	<b>1,602,159</b>	<b>3,391,989</b>	<b>3,331,464</b>	<b>634</b>	<b>710</b>	<b>4,364,946</b>	<b>4,099,738</b>
<b>Plan fiduciary net position:</b>								
Employer contributions	100,000	407,513	214,881	226,374	18	-	221,694	331,259
Member contributions	1,108	1,304	16,321	15,460	-	-	34,519	26,006
Net investment income	527	21,231	(24,163)	105,084	6	41	(45,122)	102,245
Benefit payments and withdrawals	(157,071)	(156,974)	(179,928)	(175,447)	(113)	(88)	(199,572)	(191,057)
Administrative expenses	(1,218)	(975)	(88)	(74)	3	(3)	(1,962)	(9,600)
<b>Net change in plan fiduciary net position</b>	<b>(56,654)</b>	<b>272,099</b>	<b>27,023</b>	<b>171,397</b>	<b>(86)</b>	<b>(50)</b>	<b>9,557</b>	<b>258,853</b>
<b>Plan fiduciary net position—beginning</b>	<b>782,852</b>	<b>510,753</b>	<b>2,265,293</b>	<b>2,093,896</b>	<b>698</b>	<b>748</b>	<b>3,065,220</b>	<b>2,806,367</b>
<b>Plan fiduciary net position—ending(b)</b>	<b>726,198</b>	<b>782,852</b>	<b>2,292,316</b>	<b>2,265,293</b>	<b>612</b>	<b>698</b>	<b>3,074,777</b>	<b>3,065,220</b>
<b>Employer's net pension liability—ending(a)-(b)</b>	<b>\$ 836,053</b>	<b>\$ 819,307</b>	<b>\$ 1,099,673</b>	<b>\$ 1,066,171</b>	<b>\$ 22</b>	<b>\$ 12</b>	<b>\$ 1,290,169</b>	<b>\$ 1,034,518</b>
<b>Plan fiduciary net position as a percentage of the total pension liability</b>	<b>46.48%</b>	<b>48.86%</b>	<b>67.58%</b>	<b>68.00%</b>	<b>96.53%</b>	<b>98.36%</b>	<b>70.44%</b>	<b>74.77%</b>
<b>Covered-employee payroll</b>	<b>\$ 35,282</b>	<b>\$ 43,594</b>	<b>\$ 693,900</b>	<b>\$ 671,600</b>	<b>\$ 1,664</b>	<b>\$ 2,080</b>	<b>\$ 1,620,635</b>	<b>\$ 1,395,336</b>
<b>Employer's net pension liability as a percentage of covered-employee payroll</b>	<b>2369.65%</b>	<b>1879.42%</b>	<b>158.48%</b>	<b>158.75%</b>	<b>1.32%</b>	<b>0.58%</b>	<b>79.61%</b>	<b>74.14%</b>

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.

**METROPOLITAN TRANSPORTATION AUTHORITY  
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**REQUIRED SUPPLEMENTARY INFORMATION**

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

(\$ in thousands)

Plan Measurement Date:	NYCERS Plan		NYSLERS Plan	
	June 30, 2016	June 30, 2015	March 31, 2016	March 31, 2015
MTA's proportion of the net pension liability	23.493%	23.585%	0.303%	0.289%
MTA's proportionate share of the net pension liability	\$ 5,708,052	\$ 4,773,787	\$ 48,557	\$ 9,768
MTA's actual covered-employee payroll	\$ 3,245,215	\$ 2,989,480	\$ 87,670	\$ 87,315
MTA's proportionate share of the net pension liability as a percentage of the MTA's covered-employee payroll	175.891%	159.686%	55.386%	11.187%
Plan fiduciary net position as a percentage of the total pension liability	69.568%	73.125%	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.

**METROPOLITAN TRANSPORTATION AUTHORITY  
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**REQUIRED SUPPLEMENTARY INFORMATION**

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

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
	(\$ in thousands)									
<b>Additional Plan*</b>										
Actuarially Determined Contribution	\$ 83,183	\$ 82,382	\$ 112,513	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Actual Employer Contribution	151,100	100,000	407,513	-	-	-	-	-	-	-
Contribution Deficiency (Excess)	\$ (67,917)	\$ (17,618)	\$ (295,000)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 26,880	\$ 35,282	\$ 43,594	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a % of Covered Payroll	562.13%	283.43%	934.79%	N/A						
<b>MaBSTOA Plan</b>										
Actuarially Determined Contribution	\$ 220,697	\$ 214,881	\$ 226,374	\$ 234,474	\$ 228,918	\$ 186,454	\$ 200,633	\$ 204,274	\$ 201,919	\$ 179,228
Actual Employer Contribution	220,697	214,881	226,374	234,474	228,918	186,454	200,633	204,274	201,919	179,228
Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 724,711	\$ 693,900	\$ 671,600	\$ 582,081	\$ 575,989	\$ 579,696	\$ 591,073	\$ 569,383	\$ 562,241	\$ 519,680
Contributions as a % of Covered Payroll	30.45%	30.97%	33.71%	40.28%	39.74%	32.16%	33.94%	35.88%	35.91%	34.49%
<b>Metro-North Cash Balance Plan*</b>										
Actuarially Determined Contribution	\$ 23	\$ -	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Actual Employer Contribution	23	14	-	-	-	-	-	-	-	-
Contribution Deficiency (Excess)	\$ -	\$ (14)	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 834	\$ 1,664	\$ 2,080	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a % of Covered Payroll	2.72%	0.85%	0.00%	N/A						
<b>MTA Defined Benefit Plan*</b>										
Actuarially Determined Contribution	\$ 290,415	\$ 273,700	\$ 271,523	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Actual Employer Contribution	280,767	221,694	331,259	-	-	-	-	-	-	-
Contribution Deficiency (Excess)	\$ 9,648	\$ 52,006	\$ (59,736)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 1,797,930	\$ 1,620,635	\$ 1,395,336	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a % of Covered Payroll	15.62%	13.68%	23.74%	N/A						

\* For the MTA Defined Benefit Plan, Additional Plan and Metro-North Cash Balance Plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

**METROPOLITAN TRANSPORTATION AUTHORITY  
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**REQUIRED SUPPLEMENTARY INFORMATION**

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

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
	(\$ in thousands)									
<b>NYCERS</b>										
Actuarially Determined Contribution	\$ 797,845	\$ 736,212	\$ 741,223	\$ 736,361	\$ 731,983	\$ 657,771	\$ 574,555	\$ 548,721	\$ 499,603	\$ 406,837
Actual Employer Contribution	797,845	736,212	741,223	736,361	731,983	657,771	574,555	548,721	499,603	406,837
Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 3,245,215	\$ 3,339,459	\$ 3,004,960	\$ 2,943,195	\$ 2,925,834	\$ 2,900,630	\$ 2,886,789	\$ 2,800,882	\$ 2,656,778	\$ 2,548,889
Contributions as a % of Covered Payroll	24.59%	22.05%	24.67%	25.02%	25.02%	22.68%	19.90%	19.59%	18.80%	15.96%
<b>NYSLERS **</b>										
Actuarially Determined Contribution	\$ 12,980	\$ 15,792	\$ 13,816	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Actual Employer Contribution	12,980	15,792	13,816	-	-	-	-	-	-	-
Contribution Deficiency (Excess)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$ 96,093	\$ 88,071	\$ 85,826	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Contributions as a % of Covered Payroll	13.51%	17.93%	16.10%	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.

**METROPOLITAN TRANSPORTATION AUTHORITY  
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**REQUIRED SUPPLEMENTARY INFORMATION**

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

	Additional Plan		MaBSTOA Plan	
<b>Valuation Dates:</b>	January 1, 2015	January 1, 2014	January 1, 2015	January 1, 2014
<b>Measurement Date:</b>	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014
<b>Actuarial cost method:</b>	Entry Age Normal Cost	Entry Age Normal Cost	Frozen Initial Liability (FIL)	Frozen Initial Liability (FIL)
<b>Amortization method:</b>	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.	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.
<b>Asset Valuation Method:</b>	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.
<b>Salary increases:</b>	3.00%	3.00%	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.
<b>Actuarial assumptions:</b>				
<b>Discount Rate:</b>	7.00%	7.00%	7.00%	7.00%
<b>Investment rate of return :</b>	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.
<b>Mortality:</b>	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.	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.
<b>Pre-retirement:</b>	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.
<b>Post-retirement Healthy Lives:</b>	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.
<b>Post-retirement Disabled Lives:</b>	N/A	N/A	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.
<b>Inflation/Railroad Retirement Wage Base:</b>	2.50%; 3.50%	2.50%; 3.50%	2.50%	2.50%
<b>Cost-of-Living Adjustments:</b>	N/A	N/A	1.375% per annum	1.375% per annum

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**REQUIRED SUPPLEMENTARY INFORMATION**

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

**(continued)**

	<u>MNR Cash Balance Plan</u>		<u>MTA Defined Benefit Plan</u>	
<b>Valuation Dates:</b>	January 1, 2016	January 1, 2014	January 1, 2015	January 1, 2014
<b>Measurement Date:</b>	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014
<b>Actuarial cost method:</b>	Unit Credit Cost	Unit Credit Cost	Entry Age Normal Cost	Entry Age Normal Cost
<b>Amortization method:</b>	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).	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.
<b>Asset Valuation Method:</b>	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.	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.
<b>Salary increases:</b>	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.	Varies by years of employment, and employee group. 3.5% for MTA Bus hourly employees.	Varies by years of employment, and employee group.
<b>Actuarial assumptions:</b>				
<b>Discount Rate:</b>	4.50%	4.50%	7.00%	7.00%
<b>Investment rate of return :</b>	4.00%, net of investment expenses.	4.50%, net of investment expenses.	7.00%	7.00%
<b>Mortality:</b>	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.	Preretirement and postretirement 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.	Preretirement and postretirement healthy annuitant rates are projected on a generational basis using Scale AA, as recommended by the Society of Actuaries Retirement Plans Experience Committee. Mortality assumption is based on a 2012 experience study for all MTA plans.
<b>Pre-retirement:</b>	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.
<b>Post-retirement Healthy Lives:</b>	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.
<b>Post-retirement Disabled Lives:</b>	N/A	N/A	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.
<b>Inflation/Railroad Retirement Wage Base:</b>	2.30%	2.50%	2.50%; 3.50%	2.50%; 3.00%
<b>Cost-of-Living Adjustments:</b>	N/A	N/A	55% of inflation assumption or 1.375%, if applicable.	55% of inflation assumption or 1.375%, if applicable.

**METROPOLITAN TRANSPORTATION AUTHORITY  
(A Component Unit of the State of New York)**

**REQUIRED SUPPLEMENTARY INFORMATION**

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

**(continued)**

	NYCERS Plan		NYSLERS Plan	
<b>Valuation Dates:</b>	June 30, 2014	June 30, 2013	April 1, 2015	April 1, 2014
<b>Measurement Date:</b>	June 30, 2016	June 30, 2015	March 31, 2016	March 31, 2015
<b>Actuarial cost method:</b>	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost	Entry Age Normal Cost
<b>Amortization method:</b>	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfunded.	Increasing Dollar for Initial Unfunded; Level Dollar for Post 2010 Unfunded.	Evenly over the remaining working lifetimes of the active membership.	Evenly over the remaining working lifetimes of the active membership.
<b>Asset Valuation Method:</b>	The Plan Fiduciary Net Positions are based on the Market Values of Assets at the Measurement Dates with certain adjustments.	Modified six-year moving average of market values with a Market Value Restart as of June 30, 2011.	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.
<b>Salary increases:</b>	3% per annum.	3% per annum.	3.80%	4.90%
<b>Actuarial assumptions:</b>				
<b>Discount Rate:</b>	7.00%	7.00%	7.00%	7.50%
<b>Investment rate of return :</b>	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.00%, net of investment expenses.	7.5%, net of investment expenses.
<b>Mortality:</b>	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	Mortality tables for service and disability pensioners were developed from an experience study of NYCERS's pensioners. The mortality tables for beneficiaries were developed from an experience review of NYCERS' beneficiaries. The most recently completed study was published by Gabriel Roeder & Company ("GRS"), dated October 2015, and analyzed experience for Fiscal Years 2010 through 2013.	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.
<b>Pre-retirement:</b>	N/A	N/A	N/A	N/A
<b>Post-retirement Healthy Lives:</b>	N/A	N/A	N/A	N/A
<b>Post-retirement Disabled Lives:</b>	N/A	N/A	N/A	N/A
<b>Inflation/Railroad Retirement Wage Base:</b>	2.50%	2.50%	2.50%	2.70%
<b>Cost-of-Living Adjustments:</b>	1.5% and 2.5% per annum for certain Tiers.	2.5% per annum.	1.3% per annum.	1.4% per annum.

**METROPOLITAN TRANSPORTATION AUTHORITY**

**(A Component Unit of the State of New York)**

**REQUIRED SUPPLEMENTARY INFORMATION**

**(concluded)**

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

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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 changes of benefit terms in the June 30, 2013 funding valuation for the NYCERS plan.

There were no changes of benefit terms in the April 1, 2013 funding valuation for the NYSLERS plan.

***Changes of Assumptions:***

There were no changes of benefit assumptions in the June 30, 2013 funding valuation for the NYCERS plan.

There were no changes of benefit assumptions in the April 1, 2013 funding valuation for the NYSLERS plan.

**METROPOLITAN TRANSPORTATION AUTHORITY**  
**(A Component Unit of the State of New York)**

**REQUIRED SUPPLEMENTARY INFORMATION**

**SCHEDULE OF FUNDING PROGRESS FOR THE MTA POSTEMPLOYMENT BENEFIT PLAN**  
**(\$ in millions)**

<b>Year Ended</b>	<b>Actuarial Valuation Date</b>	<b>Actuarial Value of Assets {a}</b>	<b>Actuarial Accrual Liability (AAL) {b}</b>	<b>Unfunded Actuarial Accrual Liability (UAAL) {c} = {b} - {a}</b>	<b>Funded Ratio {a} / {b}</b>	<b>Covered Payroll {d}</b>	<b>Ratio of UAAL to Covered Payroll {c} / {d}</b>
December 31, 2016	January 1, 2014	\$ 300	\$ 18,472	\$ 18,172	1.60 %	\$ 4,669.8	389.1 %
December 31, 2015	January 1, 2014	\$ 300	\$ 18,472	\$ 18,172	1.60	\$ 4,669.8	389.1
December 31, 2014	January 1, 2012	246	20,188	19,942	1.20	4,360.6	457.3

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**METROPOLITAN TRANSPORTATION AUTHORITY**  
**(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, 2017**

**(\$ in millions)**  
**(Unaudited)**

Category	Financial Plan Actual	Statement GAAP Actual	Variance
<b>REVENUE:</b>			
Farebox revenue	\$ 4,590	\$ 4,590	\$ -
Vehicle toll revenue	1,428	1,430	2
Other operating revenue	454	437	(17)
Total revenue	<u>6,472</u>	<u>6,457</u>	<u>(15)</u>
<b>OPERATING EXPENSES:</b>			
<b>Labor:</b>			
Payroll	3,714	3,708	(6)
Overtime	663	670	7
Health and welfare	880	884	4
Pensions	1,003	1,007	4
Other fringe benefits	667	654	(13)
Postemployment benefits	1,622	1,610	(12)
Reimbursable overhead	(353)	(311)	42
Total labor expenses	<u>8,196</u>	<u>8,222</u>	<u>26</u>
<b>Non-labor:</b>			
Electric power	328	328	-
Fuel	109	109	-
Insurance	2	2	-
Claims	297	297	-
Paratransit service contracts	293	292	(1)
Maintenance and other	478	445	(33)
Professional service contract	306	248	(58)
Pollution remediation project costs	2	2	-
Materials and supplies	435	435	-
Other business expenses	154	149	(5)
Total non-labor expenses	<u>2,404</u>	<u>2,307</u>	<u>(97)</u>
Depreciation	<u>1,852</u>	<u>1,852</u>	<u>-</u>
Total operating expenses	<u>12,452</u>	<u>12,381</u>	<u>(71)</u>
<b>NET OPERATING LOSS</b>	<u>\$ (5,980)</u>	<u>\$ (5,924)</u>	<u>\$ 56</u>

# METROPOLITAN TRANSPORTATION AUTHORITY

(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, 2017

(\$ in millions)

(Unaudited)

Accrued Subsidies	Financial Plan	Financial Statement	Variance	
	Actual	GAAP Actual		
Mass transportation operating assistance	\$ 1,668	\$ 1,668	\$ -	
Mass transit trust fund subsidies	392	453	61	{1}
Mortgage recording tax 1 and 2	342	342	-	
MRT transfer	(4)	(4)	-	
Urban tax	392	393	1	{1}
State and local operating assistance	341	376	35	{1}
Station maintenance	124	124	-	
Connecticut Department of Transportation (CDOT)	81	81	-	
Subsidy from New York City for MTA Bus and SIRTOA	349	371	22	{1}
NYS Grant for debt service	-	3	3	{3}
Build American Bonds Subsidy	44	46	2	{1}
Mobility tax	1,482	1,482	-	
Other non-operating income		71	71	{3}
<b>Total accrued subsidies</b>	<b>5,211</b>	<b>5,406</b>	<b>195</b>	
Net operating deficit before subsidies and debt service	(5,980)	(5,924)	56	
Debt Service	(1,918)	(1,201)	717	
Conversion to Cash basis: Depreciation	1,852	-	(1,852)	
Conversion to Cash basis: OPEB Obligation	1,198	-	(1,198)	
Conversion to Cash basis: GASB 68 pension adjustment	4	-	(4)	
Conversion to Cash basis: Pollution & Remediation	2	-	(2)	
<b>Total net operating surplus/(deficit) before appropriation, grants and other receipts restricted for capital projects</b>	<b>\$ 369</b>	<b>\$ (1,719)</b>	<b>\$ (2,088)</b>	

{1} The Financial Plan records on a cash basis while the Financial Statement records on an accrual basis.

{2} The Financial Plan records do not include other non-operating income or changes in market value.

{3} The Financial Plan records do not include other non-operating subsidy or expense for the refunding of NYS Service Contract Bonds.

**METROPOLITAN TRANSPORTATION AUTHORITY**  
**(A Component Unit of the State of New York)**

**SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF FINANCIAL PLAN TO FINANCIAL STATEMENTS RECONCILIATION**  
**FOR THE PERIOD ENDED SEPTEMBER 30, 2017**  
**(\$ in millions)**  
**(Unaudited)**

Financial Plan Actual Operating Loss at September 30, 2017	<u>\$ (5,980)</u>
<b>The Financial Plan Actual Includes:</b>	
Lower other operating revenues	26
<b>The Audited Financial Statements Includes:</b>	
Lower OPEB expense based on the most recent actuarial calculations	12
Higher pension expense based on most recent actuarial calculations	(4)
Higher labor expense primarily from reimbursable overhead	(43)
Lower non-labor expense primarily from lower depreciation	51
Intercompany eliminations and other adjustments	14
<b>Total Operating Reconciling Items</b>	<u>56</u>
Unaudited Financial Statement Operating Loss	<u>\$ (5,924)</u>
Financial Plan Actual Surplus after Subsidies and Debt Service at September 30, 2017	<u>\$ 369</u>
<b>The Financial Plan Actual Includes:</b>	
Debt Service Bond Principal Payments	717
Adjustments for non-cash liabilities:	
Depreciation	(1,852)
Unfunded OPEB Expense	(1,198)
Unfunded GASB 68 Pension adjustment	(4)
Unfunded Pollution Remediation Expense	(2)
	<u>(3,056)</u>
<b>The Audited Financial Statements Includes:</b>	
Higher subsidies and other non-operating revenues	195
<b>Total Operating Reconciling Items</b>	<u>56</u>
Financial Statements Loss Before Appropriations	<u>\$ (1,719)</u>

**MTA  
EMPLOYEE BENEFIT PLANS  
FINANCIAL STATEMENTS  
AS OF AND FOR THE YEARS ENDED  
DECEMBER 31, 2016 AND 2015**

**MANAGEMENT'S REVIEW  
AUDIT COMMITTEE MEETING  
JANUARY 22, 2018**



# MTA BENEFIT PLANS FINANCIAL STATEMENTS

JANUARY 1, 2017

(\$'s in Thousands)

#	BENEFIT PLAN NAME	TYPE	EMPLOYEES COVERED	TOTAL NET ASSETS	TOTAL MEMBERSHIP
1	MTA DEFINED BENEFIT PENSION PLAN	Defined Benefit Pension Plan	Covers certain LIRR non-represented and represented employees hired after December 31, 1987, MNCRR non-represented and certain represented employees, MTA Police, SIRTOA non-represented and represented employees, certain employees of MTA Bus and certain employees of the former LI Bus hired prior to January 23, 1983.	\$3,419,971	29,810
2	MANHATTAN and BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN	Defined Benefit Pension Plan	MaBSTOA employees of the Transit Authority who are specifically excluded from NYCERS.	\$2,555,735	15,083
3	LONG ISLAND RAILROAD COMPANY PLAN FOR ADDITIONAL PENSIONS	Defined Benefit Pension Plan	Long Island Railroad employees hired effective July 1, 1971 and prior to January 1, 1988.	\$777,217	6,154
4	METRO NORTH COMMUTER RAILROAD COMPANY CASH BALANCE PLAN	Defined Benefit Pension Plan	Metro North Railroad employees hired prior to June, 1983	\$574	44
5	MTA DEFERRED COMPENSATION PROGRAM	Defined Contribution Plans - (401K & 457)	All MTA non-represented employees and most represented employees.	\$5,544,120	401K = 51,258 457 = 39,396
6	MTA RETIREE WELFARE BENEFITS PLAN (OPEB PLAN)	Retiree Benefits Welfare Plan	The MTA Group's retired employees and their eligible spouses and dependents.	\$322,982	112,160



# MTA BENEFIT PLANS FINANCIAL STATEMENTS

- The MTA's Benefit Plans Financial Statements are prepared in conformity with Generally Accepted Accounting Principles in the United States (GAAP) using accounting standards established by the Government Accounting Standards Board (GASB). They include 4 sections as follows:
  1. Managements' Discussion & Analysis
  2. The basic Financial Statements which include:
    - The Statement of Plan Net Position
    - The Statement of Changes in Net Position
  3. The Notes to the Financial Statements
  4. Required Supplementary Information (RSI)



# NEW GASB ACCOUNTING STANDARD FOR FISCAL YEAR 2016 – GASB 82

## **Pension Issues—an amendment of GASB Statements No. 67, No. 68, and No. 73**

- ❑ This Statement amends Statements 67 and 68 to instead require the presentation of covered payroll, defined as the payroll on which contributions to a pension plan are based, and ratios that use that measure.
- ❑ This Statement clarifies that a deviation, as the term is used in Actuarial Standards of Practice issued by the Actuarial Standards Board, from the guidance in an Actuarial Standard of Practice is not considered to be in conformity with the requirements of Statement 67, Statement 68, or Statement 73 for the selection of assumptions used in determining the total pension liability and related measures.
- ❑ This Statement clarifies that payments that are made by an employer to satisfy contribution requirements that are identified by the pension plan terms as plan member contribution requirements should be classified as plan member contributions for purposes of Statement 67 and as employee contributions for purposes of Statement 68.



# MTA PENSION PLANS

## Single Employer & Multi-Employer

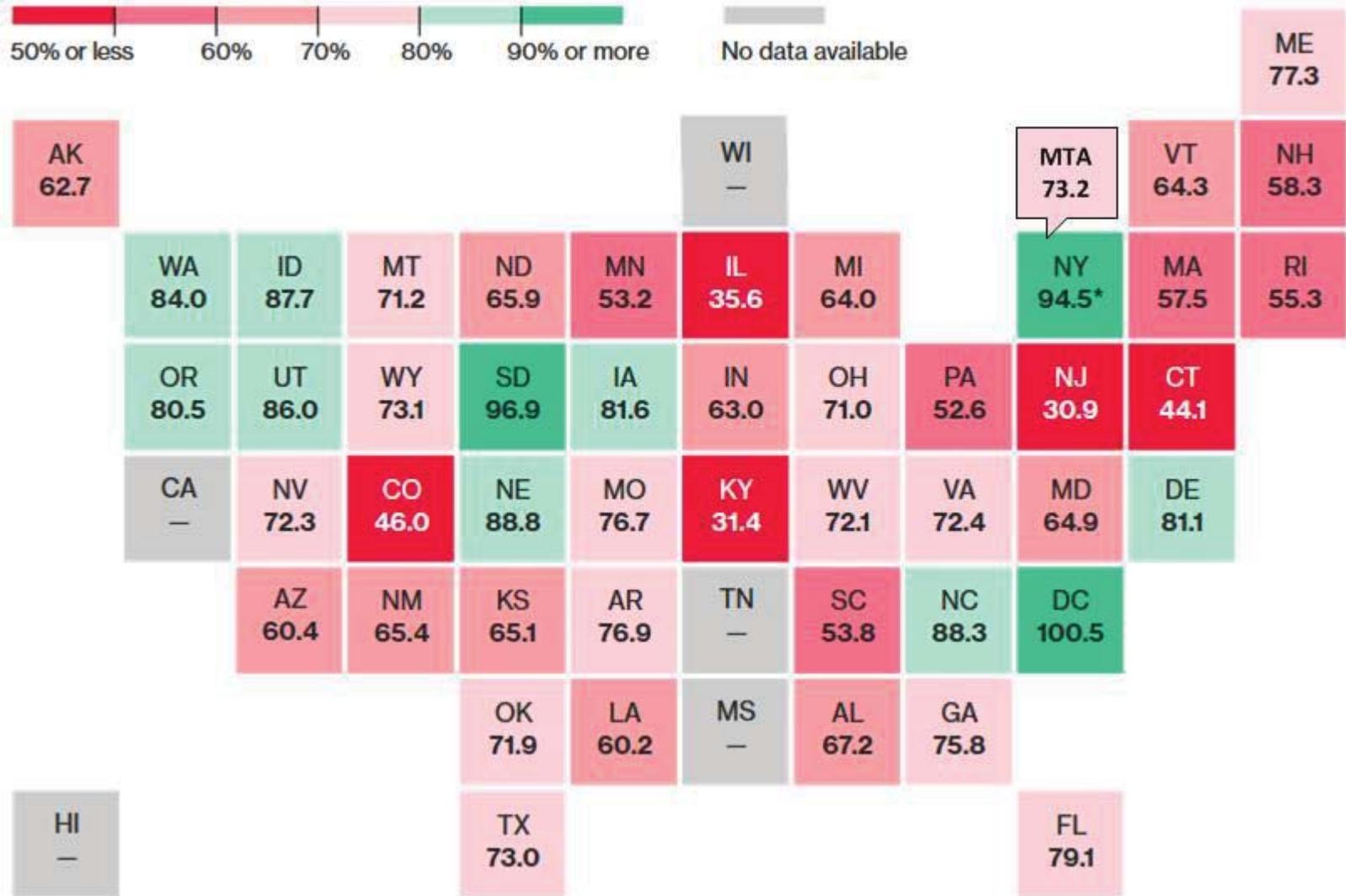
(\$'s in Thousands)	Balances as of December 31, 2017				
	Total Pension Liability	Plan Net Assets	Net Pension Liability	Funded Ratio	FY16/FY17 Contributions
<b>PENSION PLAN</b>					
<b>Single Employer</b>					
1 MTADB PLAN (MTA Group)	(4,761,877)	3,419,971	(1,341,906)	71.8%	316,916
2 MABSTOA Plan	(3,536,747)	2,555,735	(981,012)	72.3%	202,924
3 LIRR Add'l Plan	(1,526,304)	777,217	(749,087)	50.9% *	221,523
4 MNCRR Cash Balance Plan	(566)	574	8	101.4%	-
<b>Total Single Employer Plans</b>	<b>\$ (9,825,494)</b>	<b>\$ 6,753,497</b>	<b>\$ (3,071,997)</b>	<b>68.7%</b>	<b>\$ 741,363</b>
<b>Multi-Employer- Cost Sharing</b>					
5 NYSLERS - MTA % = 0.31%	(552,038)	522,799	(29,239)	94.7%	13,969
6 NYCERS - MTA % = 24.1%	(19,860,277)	14,856,466	(5,003,811)	74.8%	801,990
<b>Total Multi Employer Plans</b>	<b>\$ (20,412,315)</b>	<b>\$ 15,379,265</b>	<b>\$ (5,033,050)</b>	<b>75.3%</b>	<b>\$ 815,959</b>
<b>TOTAL MTA CONSOLIDATED</b>	<b>\$ (30,237,809)</b>	<b>\$ 22,132,762</b>	<b>\$ (8,105,047)</b>	<b>73.2%</b>	<b>\$ 1,557,322</b>

\* Note: In 2017 an additional \$145 million was contributed to the LIRR Additional Plan, increasing the funded ratio of the Total Single Employer Plans to 70.2% and the LIRR Add'l Plan to 60.4%.



# STATE PENSION PLAN FUNDING RATIOS

Public employee pension funding ratio by state, 2016 figures



# Metropolitan Transportation Authority Deferred Compensation Program

Financial Statements as of and for the  
Years Ended December 31, 2016 and 2015, and  
Independent Auditors' Report

# METROPOLITAN TRANSPORTATION AUTHORITY DEFERRED COMPENSATION PROGRAM

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Statements of Changes in Plans Net Position for the Years Ended December 31, 2016 and 2015	22
Notes to Financial Statements	23-43

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## **INDEPENDENT AUDITORS' REPORT**

To the Committee of the  
Metropolitan Transportation Authority Deferred Compensation Program

### **Report on the Financial Statements**

We have audited the accompanying statements of Plans' net position of the Metropolitan Transportation Authority Deferred Compensation Program, comprised of the Deferred Compensation Plans for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates and the Thrift Plan for Employees of the Metropolitan Transportation Authority, its Subsidiaries and Affiliates, (collectively the "Plans") as of December 31, 2016 and 2015, and the related statements of changes in Plans' 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, the financial statements referred to above present fairly, in all material respects, the Plans' net position as of December 31, 2016 and 2015, and the respective changes in Plans' net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

### *Required Supplementary Information*

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

January 22, 2018

# METROPOLITAN TRANSPORTATION AUTHORITY DEFERRED COMPENSATION PROGRAM

## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2016 AND 2015

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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, 2016 and 2015. It is meant to assist the reader in understanding the Plans' financial statements by providing an overall review of the financial activities during the year and the effects of significant changes. This discussion and analysis may contain opinions, assumptions, or conclusions by the MTA's management that should not be considered a replacement for, and is intended to be read in conjunction with the Plans' financial statements which begin on page 21.

### OVERVIEW OF BASIC FINANCIAL STATEMENTS

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

- **The Statement of Plans Net Position** — presents the financial position of the Plans at fiscal year end. It provides information about the nature and amounts of resources with present service capacity that the Plan presently controls (assets), consumption of net assets by the Plan that is applicable to a future reporting period (deferred outflow of resources), present obligations to sacrifice resources that the Plan has little or no discretion to avoid (liabilities), and acquisition of net assets by the Plan that is applicable to a future reporting period (deferred inflow of resources) with the difference between assets/deferred outflow of resources and liabilities/deferred inflow of resources being reported as net position. Investments are shown at contract and net asset values ("NAV") value. 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 values 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 \$2.332 billion and the assets of the 401(k) plan exceeded its liabilities by \$3.212 billion as of December 31,

2016. 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 \$2.136 billion and the assets of the 401(k) plan exceeded its liabilities by \$2.924 billion as of December 31, 2015. This net position restricted for benefits is held in trust for distribution to the Plans participants and/or beneficiaries.

During 2016, the net positions held in trust for the 457 Plan and the 401(k) Plan increased by \$196.228 million and \$287.309 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.

During 2015, the net positions held in trust for the 457 Plan and the 401(k) Plan increased by \$125.425 million and \$168.033 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 \$101.769 million and \$95.365 million for the 457 Plan and \$136.773 million and \$135.914 million for the 401(k) Plan for the year ended December 31, 2016 and 2015, respectively.

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

**457 Plan**

	2016	2015	2014	Amount of Change		Percentage Change	
				(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ASSETS:</b>							
Investments at fair value:	\$ 2,262,973	\$ 2,069,184	\$ 1,949,962	\$ 193,789	\$ 119,222	9.4%	6.1%
Participant loans receivable	69,815	67,361	60,849	2,454	6,512	3.6	10.7
Total assets	2,332,788	2,136,545	2,010,811	196,243	125,734	9.2	6.3
<b>LIABILITIES:</b>							
Administrative expense reimbursement	390	375	66	15	309	4.0	468.2
Total liabilities	390	375	66	15	309	4.0	468.2
<b>TOTAL NET POSITION RESTRICTED FOR BENEFITS</b>							
	\$ 2,332,398	\$ 2,136,170	\$ 2,010,745	\$ 196,228	\$ 125,425	9.2%	6.2%

**401K Plan**

	2016	2015	2014	Amount of Change		Percentage Change	
				(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ASSETS:</b>							
Investments at fair value:	\$ 3,076,148	\$ 2,794,983	\$ 2,637,807	\$ 281,165	\$ 157,176	10.1%	6.0%
Participant loans receivable	136,075	129,902	118,639	6,173	11,263	4.8	9.5
Total assets	3,212,223	2,924,885	2,756,446	287,338	168,439	9.8	6.1
<b>LIABILITIES:</b>							
Administrative expense reimbursement	501	472	66	29	406	14.0	615.2
Total liabilities	501	472	66	29	406	14.0	615.2
<b>TOTAL NET POSITION RESTRICTED FOR BENEFITS</b>							
	\$ 3,211,722	\$ 2,924,413	\$ 2,756,380	\$ 287,309	\$ 168,033	9.8%	6.1%

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

**457 Plan**

				Amount of Change		Percentage Change	
	2016	2015	2014	(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ADDITIONS:</b>							
Investment income:	\$ 117,182	\$ 36,997	\$ 84,328	\$ 80,185	\$ (47,331)	216.7 %	(56.1)%
Contributions and additional deposits	177,851	181,031	202,375	(3,180)	(21,344)	(1.8)	10.6
Loan repayments - interest	2,964	2,762	2,541	202	221	7.3	8.7
Total additions	297,997	220,790	289,244	77,207	(68,454)	35.0	(23.7)
<b>DEDUCTIONS:</b>							
Distribution to participants	50,120	47,642	42,368	2,478	5,274	5.2	12.5
Transfers to other plans	48,242	43,881	47,317	4,361	(3,436)	9.9	(7.3)
Net participant loan activity	1,735	1,778	1,850	(43)	(72)	(2.4)	(3.9)
Other	1,672	2,064	1,776	(392)	288	(19.0)	16.2
	101,769	95,365	93,311	6,404	2,054	6.7	2.2
Increase in net position	196,228	125,425	195,933	70,803	(70,508)	56.5	(36.0)
<b>TOTAL NET POSITION RESTRICTED FOR BENEFITS</b>							
Beginning of year	2,136,170	2,010,745	1,814,812	125,425	195,933	6.2	10.8
End of year	\$ 2,332,398	\$ 2,136,170	\$ 2,010,745	\$ 196,228	\$ 125,425	9.2 %	6.2 %

**401K Plan**

				Amount of Change		Percentage Change	
	2016	2015	2014	(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ADDITIONS:</b>							
Investment income:	\$ 164,042	\$ 49,879	\$ 118,282	\$ 114,163	\$ (68,403)	228.9 %	(57.8)%
Contributions and additional deposits	254,327	248,732	261,753	5,595	(13,021)	2.3	5.0
Loan repayments - interest	5,713	5,336	4,973	377	363	7.1	7.3
Total additions	424,082	303,947	385,008	120,135	(81,061)	39.5	21.1
<b>DEDUCTIONS:</b>							
Distribution to participants	63,287	58,729	49,663	4,558	9,066	7.8	18.3
Transfers to other plans	69,067	71,819	64,409	(2,752)	7,410	(3.8)	11.5
Net participant loan activity	2,379	2,548	2,254	(169)	294	(6.6)	13.1
Other	2,040	2,818	2,979	(778)	(161)	(27.6)	(5.4)
	136,773	135,914	119,305	859	16,609	0.6	13.9
Increase in net position	287,309	168,033	265,703	119,276	(97,670)	71.3	(36.8)
<b>TOTAL NET POSITION RESTRICTED FOR BENEFITS</b>							
Beginning of year	2,924,413	2,756,380	2,490,677	168,033	265,703	6.1	10.7
End of year	\$ 3,211,722	\$ 2,924,413	\$ 2,756,380	\$ 287,309	\$ 168,033	9.8 %	6.1 %

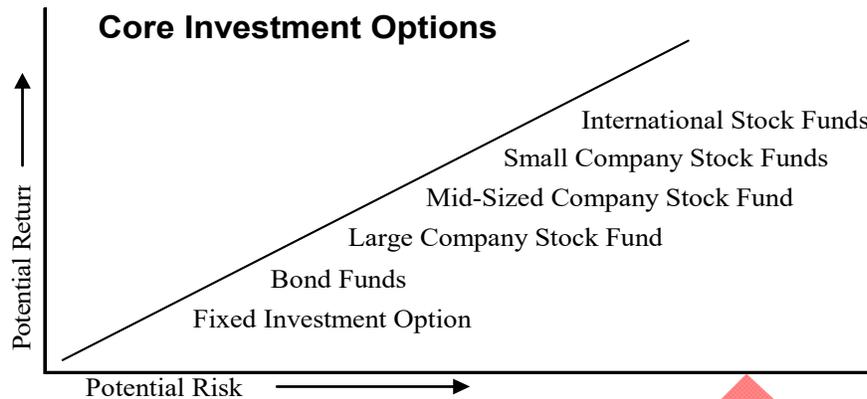
## Investment Options

The MTA Plans offer ten (10) 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.

<u>Fund Name</u>	<u>Asset Class</u>	<u>Portfolio Allocations</u>
MTA Target-Year Lifecycle 2015 Fund	Large Cap 12% Mid Cap 2% Small Cap 2% International Equity 16% Market Bonds 18% Stable Value 38% Real Asset 12%	MTA Large Cap Core Index Fund 6% MTA Large Cap Core Portfolio 6% MTA Mid Cap Core Portfolio 2% MTA Small Cap Core Portfolio 2% MTA International Portfolio 16% MTA Fixed Income Portfolio 18% MTA Stable Value Fund 38% MTA Real Asset Fund 12%
MTA Target-Year Lifecycle 2020 Fund	Large Cap 16% Mid Cap 2% Small Cap 2% International Equity 20% Market Bonds 21% Stable Value 29% Real Asset 10%	MTA Large Cap Core Index Fund 8% MTA Large Cap Core Portfolio 8% MTA Mid Cap Core Portfolio 2% MTA Small Cap Core Portfolio 2% MTA International Portfolio 20% MTA Fixed Income Portfolio 21% MTA Stable Value Fund 29% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2025 Fund	Large Cap 21% Mid Cap 3% Small Cap 3% International Equity 26% Market Bonds 22% Stable Value 15% Real Asset 10%	MTA Large Cap Core Index Fund 13% MTA Large Cap Core Portfolio 8% MTA Mid Cap Core Portfolio 3% MTA Small Cap Core Portfolio 3% MTA International Portfolio 26% MTA Fixed Income Portfolio 22% MTA Stable Value Fund 15% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2030 Fund	Large Cap 21% Mid Cap 4% Small Cap 4% International Equity 29% Market Bonds 25% Stable Value 7% Real Asset 10%	MTA Large Cap Core Index Fund 13% MTA Large Cap Core Portfolio 8% MTA Mid Cap Core Portfolio 4% MTA Small Cap Core Portfolio 4% MTA International Portfolio 29% MTA Fixed Income Portfolio 25% MTA Stable Value Fund 7% MTA Real Asset Fund 10%

<b>Fund Name</b>	<b>Asset Class</b>	<b>Portfolio Allocations</b>
MTA Target-Year Lifecycle 2035 Fund	Large Cap 22% Mid Cap 5% Small Cap 5% International Equity 32% Market Bonds 26% Real Asset 10%	MTA Large Cap Core Index Fund 12% MTA Large Cap Core Portfolio 10% MTA Mid Cap Core Portfolio 5% MTA Small Cap Core Portfolio 5% MTA International Portfolio 32% MTA Fixed Income Portfolio 26% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2040 Fund	Large Cap 25% Mid Cap 7% Small Cap 7% International Equity 38% Market Bonds 13% Real Asset 10%	MTA Large Cap Core Index Fund 11% MTA Large Cap Core Portfolio 14% MTA Mid Cap Core Portfolio 7% MTA Small Cap Core Portfolio 7% MTA International Portfolio 38% MTA Fixed Income Portfolio 13% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2045 Fund	Large Cap 27% Mid Cap 8% Small Cap 8% International Equity 42% Market Bonds 5% Real Asset 10%	MTA Large Cap Core Index Fund 11% MTA Large Cap Core Portfolio 16% MTA Mid Cap Core Portfolio 8% MTA Small Cap Core Portfolio 8% MTA International Portfolio 42% MTA Fixed Income Portfolio 5% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2050 Fund	Large Cap 27% Mid Cap 8% Small Cap 8% International Equity 42% Market Bonds 5% Real Asset 10%	MTA Large Cap Core Index Fund 9% MTA Large Cap Core Portfolio 18% MTA Mid Cap Core Portfolio 8% MTA Small Cap Core Portfolio 8% MTA International Portfolio 42% MTA Fixed Income Portfolio 5% MTA Real Asset Fund 10%
MTA Target-Year Lifecycle 2055 Fund	Large Cap 27% Mid Cap 8% Small Cap 8% International Equity 42% Market Bonds 5% Real Asset 10%	MTA Large Cap Core Index Fund 9% MTA Large Cap Core Portfolio 18% MTA Mid Cap Core Portfolio 8% MTA Small Cap Core Portfolio 8% MTA International Portfolio 42% MTA Fixed Income Portfolio 5% MTA Real Asset Fund 10%
MTA Income Fund	Large Cap 8% Mid Cap 1% Small Cap 1% International Equity 10% Market Bonds 12% Stable Value 51% Real Asset 17%	MTA Large Cap Core Index Fund 4% MTA Large Cap Core Portfolio 4% MTA Mid Cap Core Portfolio 1% MTA Small Cap Core Portfolio 1% MTA International Portfolio 10% MTA Fixed Income Portfolio 12% MTA Stable Value Fund 51% MTA Real Asset Fund 17%

In addition to the ten Target-Year lifecycle funds, the Plans offer a spectrum of investment options that include two international funds, two small company stock funds, two mid-size company stock funds, two large company stock funds, two 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](http://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 Portfolio (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-Cap Equity Funds**

**MTA Small Cap Core Index Fund (Small Cap Stock-Blend)** - The fund invests wholly in the SSgA Russell Small Cap Index Fund Class S (the Collective Investment Trust C.I.T.). The C.I.T. Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the Russell 2000 Index over the long term.

**MTA Small Cap Core Portfolio (Small 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. **The Conestoga Small Cap Growth Fund** (Small Growth) - This Custom Plan Investment Option is advised by Conestoga Capital Advisors LLC, following their Small Cap Growth Strategy. The Strategy seeks long-term capital appreciation.
2. **The Denver Small Cap Value Fund** (Small Value) - This Custom Plan Investment Option is advised by Denver Investment Advisors LLC. The strategy seeks to achieve long-term capital appreciation primarily through investments in dividend paying companies with small capitalizations whose stocks appear to be undervalued.

### **Mid-Cap Equity Funds**

**MTA Mid Cap Core Index Fund** (Mid Cap Stock-Blend) - The fund invests wholly in the SSgA S&P Mid Cap Index Non-Lending – Class C (the Collective Investment Trust C.I.T.). The C.I.T. Fund seeks an investment return that approximates as closely as practicable, before expenses, the performance of the S&P MidCap 400 Index over the long term.

**MTA Mid Cap Core Portfolio** (Mid 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. **Mid Cap Growth / Frontier Capital Fund** (Mid Cap Stock-Growth) - This Separate Account is advised by Frontier Capital Management Company LLC following its Mid Cap Growth Equity investment strategy. The fund seeks to provide capital appreciation and outperform the Russell MidCap Growth Index over the long term. The securities of mid-capitalization companies involve greater risks than those associated with larger, more established companies and may be subject to more abrupt or erratic price movements.
2. **Vanguard Selected Value Fund** (Mid Cap Value) - The fund is advised by Barrow, Hanley, Mewhinney & Strauss Inc. The investment seeks long-term capital appreciation and income. The fund invests mainly in the stocks of mid-size U.S. companies, choosing stocks considered by an advisor to be undervalued. Undervalued stocks are generally those that are out of favor with investors and are trading at prices that the advisor feels are below average in relation to measures such as earnings and book value. These stocks often have above-average dividend yields.

### **Large-Cap Equity Funds**

**MTA Large Cap Core Index Fund** (Large Cap Stock-Blend) - The Fund invests wholly in the Vanguard Institutional Index Fund Institutional Plus Shares. 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 Core Portfolio** (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.

## **Fixed Income Funds**

**MTA Bond Aggregate 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 Bloomberg Barclays U.S. Aggregate Bond Index over the long term.

**MTA Fixed Income Portfolio** (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**

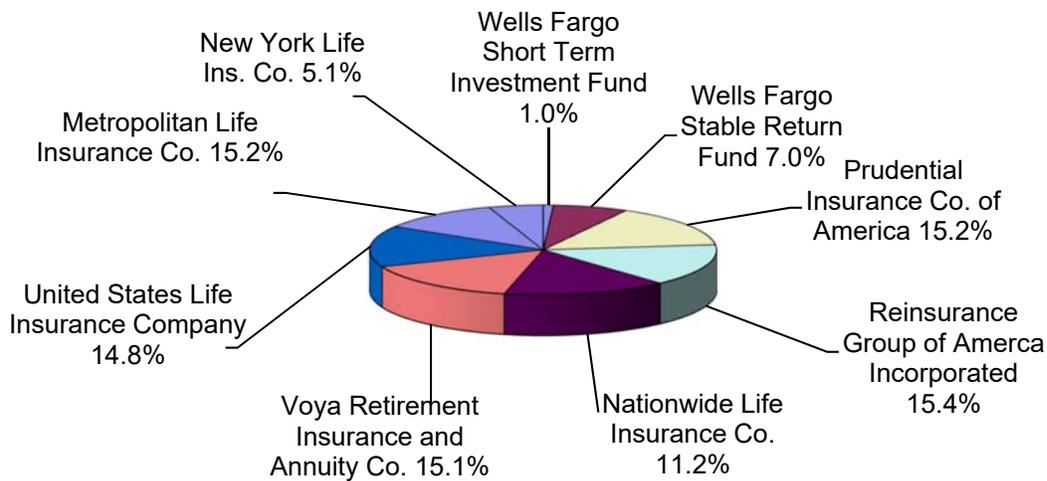
**MTA Stable Value Fund** (Stable Value) - The fund seeks to provide safety of principal and a stable credited rate of interest, while generating competitive returns over time compared to other comparable investments. The fund is managed by Galliard Capital Management and is primarily comprised of investment 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 an 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.

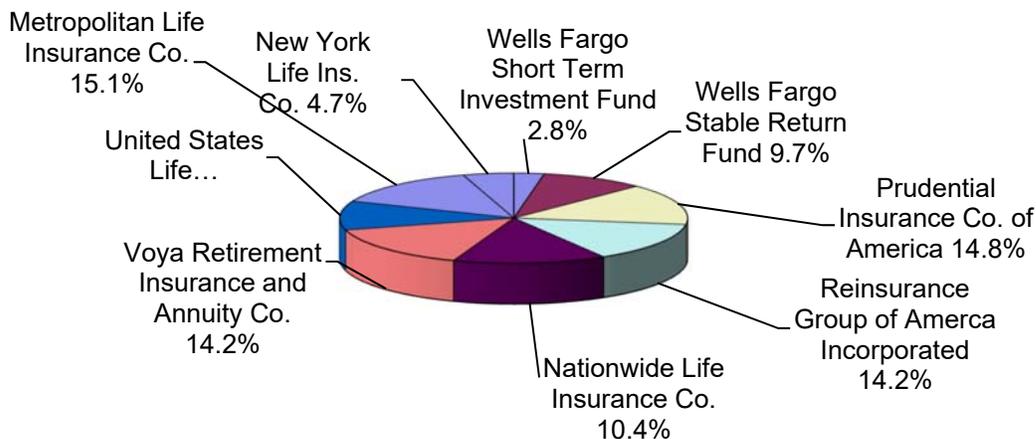
The following chart shows the underlying investments of the MTA Stable Value Fund as of December 31, 2016 and 2015.

**Stable Income Fund  
Wrap Provider Distribution as of December 31, 2016**



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

**Stable Income Fund  
Wrap Provider Distribution as of December 31, 2015**



\*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.

# Performance Summary

Year ended December 31, 2016

## Stable Value

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>MTA Stable Value</b>	0.5%	2.0%	1.9%	2.2%	2.5%
Galliard 5YrCMT+50bps	0.4%	1.5%	1.8%	1.7%	1.8%

## Fixed Income

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA Aggregate Bond Index Fund</b>	-3.0%	2.6%	3.0%	2.2%	3.6%
Barclays U.S. Aggregate	-3.0%	2.6%	3.0%	2.2%	3.6%
<b>Loomis Sayles Core Plus Bond</b>	-2.3%	7.0%	NA	NA	NA
Barclays U.S. Aggregate	-3.0%	2.6%	3.0%	2.2%	3.6%
<b>TCW MetWest Core Plus Fixed Income</b>	-2.6%	2.6%	NA	NA	NA
Barclays U.S. Aggregate	-3.0%	2.6%	3.0%	2.2%	3.6%
<b>Wellington World Bond Fund</b>	-1.4%	2.1%	NA	NA	NA
Citigroup World Government Bond	-8.5%	1.6%	-0.8%	-1.0%	0.9%

## Domestic Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>Vanguard Institutional Index Fund Institutional Plus</b>	3.8%	12.0%	8.9%	14.7%	12.8%
S&P 500	3.8%	12.0%	8.9%	14.7%	12.8%
<b>T Rowe Price Large Cap Value Fund (Prudential Separate Account)</b>	5.4%	16.0%	8.3%	14.9%	12.3%
Russell 1000 Value	6.7%	17.3%	8.6%	14.8%	12.7%
<b>Jennison Large Cap Growth (Prudential Separate Account)</b>	-1.8%	0.4%	7.0%	14.3%	11.8%
Russell 1000 Growth	1.0%	7.1%	8.6%	14.5%	13.0%
<b>SSgA S&amp;P 400 Mid Cap Index</b>	7.4%	20.7%	9.0%	15.3%	14.2%
S&P 400 MidCap	7.4%	20.7%	9.0%	15.3%	14.2%
<b>Vanguard Selected Value Fund Investor</b>	8.8%	16.3%	6.0%	14.3%	13.0%
Russell Midcap Value	5.5%	20.0%	9.5%	15.7%	14.3%
<b>Frontier Mid Cap Growth (Prudential Separate Account)</b>	-0.3%	5.5%	6.5%	13.8%	12.3%
Russell Midcap Growth	0.5%	7.3%	6.2%	13.5%	12.9%
<b>SSgA Russell 2000 Index</b>	8.8%	21.3%	6.7%	14.4%	13.2%
Russell 2000	8.8%	21.3%	6.7%	14.5%	13.2%
<b>Denver Small Cap Value (Separate Account)</b>	16.4%	31.5%	9.2%	NA	NA
Russell 2000 Value	14.1%	31.7%	8.3%	15.1%	13.1%
<b>Conestoga Small Cap Growth (Separate Account)</b>	5.2%	14.9%	4.4%	NA	NA
Russell 2000 Growth	3.6%	11.3%	5.1%	13.7%	13.2%

# Performance Summary

Year ended December 31, 2016 (continued)

## International Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA MSCI ACWI ex-U.S. IMI Index</b>	-1.6%	5.2%	-1.3%	5.5%	NA
MSCI AC Wld ex US IMI Net	-1.6%	4.4%	-1.4%	5.3%	3.3%
<b>William Blair Institutional International Growth Fund</b>	-4.2%	-2.7%	-1.8%	7.0%	5.5%
MSCI AC Wld ex U.S. Growth Net WHT	-5.8%	0.1%	-1.0%	5.6%	3.8%
<b>Mondrian ACWI ex US CIT</b>	-1.7%	4.1%	NA	NA	NA
MSCI AC Wld ex US Value Net WHT	3.3%	8.9%	-2.4%	4.6%	2.3%

## Diversified Inflation

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA Real Asset</b>	0.4%	14.2%	-1.0%	-0.1%	NA
SSgA Custom Real Asset Index	0.5%	14.3%	-0.9%	0.0%	NA

## Lifecycle

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>MTA Income</b>	0.1%	4.8%	2.9%	3.7%	4.2%
MTA Income Composite Index	0.0%	5.3%	3.0%	3.5%	4.0%
<b>MTA 2015</b>	0.0%	4.7%	3.0%	4.7%	5.3%
MTA 2015 Composite Index	-0.2%	5.7%	3.2%	4.5%	5.2%
<b>MTA 2020</b>	-0.1%	4.7%	3.0%	5.4%	5.7%
MTA 2020 Composite Index	-0.2%	6.0%	3.3%	5.2%	5.6%
<b>MTA 2025</b>	-0.1%	5.3%	3.3%	6.7%	6.6%
MTA 2025 Composite Index	-0.1%	7.0%	3.7%	6.4%	6.6%
<b>MTA 2030</b>	-0.1%	5.6%	3.4%	7.1%	6.8%
MTA 2030 Composite Index	-0.2%	7.5%	3.8%	6.8%	7.2%
<b>MTA 2035</b>	-0.1%	5.8%	3.5%	7.7%	7.2%
MTA 2035 Composite Index	-0.2%	8.0%	4.0%	7.3%	7.1%
<b>MTA 2040</b>	0.3%	6.0%	3.7%	9.0%	7.9%
MTA 2040 Composite Index	0.7%	9.0%	4.3%	8.7%	8.0%
<b>MTA 2045</b>	0.5%	6.1%	3.6%	9.8%	8.5%
MTA 2045 Composite Index	1.3%	9.5%	4.1%	9.6%	8.5%
<b>MTA 2050</b>	0.5%	6.1%	3.5%	10.0%	8.6%
MTA 2050 Composite Index	1.3%	9.5%	3.9%	9.8%	8.6%
<b>MTA 2055</b>	0.5%	6.1%	NA	NA	NA
MTA 2055 Composite Index	1.3%	9.5%	3.9%	9.8%	8.6%

# Performance Summary

Year ended December 31, 2015

## Stable Value

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>MTA Stable Value</b>	.5%	1.9%	2.1%	2.4%	2.9%
Galliard 5YrCMT+50bps	.4%	1.8%	1.9%	1.8%	2.0%

## Fixed Income

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA Aggregate Bond Index Fund</b>	-0.5%	0.6%	1.4%	3.2%	4.1%
Barclays U.S. Aggregate	-0.6%	0.6%	1.4%	3.3%	4.1%
<b>Loomis Sayles Core Plus Bond</b>	-0.6%	NA	NA	NA	NA
Barclays U.S. Aggregate	-0.6%	0.6%	1.4%	3.3%	4.1%
<b>TCW MetWest Core Plus Fixed Income</b>	-0.4%	NA	NA	NA	NA
Barclays U.S. Aggregate	-0.6%	0.6%	1.4%	3.3%	4.1%
<b>Wellington World Bond Fund</b>	-0.7%	NA	NA	NA	NA
Barclays U.S. Aggregate	-0.6%	0.6%	1.4%	3.3%	4.1%

## Domestic Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>Vanguard Institutional Index Fund Institutional Plus</b>	7.1%	1.4%	15.1%	12.6%	14.8%
S&P 500	7.0%	1.4%	15.1%	12.6%	14.8%
<b>T Rowe Price Large Cap Value Fund (Prudential Separate Account)</b>	7.8%	-3.2%	NA	NA	NA
Russell 1000 Value	5.6%	-3.8%	13.1%	11.3%	13.0%
<b>Jennison Large Cap Growth (Prudential Separate Account)</b>	8.3%	10.9%	18.6%	14.3%	17.5%
Russell 1000 Growth	7.3%	5.7%	16.8%	13.5%	17.1%
<b>SSgA S&amp;P 400 Mid Cap Index</b>	2.6%	-2.2%	12.7%	10.6%	16.3%
S&P 400 MidCap	2.6%	-2.2%	12.8%	10.7%	16.4%
<b>Vanguard Selected Value Fund Investor</b>	3.4%	-3.8%	13.3%	11.0%	15.5%
Russell Midcap Value	3.1%	-4.8%	13.4%	11.3%	16.2%
<b>Frontier Mid Cap Growth (Prudential Separate Account)</b>	2.1%	3.0%	15.3%	11.6%	16.2%
Russell Midcap Growth	4.1%	-0.2%	14.9%	11.5%	18.0%
<b>SSgA Russell 2000 Index</b>	3.6%	-4.4%	11.6%	9.1%	13.9%
Russell 2000	3.6%	-4.4%	11.7%	9.2%	14.0%
<b>Denver Small Cap Value (Separate Account)</b>	1.6%	-7.3%	NA	NA	NA
Russell 2000 Value	2.9%	-7.5%	9.1%	7.7%	11.7%
<b>Conestoga Small Cap Growth (Separate Account)</b>	8.7%	7.6%	NA	NA	NA
Russell 2000 Growth	4.3%	-1.4%	14.3%	10.7%	16.3%

# Performance Summary

Year ended December 31, 2015 (continued)

## International Equity

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA MSCI ACWI ex-U.S. IMI Index</b>	3.0%	-4.5%	1.7%	NA	NA
MSCI AC World ex U.S. Net	3.5%	-4.6%	2.0%	1.3%	8.1%
<b>William Blair Institutional International Growth Fund</b>	4.8%	0.1%	5.0%	4.4%	11.4%
MSCI AC World ex U.S. Growth Net WHT	5.0%	-1.3%	3.5%	2.1%	8.4%
<b>Target International Equity Portfolio Q</b>	4.2%	1.9%	4.6%	NA	NA
MSCI AC World ex U.S. Value Net WHT	1.4%	-10.1%	-0.6%	-0.1%	6.5%
MSCI EAFE Value NET WHT	2.7%	-5.7%	3.1%	2.5%	6.7%

## Diversified Inflation

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>SSgA Real Asset</b>	-1.9%	-14.1%	-6.8%	-2.8%	NA
SSgA Custom Real Asset Index	-1.9%	-14.1%	-6.7%	-2.7%	NA

## Lifecycle

	3 Months	1 Year	3 Years	5 Years	7 Years
<b>MTA Income</b>	1.0%	1.0%	2.3%	3.5%	4.7%
MTA Income Composite Index	0.7%	0.3%	2.0%	3.4%	4.4%
<b>MTA 2015</b>	1.6%	1.0%	3.4%	4.3%	7.2%
MTA 2015 Composite Index	1.2%	-0.1%	3.1%	4.1%	6.2%
<b>MTA 2020</b>	2.1%	1.0%	4.2%	4.9%	7.9%
MTA 2020 Composite Index	1.6%	-0.4%	3.7%	4.5%	6.9%
<b>MTA 2025</b>	2.7%	0.9%	5.5%	5.7%	8.9%
MTA 2025 Composite Index	2.1%	-0.8%	4.9%	5.3%	8.1%
<b>MTA 2030</b>	2.9%	0.8%	5.9%	5.9%	9.4%
MTA 2030 Composite Index	2.3%	-1.0%	5.2%	5.5%	9.4%
<b>MTA 2035</b>	3.1%	0.7%	6.4%	6.3%	10.0%
MTA 2035 Composite Index	2.5%	-1.3%	5.6%	5.8%	9.2%
<b>MTA 2040</b>	3.9%	1.0%	8.1%	7.0%	11.1%
MTA 2040 Composite Index	3.2%	-1.5%	7.1%	6.5%	10.4%
<b>MTA 2045</b>	4.4%	0.9%	9.1%	7.4%	11.9%
MTA 2045 Composite Index	3.8%	-2.1%	8.0%	6.9%	11.4%
<b>MTA 2050</b>	4.4%	0.8%	9.4%	7.6%	12.2%
MTA 2050 Composite Index	4.0%	-2.2%	8.2%	7.0%	11.6%
<b>MTA 2055<sup>1</sup></b>	NA	NA	NA	NA	NA
MTA 2055 Composite Index	NA	NA	NA	NA	NA

<sup>1</sup> The MTA 2055 Fund was added to the Program on December 16, 2015.

The table below summarizes the Plans' investments by category at December 31, 2016:

**FUND INVESTMENT SUMMARY**

<b>Investment at Contract and NAV Values</b>	<b>457</b>		<b>401k</b>	
	<b>Allocation</b>		<b>Allocation</b>	
Target-Year Lifecycle Funds	\$337,361,658	14.91%	\$511,083,782	16.61%
International Equity Funds	116,728,024	5.16	171,361,857	5.57
Small-Cap Equity Funds	118,205,125	5.22	166,365,725	5.41
Mid-Cap Equity Funds	173,715,288	7.68	225,750,953	7.34
Large-Cap Equity Funds	521,273,769	23.03	756,369,579	24.59
Bond Funds	108,333,099	4.79	159,628,660	5.19
Stable Income Fund	884,832,829	39.10	1,082,051,737	35.18
Self-Directed Investment Option	2,522,819	0.11	3,535,728	0.11
<b>Total Investments</b>	<b>\$2,262,972,611</b>	<b>100%</b>	<b>\$3,076,148,021</b>	<b>100%</b>

The table below summarizes the Plans' investments by category at December 31, 2015:

**FUND INVESTMENT SUMMARY**

<b>Investment at Contract and NAV Values</b>	<b>457</b>		<b>401k</b>	
	<b>Allocation</b>		<b>Allocation</b>	
Target-Year Lifecycle Funds	\$318,524,684	15.39%	\$476,611,941	17.05%
International Equity Funds	105,779,549	5.11	154,481,314	5.53
Small-Cap Equity Funds	94,927,646	4.59	132,230,414	4.73
Mid-Cap Equity Funds	156,530,472	7.57	201,497,979	7.21
Large-Cap Equity Funds	498,720,278	24.10	715,264,509	25.59
Bond Funds	86,716,130	4.19	126,838,507	4.54
Stable Income Fund	805,593,393	38.93	984,627,394	35.23
Self-Directed Investment Option	2,391,986	0.12	3,430,742	0.12
<b>Total Investments</b>	<b>\$2,069,184,138</b>	<b>100%</b>	<b>\$2,794,982,800</b>	<b>100%</b>

At December 31, 2016, the investment option holding the largest portion of participants' funds in both the 457 and 401(k) Plans was the Stable Income Funds with 39.10% and 35.18% of invested funds, respectively. This was followed by the Large-Cap Equity Funds with 23.03% and 24.59% of invested 457 and 401(k) funds, respectively.

At December 31, 2015, the investment option holding the largest portion of participants' funds in both the 457 and 401(k) Plans was the Stable Income Funds with 38.93% and 35.23% of invested funds, respectively. This was followed by the Large-Cap Equity Funds with 24.10% and 25.59% of invested 457 and 401(k) funds, respectively.

## Economic Factors

### Market Overview and Outlook – 2016

Despite investors entering the year with a myriad of concerns; such as soft economic growth in the United States (“U.S.”) and China, elevated valuations in nearly every market and asset class, and rising geopolitical tensions, performance proved to be robust and resilient across almost all major markets. After a weak 2015 appetite for risk was hearty as equities continued to march ever higher in the U.S., Japan, and Emerging Markets and returns were strong in the riskier corners of fixed income in investment grade, high yield, and emerging markets bonds.

Market performance was framed by a rather benign macro environment, albeit with some transitory complications. In 2015, eyes had turned toward a weakening Chinese economy, resulting in commodity markets continuing their steep decline and volatility rising across the equity and fixed income markets. Emerging markets, particularly those centered on commodities where demand is tied to Chinese growth, experienced sharp declines in 2015. As the calendar flipped from 2015 to 2016, these concerns dissipated and emerging markets rallied significantly off their 2015 lows. Europe was again in the headlines, this time as Brexit caused momentary anxiety that evaporated within days of the history-making vote. Nonetheless, Europe and the United Kingdom were among the few markets to post negative performance for 2016.

In the U.S., the Federal Reserve held off raising interest rates until December, well off the pace and trajectory forecast by markets heading into 2016. The December raise came weeks after Donald Trump’s election to the Presidency, which fueled a strong equities market push in the 4<sup>th</sup> quarter behind expectations for regulatory reform, repeal of the Affordable Care Act, and a re-writing of the U.S. Tax Code. How realistic these expectations are will play out in 2017 and 2018 ahead of the mid-term election cycle will remain to be seen.

#### *Macro Themes*

- Tepid global growth continuing
- Central Bank policy divergence, U.S. tightening while Europe and Japan eases
- China reforms; turmoil in emerging markets and commodities
- High valuations and increasing leverage

The macro picture was framed by tepid global growth in 2016, with the likelihood that below average economic performance would continue into 2017 and 2018. Developed markets look to remain lukewarm, with Gross Domestic Product (“GDP”) growth struggling to break through the (+3.0%) level globally and perhaps likely to fall short in the U.S., Europe, or Japan in 2017 or 2018 according to both the International Monetary Fund (“IMF”) and World Bank. Inflation remains subdued across the developed markets while currency depreciation in emerging markets have led to spikes in inflation. The U.S. is in an environment where short-term interest rates will likely rise over the next two years; Europe and Japan are in a decidedly different place. Weak demand and low inflation in Europe and Japan have led to further central bank intervention and easing. The continued European Central Bank intervention in credit and bond markets may lead to problems down the road. In emerging markets, central banks have moved to increase interest rates in order to tame both inflation and capital outflows. The slower pace of U.S. interest rate increases has continued to result in a U.S. dollar weakening a bit from highs in 2015 and 2016, potentially easing some strain on the U.S. manufacturing and exporting sectors.

Europe continues to be impacted by high levels of public debt, fractious politics and low economic growth. Like emerging markets, a significant portion of Europe’s export engine is tied to Chinese demand and growth. Lower growth in China will place pressures on Europe, in particular net exporters, such as Germany. Debt levels have not yet moderated post-financial crisis and flare-ups in periphery countries, such as in Greece, Portugal, Italy, and Spain, are likely to continue as growth remains challenged and reforms and austerity lose support. Banks will continue their deleveraging cycle should new rules (Basel III) on risk capital are implemented. In Japan, where banks are in better health, high public debt, low growth, a weakening regional economic picture, and aging demographics will challenge the government in delivering their growth and inflation targets.

Emerging markets posted solid returns in 2016 as the impact of capital flows due to the U.S. interest rate increases were much lower than expected. The main emerging markets, Brazil, Russia, India and China, defined as the “BRICs” all face their own challenges. Brazil faces high inflation, high interest rates, low growth, and a government beset by allegation of corruption. China, in attempting to shift from being manufacturing- oriented to a consumer-based economy, faces significant pressures to meet its growth target of (+7.0%) per year and will face a significant leadership election in late 2017. Russia remains impacted from lower energy prices and economic sanctions. Finally, India seems to continually disappoint in liberalizing its economy and implementing the structural reforms necessary to unleash its potential.

### ***United States***

Markets in the U.S. were strong for the year and were amongst the best performers in 2016. Unlike other regions, the U.S. appears to be on relatively sound footing, with unemployment declining to very low levels and the remaining hangovers from the 2008 financial crisis appearing to fully dissipate. The better economic picture provided the Federal Reserve enough leeway to raise interest rates in December, causing a sell-off in government bond markets.

#### ***Equity***

- Surprising and solid year for stocks
- Valuations stretched
- Risk Indulging – Small Cap outperformed Large Cap; Cyclical outperformed Defensives;
- Value leads growth on Bank sector performance
- Barring significant developments, equity markets set for another low-return year

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+12.0%) and (+12.1%), respectively. Small Cap and Mid Cap indices outperformed large cap. Small Cap, as measured by the Russell 2000 Index, returned (+21.3%). The Russell Mid Cap Index lagged but still managed to post a (+13.8%) return.

Digging deeper, there was significant performance dispersion across the sectors. Cyclical Sectors performed well with Energy (+28.0%), Financials (+22.7%) and Industrials (+20.0%) leading the charge higher. Healthcare (-2.8%), Real Estate (+3.2%), and Consumer Staples (+5.0%) were the lagging sectors. This divergence shows investors’ appetite shifted from 2015, when defensive and yield oriented sectors were the best performing segments of the S&P 500. In 2016, investors shifted towards sectors tied to economic growth (Energy and Industrials) or those that may benefit from deregulation (Financials).

#### ***Fixed Income***

The return of an appetite for risk was also evident within the U.S. Fixed Income markets. Treasuries returned (+1.0%) for the year, although this sector was impacted particularly hard in period after the U.S. Election as the Federal Reserve increased interest rate. The 4<sup>th</sup> quarter return of (-3.8%) was amongst the worst 3 month return in Treasuries in quite some time. Government bonds will likely not provide the safe haven status previously counted on by investors going forward given the Trump Administration’s pledges on spending/stimulus and the populist tone of the campaign. Credit outperformed Treasuries for the year, with (+5.6%), although it too gave back significant performance in the 4<sup>th</sup> quarter (-3.0%). High yield posted impressive gains, as worries in the Energy sector that significantly impacted the market in 2015 gave way to optimism that defaults would not be nearly as extreme as anticipated. High Yield not only posted a strong return for the year (+17.1%) but unlike other areas of fixed income, was also positive in the 4<sup>th</sup> quarter (+1.8%). Volatility entered the fixed income markets significantly in the back half of the year. High Yield held steady in the face of rising interest rates as higher quality and more liquid segments of the market lost value.

#### ***International Developed***

- Weak year in Developed Markets (U.S. dollar returns)
- Eurozone and United Kingdom slightly negative for the year
- Japan and Far East positive performers

- Equity valuations in developed markets appear relatively cheaper than the U.S.
- Low returns in fixed income in 2016 and expected through 2017

Europe muddled through another year in 2016 and seemed to never quite hit its stride even as growth projections continued to improve. In U.S. dollars, Europe and United Kingdom equities posted negative performance in 2016. Much of the negative performance as due to currency movements, as both the Euro and Sterling depreciated against the U.S. dollar in 2016. Brexit led to a historical decline in the Sterling through the summer and fall and the effects of the decision to leave the European Union may take years to be realized. Unlike the U.S., equity valuations appear a little more attractive in Europe and there may be a likelihood that investors will shift their focus from U.S. to European Equities. In Asia, most developed markets posted positive performance, albeit relatively tepid performance in U.S. dollar terms.

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 returned (+1.6%) in 2016, although 4<sup>th</sup> quarter was particularly unkind with a (-8.5%) return. Much of the negative performance can be attributed to market responses to the interest rate increases in the U.S., the relative strength of the U.S. dollar, and the return to risk taking across most markets.

### ***Emerging Markets***

- Solid year in Emerging Markets (U.S. dollar returns)
- Major rebound from performance in 2015
- Brazil, Russia, and Thailand posted big years
- Mexico and Turkey worst performers
- Emerging Market Bonds reversed recent performance losses with strong calendar year
- No end in sight for volatility and macro risks remain elevated

Emerging markets posted strong performance as investor appetite for risky assets extended into emerging markets stocks and bonds. The broad emerging markets index returned (+11.2%) for the year. Of the markets tracked by Morgan Stanley Country Index (“MSCI”), Brazil (+66.8%), Russia (+55.5%) and Thailand (+19.6%) posted the strongest gains. China was a notable laggard for the year, with its (+1.1%) gain trailing the broader markets and the majority of its large country peers. Performance of the bond markets of emerging markets was encouraging. Both hard currency and local currency bond posted solid years in performance. Hard currency bonds, which are predominately issued in U.S. dollar, returned (+10.2%) in 2016. Local currency bonds, which are more susceptible to risk-off periods and capital flight, returned (+9.9%) for the year.

### ***Commodities***

- Rebounded from one worst years on record for commodities
- Little expectation for a full recovery in commodity prices in the near term

Commodity indices posted positive performance in 2016, with the broad Bloomberg Commodity Index up (+11.8%). Industrial metals (iron ore, zinc, nickel, aluminum, and copper) all posted strong performance for the year. Also reversing recent history with a rebound in performance were oil and natural gas. Precious metals, consistent with a risk-on attitude from investors, lagged the overall commodity market and the other main sectors.

### **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 10<sup>th</sup> Floor, New York, NY 10004.

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**METROPOLITAN TRANSPORTATION AUTHORITY  
DEFERRED COMPENSATION PROGRAM**

**STATEMENTS OF PLANS NET POSITION  
AS OF DECEMBER 31, 2016 AND DECEMBER 31, 2015  
(\$ In THOUSANDS)**

	2016		2015	
	457	401K	457	401K
<b>ASSETS:</b>				
Investments at contract value	\$ 942,288	\$ 1,165,593	\$ 861,989	\$ 1,064,401
Investments at net asset value	1,320,685	1,910,555	1,207,195	1,730,582
Total investments	2,262,973	3,076,148	2,069,184	2,794,983
Other plan investments:				
Participant loans receivable	69,815	136,075	67,361	129,902
Total other plan investments	69,815	136,075	67,361	129,902
Total assets	2,332,788	3,212,223	2,136,545	2,924,885
<b>LIABILITIES:</b>				
Administrative expense reimbursement	390	501	375	472
Total liabilities	390	501	375	472
<b>TOTAL NET POSITION</b>				
RESTRICTED FOR BENEFITS	\$ 2,332,398	\$ 3,211,722	\$ 2,136,170	\$ 2,924,413

See notes to financial statements.

**METROPOLITAN TRANSPORTATION AUTHORITY  
DEFERRED COMPENSATION PROGRAM**

**STATEMENTS OF CHANGES IN PLANS NET POSITION  
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015**

(\$ In THOUSANDS)

	2016		2015	
	457	401K	457	401K
<b>ADDITIONS:</b>				
Investment income:				
Net appreciation in fair value of investments	\$ 117,182	\$ 164,042	\$ 36,997	\$ 49,879
Total investment income	117,182	164,042	36,997	49,879
Contributions:				
Employee contributions, net	172,395	229,329	175,952	226,386
Participant rollovers	5,456	21,025	5,079	17,471
Employer contributions	-	3,973	-	4,875
Total contributions	177,851	254,327	181,031	248,732
Other additions:				
Loan repayments - interest	2,964	5,713	2,762	5,336
Total additions	297,997	424,082	220,790	303,947
<b>DEDUCTIONS:</b>				
Distribution to participants	50,121	63,286	47,642	58,729
Transfers to other plans	48,242	69,068	43,881	71,819
Net loan initiations/repayments	(126)	(152)	(116)	(201)
Loan defaults/offsets	1,861	2,531	1,894	2,749
Loan fees transfers to other plans	225	517	247	518
Other deductions	1,056	1,022	1,442	1,828
Administrative expense	390	501	375	472
Total deductions	101,769	136,773	95,365	135,914
Increase in net position	196,228	287,309	125,425	168,033
<b>TOTAL NET POSITION</b>				
<b>RESTRICTED FOR BENEFITS</b>				
Beginning of year	2,136,170	2,924,413	2,010,745	2,756,380
End of year	\$ 2,332,398	\$ 3,211,722	\$ 2,136,170	\$ 2,924,413

See notes to financial statements.

# METROPOLITAN TRANSPORTATION AUTHORITY DEFERRED COMPENSATION PROGRAM

## NOTES TO FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015 (\$ in Thousands)

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### 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 Target-Year Lifecycle Funds, which are comprised of a mix of several funds, most of which are available separate investments in the Deferred Compensation Program. The particular mix of investments for each Fund is determined by the “target” date, which is the date the money is intended to be needed for retirement income.
- 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 Russell Mid Cap Index.
- 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 a selected index. These institutional strategies provide participants with a diversified array of distinct asset classes, with a single fund option in each class to simplify the decision making process.
- 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 have not adopted any new GASB Statement(s) for this financial reporting period.

**Recent Accounting Pronouncements** — Not yet adopted

GASB Statement No.	GASB Accounting Standard	MTA DC Program Required Year of Adoption
73	<i>Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68</i>	2017
84	<i>Fiduciary Activities</i>	2019
85	<i>Omibus 2017</i>	2018

**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”). 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, 2016 and 2015 are as follows:

<b>Investment at contract value – December 31, 2016</b>	<b>457 Value</b>	<b>401(k) Value</b>
MTA Stable Value Fund	\$884,832,828	\$1,082,051,7376
<b>Investment at NAV – December 31, 2016</b>	<b>457 Value</b>	<b>401(k) Value</b>
MTA Large-Cap Core Portfolio	\$280,530,154	\$406,804,304
MTA Large-Cap Core Index Fund	240,743,614	349,565,275
MTA Mid-Cap Core Portfolio	118,951,820	162,505,459
<hr/>		
<b>Investment at contract value – December 31, 2015</b>	<b>457 Value</b>	<b>401(k) Value</b>
MTA Stable Value Fund	\$805,593,393	\$984,627,394
<b>Investment at NAV – December 31, 2015</b>	<b>457 Value</b>	<b>401(k) Value</b>
MTA Large-Cap Growth Portfolio	\$228,173,059	\$319,854,420
MTA Large-Cap Core Index Fund	212,164,917	308,799,014
MTA Mid-Cap Core Portfolio	113,520,739	152,803,898

The following table shows the contract and NAV values of investment in the various investment options at December 31, 2016 and 2015.

**Investments at Contract and NAV Values at December 31, 2016**

<b><u>Target-Year Lifecycle Funds</u></b>	<b><u>457 Value</u></b>	<b><u>401k Value</u></b>
MTA Target-Year Lifecycle 2015 Fund	\$ 41,439,321	\$60,269,953
MTA Target-Year Lifecycle 2020 Fund	33,271,385	46,676,589
MTA Target-Year Lifecycle 2025 Fund	80,062,230	123,544,760
MTA Target-Year Lifecycle 2030 Fund	28,287,285	46,085,679
MTA Target-Year Lifecycle 2035 Fund	56,214,370	92,402,080
MTA Target-Year Lifecycle 2040 Fund	15,416,531	24,323,413
MTA Target-Year Lifecycle 2045 Fund	29,634,556	48,967,006
MTA Target-Year Lifecycle 2050 Fund	17,177,246	18,804,565
MTA Target-Year Lifecycle 2055 Fund	426,527	314,097
MTA Income Fund	35,432,209	49,695,641
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	104,700,421	155,594,670
MTA International Index Fund	12,027,603	15,767,187
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	82,828,552	123,467,355
MTA Small Cap Core Index	35,376,572	42,898,369
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	118,951,820	162,505,459
MTA Mid Cap Core Index Fund	54,763,467	63,245,494
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	240,743,614	349,565,275
MTA Large Cap Portfolio	280,530,155	406,804,304
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	90,567,141	138,523,476
MTA Bond Aggregate Index Fund	17,765,958	21,105,184
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	884,832,829	1,082,051,737
<b><u>Self-Directed Investment Account</u></b>		
	2,522,819	3,535,728
<b>Total</b>	<b>\$ 2,262,972,611</b>	<b>\$ 3,076,148,021</b>

**Investments at Contract and NAV Values at December 31, 2015**

<b><u>Target-Year Lifecycle Funds</u></b>	<b><u>457 Value</u></b>	<b><u>401k Value</u></b>
MTA Target-Year Lifecycle 2015 Fund	\$ 44,493,225	\$62,596,459
MTA Target-Year Lifecycle 2020 Fund	31,701,586	43,876,804
MTA Target-Year Lifecycle 2025 Fund	74,885,902	115,481,365
MTA Target-Year Lifecycle 2030 Fund	24,716,722	40,601,292
MTA Target-Year Lifecycle 2035 Fund	52,410,891	85,149,529
MTA Target-Year Lifecycle 2040 Fund	13,328,970	20,399,118
MTA Target-Year Lifecycle 2045 Fund	28,087,895	46,319,157
MTA Target-Year Lifecycle 2050 Fund	14,888,447	16,890,681
MTA Target-Year Lifecycle 2055 Fund	27,804	6,624
MTA Income Fund	33,983,242	45,290,912
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	95,442,289	141,216,984
MTA International Index Fund	10,337,260	13,264,330
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	66,531,555	99,416,057
MTA Small Cap Core Index	28,396,091	32,814,357
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	113,520,739	152,803,898
MTA Mid Cap Core Index Fund	43,009,733	48,694,081
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	212,164,017	308,799,014
MTA Large Cap Growth Portfolio	228,173,059	319,854,420
MTA Large Cap Value Portfolio	58,383,202	86,611,075
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	73,243,932	110,850,879
MTA Bond Aggregate Index Fund	13,472,198	15,987,628
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	805,593,393	984,627,394
<b><u>Self-Directed Investment Account</u></b>		
	2,391,986	3,430,742
<b>Total</b>	<b>\$ 2,069,184,138</b>	<b>\$ 2,794,982,800</b>

The following tables show the interest and/or dividends earned on investments and net appreciation/ (depreciation) for the years ended December 31, 2016 and 2015.

**457 Investments at December 31, 2016**

<b><u>Target-Year Lifecycle Funds</u></b>	<b><u>Cash Earnings</u></b>	<b><u>Appreciation/Depreciation In Fair Market Value - Net</u></b>
MTA Target-Year Lifecycle 2015 Fund	\$ -	\$1,907,176
MTA Target-Year Lifecycle 2020 Fund	-	1,492,000
MTA Target-Year Lifecycle 2025 Fund	-	4,000,485
MTA Target-Year Lifecycle 2030 Fund	-	1,450,686
MTA Target-Year Lifecycle 2035 Fund	-	3,065,539
MTA Target-Year Lifecycle 2040 Fund	-	870,303
MTA Target-Year Lifecycle 2045 Fund	-	1,695,872
MTA Target-Year Lifecycle 2050 Fund	-	982,301
MTA Target-Year Lifecycle 2055 Fund	-	3,867
MTA Income Fund	-	1,573,909
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	2	(1,363,178)
MTA International Index Fund	-	543,032
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	2	15,688,043
MTA Small Cap Core Index	-	5,626,671
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	1	11,761,464
MTA Mid Cap Core Index Fund	-	8,858,418
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	3	25,580,298
MTA Large Cap Portfolio	2	22,663,970
MTA Large Cap Value Portfolio	-	2,267,800
MTA Large Cap Growth Portfolio	-	(11,279,032)
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	5	2,773,516
MTA Bond Aggregate Index Fund	-	246,700
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	5	16,658,539
<b><u>Self-Directed Investment Account</u></b>		
	-	113,252
<b>Total</b>	<b>\$20</b>	<b>\$117,181,631</b>

457 Investments at December 31, 2015

	<u>Cash</u> <u>Earnings</u>	<u>Appreciation/Depreciation</u> <u>In Fair Market Value - Net</u>
<b><u>Target-Year Lifecycle Funds</u></b>		
MTA Target-Year Lifecycle 2010 Fund	\$ -	(\$14,244)
MTA Target-Year Lifecycle 2015 Fund	2	480,156
MTA Target-Year Lifecycle 2020 Fund	-	261,402
MTA Target-Year Lifecycle 2025 Fund	-	596,181
MTA Target-Year Lifecycle 2030 Fund	-	134,993
MTA Target-Year Lifecycle 2035 Fund	-	312,228
		86,426
MTA Target-Year Lifecycle 2040 Fund	45	
MTA Target-Year Lifecycle 2045 Fund	-	234,658
MTA Target-Year Lifecycle 2050 Fund	6	89,305
MTA Target-Year Lifecycle 2055 Fund	-	416
MTA Income Fund	(21)	324,408
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	(14)	381,162
MTA International Index Fund	-	(616,930)
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	(3)	28,327
MTA Small Cap Core Index	-	(1,255,518)
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	(4)	(513,021)
MTA Mid Cap Core Index Fund	-	(1,130,066)
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	(3)	3,150,685
MTA Large Cap Growth Portfolio	(6)	21,671,008
MTA Large Cap Value Portfolio	(2)	(1,709,687)
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	43	(556,142)
MTA Bond Aggregate Index Fund	-	45,065
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	70	15,044,409
<b><u>Self-Directed Investment Account</u></b>		
	-	(48,528)
<b>Total</b>	<b>\$113</b>	<b>\$36,996,693</b>

**401(k) Investments at December 31, 2016**

<b><u>Target-Year Lifecycle Funds</u></b>	<b><u>Cash Earnings</u></b>	<b><u>Appreciation/Depreciation in Fair Market Value - Net</u></b>
MTA Target-Year Lifecycle 2015 Fund	\$ -	\$2,802,273
MTA Target-Year Lifecycle 2020 Fund	-	2,121,748
MTA Target-Year Lifecycle 2025 Fund	-	6,227,084
MTA Target-Year Lifecycle 2030 Fund	-	2,390,027
MTA Target-Year Lifecycle 2035 Fund	10	5,026,975
MTA Target-Year Lifecycle 2040 Fund	-	1,365,778
MTA Target-Year Lifecycle 2045 Fund	-	2,864,989
MTA Target-Year Lifecycle 2050 Fund	-	1,056,316
MTA Target-Year Lifecycle 2055 Fund	-	24,944
MTA Income Fund	-	2,153,425
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	2	(2,078,681)
MTA International Index Fund	-	739,269
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	(42)	23,418,178
MTA Small Cap Core Index	-	6,783,924
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	(72)	16,078,358
MTA Mid Cap Core Index Fund	(19)	10,375,050
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	(42)	37,044,450
MTA Large Cap Portfolio	(113)	32,862,868
MTA Large Cap Value Portfolio	(33)	3,509,906
MTA Large Cap Growth Portfolio	45	(15,799,263)
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	(26)	4,239,295
MTA Bond Aggregate Index Fund	-	348,844
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	(566)	20,297,512
<b><u>Self-Directed Investment Account</u></b>		
	-	189,658
<b>Total</b>	<b>(\$856)</b>	<b>\$164,042,927</b>

**401(k) Investments at December 31, 2015**

	<u>Cash Earnings</u>	<u>Appreciation/Depreciation in Fair Market Value - Net</u>
<b><u>Target-Year Lifecycle Funds</u></b>		
MTA Target-Year Lifecycle 2010 Fund	\$ -	(\$17,298)
MTA Target-Year Lifecycle 2015 Fund	-	661,014
MTA Target-Year Lifecycle 2020 Fund	-	377,238
MTA Target-Year Lifecycle 2025 Fund	3	914,637
MTA Target-Year Lifecycle 2030 Fund	-	267,156
MTA Target-Year Lifecycle 2035 Fund	-	557,705
MTA Target-Year Lifecycle 2040 Fund	-	140,509
MTA Target-Year Lifecycle 2045 Fund	-	360,969
MTA Target-Year Lifecycle 2050 Fund	-	89,310
MTA Target-Year Lifecycle 2055 Fund	-	27
MTA Income Fund	1	446,354
<b><u>International Equity Funds</u></b>		
MTA International Portfolio	(27)	377,593
MTA International Index Fund	-	(721,280)
<b><u>Small-Cap Equity Funds</u></b>		
MTA Small Cap Core Portfolio	(49)	(32,359)
MTA Small Cap Core Index	-	(1,556,907)
<b><u>Mid-Cap Equity Funds</u></b>		
MTA Mid Cap Core Portfolio	(60)	(665,103)
MTA Mid Cap Core Index Fund	-	(1,192,480)
<b><u>Large-Cap Equity Funds</u></b>		
MTA Large Cap Core Index Fund	(101)	4,535,707
MTA Large Cap Growth Portfolio	(107)	30,585,709
MTA Large Cap Value Portfolio	(62)	(2,683,389)
<b><u>Bond Funds</u></b>		
MTA Bond Core Plus Portfolio	(103)	(831,452)
MTA Bond Aggregate Index Fund	-	46,064
<b><u>Fixed Investment Option</u></b>		
MTA Stable Value Fund	(2,136)	18,308,257
<b><u>Self-Directed Investment Account</u></b>		
	-	(85,689)
	<b>(\$2,641)</b>	<b>\$49,882,292</b>

**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 safety of funds invested in the various investment accounts is based upon the performance and stability of the securities in the underlying portfolios. Investment in these funds 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 funds pursuant to investment policy and objectives. When funds are determined to not be meeting the investment policy and objectives, they are closed and replaced.

At December 31, 2016, the following credit quality rating has been assigned by a nationally recognized rating organization to the Fixed Income Portfolio of the Plans:

<u>Quality Rating</u>	<u>457</u>		<u>401(k)</u>	
	<u>457</u>	<u>Percentage of Fixed Income Portfolio</u>	<u>401(k)</u>	<u>Percentage of Fixed Income Portfolio</u>
AAA	\$ 508,196,244	42.87%	\$ 664,957,825	43.12%
AA	78,691,151	6.64%	101,629,089	6.59%
A	163,177,729	13.76%	209,551,011	13.59%
BBB	132,771,937	11.20%	171,855,686	11.14%
BB	11,519,025	0.97%	17,304,407	1.12%
Below BB	<u>7,788,409</u>	<u>0.66%</u>	<u>12,093,848</u>	<u>0.78%</u>
Credit Risk Debt Securities	902,144,495	76.10%	1,177,391,866	76.34%
U.S. Government Bonds	<u>283,367,025</u>	<u>23.90%</u>	<u>364,860,700</u>	<u>23.66%</u>
Total fixed income securities	1,185,511,520	<u>100.00%</u>	1,542,252,566	<u>100.00%</u>
Other securities not rated - equity, international funds and corporate bonds	<u>1,077,461,091</u>		<u>1,533,895,455</u>	
	<u>\$ 2,262,972,611</u>		<u>\$ 3,076,148,021</u>	

At December 31, 2015, the following credit quality rating has been assigned by a nationally recognized rating organization to the Fixed Income Portfolio of the Plans:

<u>Quality Rating</u>	<u>457</u>	<u>457</u> Percentage of Fixed Income <u>Portfolio</u>	<u>401(k)</u>	<u>401(k)</u> Percentage of Fixed Income <u>Portfolio</u>
AAA	\$ 469,727,691	43.63%	\$ 612,834,150	43.94%
AA	63,380,137	5.89%	80,671,205	5.78%
A	144,495,317	13.42%	185,659,267	13.31%
BBB	116,889,017	10.86%	152,170,862	10.91%
BB	10,162,966	0.94%	14,873,718	1.07%
Credit Risk Debt Securities	808,152,484	75.06%	1,051,072,756	75.36%
U.S. Government Bonds	<u>268,525,761</u>	<u>24.94%</u>	<u>343,612,997</u>	<u>24.64%</u>
Total fixed income securities	1,076,678,245	<u>100.00%</u>	1,394,685,753	<u>100.00%</u>
Other securities not rated - equity, international funds and corporate bonds	<u>992,505,893</u>		<u>1,400,297,047</u>	
	<u>\$ 2,069,184,138</u>		<u>\$ 2,794,982,800</u>	

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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 interest rate risk. The greater the duration of a portfolio, 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.

**2016**

<b><u>Investment Type</u></b>	<b><u>457</u></b>	<b><u>401(k)</u></b>	<b><u>Total</u></b>	<b><u>Duration</u></b>
Stable Value Fund	\$ 884,832,829	\$ 1,082,051,737	\$ 1,966,884,566	3.02 *
Loomis Sayles	29,887,157	45,712,747	75,599,904	6.16
TCW Group	30,792,828	47,097,982	77,890,810	5.57
SSgA BC Aggregate Fund	17,765,958	21,105,184	38,871,142	5.82
SSgA Real Asset Fund	37,045,207	55,792,472	92,837,679	7.83
Wellington World Bond Fund	<u>29,887,156</u>	<u>45,712,747</u>	<u>75,599,903</u>	1.54
Total Fixed Income				
Portfolio Modified Duration	1,030,211,135	1,297,472,869	2,327,684,004	
Investment with no duration reported	<u>1,232,761,476</u>	<u>1,778,675,152</u>	<u>3,011,436,628</u>	
Total investments	<u>\$ 2,262,972,611</u>	<u>\$ 3,076,148,021</u>	<u>\$ 5,339,120,632</u>	

\* Average Duration - the price sensitivity to yield and the rate of change of price with respect to yield due

**2015**

<b><u>Investment Type</u></b>	<b><u>457</u></b>	<b><u>401(k)</u></b>	<b><u>Total</u></b>	<b><u>Duration</u></b>
Stable Value Fund	\$ 746,246,539	\$ 919,240,506	\$ 1,665,487,045	2.91 *
Loomis Sayles	24,170,497	36,580,790	60,751,287	6.74
TCW Group	24,902,937	37,689,299	62,592,236	4.97
SSgA BC Aggregate Fund	13,472,198	15,987,628	29,459,826	5.69
Wellington World Bond Fund	<u>24,170,497</u>	<u>52,083,487</u>	<u>76,253,984</u>	7.60
Total Fixed Income				
Portfolio Modified Duration	868,083,828	1,098,162,500	1,966,246,328	
Investment with no duration reported	<u>1,201,100,310</u>	<u>1,696,820,300</u>	<u>2,897,920,610</u>	
Total investments	<u>\$ 2,069,184,138</u>	<u>\$ 2,794,982,800</u>	<u>\$ 4,864,166,938</u>	

\* Average Duration - the price sensitivity to yield and the rate of change of price with respect to yield due

**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:

<b>2016</b>	<b>457</b>	<b>401(k)</b>	<b>Total</b>
<b>Currency</b>	<b>Holdings in U.S. Dollars</b>	<b>Holdings in U.S. Dollars</b>	<b>Holdings in U.S. Dollars</b>
Australian Dollar	\$ 6,476,036	\$ 9,722,088	\$ 16,198,125
Bermudian Dollar	1,377	1,657	3,033
Brazil Cruzeiro Real	2,967,944	4,484,853	7,452,797
British Pound Sterling	37,059,647	55,964,750	93,024,396
Canadian Dollar	14,025,322	20,980,045	35,005,367
Chilean Peso	139,095	200,545	339,640
Chinese Yuan Renminbi	5,142,674	7,687,577	12,830,251
Colombian Peso	42,413	52,584	94,997
Czech Krone	4,959	6,586	11,545
Danish Krone	3,632,390	5,559,545	9,191,935
Egyptian Pound	4,959	6,586	11,545
Euro	53,545,552	80,572,968	134,118,521
Hong Kong Dollar	5,758,314	8,697,029	14,455,343
Hungarian Forint	204,319	304,116	508,436
Indian Rupee	2,851,831	4,301,066	7,152,897
Indonesia Rupiah	1,380,973	2,091,763	3,472,736
Israeli Shekel	127,703	174,459	302,163
Japanese Yen	35,517,104	53,714,855	89,231,959
Malaysian Ringgit	1,388,595	2,103,663	3,492,257
Mexican Peso	3,117,015	4,742,554	7,859,570
New Zealand Dollar	(417,079)	(659,692)	(1,076,771)
Norwegian Krone	648,657	970,958	1,619,614
Panamanian Balboa	11,248	13,536	24,784
Peruvian Nuevo Sol	21,167	26,707	47,874
Philippine Peso	722,394	1,092,893	1,815,287
Polish Zloty	363,672	551,561	915,233
Qatar Riyal	707,710	1,074,462	1,782,172
Russian Ruble	113,400	150,947	264,347
Singapore Dollar	285,759	410,134	695,893
South African Rand	4,675,375	7,089,314	11,764,689
South Korean Won	4,040,394	6,072,874	10,113,269
Swedish Krona	8,958,161	13,646,666	22,604,827
Swiss Franc	14,377,692	21,776,803	36,154,495
New Taiwan Dollar	3,484,687	5,244,446	8,729,132
Thai Baht	1,261,810	1,910,747	3,172,557
Turkish Lira	167,976	242,372	410,348
United Arab Emirates Dirham	626,207	950,159	1,576,366
Uruguayan Peses	10,505	12,641	23,146
<b>Total</b>	<b>\$ 213,447,957</b>	<b>\$ 321,946,817</b>	<b>\$ 535,394,774</b>

<b>2015</b>	<b>457</b>	<b>401(k)</b>	<b>Total</b>
<b>Currency</b>	<b>Holdings in U.S. Dollars</b>	<b>Holdings in U.S. Dollars</b>	<b>Holdings in U.S. Dollars</b>
Australian Dollar	\$ 8,430,411	\$ 12,689,482	\$ 21,119,893
Bermudian Dollar	1,391	1,673	3,064
Brazil Cruzeiro Real	1,009,692	1,509,808	2,519,500
British Pound Sterling	35,032,603	52,780,871	87,813,474
Canadian Dollar	9,374,858	14,010,627	23,385,485
Chilean Peso	28,627	36,412	65,039
Chinese Yuan Renminbi	(451,209)	(701,617)	(1,152,826)
Colombian Peso	29,729	36,486	66,215
Czech Krone	143,862	219,955	363,817
Danish Krone	4,841,981	7,351,495	12,193,476
Egyptian Pound	5,337	6,940	12,277
Euro	48,951,105	73,573,524	122,524,629
Hong Kong Dollar	8,712,557	13,064,287	21,776,844
Hungarian Forint	14,020	19,774	33,794
Indian Rupee	1,647,704	2,457,190	4,104,894
Indonesia Rupiah	282,416	416,379	698,795
Israeli Shekel	1,030,436	1,550,257	2,580,693
Japanese Yen	39,847,052	60,061,720	99,908,772
Malaysian Ringgit	198,440	283,765	482,205
Mexican Peso	3,703,747	5,632,936	9,336,683
Moroccan Dirham	326	491	817
New Zealand Dollar	1,721,989	2,640,247	4,362,236
Norwegian Krone	3,138,391	4,762,057	7,900,448
Panamanian Balboa	8,346	10,038	18,384
Peruvian Nuevo Sol	8,782	10,692	19,474
Philippine Peso	637,023	958,871	1,595,894
Polish Zloty	783,320	1,191,763	1,975,083
Qatar Riyal	20,280	26,374	46,654
Russian Ruble	3,202	4,164	7,366
Singapore Dollar	1,272,760	1,895,486	3,168,246
South African Rand	1,751,658	2,628,060	4,379,718
South Korean Won	1,698,329	2,486,961	4,185,290
Swedish Krona	6,669,738	10,088,802	16,758,540
Swiss Franc	11,149,261	16,747,359	27,896,620
New Taiwan Dollar	1,498,041	2,212,870	3,710,911
Thai Baht	262,231	387,339	649,570
Turkish Lira	480,527	712,243	1,192,770
United Arab Emirates Dirham	155,571	232,462	388,033
Uruguayan Peses	5,564	6,692	12,256
<b>Total</b>	<b>\$ 194,100,098</b>	<b>\$ 292,004,935</b>	<b>\$ 486,105,032</b>

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)**

	2016			
	December 31, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>457 Plan</b>				
Equity Securities:				
Comingled large-cap equity funds	\$ 311,453	\$ -	Daily	None
Large-cap equity mutual fund	274,680	-	Daily	None
Comingled mid-cap equity funds	120,765	-	Daily	None
Mid-cap equity mutual fund	66,001	-	Daily	None
Comingled small-cap equity funds	131,256	-	Daily	None
Comingled international equity fund	12,028	-	Daily	None
International equity mutual funds	194,235	-	Daily	None
Total equity securities	1,110,418	-		
Debt Securities				
Comingled debt funds	170,699	-	Daily	None
Total debt securities	170,699	-		
Real assets				
Comingled real asset equity fund	37,045	-	Daily	None
Total real assets	37,045	-		
Other:				
Self direct investment option	2,523	-	Daily	None
Total other	2,523	-		
Total investments measured at the NAV	1,320,685	-		
Investments measured at Contract Value	942,288	-		
Total investments	\$ 2,262,973	\$ -		

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

	2016			
	December 31, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>401k Plan</b>				
Equity Securities:				
Comingled large-cap equity funds	\$ 453,635	\$ -	Daily	None
Large-cap equity mutual fund	401,826	-	Daily	None
Comingled mid-cap equity funds	154,476	-	Daily	None
Mid-cap equity mutual fund	91,230	-	Daily	None
Comingled small-cap equity funds	186,321	-	Daily	None
Comingled international equity fund	15,767	-	Daily	None
International equity mutual funds	292,437	-	Daily	None
Total equity securities	1,595,692	-		
Debt Securities				
Comingled debt funds	255,535	-	Daily	None
Total debt securities	255,535	-		
Real assets				
Comingled real asset equity fund	55,792	-	Daily	None
Total real assets	55,792	-		
Other:				
Self direct investment option	3,536	-	Daily	None
Total other	3,536	-		
Total investments measured at the NAV	1,910,555	-		
Investments measured at Contract Value	1,165,593	-		
Total investments	\$ 3,076,148	\$ -		

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

	2015			
	December 31, 2015	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>457 Plan</b>				
Equity Securities:				
Comingled large-cap equity funds	\$ 315,376	\$ -	Daily	None
Large-cap equity mutual fund	243,865	-	Daily	None
Comingled mid-cap equity funds	105,817	-	Daily	None
Mid-cap equity mutual fund	62,807	-	Daily	None
Comingled small-cap equity funds	107,020	-	Daily	None
Comingled international equity fund	10,337	-	Daily	None
International equity mutual funds	178,836	-	Daily	None
Total equity securities	1,024,058	-		
Debt Securities				
Comingled debt funds	145,624	-	Daily	None
Total debt securities	145,624	-		
Real assets				
Comingled real asset equity fund	35,121	-	Daily	None
Total real assets	35,121	-		
Other:				
Self direct investment option	2,392	-	Daily	None
Total other	2,392	-		
Total investments measured at the NAV	1,207,195	-		
Investments measured at Contract Value	861,989	-		
Total investments	\$ 2,069,184	\$ -		

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

	2015			
	December 31, 2015	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
<b>401k Plan</b>				
Equity Securities:				
Comingled large-cap equity funds	\$ 449,853	\$ -	Daily	None
Large-cap equity mutual fund	357,245	-	Daily	None
Comingled mid-cap equity funds	134,303	-	Daily	None
Mid-cap equity mutual fund	85,609	-	Daily	None
Comingled small-cap equity funds	150,644	-	Daily	None
Comingled international equity fund	13,264	-	Daily	None
International equity mutual funds	267,887	-	Daily	None
Total equity securities	1,458,805	-		
Debt Securities				
Comingled debt funds	216,263	-	Daily	None
Total debt securities	216,263	-		
Real assets				
Comingled real asset equity fund	52,083	-	Daily	None
Total real assets	52,083	-		
Other:				
Self direct investment option	3,431	-	Daily	None
Total other	3,431	-		
Total investments measured at the NAV	1,730,582	-		
Investments measured at Contract Value	1,064,401	-		
Total investments	\$ 2,794,983	\$ -		

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

**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 LargerMidCap 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

**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, 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 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, 2016 and 2015, 34.2% and 34.3% of the eligible employees were enrolled in the 457 Plan and 48.93% and 48.17% of the eligible employees were enrolled in the 401(k) Plan, respectively. There are 30,557 and 30,293 active participants in the 457 Plan and 42,189 and 40,990 active participants in the 401(k) Plan. The average account balance in the 457 Plan is \$57,423 and \$54,319 and in the 401(k) Plan is \$59,705 and \$57,058 in 2016 and 2015, 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 1<sup>st</sup> 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 to take direct payments; 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

**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 COA contributions, MTA Business Service Center, Matching Contributions and Roth Elective Deferrals. The net loans outstanding for the 457 plan is \$69.82 million and \$67.36 million at December 31, 2016 and 2015, respectively, and for the 401(k) plan was \$136.07 million and \$129.90 million at December 31, 2016 and 2015, 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 2016 and 2015. 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 2016 and 2015, 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, 2016 and 2015, the Plans' membership with balances consisted of:

2016	457	401(k)
Active employees	30,557	42,189
Terminated/Inactive employees	<u>8,839</u>	<u>9,259</u>
Total active and inactive members	<u><u>39,396</u></u>	<u><u>51,448</u></u>
Vested employees	39,396	51,258

2015	457	401(k)
Active employees	30,293	40,990
Terminated/Inactive employees	<u>7,822</u>	<u>7,617</u>
Total active and inactive members	<u><u>38,115</u></u>	<u><u>48,607</u></u>
Vested employees	38,115	48,453

**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**

In October 2017, \$646,932,467 in cash and securities were transitioned from investment managers Vanguard, Frontier, Denver and Conestoga to the management of the following small and mid-capitalization (“SMID”) funds: Alliance SMID Value, Dimensional Fund Advisors U.S. Targeted Value, William Blair SMID Growth, and Jackson Square SMID Growth.

\* \* \* \* \*

# Metro-North Commuter Railroad Company Cash Balance Plan

Financial Statements as of and for the  
Years Ended December 31, 2016 and 2015,  
Supplemental Schedules, and  
Independent Auditors' Report

DRAFT

# 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, 2016 and 2015, 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, 2016 and 2015, 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 21, Schedule of Employer Contributions - Schedule II on pages 22 through 23, and Schedule of Investment Returns - Schedule III on page 24 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 22, 2018

# METRO-NORTH COMMUTER RAILROAD COMPANY

## CASH BALANCE PLAN

### MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2016 AND 2015

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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, 2016 and 2015. 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 7.

#### 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, 2016, 2015, and 2014

(Dollars in thousands)

	2016	2015	2014	Increase/(Decrease)	
				2016-2015	2015-2014
Cash	\$ -	\$ 3	\$ -	\$ (3)	\$ 3
Investments, at fair value	571	606	695	(35)	(89)
Accrued interest	3	3	3	-	-
Receivable from MNCR	-	-	21	-	(21)
Receivable from investment securities sold	<u>30</u>	<u>10</u>	<u>-</u>	<u>20</u>	<u>10</u>
Total assets	<u>604</u>	<u>622</u>	<u>719</u>	<u>(18)</u>	<u>(97)</u>
Payable for investment securities purchased	<u>30</u>	<u>10</u>	<u>-</u>	<u>20</u>	<u>10</u>
Total liabilities	<u>30</u>	<u>10</u>	<u>-</u>	<u>20</u>	<u>10</u>
Net position - restricted for pension benefits	<u>\$ 574</u>	<u>\$ 612</u>	<u>\$ 719</u>	<u>\$ (38)</u>	<u>\$ (107)</u>

### December 31, 2016 versus December 31, 2015

Cash and investments at December 31, 2016 were \$571 thousand, a decrease of \$38 thousand from 2015. The decrease is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and accrued interest at December 31, 2016 were \$33 thousand, a net increase of \$20 thousand from 2015. The increase is the result of an increase in net securities sold at the end of 2016.

Payables at December 31, 2016 were \$30 thousand, an increase of \$20 thousand from 2015. The increase is the result of an increase in net securities purchased at the end of 2016.

Net position restricted for pension benefits at December 31, 2016 were \$574 thousand, a decrease of \$38 thousand from 2015 as a result of the changes noted above.

December 31, 2015 versus December 31, 2014

Cash and investments at December 31, 2015 were \$609 thousand, a decrease of \$86 thousand from 2014. The decrease is the result of investment activity and plan contributions net of benefit payments and expenses.

Receivables and accrued interest at December 31, 2015 were \$13 thousand, a net decrease of \$11 thousand from 2014. The decrease is the result of an increase in net securities sold at the end of 2014 of \$10 thousand, offset by a decrease in receivable from MNCR of \$21 thousand.

Payables at December 31, 2015 were \$10 thousand, an increase of \$10 thousand from 2014. The increase is the result of an increase in net securities purchased at the end of 2015.

The net position restricted for pension benefits at December 31, 2015 were \$612 thousand, a decrease of \$107 thousand from 2014 as a result of the changes noted above.

**Changes in Fiduciary Net Position  
For the Years Ended December 31, 2016, 2015 and 2014  
(Dollars in thousands)**

	<u>2016</u>	<u>2015</u>	<u>2014</u>	<u>Increase/(Decrease)</u>	
				<u>2016-2015</u>	<u>2015-2014</u>
<b>Additions:</b>					
Net investment income/(loss)	\$ 16	\$ 6	\$ 42	\$ 10	\$ (36)
Employer contributions	23	-	14	23	(14)
Other	-	7	-	(7)	7
Total additions	<u>39</u>	<u>13</u>	<u>56</u>	<u>26</u>	<u>(43)</u>
<b>Deductions:</b>					
Benefits paid to participants	77	113	88	(36)	25
Other	-	7	-	(7)	7
Total deductions	<u>77</u>	<u>120</u>	<u>88</u>	<u>(43)</u>	<u>32</u>
Net decrease in net position	<u>(38)</u>	<u>(107)</u>	<u>(32)</u>	<u>69</u>	<u>(75)</u>
<b>Net position-restricted for pension benefits:</b>					
Beginning of year	<u>612</u>	<u>719</u>	<u>751</u>	<u>(107)</u>	<u>(32)</u>
End of year	<u>\$ 574</u>	<u>\$ 612</u>	<u>\$ 719</u>	<u>\$ (38)</u>	<u>\$ (107)</u>

## CHANGES IN FIDUCIARY NET POSITION

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 accrued liabilities were paid to the Plan in several subsequent years. Per the January 1, 2014 actuarial valuation, the unfunded accrued liability was \$18 thousand which included administrative fees reimbursable to the Plan from MNCR. The full amount was paid to the Plan in 2015. Per the January 1, 2015 valuation, the actuarial value of assets exceeded the actuarial accrued liability and as a result no payment was required for 2015. Per the January 1, 2016 valuation, the unfunded accrued liability was \$22 thousand and was paid to the Plan in 2016. 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.

The Plan is a closed plan and has 4 active members as of January 1, 2017. 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, 2016 versus December 31, 2015

Net investment income increased by \$10 thousand in 2016 due to net investment gains of \$16 thousand in 2016 versus net investment gains of \$6 thousand in 2015.

Contributions increased by \$23 thousand in 2016 compared to 2015 as a result of the Actuarial Determined Contributions ("ADC") for 2016.

Other additions decreased by \$7 thousand in 2016 compared to 2015 primarily due the receipt of securities in-kind made in 2015.

Benefit payments decreased by \$36 thousand in 2016 compared to 2015. In 2016, there were less retirees taking lump sum distributions when compared to 2015.

Other deductions decreased by \$7 thousand in 2016 compared to 2015 primarily due the disbursement of securities in-kind made in 2015.

### December 31, 2015 versus December 31, 2014

Net investment income decreased by \$36 thousand in 2015 due to net investment gains of \$6 thousand in 2015 versus net investment losses of \$42 thousand in 2014.

Contributions decreased by \$14 thousand in 2015 compared to 2014 as a result of the Actuarial Determined Contributions ("ADC") for 2015.

Other additions increased by \$7 thousand in 2015 compared to 2014. The increase was the result of the receipt of securities in-kind in 2015.

Benefits paid to plan participants increased by \$25 thousand in 2015 compared to 2014. In 2015, there were more retirees taking lump sum distributions when compared to 2014.

Other deductions increased by \$7 thousand in 2015 compared to 2014 primarily due the disbursement of securities in-kind in 2015.

## 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
<b>December 31, 2016</b>			
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	<u>11</u>	<u>2.0 %</u>	<u>4.8 %</u>
Total	<u>\$ 571</u>	<u>100.0 %</u>	<u>2.9 %</u>
<b>December 31, 2015</b>			
U.S. government & agency securities	\$ 346	57.1 %	2.6 %
Corporate bonds & asset backed securities	225	37.0 %	4.2 %
U.S. Treasury Bills	22	3.6 %	0.0 %
Short-term investments	2	0.4 %	0.1 %
Other bonds & fixed income securities	<u>11</u>	<u>1.9 %</u>	<u>4.9 %</u>
Total	<u>\$ 606</u>	<u>100.0 %</u>	<u>3.1 %</u>
<b>December 31, 2014</b>			
U.S. government & agency securities	\$ 286	41.1 %	2.4 %
Corporate bonds & asset backed securities	297	42.7 %	4.1 %
U.S. Treasury Bills	95	13.7 %	0.0 %
Short-term investments	10	1.4 %	0.1 %
Other bonds & fixed income securities	<u>7</u>	<u>1.1 %</u>	<u>5.1 %</u>
Total	<u>\$ 695</u>	<u>100.0 %</u>	<u>2.8 %</u>

### 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, 16<sup>th</sup> Floor, New York, NY 10004.

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

**STATEMENTS OF FIDUCIARY NET POSITION**  
**AS OF DECEMBER 31, 2016 AND 2015**

	2016	2015
<b>ASSETS:</b>		
Cash	\$ -	\$ 2,872
Investments, at fair value:		
U.S. government & agency securities	324,479	346,033
Corporate bonds & asset backed securities	220,709	224,509
U.S. Treasury Bills	5,999	22,000
Other bonds & fixed income securities	11,474	11,264
Short-term investments	<u>8,250</u>	<u>2,341</u>
Total investments	<u>570,911</u>	<u>606,147</u>
Accrued interest	3,165	3,412
Receivable from investment securities sold	<u>29,585</u>	<u>9,981</u>
Total assets	<u>603,661</u>	<u>622,412</u>
<b>LIABILITIES:</b>		
Payable for investment securities purchased	<u>(29,497)</u>	<u>(9,962)</u>
Total liabilities	<u>(29,497)</u>	<u>(9,962)</u>
<b>NET POSITION - restricted for pension benefits</b>	<u>\$ 574,164</u>	<u>\$ 612,450</u>

See notes to financial statements.

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

**STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015**

	2016	2015
ADDITIONS:		
Investment income/(loss):		
Interest	\$ 17,415	\$ 17,285
Net (depreciation)/appreciation in fair value of investments	<u>(1,667)</u>	<u>(11,251)</u>
Total investment income	15,748	6,034
Contributions:		
Employer	22,721	-
Other	<u>1</u>	<u>6,741</u>
Total additions	<u>38,470</u>	<u>12,775</u>
DEDUCTIONS:		
Benefits paid to participants	(76,746)	(112,655)
Other	<u>(10)</u>	<u>(6,773)</u>
Total deductions	<u>(76,756)</u>	<u>(119,428)</u>
NET DECREASE IN NET POSITION	(38,286)	(106,653)
NET POSITION - restricted for pension benefits		
Beginning of year	<u>612,450</u>	<u>719,103</u>
End of year	<u>\$ 574,164</u>	<u>\$ 612,450</u>

See notes to financial statements.

# METRO-NORTH COMMUTER RAILROAD COMPANY CASH BALANCE PLAN

## NOTES TO FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2015 AND 2014

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### 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 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, 2017, the date of the latest actuarial valuation:

Active Plan Members	4
Retirees and beneficiaries receiving benefits	27
Vested formerly active members not yet receiving benefits	<u>13</u>
Total	<u><u>44</u></u>

**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, 2014 actuarial valuation, the unfunded pension liability was \$18 thousand which included administrative fees reimbursable to the Plan from MNCR. The full amount was paid to the Plan in 2015. Per the January 1, 2015 valuation, the actuarial value of assets exceeded the actuarial total pension liability and as a result no payment was required for 2015. Per the January 1, 2016 valuation, the unfunded total pension liability was \$22 thousand and paid to the Plan in 2016. 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.

## 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 \$17 thousand and \$17 thousand for the years ended December 31, 2016 and 2015, 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 Statements for the year-ended December 31, 2016:

GASB Statement No. 82, *Pension Issues-An Amendment of GASB Statements No. 67, No. 68 and No. 73*, addresses the presentation of payroll measures in required supplementary information ("RSI"), the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes and the classification of payments made by employers to satisfy employee (plan member) contribution requirements. There was no material impact on the Plan's financial statements as a result of the implementation of GASB Statement No. 82.

### 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.

<b>GASB Statement No.</b>	<b>GASB Accounting Standard</b>	<b>MNCR Pension Plan Required Year of Adoption</b>
73	<i>Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68</i>	2017
84	<i>Fiduciary Activities</i>	2019
85	<i>Omnibus 2017</i>	2018

### Subsequent Events

As of January 22, 2018, 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, 2016 and December 31, 2015:

**GASB 72 Disclosure  
(in thousands)**

	<b>2016</b>			
	Level 1	Level 2	Level 3	Total
INVESTMENTS - fair value level				
Debt securities:				
U.S government agency	\$ 198	\$ 127	\$ -	\$ 325
Corporate bonds	-	200	-	200
U.S treasury securities	6	-	-	6
Commerical mortgage-backed securities	-	21	-	21
Other bonds	-	11	-	11
Total debt securities	<u>204</u>	<u>359</u>	<u>-</u>	<u>563</u>
Total investments by fair value level	<u>204</u>	<u>359</u>	<u>-</u>	<u>563</u>
INVESTMENTS- measured at the net asset value (NAV)				
Short-term other				<u>8</u>
Total investments measured at the NAV				<u>8</u>
<b>Total investments by fair value level</b>	<u>\$ 204</u>	<u>\$ 359</u>	<u>\$ -</u>	<u>\$ 571</u>

	<b>2015</b>			
	Level 1	Level 2	Level 3	Total
INVESTMENTS - fair value level				
Debt securities:				
U.S government agency	\$ 191	\$ 155	\$ -	\$ 346
Corporate bonds	-	204	-	204
U.S treasury securities	22	-	-	22
Commerical mortgage-backed securities	-	21	-	21
Other bonds	-	11	-	11
Total debt securities	<u>213</u>	<u>391</u>	<u>-</u>	<u>604</u>
Total investments by fair value level	<u>213</u>	<u>391</u>	<u>-</u>	<u>604</u>
INVESTMENTS- measured at the net asset value (NAV)				
Short-term other				<u>2</u>
Total investments measured at the NAV				<u>2</u>
<b>Total investments by fair value level</b>	<u>\$ 213</u>	<u>\$ 391</u>	<u>\$ -</u>	<u>\$ 606</u>

**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, 2016 and December 31, 2015, the annual money-weighted rate of return on pension plan investments, net of pension plan investment expense, for the Plan was 2.75% and 0.93%, 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,	
	2016	2015
U.S. government & agency securities	\$ (2,572)	\$ (2,209)
Corporate bonds & asset backed securities	695	(8,792)
Other bonds & fixed income securities	210	(250)
	<u>\$ (1,667)</u>	<u>\$ (11,251)</u>

## Credit Risk

The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2016 and December 31, 2015, respectively, are as follows:

December 31, 2016 Quality Rating	Fair Value	Percentage of Portfolio
AAA	\$ 18,693	3.27%
AA+	5,041	0.88
AA	4,939	0.87
A+	5,022	0.88
A	12,569	2.20
AA-	11,457	2.01
A-	29,137	5.10
BBB+	81,471	14.27
BBB	46,467	8.14
BBB-	5,187	0.91
NR	<u>20,450</u>	<u>3.58</u>
Total credit risk debt securities	240,433	
U.S. government & agency securities*	<u>330,478</u>	<u>57.89</u>
Total investment portfolio	<u>\$ 570,911</u>	<u>100.00%</u>

<b>December 31, 2015</b>	<b>Fair</b>	<b>Percentage of</b>
<b>Quality Rating</b>	<b>Value</b>	<b>Portfolio</b>
AAA	\$ 9,431	1.56%
AA+	4,994	0.82
AA	5,042	0.83
A+	4,965	0.82
A	18,169	3.00
AA-	6,284	1.04
A-	50,078	8.26
BBB+	64,587	10.66
BBB	40,651	6.71
BBB-	16,034	2.65
NR	<u>17,879</u>	<u>2.95</u>
Total credit risk debt securities	238,114	
U.S. government & agency securities*	<u>368,033</u>	<u>60.72</u>
Total investment portfolio	<u>\$ 606,147</u>	<u>100.00%</u>

\*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.

<b>December 31, 2016</b>	<b>Fair</b>	<b>Percentage of</b>	<b>Duration</b>
<b>Investment Type</b>	<b>Value</b>	<b>Portfolio</b>	<b>(Years)</b>
U.S. government & agency securities	\$ 324,479	56.84%	6.21
Corporate bonds & asset backed securities	220,709	38.66	5.55
U.S. treasury bills	5,999	1.05	0.03
Other Bonds & fixed income securities	11,474	2.01	6.63
Short-term investments	<u>8,250</u>	<u>1.44</u>	0.00
Total investment	<u>\$ 570,911</u>	<u>100.00%</u>	
Portfolio average duration			<u>5.81</u>

<b>December 31, 2015</b>	<b>Fair</b>	<b>Percentage of</b>	<b>Duration</b>
<b>Investment Type</b>	<b>Value</b>	<b>Portfolio</b>	<b>(Years)</b>
U.S. government & agency securities	\$ 346,033	57.09%	5.96
Corporate bonds & asset backed securities	224,509	37.04	5.54
U.S. treasury bills	22,000	3.63	0.02
Other Bonds & fixed income securities	11,264	1.86	7.26
Short-term investments	<u>2,341</u>	<u>0.39</u>	0.00
Total investment	<u>\$ 606,147</u>	<u>100.00%</u>	
Portfolio average duration			<u>5.59</u>

#### **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, 2016 and 2015, for the Plan, were as follows:

	<b>2016</b>	<b>2015</b>
Total pension liability	\$ 566,265	\$ 634,297
Plan's fiduciary net position	<u>574,164</u>	<u>612,450</u>
Employer's net pension liability	<u>\$ (7,899)</u>	<u>\$ 21,847</u>
Plan's fiduciary net position as a percentage of the total pension liability	101.39%	96.56%

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.

	<b>2016</b>	<b>2015</b>
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, 2016 and December 31, 2015 were as follows:**

The actuarial assumptions that determined the total pension liability as of December 31, 2016 and 2015 were based on the results of an actuarial experience study for the period January 1, 2006 - December 31, 2011.

	<b>2016</b>	<b>2015</b>
Valuation date:	January 1, 2017	January 1, 2016
Measurement date:	December 31, 2016	December 31, 2015
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:	2.30%	2.30%
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

**Additional Actuarial Assumptions:**

Termination: Withdrawal rates vary by age. Illustrative rates shown below are for years 2016 and 2015:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
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. Illustrative rates shown below are for years 2016 and 2015:

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

Mortality: 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.

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

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

Changes in Actuarial Assumptions Since Prior Valuation: None.

### Long-Term Expected Rate of Return

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions are per Milliman's investment consulting practice as of December 31, 2016 and 2015.

Asset Class	Index	Target Allocation	2016	2015
Core Fixed Income	Barclays Aggregate	100.00%	1.17%	1.68%

### Sensitivity Analysis

The following presents the net pension liability of the Metro-North Commuter Railroad Company Cash Balance Plan as of December 31, 2016 and 2015, 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, 2016			December 31, 2015		
	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	\$25,200	(\$7,899)	(\$37,092)	\$60,689	\$21,847	(\$12,361)

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

Schedule I

**Required Supplementary Information ( Unaudited)**

**Schedule of Changes in the Employer's Net Pension Liability and Related Ratios (\$ in Thousands)**

	2016	2015	2014
<b>Total Pension Liability:</b>			
Service Cost	\$ -	\$ -	\$ -
Interest	24	29	32
Changes of benefit terms	-	-	-
Difference between expected and actual experience	-	-	-
Changes of economic/demographic (gains) or losses	(15)	(10)	-
Changes of assumptions	-	18	-
Benefit payments	(77)	(113)	(88)
Net change in total pension liability	(68)	(76)	(56)
Total pension liability - beginning	634	710	766
Total pension liability - ending (a)	<u>\$ 566</u>	<u>\$ 634</u>	<u>\$ 710</u>
<b>Fiduciary Net Position:</b>			
Employer contributions	\$ 23	\$ 18	\$ -
Member contributions	-	-	-
Net investment income	16	6	41
Benefit payments	(77)	(113)	(88)
Administrative expenses	-	3	(3)
Net change in plan fiduciary net position	(38)	(86)	(50)
Fiduciary net position - beginning	612	698	748
Fiduciary net position - ending (b)	574	612	698
Net pension liability - ending (a)-(b)	<u>\$ (8)</u>	<u>\$ 22</u>	<u>\$ 12</u>
Fiduciary net position as a percentage of the total pension liability	101.39%	96.56%	98.36%
Covered payroll	\$ 649	\$ 995	\$ 2,080
Net pension liability as a percentage of covered payroll	<u>-1.22%</u>	<u>2.20%</u>	<u>0.56%</u>

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

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

**Schedule II**

**Required Supplementary Information (Unaudited)  
Schedule of Employer Contributions**

<b>Fiscal Year Ending December 31</b>	<b>Actuarially Determined Contribution</b>	<b>Actual Employer Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Contribution as a % of covered Payroll</b>
2007	9,666	9,666	-	6,842,884	0.14%
2008	13,683	13,683	-	6,798,416	0.20%
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%

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

**Actuarial Methods and Assumptions**

The following actuarial methods and assumptions were used in the January 1, 2017, January 1, 2016 and January 1, 2014 valuations.

<b>Valuation Date</b>	January 1, 2017	January 1, 2016	January 1, 2014
<b>Valuation Timing</b>	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.
<b>Actuarial Cost Method</b>	Entry Age Normal	Entry Age Normal	Unit Credit
<b>Amortization Method</b>	One-year amortization of the unfunded liability, if any.	One-year amortization of the unfunded liability, if any.	Period specified in current valuation (closed 10 year period beginning January 1, 2008 - 4 year period for the January 1, 2014 valuation).
<b>Asset Valuation Method</b>	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.
<b>Inflation</b>	2.30%	2.30%	2.50%
<b>Salary Increases</b>	N/A	N/A	N/A - There were no projected salary increase assumptions used in the January 1, 2014 valuation as participants of the Plan were covered under the Management Plan effective January 1, 1989. For participants of the Plan eligible for additional benefits, these benefits were not valued as the potential liability is de minimus.
<b>Investment Rate of Return</b>	4.00%, net of investment expenses	4.00%, net of investment expenses	4.50%, net of investment expenses
<b>Mortality</b>	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

**Required Supplementary Information (Unaudited)**  
**Schedule of Investment Returns**

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

<b><u>Fiscal Year Ending December 31</u></b>	<b><u>Net Money-Weighted Rate of Return</u></b>
2007	N/A
2008	N/A
2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	5.96%
2015	0.93%
2016	2.75%

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

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, 2016 and 2015  
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, 2016 and 2015, 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, 2016 and 2015, 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 10, the Schedule of Funding Progress on page 29, and the Schedule of Employer Contributions on page 30 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 22, 2018

# METROPOLITAN TRANSPORTATION AUTHORITY OTHER POSTEMPLOYMENT BENEFITS PLAN

## MANAGEMENT'S DISCUSSION AND ANALYSIS FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

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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, 2016 and 2015. 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 is held in trust for the payment of future benefits to members and beneficiaries. The assets of the Plan exceeded its liabilities by \$323.0 million, \$297.5 million, and \$303.2 million as of December 31, 2016, 2015, and 2014, respectively. The increase in 2016 is primarily a result of net appreciation on fair value of investments held offset by investment fees charged to the Plan. The decrease in 2015 is primarily a result of net depreciation in investment values less investment fees charged to the Plan.

**Plan Net Position  
December 31, 2016, 2015, and 2014  
(Dollars in thousands)**

	2016	2015	2014	Amount of Change		Percentage Change	
				(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ASSETS:</b>							
Cash	\$ 9,193	\$ 9,668	\$102,320	\$ (475)	\$ (92,652)	(491.0)	(90.6)
Commitment to purchase	-	-	7,500	-	(7,500)	-	(100.0)
Investments	314,006	288,115	193,367	25,891	94,748	9.0	49.0
Receivables and other assets	3	1	2	2	(1)	200.0	(50.0)
<b>TOTAL ASSETS</b>	<b>323,202</b>	<b>297,784</b>	<b>303,189</b>	<b>25,418</b>	<b>(5,405)</b>	<b>8.5</b>	<b>(1.8)</b>
<b>LIABILITIES:</b>							
Benefits payable and accrued expenses	220	236	-	(16)	236	(6.8)	100
<b>TOTAL LIABILITIES</b>	<b>220</b>	<b>236</b>	<b>-</b>	<b>(16)</b>	<b>236.00</b>	<b>(6.8)</b>	<b>100</b>
<b>PLAN NET POSITION HELD IN TRUST FOR OTHER</b>							
<b>POSTEMPLOYMENT BENEFITS</b>	<b>\$ 322,982</b>	<b>\$ 297,548</b>	<b>\$303,189</b>	<b>\$25,434</b>	<b>\$(5,641)</b>	<b>8.5</b>	<b>(1.9)</b>

**Changes in Plan Net Position**  
**For the Years Ended December 31, 2016, 2015, and 2014**  
(Dollars in thousands)

	2016	2015	2014	Amount of Change		Percentage Change	
				(2016 - 2015)	(2015 - 2014)	(2016 - 2015)	(2015 - 2014)
<b>ADDITIONS:</b>							
Net realized and unrealized (loses) or gains	\$ 27,177	\$ (4,758)	\$ 3,950	\$ 31,935	\$ (8,708)	671.2	(220.5)
<b>Less:</b>							
Investment expenses	1,743	883	507	860	376	97.4	74.2
Net investment income/(loss)	25,434	(5,641)	3,443	31,075	(9,084)	550.9	(263.8)
<b>Add:</b>							
Employer contributions	551,013	503,371	483,700	47,642	19,671	9.5	4.1
Total additions	576,447	497,730	487,143	78,717	10,587	9.6	2.2
<b>DEDUCTIONS</b>							
Benefit payments	551,013	503,371	483,700	47,642	19,671	9.5	4.1
Total deductions	551,013	503,371	483,700	47,642	19,671	9.5	4.1
Net increase/(decrease) in Plan net position	25,434	(5,641)	3,443	31,075	(9,084)	550.9	(263.8)
<b>PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYEMENT BENEFITS</b>							
Beginning of year	297,548	303,189	299,746	(5,641)	3,443	(1.9)	1.1
End of year	\$ 322,982	\$ 297,548	\$ 303,189	\$ 25,434	\$ (5,641)	8.5	1.9

The Plan's net position held in trust increased by \$25.4 million during 2016, and decreased by \$5.6 million during 2015. In 2016, the Plan's net appreciation in fair market values was \$27.2 and the investment fees were \$1.7 million. In 2015, the Plan's net depreciation on fair value of investments was \$4.8 million and the investment fees were \$0.8 million.

**Investments** — The table below summarizes the Plan’s investment allocations.

<b>December 31, 2016</b> <b>(Dollars in thousands)</b>	<b>Fair Value</b>	<b>Allocation</b>
<b>Type of Investments</b>		
Investment measured at the NAV	\$ 314,006	100.00 %
	<u>\$ 314,006</u>	<u>100.00 %</u>

<b>December 31, 2015</b> <b>(Dollars in thousands)</b>	<b>Fair Value</b>	<b>Allocation</b>
<b>Type of Investments</b>		
Investment measured at the NAV	\$ 288,115	100.00 %
	<u>\$ 288,115</u>	<u>100.00 %</u>

**Overview of Actuarial Information**

GASB 43 requires employers with more than 200 employees or beneficiaries receiving benefits to perform periodic actuarial valuations at least biennially to determine annual accounting costs and liabilities.

The following is a summary of information from the January 1, 2014, the most recent OPEB actuarial valuation, and from the January 1, 2012 actuarial valuation for the Plan (\$ in millions):

	<u>2014</u>	<u>2012</u>
Actuarial value of assets	\$ 300	\$ 246
Actuarial accrued liability	(18,472)	(20,188)
Unfunded actuarial accrued liability ("UAAL")	<u>\$ (18,172)</u>	<u>\$ (19,942)</u>

**Actuarial Value of Assets**

The actuarial value of assets (which is equal to the Plan’s net position) as of January 1, 2014, the date of the most recent OPEB actuarial valuation, was \$299.7 million.

**Actuarial Accrued Liability**

The actuarial accrued liability (“AAL”) as of January 1, 2014, the date of the most recent OPEB actuarial valuation, was \$18.5 billion determined under the Entry Age (“EA”) Normal Actuarial Cost Method.

**Unfunded AAL**

The decrease in the Unfunded AAL of \$1.7 billion from \$19.9 billion as of the January 1, 2012 actuarial valuation to \$18.2 billion as of the January 1, 2014 actuarial valuation was the result of changes in actuarial assumptions, primarily due to significant reductions in the per capita costs for represented members of New York City Transit and MTA Bus Company. The MTA determines the amount of its annual employer

contributions on the annual Pay-Go, adjusted by prepayments and trust asset usages, which are determined through its normal budgetary process.

## **Economic Factors**

### **Market Overview and Outlook – 2016**

Despite investors entering the year with a myriad of concerns; such as soft economic growth in the United States (“U.S.”) and China, elevated valuations in nearly every market and asset class, and rising geopolitical tensions, performance proved to be robust and resilient across almost all major markets. After a weak 2015, appetite for risk was hearty as equities continued to march ever higher in the U.S., Japan, and Emerging Markets and returns were strong in the riskier corners of fixed income in investment grade, high yield, and emerging markets bonds.

Market performance was framed by a rather benign macro environment, albeit with some transitory complications. In 2015, eyes had turned toward a weakening Chinese economy, resulting in commodity markets continuing their steep decline and volatility rising across the equity and fixed income markets. Emerging markets, particularly those centered on commodities where demand is tied to Chinese growth, experienced sharp declines in 2015. As the calendar flipped from 2015 to 2016, these concerns dissipated and emerging markets rallied significantly off their 2015 lows. Europe was again in the headlines, this time as Brexit caused momentary anxiety that evaporated within days of the history-making vote. Nonetheless, Europe and the United Kingdom were among the few markets to post negative performance for 2016.

In the U.S., the Federal Reserve held off raising interest rates until December, well off the pace and trajectory forecast by markets heading into 2016. The December raise came weeks after Donald Trump’s election to the Presidency, which fueled a strong equities market push in the 4<sup>th</sup> quarter behind expectations for regulatory reform, repeal of the Affordable Care Act, and a re-writing of the U.S. Tax Code. How realistic these expectations are will play out in 2017 and 2018 ahead of the mid-term election cycle will remain to be seen.

#### ***Macro Themes***

- Moderate global growth continuing
- Central Bank policy divergence, U.S. tightening while Europe and Japan eases
- China reforms; turmoil in emerging markets and commodities
- High valuations and increasing leverage

The macro picture was framed by moderate global growth in 2016, with the likelihood that below average economic performance would continue into 2017 and 2018. Developed markets look to remain lukewarm, with Gross Domestic Product (“GDP”) growth struggling to break through the (+3.0%) level globally and perhaps likely to fall short in the U.S., Europe, or Japan in 2017 or 2018 according to both the International Monetary Fund (“IMF”) and World Bank. Inflation remains subdued across the developed markets while currency depreciation in emerging markets have led to spikes in inflation. The U.S. is in an environment where short-term interest rates will likely rise over the next two years; Europe and Japan are in a decidedly different place. Weak demand and low inflation in Europe and Japan have led to further central bank intervention and easing. The continued European Central Bank intervention in credit and bond markets may lead to problems down the road. In emerging markets, central banks have moved to increase interest rates in order to tame both inflation and capital outflows. The slower pace of U.S. interest rate increases has continued to result in a U.S. dollar weakening a bit from highs in 2015 and 2016, potentially easing some strain on the U.S. manufacturing and exporting sectors.

Europe continues to be impacted by high levels of public debt, fractious politics and low economic growth. Like emerging markets, a significant portion of Europe's export engine is tied to Chinese demand and growth. Lower growth in China will place pressures on Europe, in particular net exporters, such as Germany. Debt levels have not yet moderated post-financial crisis and flare-ups in periphery countries, such as in Greece, Portugal, Italy, and Spain, are likely to continue as growth remains challenged and reforms and austerity lose support. Banks will continue their deleveraging cycle should new rules (Basel III) on risk capital are implemented. In Japan, where banks are in better health, high public debt, low growth, a weakening regional economic picture, and aging demographics will challenge the government in delivering their growth and inflation targets.

Emerging markets posted solid returns in 2016 as the impact of capital flows due to the U.S. interest rate increases were much lower than expected. The main emerging markets, Brazil, Russia, India and China, defined as the "BRICs" all face their own challenges. Brazil faces high inflation, high interest rates, low growth, and a government beset by allegation of corruption. China, in attempting to shift from being manufacturing-oriented to a consumer-based economy, faces significant pressures to meet its growth target of (+7.0%) per year and will face a significant leadership election in late 2017. Russia remains impacted from lower energy prices and economic sanctions. Finally, India seems to continually disappoint in liberalizing its economy and implementing the structural reforms necessary to unleash its potential.

### ***United States***

Markets in the U.S. were strong for the year and were amongst the best performers in 2016. Unlike other regions, the U.S. appears to be on relatively sound footing, with unemployment declining to very low levels and the remaining hangovers from the 2008 financial crisis appearing to fully dissipate. The better economic picture provided the Federal Reserve enough leeway to raise interest rates in December, causing a sell-off in government bond markets.

### ***Equity***

- Surprising and solid year for stocks
- Valuations stretched
- Risk Indulging – Small Cap outperformed Large Cap; Cyclical outperformed Defensives;
- Value leads growth on Bank sector performance
- Barring significant developments, equity markets set for another low-return year

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+12.0%) and (+12.1%), respectively. Small Cap and Mid Cap indices outperformed large cap. Small Cap, as measured by the Russell 2000 Index, returned (+21.3%). The Russell Mid Cap Index lagged but still managed to post a (+13.8%) return.

Digging deeper, there was significant performance dispersion across the sectors. Cyclical Sectors performed well with Energy (+28.0%), Financials (+22.7%) and Industrials (+20.0%) leading the charge higher. Healthcare (-2.8%), Real Estate (+3.2%), and Consumer Staples (+5.0%) were the lagging sectors. This divergence shows investors' appetite shifted from 2015, when defensive and yield oriented sectors were the best performing segments of the S&P 500. In 2016, investors shifted towards sectors tied to economic growth (Energy and Industrials) or those that may benefit from deregulation (Financials).

### ***Fixed Income***

The return of an appetite for risk was also evident within the U.S. Fixed Income markets. Treasuries returned (+1.0%) for the year, although this sector was impacted particularly hard in period after the U.S. Election as the Federal Reserve increased interest rate. The 4<sup>th</sup> quarter return of (-3.8%) was amongst the worst 3 month return in Treasuries in quite some time. Government bonds will likely not provide the safe haven status

previously counted on by investors going forward given the Trump Administration's pledges on spending/stimulus and the populist tone of the campaign. Credit outperformed Treasuries for the year, with (+5.6%), although it too gave back significant performance in the 4<sup>th</sup> quarter (-3.0%). High yield posted impressive gains, as worries in the Energy sector that significantly impacted the market in 2015 gave way to optimism that defaults would not be nearly as extreme as anticipated. High Yield not only posted a strong return for the year (+17.1%) but unlike other areas of fixed income, was also positive in the 4<sup>th</sup> quarter (+1.8%). Volatility entered the fixed income markets significantly in the back half of the year. High Yield held steady in the face of rising interest rates as higher quality and more liquid segments of the market lost value.

### ***International Developed***

- Weak year in Developed Markets (U.S. dollar returns)
- Eurozone and United Kingdom slightly negative for the year
- Japan and Far East positive performers
- Equity valuations in developed markets appear relatively cheaper than the U.S.
- Low returns in fixed income in 2016 and expected through 2017

Europe muddled through another year in 2016 and seemed to never quite hit its stride even as growth projections continued to improve. In U.S. dollars, Europe and United Kingdom equities posted negative performance in 2016. Much of the negative performance as due to currency movements, as both the Euro and Sterling depreciated against the U.S. dollar in 2016. Brexit led to a historical decline in the Sterling through the summer and fall and the effects of the decision to leave the European Union may take years to be realized. Unlike the U.S., equity valuations appear a little more attractive in Europe and there may be a likelihood that investors will shift their focus from U.S. to European Equities. In Asia, most developed markets posted positive performance, albeit relatively tepid performance in U.S. dollar terms.

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 returned (+1.6%) in 2016, although 4<sup>th</sup> quarter was particularly unkind with a (-8.5%) return. Much of the negative performance can be attributed to market responses to the interest rate increases in the U.S., the relative strength of the U.S. dollar, and the return to risk taking across most markets.

### ***Emerging Markets***

- Solid year in Emerging Markets (U.S. dollar returns)
- Major rebound from performance in 2015
- Brazil, Russia, and Thailand posted big years
- Mexico and Turkey worst performers
- Emerging Market Bonds reversed recent performance losses with strong calendar year
- No end in sight for volatility and macro risks remain elevated

Emerging markets posted strong performance as investor appetite for risky assets extended into emerging markets stocks and bonds. The broad emerging markets index returned (+11.2%) for the year. Of the markets tracked by Morgan Stanley Country Index ("MSCI"), Brazil (+66.8%), Russia (+55.5%) and Thailand (+19.6%) posted the strongest gains. China was a notable laggard for the year, with its (+1.1%) gain trailing the broader markets and the majority of its large country peers. Performance of the bond markets of emerging markets was encouraging. Both hard currency and local currency bond posted solid years in performance. Hard currency bonds, which are predominately issued in U.S. dollar, returned (+10.2%) in 2016. Local currency bonds, which are more susceptible to risk-off periods and capital flight, returned (+9.9%) for the year.

***Commodities***

- Rebounded from one worst years on record for commodities
- Little expectation for a full recovery in commodity prices in the near term

Commodity indices posted positive performance in 2016, with the broad Bloomberg Commodity Index up (+11.8%). Industrial metals (iron ore, zinc, nickel, aluminum, and copper) all posted strong performance for the year. Also reversing recent history with a rebound in performance were oil and natural gas. Precious metals, consistent with a risk-on attitude from investors, lagged the overall commodity market and the other main sectors.

**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, 16<sup>th</sup> 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, 2016 AND 2015  
(In thousands)**

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	<b>2016</b>	<b>2015</b>
<b>ASSETS:</b>		
Cash and cash equivalents	\$ 9,193	\$ 9,668
Investments measured by Net Asset Value	314,006	288,115
Interest receivable	<u>3</u>	<u>1</u>
Total assets	<u>323,202</u>	<u>297,784</u>
<b>LIABILITIES:</b>		
Benefits payable and accrued expenses	<u>220</u>	<u>236</u>
Total liabilities	<u>220</u>	<u>236</u>
<b>PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS</b>	<u><b>\$ 322,982</b></u>	<u><b>\$ 297,548</b></u>

See notes to financial statements.

**METROPOLITAN TRANSPORTATION AUTHORITY  
OTHER POSTEMPLOYMENT BENEFITS PLAN**

**STATEMENTS OF CHANGES IN PLAN NET POSITION  
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015  
(In thousands)**

	<b>2016</b>	<b>2015</b>
ADDITIONS:		
Net realized and unrealized gains or (losses)	\$ 27,177	\$ (4,758)
Less:		
Investment expenses	<u>1,743</u>	<u>883</u>
Net investment income or (loss)	<u>25,434</u>	<u>(5,641)</u>
Add:		
Employer contributions	<u>551,013</u>	<u>503,371</u>
Total additions	<u>576,447</u>	<u>497,730</u>
DEDUCTIONS:		
Benefit Payments	<u>551,013</u>	<u>503,371</u>
Total deductions	<u>551,013</u>	<u>503,371</u>
Net increase/(decrease) in Plan net position	25,434	(5,641)
PLAN NET POSITION HELD IN TRUST FOR OTHER POSTEMPLOYMENT BENEFITS:		
Beginning of year	<u>297,548</u>	<u>303,189</u>
End of year	<u>\$ 322,982</u>	<u>\$ 297,548</u>
See notes to financial statements.		

# METROPOLITAN TRANSPORTATION AUTHORITY OTHER POSTEMPLOYMENT BENEFITS PLAN

## NOTES TO FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

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### 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 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. 43, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans* (“GASB 43”) 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 43, *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.

GASB Statement No. 45, *Accounting and Financial Reporting for Employers for Postemployment Benefits Other Than Pensions* (“GASB 45”) requires state and local government’s financial reports to reflect systematic, accrual-basis measurement and recognition of OPEB cost (expense) over a period that

approximates employees' years of service and provides information about actuarial accrued liabilities associated with the OPEB and to what extent progress is being made in funding the plan.

The MTA has implemented GASB 45. This Statement establishes the standards for the measurement, recognition, and display of OPEB expense/expenditures and related liabilities (assets), note disclosures, and, if applicable, required supplementary information ("RSI") in the financial reports of state and local governmental employers.

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. GASB 45 requires state and local government's financial reports to reflect systematic, accrual-basis measurement and recognition of OPEB cost (expense) over a period that approximates employees' years of service and provides information about actuarial accrued liabilities associated with the OPEB and to what extent progress is being made in funding the plan.

During 2012, MTA contributed \$250 million into the Trust. In addition, \$50 million was contributed during 2013. There were no contributions to the OPEB Trust by the MTA during 2016 and 2015. Under GASB 45, the discount rate is based on the assets in a trust, the assets of the employer or a blend of the two based on the anticipated funding levels of the employer. For the 2014 valuation, the discount rate reflects a blend of Trust assets and employer assets. The assumed return on Trust assets is 6.5% whereas the assumed return on employer assets is 3.25% resulting in a discount rate under GASB 45 of 3.50%, which is slightly lower than the discount rate of 3.75% used in the prior valuation. This decrease is primarily due to the decrease in Treasury yields and thus, returns on employer assets since the prior valuation.

## **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 agency and relevant collective bargaining agreements. 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").

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, and MTA Bus Company retirees 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 45 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 January 1, 2014. The total number of plan participants as of January 1, 2014 receiving retirement benefits was approximately 45 thousand.

**Plan Eligibility** — Generally, to qualify for benefits under the Plan, a former employee of The MTA must:

- have retired, be receiving a pension, and have at least 10 years of credited service as a member of NYCERS, NYSLERS, the MTADBPP or the MaBSTOA Pension Plan 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 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 New York City Transit and 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, 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 or domestic partner and surviving dependents of retired uniform members of the MTA Police Department.
  - (iv) Lifetime coverage is provided to the surviving spouse 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.

**Plan Membership** — As permitted under GASB 43, the Plan has elected to use January 1, 2014, as the date of the OPEB actuarial valuation. The Plan’s combined membership consisted of the following at January 1, 2014, the date of the most recent OPEB actuarial valuation:

	<b>January 1, 2014</b>	<b>January 1, 2012</b>
Actives	67,516	65,730
Deferreds	-	276
Retirees	<u>44,644</u>	<u>46,686</u>
 Total number of participating employees	 <u>112,160</u>	 <u>112,692</u>

### 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** — Not yet adopted

GASB Statement No.	GASB Accounting Standard	MTA Welfare Benefits Plan Required Year of Adoption
74	<i>Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans</i>	2017
84	<i>Fiduciary Activities</i>	2019
85	<i>Omnibus 2017</i>	2018

**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. 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.

### 4. CASH, CASH EQUIVALENTS AND INVESTMENTS

Cash and Cash Equivalents balance as of December 31, 2016 and 2015 represents securities in the Plan’s portfolio, held in the Trust, that mature within three months of purchase date. The Plan held \$9,192,941 and \$9,667,982 in money market accounts as of December 31, 2016 and 2015, respectively.

**Investment Objective** — The Plan’s investments are those which are held in the Trust. 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 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 Pension Managers for the MTA Defined Benefit Pension Plan.

**Credit Risk** — At December 31, 2016 and 2015 the following credit quality rating has been assigned by a nationally recognized rating organization:

Quality Rating	2016		2015	
	Fair Value	Percentage of Fixed Income Portfolio	Fair Value	Percentage of Fixed Income Portfolio
AAA	\$ 23,164,269	13.27 %	\$ 10,970,160	7.36 %
AA	5,276,145	3.02	5,428,577	3.64
A	14,044,929	8.05	11,997,959	8.05
BAA	-	-	27,073,431	18.16
BBB	24,789,389	14.20	19,101,184	12.81
BB	11,522,793	6.60	5,921,796	3.97
B	6,186,168	3.55	2,766,567	1.86
CCC	1,861,824	1.07	1,315,704	0.88
Not Rated	17,672,299	10.13	5,321,828	3.57
Credit risk debt securities	104,517,815	59.89	89,897,206	60.30
U.S. Government bonds	70,001,778	40.11	59,177,974	39.70
Total fixed income securities	174,519,593	100.00 %	149,075,180	100.00 %
Other securities not rated — equity, international funds and foreign corporate bonds	139,486,250		139,039,907	
Total investments	\$ 314,005,843		\$ 288,115,087	

**Interest Rate Risk** — Interest rate risk is the risk that changes in interest rates that 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.

Investment Fund	2016		2015	
	Fair Value	Duration	Fair Value	Duration
Allianz Structured Alpha	\$ 18,611,047	0.13	\$ 16,438,421	0.13
Baird Aggregate Bond Fund	25,955,723	5.89	25,073,279	5.68
Bridgewater Alpha Pure Markets Fund	13,423,321	0.02	12,354,534	7.87
Bridgewater All Weather Fund	37,020,801	9.05	33,663,358	6.84
GAM Unconstrained Bond Fund	16,061,041	0.25	15,059,609	0.93
Pimco All Asset Fund	30,361,189	3.10	27,073,431	2.57
Wellington Diversified Inflation Hedge Fund	14,455,323	3.88	11,704,663	7.56
Wellington Blended Emerging Markets Debt Fund	14,576,069	11.80	12,971,010	5.06
Wellington Opportunistic Investment Fund	26,410,584	4.56	24,699,599	1.69
	196,875,098		179,037,904	
Portfolio modified duration		4.76		4.61
Investments with no duration reported	117,130,745		109,077,183	
Total investments	<u>\$ 314,005,843</u>		<u>\$ 288,115,087</u>	

**Custodial 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 custodial 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, 2016 and 2015 is as follows:

Issuer	% of Total Investments	of Total Investments	% of Total Investments	of Total Investments
Artisan Global Opportunities Fund	13 %	\$ 40,638,219	13 %	\$ 38,699,341
Dreyfus Global Stock Fund	12	37,555,562	12	35,392,022
Hexavest World Equity Fund	12	38,936,964	12	34,605,721
Bridgewater All Weather Fund	12	37,020,801	11	33,663,358
PIMCO All Asset Fund	10	30,361,189	9	27,073,431
Wellington Opportunities Investment Fund	8	26,410,584	8	24,699,599
Baird Aggregate Bond Fund	8	25,955,723	8	25,073,279
Allianz Structured Alpha	6	18,611,047	6	16,818,520
GAM Unconstrained Bond Fund	5	16,061,041	5	15,059,609
Wellington Divisified Inflation Hedge Fund	5	14,455,323	-	-
Wellington Blended Emerging Markets Debt Fund	5	14,576,069	-	-

**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. In addition, the Plan has investments in foreign stocks and/or bonds denominated in foreign currencies. The Plan's foreign currency exposures as of December 31, 2016 and 2015 is as follows :

<b>Foreign Currency Holdings in US \$</b>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Argentine Peso	\$ 71,309	\$ 29,944
Australian Dollar	4,410,531	3,980,839
Brazilian Cruzeiro Real	1,981,032	539,298
Bulgarian Lev	-	(24,095)
Canadian Dollar	3,347,574	5,054,099
Chilean Peso	385,209	653,998
Columbian Peso	901,326	1,198,127
Chinese Yuan Renminbi	738,361	1,294,108
Czech Republic Koruna	494,705	331,763
Danish Krone	2,164,758	3,083,641
Egyptian Pound	27,547	25,268
Euro	19,083,383	14,848,633
Great Britain Pound Sterling	13,023,840	13,355,281
Hong Kong Dollar	7,505,825	6,113,236
Hungarian Forint	319,816	216,074
Iceland Krona	79,232	-
Indian Rupee	3,152,040	1,829,338
Indonesia Rupiah	996,056	817,157
Israeli Shekel	191,321	333,912
Japanese Yen	13,256,388	17,811,601
Malaysian Ringgit	767,425	832,451
Mauritian Rupee	66,026	-
Mexican New Peso	454,531	2,265,402
New Zealand Dollar	270,697	(147,163)
Norwegian Krone	168,072	664,666
Peruvian Nuevo Sol	475,744	415,248
Philippine Peso	84,279	95,986
Polish Zloty	1,141,372	1,285,296
Qatar Riyal	5,022	2,002
Romanian Leu	34,334	288,356
Russian Federation Rouble	788,754	733,984
Singapore Dollar	450,365	1,271,179
South African Rand	1,228,826	1,143,104
South Korean Won	1,740,291	2,952,107
Swedish Krona	1,195,094	2,979,638
Swiss Franc	5,645,730	5,941,121
Taiwanese New Dollar	3,054,654	2,232,503
Thai Baht	841,589	611,407
Turkish Lira	172,522	472,362
UAE Dirham	4,743	1,507
Uruguayan Peso	-	90,636
Other	(221,811)	1,220,197
<b>Total</b>	<b><u>\$ 90,498,510</u></b>	<b><u>\$ 96,844,211</u></b>

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, 2016 and 2015, 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**

	<b>December 31, 2016</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency</b>	<b>Redemption Notice Period</b>
Equity Securities:				
Comingled international equity funds	\$ 38,936,964	\$ -	Daily	None
International equity mutual funds	78,193,781	-	Daily, monthly	None
<b>Total equity investments measured at the NAV</b>	<b>117,130,745</b>	<b>-</b>		
Debt Securities				
Comingled debt funds	56,592,832	-	Daily, monthly, quarterly	None
<b>Total debt investments measured at the NAV</b>	<b>56,592,832</b>	<b>-</b>		
Absolute return:				
Directional	18,611,047	-	Monthly	3-60 days
Global macro	13,423,321	-	Monthly	3-30 days
Global tactical asset allocation	56,771,774	-	Daily, monthly	3-30 days
Risk parity	37,020,801	-	Monthly	3-30 days
<b>Total absolute return measured at the NAV</b>	<b>125,826,943</b>	<b>-</b>		
Real assets				
Comingled commodities fund	14,455,323	-	Not eligible	N/A
<b>Total real assets measured at the NAV</b>	<b>14,455,323</b>	<b>-</b>		
<b>Total investments measured at the NAV</b>	<b>\$ 314,005,843</b>	<b>\$ -</b>		

**Investments measured at NAV**

	<b>December 31, 2015</b>	<b>Unfunded Commitments</b>	<b>Redemption Frequency</b>	<b>Redemption Notice Period</b>
Equity Securities:				
Comingled international equity funds	\$ 34,605,722	\$ -	Daily	None
International equity mutual funds	74,091,363	-	Daily, monthly	None
<b>Total equity investments measured at the NAV</b>	<b>108,697,084</b>	<b>-</b>		
Debt Securities				
Comingled debt funds	53,103,898	-	Daily, monthly, quarterly	None
<b>Total debt investments measured at the NAV</b>	<b>53,103,898</b>	<b>-</b>		
Absolute return:				
Directional	16,818,520	-	Monthly	3-60 days
Global macro	12,354,534	-	Monthly	3-30 days
Global tactical asset allocation	51,773,030	-	Daily, monthly	3-30 days
Risk parity	33,663,358	-	Monthly	3-30 days
<b>Total absolute return measured at the NAV</b>	<b>114,609,442</b>	<b>-</b>		
Real assets				
Comingled commodities fund	11,704,663	-	Not eligible	N/A
<b>Total real assets measured at the NAV</b>	<b>11,704,663</b>	<b>-</b>		
<b>Total investments measured at the NAV</b>	<b>\$ 288,115,087</b>	<b>\$ -</b>		

## 5. FUNDED STATUS AND FUNDING PROGRESS — OPEB PLAN

The funded status of the Plan as of the most recent OPEB actuarial valuation date is as follows (dollar amounts in thousands):

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) — Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b-a)/c]
January 1, 2014	\$ 299,747	\$ 18,471,642	\$ 18,171,895	1.6 %	\$ 4,669,807	389.1 %

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the healthcare 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.

The schedule of funding progress, presented as required supplementary information following the notes to the financial statements, presents multiyear trend information about whether the actuarial values of plan assets are increasing or decreasing over time relative to the actuarial accrued liabilities for benefits.

The accompanying schedule of employer contributions presents trend information about the amounts contributed to the Plan by employers in comparison to the annual required contribution (“ARC”), an amount that is actuarially determined in accordance with the parameters of GASB 43. The ARC represents a level of funding that, if paid on an ongoing basis, is projected to cover costs under the actuarial assumptions and methods utilized for each year.

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.

**Annual OPEB Cost (“AOC”) and Net OPEB Obligation** — The MTA’s annual OPEB cost (expense) represents the accrued cost for postemployment benefits under GASB 45. Currently, the MTA expenses the actual benefits paid during a year. The cumulative difference between the annual OPEB cost (new method) and the benefits paid during a year (old method) will result in a net OPEB obligation (the “Net OPEB Obligation”), included on the statement of net position. The annual OPEB cost is equal to the annual required contribution (the “ARC”) less adjustments if a Net OPEB Obligation exists and plus the interest on Net OPEB Obligations. The ARC is equal to the normal cost plus an amortization of the unfunded liability.

The MTA's annual OPEB cost, the percentage of annual OPEB cost contributed to, and the net OPEB obligation for the years ended December 31, 2016 and 2015 is as follows:

<b>Year Ended</b>	<b>Annual OPEB Cost</b>	<b>% of Annual Cost Contributed</b>	<b>Net OPEB Obligation</b>
<b>(In Thousands)</b>			
December 31, 2016	\$ 2,146,430	25.7 %	\$ 15,155,537

<b>Year Ended</b>	<b>Annual OPEB Cost</b>	<b>% of Annual Cost Contributed</b>	<b>Net OPEB Obligation</b>
<b>(In Thousands)</b>			
December 31, 2015	\$ 1,997,180	25.2 %	\$ 13,560,121

**Actuarial Cost, Amortization Methods and Assumptions** — For determining the ARC, the MTA has chosen to use Frozen Initial Liability (the “FIL Cost Method”) cost method, one of the cost methods in accordance with the parameters of GASB 45. The initial liability is amortized over a 22-year closed period. As of the last valuation date the remaining amortization period is 14 years.

In order to recognize the liability over an employee's career, an actuarial cost method divides the present value into three pieces: the part that is attributed to past years (the “Accrued Liability” or “Past Service Liability”), the part that is being earned this year (the “Normal Cost”), and the part that will be earned in future years (the “Future Service Liability”). Under the FIL Cost Method, an initial past service liability is determined based on the Entry Age Normal (“EAN”) Cost Method and is amortized separately. This method determines the past service liability for each individual based on a level percent of pay. The Future Service Liability is allocated based on the present value of future compensation for all members combined to determine the Normal Cost. In future years, actuarial gains/losses will be incorporated into the Future Service Liability and amortized through the Normal Cost.

The Frozen Unfunded Accrued Liability is determined each year as the Frozen Unfunded Accrued Liability for the prior year, increased with interest, reduced by the end-of-year amortization payment and increased or decreased by any new bases established for the current year.

The difference between the Actuarial Present Value of Benefits and the Frozen Unfunded Accrued Liability equals the Present Value of Future Normal Cost. The Normal Cost equals the Present Value of Future Normal Cost divided by the present value of future compensation and multiplied by the total of current compensation for members less than certain retirement age.

The Annual Required Contribution (“ARC”) is equal to the sum of the Normal Cost and the amortization for the Frozen Unfunded Accrued Liability with appropriate interest adjustments. Any difference between the ARC and actual plan contributions from the prior year are considered an actuarial gain/loss and thus, are included in the development of the Normal Cost. This methodology differs from the approach used for the pension plan where the difference between the ARC and actual plan contributions from the prior year, if any, will increase or decrease the Frozen Unfunded Accrued Liability and will be reflected in future amortization payments. A different approach was applied to the OPEB benefits because these benefits are not actuarially funded.

**Valuation Date** — The valuation date is the date that all participant and other pertinent information is collected and liabilities are measured. This date may not be more than 24 months prior to the beginning of the fiscal year. The valuation date for this valuation is January 1, 2014, which is 24 months prior to the beginning of the 2016 fiscal year.

**Inflation Rate** — 2.5% per annum compounded annually.

**Discount Rate** — GASB 45 provides guidance to employers in selecting the discount rate. The discount rate should be based on the estimated long-term investment yield on the investments that are expected to be used to finance the benefits. If there are no plan assets, assets of the employer should be used to derive the discount rate. This would most likely result in a lower discount rate and thus, liabilities significantly higher than if the benefits are prefunded. In recognition of the decrease in short-term investment yields partially offset by the establishment of a trust, the discount rate for this valuation has been lowered from 3.75% to 3.50%.

**Healthcare Reform** — The results of this valuation reflect our understanding of the impact in future health costs due to the Affordable Care Act (“ACA”) passed into law in March 2010. An excise tax for high cost health coverage or “Cadillac” health plans was included in ACA. The provision levies a 40% tax on the value of health plan costs that exceed certain thresholds for single coverage or family coverage. If, between 2010 and 2018, the cost of health care insurance rises more than 55%, the threshold for the excise tax will be adjusted. Legislative changes passed in December 2015 have delayed the effective date of the excise tax until 2020. However, the calculation of the threshold amounts remains unchanged. Also included in ACA are various fees (including, but not limited to, the Patient-Centered Outcomes Research Institute fee, Transitional Reinsurance Program fee, and the Health Insurer fee) associated with the initiation of health exchanges in 2016 and 2015.

The OPEB-specific actuarial assumptions used in the most recent biennial valuations are as follows:

Valuation date	January 1, 2014	January 1, 2012
Actuarial cost method	Frozen Initial Liability	Frozen Initial Liability
Discount rate	3.50%	3.75%
Price inflation	2.5% per annum, compounded annually	2.5% per annum, compounded annually
Per-Capita retiree contributions	*	*
Amortization method	Frozen Initial Liability	Frozen Initial Liability
Amortization period	14 years	15 years
Period closed or open	Closed	Closed

\* In general, all coverages are paid for by the MTA. However, MTAHQ members who retired prior to 1997 pay a portion of the premium, depending on the year they retired.

Actuarial valuation involve estimates of the value of reported amounts and assumptions about the probability of events far into the future, and that actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

**Per Capita Claim Costs** — Use of a blended premium rate for active employees and retirees under age 65 is a common practice. Health costs generally increase with age, so the blended premium rate is higher than the true underlying cost for actives and the blended premium is lower than the true underlying cost for retirees. For retirees, this difference is called the implicit rate subsidy. Since GASB 45 only requires an actuarial valuation for retirees, it requires the plan sponsor to determine the costs of these benefits by removing the subsidy. However, a plan sponsor may use the premiums without adjustment for age if the

employer participates in a community-rated plan, in which the premium rates reflect projected health claims experience of all participating employers, or if the insurer would offer the same premium rate if only non-Medicare-eligible retirees were covered.

Based on an initial 2006 report, as well as an updated 2014 report, from the Department of Civil Service of the State of New York regarding recommended actuarial assumptions used for New York State/SUNY's GASB 45 Valuation sent to all participating employers, it stated that the Empire Plan of NYSHIP is community-rated for all participating employers. We believe that the actual experience of the MTA will have little or no impact on the actual premium and, that it is reasonable to use the premium rates without age adjustments as the per capita claims cost.

The medical and pharmacy benefits provided to TWU Local 100, ATU 1056 and ATU 726 represented Transit members, represented MTA Bus Company members and represented SIRTOA members are self-insured as well as some Pre-NYSHIP Transit members. For these benefits we developed per capita claims cost assumptions that vary by age, gender and benefit type. The per capita costs assumptions reflect medical and pharmacy claims information, including the EGWP plan for providing pharmacy benefits to Medicare-eligible retirees, for 2016 and 2015.

**Medicare Part D Premiums** — GASB has issued a Technical Bulletin stating that the value of expected Retiree Drug Subsidy (“RDS”) payments to be received by an entity cannot be used to reduce the Actuarial Accrued Liability of OPEB benefits nor the Annual Required Contribution (“ARC”). Furthermore, actual contributions made (equal to the amount of claims paid in a year if the plan is not funded) will not be reduced by the amount of any subsidy payments received. Accordingly, the 2014 valuation excludes any RDS payments expected to be received by the MTA and its agencies.

**Health Care Cost Trend** — The healthcare trend assumption is based on the Society of Actuaries-Getzen Model version 2014 utilizing the baseline assumptions included in the model, except real GDP of 1.8% and 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 non-NYSHIP benefits. These assumptions are combined with long-term assumptions for dental and vision benefits (4%) plus Medicare Part B reimbursements (4.5%). The NYSHIP trend reflects actual increases in premiums through 2015. This trend also reflects dental and vision benefits plus Medicare Part B reimbursements. The non-NYSHIP trend is applied directly for represented employees of MTA NYC Transit, SIRTOA and MTA Bus Company. Note, due to the Excise Tax, the non-NYSHIP trends for MTA Bus and New York City Transit differ. The following lists illustrative rates for the NYSHIP and non-NYSHIP trend assumptions for the MTA New York City Transit and MTA Bus Company (amounts are in percentages).

## Health Care Cost Trend Rates

Fiscal Year	NYSHIP	Transit and SIRTOA		MTA BUS COMPANY	
		< 65	>=65	< 65	>=65
2014	0.0 *	7.5	9.5	7.5	8.1
2015	6.0	7.6	9.5	7.6	8.2
2016	6.0	6.7	8.1	6.7	7.3
2017	6.0	6.2	6.8	6.2	6.3
2018	5.3	5.4	5.4	5.4	5.4
2019	5.2	12.1	5.4	11.3	5.4
2024	5.2	6.1	5.4	6.2	5.4
2029	5.5	6.1	5.4	6.1	5.4
2034	6.4	6.1	5.6	6.1	5.5
2039	5.9	5.7	5.2	5.7	5.2
2044	5.7	5.5	5.1	5.5	5.1
2049	5.6	5.4	5.3	5.4	5.3
2054	5.5	5.3	5.3	5.3	5.3

\* Trend not applicable as actual 2015 premiums were valued

**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 January 1, 2014

	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
<b>Active Members</b>									
Number	47,447	6,772	6,288	1,569	1,641	-	260	3,539	67,516
Average Age	49.5	44.2	45.5	46.5	46.3	-	45.1	47.1	48.3
Average Service	14.4	11.8	13.4	13.3	12.9	-	14	11.7	13.8
<b>Retirees</b>									
Single Medical Coverage	12,400	674	417	612	158	105	19	624	15,009
Employee/Spouse Coverage	16,784	2,314	909	663	329	234	58	893	22,184
Employee/Child Coverage	916	136	54	36	20	23	3	43	1,231
No Medical Coverage	867	2,308	2,423	5	8	468	15	126	6,220
<b>Total Number</b>	<b>30,967</b>	<b>5,432</b>	<b>3,803</b>	<b>1,316</b>	<b>515</b>	<b>830</b>	<b>95</b>	<b>1,686</b>	<b>44,644</b>
Average Age of Retiree	71.9	67.6	74.0	68.9	65.2	67.6	63.9	69.8	71.2
Total Number with Dental	6,427	857	470	406	445	58	46	85	8,794
Total Number with Vision	25,858	857	470	406	445	58	67	1,529	29,690
Total No. with Supplement	25,442	1,747	-	910	-	459	22	1,454	30,034
Average Monthly Supplement Amount (Excluding Part B Premium)	\$ 33	\$ 218	\$ -	\$ 207	\$ -	N/A	\$ 238	\$ 25	\$ 49
Total No. with Life Insurance	5,616	4,890	2,406	353	435	713	78	199	14,690
Average Life Insurance Amount	\$ 2,076	\$22,181	\$2,623	\$5,754	\$4,994	\$8,636	\$2,763	\$5,214	\$ 9,397

\* No active members as of January 1, 2014. In addition, there are 155 vestees not included in these counts.

**Coverage Election Rates** — For members that participate in NYSHIP, 100% of eligible members, including current retirees and surviving spouses, are assumed to elect the Empire PPO Plan. However, for MTA Bridges and Tunnels, 15% of represented members and 10% of non-represented members

are assumed to elect the Health Insurance Plan (“HIP”), a HMO Plan. For MTA Metro-North Railroad represented members, 15% are assumed to elect ConnectiCare. For groups that do not participate in NYSHIP, notably MTA New York City Transit, MTA Bus Company and Staten Island Railway, members are assumed to elect Empire Blue Cross Blue Shield (“BCBS”) or Aetna/United Healthcare with percentages varying by agency.

**Dependent Coverage** - Spouses are assumed to be the same age as the employee/retiree. 80% of male and 45% of female eligible members 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 New York City Transit are assumed to cover a dependent. No children are assumed. Actual coverage elections for current retirees are used. 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 recommended by the Society of Actuaries Retirement Plans Experience Committee.

*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* — 75% of the rates from the RP-2000 Disabled Annuitant mortality table for males and females.

**Vestee Coverage** — For members that participate in NYSHIP, Vesteess (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. Vesteess 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 Valuation report provided to Participating Employers of NYSHIP. These percentages were also applied to current vesteess based on age at valuation date.

<b>Age at Termination</b>	<b>Percent Electing</b>
< 40	0 %
40–43	5
44	20
45–46	30
47–48	40
49	50
50–51	80
52+	100

**6. 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 is advised by NEPC with respect to the investment of Plan assets.

**7. SUBSEQUENT EVENTS**

Management has evaluated subsequent events for the Plan through January 22, 2018, the date the financial statements were available to be issued, and has concluded that there are no recognized or non-recognized subsequent events for the financial statement adjustment or disclosure.

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**REQUIRED SUPPLEMENTARY INFORMATION**

**METROPOLITAN TRANSPORTATION AUTHORITY  
OTHER POSTEMPLOYMENT BENEFITS PLAN**

**SCHEDULE OF FUNDING PROGRESS (UNAUDITED)**

**(In thousands)**

Year Ended	Actuarial Valuation Date	Actuarial Value of Assets {a}	Actuarial Accrual Liability (AAL) {b}	Unfunded Actuarial Liability (UAAL) {c} = {b} - {a}	Funded Ratio {a} / {b}	Covered Payroll {d}	Ratio of UAAL to Covered Payroll {c} / {d}
December 31, 2016	January 1, 2014	\$ 299,747	\$ 18,471,642	\$ 18,171,895	1.6 %	\$ 4,669,807	389.1 %
December 31, 2015	January 1, 2014	299,747	18,471,642	18,171,895	1.6	4,669,807	389.1
December 31, 2014	January 1, 2012	246,009	20,187,800	19,941,791	1.2	4,360,578	457.3
December 31, 2013	January 1, 2012	246,009	20,187,800	19,941,791	1.2	4,360,578	457.3
December 31, 2012	January 1, 2010	-	17,763,604	17,763,604	-	4,600,303	386.1

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**METROPOLITAN TRANSPORTATION AUTHORITY  
OTHER POSTEMPLOYMENT BENEFITS PLAN**

**SCHEDULE OF EMPLOYER CONTRIBUTIONS (UNAUDITED)**

**(In thousands)**

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<b>Fiscal Years Ended</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
December 31, 2016	\$ 2,907,315	19.0 %
December 31, 2015	2,673,781	18.8
December 31, 2014	3,092,900	15.6
December 31, 2013	2,842,893	17.8
December 31, 2012	2,647,527	25.3

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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, 2016 and 2015, 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, 2016 and 2015, 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 Additional Plan's net position as of December 31, 2016 and 2015, 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 10 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 - 38; and Schedule of Investment Returns—Schedule III on page 39 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

January 22, 2018

# THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

## MANAGEMENT'S DISCUSSION AND ANALYSIS (UNAUDITED) DECEMBER 31, 2016 AND 2015

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### 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, 2016 and 2015, 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 year-end. It indicates the assets available for payment of future benefits and any current liabilities that are owed as of the statement date. 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 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*—Provide additional information that is essential to a full understanding of the data provided in the financial statements. The notes present information about the Additional 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 Notes to the Financial Statements.

The financial statements are prepared in accordance with GASB Pronouncements.

## Financial Highlights

### Financial Analysis Plan

#### Net Position

As of December 31, 2016, 2015 and 2014

(Amounts in thousands)

	2016	2015	2014	Increase/(Decrease)			
				Amount of Change 2016–2015	% Change 2016–2015	Amount of Change 2015–2014	% Change 2015–2014
Cash	\$ 1,076	\$ 9,466	\$ 1,411	\$ (8,390)	(89)%	\$ 8,055	571%
Investments, at fair value	770,199	720,150	783,939	50,049	7%	(63,789)	(8)%
Receivables	6,519	259	29,372	6,260	2417%	(29,113)	(99)%
<b>Total assets</b>	<b>777,794</b>	<b>729,875</b>	<b>814,722</b>	<b>47,919</b>	<b>7%</b>	<b>(84,847)</b>	<b>(10)%</b>
Additional plan payable	-	-	578	-	100%	(578)	(100)%
Due to broker for securities purchased	577	3,677	31,292	(3,100)	-84%	(27,615)	(88)%
<b>Total liabilities</b>	<b>577</b>	<b>3,677</b>	<b>31,870</b>	<b>(3,100)</b>	<b>-84%</b>	<b>(28,193)</b>	<b>(88)%</b>
Plan net position restricted for pensions	\$ 777,217	\$ 726,198	\$ 782,852	\$ 51,019	7%	\$ (56,654)	(7)%

### *December 31, 2016 versus December 31, 2015*

The assets of the Additional Plan exceeded its liabilities by \$777 million and \$726 million as of December 31, 2016 and 2015, 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 \$51 million during 2016, representing an increase of 7% over 2015. The increase in 2016 was primarily due to \$70 million for additional non-employer contributions from the Company's parent company, Metropolitan Transportation Authority ("MTA") as an infusion towards improving the funding for the Plan's unfunded pension liability.

Investments at December 31, 2016, were \$770 million representing an increase of \$50 million from 2015. The increase is reflective of the additional contributions invested in the portfolio during 2016.

Payables for investments purchased at December 31, 2016, amounted to \$1 million. Investments are purchased on a trade-date settlement basis and that generate timing differences in settlement dates, similar to receivables for investments sold discussed earlier.

### *December 31, 2015 versus December 31, 2014*

The assets of the Additional Plan exceeded its liabilities by \$726 million and \$783 million as of December 31, 2015 and 2014, 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 \$57 million during 2015, representing a decrease of 7% over 2014. The decrease in 2015 was primarily due to \$157 million paid out for pension benefit payments and only \$101 million received in employer and employee contributions.

Investments at December 31, 2015, were \$720 million representing a decrease of \$64 million from 2014. The decrease is reflective of higher pension benefit payouts compared to lower employer contributions during 2015.

Payables for investments purchased at December 31, 2015, amounted to \$4 million. Investments are purchased on a trade-date settlement basis and that generate timing differences in settlement dates, similar to receivables for investments sold discussed earlier.

## CHANGES IN PLAN NET POSITION

Changes in Plan Net Position  
For the Years Ended December 31, 2016, 2015 and 2014  
(Amounts in thousands)

	2016	2015	2014	Amount of Change 2016-2015	Increase/(decrease) % Change 2016-2015	Amount of Change 2015-2014	% Change 2015-2014
<b>Additions:</b>							
Net investment income	\$ 58,239	\$ 527	\$ 21,231	\$ 57,712	10,951 %	\$ (20,704)	(98)%
Employer contributions	81,079	100,000	407,513	(18,921)	(19)%	(307,513)	(75)%
Non - Employer contributions	70,000	-	-	70,000	100%	-	0%
Employee contributions	905	1,108	1,304	(203)	(18)%	(196)	(15)%
<b>Total additions</b>	<b>210,223</b>	<b>101,635</b>	<b>430,048</b>	<b>108,588</b>	<b>107 %</b>	<b>(328,413)</b>	<b>(76)%</b>
<b>Deductions:</b>							
Benefits paid directly to participants	158,593	157,071	156,974	1,522	1%	97	0%
Administrative expenses	717	678	975	39	6%	(297)	(30)%
Other	(106)	540	-	(646)	(120)%	540	100%
<b>Total deductions</b>	<b>159,204</b>	<b>158,289</b>	<b>157,949</b>	<b>915</b>	<b>1 %</b>	<b>340</b>	<b>0 %</b>
<b>Net increase</b>	<b>51,019</b>	<b>(56,654)</b>	<b>272,099</b>	<b>\$ 107,673</b>	<b>190%</b>	<b>\$ (328,753)</b>	<b>(121)%</b>
Plan net position restricted for pensions	726,198	782,852	510,753				
<b>End of year</b>	<b>\$ 777,217</b>	<b>\$ 726,198</b>	<b>\$ 782,852</b>				

### *December 31, 2016 versus December 31, 2015*

At the end of 2016, the net investment income amounted to \$58 million. This represents an increase of \$58 million over the prior year, due to strong stock market conditions resulting in an increase in the investment portfolio in 2016.

Employer, non-employer and employee contributions for the year ended December 31, 2016, totaled \$152 million, which represents a 50% increase from 2015. This increase was the result of the additional \$70 million in non-contributing employer contributions the MTA infused into the plan in 2016.

Benefit payments for the year ended December 31, 2016, totaled \$159 million, which was 1% higher than 2015.

### *December 31, 2015 versus December 31, 2014*

At the end of 2015, the net investment income amounted to \$1 million. This represents a decrease of 98% over the prior year, due mainly to the lower interest rates still prevailing in the market place, an increase in investment expenses and the depreciation in the investment portfolio in 2015.

Employer and employee contributions for the year ended December 31, 2015, totaled \$101 million, which represents a 75% decrease from 2014. This decrease was the result of lower employer contributions primarily due to MTA not contributing additional monies into the pension plan in 2015.

Benefit payments for the year ended December 31, 2015, totaled \$157 million, which was consistent with 2014. **Investments**—The table below summarizes the Additional Plan’s investment allocation:

**Investment Summary**  
(Dollars in thousands)

Type of Investments	Fair Value	Allocation
<b>December 31, 2016</b>		
Commingled funds	\$ 136,713	17.75 %
Common Stock	117,862	15.30 %
Strategic property fund	54,877	7.13 %
Mutual funds	154,061	20.00 %
Corporate bonds and debentures	21,136	2.74 %
Collective short-term investments	19,969	2.59 %
Limited partnership	190,025	24.67 %
Mortgage backed securities	5,255	0.68 %
Commercial mortgage backed securities	2,044	0.27 %
U.S. government securities	4,543	0.59 %
Asset backed securities	549	0.07 %
Real Estate Investment Trust	7,917	1.03 %
Preferred stock	515	0.07 %
other	<u>54,736</u>	<u>7.11 %</u>
	<u>\$ 770,202</u>	<u>100.00 %</u>
<b>December 31, 2015</b>		
Commingled funds	\$ 197,306	27.40 %
Common Stock	122,723	17.04 %
Strategic property fund	50,635	7.03 %
Mutual funds	122,557	17.02 %
Corporate bonds and debentures	25,826	3.59 %
Collective short-term investments	21,559	2.99 %
Limited partnership	161,213	22.39 %
Mortgage backed securities	5,489	0.76 %
Commercial mortgage backed securities	2,030	0.28 %
U.S. government securities	7,484	1.04 %
Foreign government bonds	122	0.02 %
American Depositary Receipts	479	0.07 %
Asset backed securities	840	0.12 %
Real Estate Investment Trust	1,111	0.15 %
Preferred stock	<u>776</u>	<u>0.11 %</u>
	<u>\$ 720,151</u>	<u>100.00 %</u>

The composite 2016 return for the fund was 7.97% as opposed to the 2015 return of -1.47%. The majority of Additional Plan’s investment assets were commingled for investment purposes into the MTA Master Trust and the MTA Defined Benefit’s Board of Managers of Pension oversee investment allocations and returns, effective October 2, 2006.

## **ECONOMIC FACTORS AND INDUSTRY DECISIONS**

### **Market Overview and Outlook – 2016**

Despite investors entering the year with a myriad of concerns; such as soft economic growth in the United States (“U.S.”) and China, high valuations in nearly every market and asset class, and rising geopolitical tensions, performance proved to be quite robust and impressive across almost all major markets. Appetite for risk was hearty as equities continued to march ever higher in the U.S., Japan, and Emerging Markets and returns were strong in the riskier corners of fixed income in investment grade, high yield, and emerging markets bonds.

Market performance was framed by a rather benign macro environment, albeit with some transitory complications. Last year, eyes had turned toward a weakening Chinese economy, resulting in commodity markets continuing their steep decline and volatility rising across the equity and fixed income markets. Emerging markets, particularly those centered on commodities where demand is tied to Chinese growth, experienced sharp declines in 2015. As the calendar flipped from 2015 to 2016, these concerns dissipated and emerging markets rallied significantly off their 2015 lows. Europe was again in the headlines, this time as Brexit caused momentary anxiety that evaporated within days of the history-making vote. Nonetheless, Europe and the United Kingdom were among the few markets to post negative performance for the year.

In the U.S., the Federal Reserve held off raising interest rates until December, well off the expected pace forecast by markets heading into 2016. The December raise came weeks after Donald Trump’s election to the Presidency, which fueled a strong equities market push in the 4<sup>th</sup> quarter behind expectations for regulatory reform, repeal of the Affordable Care Act, and a re-writing of the U.S. Tax Code. How realistic these expectations are will play out in 2017 and 2018 ahead of the mid-term election cycle.

#### ***Macro Themes***

- Tepid global growth continuing
- Central Bank policy divergence, U.S. tightening while Europe and Japan eases
- China reforms; turmoil in emerging markets and commodities
- High valuations and increasing leverage

The macro picture was framed by tepid global growth in 2016, with the likelihood that sub-optimal economic performance would continue into 2017 and 2018. Developed markets look to remain weak, with Gross Domestic Product (“GDP”) growth struggling to break through the (+3.0%) level globally and likely to fall short in the U.S., Europe, or Japan in 2017 or 2018 according to both the International Monetary Fund (“IMF”) and World Bank. Inflation remains subdued across the developed markets while currency depreciation in emerging markets have led to spikes in inflation. The U.S. is in an environment where interest rates will likely rise over the next two years; Europe and Japan are in a decidedly different place. Weak demand and low inflation in Europe and Japan have led to further central bank intervention and easing. In emerging markets, central banks have moved to increase interest rates in order to tame both inflation and capital outflows. The slower pace of U.S. interest rate increases has continued to result in a U.S. dollar weakening a bit from highs in 2015 and 2016, potentially easing some strain on the U.S. manufacturing and exporting sectors.

Europe continues to be impacted by high levels of public debt and low economic growth. Like many emerging markets, much of Europe’s exports are tied to Chinese demand and growth. Lower growth in China will continue to place pressures on Europe, in particular Germany. Debt levels have not yet moderated post-financial crisis and flare-ups in the periphery countries, such as in Greece, Portugal, Italy, and Spain, are likely to continue as growth remains challenged and reforms and austerity lose support. Banks will continue

their deleveraging cycle as new rules on risk capital are implemented. In Japan, where banks are in better health, high public debt, low growth, a weakening regional economic picture, and aging demographics will challenge the government in delivering their growth and inflation targets.

Emerging markets posted solid returns in 2016 as the impact of capital flows due to the U.S. interest rate increases were much lower than expected. The main emerging markets, Brazil, Russia, India and China, defined as the “BRICs” all face their own challenges. Brazil faces high inflation, high interest rates, low growth, and a government beset by allegation of corruption. China, in attempting to shift from being manufacturing- oriented to a consumer-based economy, faces significant pressures to meet its growth target of (+7.0%) per year and will face a significant leadership election in late 2017. Russia remains impacted from lower energy prices and economic sanctions. Finally, India seems to continually disappoint in liberalizing its economy and implementing the structural reforms necessary to unleash its potential.

### ***United States***

Markets in the U.S. were strong for the year and were amongst the best performers in 2016. Unlike other regions, the U.S. appears to be on relatively sound footing, with unemployment declining to very low levels and the remaining hangovers from the 2008 financial crisis appearing to fully dissipate. The better economic picture provided the Federal Reserve enough leeway to raise interest rates in December, causing a sell-off in government bond markets.

### ***Equity***

- Surprising and solid year for stocks
- Valuations stretched
- Risk Indulging – Small Cap outperformed Large Cap; Cyclical outperformed Defensives;
- Value leads growth on Bank sector performance
- Equity markets set for another low-return year

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+12.0%) and (+12.1%), respectively. Small Cap and Mid Cap indices outperformed large cap. Small Cap, as measured by the Russell 2000 Index, returned (+21.3%). The Russell Mid Cap Index lagged but still managed to post a (+13.8%) return.

Digging deeper, there was significant performance dispersion across the sectors. Cyclical Sectors performed well with Energy (+28.0%), Financials (+22.7%) and Industrials (+20.0%) leading the charge higher. Healthcare (-2.8%), Real Estate (+3.2%), and Consumer Staples (+5.0%) were the lagging sectors. This divergence shows investors’ appetite shifted from 2015, when defensive and yield oriented sectors were the best performing segments of the S&P 500. In 2016, investors shifted towards sectors tied to economic growth (Energy and Industrials) or those that may benefit from deregulation (Financials).

### ***Fixed Income***

The return of an appetite for risk was also evident within the U.S. Fixed Income markets. Treasuries returned (+1.0%) for the year, although this sector was impacted particularly hard in period after the U.S. Election as the Federal Reserve increased interest rate. The 4<sup>th</sup> quarter return of (-3.8%) was amongst the worst 3 month return in Treasuries in quite some time. Government bonds will likely not provide the safe haven status previously counted on by investors going forward given the Trump Administration’s pledges on spending/stimulus and the populist tone of the campaign. Credit outperformed Treasuries for the year, with (+5.6%), although it too gave back significant performance in the 4<sup>th</sup> quarter (-3.0%). High yield posted impressive gains, as worries in the Energy sector that significantly impacted the market in 2015 gave way to optimism that defaults would not be nearly as extreme as anticipated. High Yield not only posted a strong return for the year (+17.1%) but unlike other areas of fixed income, was also positive in the 4<sup>th</sup> quarter

(+1.8%). Volatility entered the fixed income markets significantly in the back half of the year. High Yield held steady in the face of rising interest rates as higher quality and more liquid segments of the market lost value.

#### International Developed

- Weak year in Developed Markets (U.S. dollar returns)
- Eurozone and United Kingdom slightly negative for the year
- Japan and Far East positive performers
- Equity valuations in developed markets appear relatively cheaper than the U.S.
- Low returns in fixed income in 2015 and expected through 2016

Europe muddled through another year in 2016 and seemed to never quite hit its stride even as growth projections continued to improve. In U.S. dollars, Europe and United Kingdom equities posted negative performance in 2016. Much of the negative performance was due to currency movements, as both the Euro and Sterling depreciated against the U.S. dollar in 2016. Brexit led to a historical decline in the Sterling through the summer and fall and the effects of the decision to leave the European Union may take years to be realized. Unlike the U.S., equity valuations appear a little more attractive in Europe and there may be a likelihood that investors will shift their focus from U.S. to European Equities. In Asia, most developed markets posted positive, albeit relatively tepid performance in U.S. dollar terms.

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 returned (+1.6%) in 2016, although 4<sup>th</sup> quarter was particularly unkind with a (-8.5%) return. Much of the negative performance can be attributed to market responses to the interest rate increases in the U.S., the relative strength of the U.S. dollar, and the return to risk taking across most markets.

#### *Emerging Markets*

- Solid year in Emerging Markets (U.S. dollar returns)
- Major rebound from performance in 2015
- Brazil, Russia, and Thailand posted big years
- Mexico and Turkey worst performers
- Emerging Market Bonds reversed recent performance losses with strong calendar year
- No end in sight for volatility and macro risks remain elevated

Emerging markets posted strong performance as investor appetite for risky assets extended into emerging markets stocks and bonds. The broad emerging markets index returned (+11.2%) for the year. Of the markets tracked by Morgan Stanley Country Index (“MSCI”), Brazil (+66.8%), Russia (+55.5%) and Thailand (+19.6%) posted the strongest gains. China was a notable laggard for the year, with its (+1.1%) gain trailing the broader markets and the majority of its large country peers. Performance of the bond markets of emerging markets was encouraging. Both hard currency and local currency bond posted solid years in performance. Hard currency bonds, which are predominately issued in U.S. dollar, returned (+10.2%) in 2016. Local currency bonds, which are more susceptible to risk-off periods and capital flight, returned (+9.9%) for the year.

#### Commodities

- Rebounded from one worst years on record for commodities
- Little expectation for a full recovery in commodity prices in the near term

Commodity indices posted positive performance in 2016, with the broad Bloomberg Commodity Index up (+11.8%). Industrial metals (iron ore, zinc, nickel, aluminum, and copper) all posted strong performance for

the year. Also reversing recent history with a rebound in performance were oil and natural gas. Precious metals, consistent with a risk-on attitude from investors, lagged the overall commodity market and the other main sectors.

## CONTACT INFORMATION

This financial report is designed to provide a general overview of the Long Island Rail Road Company for Additional Pensions' finances. Questions concerning any data provided in this report or requests for additional information should be directed to the Controller, Long Island Rail Road, 146-01 Archer Avenue, Jamaica, New York 11435-4380.

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DRAFT

**THE LONG ISLAND RAIL ROAD COMPANY PLAN  
FOR ADDITIONAL PENSIONS**

**STATEMENTS OF PLAN NET POSITION  
AS OF DECEMBER 31, 2016 AND 2015  
(Amounts in thousands)**

	2016	2015
ASSETS:		
Cash	\$ 1,076	\$ 9,466
Investments:		
Investments measured at fair value level	151,826	168,213
Investments measured at NAV	<u>618,373</u>	<u>551,937</u>
Total investments	<u>770,199</u>	<u>720,150</u>
Receivables:		
Participant and union contributions	(14)	27
Accrued interest and dividends	348	232
Additional Plan receivable due from MTA Defined Benefit Plan	<u>6,185</u>	<u>-</u>
Total receivables	<u>6,519</u>	<u>259</u>
Total assets	<u>777,794</u>	<u>729,875</u>
LIABILITIES:		
Due to broker for securities purchased	<u>577</u>	<u>3,677</u>
Total liabilities	<u>577</u>	<u>3,677</u>
PLAN NET POSITION RESTRICTED FOR PENSIONS	<u>\$777,217</u>	<u>\$ 726,198</u>

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, 2016 AND 2015  
(Amounts in thousands)**

	2016	2015
ADDITIONS:		
Investment income:		
Net realized and unrealized gains or (losses)	\$ 56,537	\$ (920)
Interest income	1,121	1,378
Dividend income	<u>6,065</u>	<u>6,661</u>
Total investment income	63,723	7,119
Less investment expenses	<u>(5,484)</u>	<u>(6,592)</u>
Total Net investment income	<u>58,239</u>	<u>527</u>
Contributions:		
Employer	81,079	100,000
Non-Employer	70,000	-
Participant and union	<u>905</u>	<u>1,108</u>
Total contributions	<u>151,984</u>	<u>101,108</u>
Total additions	<u>210,223</u>	<u>101,635</u>
DEDUCTIONS:		
Benefits paid to participants	158,593	157,071
Administrative expenses	717	678
Other	<u>(106)</u>	<u>540</u>
Total deductions	<u>159,204</u>	<u>158,289</u>
NET INCREASE/(DECREASE)	51,019	(56,654)
PLAN NET POSITION RESTRICTED FOR PENSIONS		
Beginning of year	<u>726,198</u>	<u>782,852</u>
End of year	<u>\$777,217</u>	<u>\$ 726,198</u>

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, 2016 AND 2015  
(Dollars in thousands)

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## 1. PLAN DESCRIPTION

The Long Island Rail Road Company Plan for Additional Pensions (the “Additional Plan”) is a 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 of the 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 2016 Master Trust is 83.48% for the Metropolitan Transportation Authority Defined Benefit Pension Plan and 16.52% for the Long Island Rail Road Company Plan for Additional Pensions for the year ended December 31, 2016.

The total asset allocation of the 2015 Master Trust is 82.71% for the Metropolitan Transportation Authority Defined Benefit Pension Plan and 17.29% for the Long Island Rail Road Company Plan for Additional Pensions for the year ended December 31, 2015.

**Pension Benefits**—All full-time employees who were hired before January 1, 1988, are eligible for Additional Plan membership. At January 1, 2016 and 2015, the most recent valuation dates, the Additional Plan’s membership consisted of the following:

	2016	2015
Active plan members	216	282
Retirees and beneficiaries receiving benefits	5,900	5,985
Vested formerly active members not yet receiving benefits	<u>38</u>	<u>53</u>
Total	<u>6,154</u>	<u>6,320</u>

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”).

The Additional Plan has implemented GASB Statement No. 67, Financial Reporting for Pension Plans. The Statement addresses accounting and financial reporting requirements for pension plans. Significant requirements include an actuarial calculation of total and net pension liability. It also includes comprehensive footnote disclosure regarding the pension liability, the sensitivity of the net pension liability to the discount rate, and increased investment activity disclosures. The total pension liability, determined in accordance with GASB Statement No. 67, is presented in Note 6 and in the Required Supplementary Information.

**New Accounting Standards Adopted** – The Additional Plan adopted GASB Statement No. 82, *Pension Issues: An Amendment of GASB Statements No. 67, No. 68 and No. 73*. GASB Statement No.82 requires the Plan to address certain issues that have been raised with respect to Statements No. 67, Financial Reporting for Pension Plans, No. 68, Accounting and Financial Reporting for Pensions, and Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements Nos. 67 and 68. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. There was no material impact on The Additional Plan’s financial statements as a result of the implementation of GASB 82.

**Recent Accounting Pronouncements—**

<b>GASB Statement No.</b>	<b>GASB Accounting Standard</b>	<b>MTA Pension Plan Required Year of Adoption</b>
73	<i>Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68</i>	2017
84	<i>Fiduciary Activities</i>	2018
85	<i>Omnibus 2017</i>	2018

**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 as at December 31, 2016.

Asset Class	Target Allocation (%)	Target Range (%)	Policy Benchmark
<b>Equities</b>	<b>29.0</b>	<b>24-34</b>	
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
<b>Fixed Income</b>	<b>15.0</b>	<b>9-21</b>	Manager Specific
<b>Global Asset Allocation*</b>	<b>20.0</b>	<b>15-33</b>	50% World Equity/ 50% Citigroup WGBI unhedged
<b>Opportunistic Investments</b>	<b>6.0</b>	<b>0-15</b>	Manager Specific
<b>Absolute Return</b>	<b>15.0</b>	<b>10-22</b>	Manager Specific
<b>Real Assets</b>	<b>5.0</b>	<b>0-10</b>	Manager Specific
<b>Real Estate</b>	<b>3.0</b>	<b>0-10</b>	Manager Specific
<b>Private Equity</b>	<b>7.0</b>	<b>0-10</b>	Manager Specific
<b>Total</b>	<b>100.0</b>		

\* 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 Trust to ascertain whether they are appropriate.
- The Additional Plan requires that any exceptions taken to investment policy and guideline statements be submitted in writing pending approval by the Board of Managers. The Board must explicitly authorize each exception in writing. Failure to notify the Board and obtain written authorization will result in the investing manager being liable for any corresponding loss to the investment fund.
- The index fund manager has the Board's approval to utilize securities lending and futures contracts (for the specific reason of equalizing cash deposits with Lehman Aggregate futures contracts) in the management of the index fund.

- The domestic equity manager who has the Board's approval to invest in collective investment vehicles may invest more than 7.5% of the assets subject to such manager's discretionary in collective investment vehicles of any one issuer.
- The fixed income manager who has the Board's approval to invest in collective investment vehicles may invest more than 5% of the assets subject to such manager's discretionary authority in collective investment vehicles of any issuer.

**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, 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 investment 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.

In year 2015, the LIRR Additional Plan 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 by fair value level

	December 31, 2016	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	\$ 44,286,188	\$ 44,286,188	\$ -	\$ -
Separate account small-cap equity funds	67,442,576	67,442,576	-	-
Separate account real estate investment trust	6,816,345	6,816,345	-	-
Total equity investments	118,545,109	118,545,109	-	-
Debt Securities				
Separate account debt funds	33,280,888	-	33,280,888	-
Total debt investments	33,280,888	-	33,280,888	-
Total investments by fair value level	\$151,825,997	\$ 118,545,109	\$ 33,280,888	\$ -

Investments measured at the net asset value (NAV)

	December 31, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled large cap equity funds	\$ 19,600,494	\$ -	Daily	None
Comingled international equity funds	77,705,257	-	Daily	None
Comingled emerging market equity funds	20,362,075	-	Daily, monthly	None
Total equity investments measured at the NAV	117,667,826	-		
Debt Securities				
Comingled debt funds	64,951,970	-	Daily, monthly, quarterly	None
Mutual funds	9,093,971	-	Daily	None
Total debt investments measured at the NAV	74,045,941	-		
Absolute return:				
Directional	18,718,239		Monthly	3-60 days
Direct lending	29,826,310	2,051,667	Bi-annually	60 plus days
Distressed securities	6,791,914	-	Not eligible	N/A
Credit long	11,038,108	-	Quarterly	3-30 days
Credit long/short	13,394,058	-	Quarterly	3-60 days
Equity long/short	13,430,724	-	Quarterly	3-60 days
Event driven	16,908,024	374,553	Quarterly, Bi-annually	60-120 days
Global macro	16,776,423	-	Monthly	3-30 days
Global tactical asset allocation	40,642,912	-	Daily, monthly	3-30 days
Market neutral	30,449	-	Quarterly	3-60 days
Multistrategy	21,023,003	-	Quarterly	3-60 days
Risk parity	65,567,885	-	Monthly	3-30 days
Structured credit	3,535,366	-	Not eligible	N/A
Total absolute return measured at the NAV	257,683,415	2,426,220		
Private equity - private equity partnerships	42,739,171	36,311,877	Not eligible	N/A
Real assets				
Comingled commodities fund	19,404,300	-	Not eligible	N/A
Comingled real estate funds	75,080,555	-	Not eligible	N/A
Energy	8,855,215	5,544,109	Not eligible	N/A
Infrastructure	2,739,805	3,618,661	Not eligible	N/A
Total real assets measured at the NAV	106,079,875	9,162,770		
Short term investments measured at the NAV	20,157,242	-		
Total investments measured at the NAV	618,373,470	\$ 47,900,867		
Total investments measured at fair value	\$ 618,373,470			

Investments measured by fair value level

	December 31, 2015	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	\$ 60,588,679	\$ 60,588,679	\$ -	\$ -
Separate account small-cap equity funds	65,833,177	65,833,177	-	-
Total equity investments	126,421,856	126,421,856	-	-
Debt Securities				
Separate account debt funds	41,790,996	-	41,790,996	-
Total debt investments	41,790,996	-	41,790,996	-
Total investments by fair value level	\$ 168,212,852	\$ 126,421,856	\$ 41,790,996	\$ -

Investments measured at the net asset value (NAV)

	December 31, 2015	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled large cap equity funds	\$ 64,379,929	\$ -	Daily	None
Comingled emerging market equity funds	19,182,836	-	Daily, monthly	None
Total equity investments measured at the NAV	83,562,765	-		
Debt Securities				
Comingled debt funds	58,831,574	-	Daily, monthly, quarterly	None
Total debt investments measured at the NAV	58,831,574	-		
Absolute return:				
Directional	17,710,333	-	Monthly	3-60 days
Direct lending	22,167,568	5,365,338	Bi-annually	60 plus days
Credit long	10,506,231	-	Quarterly	3-30 days
Credit long/short	13,431,991	-	Quarterly	3-60 days
Equity long/short	10,306,155	-	Quarterly	3-60 days
Event driven	23,890,851	392,155	Quarterly, Bi-annually	60-120 days
Global macro	17,090,514	-	Monthly	3-30 days
Global tactical asset allocation	54,738,789	-	Daily, monthly	3-30 days
Market neutral	94,146	-	Quarterly	3-60 days
Multistrategy	8,229,940	-	Quarterly	3-60 days
Risk parity	81,470,531	-	Monthly	3-30 days
Total absolute return measured at the NAV	259,637,050	5,757,493		
Private equity - private equity partnerships	36,744,163	14,881,627	Not eligible	N/A
Real assets				
Comingled commodities fund	16,468,969	-	Not eligible	N/A
Comingled real estate funds	66,676,860	-	Not eligible	N/A
Energy	6,214,143	10,102,396	Not eligible	N/A
Infrastructure	1,827,034	4,609,713	Not eligible	N/A
Total real assets measured at the NAV	91,187,006	14,712,109		
Short term investments measured at the NAV	21,954,938	-		
Total investments measured at the NAV	551,917,496	\$ 35,351,229		
Total investments measured at fair value	\$ 551,917,496			

**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, 2016 and 2015, are as follows:

(Amounts in thousands)	December 31,	
	2016	2015
Investments at fair value as determined by quoted market prices:		
JPMCB Strategic Property Fund	<u>\$54,877</u>	<u>\$50,637</u>

**Credit Risk**—The quality ratings of investments in fixed income securities as described by nationally recognized statistical rating organizations at December 31, 2016 and 2015:

(Amount in thousands)	2016		2015	
Quality Rating—S&P	Fair Value	Percentage of Fixed Income Portfolio	Fair Value	Percentage of Fixed Income Portfolio
AAA	\$ 11,391	7.07 %	\$ 24,725	13.13 %
AA	3,580	2.22	13,000	6.90
A	12,504	7.77	15,286	8.12
BBB	29,382	18.25	38,023	20.19
BB	17,627	10.95	13,963	7.42
B	11,464	7.12	14,148	7.51
CCC	1,941	1.21	1,648	0.88
CC	300	0.19	-	0.00
C	711	0.44	-	0.00
Not rated	<u>26,160</u>	<u>16.25</u>	<u>13,740</u>	<u>7.30</u>
Total credit risk debt securities	115,060	71.46	134,533	71.45
U.S. Government bonds*	<u>45,958</u>	<u>28.54</u>	<u>53,751</u>	<u>28.55</u>
Total Fixed Income Securities	<u>\$ 161,018</u>	<u>100.00 %</u>	<u>\$ 188,284</u>	<u>100.00 %</u>
Other securities not rated — equity, international funds and foreign corporate bonds	<u>609,181</u>		<u>531,866</u>	
Total investments	<u>\$ 770,199</u>		<u>\$ 720,150</u>	

\* 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, 2016 and 2015 are as follows:

(Amounts in thousands) Investment Type	2016		2015	
	Fair Value	Duration	Fair Value	Duration
Chase	\$ 33,796	11.54	\$ 41,791	11.46
Wellington Emerging Debt	9,440	5.55	14,019	5.06
Bridgewater All Weather Fund	19,127	9.00	28,336	7.87
Wellington Opportunistic	4,590	1.91	7,488	1.69
Bridgewater Alpha	430	(3.54)	12,221	4.36
Bridgewater Market Limited	1,808	1.40	1,581	6.84
Northern Trust William Capital	1,657	-	1,731	-
Park Square Capital Credit Opportunities	6,628	0.54	2,949	0.61
Libremax Partners Fund	1,088	5.02	-	-
Gramercy Distressed Opportunistic Fund	1,900	(0.48)	-	-
Makuria Credit Fund	2,793	1.05	-	-
Crescent Capital High Income Fund	5,677	2.61	4,494	2.64
Fit Tree Value Fund	20	-	522	-
Wellington Global Managed Risk	10,420	6.70	16,270	6.77
Wellington Trust Collective Investment Fund and Diversified Investment Fund	4,626	0.88	2,157	7.56
Allianz Structured Alpha Fund	18,295	0.25	17,315	0.13
GAM Unconstrained Bond Fund	34,459	0.25	33,828	0.93
Canyon Value	4,265	1.90	3,582	2.40
Total fixed income	<u>\$ 161,017</u>		<u>\$ 188,284</u>	
Portfolio modified duration		<u>4.60</u>		<u>5.47</u>
Investments with no duration reported	<u>609,182</u>		<u>531,866</u>	
Total investments	<u>\$ 770,199</u>		<u>\$ 720,150</u>	

**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 Depositary 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, 2016 and 2015 are follows (amounts in U.S. dollars, in

Foreign Currency	December 31,	
	2016	2015
Euro	\$ 22,928	\$ 15,046
British Pound (Sterling)	19,371	14,312
Japanese Yen	8,032	6,474
Franc (Swiss)	2,278	1,715
Dollar (Hong Kong)	2,929	972
Australian Dollar	11,553	10,025
Sri Lankan Rupee	68	67
Krona (Swedish)	888	1,404
Brazil Cruzeiro Real	2,078	1,530
Chilean Peso	269	692
Dollar (Canadian)	5,190	6,309
Krone (Danish)	352	762
Mexican New Peso	1,072	8,220
China (Yuan Renminbi)	2,037	1,899
Czech Koruna	571	(273)
Egyptian Pound	83	121
Hungary (Forint)	71	138
South Korean Won	2,111	1,942
Indian Rupee	4,556	2,537
Indonesia Rupiah	2,994	2,633
Israel (Shekel)	185	425
Malaysian (Ringgit)	784	853
Philippines Peso	308	341
Dollar (New Zealand)	829	(385)
Krone (Norwegian)	(177)	635
Thai Bhat	1,025	849
Polish (New Zloty)	271	565
Russian Federation Ruble	525	1,253
Singapore Dollar	249	273
Argentina Peso	72	97
Colombian Peso	568	1,352
South Africa Rand	1,132	906
Dollar (Taiwan, New)	4,929	3,694
Turkish Lira	266	278
Kenyan Shilling	159	151
Uruguayan Pesos	-	136
Peru Sol	406	479
Bangladesh (Taka)	77	60
Botswana Pula	19	23
Bulgarian Lev	1	1
Croatia Kuna	74	63
Ghanaian Cedi	7	9
UAE Dirham	295	273
Omanian Rial	74	64
Pakistani Rupee	564	452
Qatar Riyal	141	141
Mauritius (Rupee)	140	67
Morocco Dirham	76	64
Nigerian Naira	132	147
Jordanian Dinar	71	73
Romanian Leu	69	371
Kuwait Dinar	154	124
Tunisian Dinar	27	29
Geogian Lari	305	292
Saudi Riyal	83	69
Other	1,002	2,084
Totals	<u>\$ 104,273</u>	<u>\$ 92,830</u>

**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, 2016 and 2015, were 16.52% and 17.29%, respectively. The Master Trust invests in commingled funds whereby various invested funds are invested in funds, which have readily determinable fair market values.

	December 31, 2016		December 31, 2015	
	Master Trust Total	Additional Plan	Master Trust Total	Additional Plan
Total Investments:				
Investments measured at fair value level	\$ 693,868	\$ 114,596	\$ 791,775	\$ 136,898
Investments measured at the NAV	<u>3,411,910</u>	<u>563,496</u>	<u>2,896,954</u>	<u>500,883</u>
Total investments	<u>\$ 4,105,778</u>	<u>\$ 678,093</u>	<u>\$ 3,688,729</u>	<u>\$ 637,781</u>

#### 4. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2016 and 2015 were as follows (in thousands):

	2016	2015
Total pension liability	\$ 1,526,304	\$ 1,562,251
Fiduciary net position	<u>777,217</u>	<u>726,198</u>
Net pension liability	<u>\$ 749,087</u>	<u>\$ 836,053</u>
Fiduciary net position as a percentage of the total pension liability	<u>50.92 %</u>	<u>46.48 %</u>
Covered payroll	<u>\$ 18,216</u>	<u>\$ 25,712</u>
Net pension liability as a percentage of covered payroll	<u>4,112.20 %</u>	<u>3,251.65 %</u>

**Actuarial Methods and Assumptions**—The total pension liability as of December 31, 2016 was determined by an actuarial valuation date of January 1, 2016, 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, 2016 and 2015 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:

2016 (In thousands)	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	<u>\$871,350</u>	<u>\$749,087</u>	<u>\$642,973</u>
2015 (In thousands)	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
Net pension liability	<u>\$963,427</u>	<u>\$836,053</u>	<u>\$725,673</u>

Additional information of the latest actuarial valuation follows:

	January 1, 2016	January 1, 2015
Valuation date	January 1, 2016	January 1, 2015
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 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.
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.

**2016 - 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, 2016	\$ 726,198	12.00	1.00	\$ 785,100
Monthly net external cash flows:				
January	(7,008)	12.00	1.00	(7,576)
February	(7,008)	11.00	0.92	(7,529)
March	(7,008)	10.00	0.83	(7,477)
April	(7,008)	9.00	0.75	(7,430)
May	(6,149)	8.00	0.67	(6,478)
June	(6,149)	7.00	0.58	(6,433)
July	63,851	6.00	0.50	66,390
August	(6,149)	5.00	0.42	(6,353)
September	(6,149)	4.00	0.33	(6,309)
October	(6,149)	3.00	0.25	(6,270)
November	(6,149)	2.00	0.17	(6,231)
December	(6,149)	1.00	0.08	(6,187)
Ending Value—December 31, 2016	<u>\$ 777,217</u>			<u>\$ 777,217</u>
Money—Weighted Rate of Return		<u>8.11 %</u>		

**2015 - 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, 2015	\$ 782,852	12.00	1.00	\$ 783,398
Monthly net external cash flows:				
January	(3,383)	11.50	0.96	(3,386)
February	(3,383)	10.50	0.88	(3,386)
March	(3,383)	9.50	0.79	(3,385)
April	(3,383)	8.50	0.71	(3,385)
May	(3,383)	7.50	0.63	(3,385)
June	(3,383)	6.50	0.54	(3,385)
July	(3,383)	5.50	0.46	(3,385)
August	(3,383)	4.50	0.38	(3,384)
September	(3,383)	3.50	0.29	(3,384)
October	(3,383)	2.50	0.21	(3,384)
November	(10,248)	1.50	0.13	(10,249)
December	(13,098)	0.50	0.04	(13,103)
Ending Value—December 31, 2015	<u>\$ 725,671</u>			<u>\$ 726,198</u>
Money—Weighted Rate of Return		<u>0.07 %</u>		

**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, 2016 and 2015.

**SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2016**

<b>Asset Class</b>	<b>Index</b>	<b>Target Allocation*</b>	<b>Real Rate of Return</b>
US Core Fixed Income	Barclays Aggregate	10.00%	1.67%
US High Yield Bonds	BAML High Yield	8.00%	5.04%
Global Bonds	Citi WGBI	10.00%	0.28%
Emerging Markets Bonds	JPM EMBI Plus	3.00%	3.78%
US Large Caps	S&P 500	10.00%	4.80%
US Small Caps	Russell 2000	5.50%	6.06%
Global Equity	MSCI ACWI NR	10.00%	5.49%
Foreign Developed Equity	MSCI EAFE NR	10.00%	6.06%
Emerging Markets Equity	MSCI EM NR	3.50%	8.39%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.77%
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%	3.45%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.85%
Portfolio Normal Mean Return			7.03%
Portfolio Standard Deviation			11.54%
<b>Long-Term Expected Rate of Return selected by MTA</b>			<b>7.00%</b>

\* Based on March 2014 Investment Policy

**SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2015**

<b>Asset Class</b>	<b>Index</b>	<b>Target Allocation*</b>	<b>Real Rate of Return</b>
US Core Fixed Income	Barclays Aggregate	10.00%	2.11%
US High Yield Bonds	BAML High Yield	8.00%	4.32%
Global Bonds	Citi WGBI	10.00%	0.82%
Emerging Market Bonds	JPM EMBI Plus	3.00%	5.17%
US Large Caps	S&P 500	10.00%	5.09%
US Small Caps	Russell 2000	5.50%	6.26%
Global Equity	MSCI ACWI NR	10.00%	5.67%
Foreign Developed Equity	MSCI EAFE NR	10.00%	6.06%
Emerging Market Equity	MSCI EM NR	3.50%	8.21%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.98%
Private Real Estate Property	NCREIF Property	3.00%	3.84%
Private Equity	Cambridge Private Equity	7.00%	9.17%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	15.00%	4.20%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.89%
Portfolio Arithmetic Mean Return			7.31%
Portfolio Standard Deviation			11.67%
<b>Long-Term Expected Rate of Return selected by MTA</b>			<b>7.00%</b>

\* 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 2016 and 2015), 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 2016 and 2015).

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 Entry Age Normal method was used for determining normal costs and the 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.

### 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:

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

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 (e.g. for 2016) is equal to the annualized base salary as of December 31, 2015 projected 6 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 year’s reported administrative 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. For inactive participants, offsets for Railroad Retirement benefits are estimated and assumed to occur at the member's age 65.

**Retroactive Wage Adjustments**—Based on recalculations completed by the MTA, adjustments to benefits were determined based on year of retirement: 2% for retirements prior to 2013, 5% for 2013 retirements, 8% for 2014 retirements and 11% for 2015 retirements. These adjustments were applied to liabilities represented members provided by the MTA who received a retroactive wage adjustment. Additional liabilities equal to the accumulated amount of estimated retroactive payments as of the valuation date were also included.

**Benefits Not Valued**—Since the majority of active plan participants are at or close to retirement eligibility, the disability benefit has not been explicitly valued.

#### D. CHANGES IN ACTUARIAL ASSUMPTIONS

The provision for the administrative expenses was modified to equal an average of the prior three years.

### 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 January 22, 2018, there were no materially significant events.

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**SUPPLEMENTAL SCHEDULES**

THE LONG ISLAND RAIL ROAD COMPANY PLAN  
FOR ADDITIONAL PENSIONS

SCHEDULE I

REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)  
SCHEDULE OF CHANGES IN THE EMPLOYERS' NET PENSION LIABILITY AND  
RELATED RATIOS  
FOR THE YEARS ENDED DECEMBER 31  
(In thousands)

	2016	2015	2014
Total pension liability:			
Service cost	\$ 2,752	\$ 3,441	\$ 3,813
Interest	104,093	106,987	110,036
Changes of benefit terms	-	-	-
Differences between expected and actual experience	15,801	6,735	-
Changes of assumptions	-	-	-
Benefit payments and withdrawals	(158,593)	(157,071)	(156,974)
Net change in total pension liability	(35,947)	(39,908)	(43,125)
Total pension liability—beginning	1,562,251	1,602,159	1,645,284
Total pension liability—ending (a)	1,526,304	1,562,251	1,602,159
Plan fiduciary net position:			
Employer contributions	81,100	100,000	407,513
Non-Employer contributions	70,000	-	-
Member contributions	884	1,108	1,304
Net investment income	58,239	527	21,231
Benefit payments and withdrawals	(158,593)	(157,071)	(156,974)
Administrative expenses	(611)	(1,218)	(975)
Net change in plan fiduciary net position	51,019	(56,654)	272,099
Plan fiduciary net position—beginning	726,198	782,852	510,753
Plan fiduciary net position—ending (b)	777,217	726,198	782,852
Employer's net pension liability—ending (a)-(b)	\$ 749,087	\$ 836,053	\$ 819,307
Plan fiduciary net position as a percentage of the total pension liability	50.92 %	46.48 %	48.86 %
Covered-employee payroll	\$ 18,216	\$ 25,712	\$ 29,334
Employer's net pension liability as a percentage of covered-employee payroll	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
2007	100,907	100,907	0	93,998	107.35 %
2008	100,337	100,337	0	80,927	123.98 %
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 %

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# THE LONG ISLAND RAIL ROAD COMPANY PLAN FOR ADDITIONAL PENSIONS

## SCHEDULE II

### REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED) SCHEDULE OF EMPLOYER CONTRIBUTIONS

Note to Schedule II:

The more significant actuarial assumptions and methods used in the calculation of employer contributions to the Plan for the years ended December 31, 2016, 2015 and 2014, are as follows:

Valuation Dates	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Entry Age Cost Method	Entry Age Cost Method	Entry Age Cost Method
Amortization method	Period specified in current valuation report (closed 17-year period from January 1, 2016) with level dollar payments.	Period specified in current valuation report (closed 18-year period from January 1, 2015) with level dollar payments.	Period specified in current valuation report (closed 19-year period from January 1, 2014) with level dollar payments.
Actuarial asset valuation method	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets.
Interest rate	Net rate of 7.0% for 2016, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses	Net rate of 7.0% for 2014, per annum, net of investment expenses
Inflation	2.5% per annum	2.5% per annum	2.5% per annum
Railroad retirement wage base	3.5% per year	3.5% per year	3.5% per year
Mortality	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA	Based on experience of all LIRR members reflecting mortality improvement on generational basis using Scale AA
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.	Tables based on recent experience. Rates vary by age, years of service at retirement.
Salary increases	3.0% per year	3.0% per year	3.0% per year
Overtime	Earnings in each year increased by 65% for represented employees to account for overtime and by 20% in the year prior to assumed retirement and by 10% in the year prior to termination (other than retirement) for non-represented employees 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 employees 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 employees to account for unused vacation pay.
Provision for expenses	The provision for administrative expenses was modified to equal an average of the prior three years.	\$650,000 is added to the normal cost to account for administrative expenses paid by plan assets throughout the year.	\$500,000 is added to the normal cost to account for administrative expenses paid by plan assets throughout the year.

**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**

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

<b>Year Ended December 31</b>	<b>Net Money-Weighted Rate of Return</b>
2007	N/A
2008	N/A
2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	3.73 %
2015	0.07 %
2016	8.11 %

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

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

Financial Statements as of and for the  
Years Ended December 31, 2016 and 2015,  
Supplemental Schedules, and  
Independent Auditors' Report

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# MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

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## **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, 2016 and 2015, 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, 2016 and 2015, and the changes in Plan net position for the years then ended in accordance with accounting principles generally accepted in the United States of America.

## **Other Matters**

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 9 and the Changes in the Employers' Net Pension Liability and Related Ratios-Schedule I on page 52; Employer Contributions and Notes to Schedule-Schedule II on pages 53-54; and the Investment Returns-Schedule III on page 55 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 22, 2018

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

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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, 2016 and 2015. 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 11.

### 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**— 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.

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

### CONDENSED FINANCIAL INFORMATION AND ANALYSIS

#### FINANCIAL ANALYSIS

##### Plan Net Position As of December 31, 2016, 2015, and 2014 (Dollars in thousands)

	2016	2015	2014	Increase / Decrease			
				2016-2015		2015-2014	
				\$	%	\$	%
Cash and investments	\$ 2,526,557	\$ 2,263,535	\$ 2,249,053	\$ 263,022	11.6%	\$ 14,482	0.6 %
Receivables and other assets	39,441	40,789	98,897	(1,348)	(3.3)%	(58,108)	(58.8)%
<b>Total assets</b>	<b>\$ 2,565,998</b>	<b>\$ 2,304,324</b>	<b>\$ 2,347,950</b>	<b>\$ 261,674</b>	<b>11.4 %</b>	<b>\$ (43,626)</b>	<b>(1.9)%</b>
Payable for investment securities purchased	2,348	1,762	55,863	586	33.3 %	(54,101)	(96.8)%
Other liabilities	7,915	10,247	26,794	(2,332)	(22.8)%	(16,547)	(61.8)%
<b>Total liabilities</b>	<b>10,263</b>	<b>12,009</b>	<b>82,657</b>	<b>(1,746)</b>	<b>(14.5)%</b>	<b>(70,648)</b>	<b>(85.5)%</b>
<b>Plan net position restricted for pensions</b>	<b>\$ 2,555,735</b>	<b>\$ 2,292,315</b>	<b>\$ 2,265,293</b>	<b>\$ 263,420</b>	<b>11.5%</b>	<b>\$ 27,022</b>	<b>1.2%</b>

#### December 31, 2016 versus December 31, 2015

Cash and investments at December 31, 2016, were \$2,526.6 million, an increase of \$263.0 million or 11.6% from 2015. 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, 2016 decreased by \$1.9 million or 4.5%. The flat variance represents a minimal decrease in interest and dividends and employee loans offset by a minimal increase in investment securities payable and post retirement death benefits.

The plan net position held in trust for pension benefits increased \$263.4 million or 11.5% in 2016 as a result of the changes noted above.

#### December 31, 2015 versus December 31, 2014

Cash and investments at December 31, 2015, were \$2,263.5 million, an increase of \$14.5 million or 0.6% from 2014. 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, 2015 increased by \$12.5 million or 77.2% from 2014. This increase was due primarily to a decrease of \$58 million in receivables from investments,

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

offset by decreases in payable for investment securities purchased and other liabilities of \$70.6 million in 2015.

The plan net position held in trust for pension benefits increased \$27 million or 1.2% in 2015 as a result of the changes noted above.

### Changes in Plan Net Position For the Years Ended December 31, 2016, 2015 and 2014 (Dollars in thousands)

	2016	2015	2014	Increase / Decrease			
				2016-2015		2015-2014	
				\$	%	\$	%
<b>Additions:</b>							
Net investment income	\$ 212,260	\$ (24,163)	\$ 105,084	\$ 236,423	978.5 %	\$ (129,247)	(123.0)%
Transfers and contributions	239,169	231,202	241,834	7,967	3.4 %	(10,632)	(4.4)%
<b>Total net additions</b>	<b>451,429</b>	<b>207,039</b>	<b>346,918</b>	<b>244,390</b>	<b>118.0 %</b>	<b>(139,879)</b>	<b>(40.3)%</b>
<b>Deductions:</b>							
Benefit payments	187,823	179,928	175,447	\$ 7,895	4.4%	\$ 4,481	2.6 %
Administrative expenses	186	89	73	97	109.0%	16	21.9 %
<b>Total deductions</b>	<b>188,009</b>	<b>180,017</b>	<b>175,520</b>	<b>7,992</b>	<b>4.4%</b>	<b>4,497</b>	<b>2.6 %</b>
<b>Net increase</b>	<b>263,420</b>	<b>27,022</b>	<b>171,398</b>	<b>236,398</b>	<b>874.8 %</b>	<b>(144,376)</b>	<b>(84.2)%</b>
Plan net position restricted for pensions:							
Beginning of year	2,292,315	2,265,293	2,093,895	27,022	1.2%	171,398	8.2 %
<b>End of year</b>	<b>\$ 2,555,735</b>	<b>\$ 2,292,315</b>	<b>\$ 2,265,293</b>	<b>\$ 263,420</b>	<b>11.5%</b>	<b>\$ 27,022</b>	<b>1.2 %</b>

### December 31, 2016 versus December 31, 2015

Net investment income increased by \$236.4 million or 978.5% in 2016 due to net investment gains of \$212.3 million in 2016 versus net losses of \$24.2 million in 2015.

Contributions increased by \$8.0 million or 3.4% in 2016 compared to 2015, as a result of the Actuarial Determined Contributions ("ADC") for 2016.

Benefit payments increased by \$7.9 million or 4.4% over the prior year due to a continuing trend of increase in the number of retirees.

Administrative expenses increased by \$0.097 million or 109.0% over 2015. This increase was due to recognition of Plan Trustee fees as part of administration expenses offset by a reduction of audit expenses reimbursed to the Plan for years 2014 and 2015 respectively. Starting in 2014, Plan annual audit expenses are paid by the MTA Headquarters and no longer by the Plan.

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

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### December 31, 2015 versus December 31, 2014

Net investment income decreased by \$129.2 million or 123% in 2015 due to net investment losses of \$24.2 million in 2015 versus net gains of \$105.1 million in 2014.

Contributions decreased by \$10.6 million or 4.4% in 2015 compared to 2014, as a result of the Actuarial Determined Contributions ("ADC") for 2015.

Benefit payments increased by \$4.5 million or 2.6% over the prior year due to a continuing trend of increase in the number of retirees.

Administrative expenses increased by \$.016 million or 21.9% over 2014. This increase was due to an increase in fees for various services provided to the plan.

### **Economic Factors**

#### **Market Overview and Outlook – 2016**

Despite investors entering the year with a myriad of concerns; such as soft economic growth in the United States ("U.S.") and China, elevated valuations in nearly every market and asset class, and rising geopolitical tensions, performance proved to be robust and resilient across almost all major markets. After a weak 2015 appetite for risk was hearty as equities continued to march ever higher in the U.S., Japan, and Emerging Markets and returns were strong in the riskier corners of fixed income in investment grade, high yield, and emerging markets bonds.

Market performance was framed by a rather benign macro environment, albeit with some transitory complications. In 2015, eyes had turned toward a weakening Chinese economy, resulting in commodity markets continuing their steep decline and volatility rising across the equity and fixed income markets. Emerging markets, particularly those centered on commodities where demand is tied to Chinese growth, experienced sharp declines in 2015. As the calendar flipped from 2015 to 2016, these concerns dissipated and emerging markets rallied significantly off their 2015 lows. Europe was again in the headlines, this time as Brexit caused momentary anxiety that evaporated within days of the history-making vote. Nonetheless, Europe and the United Kingdom were among the few markets to post negative performance for 2016.

In the U.S., the Federal Reserve held off raising interest rates until December, well off the pace and trajectory forecast by markets heading into 2016. The December raise came weeks after Donald Trump's election to the Presidency, which fueled a strong equities market push in the 4<sup>th</sup> quarter behind expectations for regulatory reform, repeal of the Affordable Care Act, and a re-writing of the U.S. Tax Code. How realistic these expectations are will play out in 2017 and 2018 ahead of the mid-term election cycle will remain to be seen.

#### ***Macro Themes***

- Tepid global growth continuing
- Central Bank policy divergence, U.S. tightening while Europe and Japan eases
- China reforms; turmoil in emerging markets and commodities
- High valuations and increasing leverage

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

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The macro picture was framed by tepid global growth in 2016, with the likelihood that below average economic performance would continue into 2017 and 2018. Developed markets look to remain lukewarm, with Gross Domestic Product ("GDP") growth struggling to break through the (+3.0%) level globally and perhaps likely to fall short in the U.S., Europe, or Japan in 2017 or 2018 according to both the International Monetary Fund ("IMF") and World Bank. Inflation remains subdued across the developed markets while currency depreciation in emerging markets have led to spikes in inflation. The U.S. is in an environment where short-term interest rates will likely rise over the next two years; Europe and Japan are in a decidedly different place. Weak demand and low inflation in Europe and Japan have led to further central bank intervention and easing. The continued European Central Bank intervention in credit and bond markets may lead to problems down the road. In emerging markets, central banks have moved to increase interest rates in order to tame both inflation and capital outflows. The slower pace of U.S. interest rate increases has continued to result in a U.S. dollar weakening a bit from highs in 2015 and 2016, potentially easing some strain on the U.S. manufacturing and exporting sectors.

Europe continues to be impacted by high levels of public debt, fractious politics and low economic growth. Like emerging markets, a significant portion of Europe's export engine is tied to Chinese demand and growth. Lower growth in China will place pressures on Europe, in particular net exporters, such as Germany. Debt levels have not yet moderated post-financial crisis and flare-ups in periphery countries, such as in Greece, Portugal, Italy, and Spain, are likely to continue as growth remains challenged and reforms and austerity lose support. Banks will continue their deleveraging cycle should new rules (Basel III) on risk capital be implemented. In Japan, where banks are in better health, high public debt, low growth, a weakening regional economic picture, and aging demographics will challenge the government in delivering their growth and inflation targets.

Emerging markets posted solid returns in 2016 as the impact of capital flows due to the U.S. interest rate increases were much lower than expected. The main emerging markets, Brazil, Russia, India and China, defined as the "BRICs" all face their own challenges. Brazil faces high inflation, high interest rates, low growth, and a government beset by allegation of corruption. China, in attempting to shift from being manufacturing-oriented to a consumer-based economy, faces significant pressures to meet its growth target of (+7.0%) per year and will face a significant leadership election in late 2017. Russia remains impacted from lower energy prices and economic sanctions. Finally, India seems to continually disappoint in liberalizing its economy and implementing the structural reforms necessary to unleash its potential.

### *United States*

Markets in the U.S. were strong for the year and were amongst the best performers in 2016. Unlike other regions, the U.S. appears to be on relatively sound footing, with unemployment declining to very low levels and the remaining hangovers from the 2008 financial crisis appearing to fully dissipate. The better economic picture provided the Federal Reserve enough leeway to raise interest rates in December, causing a sell-off in government bond markets.

### *Equity*

- Surprising and solid year for stocks
- Valuations stretched
- Risk Indulging – Small Cap outperformed Large Cap; Cyclical outperformed Defensives;
- Value leads growth on Bank sector performance

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

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- Barring significant developments, equity markets set for another low-return year

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+12.0%) and (+12.1%), respectively. Small Cap and Mid Cap indices outperformed large cap. Small Cap, as measured by the Russell 2000 Index, returned (+21.3%). The Russell Mid Cap Index lagged but still managed to post a (+13.8%) return.

Digging deeper, there was significant performance dispersion across the sectors. Cyclical Sectors performed well with Energy (+28.0%), Financials (+22.7%) and Industrials (+20.0%) leading the charge higher. Healthcare (-2.8%), Real Estate (+3.2%), and Consumer Staples (+5.0%) were the lagging sectors. This divergence shows investors' appetite shifted from 2015, when defensive and yield oriented sectors were the best performing segments of the S&P 500. In 2016, investors shifted towards sectors tied to economic growth (Energy and Industrials) or those that may benefit from deregulation (Financials).

### *Fixed Income*

The return of an appetite for risk was also evident within the U.S. Fixed Income markets. Treasuries returned (+1.0%) for the year, although this sector was impacted particularly hard in period after the U.S. Election as the Federal Reserve increased interest rate. The 4<sup>th</sup> quarter return of (-3.8%) was amongst the worst 3 month return in Treasuries in quite some time. Government bonds will likely not provide the safe haven status previously counted on by investors going forward given the Trump Administration's pledges on spending/stimulus and the populist tone of the campaign. Credit outperformed Treasuries for the year, with (+5.6%), although it too gave back significant performance in the 4<sup>th</sup> quarter (-3.0%). High yield posted impressive gains, as worries in the Energy sector that significantly impacted the market in 2015 gave way to optimism that defaults would not be nearly as extreme as anticipated. High Yield not only posted a strong return for the year (+17.1%) but unlike other areas of fixed income, was also positive in the 4<sup>th</sup> quarter (+1.8%). Volatility entered the fixed income markets significantly in the back half of the year. High Yield held steady in the face of rising interest rates as higher quality and more liquid segments of the market lost value.

### *International Developed*

- Weak year in Developed Markets (U.S. dollar returns)
- Eurozone and United Kingdom slightly negative for the year
- Japan and Far East positive performers
- Equity valuations in developed markets appear relatively cheaper than the U.S.
- Low returns in fixed income in 2016 and expected through 2017

Europe muddled through another year in 2016 and seemed to never quite hit its stride even as growth projections continued to improve. In U.S. dollars, Europe and United Kingdom equities posted negative performance in 2016. Much of the negative performance as due to currency movements, as both the Euro and Sterling depreciated against the U.S. dollar in 2016. Brexit led to a historical decline in the Sterling through the summer and fall and the effects of the decision to leave the European Union may take years to be realized. Unlike the U.S., equity valuations appear a little more attractive in Europe and there may be a likelihood that investors will shift their focus from U.S. to European Equities. In Asia, most developed markets posted positive performance, albeit relatively tepid performance in U.S. dollar terms.

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 returned (+1.6%) in

# Manhattan and Bronx Surface Transit Operating Authority Pension Plan

## Management's Discussion and Analysis As of and For the Years Ended December 31, 2016 and 2015 (Unaudited)

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2016, although 4<sup>th</sup> quarter was particularly unkind with a (-8.5%) return. Much of the negative performance can be attributed to market responses to the interest rate increases in the U.S., the relative strength of the U.S. dollar, and the return to risk taking across most markets.

### *Emerging Markets*

- Solid year in Emerging Markets (U.S. dollar returns)
- Major rebound from performance in 2015
- Brazil, Russia, and Thailand posted big years
- Mexico and Turkey worst performers
- Emerging Market Bonds reversed recent performance losses with strong calendar year
- No end in sight for volatility and macro risks remain elevated

Emerging markets posted strong performance as investor appetite for risky assets extended into emerging markets stocks and bonds. The broad emerging markets index returned (+11.2%) for the year. Of the markets tracked by Morgan Stanley Country Index ("MSCI"), Brazil (+66.8%), Russia (+55.5%) and Thailand (+19.6%) posted the strongest gains. China was a notable laggard for the year, with its (+1.1%) gain trailing the broader markets and the majority of its large country peers. Performance of the bond markets of emerging markets was encouraging. Both hard currency and local currency bond posted solid years in performance. Hard currency bonds, which are predominately issued in U.S. dollar, returned (+10.2%) in 2016. Local currency bonds, which are more susceptible to risk-off periods and capital flight, returned (+9.9%) for the year.

### *Commodities*

- Rebounded from one worst years on record for commodities
- Little expectation for a full recovery in commodity prices in the near term

Commodity indices posted positive performance in 2016, with the broad Bloomberg Commodity Index up (+11.8%). Industrial metals (iron ore, zinc, nickel, aluminum, and copper) all posted strong performance for the year. Also reversing recent history with a rebound in performance were oil and natural gas. Precious metals, consistent with a risk-on attitude from investors, lagged the overall commodity market and the other main sectors.

### **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, 16<sup>th</sup> 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, 2016 AND 2015 (In thousands)

	2016	2015
<b>ASSETS:</b>		
Cash	\$ 10,431	\$ 4,884
Receivables:		
Investment securities sold	995	927
Interest and dividends	949	1,614
Employee loans	<u>37,497</u>	<u>38,248</u>
Total receivables	<u>39,441</u>	<u>40,789</u>
Investments (Notes 2 and 3):		
Investments measured at fair value level	343,501	524,352
Investments measured by net asset value	<u>2,172,625</u>	<u>1,734,299</u>
Total investments	<u>2,516,126</u>	<u>2,258,651</u>
Total assets	<u>2,565,998</u>	<u>2,304,324</u>
<b>LIABILITIES:</b>		
Accounts payable	1,469	1,357
Payable for investment securities purchased	2,348	1,762
Accrued benefits payable	1,342	1,578
Accrued post retirement death benefits (PRDB) payable	1,492	893
Accrued 55/25 Additional Members Contribution (AMC) payable	<u>3,612</u>	<u>6,419</u>
Total liabilities	<u>10,263</u>	<u>12,009</u>
<b>PLAN NET POSITION RESTRICTED FOR PENSIONS</b>	<u><u>\$2,555,735</u></u>	<u><u>\$2,292,315</u></u>

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, 2016 AND 2015**

(In thousands)

	2016	2015
ADDITIONS:		
Contributions (Note 4):		
Employee contributions	\$ 18,472	\$ 16,321
Employer contributions	<u>220,697</u>	<u>214,881</u>
Total contributions	<u>239,169</u>	<u>231,202</u>
Investment income:		
Interest income	5,957	8,071
Dividend income	19,288	18,336
Net appreciation/(depreciation) in fair value of investments	<u>224,671</u>	<u>(22,885)</u>
Total investment income	249,916	3,522
Less investment expenses	<u>37,656</u>	<u>27,685</u>
Net investment income/(loss)	<u>212,260</u>	<u>(24,163)</u>
Total additions	<u>451,429</u>	<u>207,039</u>
DEDUCTIONS:		
Benefit payments and withdrawals	187,823	179,928
Administrative expenses	<u>186</u>	<u>89</u>
Total deductions	<u>188,009</u>	<u>180,017</u>
NET INCREASE	<u>263,420</u>	<u>27,022</u>
PLAN NET POSITION RESTRICTED FOR PENSIONS:		
Beginning of year	<u>2,292,315</u>	<u>2,265,293</u>
End of year	<u>\$2,555,735</u>	<u>\$2,292,315</u>

See notes to financial statements.

# MANHATTAN AND BRONX SURFACE TRANSIT OPERATING AUTHORITY PENSION PLAN

## NOTES TO FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

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### 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 the New York City Employees Retirement System (NYCERS). Effective January 1, 1999, in order to afford managerial and nonrepresented 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, 2016 and 2015, respectively, the date of the latest actuarial valuation:

	2016	2015
Active and inactive members	8,617	8,217
Retirees and beneficiaries currently receiving benefits	5,468	5,394
Vested formerly active members not yet receiving benefits	<u>998</u>	<u>959</u>
Total members	<u>15,083</u>	<u>14,570</u>

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 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 has estimated that \$6 million is owed to beneficiaries of retirees who were deceased prior to January 1, 2013. As of December 31, 2016, the Plan has paid \$7.1 million in post-retirement benefits and accrued an additional \$2 million based on the updated valuation. The Plan recorded \$1.4 million in liabilities in the Plan's financial statements as of December 31, 2016 compared to \$0.893 million as of December 31, 2015.

**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, 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 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). Certain employees entering qualifying service on or after July 27, 1976, are required to contribute either 2% of their salary plus certain employees pay additional member contribution of 1.85% (Tiers 3 and 4). 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.
- 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.
- 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 \$265,000 for 2015.
4. Credited Service Credited Service is credited full-time employment from date of hire.
5. Pensioner Supplementations

## All Tiers

### (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.

**All Tiers**

(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 conform to those legislated by the Tax Reform Act of 1986. For 2015, the maximum benefit is \$210,000.

8. Changes in Plan Provisions Since Prior Valuation

The military service location was removed as a requirement for applying to purchase military service credit

The deadline for filing a Notice of Participation in the World Trade Center Rescue, Recovery or Clean-Up Operations was extended until September 11, 2018.

## 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: Line of duty related death for World Trade Center Presumption benefits and performance of duty for all other Accidental Death benefits.

Benefit: The benefit equals 50% of Final Compensation.

**I. Tier 1 Employees**

- |   |  |
|---|--|
| (e) Ordinary Disability Benefits                    | Eligibility: Completion of 10 years of credited service.<br><br>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: Duty-related accident. Line of duty related accident for World Trade Center Presumption benefits and performance of duty for all other Accidental Disability benefits.<br><br>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   |

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## 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: Duty-related death.  
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.

**II. Tier 2 Employees**

(g) Accidental Disability Benefits      Eligibility: Line of duty related accident for World Trade Center Presumption benefits and performance of duty for all other Accidental Disability benefits.

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

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**Tier 3 and Tier 4—Basic Age  
62 & 5 Year Retirement Program**

1. Eligibility

Non-operating Members hired prior to June 28, 1995, who have not elected the 55 & 25 Plan. Members hired on or after July 27, 1976, and before September 1, 1983, are in Tier 3. Members hired on or after September 1, 1983, are in Tier 4.
2. Final Average Compensation

Highest average earnings during any three consecutive calendar-years periods, or the final 36 months immediately preceding the member's retirement date. Earnings used in the calculation ~~a year~~ 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 5 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.

**Tier 3 and Tier 4—Basic Age  
62 & 5 Year Retirement Program**

(d) Ordinary Death Benefits

Eligibility: all members.

Pre-retirement Benefit: The benefit equals a lump sum of annual salary times the lesser of completed years of credited 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.

Post-retirement 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 III 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: Line-of-Duty-related death.

Benefit: Line of duty related death for World Trade Center Presumption benefits and performance of duty for all other Accidental Death benefits.

- (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.

**Tier 3 and Tier 4—Basic Age  
62 & 5 Year Retirement Program**

- |   |   |
|---|---|
| (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.<br><br>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  |

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**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-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 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 5 years of credited service.

Benefit: The benefit equals a refund of the basic member's accumulated contributions. Non-operating can also obtain 50% of additional member contribution. All contributions are refunded with interest at a rate of 5.0% also payable.

**Tier 3 and Tier 4—Basic Age  
62 & 5 Year Retirement Program**

(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 Benefit: A maximum benefit equals to a lump sum of three times annual salary for members with 3 or more years of credited service. The benefit payment is less if fewer than 3 years of credited 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 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.

**Tier 3 and Tier 4—Basic Age  
62 & 5 Year Retirement Program**

(d) Accidental Death Benefits

Eligibility: Line of duty related death for World Trade Center Presumption benefits and Performance of Duty for all other Accidental Death benefits.

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

**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 5 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 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.

**Tier 4—Age 57 & 5 Year  
Retirement Program**

- (c) Ordinary Death Benefits      Eligibility: All members
- Pre-retirement Benefit: A maximum benefit equals to a lump sum of three times annual salary for members with 3 or more years of credited service. The benefit payment is less if fewer than 3 years of credited 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 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: Line of duty related death for World Trade Center Presumption benefits and performance of duty for all other Accidental Death benefits.
- 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

**Tier 6—Twenty-Five Year 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 \$15,490 for 2015. 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.

**Tier 4—Age 57 & 5 Year  
Retirement Program**

(c) Ordinary Death Benefits

Eligibility: All members

Pre-retirement Benefit: The benefit equals a lump sum of annual salary times the lesser of completed years of credited 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.

Post-retirement 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: Line of duty related death for World Trade Center Presumption benefits and performance of duty for all other Accidental Death benefits.

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.

**Tier 4—Age 57 & 5 Year  
Retirement Program**

4. Member Contributions

Regular contribution rate varies based on gross wages earned during two plan years (April 1 to March 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

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**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 \$15,490 for 2015. 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.

**Tier 6—Age 63 and 10 Year  
Retirement Program**

(d) Ordinary Death Benefits

Eligibility: All members

Pre-retirement Benefit: A maximum benefit equals to a lump sum of three times annual salary for members with 3 or more years of credited service. The benefit payment is less if fewer than 3 years of credited 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 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: Line of duty related death for World Trade Center Presumption benefits and performance of duty for all other Accidental Death benefits.

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.

**Tier 6—Age 63 and 10 Year Retirement Program**

4. Member Contributions

Regular contribution rate varies based on gross wages earned during two plan years (April 1 to March 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

The MaBSTOA Board adopted amendments on June 21, 2017 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.

**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. 82, *Pension Issues: An Amendment of GASB Statements No. 67, No. 68 and No. 73*. GASB Statement No.82 requires the Plans to address certain issues that have been raised with respect to Statements No. 67, Financial Reporting for Pension Plans, No. 68, Accounting and Financial Reporting for Pensions, and Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements Nos. 67 and 68. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. There was no material impact on the Plan’s financial statements as a result of the implementation of GASB 82.

**Recent Accounting Pronouncements** — Not yet adopted

GASB Statement No.	GASB Accounting Standard	MaBSTOA Pension Plan Required Year of Adoption
73	<i>Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68</i>	2017
84	<i>Fiduciary Activities</i>	2019
85	<i>Omnibus 2017</i>	2018

**Methods Used to Value Investments**—Investments are stated at fair value or NAV which approximates fair value. Fair value is the amount that the Plan can reasonably expect to receive for an investment in a current sale between a willing buyer and a willing seller, that is, other than a forced or liquidation sale. All investments, with the exception of alternative investments are valued based on closing market prices or broker quotes.

Traded securities are stated at the last reported sales price on a national securities exchange on the last business day of the fiscal year. Securities purchased pursuant to agreements to resell are carried at the contract price, exclusive of interest, at which the securities will be resold. Alternative investments are valued based on the most current net asset values.

Purchases and sales of securities are reflected on the trade date.

Dividend income is recorded on the ex-dividend date. Interest income is recorded as earned on an accrual basis.

**Use of Estimates**—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Authority to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. Accordingly, actual results could differ from these estimates.

**Risks and Uncertainties**—The Plan’s investments are exposed to various risks, such as interest rate, market, and credit risk. Due to the level of risk associated with certain investment securities and level of uncertainty related to changes in the value of investment securities, it is possible that changes in risks in the near term would materially affect the amounts reported in the Plan’s financial statements.

**Income Taxes**—The Plan is designed to satisfy the applicable requirements for governmental plans under Section 401(a) of the Internal Revenue Code. Accordingly, the Plan is tax-exempt and is not subject to the provisions of ERISA. Therefore, income retained by the Plan is not subject to Federal income tax.

**3. CASH AND INVESTMENTS**

**Investment Committee**—The Plan’s policy statement is issued for the guidance of fiduciaries, including the members of the Board and investment managers, in the course of investing the assets of the Trust. The investments of the Trust will be made for the exclusive benefit of the Plan participants and their beneficiaries. Policy guidelines may be amended by the Board upon consideration of the advice and recommendations of the investment professionals.

In order to have a reasonable probability of achieving the target return at an acceptable risk level, the Board has adopted the asset allocation policy outlined below. The actual asset allocation will be reviewed on, at least, a quarterly basis and will be readjusted when an asset class weighting is outside its target range. The following was the MaBSTOA Pension Plan Board adopted asset allocation policy as at December 31, 2016.

<b>Asset Class</b>	<b>Target Allocation (%)</b>	<b>Target Range (%)</b>	<b>Policy Benchmark</b>
Equities	<b>29.0</b>	<b>24-34</b>	
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	<b>15.0</b>	<b>9-21</b>	Manager Specific
Global Asset Allocation*	<b>20.0</b>	<b>15-33</b>	50% World Equity/ 50% Citigroup WGBI unhedged
Opportunistic Investments	<b>6.0</b>	<b>0-15</b>	Manager Specific
Absolute Return	<b>15.0</b>	<b>10-22</b>	Manager Specific
Real Assets	<b>5.0</b>	<b>0-10</b>	Manager Specific
Real Estate	<b>3.0</b>	<b>0-10</b>	Manager Specific
Private Equity	<b>7.0</b>	<b>0-10</b>	Venture Economics
<b>Total</b>	<b>100.0</b>		

\* 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 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 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 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. Many factors are considered in arriving at that value. Corporate debt securities are valued based on yields currently available on comparable securities of issuers with similar credit ratings. 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 by fair value level**

	Quoted Price in			
	December 31, 2016	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	\$ 72,251,016	\$ 72,251,016	\$ -	\$ -
Separate account small-cap equity funds	128,138,196	128,138,196	-	-
Separate account real estate investment trust funds	23,322,458	23,322,458	-	-
Total equity investments	223,711,670	223,711,670	-	-
Debt Securities				
Separate account debt funds	119,789,292	-	119,789,292	-
Total debt investments	119,789,292	-	119,789,292	-
Total investments by fair value	\$ 343,500,962	\$ 223,711,670	\$ 119,789,292	\$ -

**Investments measured at the net asset value (NAV)**

	December 31, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled large cap equity funds	\$ 153,081,608	\$ -	Daily	None
Comingled international equity funds	279,977,601	-	Daily	None
Comingled emerging market equity funds	77,484,913	-	Daily, monthly	None
Total equity investments measured at the NAV	510,544,122	-		
Debt Securities				
Comingled debt funds	208,539,805	-	Daily, monthly, quarterly	None
Mutual fund	32,031,598	-	Daily	None
Total debt investments measured at the NAV	240,571,403	-		
Absolute return:				
Directional	83,483,726	-	Monthly	3-60 days
Direct lending	115,235,870	8,281,753	Bi-annually	60 plus days
Distressed securities	24,674,583	-	Not eligible	N/A
Credit long	35,726,215	-	Quarterly	3-30 days
Credit long/short	50,695,157	-	Quarterly	3-60 days
Equity long/short	36,673,598	-	Quarterly	3-60 days
Event driven	48,446,341	2,093,427	Quarterly, Bi-annually	60-120 days
Global macro	86,868,753	-	Monthly	3-30 days
Global tactical asset allocation	167,208,452	-	Daily, monthly	3-30 days
Market neutral	184,367	-	Quarterly	3-60 days
Multistrategy	74,514,322	-	Quarterly	3-60 days
Risk parity	232,165,400	-	Monthly	3-30 days
Structured credit	12,843,757	32,062,887	Not eligible	N/A
Total absolute return measured at the NAV	968,720,541	42,438,067		
Private equity - private equity partnerships	163,295,227	141,080,843	Not eligible	N/A
Real assets				
Comingled commodities fund	53,584,239	-	Not eligible	N/A
Comingled real estate funds	101,208,383	-	Not eligible	N/A
Energy	37,318,500	21,838,034	Not eligible	N/A
Infrastructure	9,604,288	12,685,084	Not eligible	N/A
Total real assets measured at the NAV	201,715,410	34,523,118		
Short term investments measured at the NAV	87,778,068	-		
Total investments measured at the NAV	2,172,624,771	\$ 218,042,028		
Total investments	\$ 2,516,125,733			

**Investments measured by fair value level**

	December 31, 2015	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	\$ 233,730,250	\$ 233,730,250	\$ -	\$ -
Separate account small-cap equity funds	112,521,684	112,521,684	-	-
<b>Total equity investments</b>	<b>346,251,934</b>	<b>346,251,934</b>	<b>-</b>	<b>-</b>
Debt Securities				
Separate account debt funds	178,100,326	-	178,100,326	-
<b>Total debt investments</b>	<b>178,100,326</b>	<b>-</b>	<b>178,100,326</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$ 524,352,260</b>	<b>\$ -</b>	<b>\$ 178,100,326</b>	<b>\$ -</b>

**Investments measured at the net asset value (NAV)**

	December 31, 2015	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled international equity funds	\$ 191,633,568	\$ -	Daily	None
Comingled emerging market equity funds	78,259,008	-	Daily, monthly	None
<b>Total equity investments measured at the NAV</b>	<b>269,892,576</b>	<b>-</b>		
Debt Securities				
Comingled debt funds	157,718,640	-	Daily, monthly, quarterly	None
<b>Total debt investments measured at the NAV</b>	<b>157,718,640</b>	<b>-</b>		
Absolute return:				
Directional	75,442,971	-	Monthly	3-60 days
Direct lending	81,226,075	20,685,570	Bi-annually	60 plus days
Credit long	32,478,393	-	Quarterly	3-30 days
Credit long/short	48,558,309	-	Quarterly	3-60 days
Equity long/short	18,545,495	-	Quarterly	3-60 days
Event driven	67,624,501	2,093,427	Quarterly, Bi-annually	60-120 days
Global macro	85,169,414	-	Monthly	3-30 days
Global tactical asset allocation	203,808,645	-	Daily, monthly	3-30 days
Market neutral	326,315	-	Quarterly	3-60 days
Multistrategy	19,978,907	-	Quarterly	3-60 days
Risk parity	279,343,628	-	Monthly	3-30 days
<b>Total absolute return measured at the NAV</b>	<b>912,502,653</b>	<b>22,778,997</b>		
Private equity - private equity partnerships	136,463,123	54,599,911	Not eligible	N/A
Real assets				
Comingled commodities fund	43,822,896	-	Not eligible	N/A
Comingled real estate funds	80,268,283	-	Not eligible	N/A
Energy	23,749,949	38,029,950	Not eligible	N/A
Infrastructure	6,117,124	15,433,863	Not eligible	N/A
<b>Total real assets measured at the NAV</b>	<b>153,958,252</b>	<b>53,463,813</b>		
Short term investments measured at the NAV	103,763,871	-		
<b>Total investments measured at the NAV</b>	<b>1,734,299,115</b>	<b>\$ 130,842,721</b>		
<b>Total investments</b>	<b>\$ 2,258,651,375</b>			

**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, 2016 and 2015 are as follows:

	<b>2016</b>	<b>2015</b>
Investments at fair value as determined by quoted market prices:		
Bridgewater All Weather Fund	\$ -	\$ 119,786,492

**Credit Risk** — At December 31, 2016 and 2015, the following credit quality rating has been assigned by a nationally recognized rating organization:

<b>Quality Rating</b>	<b>2016 Fair Value</b>	<b>Percentage of Fixed Income Portfolio</b>	<b>2015 Fair Value</b>	<b>Percentage of Fixed Income Portfolio</b>
AAA	\$ 29,130,599	5.39 %	\$ 87,622,789	12.20 %
AA	(7,537,593)	(1.39)	36,024,253	5.02
A	36,408,312	6.73	45,960,297	6.40
BBB	77,354,781	14.30	169,644,600	23.63
BB	63,644,818	11.77	52,544,773	7.32
B	41,858,028	7.74	31,853,323	4.43
CCC	6,609,734	1.22	4,970,616	0.68
CC	1,089,363	0.20	-	-
C	2,581,483	0.48	-	-
Not Rated	<u>88,743,868</u>	<u>16.41</u>	<u>42,637,192</u>	<u>5.94</u>
Credit risk debt securities	339,883,393	62.85	471,257,843	65.62
U.S. Government bonds	<u>200,917,215</u>	<u>37.15</u>	<u>246,821,098</u>	<u>34.38</u>
Total fixed income securities	540,800,608	<u>100.00 %</u>	718,078,941	<u>100.00 %</u>
Other securities not rated — equity, international funds and foreign corporate bonds	<u>1,975,325,125</u>		<u>1,540,572,434</u>	
Total investments	<u>\$ 2,516,125,733</u>		<u>\$ 2,258,651,375</u>	

**Interest Rate Risk Exceptions** — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of 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.

Investment Fund	2016		2015	
	Fair Value	Duration	Fair Value	Duration
Chase	\$ 98,666,882	11.38	\$ 178,100,326	11.46
Wellington Blended Emerging Market Debt	33,839,192	5.55	50,038,235	5.06
Allianz Structured Alpha Fund	81,596,994	0.25	95,184,350	0.13
GAM Unconstrained Bond Fund	96,393,243	0.25	66,632,867	0.93
Bridgewater All Weather Fund	67,809,509	9.00	119,786,492	7.87
Wellington Opportunistic	17,303,562	1.91	24,882,085	1.69
Bridgewater Pure Alpha	2,541,467	(3.54)	68,987,225	4.36
Northern Trust William Capital	10,029,926	-	10,006,812	-
Park Square Capital Credit Opportunities	26,754,777	0.54	11,594,616	0.61
Crescent Capital High Income Fund	21,285,910	2.61	16,941,461	2.64
Fir Tree Value Realization Fund	53,997	-	1,237,589	-
Libremax Partners Fund	4,116,447	5.02	-	-
Gramercy Distressed Opportunistic Fund	6,902,793	(0.48)	-	-
Makuria Credit Fund	9,865,029	1.05	-	-
Wellington Global Managed Fund	40,351,500	6.70	60,508,536	6.77
Wellington Trust Collective Investment Fund and Diversified Inflation Fund	12,774,483	0.88	5,740,799	7.56
Canyon Value	10,514,897	1.90	8,437,548	2.40
Total fixed income securities	540,800,608		718,078,941	
Portfolio modified duration		4.37		5.82
Investments with no duration reported	\$ 1,975,325,125		\$ 1,540,572,434	
Total investments	\$ 2,516,125,733		\$ 2,258,651,375	

**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 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.

In addition, the Plan has investments in foreign stocks and/or bonds denominated in foreign currencies. The Plan’s foreign currency exposures as of December 31, 2016 and 2015 are as follows (amounts in U.S. dollars, in thousands):

<b>Foreign Currency Holdings in US \$</b>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Argentina Peso	\$ 297,239	\$ 356,060
Dollar (Australian)	44,173,581	36,638,334
Bahraini Dinar	293,236	266,989
Bangladesh (Taka)	319,744	239,250
Botswana Pula	77,108	90,152
Brazil Cruzeiro Real	5,303,903	4,680,235
Bulgarian Lev	5,948	3,467
Dollar (Canadian)	21,994,856	22,397,864
Chilean Peso	624,031	3,334,238
China (Yuan Renminbi)	7,786,652	7,865,310
Colombian Peso	2,057,190	5,006,485
Croatia Kuna	306,814	249,652
Czech Koruna	586,800	(1,735,533)
Krone (Danish)	1,303,137	2,568,644
Egyptian Pound	345,211	476,692
Euro	99,630,684	60,258,522
Georgian Lari	1,072,262	1,276,382
Ghanaian Cedi	29,813	34,674
Dollar (Hong Kong)	10,531,260	4,071,871
Hungary (Forint)	(374,759)	(96,208)
Icelandic Krona	310,355	-
Indian Rupee	16,821,854	9,489,781
Indonesia Rupiah	11,243,312	9,665,947
Israeli (Shekel)	634,785	1,230,939
Yen (Japan)	30,640,715	26,799,654
Jordanian Dinar	295,078	287,794
Kazakhstani Tenge	282,504	239,250
Kenyan Shilling	603,770	631,670
Kuwait Dinar	636,886	492,370
Lebanese Pound	90,816	100,554
Malaysian (Ringgit)	2,983,677	3,344,436
Mauritius (Rupee)	552,962	263,522
Mexican New Peso	2,046,380	23,349,282
Morocco Dirham	313,101	253,120
Dollar (New Zealand)	3,543,970	(2,158,637)
Nigerian Naira	492,602	617,800
Krone (Norwegian)	(1,972,015)	505,295
Omanian Rial	307,841	253,120
Pakistani Rupee	2,082,977	1,950,170
Panamanian Balboa	133,397	104,022
Peru Sol	1,415,694	1,993,211
Philippines Peso	1,270,926	1,329,935
Polish (New Zloty)	(198,443)	1,653,189
Pound (Sterling)	89,307,070	51,632,941
Qatar Riyal	586,038	556,324
Romanian Leu	286,159	1,347,620
Russian Federation Rouble	1,435,821	5,086,596
Saudi Riyal	344,613	273,924
Singapore Dollar	881,381	809,776
South Africa Rand	3,667,204	2,801,380
South Korean Won	7,866,343	7,504,005
Sri Lankan Rupee	283,694	263,522
Krona (Swedish)	3,797,748	4,013,303
Swiss Franc	10,292,983	7,645,046
Thai (Bhat)	3,825,862	3,438,066
Dollar (Taiwan, New)	18,015,165	15,665,679
Tunisian Dinar	111,355	114,424
Turkish Lira	582,729	913,173
Ukrainian Hryvnia	-	45,076
UAE Dirham	1,125,511	1,138,385
Uruguayan Pesos	-	433,945
Vietnamese Dong	296,607	249,652
Other	4,054,160	8,968,309
<b>Total</b>	<b>\$ 417,658,297</b>	<b>\$ 343,280,650</b>

#### 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 \$220.7 million and \$214.9 million for the years ended December 31, 2016 and 2015, respectively. Employee contributions amounted to \$18.5 million and \$16.3 million for the years ended December 31, 2016 and 2015, 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 \$17.0 million and \$16.8 million in loans to members during 2016 and 2015, respectively. Loan repayments by members amounted to \$15.6 million and \$15.1 million in 2016 and 2015, 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, 2016 and 2015 were as follows (in thousands):

	December 31, 2016	December 31, 2015
Total pension liability	\$ 3,536,747	\$ 3,391,989
Fiduciary net position	<u>2,555,735</u>	<u>2,292,315</u>
Net pension liability	<u>\$ 981,012</u>	<u>\$ 1,099,674</u>
Fiduciary net position as a percentage of the total pension liability	72.26 %	67.58 %
Covered payroll	\$ 713,280	\$ 685,999
Net pension liability as a percentage of covered payroll	137.54 %	160.30 %

**Actuarial Methods and Assumptions**—The total pension liability as of December 31, 2016 was determined by an actuarial valuation date of January 1, 2016, 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, 2016	January 1, 2015
Actuarial cost method	Frozen initial liability (FIL) <sup>(1)</sup>	Frozen initial liability (FIL) <sup>(1)</sup>
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	Varies by years of employment and employment type	In general, merit and promotion increases plus assumed general wage increases of 3.5% to 15% 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	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	1.375% per annum
Inflation	2.50% per annum	2.50% per annum

<sup>(1)</sup> 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 nonoperating 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:

<b>Retirees at Least age</b>	<b>Retired or Receiving Benefits for at Least</b>
62	5 years
55	10
Disabled retirees	5
Accidental death beneficiaries	5

- Initial COLA payable September 30, 2000, based on the first \$18,000 of the maximum retirement allowance.
- Thereafter, annual COLAs of 50% of the increase in the consumer price index (CPI), but not less than 1% or more than 3%, of the first \$18,000 of maximum retirement allowance will be payable.

The benefit enhancements, as well as the automatic COLA for retirees, were reflected in the actuarial valuation beginning with the January 1, 2000, valuation.

The Plan adopted several amendments during 2002 as a result of state legislation. Amendments included changes to the definition of active service for Tier 1 and Tier 2 members, extension of the phase-in period from five years to ten years for funding liabilities created by Chapter 125 of the Laws of 2000 and increased accidental disability benefits for Tier 3 and Tier 4 members.

The Plan also adopted the legislative provisions of Chapter 379, which allow current and former members of the Transport Workers Union, Local 100 and Transit Supervisors Organization, Local 106, with an accumulated balance of additional member contributions (AMC) made in accordance with the MaBSTOA 55/25 Plan enacted in 1994, to apply for a refund of such contributions. AMC refunds amounted to approximately \$443 thousand and \$692 thousand as of December 31, 2016 and 2015, respectively.

At January 1, 2016 and 2015, actuarial assets were available to fund 72.3% and 67.6%, respectively, of the unfunded actuarial accrued liability (UAAL) when measured using the Entry Age Normal Cost Method 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

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2016	\$2,292,315,704	12.00	1.00	\$2,502,222,161
Monthly net external cash flows:				
January	4,341,704	11.50	0.96	4,722,691
February	4,343,937	10.50	0.88	4,692,116
March	4,343,937	9.50	0.79	4,655,262
April	4,343,937	8.50	0.71	4,622,746
May	4,343,937	7.50	0.63	4,590,457
June	4,343,937	6.50	0.54	4,554,401
July	4,343,937	5.50	0.46	4,522,589
August	4,343,937	4.50	0.38	4,491,000
September	4,343,937	3.50	0.29	4,455,725
October	4,343,937	2.50	0.21	4,424,603
November	4,343,937	1.50	0.13	4,393,698
December	3,378,850	0.38	0.03	2,287,743
Ending Value - December 31, 2016	\$2,555,735,192			\$2,555,735,192
Money-Weighted Rate of Return	9.16%			

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - January 1, 2015	\$2,265,293,331	12.00	1.00	\$2,241,439,352
Monthly net external cash flows:				
January	4,487,720	11.50	0.96	4,442,344
February	4,487,720	10.50	0.88	4,446,107
March	4,487,720	9.50	0.79	4,450,345
April	4,487,720	8.50	0.71	4,454,116
May	4,487,720	7.50	0.63	4,457,890
June	4,487,720	6.50	0.54	4,462,139
July	8,968,720	5.50	0.46	8,925,152
August	5,144,720	4.50	0.38	5,124,066
September	5,144,720	3.50	0.29	5,128,950
October	5,144,720	2.50	0.21	5,133,295
November	5,144,720	1.50	0.13	5,137,644
December	(5,287,934)	0.50	0.04	-5,285,696
Ending Value - December 31, 2015	\$2,292,315,704			\$2,292,315,704
Money-Weighted Rate of Return	-1.05%			

**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, 2016 and 2015 actuarial valuations are summarized in the following table:

<b>Asset Class</b>	<b>Index</b>	<b>Target Allocation</b>	<b>Long-Term Expected Real Rate of Return</b>
U.S. Core Fixed Income	Barclays Aggregate	10.00 %	1.67 %
U.S. High Yield Bonds	BAML High Yield	8.00 %	5.04 %
Global Bonds	Citi WGBI	10.00 %	0.28 %
Emerging Market Bonds	JPM EMBI Plus	3.00 %	3.78 %
U.S. Large Cap	S&P 500	10.00 %	4.80 %
U.S. Small Cap	Russell 2000	5.50 %	6.06 %
Global Equities	MSCI ACWI NR	10.00 %	5.49 %
Foreign Developed Equities	MSCI EAFE NR	10.00 %	6.06 %
Emerging Market Equities	MSCI EM NR	3.50 %	8.39 %
GLOBAL REITs	FTSE EPRA/NAREIT Developed	5.00 %	5.77 %
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 %	3.45 %
Total			
Assumed Inflation—Mean			2.50 %
Assumed Inflation—Standard Deviation			1.85 %
Portfolio Arithmetic Mean Return			7.03 %
Portfolio Standard Deviation			11.54 %
Long-Term Expected Rate of Return			7.00 %

Asset Class	Index	Target Allocation	Long-Term Expected Real Rate of Return
U.S. Core Fixed Income	Barclays Aggregate	10.00 %	2.11 %
U.S. High Yield Bonds	BAML High Yield	8.00 %	4.32 %
Global Bonds	Citi WGBI	10.00 %	0.82 %
Emerging Market Bonds	JPM EMBI Plus	3.00 %	5.17 %
U.S. Large Cap	S&P 500	10.00 %	5.09 %
U.S. Small Cap	Russell 2000	5.50 %	6.26 %
Global Equities	MSCI ACWI NR	10.00 %	5.67 %
Foreign Developed Equities	MSCI EAFE NR	10.00 %	6.06 %
Emerging Market Equities	MSCI EM NR	3.50 %	8.21 %
GLOBAL REITS	FTSE EPRA/NAREIT Developed	5.00 %	5.98 %
Private Real Estate Property	NCREIF Property	3.00 %	3.84 %
Private Equity	Cambridge Private Equity	7.00 %	9.17 %
Hedge Funds - MultiStrategy	HFRI Fund Wtd Composite	15.00 %	4.20 %
Total			
Assumed Inflation—Mean			2.50 %
Assumed Inflation—Standard Deviation			1.89 %
Portfolio Arithmetic Mean Return			7.31 %
Portfolio Standard Deviation			11.67 %
Long-Term Expected Rate of Return			7.00 %

**Discount Rate**—The discount rate used to measure the total liability as of December 31, 2016 and 2015 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 2016 and 2015 respectively:

	1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
<b>2016</b> (in thousands)			
Net pension liability	\$ 1,376,916	\$ 981,012	\$ 643,826
<b>2015</b> (in thousands)			
Net pension liability	\$ 1,480,961	\$ 1,099,673	\$ 775,092

**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 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.

**7. SUBSEQUENT EVENTS**

Subsequent events have been evaluated through January 22, 2018.

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**REQUIRED SUPPLEMENTARY INFORMATION  
(UNAUDITED)**

**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)**

	2016	2015	2014
Total pension liability:			
Service cost	\$ 82	\$ 77	\$ 72
Interest	237	232	224
Changes of benefit terms	-	-	-
Differences between expected and actual experience	14	(69)	(2)
Benefit payments and withdrawals	<u>(188)</u>	<u>(180)</u>	<u>(175)</u>
Net change in total pension liability	145	60	119
Total pension liability—beginning	<u>3,391</u>	<u>3,331</u>	<u>3,212</u>
Total pension liability—ending (a)	<u>3,536</u>	<u>3,391</u>	<u>3,331</u>
Plan fiduciary net position:			
Employer contributions	221	215	226
Employee contributions	18	16	15
Net investment income	212	(24)	105
Benefit payments and withdrawals	(188)	(180)	(175)
Administrative expenses	-	-	-
Other	<u>-</u>	<u>-</u>	<u>-</u>
Net change in plan fiduciary net position	263	27	171
Plan fiduciary net position—beginning	<u>2,292</u>	<u>2,265</u>	<u>2,094</u>
Plan fiduciary net position—ending (b)	<u>2,555</u>	<u>2,292</u>	<u>2,265</u>
Employer's net pension liability—ending (a)-(b)	<u>\$ 981</u>	<u>\$ 1,099</u>	<u>\$ 1,066</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>72.26 %</u>	<u>67.58 %</u>	<u>68.00 %</u>
Covered-employee payroll	<u>713</u>	<u>686</u>	<u>672</u>
Employer's net pension liability as a percentage of covered-employee payroll	<u>137.54 %</u>	<u>160.30 %</u>	<u>158.74 %</u>

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)**

<b>Fiscal Year Ending December 31,</b>	<b>Actuarially Determined Contribution</b>	<b>Actual Employer Contribution</b>	<b>Contribution Deficiency/ (Excess)</b>	<b>Covered- Employee Payroll</b>	<b>Contributions as a Percentage of Covered-Employee Payroll</b>
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
2008	201,919	201,919	-	562,241	35.91
2007	179,228	179,228	-	519,680	34.49

## 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 for the years ended December 31, 2016 and 2015, are as follows:

Valuation Dates	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For FIL bases, period specified in current valuation report. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population	For FIL bases, period specified in current valuation report. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population	For FIL bases, period specified in current valuation report. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population
Actuarial asset valuation method	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets	Actuarial value equals market value less unrecognized gains/losses over a 5-year period. Gains/losses are based on market value of assets	Actuarial value equals market value less 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 2015, per annum, net of investment expenses	Net rate of 7.0% for 2014, per annum, net of investment expenses
Inflation	2.5% per annum	2.5% per annum	2.5% per annum
Deaths after retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan. All members are assumed to retire by age 80
Salary increases	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	In general, merit and promotion increases plus assumed general wage increases of 3.5% to 15.0% for operating employees and 4.0% to 7.0% for nonoperating employees per year, depending on years of service
Overtime	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap	Except for managerial employees, 8.5% of base salary for operating employees and 2.0% of base salary for nonoperating employees, with different assumptions used in the year before retirement. For Tier 6 members, all overtime was assumed to be less than overtime cap
Cost-of-living adjustments	55% of inflation assumption or 1.375% per annum if applicable (2)	1.375% per annum (2)	1.375% per annum (2)
Provision for expenses	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost	An average of the prior two years' administrative charges added to the normal cost

(1) Under this actuarial method, the initial liability has been established by the Entry Age Actuarial Cost Method for determining changes in the Unfunded Actuarial Accrued Liability (UAAL) due to plan provision and assumption changes.

(2) Assumes a long-term consumer price inflation assumption of 2.5% per annum, compounded annually.

(continued)

**MANHATTAN AND BRONX SURFACE TRANSIT  
OPERATING AUTHORITY PENSION PLAN**

**REQUIRED SUPPLEMENTARY INFORMATION (UNAUDITED)  
SCHEDULE OF INVESTMENT RETURNS**

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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:

<b>Fiscal Year Ended December 31</b>	<b>Annual Money-Weighted Rate of Return</b>
2016	9.16 %
2015	(1.05)
2014	4.95

Note: Information for periods prior to 2014 was not readily available.

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# Metropolitan Transportation Authority Defined Benefit Pension Plan

Financial Statements as of and for the  
Years Ended December 31, 2016 and 2015,  
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, 2016 and 2015, 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, 2016 and 2015, 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 54; Schedule of Employer Contributions-Schedule II on page 55-56; and Schedule of Investment Returns-Schedule III on page 57 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 22, 2018

# METROPOLITAN TRANSPORTATION AUTHORITY DEFINED BENEFIT PENSION PLAN

## MANAGEMENT'S DISCUSSION AND ANALYSIS DECEMBER 31, 2016 AND 2015 (UNAUDITED)

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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, 2016 and 2015. 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, 2016, 2015 and 2014

(Dollars in thousands)

	2016	2015	2014	Increase / Decrease			
				2016-2015		2015-2014	
				\$	%	\$	%
Cash and investments	\$ 3,433,122	\$ 3,096,159	\$ 3,082,790	\$ 336,963	10.9	\$ 13,369	0.4
Receivables and other assets	1,753	2,243	127,137	(490)	(21.8)	(124,894)	(98.2)
<b>Total assets</b>	<b>\$ 3,434,875</b>	<b>\$ 3,098,402</b>	<b>\$ 3,209,927</b>	<b>\$ 336,473</b>	<b>10.9</b>	<b>\$ (111,525)</b>	<b>(3.5)</b>
Due to broker for securities purchased	2,391	18,771	57,978	(16,380)	(87.3)	(39,207)	(67.6)
Other liabilities	12,513	4,854	86,729	7,659	157.8	(81,875)	(94.4)
<b>Total liabilities</b>	<b>14,904</b>	<b>23,625</b>	<b>144,707</b>	<b>(8,721)</b>	<b>(36.9)</b>	<b>(121,082)</b>	<b>(83.7)</b>
<b>Plan net position restricted for pensions</b>	<b>\$ 3,419,971</b>	<b>\$ 3,074,777</b>	<b>\$ 3,065,220</b>	<b>\$ 345,194</b>	<b>11.2</b>	<b>\$ 9,557</b>	<b>0.3</b>

#### December 31, 2016 versus December 31, 2015

Cash and investments at December 31, 2016 were \$3,433.1 million representing an increase of \$337.0 million or 10.9% from 2015. This increase is a result of investment activity and plan contributions net of benefit payments and expenses during 2016.

Receivables and other assets net of liabilities at December 31, 2016 decreased by \$8.2 million or 215.9% from 2015. The is due primarily to a decrease in interest and dividend receivables in the amount of \$0.5 million, and a decrease in net securities sold at the end of 2015 in the amount of \$16.4 million, offset by an increase in liabilities related to investment management fees of \$2.0 million, administrative expenses of \$0.5 million and amounts due for employer contribution to the Long Island Railroad Additional Plan in the amount of \$6.2 million.

The plan net position held in trust for pension benefits increased by \$345.2 million or 11.2% in 2016 as a result of the changes noted above.

#### December 31, 2015 versus December 31, 2014

Cash and investments at December 31, 2015 were \$3,096.2 million representing an increase of \$13.4 million or 0.4% from 2014. This increase is a result of investment activity and plan contributions net of benefit payments and expenses during 2015.

Receivables and other assets net of liabilities at December 31, 2015 increased by \$3.8 million or 21.2% from 2014. The is due primarily to a decrease in collateral fund receivable in the amount of \$80.8 million, and a decrease in net securities sold at the end of 2014 in the amount of \$43.9 million, offset by a decrease in forward currency contracts in the amount of \$80.1 million.

The plan net position held in trust for pension benefits increased \$9.6 million or 0.3% in 2015 as a result of the changes noted above.

**Changes in Plan Net Position**

**December 31, 2016, 2015  
and 2014**

**(Dollars in thousands)**

	2016	2015	2014	Increase / Decrease			
				2016-2015		2015-2014	
				\$	%	\$	%
<b>Additions:</b>							
Net investment income	\$ 247,708	\$ (45,122)	\$ 102,245	\$ 292,830	649.0	\$ (147,367)	(144.1)
Transfers and contributions	310,160	256,213	357,265	53,947	21.1	(101,052)	(28.3)
<b>Total net additions</b>	<b>557,868</b>	<b>211,091</b>	<b>459,510</b>	<b>346,777</b>	<b>164.3</b>	<b>(248,419)</b>	<b>(54.1)</b>
<b>Deductions:</b>							
Benefit payments	209,623	199,572	191,057	\$ 10,051	5.0	\$ 8,515	4.5
Administrative expenses	3,051	1,962	9,600	1,089	55.5	(7,638)	(79.6)
<b>Total deductions</b>	<b>212,674</b>	<b>201,534</b>	<b>200,657</b>	<b>11,140</b>	<b>5.5</b>	<b>877</b>	<b>0.4</b>
<b>Net increase in Plan net position</b>	<b>345,194</b>	<b>9,557</b>	<b>258,853</b>	<b>335,637</b>	<b>3511.9</b>	<b>(249,296)</b>	<b>(96.3)</b>
Plan net position							
restricted for pensions:							
Beginning of year	3,074,777	3,065,220	2,806,367	9,557	0.3	258,853	9.2
<b>End of year</b>	<b>\$ 3,419,971</b>	<b>\$ 3,074,777</b>	<b>\$ 3,065,220</b>	<b>\$ 345,194</b>	<b>11.2</b>	<b>\$ 9,557</b>	<b>0.3</b>

December 31, 2016 versus December 31, 2015

Net investment income increased by \$292.8 million or 649.0% in 2016 due to net investment gains of \$247.7 million in 2016 versus net losses of \$45.1 million experienced in 2015.

Contributions increased by \$53.9 million or 21.1% in 2016 compared to 2015 as required by the Actuarial Determined Contributions (“ADC”) for 2016.

Benefit payments increased by \$10.1 million or 5.0% over the prior year due to a continuing trend of increases in the number of retirees and benefits adjustment in 2016.

Administrative expenses increased by \$1.1 million, or 55.5% over 2015. This increase is due primarily to expenses charged in 2016 for various services provided to the Plan.

December 31, 2015 versus December 31, 2014

Net investment income decreased by \$147.4 million or 144.1% in 2015 due to net investment losses of \$45.1 million in 2015 versus net gains of \$102.2 million in 2014.

Contributions decreased by \$101.1 million or 28.3% in 2015 compared to 2014 as a result of the Actuarial Determined Contributions (“ADC”) for 2015.

Benefit payments increased by \$8.5 million or 4.5% over the prior year due to a continuing trend of increases in the number of retirees and benefits adjustment in 2015.

Administrative expenses decreased by \$7.6 million, or 79.6% over 2014. This decrease is due primarily to a reduction in an offshore tax liability investment charge of \$6.0 million, and a reduction in other fees and expenses charged in 2015 for various services provided to the Plan.

## **Economic Factors**

### **Market Overview and Outlook – 2016**

Despite investors entering the year with a myriad of concerns; such as soft economic growth in the United States (“U.S.”) and China, elevated valuations in nearly every market and asset class, and rising geopolitical tensions, performance proved to be robust and resilient across almost all major markets. After a weak 2015 appetite for risk was hearty as equities continued to march ever higher in the U.S., Japan, and Emerging Markets and returns were strong in the riskier corners of fixed income in investment grade, high yield, and emerging markets bonds.

Market performance was framed by a rather benign macro environment, albeit with some transitory complications. In 2015, eyes had turned toward a weakening Chinese economy, resulting in commodity markets continuing their steep decline and volatility rising across the equity and fixed income markets. Emerging markets, particularly those centered on commodities where demand is tied to Chinese growth, experienced sharp declines in 2015. As the calendar flipped from 2015 to 2016, these concerns dissipated and emerging markets rallied significantly off their 2015 lows. Europe was again in the headlines, this time as Brexit caused momentary anxiety that evaporated within days of the history-making vote. Nonetheless, Europe and the United Kingdom were among the few markets to post negative performance for 2016.

In the U.S., the Federal Reserve held off raising interest rates until December, well off the pace and trajectory forecast by markets heading into 2016. The December raise came weeks after Donald Trump’s election to the Presidency, which fueled a strong equities market push in the 4<sup>th</sup> quarter behind expectations for regulatory reform, repeal of the Affordable Care Act, and a re-writing of the U.S. Tax Code. How realistic these expectations are will play out in 2017 and 2018 ahead of the mid-term election cycle will remain to be seen.

#### ***Macro Themes***

- Tepid global growth continuing
- Central Bank policy divergence, U.S. tightening while Europe and Japan eases
- China reforms; turmoil in emerging markets and commodities
- High valuations and increasing leverage

The macro picture was framed by tepid global growth in 2016, with the likelihood that below average economic performance would continue into 2017 and 2018. Developed markets look to remain lukewarm, with Gross Domestic Product (“GDP”) growth struggling to break through the (+3.0%) level globally and perhaps likely to fall short in the U.S., Europe, or Japan in 2017 or 2018 according to both the International Monetary Fund (“IMF”) and World Bank. Inflation remains subdued across the developed markets while currency depreciation in emerging markets have led to spikes in inflation. The U.S. is in an environment where short-term interest rates will likely rise over the next two years; Europe and Japan are in a decidedly different place. Weak demand and low inflation in Europe and Japan have led to further central bank intervention and easing. The continued European Central Bank intervention in credit and bond markets may lead to problems down the road. In emerging markets, central banks have moved to increase interest rates in order to tame both inflation and capital outflows. The slower pace of U.S. interest rate increases has continued to result in a U.S. dollar weakening a bit from highs in 2015 and 2016, potentially easing some strain on the U.S. manufacturing and exporting sectors.

Europe continues to be impacted by high levels of public debt, fractious politics and low economic growth. Like emerging markets, a significant portion of Europe’s export engine is tied to Chinese demand and growth. Lower growth in China will place pressures on Europe, in particular net exporters, such as Germany. Debt levels have not yet moderated post-financial crisis and flare-ups in periphery countries, such as in Greece, Portugal, Italy,

and Spain, are likely to continue as growth remains challenged and reforms and austerity lose support. Banks will continue their deleveraging cycle should new rules (Basel III) on risk capital are implemented. In Japan, where banks are in better health, high public debt, low growth, a weakening regional economic picture, and aging demographics will challenge the government in delivering their growth and inflation targets.

Emerging markets posted solid returns in 2016 as the impact of capital flows due to the U.S. interest rate increases were much lower than expected. The main emerging markets, Brazil, Russia, India and China, defined as the “BRICs” all face their own challenges. Brazil faces high inflation, high interest rates, low growth, and a government beset by allegation of corruption. China, in attempting to shift from being manufacturing-oriented to a consumer-based economy, faces significant pressures to meet its growth target of (+7.0%) per year and will face a significant leadership election in late 2017. Russia remains impacted from lower energy prices and economic sanctions. Finally, India seems to continually disappoint in liberalizing its economy and implementing the structural reforms necessary to unleash its potential.

### ***United States***

Markets in the U.S. were strong for the year and were amongst the best performers in 2016. Unlike other regions, the U.S. appears to be on relatively sound footing, with unemployment declining to very low levels and the remaining hangovers from the 2008 financial crisis appearing to fully dissipate. The better economic picture provided the Federal Reserve enough leeway to raise interest rates in December, causing a sell-off in government bond markets.

#### ***Equity***

- Surprising and solid year for stocks
- Valuations stretched
- Risk Indulging – Small Cap outperformed Large Cap; Cyclical outperformed Defensives;
- Value leads growth on Bank sector performance
- Barring significant developments, equity markets set for another low-return year

Large Cap stocks were strongly positive, with the S&P 500 and Russell 1000 indices posting returns of (+12.0%) and (+12.1%), respectively. Small Cap and Mid Cap indices outperformed large cap. Small Cap, as measured by the Russell 2000 Index, returned (+21.3%). The Russell Mid Cap Index lagged but still managed to post a (+13.8%) return.

Digging deeper, there was significant performance dispersion across the sectors. Cyclical Sectors performed well with Energy (+28.0%), Financials (+22.7%) and Industrials (+20.0%) leading the charge higher. Healthcare (-2.8%), Real Estate (+3.2%), and Consumer Staples (+5.0%) were the lagging sectors. This divergence shows investors’ appetite shifted from 2015, when defensive and yield oriented sectors were the best performing segments of the S&P 500. In 2016, investors shifted towards sectors tied to economic growth (Energy and Industrials) or those that may benefit from deregulation (Financials).

#### ***Fixed Income***

The return of an appetite for risk was also evident within the U.S. Fixed Income markets. Treasuries returned (+1.0%) for the year, although this sector was impacted particularly hard in period after the U.S. Election as the Federal Reserve increased interest rate. The 4<sup>th</sup> quarter return of (-3.8%) was amongst the worst 3 month return in Treasuries in quite some time. Government bonds will likely not provide the safe haven status previously counted on by investors going forward given the Trump Administration’s pledges on spending/stimulus and the populist tone of the campaign. Credit outperformed Treasuries for the year, with (+5.6%), although it too gave back significant performance in the 4<sup>th</sup> quarter (-3.0%). High yield posted impressive gains, as worries in the Energy sector that significantly impacted the market in 2015 gave way to optimism that defaults would not be nearly as extreme as anticipated. High Yield not only posted a strong return for the year (+17.1%) but unlike other areas of fixed income, was also positive in the 4<sup>th</sup> quarter (+1.8%). Volatility entered the fixed income

markets significantly in the back half of the year. High Yield held steady in the face of rising interest rates as higher quality and more liquid segments of the market lost value.

### ***International Developed***

- Weak year in Developed Markets (U.S. dollar returns)
- Eurozone and United Kingdom slightly negative for the year
- Japan and Far East positive performers
- Equity valuations in developed markets appear relatively cheaper than the U.S.
- Low returns in fixed income in 2016 and expected through 2017

Europe muddled through another year in 2016 and seemed to never quite hit its stride even as growth projections continued to improve. In U.S. dollars, Europe and United Kingdom equities posted negative performance in 2016. Much of the negative performance as due to currency movements, as both the Euro and Sterling depreciated against the U.S. dollar in 2016. Brexit led to a historical decline in the Sterling through the summer and fall and the effects of the decision to leave the European Union may take years to be realized. Unlike the U.S., equity valuations appear a little more attractive in Europe and there may be a likelihood that investors will shift their focus from U.S. to European Equities. In Asia, most developed markets posted positive performance, albeit relatively tepid performance in U.S. dollar terms.

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 returned (+1.6%) in 2016, although 4<sup>th</sup> quarter was particularly unkind with a (-8.5%) return. Much of the negative performance can be attributed to market responses to the interest rate increases in the U.S., the relative strength of the U.S. dollar, and the return to risk taking across most markets.

### ***Emerging Markets***

- Solid year in Emerging Markets (U.S. dollar returns)
- Major rebound from performance in 2015
- Brazil, Russia, and Thailand posted big years
- Mexico and Turkey worst performers
- Emerging Market Bonds reversed recent performance losses with strong calendar year
- No end in sight for volatility and macro risks remain elevated

Emerging markets posted strong performance as investor appetite for risky assets extended into emerging markets stocks and bonds. The broad emerging markets index returned (+11.2%) for the year. Of the markets tracked by Morgan Stanley Country Index (“MSCI”), Brazil (+66.8%), Russia (+55.5%) and Thailand (+19.6%) posted the strongest gains. China was a notable laggard for the year, with its (+1.1%) gain trailing the broader markets and the majority of its large country peers. Performance of the bond markets of emerging markets was encouraging. Both hard currency and local currency bond posted solid years in performance. Hard currency bonds, which are predominately issued in U.S. dollar, returned (+10.2%) in 2016. Local currency bonds, which are more susceptible to risk-off periods and capital flight, returned (+9.9%) for the year.

### ***Commodities***

- Rebounded from one worst years on record for commodities
- Little expectation for a full recovery in commodity prices in the near term

Commodity indices posted positive performance in 2016, with the broad Bloomberg Commodity Index up (+11.8%). Industrial metals (iron ore, zinc, nickel, aluminum, and copper) all posted strong performance for the year. Also reversing recent history with a rebound in performance were oil and natural gas. Precious metals, consistent with a risk-on attitude from investors, lagged the overall commodity market and the other main sectors.

**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, 16<sup>th</sup> 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, 2016 AND 2015**

	<b>2016</b>	<b>2015</b>
<b>ASSETS:</b>		
Cash	\$ 5,436,647	\$ 45,274,024
Investments (Notes 2 and 3):		
Investments measured at fair value level	579,271,580	654,863,498
Investments measured by net asset value	<u>2,848,413,709</u>	<u>2,396,020,885</u>
Total investments	<u>3,427,685,289</u>	<u>3,050,884,383</u>
Receivables:		
Accrued interest and dividends	1,516,167	1,872,900
Other receivable	<u>236,422</u>	<u>370,247</u>
Total receivables	<u>1,752,589</u>	<u>2,243,147</u>
Total assets	<u>3,434,874,525</u>	<u>3,098,401,554</u>
<b>LIABILITIES:</b>		
Due to broker for securities purchased	2,390,876	18,770,581
Due to broker for investment fee	3,535,137	2,094,181
Due to broker for administrative expenses	181,389	135,439
Due to MTA for administrative expenses	2,457,587	2,157,638
Due to MTA Long Island Railroad Additional Plan - Employer contribution	6,185,474	-
Other liabilities	<u>153,125</u>	<u>467,060</u>
Total liabilities	<u>14,903,588</u>	<u>23,624,899</u>
<b>PLAN NET POSITION RESTRICTED FOR PENSIONS</b>	<u>\$ 3,419,970,937</u>	<u>\$ 3,074,776,655</u>

See notes to financial statements.

**METROPOLITAN TRANSPORTATION AUTHORITY  
DEFINED BENEFIT PENSION PLAN**

**STATEMENTS OF CHANGES IN PLAN NET POSITION  
FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015**

	<b>2016</b>	<b>2015</b>
<b>ADDITIONS:</b>		
Investment income:		
Net realized and unrealized gains or (losses)	\$ 252,282,066	\$ (53,175,371)
Dividends	28,874,289	28,525,943
Interest	<u>5,746,979</u>	<u>6,248,227</u>
Total investment income/(loss)	286,903,334	(18,401,201)
Less:		
Investment expenses	<u>(39,194,640)</u>	<u>(26,720,680)</u>
Net investment income/(loss)	247,708,694	(45,121,881)
<b>Contributions:</b>		
Employer:		
Metro-North Commuter Railroad Company	99,082,552	70,500,320
Long Island Rail Road Company	99,800,000	68,500,000
Metropolitan Transportation Authority Headquarters	31,700,000	30,600,000
MTA Bus Company	44,299,995	45,928,494
Staten Island Rapid Transit Operating Authority	5,885,196	6,164,903
Employee	<u>29,392,213</u>	<u>34,518,682</u>
Total contributions	<u>310,159,956</u>	<u>256,212,399</u>
Total additions	<u>557,868,650</u>	<u>211,090,518</u>
<b>DEDUCTIONS:</b>		
Benefits paid to participants	209,623,034	199,571,600
Administrative expenses	<u>3,051,334</u>	<u>1,962,239</u>
Total deductions	<u>212,674,368</u>	<u>201,533,839</u>
<b>NET INCREASE IN PLAN NET POSITION</b>	<u>345,194,282</u>	<u>9,556,679</u>
<b>PLAN NET POSITION RESTRICTED FOR PENSIONS</b>		
Beginning of year	<u>3,074,776,655</u>	<u>3,065,219,976</u>
End of year	<u>\$ 3,419,970,937</u>	<u>\$ 3,074,776,655</u>

See notes to financial statements.

# METROPOLITAN TRANSPORTATION AUTHORITY DEFINED BENEFIT PENSION PLAN

## NOTES TO FINANCIAL STATEMENTS AS OF AND FOR THE YEARS ENDED DECEMBER 31, 2016 AND 2015

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### 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 1<sup>st</sup>, 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 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. 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, 2016 and 2015, respectively, the date of the latest actuarial valuations:

	<b>2016</b>	<b>2015</b>
Active Plan Members	17,670	17,156
Retirees and beneficiaries receiving benefits	10,701	11,382
Vested formerly active members not yet receiving benefits	<u>1,439</u>	<u>1,417</u>
<b>Total</b>	<u><b>29,810</b></u>	<u><b>29,955</b></u>

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:
  - (i) 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.

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

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

The retirement benefits for certain non-represented employees at Baisley Park, Far Rockaway, JFK, La Guardia and Spring Creek are based on final average salary. Certain active 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 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  $\frac{1}{3}$  of FAS. Under the MTA 20 Year Police Retirement Program, a disabled participant may be eligible for one of three forms of disability retirement: (a) ordinary disability which is payable if a participant has 10 years of credited Police service and is calculated based on the participant's credited Police service and FAS but not less than  $\frac{1}{3}$  of FAS; (b) performance of duty, which is payable if a participant is disabled in the performance of duty and is  $\frac{1}{2}$  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  $\frac{3}{4}$  of FAS subject to an offset of Workers' Compensation benefits. Pursuant to the MTA Bus programs, the disability benefit is the same as the service retirement benefit.

Pre-1988 MTA Long Island Rail Road participants who become disabled after accumulating 10 years of credited service and who meet the requirements as described in the Plan may be eligible to receive a disability benefit. Disability pension benefits are 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 nonrepresentative employees, retirement benefits establishment and changes 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. 82, *Pension Issues: An Amendment of GASB Statements No. 67, No. 68 and No. 73*. GASB Statement No.82 requires the Plans to address certain issues that have been raised with respect to Statements No. 67, Financial Reporting for Pension Plans, No. 68, Accounting and Financial Reporting for Pensions, and Statement No. 73, Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement No. 68, and Amendments to Certain Provisions of GASB Statements Nos. 67 and 68. Specifically, this Statement addresses issues regarding (1) the presentation of payroll-related measures in required supplementary information, (2) the selection of assumptions and the treatment of deviations from the guidance in an Actuarial Standard of Practice for financial reporting purposes, and (3) the classification of payments made by employers to satisfy employee (plan member) contribution requirements. There was no material impact on the Plan’s financial statements as a result of the implementation of GASB 82.

**Recent Accounting Pronouncements** — Not yet adopted

GASB Statement No.	GASB Accounting Standard	MTA Pension Plan Required Year of Adoption
73	<i>Accounting and Financial Reporting for Pensions and Related Assets That Are Not within the Scope of GASB Statement 68, and Amendments to Certain Provisions of GASB Statements 67 and 68</i>	2017
84	<i>Fiduciary Activities</i>	2019
85	<i>Omnibus 2017</i>	2018

**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 are 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 2016 and 2015 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 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 as at December 31, 2016.

<b>Asset Class</b>	<b>Target Allocation (%)</b>	<b>Target Range (%)</b>	<b>Policy Benchmark</b>
Equities	<b>29.0</b>	<b>24-34</b>	
Domestic Large Cap	10.0	5-15	S&P 500
Domestic Small Cap	5.5	2-10	Russrll 2000
International Developed Markets Equities	10.0	5-15	MSCI EAFE
Emerging Markets Equities	3.5	2-6	MSCI Emerging Markets
Fixed Income	<b>15.0</b>	<b>9-21</b>	Manager Specific
Global Asset Allocation*	<b>20.0</b>	<b>15-33</b>	50% World Equity/ 50% Citigroup WGBI unhedged
Opportunistic Investments	<b>6.0</b>	<b>0-15</b>	Manager Specific
Absolute Return	<b>15.0</b>	<b>10-22</b>	Manager Specific
Real Assets	<b>5.0</b>	<b>0-10</b>	Manager Specific
Real Estate	<b>3.0</b>	<b>0-10</b>	Manager Specific
Private Equity	<b>7.0</b>	<b>0-10</b>	Venture Economics
<b>Total</b>	<b>100.0</b>		

\* 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 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 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 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. Many factors are considered in arriving at that value. Corporate debt securities are valued based on yields currently available on comparable securities of issuers with similar credit ratings. 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 investment 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 by fair value level**

	December 31, 2016	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	\$223,861,897	\$ 223,861,897	\$ -	\$ -
Separate account small-cap equity funds	152,722,504	152,722,504	-	-
Separate account real estate investment trust	34,455,885	34,455,885	-	-
<b>Total equity investments</b>	<b>411,040,286</b>	<b>411,040,286</b>	<b>-</b>	<b>-</b>
Debt Securities				
Separate account debt funds	168,231,294	-	168,231,294	-
<b>Total debt investments</b>	<b>168,231,294</b>	<b>-</b>	<b>168,231,294</b>	<b>-</b>
<b>Total investments by fair value level</b>	<b>\$579,271,580</b>	<b>\$ 411,040,286</b>	<b>\$ 168,231,294</b>	<b>\$ -</b>

**Investments measured at the net asset value (NAV)**

	December 31, 2016	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Equity Securities:				
Comingled large cap equity funds	\$ 99,078,378	\$ -	Daily	None
Comingled international equity funds	392,791,680	-	Daily	None
Comingled emerging market equity funds	102,928,093	-	Daily, monthly	None
<b>Total equity investments measured at the NAV</b>	<b>594,798,151</b>	<b>-</b>		
Debt Securities				
Comingled debt funds	328,325,193	-	Daily, monthly, quarterly	None
Mutual funds	45,969,042	-	Daily	None
<b>Total debt investments measured at the NAV</b>	<b>374,294,235</b>	<b>-</b>		
Absolute return:				
Directional	94,618,677		Monthly	3-60 days
Direct lending	150,768,774	10,370,957	Bi-annually	60 plus days
Distressed securities	34,332,391	-	Not eligible	N/A
Credit long	55,796,444	-	Quarterly	3-30 days
Credit long/short	67,705,519	-	Quarterly	3-60 days
Equity long/short	67,890,858	-	Quarterly	3-60 days
Event driven	85,468,237	1,893,325	Quarterly, Bi-annually	60-120 days
Global macro	84,803,008	-	Monthly	3-30 days
Global tactical asset allocation	205,445,533	-	Daily, monthly	3-30 days
Market neutral	153,918	-	Quarterly	3-60 days
Multistrategy	106,269,008	-	Quarterly	3-60 days
Risk parity	331,438,578	-	Monthly	3-30 days
Structured credit	17,870,896	44,612,530	Not eligible	N/A
<b>Total absolute return measured at the NAV</b>	<b>1,302,561,839</b>	<b>56,876,812</b>		
Private equity - private equity partnerships	216,041,892	183,552,615	Not eligible	N/A
Real assets				N/A
Comingled commodities fund	98,086,640	-	Not eligible	N/A
Comingled real estate funds	102,126,697	-	Not eligible	N/A
Energy	44,762,155	28,024,870	Not eligible	N/A
Infrastructure	13,849,416	18,291,940	Not eligible	N/A
<b>Total real assets measured at the NAV</b>	<b>258,824,908</b>	<b>46,316,810</b>		
Short term investments measured at the NAV	101,892,684	-		
<b>Total investments measured at the NAV</b>	<b>2,848,413,709</b>	<b>\$ 286,746,237</b>		
<b>Total investments</b>	<b>\$ 3,427,685,289</b>			

**Investments measured by fair value level**

	Quoted Price in		Significant Other	Significant
	December 31,	Active Markets for	Observable Inputs	Unobservable Inputs
	2015	Identical Assets	Level 2	Level 3
		Level 1		
Equity Securities:				
Separate account large-cap equity funds	\$ 289,802,444	\$ 289,802,444	\$ -	\$ -
Separate account small-cap equity funds	165,170,034	165,170,034	-	-
Total equity investments	454,972,478	454,972,478	-	-
Debt Securities				
Separate account debt funds	199,891,020	-	199,891,020	-
Total debt investments	199,891,020	-	199,891,020	-
Total investments by fair value level	\$ 654,863,498	\$ -	\$ 199,891,020	\$ -

**Investments measured at the net asset value (NAV)**

	December 31,	Unfunded	Redemption	Redemption
	2015	Commitments	Frequency	Notice Period
Equity Securities:				
Comingled international equity funds	\$ 307,936,422	\$ -	Daily	None
Comingled emerging market equity funds	91,753,658	-	Daily, monthly	None
Total equity investments measured at the NAV	399,690,080	-		
Debt Securities				
Comingled debt funds	281,493,679	-	Daily, monthly, quarterly	None
Total debt investments measured at the NAV	281,493,679	-		
Absolute return:				
Directional	84,710,510	-	Monthly	3-60 days
Direct lending	106,029,965	25,663,011	Bi-annually	60 plus days
Credit long	50,252,481	-	Quarterly	3-30 days
Credit long/short	64,246,718	-	Quarterly	3-60 days
Equity long/short	49,295,498	-	Quarterly	3-60 days
Event driven	114,272,619	1,875,723	Quarterly, Bi-annually	60-120 days
Global macro	81,745,847	-	Monthly	3-30 days
Global tactical asset allocation	261,821,767	-	Daily, monthly	3-30 days
Market neutral	450,313	-	Quarterly	3-60 days
Multistrategy	39,364,728	-	Quarterly	3-60 days
Risk parity	389,682,691	-	Monthly	3-30 days
Total absolute return measured at the NAV	1,241,873,138	27,538,734		
Private equity - private equity partnerships	175,751,452	71,180,490	Not eligible	N/A
Real assets				N/A
Comingled commodities fund	78,772,929	-	Not eligible	N/A
Comingled real estate funds	76,719,180	-	Not eligible	N/A
Energy	29,722,941	48,320,894	Not eligible	N/A
Infrastructure	8,738,908	22,048,777	Not eligible	N/A
Total real assets measured at the NAV	193,953,958	70,369,671		
Short term investments measured at the NAV	103,258,576	-		
Total investments measured at the NAV	2,396,020,884	\$ 169,088,895		
Total investments	\$ 3,050,884,383			

**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, 2016 and 2015 are as follows:

	<b>2016</b>	<b>2015</b>
Investments at fair value as determined by quoted market prices:		
Mellon Dynamic Growth Fund	\$ -	\$ 157,117,663
GAM Unconstrained Bond Fund	174,184,327	161,805,235

**Credit Risk** — At December 31, 2016 and 2015, the following credit quality rating has been assigned by a nationally recognized rating organization:

<b>Quality Rating</b>	<b>2016 Fair Value</b>	<b>Fixed Income Portfolio</b>	<b>2015 Fair Value</b>	<b>Fixed Income Portfolio</b>
AAA	\$ 57,581,958	7.07 %	\$ 118,263,857	9.58 %
AA	18,097,532	2.22	62,182,061	3.99
A	63,204,420	7.77	73,114,438	7.89
BBB	148,521,367	18.25	181,867,523	12.95
BB	89,104,424	10.95	66,787,768	9.53
B	57,947,199	7.12	67,671,875	6.51
CCC	9,811,835	1.21	7,880,217	2.50
CC	1,515,747	0.19	-	-
C	3,591,894	0.44	-	-
Not Rated	<u>132,234,314</u>	<u>16.24</u>	<u>65,721,828</u>	<u>26.09</u>
Credit risk debt securities	581,610,690	71.46	643,489,567	79.04
U.S. Government bonds	<u>232,311,674</u>	<u>28.54</u>	<u>257,095,359</u>	<u>20.96</u>
Total fixed income securities	813,922,364	<u>100.00 %</u>	900,584,926	<u>100.00 %</u>
Other securities not rated — equity, international funds and foreign corporate bonds	<u>2,613,762,925</u>		<u>2,150,299,457</u>	
Total investments	<u>\$ 3,427,685,289</u>		<u>\$ 3,050,884,383</u>	

**Interest Rate Risk Exceptions** — Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of the investment. Duration is a measure of 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.

Investment Fund	2016		2015	
	Fair Value	Duration	Fair Value	Duration
Chase	\$ 170,836,144	11.54	\$ 199,891,020	11.46
Allianz Structured Alpha Fund	92,480,295	0.25	82,821,466	0.13
Wellington Blended Emerging Market Debt	47,715,659	5.55	67,054,183	5.06
Bridgewater All Weather Fund	96,685,982	9.00	135,533,958	7.87
Wellington Opportunistic Fund	23,202,272	1.91	35,816,535	1.69
Bridgewater Pure Alpha Fund	2,173,603	(3.54)	58,453,158	4.36
Bridgewater Markets Fund	9,137,252	1.40	7,559,768	6.84
GAM Unconstrained Bond Fund	174,184,327	0.25	161,805,236	0.93
Northern Trust William Capital	8,373,508	-	8,278,847	-
Park Square Capital Credit Opportunities Fund	33,504,109	0.54	14,105,020	0.61
Libremax Partners Fund	5,497,688	5.02	-	-
Gramercy Distressed Opportunistic Fund	9,604,596	(0.48)	-	-
Makuria Credit Fund	14,118,452	1.05	-	-
Crescent Capital High Income Fund	28,696,979	2.61	21,493,620	2.64
Fir Tree realization Value Fund	100,318	-	2,498,689	-
Wellington Global Managed Risk Fund	52,669,664	6.70	77,818,919	6.77
Wellington Trust Collective Investment Fund and Diversified Inflation Fund	23,383,855	0.88	10,319,254	7.56
Canyon Value Fund	21,557,661	1.90	17,135,253	2.40
Total fixed income securities	813,922,364		900,584,926	
Portfolio modified duration		4.60		5.47
Investments with no duration reported	\$ 2,613,762,925		\$ 2,150,299,457	
Total investments	\$ 3,427,685,289		\$ 3,050,884,383	

**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 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.

In addition, the Plan has investments in foreign stocks and/or bonds denominated in foreign currencies. The Plan’s foreign currency exposures as of December 31, 2016 and 2015 are as follows (amounts in U.S. dollars, in thousands):

<b>Foreign Currency Holdings in US \$</b>	<b>December 31, 2016</b>	<b>December 31, 2015</b>
Argentina Peso	\$ 362,716	\$ 464,439
Dollar (Australian)	58,399,692	47,951,037
Bahraini Dinar	357,832	322,774
Bangladesh (Taka)	390,178	289,239
Botswana Pula	94,093	108,989
Brazil Cruzeiro Real	10,503,237	7,316,548
Bulgarian Lev	7,258	4,192
Dollar (Canadian)	26,235,738	30,175,538
Chilean Peso	1,361,561	3,308,584
China (Yuan Renminbi)	10,295,190	9,084,125
Colombian Peso	2,870,124	6,468,225
Croatia Kuna	374,400	301,815
Czech Koruna	2,888,051	(1,303,626)
Krone (Danish)	1,780,401	3,643,732
Egyptian Pound	421,256	576,153
Euro	115,900,253	71,966,317
Ghanaian Cedi	36,380	41,919
Georgian Lari	1,542,950	1,395,379
Dollar (Hong Kong)	14,804,402	4,650,918
Hungary (Forint)	357,449	662,002
Icelandic Krona	416,154	-
Indian Rupee	23,027,624	12,132,464
Indonesia Rupiah	15,132,928	12,592,872
Israeli (Shekel)	933,290	2,031,102
Yen (Japan)	40,601,125	30,966,067
Jordanian Dinar	360,079	347,925
Kazakhstani Tenge	344,735	289,239
Kenyan Shilling	803,767	721,454
Kuwait Dinar	777,182	595,246
Lebanese Pound	110,822	121,564
Malaysian (Ringgit)	3,961,597	4,079,733
Mauritius (Ruppee)	706,103	318,582
Mexican New Peso	5,419,146	39,317,139
Morocco Dirham	382,072	306,007
Dollar (New Zealand)	4,190,670	(1,842,208)
Nigerian Naira	668,111	704,686
Krone (Norwegian)	(893,256)	3,036,554
Omani Rial	375,654	306,007
Pakistani Rupee	2,851,680	2,162,476
Panama Balboa	162,783	125,756
Peru Sol	2,050,691	2,292,807
Philippines Peso	1,558,958	1,630,160
Polish (New Zloty)	1,371,164	2,701,834
Pound (Sterling)	97,919,528	68,456,693
Qatar Riyal	715,133	675,891
Romanian Leu	349,195	1,774,066
Russian Federation Rouble	2,654,950	5,991,158
Saudi Riyal	420,526	331,158
Singapore Dollar	1,259,811	1,304,597
Rand South Africa	5,723,875	4,332,714
South Korean Won	10,671,336	9,286,673
Sri Lankan Rupee	346,188	318,582
Krona (Swedish)	4,488,161	6,716,714
Franc (Swiss)	11,515,667	8,202,309
Thai (Bhat)	5,183,551	4,059,064
Dollar (Taiwan, New)	24,917,199	17,669,773
Tunisian Dinar	135,885	138,332
Turkish Lira	1,342,703	1,329,207
Ukraine Hryvnia	-	54,494
UAE Dirham	1,490,686	1,303,532
Uruguayan Pesos	-	650,764
Vietnam Dong	361,945	301,815
Other	3,293,705	8,754,683
<b>Total</b>	<b>\$ 527,086,284</b>	<b>\$ 444,017,984</b>

**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, 2016 and December 31, 2015 was 83.48% and 82.71% respectively.

	<u>Master Trust Total Plan</u>	<u>MTA Defined Benefit Plan</u>	<u>Master Trust Total Plan</u>	<u>MTA Defined Benefit Plan</u>
	December 31, 2016		December 31, 2015	
Total Investments:				
Investments measured at fair value level	\$ 693,867,813	\$ 579,271,580	\$ 791,775,089	\$ 654,863,498
Investments measured at the NAV	<u>3,411,910,161</u>	<u>2,848,413,709</u>	<u>2,896,954,334</u>	<u>2,396,020,885</u>
Total investments measured at fair value	<u>\$ 4,105,777,974</u>	<u>\$ 3,427,685,289</u>	<u>\$ 3,688,729,423</u>	<u>\$ 3,050,884,383</u>

#### 4. NET PENSION LIABILITY

The components of the net pension liability of the Plan at December 31, 2016 and 2015 were as follows (in thousands):

	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Total pension liability	\$ 4,761,877	\$ 4,364,946
Fiduciary net position	<u>3,419,971</u>	<u>3,074,777</u>
Net pension liability	<u>1,341,906</u>	<u>1,290,169</u>
Fiduciary net position as a percentage of the total pension liability	71.82%	70.44%

#### Actuarial Methods and Assumptions

The total pension liability as of December 31, 2016 was determined by an actuarial valuation date of January 1, 2016, 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, 2016 and 2015 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:

**2016**  
**(in thousands)**

	<b>1% Decrease 6.00%</b>	<b>Current Discount Rate 7.00%</b>	<b>1% Increase 8.00%</b>
Net pension liability	\$1,936,639	\$1,341,906	\$840,176

**2015**  
**(in thousands)**

	<b>1% Decrease 6.00%</b>	<b>Current Discount Rate 7.00%</b>	<b>1% Increase 8.00%</b>
Net pension liability	\$1,835,699	\$1,290,169	\$830,112

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## Additional Important Actuarial Valuation Information

Valuation date	January 1, 2016
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	Entry age normal
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 on a generational basis using Scale AA
Actuarial assumptions:	
Investment rate of return	7.0%
Projected salary increases	Varies by years of employment, and employee group; 3.5% for 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, 2015
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	Entry age normal
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 on a 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% Growth Wage Increases for TWU 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 middle of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month.

### 2016 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, 2016	\$3,074,776,655	12.00	1.00	\$3,319,712,784
Monthly net external cash flows:				
January	(7,048,513)	12.00	1.00	(7,609,996)
February	6,604,591	11.00	0.92	7,087,122
March	6,604,591	10.00	0.83	7,038,402
April	6,604,591	9.00	0.75	6,995,377
May	8,618,134	8.00	0.67	9,072,260
June	8,678,038	7.00	0.58	9,072,521
July	8,695,234	6.00	0.50	9,034,929
August	8,622,038	5.00	0.42	8,904,109
September	8,622,038	4.00	0.33	8,842,898
October	8,622,038	3.00	0.25	8,788,842
November	8,622,038	2.00	0.17	8,735,117
December	24,240,770	0.36	0.03	24,396,573
Ending Value - December 31, 2016	\$3,419,970,937			\$3,419,970,938
Money-Weighted Rate of Return	7.97%			

**2015 Schedule of Calculations of Money-Weighted Rate of Return**

	<b>Net External Cash Flows</b>	<b>Periods Invested</b>	<b>Period Weight</b>	<b>Net External Cash Flows With Interest</b>
Beginning Value - January 1, 2015	\$3,065,219,976	12.00	1.00	\$3,028,239,128
Monthly net external cash flows:				
January	(9,289,705)	11.50	0.96	(9,158,428)
February	(7,790,927)	10.50	0.88	(7,689,944)
March	(6,755,827)	9.50	0.79	(6,677,164)
April	(1,193,263)	8.50	0.71	(1,180,769)
May	6,017,761	7.50	0.63	5,961,817
June	8,443,341	6.50	0.54	8,376,016
July	8,993,341	5.50	0.46	8,932,218
August	9,543,341	4.50	0.38	9,489,729
September	9,543,341	3.50	0.29	9,502,399
October	9,543,341	2.50	0.21	9,513,676
November	9,543,341	1.50	0.13	9,524,986
December	18,080,475	0.50	0.04	18,069,756
Ending Value - December 31, 2015	\$3,074,776,655			\$3,074,776,655
Money-Weighted Rate of Return	-1.47%			

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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, 2016 and 2015.

### SCHEDULE OF LONG TERM EXPECTED RATE OF RETURN FOR 2016

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	10.00%	1.67%
US High Yield Bonds	BAML High Yield	8.00%	5.04%
Global Bonds	Citi WGBI	10.00%	0.28%
Emerging Market Bonds	JPM EMBI Plus	3.00%	3.78%
US Large Caps	S&P 500	10.00%	4.80%
US Small Caps	Russell 2000	5.50%	6.06%
Global Equity	MSCI ACWI NR	10.00%	5.49%
Foreign Developed Equity	MSCI EAFE NR	10.00%	6.06%
Emerging Market Equity	MSCI EM NR	3.50%	8.39%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.77%
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%	3.45%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.85%
Portfolio Nominal Mean Return			7.03%
Portfolio Standard Deviation			11.54%
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 2015

Asset Class	Index	Target Allocation*	Real Rate of Return
US Core Fixed Income	Barclays Aggregate	10.00%	2.11%
US High Yield Bonds	BAML High Yield	8.00%	4.32%
Global Bonds	Citi WGBI	10.00%	0.82%
Emerging Market Bonds	JPM EMBI Plus	3.00%	5.17%
US Large Caps	S&P 500	10.00%	5.09%
US Small Caps	Russell 2000	5.50%	6.26%
Global Equity	MSCI ACWI NR	10.00%	5.67%
Foreign Developed Equity	MSCI EAFE NR	10.00%	6.06%
Emerging Market Equity	MSCI EM NR	3.50%	8.21%
Global REITS	FTSE EPRA/NAREIT Developed	5.00%	5.98%
Private Real Estate Property	NCREIF Property	3.00%	3.84%
Private Equity	Cambridge Private Equity	7.00%	9.17%
Hedge Funds - MultiStrategy	HFRI: Fund Wtd Composite	15.00%	4.20%
Assumed Inflation - Mean			2.50%
Assumed Inflation - Standard Deviation			1.89%
Portfolio Arithmetic Mean Return			7.31%
Portfolio Standard Deviation			11.67%
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.

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, 2016 and January 1, 2015 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 \$44.3 and \$45.9 for the calendar years ended December 31, 2016 and 2015, 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 normal costs and the unfunded actuarial accrued liability. Entry Age Normal method is used for determining changes in the unfunded actuarial accrued liability due to plan provision and assumption changes. 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.

### 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:

$$\text{Actuarial Value of Assets} = MV_t - .8UR_1 - .6UR_2 - .4UR_3 - .2UR_4$$

Where

$MV_t$  = Market Value of assets as of the valuation date.

$UR_n$  = Unexpected return during the  $n^{\text{th}}$  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.

### C. Actuarial Assumptions Universal to all Groups

**Interest** — 7.00% per annum, compounded annually.

**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 year's reported administrative expenses and are assumed payable in the middle of the plan year.

**Mortality** — Preretirement and postretirement healthy annuitant rates are projected on a generational basis using Scale AA, as recommended by the Society of Actuaries Retirement Plans Experience Committee.

**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** — 75% of the rates from the RP-2000 Disabled 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 female healthy rates, respectively.

**Participant Data** — Retirement status and benefits based on information provided in JP Morgan file as of the valuation date. For inactive participants, offsets for Railroad Retirement benefits are estimated and assumed to occur at age 62 unless disabled or it appears offset has occurred. Benefits, net of any Railroad Retirement benefits, are estimated for vested members who terminated during the past year if not provided by the Authority.

**Retroactive Wage Adjustments** - Based on calculations completed by the MTA, adjustments to benefits were determined based on year of retirement: 2% for retirements prior to 2013, 5% for 2013 retirements, 8% for 2014 retirements and 11% for 2015 retirements. These adjustments were applied to liabilities of Metro-North and Long Island Rail Road represented members provided by the MTA who received a retroactive wage adjustment. Additional liabilities equal to the accumulated amount of estimated retroactive payments as of the valuation date were also included.

**D. Changes in Actuarial Assumptions Universal to all Groups**

The assumed increase in the railroad retirement wage base was set to 1% higher than the assumed rate of inflation or 3.5%

**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 has fewer than 10 years of service
- 15% per year if members has 10 but fewer than 20 years of service
- 30% per year if member has 20 or more years of service

**Disability** — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary		Accidental		Age	Ordinary		Accidental	
	M	F	M	F		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 — 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:

<b>Years of Service</b>	<b>Termination Rate</b>
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:

<b>Age</b>	<b>Reduced Early Retirement</b>	<b>Unreduced Early Retirement</b>
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:

<b>Age</b>	<b>Reduced Early Retirement</b>	<b>Unreduced Early Retirement</b>
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 has fewer than 10 years of service
- 15% per year if members has 10 but fewer than 20 years of service
- 30% per year if member has 20 or more years of service

**Disability** — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary		Accidental		Age	Ordinary		Accidental	
	M	F	M	F		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** — Reduced early retirement rates have been added for non-ACRE represented employees. This group was previously not eligible for early retirement benefits.

**G. Actuarial Assumptions — MTA Defined Benefit Pension Plan — 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, 2008:

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 other represented employees.

Normal Retirement:

- 5% per year if members has fewer than 10 years of service
- 15% per year if members has 10 but fewer than 20 years of service
- 30% per year if member has 20 or more years of service

**Disability** — Rates vary by age, sex and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary		Accidental		Age	Ordinary		Accidental	
	M	F	M	F		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:

Years of Eligibility	Retirement Rate
1	17.00 %
2	12.00
3 – 9	10.00
10+	50.00

Retirement rates at ages 62 and above are 100% regardless of year of eligibility.

**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.

**Changes in Actuarial Assumptions** — None

**I. Actuarial Assumptions — MSBA Employees Pension Plan**

**Salary Scale** — Rates of pay are assumed to increase at a rate of 3.50% per annum.

**Overtime** — Members are assumed to earn overtime equal to the following percentage of their rates of pay:

<b>Years of Service</b>	<b>Rate</b>
25 years of service	17.00 %
25 to 29 years of service	20.00
30 or more years of service	23.00

**Termination** — Withdrawal rates vary by years of service and sex. Illustrative rates are shown below:

<b>Years of Service</b>	<b>Male</b>	<b>Female</b>
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:

<b>Age</b>	<b>Reduced Early Retirement</b>	<b>Unreduced Early Retirement</b>
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

For all other represented employees.

Normal Retirement:

- 5% per year if members has fewer than 10 years of service
- 15% per year if members has 10 but fewer than 20 years of service
- 30% per year if member has 20 or more years of service

**Disability** — Rates vary by age and type of disability beginning at benefit eligibility. Illustrative rates are shown below:

Age	Ordinary		Accidental		Age	Ordinary		Accidental	
	M	F	M	F		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.

**Changes in Actuarial Assumptions** - None.

**J. Actuarial Assumptions — MTA Defined Benefit Plan — SIRTOA**

**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 length 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:

Age	Reduced Early* Retirement	Normal 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

\*Applies only to members of United Transportation Union and management employees.

For ages 62 to 80:

- 5% per year if members has fewer than 10 years of service
- 15% per year if members has 10 but fewer than 20 years of service
- 30% per year if member has 20 or more years of service

**Disability** — Rates vary by age, sex and type of disability. 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.

**Participant Data** — Benefits were estimated for vested members...

**Benefits Not Valued** — Accidental death benefits.

**Changes in Actuarial Assumptions** — Rates of early retirement are included for TCU and ATDA represented employees. **K. Actuarial Assumptions — LIRR Pension Plan**

**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		

**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 Defined Benefit Pension Plan – Former New York Bus Service 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+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below

For represented TWU and TSO members:

Age	Years of Service at Retirement		
	<u>≤5</u>	<u>5-10</u>	<u>10+</u>
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30 %
80 +	100 %	100 %	100 %

For all other members:

All members are assumed to retire at their Normal Retirement Age of 62.

**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		

**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.

**Benefits Not Valued** — The \$2,500 post-retirement death benefit for represented TWU members is not valued since premiums are paid outside of the Plan trust.

**Changes in Actuarial Assumptions** — None.

**M. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Former Queens Surface, Triboro and Jamaica 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+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below:

For represented TWU and TSO members:

<b>Age</b>	<b>Years of Service at Retirement</b>		
	<b><u>&lt;5</u></b>	<b><u>5-10</u></b>	<b><u>10+</u></b>
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30 %
80 +	100 %	100 %	100 %

For all other members:

<b>Age</b>	<b>Retirement Rate</b>
55-56	10 %
57	20
58-60	15
61	20
62-63	45
64	40
65	100

**Disability** — Rates vary by age. Illustrative rates are shown below:

<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
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 for members not represented by TWU or TSO.

**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.

**Benefits Not Valued** — The \$2,500 post-retirement death benefit for represented TWU members is not valued since premiums are paid outside of the plan trust.

The \$10,000 post-retirement death benefit for all other members is not valued since premiums are paid outside of the plan trust.

The accidental death and dismemberment benefit for members who are not represented by TWU or TSO is not valued as the costs are expected to be de minimis.

**Changes in Actuarial Assumptions** — None.

**N. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Former Liberty Lines Bus Employees**

**Termination** — Withdrawal rates vary by years of service. Illustrative rates are shown below:

<b>Year of Service</b>	<b>Termination Rate</b>
0	17.50 %
1	4.75
2 - 9	2.75
10+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below:

For represented TWU and TSO members:

<b>Age</b>	<b>Years of Service at Retirement</b>		
	<b>&lt;5</b>	<b>5-10</b>	<b>10+</b>
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30 %
80 +	100 %	100 %	100 %

For all other members:

<b>Age</b>	<b>Retirement Rate</b>
60-61	7.5 %
62	40.0
63-64	20.0
65	100.0

**Disability** — Rates vary by age. Illustrative rates are shown below:

<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
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		

**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.

**Benefits Not Valued** — The \$2,500 post-retirement death benefit for represented TWU members is not valued since premiums are paid outside of the plan trust.

**Changes in Actuarial Assumptions** — None.

**O. Actuarial Assumptions- MTA Defined Benefit Pension Plan – Former Liberty Lines Bus Non-Represented MTA Bus employees**

**Salary Scale** — Salaries are assumed to increase in accordance with the following schedule:

<b>Years of Service</b>	<b>Rate</b>
0	6.00 %
1	5.00
2	4.25
3	4.00
4+	3.50

**Termination** — Withdrawal rates vary by years of service. Illustrative rates are shown below:

<b>Year of Service</b>	<b>Termination Rate</b>
0	17.50 %
1	4.75
2 - 9	2.75
10+	2.25

**Retirement** — All members are assumed to retire at their Normal Retirement Age of 62.

**Disability** — Rates vary by age. Illustrative rates are shown below:

<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
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		

**Form of Payment** — All members are assumed to elect the lump sum payment option. Lump sums valued using the current (2015) lump sum mortality table published by the IRS and the 4.5% assumed interest rate.

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

**Changes in Actuarial Assumptions** — None.

**P. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Former Command Bus Represented Employees**

**Termination** — Withdrawal rates vary by years of service. Illustrative rates are shown below:

<b>Year of Service</b>	<b>Termination Rate</b>
0	17.50 %
1	4.75
2 - 9	2.75
10+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below:

For represented ATU and TSO members:

<b>Age</b>	<b>Years of Service at Retirement</b>		
	<b>&lt;5</b>	<b>5-10</b>	<b>10+</b>
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30 %
80 +	100 %	100 %	100 %

For all other members:

<b>Age</b>	<b>Retirement Rate</b>	<b>Age</b>	<b>Retirement Rate</b>
50-52	5 %	59	34 %
53-54	10	60	35
55	30	61	36
56	31	62-64	40
57	32	65	100
58	33		

**Disability** — Rates vary by age. Illustrative rates are shown below:

<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
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 male 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.

**Benefits Not Valued** — The \$2,500 post-retirement death benefit for represented ATU members is not valued since premiums are paid outside of the plan trust.

**Changes in Actuarial Assumptions:** The marriage assumption was updated to be consistent with other MTA Bus agencies.

**Q. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Former Green Bus 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+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below:

For represented ATU and TSO members:

Age	Years of Service at Retirement		
	<u>≤5</u>	<u>5-10</u>	<u>10+</u>
57-64	N/A	N/A	30 %
65-79	0 %	5 %	30 %
80 +	100 %	100 %	100 %

For all other members:

Age	Rate of Retirement
55-59	5 %
60-61	10
62	100

**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		

**Marriage** — 80% of male 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.

**Benefits Not Valued** — The \$2,500 post-retirement death benefit for represented ATU members is not valued since premiums are paid outside of the plan trust.

**Changes in Actuarial Assumptions:** The marriage assumption was updated to be consistent with other MTA Bus agencies.

**Q. Actuarial Assumptions — MTA Defined Benefit Pension Plan — Certain Non-Represented Employees of Alliance Companies**

**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. Illustrative rates are shown below:

Year of Service	Termination Rate
0	17.50 %
1	4.75
2 - 9	2.75
10+	2.25

**Retirement** — Rates vary by age. Illustrative rates are shown below:

Age	Retirement Rate
55-56	6 %
57-58	8
59	9
60-61	13
62	25
63-64	15
65	100

**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		

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

**Changes in Actuarial Assumptions** — The marriage assumption was updated to be consistent with other MTA BUS agencies.

**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**

Subsequent Management has s evaluated subsequent events for the Plan through January 22, 2018, the date the financial statements were available to be issued, and has concluded that there are no recognized or non-recognized subsequent events for the financial statement adjustment or disclosure.

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**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)**

	<b>2016</b>	<b>2015</b>	<b>2014</b>
Total pension liability:			
Service cost	\$ 138,215	124,354	121,079
Interest	308,009	288,820	274,411
Changes of benefit terms	73,521	6,230	-
Differences between expected and actual experience	86,809	121,556	2,322
Changes of assumptions	-	(76,180)	-
Benefit payments and withdrawals	(209,623)	(199,572)	(191,057)
Net change in total pension liability	396,931	265,208	206,755
Total pension liability – beginning	4,364,946	4,099,738	3,892,983
Total pension liability – ending (a)	4,761,877	4,364,946	4,099,738
Plan fiduciary net position:			
Employer contributions	280,768	221,694	331,259
Member contributions	29,392	34,519	26,006
Net investment income	247,708	(45,122)	102,245
Benefit payments and withdrawals	(209,623)	(199,572)	(191,057)
Administrative expenses & Transfer to investments	(3,051)	(1,962)	(9,600)
Net change in plan fiduciary net position	345,194	9,557	258,853
Plan fiduciary net position – beginning	3,074,777	3,065,220	2,806,367
Plan fiduciary net position – ending (b)	3,419,971	3,074,777	3,065,220
Employer's net pension liability – ending (a)-(b)	\$ 1,341,906	1,290,169	1,034,518
Plan fiduciary net position as a percentage of the total pension liability	71.82%	70.44%	74.77%
Covered-employee payroll	\$ 1,724,219	1,603,924	1,544,050
Employer's net pension liability as a percentage of covered-employee payroll	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.

**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 the years ended December 31, 2016 and 2015, are as follows:

Valuation Dates	January 1, 2016	January 1, 2015	January 1, 2014
Actuarial cost method	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)	Frozen initial liability (FIL) (1)
Amortization method	For FIL bases, period specified in current valuation report. Future gains/losses are amortized through the calculation of the normal cost in accordance with the FIL cost method amortized based on expected working lifetime, weighted by salary, of the projected population for 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.
Interest rate	Net rate of 7.0% for 2016, per annum, net of investment expenses	Net rate of 7.0% for 2015, per annum, net of investment expenses	Net rate of 7.0% for 2015, 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	3.0% per year	3.0% per year
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
Separations other than for normal retirement	Tables based on recent experience	Tables based on recent experience	Tables based on recent experience
Rates of normal retirement	Tables based on recent experience. Rates vary by age, years of service at retirement and Tier/Plan.	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; 3.5% 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
Cost-of-living adjustments	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

(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.

**METROPOLITAN TRANSPORTATION AUTHORITY  
DEFINED BENEFIT PENSION PLAN**

**SCHEDULE II**

**Required Supplementary Information (Unaudited)  
Schedule of Employer Contributions  
(in thousands)**

<b>Fiscal Year Ending December 31</b>	<b>Actuarially Determined Contribution</b>	<b>Actual Employer Contribution</b>	<b>Contribution Deficiency (Excess)</b>	<b>Covered Payroll</b>	<b>Contribution as a % of covered Payroll</b>
2007	\$ 81,700	\$ 81,700	\$ -	\$ -	N/A
2008	107,759	107,759	-	-	N/A
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%

\* 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**

**SCHEDULE III**

**Required Supplementary Information (Unaudited)  
Schedule of Investment Returns**

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

<b>Fiscal Year Ending December 31</b>	<b>Net Money-Weighted Rate of Return</b>
2007	N/A
2008	N/A
2009	N/A
2010	N/A
2011	N/A
2012	N/A
2013	N/A
2014	3.58%
2015	-1.47%
2016	7.97%

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, 2016.



# METROPOLITAN TRANSPORTATION AUTHORITY ENTERPRISE RISK MANAGEMENT AND INTERNAL CONTROL GUIDELINES

Pursuant to Public Authorities Law Section 2931  
*Adopted by the Board on November 16, 2016*

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, 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;

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METROPOLITAN TRANSPORTATION AUTHORITY

ENTERPRISE RISK MANAGEMENT/INTERNAL CONTROL GUIDELINES

Internal Control Number GRC002187

Page 1 of 10

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**

#### **Section A. Enterprise Risk Management/Internal Controls**

Enterprise Risk Management (“ERM”)/Internal Controls is defined as a process conducted by the Authority’s Board, 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:

Strategic - high-level goals, aligned with and supporting Authority’s mission

Operations - effective and efficient use of the Authority’s resources

Reporting – reliability, timeliness, transparency of financial and non-financial reporting

Compliance - compliance with applicable laws, regulations, contracts and policies

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

- An ongoing and flowing process throughout the Authority
- Effected by people at every level within the Authority
- Applied in developing 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/Internal Controls consists of eight 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.
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. **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 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 rationale of how, in the absence of that principle, the control is operating effectively.

### **Section B. 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 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 serve on the Committee, which is chaired by the MTA Chief Compliance Officer. The Committee will meet as needed but generally not less than every six months to review and suggest improvements to the ERM program.

## **Section C. Vulnerability Assessments**

### **Part 1. Components**

Vulnerability (Risk) Assessments (“VA”) is an analysis of the potential exposure to a thing going wrong, what can happen if it does, and what controls, if any, are or should be in place 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 that will negatively impact that business process, its objectives, and/or related activities. Vulnerability within a business process can be assessed by defining what negative event can reasonably occur (risk), evaluating their significance (effects) and estimating the likelihood that they can happen (probability). When assessing the effect if the risk occurs the following categories should be used in determining level of significance.

<b>Significance Rating</b>	<b>Evaluation Criteria</b>
<i>High (5)</i>	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.
<i>Med High (4)</i>	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.
<i>Medium (3)</i>	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.
<i>Medium Low (2)</i>	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.
<i>Low (1)</i>	Unlikely to cause the activity not to meet part of its objectives. If the activity does not meet part of its objective, this, in turn, may cause or expose the Authority to potentially unacceptable financial losses, less efficient operations, some non-compliance with laws and regulations, less efficient use of resources, etc.

When assessing the likelihood the risk will occur the following categories should be used in determining level of likelihood.

<b>Likelihood Rating</b>	<b>Evaluation Criteria (Assumes No Controls in Place)</b>
<i>Extreme (5)</i>	Reasonable assumption that this risk will almost certainly occur
<i>High (4)</i>	Reasonable assumption that this risk will likely, but not certainly, occur
<i>Medium (3)</i>	Reasonable assumption that this risk may occur
<i>Low (2)</i>	Reasonable assumption that this risk will likely not occur
<i>Negligible (1)</i>	Reasonable assumption that this risk will not occur

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

<b>Overall Risk Rating</b>				
Very High (25-20)	High (19-16)	Medium (15-9)	Low (8-4)	Very Low (3-1)

#### **Section D. 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:

<b>Vulnerability</b>	<b>Control Test Cycle</b>
<i>Very High</i>	Annually (Minimum)
<i>High</i>	Not less than Every 2 years
<i>Moderate</i>	Not less than Every 3 years
<i>Low</i>	Not less than Every 4 years
<i>Very Low</i>	Not less than Every 5 years

Each Business Process Owner along with their Authority Internal Control Officer 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 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. 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. 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. Corrective Action Plans**

If any control should fail the Control Testing or ICRA process, described in Section D and E above, a corrective action plan must be initiated. The corrective action plans will at a minimum list the severity of the issue as either:

- Material Weakness
- Significant Deficiency
- Deficiency
- Documentation Only

This corrective action plan shall also include:

- Actions to be undertaken
- Persons responsible for those actions
- Resources required to complete the corrective action
- Date corrective actions were completed or date by which they are expected to be achieved

## **Article V. Generally Applicable Managerial Policies and Standards**

The Chairman/Chief Executive Officer of the Authority, together with Agency Presidents shall prepare and disseminate annually a statement emphasizing the tone at the top, the importance of effective internal controls and the responsibility of each officer and employee for effective internal controls. This statement should list the name and contact number of the Authority Internal Control Officer for 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.

**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

**Article VII. Implementation of Education and Training Programs**

Senior management and employees responsible for specific functions relating to the Authority's internal control program must attend recurring internal control training.

The training will utilize standardized material on Internal Controls developed by the Committee as well as the Office of the New York State Comptroller's Internal Control Guide-Compliance Road Map. Agencies may augment this guide, if necessary, to provide specialized instruction.

The Committee shall determine at a minimum which classification of employees should attend internal control training, including the method, content and frequency of such training.

**Article VIII. MTA Audit Services**

In order to maintain independence, MTA's Auditor General and MTA Audit Services shall not directly or indirectly manage the Authority's ERM/Internal Control program. MTA Audit Services shall evaluate the Authority's internal controls and operations, identify internal control weaknesses that have not been corrected and make recommendations to correct those weaknesses.

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# Enterprise Risk Management Committee Status Report

Report to the Audit Committee  
January 22, 2018



# Executive Summary

## Period Snapshot

All Agencies Submitted Their Annual Internal Controls Certifications and All of the Programs Were in Full Compliance with NYS Governmental Accountability, Audit and Internal Control Act Requirements

All Agencies Working on Closing Open Material Weakness / Significant Deficiencies

ERM Committee Met During the Period to Discuss Significant Issues and MTA Organizational Changes

Agencies Continue to Document Their Vulnerability Assessments in the Governance Risk and Compliance (GRC) System

RFP issued for Governance Risk and Compliance (GRC) System replacement

## Strategy/Internal Driven Risk Change

Procurement Consolidation

IT Transformation

Treasury Transformation

GRC Migration

## Summary of Control Activities

1,924 Total Business Processes

903 Total Significant Business Processes of which 553 Were Reviewed

Approximately 4,807 Total Risks (all business processes)

Approximately 6,178 Total Controls (all business processes)

12 Total Material Weakness / Significant Deficiencies Are Still Pending

## External Driven Risk Change

Standards for Internal Controls in New York State Government – Office of the State Comptroller

COSO 2013

COSO Enterprise Risk Management

NYS Comptroller Guidelines



## ERM Personnel by Agency

Agency	Number of ERM Personnel*	Number of Agency Coordinators	Activities / Business Process	Total Risks	Total Controls
B&T	2	14	265	358	353
MTA HQ	3	29	198	1,339	529
LIRR	4	34	430	984	1,422
MNR	4	42	237	724	732
MTA Bus	3	25	38	148	195
MTA CC	1	15	147	202	519
NYCT	6	65	609	1,052	2,428
<b>TOTAL</b>	<b>23</b>	<b>224</b>	<b>1,924</b>	<b>4,807</b>	<b>6,178</b>

\* Note that while these employees have ERM responsibilities for their agencies, they also have a number of other responsibilities.



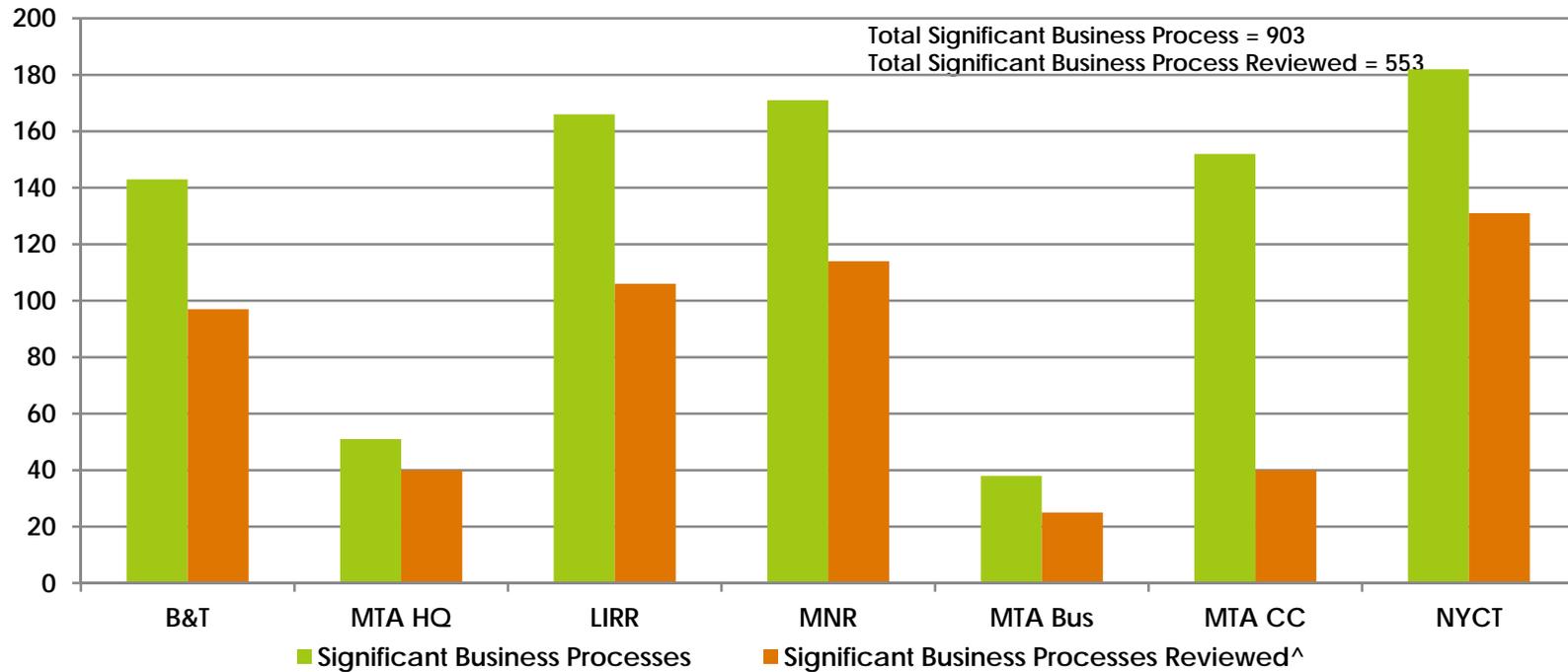
## Prior Period Comparison

	January 2018	November 2016	Change (+/-)	Change (+/-)
Significant Business Processes	903	882	21	2.4%
Total Activities / Business Process	1,924	1,910	14	0.7%
Total Risks	4,807	4,784	23	0.5%
Total Controls	6,178	6,207	-29	-0.5%



# Review of Internal Controls Performance

## Significant Business Processes Reviewed



Corporate Compliance



# Material Weakness/Significant Deficiencies

Total Material Weakness / Significant Deficiencies

Overall Risk Ranking	MTACC	MTHQ	LIRR	MNR	NYCT	Total
Low	1	0	0	0	1	2
Medium	2	0	4	0	3	9
High	1	1	1	0	0	3
Very High	0	0	1	5	5	11
<b>TOTAL</b>	<b>4</b>	<b>1</b>	<b>6</b>	<b>5</b>	<b>9</b>	<b>25</b>

Total Open Material Weakness / Significant Deficiencies

Overall Risk Ranking	MTACC	MTHQ	LIRR	MNR	NYCT	Total
Low	1	0	0	0	0	1
Medium	2	0	0	0	2	4
High	1	0	0	0	0	1
Very High	0	0	0	4	2	6
<b>TOTAL</b>	<b>4</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>12</b>



# Open Corrective Action Plans Status

## Total Controls Vs. % of Material Weakness / Significant Deficiencies

Agency	Total Controls	Open Material Weakness / Significant Deficiencies January 2018	% Total Material Weakness / Significant Deficiencies to Total Controls
B&T	353	-	0.00%
MTA HQ	529	-	0.00%
LIRR	1,422	-	0.00%
MNR	732	4	0.55%
MTA Bus	195	-	0.00%
MTA CC	519	4	0.77%
NYCT	2,428	4	0.16%
<b>Enterprise</b>	<b>6,178</b>	<b>12</b>	<b>0.19%</b>



## Open Corrective Action Plans

ERM Risk Category	Very High	High	Medium	Low	Total
Ineffectual Operations	-	1	1	1	3
Regulatory Noncompliance	-	-	1	-	1
Safety	6	-	1	-	7
Theft of Assets	-	-	1	-	1
<b>Total</b>	<b>6</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>12</b>



# January 2018

## Top Agency Risks

### Risk Process

- Cyber Security
- Infrastructure and Equipment Maintenance
- Reputational
- Safety - Employee and Customer
- Security
- Succession Planning

## Enterprise-Wide Risks

### Risk Process

- Cyber Security
- Institutional Transformation
- Reputational
- Safety
- Succession Planning



# Memorandum



## Metropolitan Transportation Authority

State of New York

**To:** Audit Committee

**From:** Lamond W. Kearse, Chief Compliance Officer 

**Date:** December 29, 2017

**Re:** Management Assessment: Effectiveness of Internal Controls 2016-17

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As the Metropolitan Transportation Authority's Chief Compliance Officer, I also serve as the Authority's Chief Risk Officer and therefore I am responsible for overseeing the establishment and operation of the MTA's internal control program, which includes each of its subsidiary and affiliated entities ("MTA").

This statement certifies that management has documented and assessed the internal control structure and procedures of the MTA for the year ending December 31, 2017. In making this assessment, management used criteria set forth by MTA's Enterprise Risk Management/Internal Control Guidelines, Standards for Internal Control in New York State published by the Office of the State Comptroller, Guidelines issued by the Independent Authority Budget Office, and the Guidelines of the Commission of Sponsoring Organizations of the Treadway Commission.

This assessment found the MTA's internal controls to be adequate, and to the extent that deficiencies were identified, the MTA has developed corrective action plans to reduce any corresponding risk.

Therefore based upon the above I believe that as of December 31, 2017, the MTA's internal control structure and procedures are effective.

c: Michael Fucilli, Auditor General  
Enterprise Risk Management Committee

# Memorandum



## Metropolitan Transportation Authority

State of New York

**Date** November 7, 2017  
**To** All MTA Employees  
**From** Veronique Hakim, Managing Director   
**Re** Annual Commitment to Efficient and Effective Internal Controls

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The Metropolitan Transportation Authority (“MTA”) is committed to maintaining a system of efficient and effective internal controls. Internal controls is the integration of the activities, plans, attitudes, policies, and efforts of all MTA employees working together to provide reasonable assurance that we will achieve our objectives and mission.

The overall purpose of our internal controls system is to help the MTA: (1) promote orderly, economical, efficient and effective operations, (2) provide quality services for our stake holders consistent with our mission; (3) safeguard resources against loss due to waste, abuse, mismanagement, errors and fraud; (4) promote compliance with our Code of Ethics, laws, regulations, policies, contracts and management directives and; (5) develop and maintain reliable financial/management data which is accurately presented in timely reports.

Each employee is responsible for ensuring that we comply with our system of internal controls. For our internal controls to be most effective, each employee must be responsible for becoming familiar with our policies, operating procedures, and the legal requirements that apply to his or her job, and must abide by these requirements at all times.

If you want additional information about our internal controls program you can contact your Agency Internal Control Staff (list attached) or MTA Chief Compliance Officer, Lamond W. Kears at 646-252-1329.

**METROPOLITAN TRANSPORTATION AUTHORITY  
2016-17 INTERNAL CONTROL COMPLIANCE CERTIFICATION**

METROPOLITAN TRANSPORTATION AUTHORITY

Authority Name

JOSEPH J. LHOTA, CHAIRMAN

Chairman Governing Board

2 BROADWAY, NEW YORK, NY 10017

Authority Address

(212) 878-7200

Telephone Number

LAMOND W. KEARSE, CHIEF COMPLIANCE OFFICER

Name of Internal Control Officer

(646) 252-1330

Telephone Number

LKEARSE@MTAHQ.ORG

Email Address of Internal Control Officer

I hereby certify to the best of my knowledge and belief that as of December 31, 2017 the Metropolitan Transportation Authority's Internal Controls Structure and Procedures are effective and

- Fully Compliant (Full compliance with all provisions)
- Partially Compliant (Partial compliance with some or all provisions)
- Not Compliant (Noncompliance with all provisions)

with the Enterprise Risk Management/Internal Control Guidelines Issued by the MTA Board.

  
\_\_\_\_\_  
JOSEPH J. LHOTA, CHAIRMAN

01/11/18  
\_\_\_\_\_  
Date

# MTA Information Technology

Audit Committee Report on IT

January 2018

**Sidney Gellineau, CIO**



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## Purpose / Overview

This presentation has been prepared to update MTA Audit Committee on major enterprise-wide technology strategies and initiatives underway.



# MTA IT is driving savings by using resources more efficiently across all agencies

- 2015 Budget reduction of 6%
  - 59 Positions (\$19.3m)
  - \$3.4m Non Labor
  
- 2016 Budget reduction of 7%
  - 69 Positions (\$16.7m)
  - \$5.9m Non Labor
  
- 2017 Budget reduction
  - \$1.6m Non Labor
  
- 2018 Budget reduction
  - \$5.1m Non Labor – *proposed* - to fund NYCT Subways Action Plan
  
- One time savings from demand management \$96.1m

Note some staff additions were necessary:

**Labor Agreements:** Converted consulting positions to 67 permanent positions for technical support and service desk

**New Project Requirements:** 61 positions added to support cybersecurity, projects approved by IT Governance, EAM, and Capital Programs (e.g., M9s & PTC)

Total savings since consolidation \$143m

\* Includes Payroll underruns in 2015 and 2016



# Goal and Progress of Application Rationalization effort at MTA

- 2017 Inventory – 920 Applications
- 584 are in scope for rationalization

## Business Drivers for Application Rationalization

### Reduced number of custom apps

Minimal use of custom apps will reduce maintenance and support.

### Reduced integration complexity

Rationalization will help with eliminating complex integration environments.

### Reduced app support costs

Rationalization will help with identifying areas where app support can be minimized.

- Out of 584 Apps., 298 are potential candidates for rationalization within Strategic Projects
- **23 Apps** already completed
- Remaining applications
  - ✓ in process of being rationalized
  - ✓ need Fit Gap Analysis

## Examples

	Apps. that will be rationalized
• New Fare Payment	29
• EAM	76
• Kronos Timekeeping	11
• Document Management	37
• Incident Management	9
• Crew Management	11
• Central Train Scheduling	13

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## (Multi-year) Major Initiatives

- ❑ Windows Server Upgrades
- ❑ Windows Desktop Upgrade
  - ❑ Win10 (25K Desktops)
- ❑ Data Center Optimization (5)
  - ❑ Cloud Hosting
  - ❑ Mainframe Support
- ❑ MNR & LIRR Network replacement



MTA IT continues to consolidate multiple contracts into single IT Contracts or Enterprise License Agreements (ELA).

- Completed
  - Microsoft
  - CISCO (networks)
  - VM Ware (datacenter and server virtualization)
  - IT Training Services
  - EMC (System Backup)
  - HP Managed Print Services
  - Dell (computer hardware)
  - IBM (Document management)
  - Oracle Maintenance



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# Major Accomplishments 2017

## □ Information Technology

- Install ServiceNow to improve IT Service delivery and inventory control
- Updated cyber security platforms
- Delivered dashboards for project tracking
- Upgraded Identity Management Systems

## □ Agencies

- "B" Division Countdown Clock rollout
- Security reviews of SCADA/ICS systems
- MTA.Info Performance Dashboards
- LIRR PCI Compliance (new)
- NYCT, MNR PCI Compliance (renewal)
- On Board Ticket Issuing Machines (OBTIMS)



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# Goals for 2018

## □ Information Technology

- Continue to update cyber security platforms.
- Upgrade PeopleSoft hardware and disaster recovery
- Continue upgrades to desktops to Windows 10
- New Mainframe Support Contract

## □ Agencies

- Complete replacement of NYCT Business Data Network
- Start Upgrades of MNR and LIRR Networks
- Complete Proof of Concept for UWB CBTC Systems
- Continue rollout of Info Asset Management System



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## What are our concerns?

- Since the last briefing IT working with HR is having greater success in recruiting staff
  - Job Fairs
  - Interviewing on the weekends
  - Advertising effort promoting MTA IT brand
  - Development of current staff
  
- We are assessing the impact of the recent hiring restrictions on IT Operations and project completion.



Metropolitan Transportation Authority  
Department of Diversity and Civil Rights

Report to the Audit Committee  
January 22, 2018



# MTA Headquarters DDCR Update

## Inactive Contracts – Status as of December 31, 2017

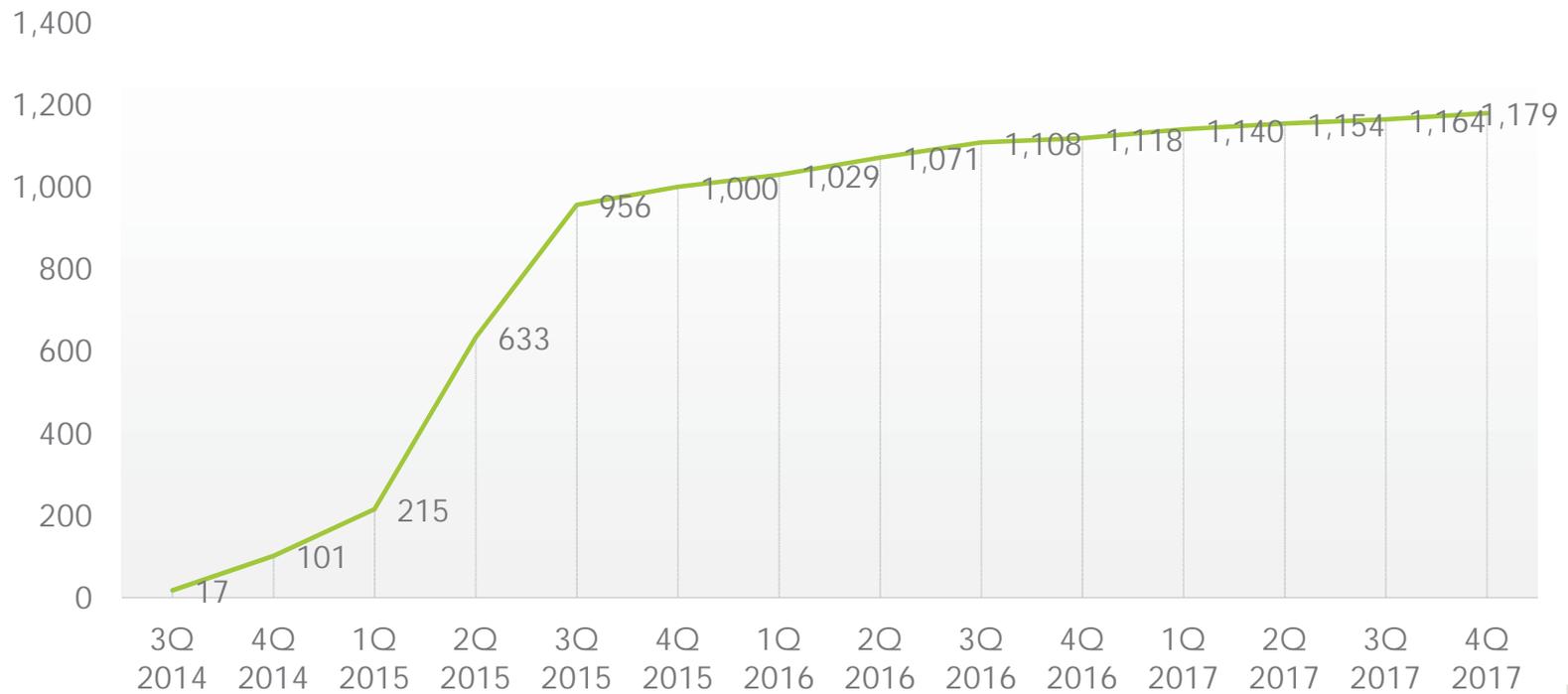
Inactive Contracts with Goals	#
1. Total Contracts Reviewed and Closed	887
2. Contracts Administratively Closed	292 <sup>1</sup>
Sub-Total	1,179 (95%)
3. Closeouts in Progress	19
4. Contracts Pending Agency Action	48
Total	1,246 <sup>2</sup> (100%)

1. Contracts administratively closed because of the age of the contract (beyond the established seven-year record retention period).
2. Total number of inactive & closed contracts as of December 31, 2017.



# MTA Headquarters DDCR Update

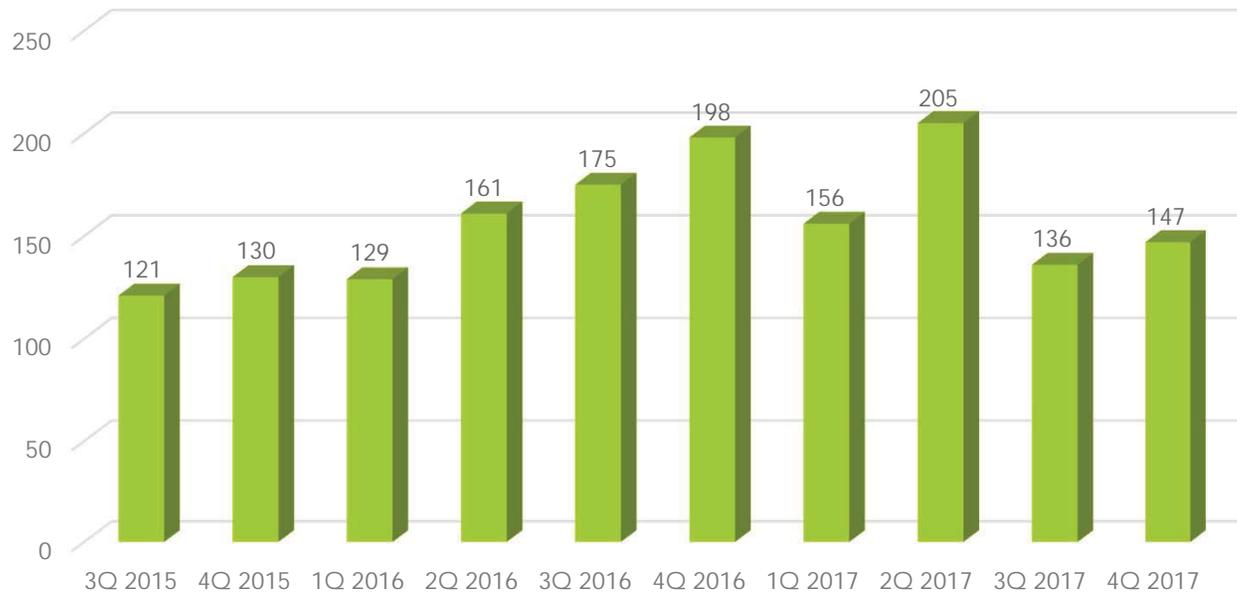
## DDCR Contract Closeout Progression 3Q 2014 through 4Q 2017



# MTA Headquarters DDCR Update

DDCR Project Site Visits: 3Q 2015 - 4Q 2017

Total Site Visits Performed = 1,558



# MTA AUDIT SERVICES

## 2017 Year End Status and 2018 Proposed Audit Plan

January 22, 2018



# 2017 Audit Plan Summary

## Financial/Operational/Technology

- **Projects Completed** = **168**
- **Recommendations** = **607**
- **Savings/Cost Efficiencies** = **\$ 53.7 M**

## Contracts

- **Projects Completed** = **157**
- **Pre-Award OH Reviews** = **289**
- **\$ Audited** = **\$ 989.7 M**
- **Questioned Costs** = **\$ 37.9 M**



# 2017 Audit Plan

## **Superstorm Sandy Recovery Oversight Audits (Since 2013)**

- Total Grant Expenditures	=	\$1.71 Billion
- Total \$ Audited	=	\$333 Million
- Projects Completed	=	94
- Recommendations	=	252
- Follow-up Audits Completed	=	10
- Total Cost Adjustments	=	\$ 59.6 Million
- Use of External Monitors	=	2 Projects (\$395K)
- DOT/IG Reviews	=	4
- FTA Reviews	=	7



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# MTA Audit Services

## 2018 Audit Plan



# Audit Plan Formulation

## Perform Company Analysis

Analyze strategies, financial indicators, and operational controls to identify the audit universe.

## Develop Value Driver Analysis

Understand enterprise, business unit and functional strategies based on business risk factors and discussions with key management personnel.

## Evaluate Enterprise Risk

Evaluate the enterprise risk using five main key indicators.

## Prioritize Audits

Identify auditable activities / units, based on the results of the risk assessment.

## Refine Audit Strategy

Using the IIA's risk assessment methodology formulate audit plan and obtain Audit Committee approval.

September

October

November

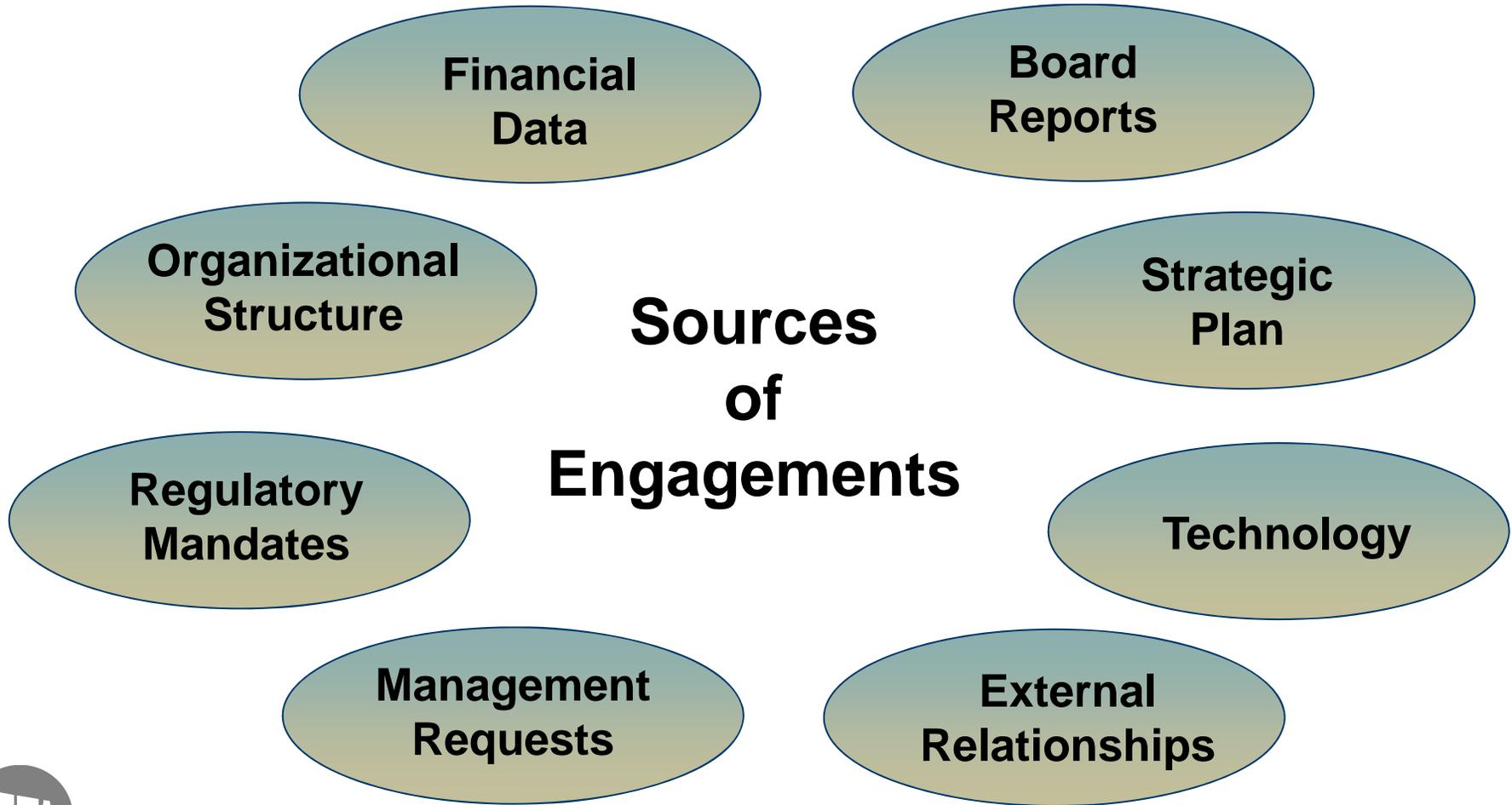
December

January



# The Audit Plan Sources

*The Metropolitan Transportation Authority Mission is to preserve and enhance the quality of life and economic health of the region it services through the cost-efficient provisions of safe, on-time, reliable, and clean transportation services.*



# Risk Factor Considerations

*Financial Exposure*

*Nature of Operations*

*Control Activities*

*Previous Audit Results*

*Management Input*



**Conducted  
91 Interviews**



# Risk Assessment Results

## *Audit Universe*

**296 Activities**  
**(672 Sub-Activities)**

**129 High**

**120 Moderate**

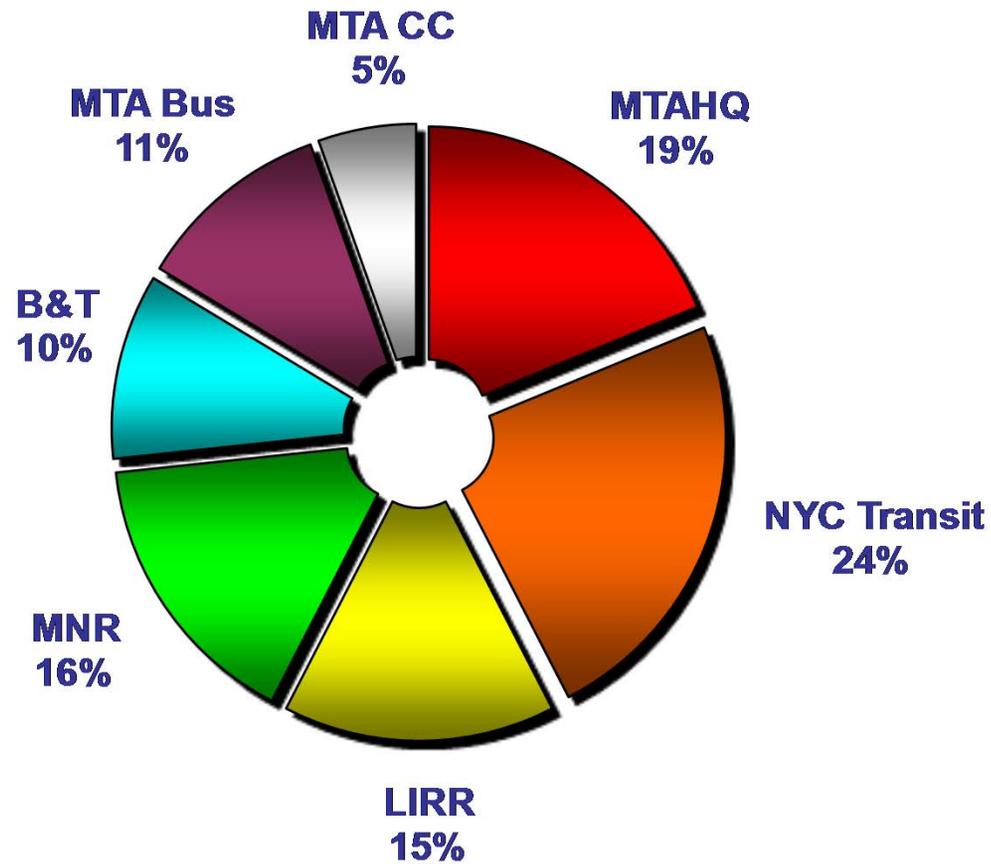
**47 Low**

**2018 Audit Plan**  
**165 Audits**

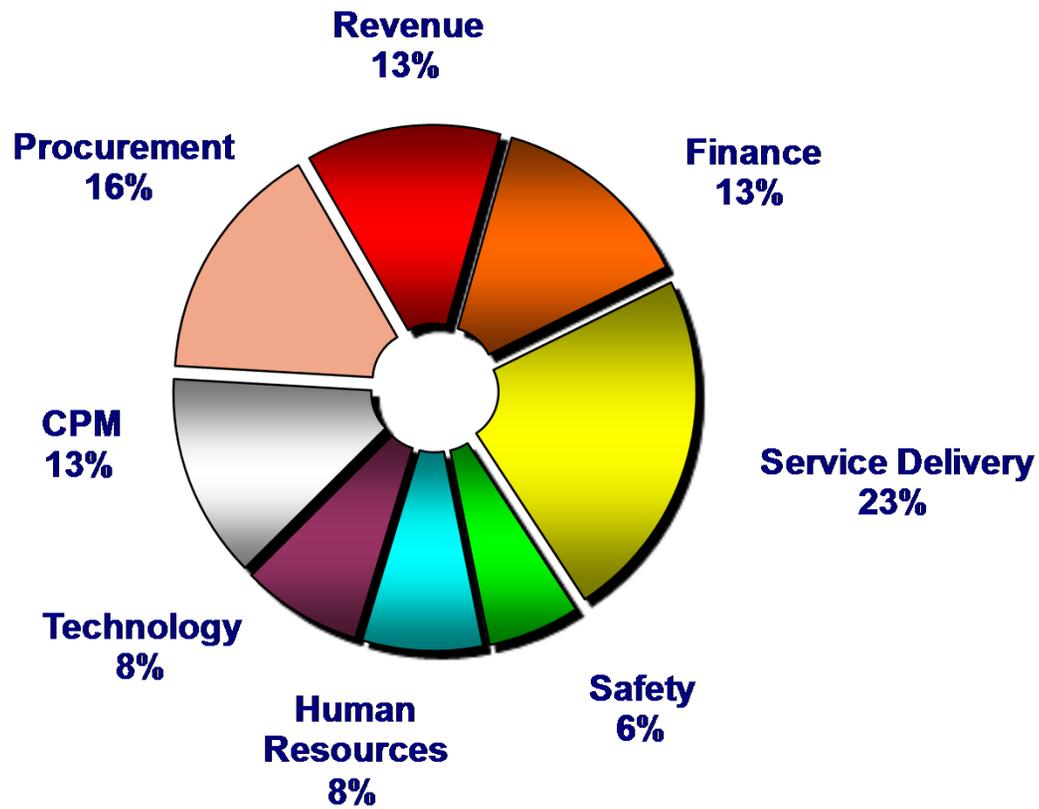
**Audit Universe based on a Five Year Cycle**



# 2018 AGENCY RESOURCE ALLOCATION



# 2018 RESOURCE ALLOCATION BUSINESS FUNCTIONS



# 2018 Audit Strategy

- Focus Audit work on Governance, Risk, and Control Environment**
- Review efficiency & effectiveness of Operations**
- Evaluate Reliability of Internal and External Reporting**
- Support Agency-wide Goals & Initiatives**



# 2018 Audit Areas

Finance	Safety	Capital Program
<ul style="list-style-type: none"> <li>Treasury</li> <li>Payroll</li> <li>Pensions</li> <li>Accounts Payable</li> <li>Timekeeping</li> <li>Overtime</li> <li>Enterprise Asset Management</li> <li>Internal Control Act</li> <li>Year-End Financial Statements</li> <li>Audit Recommendations</li> </ul>	<ul style="list-style-type: none"> <li>Flagging</li> <li>Sandy Project Safety</li> <li>Hours of Service</li> <li>Sleep Apnea Program</li> <li>Asbestos / Lead Abatement</li> </ul>	<ul style="list-style-type: none"> <li>Superstorm Sandy</li> <li>LIRR 3<sup>rd</sup> Track</li> <li>7 Line Extension</li> <li>2nd Avenue</li> <li>East Side Access</li> <li>Capital Contracts</li> </ul>
	Procurement	Human Resources
	<ul style="list-style-type: none"> <li>Executive Order 168</li> <li>PeopleSoft Market Place</li> <li>Operating Contracts</li> <li>Inventory Management</li> <li>Non-PO Purchases</li> <li>M/WBE Program</li> <li>Third Party Contracts</li> </ul>	<ul style="list-style-type: none"> <li>Medical Benefits</li> <li>Employee Availability</li> <li>Operational Training</li> <li>Independent Medical Exams</li> <li>Personal Actions</li> </ul>
Service Delivery	Revenue	Technology
<ul style="list-style-type: none"> <li>Subway Action Plan</li> <li>Infrastructure Maintenance</li> <li>Subway Car Maintenance</li> <li>Signals</li> <li>Power</li> <li>Depot Facilities</li> <li>Diesel Shops</li> <li>Bridge &amp; Tunnel Facilities</li> <li>Amtrak Agreements</li> <li>Elevators &amp; Escalators</li> <li>Customer Service</li> <li>Track Repairs</li> <li>Yard/Tower Operations</li> </ul>	<ul style="list-style-type: none"> <li>MetroCard</li> <li>E-ZPass</li> <li>Open Road Tolling</li> <li>Tenant Management</li> <li>Rental &amp; Advertising Agreements</li> <li>Electronic Ticket Collection</li> <li>Transit Wireless</li> <li>On-Board Program</li> </ul>	<ul style="list-style-type: none"> <li>BSC PeopleSoft</li> <li>Data Security</li> <li>Sensitive Data</li> <li>Cloud Computing</li> <li>Enterprise Change Mgmt.</li> <li>General Controls</li> <li>Data Centers</li> <li>Business Continuity</li> </ul>

# Internal Quality Assurance Review 2017 Results

Results: "Fully Complies"		
Seq#	IIA - Audit Elements	Compliance
1	<b>Purpose, Authority &amp; Responsibility</b>	✓
2	<b>Independence &amp; Objectivity</b>	✓
3	<b>Proficiency &amp; Due Professional Care</b>	✓
4	<b>Quality Assurance &amp; Improvement Program</b>	✓
5	<b>Managing the Internal Audit Activity</b>	✓
6	<b>Nature of Work</b>	✓
7	<b>Engagement Planning</b>	✓
8	<b>Performing the Engagement</b>	✓
9	<b>Communicating Results</b>	✓
10	<b>Monitoring Progress</b>	✓
11	<b>Resolution of Management's Acceptance of Risk</b>	✓



# Other Activities

- ❑ Continue to coordinate audit activities with:
  - External Auditors
  - City/State Comptrollers' Offices
  - MTA Chief Compliance Officer
  
- ❑ Perform Internal Quality Assurance Review



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# QUESTIONS?

