



**Metropolitan Transportation Authority**

# Audit Committee Meeting

## November 2017

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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, 11/13/2017  
2:45 - 3:45 PM ET**

## **1. PUBLIC COMMENTS**

## **2. APPROVAL OF MINUTES**

*Minutes of June 19, 2017 Meeting - Page 3*

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

*2017 - 18 WORKPLAN - Condensed - Page 6*

*2017 - 18 WORKPLAN - Detailed - Page 8*

## **4. INDEPENDENT ACCOUNTANT'S REVIEW REPORT - 2nd QUARTER 2017**

*Draft - MTA Consolidated Financial Statements - 2Q 2017 - Page 12*

## **5. APPOINTMENT OF EXTERNAL AUDITORS**

*PCAOB 2016 Inspection Report of Deloitte - Page 138*

## **6. AUDIT APPROACH PLAN/COORDINATION WITH EXTERNAL AUDITOR (Materials previously distributed)**

## **7. REVIEW OF MTA INSPECTOR GENERAL'S OFFICE**

*Draft - MTA 2016 IG Report - Page 186*

## **8. REVIEW OF THE AUDIT COMMITTEE CHARTER**

*Audit Committee Charter - Page 189*

## **9. ANNUAL AUDIT COMMITTEE ACTIVITY REPORT (Materials previously distributed)**

**MINUTES OF MEETING  
AUDIT COMMITTEE OF THE BOARD  
MONDAY, JUNE 19, 2017 - 2:15 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**

**M. Fucilli - MTA  
L. Kearse - MTA**

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

**M. Fritz - Deloitte  
G. Koslow - Deloitte  
J. Strohmeier - Deloitte  
C. Hickmann - Deloitte**

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**1. PUBLIC COMMENTS PERIOD**

Omar Vera, the only public speaker, asked about the MTA Chairman vacancy and expressed his concerns about recurring train delays.

**2. APPROVAL OF MINUTES**

The minutes of the April 24, 2017 Audit Committee meeting were approved.

**3. AUDIT COMMITTEE WORK PLAN**

There were no changes to the work plan.

**4. INDEPENDENT ACCOUNTANT’S REVIEW REPORT – 1<sup>ST</sup> QUARTER 2017**

Mike Fritz (Deloitte) presented the 1<sup>st</sup> Quarter 2017 MTA Consolidated Financial Statements to the committee and stated that it included discussions and analysis prepared by MTA financial management who are available to answer questions regarding the results of operations for the three months ended March 31. He said Deloitte will issue the report on their review of the 1<sup>st</sup> 2017 Quarter Financial Statements upon completion of the 2016 financial statements audit.

A motion was made and seconded to accept the 1<sup>st</sup> Quarter 2017 MTA Consolidated Financial Statements.

**5. 2016 SINGLE AUDIT REPORTS**

Mike Fritz said their single audits of federal grant expenditures totaling \$1.7 billion and state grant expenditures totaling \$187.9 million in 2016 resulted in a finding of: (a) “significant deficiency” with respect to federal grants for the MTA having awarded contracts without fully following the federal contracting requirements and (b) non-compliance on the timely submission of the mandated quarterly reports with respect to state grants. Overall, other than these two comments, Mike said their single audits resulted in a clean opinion.

A motion was made and seconded to accept the single audit reports.

**6. 2016 INVESTMENT COMPLIANCE REPORT**

Mike Fritz directed the Committee to the one-page report on their audit of MTA investments, which he said was performed in connection with their year-end audit of the consolidated financial statements. He indicated their audit found the MTA's investments portfolio complied with MTA's investment policies and guidelines and the New York State Comptroller's Investment Guidelines.

A motion was made and seconded to accept the Investment Compliance Report.

**7. MANAGEMENT LETTERS REPORT**

Mike Fritz first spoke about the "review and reconciliation" control issues at NYC Transit, Bridges & Tunnels and SIRTOA that resulted in the restatement of the respective agencies' prior year's financial statements and effected the year-end closing of the consolidated financial statements. He said that it was financial management who have identified the reconciliation issues and they have been working closely with the auditors to resolve them with the goal of getting the audited financial statements issued by June 30. He then talked about the items contained in the management letter section of the report, citing, among others, the need for the agencies to complete the Government Finance Officers Association (GFOA) checklist on the preparation of financial reports; the need for the agencies to align their password parameters with security policies and guidelines; that MTA HQ procedures for accrual of capital expenditures and grants should be improved; and MNR controls around materials and supplies inventory be enhanced. Mike Fritz indicated that finance management agreed with the management letter comments and plans to implement the recommendations are reflected in the report.

Member Pally inquired as to the time it takes to close a comment or implement a recommendation. Mike Fritz said most are cleared within a year but some recommendations, such as those pertaining to IT issues, could take longer. He did note that a majority of prior year's comments have been remediated as noted in the report. Mike Fucilli also said that follow-ups are made and recommendations that remained open six months past their implementation dates are reported to this committee.

A motion was made and seconded to accept the Management Letters.

**8. ENTERPRISE RISK MANAGEMENT UPDATE AND ETHICS COMPLIANCE PROGRAM**

Lamond Kears (MTA Chief Compliance Officer) provided the Committee with a summary of the activities of the ERM Committee and its accomplishments to date. He said the Annual Internal Control Certification Report is being compiled for presentation to this Committee in November and the agencies are working to close the significant control deficiencies identified in their areas of responsibility. He discussed the year-to-year changes in the number of significant business processes, risk and controls and noted that of the 6,125 controls identified 5 were classified under "significant deficiency" of which 4 were safety-related. Lamond briefly discussed the top agency and enterprise-wide risks presented in the agenda book.

For the Ethics Compliance Program, Lamond spoke about the work accomplished by Corporate Compliance to date which included, among others, the handling of over 2,000 compliance matters; the achievement of a 90% training completion rate; and the increased compliance coordination among agencies. He said 96% of the 2000 plus compliance matters pertained to inquiries, the majority of which were about financial disclosure questions coming from first-time filers and from repeat filers seeking clarification on the new filing requirements. He noted 83% of the inquiries came through e-mail and only 22 of the over 2,000 inquiries requested anonymity, suggesting a high degree of confidence in the way the

employees' issues are being handled. As to training, Lamond said that while there was success in achieving 90% completion rate on the MTA-mandated training, only a 65% completion rate was achieved on the JCOPE Ethics Training. He said the data base for employees required to complete this training is being updated to obtain a more accurate measurement. Lastly, Lamond talked about the communication methods used to keep employees mindful of ethics and compliance policies and Corporate Compliance's "high level" goals which included, among others, a project to consolidate corporate policies.

There were discussions on the increased number of financial disclosure filers and the number of delinquent filers during which time Lamond mentioned that about 400 employees have been identified by the State as delinquent filers of which 15 were fined.


**9. 2017 AUDIT PLAN STATUS**

The Auditor General reported that MTA Audit Services is on track to complete the Audit Plan approved by the Committee in January and cited its accomplishments to date which, as presented in the agenda book, included: completing 67 projects and 65 contract audits and making over 200 recommendations to improve controls and reduce or avoid costs totaling \$59.6 million. The AG also reported the performance of the Superstorm Sandy audit, a unit within the department dedicated to audit Sandy-related expenditures to ensure they were proper and in accordance with FTA grant rules. He said from inception to date, the unit has: (a) completed the audit of \$303 million of the \$1.49 billion of FTA grant expenditures; (b) made 217 recommendations to strengthen controls; and (c) recommended adjustments to grant cost reimbursements totaling \$58 million. He noted that the FTA was appraised of the unit's activities and the audit results. The AG stated the department continues to maintain an experienced and professional staff to effectively conduct the audits and showed the Committee a slide showing the department staff, on average, have 21 years of business experience; 40% have graduate degrees and 73% have professional certifications such as CIA, CPA and CISA. Lastly, the AG spoke about the department's plans going forward which include completing the Audit Plan, providing support to critical HQ and agency projects and coordinating audit activities with the external audit entities.

**10. MOTION TO ADJOURN**

A motion was made and seconded to adjourn the meeting.

Respectfully submitted,

  
Michael J. Fucilli  
Auditor General

## 2017 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**

#### November 2017

Quarterly Financial Statements – 2 <sup>nd</sup> Quarter 2017	External Auditor/CFOs
Appointment of External Auditors	Committee Chair & Members
Audit Approach Plans/Coordination	External Auditor
Review of MTA/IG's Office	External Auditor/IG
Review of Audit Committee Charter	CCO and Committee Chair
Annual Audit Committee Report	Committee Chair

#### 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  
Management's Review of Consolidated  
Financial Statements  
Contingent Liabilities/Third Party  
Lawsuits (Executive Session)  
Financial Interest Reports  
Open Audit Recommendations  
DDCR Performance Measures

External Auditor/CFOs/Controllers

Comptroller

General Counsels/External Auditor  
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

# 2017 - 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

### **NOVEMBER 2017**

#### Quarterly Financial Statements - 2<sup>nd</sup> Quarter 2017

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 2017.

#### 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 2017 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 2017 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 2017. 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.

### **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 reviews 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.

# 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 Six-Month Period Ended June 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 June 30, 2017, and the related consolidated interim statements of revenues, expenses and changes in net position and consolidated cash flows for the six-month periods ended June 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 19, the Schedule of Changes in the MTA's Net Pension Liability and Related Ratios for the Single Employer Pension Plans on page 113, the Schedule of the MTA's Proportionate Share of Net Pension Liabilities of

Cost-Sharing Multiple-Employer Pension Plans on page 114, the Schedule of the MTA's Contributions for All Pension Plans on pages 115-116, and the Schedule of Funding Progress for the MTA Postemployment Benefit Plan on page 121 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 June 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.

November 13, 2017

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

**MANAGEMENT'S DISCUSSION AND ANALYSIS**  
**AS OF JUNE 30, 2017 AND DECEMBER 31, 2016 AND**  
**FOR THE SIX-MONTH PERIODS ENDED JUNE 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 June 30, 2017 and December 31, 2016 and for the six-month periods ended June 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 June 30, 2017 and December 31, 2016 and for the six-month periods ended June 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**

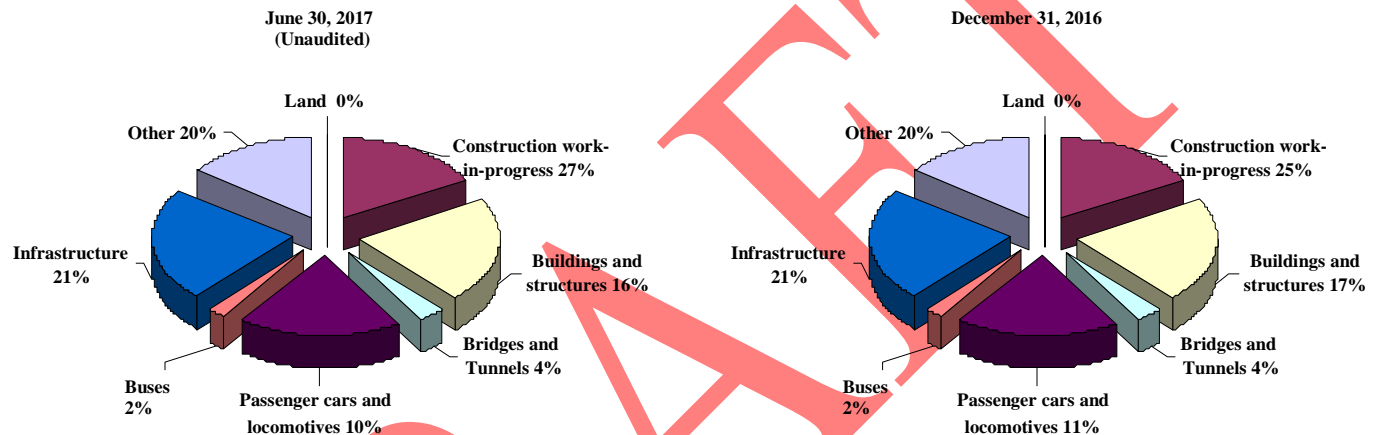
Capital assets include, but are not limited to: bridges, structures, tunnels, construction of buildings and the acquisition of buses, equipment, passenger cars, and locomotives.

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)	June 30, 2017	December 31, 2016	Increase / (Decrease)
	(Unaudited)		
Capital assets — net (see Note 6)	\$ 65,895	\$ 64,518	\$ 1,377
Other assets	10,797	9,268	1,529
Deferred outflows of resources	4,006	3,832	174
Total assets and deferred outflows of resources	<u>\$ 80,698</u>	<u>\$ 77,618</u>	<u>\$ 3,080</u>

### Capital Assets, Net



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

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

- Net capital assets increased at June 30, 2017 by \$1,377 or 2.1%. There was an increase in construction in progress of \$1,317, an increase in other capital assets of \$505, an increase in infrastructure of \$491, an increase in buildings and structures of \$122, an increase in buses of \$113, and an increase in bridges and tunnels of \$36. This was offset by a net increase in accumulated depreciation of \$1,207. 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 \$1,529 or 16.5%. The major items contributing to this change include:
  - An increase in investments of \$518 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 \$1,088 primarily due to an increase in State and regional mass transit tax of \$1,410 stemming from the approval of the New York State 2017-2018 budget in April, 2017, an increase in state and local operating assistance of \$155, and an increase in station maintenance of \$83. These increases were offset by a decrease in other state, city and local subsidies of \$152, a decrease in Federal and State grants for capital projects of \$44, a decrease of \$4 in mortgage recording tax, and a decrease of \$38 in receivables from New York State. There was also a decrease in other receivables of \$322 primarily due to the receipt of reinsurance recoveries related to Tropical Storm Sandy.
  - A decrease in cash of \$89 from net cash flow activities and a net increase in various other current and non-current assets of \$12.
- Deferred outflows of resources increased by \$174 or 4.5%. This increase was primarily due from higher deferred outflows related to pensions of \$118, an increase in deferred outflows for unamortized losses on refundings of \$55, and an increase in the fair value of derivative instruments of \$1.

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

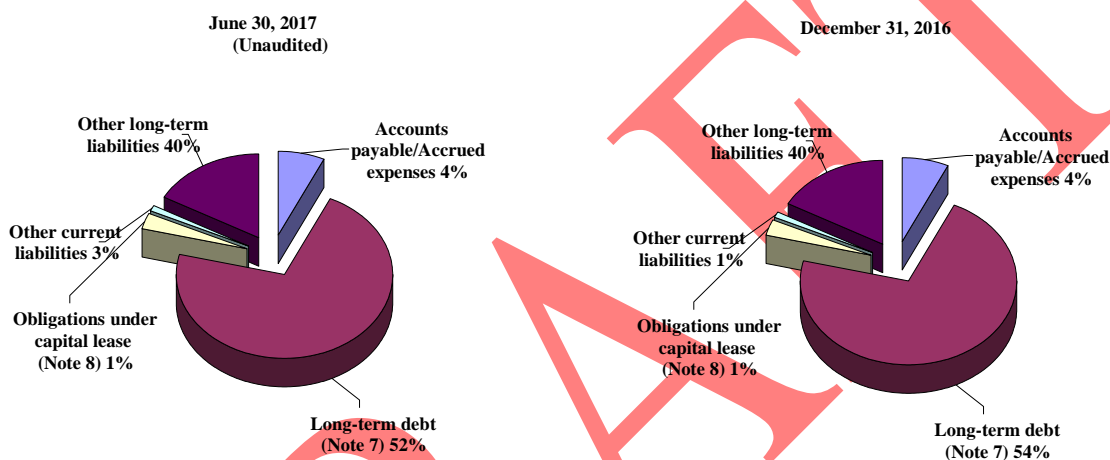
Current liabilities include: accounts payable, accrued expenses, current portions of long-term debt, capital lease obligations, pollution remediation liabilities, unredeemed fares and tolls, and other current liabilities.

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)	June 30, 2017	December 31, 2016	Increase / (Decrease)
	(Unaudited)		
Current liabilities	\$ 5,768	\$ 6,003	\$ (235)
Non-current liabilities	68,478	65,684	2,794
Deferred inflows of resources	323	324	(1)
Total liabilities and deferred inflows of resources	<u>\$ 74,569</u>	<u>\$ 72,011</u>	<u>\$ 2,558</u>

### Total Liabilities and Deferred Inflows of Resources



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

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

- Current liabilities decreased by \$235 or 3.9%. The net decrease in current liabilities was primarily due to a decrease in the current portion of long-term debt by \$333 primarily from debt service payments made in the first half of 2017, a decrease in accrued expenses of \$27, an increase of \$112 in unearned revenues, largely due to unused fare cards and school fare subsidies, an increase of \$9 in accounts payable due to timing, and an increase of \$4 in the derivative fuel hedge liability.
- Non-current liabilities increased by \$2,794 or 4.2%. This increase was mainly due:
  - An increase in the non-current portion of long-term debt of \$1,776 primarily due to 2017 bond issuances (See Note 7).
  - An increase in postemployment benefits other than pension liability (“OPEB”) of \$797 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 \$192 due to revised calculations of the workers’ compensation reserve.
  - A net increase in other various non-current liabilities of \$29.

- Deferred inflows of resources decreased by \$1 or 0.3%.

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

(In millions)	June 30, 2017 (Unaudited)	December 31, 2016	Increase / (Decrease)
Net investment in capital assets	\$ 25,972	\$ 25,756	\$ 216
Restricted for debt service	966	352	614
Restricted for claims	157	178	(21)
Restricted for other purposes	998	935	63
Unrestricted	(21,964)	(21,614)	(350)
Total Net Position	<u>\$ 6,129</u>	<u>\$ 5,607</u>	<u>\$ 522</u>

***Significant Changes in Net Position Include:***

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

At June 30, 2017, total net position increased by \$522 or 9.3%, when compared with December 31, 2016. This change is a result of net non-operating revenues of \$3,333 and appropriations, grants and other receipts externally restricted for capital projects of \$1,098 offset by operating losses of \$3,909.

The net investment in capital assets increased by \$216 or 0.8%. Funds restricted for debt service, claims and other purposes increased by \$656 or 44.8% in the aggregate, mainly due to scheduled debt service payments. Unrestricted net position decreased by \$350 or 1.6%.

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

(In millions)	Six-Month Period Ended		Increase/ (Decrease)
	June 30, 2017 (Unaudited)	June 30, 2016 (Unaudited)	
Operating revenues			
Passenger and tolls	\$ 3,936	\$ 3,877	\$ 59
Other	309	301	8
Total operating revenues	4,245	4,178	67
Non-operating revenues			
Grants, appropriations and taxes	3,765	3,885	(120)
Other	345	362	(17)
Total non-operating revenues	4,110	4,247	(137)
Total revenues	8,355	8,425	(70)
Operating expenses			
Salaries and wages	2,889	2,772	117
Retirement and other employee benefits	1,494	1,496	(2)
Postemployment benefits other than pensions	1,073	1,073	-
Depreciation and amortization	1,211	1,221	(10)
Other expenses	1,487	1,425	62
Net expenses related to asset impairment	-	1	(1)
Total operating expenses	8,154	7,988	166
Non-operating expenses			
Interest on long-term debt	822	732	90
Other net non-operating expenses	(45)	(82)	37
Total non-operating expenses	777	650	127
Total expenses	8,931	8,638	293
Loss before appropriations, grants and other receipts externally restricted for capital projects	(576)	(213)	(363)
Appropriations, grants and other receipts externally restricted for capital projects	1,098	967	131
Change in net position	522	754	(232)
Net position, beginning of period	5,607	5,833	(226)
Net position, end of period	\$ 6,129	\$ 6,587	\$ (458)

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

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

- Total operating revenues increased by \$67 or 1.6%. The increase was mainly due to higher subway ridership and an increase in vehicle crossings.
- Total non-operating revenues decreased by \$137 or 3.2%.
  - Total grants, appropriations, and taxes decreased by \$120. This was primarily due to a decrease in tax-supported subsidies from New York City and local service areas of \$152 mainly from Urban Tax and a decrease in other subsidies of \$3. This was offset by an increase in tax-supported subsidies from New York State of \$35 mainly from Payroll Mobility Tax.
  - Other non-operating revenues decreased by \$17 primarily due to a decrease in subsidies from the Connecticut Department of Transportation for the MTA Metro-North Railroad of \$7 and a decrease in subsidies from New York City of \$11 for MTA Bus and MTA Staten Island Railway. This was offset by an increase in Station Maintenance and use assessments of \$1.
- Labor costs increased by \$115 or 2.2%. The major changes within this category are:
  - Salaries, wages and overtime increased by \$117 due largely to increases in MTA New York City Transit.
  - Retirement and employee benefits decreased by \$2.
- Non-labor operating costs increased by \$51 or 1.9%. The variance was primarily due to:
  - An increase in claims arising from injuries to persons of \$63 based on the most recent actuarial valuations.
  - An increase in electric power of \$23 and fuel of \$14 due to changes in rates and consumption.
  - A decrease in professional service contracts of \$10 due to changes in consulting services requirements.
  - Decrease in insurance by \$18 due to lower liability premiums.
  - A decrease in material and supplies by \$6, mainly due to revised maintenance and repairs requirements for transit and commuter systems.
  - A decrease in depreciation of \$10 primarily due to the correction of the capitalization date of assets placed in service in prior years offset by additional facilities, track work and new buses and subway cars placed into service.
  - A net decrease in other various expenses of \$5 mainly due to lower operating expenses.
- Total net non-operating expenses increased by \$127 or 19.6% primarily due to increases in interest on long-term debt of \$90 and other non-operating expenses of \$37 mainly due to changes in the fair value for fuel hedges.



- Appropriations, grants and other receipts externally restricted for capital projects increased by \$131 or 13.5%, 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 second quarter of 2017 decreased relative to 2016, with ridership down by 30.5 million trips (2.3%). Subway ridership declined by 11.1 million (1.3%), while MTA New York City Transit Bus ridership declined by 18.0 million trips (5.6%). MTA Bus ridership declined by 1.4 million trips (2.8%), and MTA Staten Island Railway declined by 1 thousand trips (0.05%), while MTA Metro-North Railroad increased by 53.3 thousand trips (0.1%) and MTA Long Island Rail Road experienced an increase of 0.4 million trips (0.8%). The overall decline in ridership in the first half of 2017 was comprised of a 15.7 million decline in the first quarter and a 14.8 million decline in the second quarter; slightly smaller declines in subway ridership in the second quarter were mostly offset by larger declines in MTA New York City Transit and MTA Bus ridership. Lower ridership levels through the second quarter of 2017 are partially attributable to unfavorable weather conditions. In the first quarter, storms dumped at least five inches of snow on three occasions, including during Winter Storm Stella, which hit the metropolitan area on March 14, 2017, leading the MTA to suspend above-ground subway service and MTA Metro-North Railroad service and limit bus service. During the second quarter, high rainfall relative to 2016 levels occurred in each month, with total rainfall in the quarter 77% higher in 2017. Besides weather-related impacts, utilization has been adversely impacted by a general decline in bus utilization, as well as weaker subway ridership during non-peak periods. Vehicle traffic at MTA Bridges and Tunnels facilities decreased by 1.4 million crossings (0.9%) through the second quarter; as with ridership, the decline in traffic reflects the impact from adverse weather conditions.

Seasonally adjusted non-agricultural employment in New York City for the second quarter was higher in 2017 than in 2016 by 71.6 thousand jobs (1.7%). On a quarter-to-quarter basis, New York City employment has increased in each of the last twenty-seven 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 2.6% in the second 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 non-residential fixed investment, exports, personal consumption expenditures and federal government spending; these were partially offset by negative contributions from private residential fixed investment, private inventory investment, and state and local government spending. Imports, which are a subtraction in the Gross Domestic Product ("GDP") calculation, increased. The acceleration in RGDP growth, over the first quarter's revised 1.2% growth rate, reflected a smaller decrease in private inventory investment, an acceleration in personal consumption expenditures, and an increase in federal government spending. These were partly offset by a downturn in residential fixed investment, and decelerations in exports and nonresidential fixed investment. Another possible factor in the acceleration in RGDP growth from the first to second quarter is the presence of

“residual seasonality”. Despite the BEA’s seasonal adjustment of the RGDP, first quarter RGDP – as reported by the BEA – has been consistently below the other quarters for more than a decade.

The New York City metropolitan area’s price inflation, as measured by the Consumer Price Index for All Urban Consumers (“CPI-U”), was the same as the national average in the second quarter of 2017, with both indices increasing by 1.9% when compared with the second quarter of 2016. An 8.5% increase in the regional price of energy products, along with a 5.6% national increase, impacted overall inflation; in the metropolitan area, the CPI-U exclusive of energy products increased by 1.5%, while nationally, inflation exclusive of energy products was 1.6%. Increasing less than overall energy prices, the spot price for New York Harbor conventional gasoline rose by 1.7% from an average price of \$1.51 per gallon to an average price of \$1.53 per gallon between the second 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. 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 job gains have moderated but remained solid and that the unemployment rate declined since the beginning of 2017. Household spending picked up in recent months, while business fixed investment continued to expand. Inflation has declined recently and was somewhat below the FOMC’s 2 percent target, but 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 second quarter of 2017 were lower than the second quarter of 2016 by \$2.9 (2.5%); receipts in the second quarter of 2017 were \$6.3 (5.4%) lower than receipts from the first quarter of 2017. Despite the gradual overall recovery of MRT receipts that began in 2012, average monthly receipts in 2017 remain \$25.8 (40.6%) 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 \$58.3 (29.1%) lower than receipts for the second quarter of 2016; receipts in the second quarter of 2017 were \$25.6 (15.3%) lower than receipts from the first quarter of 2017. Average monthly receipts in 2017 were \$22.0 (29.8%) 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 second quarter of 2017 totaled 148.7 million crossings, which was 1.4 million, or 0.9% lower than the first half of 2016. The decline primarily resulted from one less calendar day in February 2017 due to the 2016 leap year, relatively harsh weather in March of 2017, when snow accumulations neared 10 inches compared to 2 inches last year, and Hurricane Sandy restoration construction at the Queens Midtown Tunnel and the Hugh L. Carey Tunnel. Despite the decline in traffic, toll revenue, before bad debt expense, through June 2017 was \$5.5, or 0.6% more than the first half of 2016 due to the toll increase implemented in March 2017. Year-to-date toll revenue in June 2017 was \$916.7 compared to \$911.2 in June 2016.

The E-ZPass electronic toll collection system experienced year-to-year increases in market share. Total average market share as of the June 30, 2017 was 88.3% compared to 86.0% as of June 30, 2016. The average weekday market shares were 89.7% and 87.6% for the first half of 2017 and the first half of 2016, respectively.

*MTA New York City Transit* - Total revenue from fares were \$2,208 for the period ended June 30, 2017, an increase of \$29.6 or 1.4% compared to the period ended June 30, 2016. For the same comparative period, total operating expenses increased by \$52.8 or 1.0%, totaling \$5,323 for the six months ended June 30, 2017.

*MTA Long Island Rail Road* - Total operating revenue for the six months ended June 30, 2017 were \$382.8, which was higher by \$11.1 or 3.0% compared to the first six months of 2016. For the same comparative period, operating expenses were higher by \$9.5 or 1.1%, totaling \$907.0 for the six months ended June 30, 2017.

*MTA Metro-North Railroad* - During the first six months of 2017, operating revenue increased by \$17.6 or 4.8% compared to the first six months of 2016. During the same period, operating expenses increased by \$46.3 or 6.3%. Year-to-date 2017 fare revenue increased by 6.3% and Ridership decreased by 0.4% compared to the same period in 2016. The increases in revenue occurred on the New Haven, Harlem and Hudson Lines 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 June 30, 2017 was \$223.1 compared to \$222.0 for the period ended June 30, 2016.

### **Capital Programs**

At June 30, 2017, \$7,918 had been committed and \$1,939 had been expended for the combined 2015-2019 MTA Capital Programs and the 2015-2019 MTA Bridges and Tunnels Capital Program, and \$25,680 had been committed and \$18,450 had been expended for the combined 2010-2014 MTA Capital Programs and the 2010-2014 MTA Bridges and Tunnels Capital Program, and \$24,026 had been committed and \$23,398 had been expended for the combined 2005-2009 MTA Capital Programs and the 2005-2009 MTA Bridges and Tunnels Capital Program.

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

*2015-2019 Capital Program* — Capital programs covering the years 2015-2019 for: (1) the commuter railroad operations of the MTA conducted by MTA Long Island Rail Road and MTA Metro-North Railroad (the “2015–2019 Commuter Capital Program”), (2) the transit system operated by MTA New York City Transit and its subsidiary, MaBSTOA, the MTA Bus Company, and the rail system operated by MTA Staten Island Railway (the “2015–2019 Transit Capital Program”) were originally approved by the MTA Board in September 2014. The capital programs were subsequently submitted to the Capital Program Review Board (“CPRB”) in October 2014. This plan was disapproved by the CPRB, without prejudice, in October 2014. The capital program for

the toll bridges and tunnels operated by MTA Bridges and Tunnels (the “2015–2019 MTA Bridges and Tunnels Capital Program”) was approved by the MTA Board in September 2014 and was not subject to CPRB approval.

On April 20, 2016, the MTA Board approved revised capital programs for the years covering 2015-2019. The revised capital programs provided for \$29,456 in capital expenditures. On May 23, 2016, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. The revised 2015-2019 MTA Bridges and Tunnels Capital Program, was approved by the MTA Board on April 20, 2016.

On February 23, 2017, the MTA Board approved a revision to the CPRB portion of the capital programs for the years covering 2015-2019, adding \$119 transferred from prior capital programs to support additional investment projects. On March 30, 2017, the CPRB deemed approved the revised 2015-2019 Capital Programs for the Transit and Commuter systems as submitted. On May 24, 2017, the MTA Board approved a full amendment to the 2015-2019 Capital Programs to reflect updated project estimates and rebalanced programs to address budgetary and funding needs of priority projects that include Second Avenue Subway Phase 2, MTA Long Island Rail Road regional mobility, station enhancement work, investments at Penn Station, and new Open Road Tolling at MTA Bridges and Tunnels.

As last approved by the CPRB, the revised 2015-2019 Capital Programs for the Transit and Commuter systems provided \$26,719 in capital expenditures, of which \$15,849 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; \$5,275 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$4,956 relates to the expansion of existing rail networks for both the transit and commuter systems to be managed by MTA Capital Construction; \$263 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, provided 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 \$5,929 in MTA Bonds, \$2,940 in MTA Bridges and Tunnels dedicated funds, \$8,336 in funding from the State of New York, \$6,875 in Federal Funds, \$2,492 from City Capital Funds, \$1,925 in pay-as-you-go (“PAYGO”) capital, \$600 from asset sale/leases, and \$562 from Other Sources.

At June 30, 2017, \$7,918 had been committed and \$1,939 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. By June 30, 2017, the 2010-2014 MTA Capital Programs budget reflected an overall decrease of \$264, primarily attributable to a reduction of MTA Bridges and Tunnels' Superstorm Sandy capital program, which did not require CPRB approval, and a transfer of the CPRB portion of the 2015-2019 Capital Program to support new investment projects. Of the \$34,587 now provided in capital expenditures, \$11,629 relates to ongoing repairs of, and replacements to, the transit system operated by MTA New York City Transit and MTA BxMA and the rail system operated by MTA Staten Island Railway; \$3,880 relates to ongoing repairs of, and replacements to, the commuter system operated by MTA Long Island Rail Road and MTA Metro-North Railroad; \$5,865 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 \$10,337 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 \$12,675 in MTA Bonds, \$2,018 in MTA Bridges and Tunnels dedicated funds, \$6,343 in Federal Funds, \$148 in MTA Bus Federal and City Match, \$761 from City Capital Funds, and \$1,484 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 \$9,115 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 June 30, 2017, \$25,680 had been committed and \$18,450 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 June 30, 2017, the 2005–2009 MTA Capital Programs budget increased by \$777 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 \$24,495 now provided in capital expenditures, \$11,602 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; \$3,749 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 \$9,807 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, \$2,826 in City Capital Funds, and \$1,319 from other sources.

At June 30 2017, \$24,026 had been committed and \$23,398 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 2016 November Plan***

The final 2017–2020 Financial Plan was released by the MTA in February 2017 (the “February Plan”). It includes a final Adopted Budget for 2017 (the “2017 Adopted Budget”) and a financial plan for the years 2017–2020. The February Plan is 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.

On a MTA consolidated basis, the February Plan, after including approved actions and technical adjustments, projects ending net closing cash balances of \$24 in 2017, \$27 in 2018, and \$7 in 2019, and a deficit of \$372 in 2020.

The 2016 MTA November Financial Plan (the “November Plan”), which was approved by the MTA Board in December 2016, projected small to break-even cash balances through 2019, with a deficit of \$319 in 2020. The

February Plan's \$372 projected cash deficit for 2020 is higher than the \$319 that the MTA Board approved in December because of unfavorable non-recurring events known as "one-shots." More specifically, non-recurring costs necessary to address the Transport Workers Union ("TWU") labor settlement, combined with a lower than anticipated MMTOA Receipts projection for 2017, exceeded the value of a favorable "one-shot" insurance recovery for Superstorm Sandy damage. Excluding these net unfavorable impacts (described below in more detail) on carryover cash balances, MTA's operating cash position is virtually unchanged from the November Plan for the years 2019 and beyond.

The February Plan included certain policy actions and re-estimated items that were highlighted "below-the-line" in the November Plan and are now included within the MTA baseline. Most of these re-categorizations had no budgetary impact. There was, however, a change in the projected revenue for the March 2017 fare and toll increase, as summarized below.

*Fare and Toll increase in March 2017* - The previously scheduled fare and toll increases were implemented on March 19, 2017. Excluding MTA Bus and MTA Staten Island Railway, revenues are expected to increase by \$220 in 2017, \$275 in 2018, \$276 in 2019 and \$277 in 2020. MTA Bus revenue is expected to increase by \$5 in 2017 and by \$7 annually for years 2018 through 2020, while MTA Staten Island Railway revenue is expected to increase by \$0.2 in 2017 and by \$0.3 in subsequent years.

The additional farebox and toll revenues and the accompanying subsidy impacts that are now reflected in the February Plan baseline differ from the below-the-line projections in the November Plan, reflecting (1) re-estimates based on the specific fare and toll levels approved by the MTA Board on January 25, 2017, and (2) an adjustment for date of implementation of the fare and toll increases from the beginning of March 2017 to March 19, 2017.

Excluding MTA Bus and MTA Staten Island Railway, revenues from the fare and toll increases are lower by \$15 in 2017 and by \$2 each year for 2018 through 2020 as the result of the re-estimates. Re-estimated farebox revenue for MTA Bus is lower by \$1 each year and MTA Staten Island Railway revenue is improved by \$0.1 each year.

Additional details of the November Plan and the February Plan are available on the MTA website 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 \$2.97 billion have been executed, including five grants in the amounts of \$194, \$886, \$684.5, \$344 and \$787.6 respectively for repair/local priority resiliency; and three grants for competitive resiliency totaling \$77.9. As of June 30, 2017, MTA has drawn down a total of \$1.50 billion in grant reimbursement for eligible operating and capital expenses. The balance of funds to be drawn down from all eight 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 \$2.85 billion of allocated FTA emergency relief funding in Federal Fiscal Years 2017 and 2018.

### ***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 Staten Island Rapid Transit Operating Authority* – No changes since February Plan.

*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).

### ***Bond Ratings***

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 that date, Fitch Ratings also upgraded the outstanding MTA Transportation Revenue Bond Anticipation Notes (“BANs”) to ‘F1+’ from ‘F1’.

### ***Confirmation of Chairman***

On June 22, 2017, Governor Andrew M. Cuomo announced the appointment Joseph J. Lhota as Chairman of the MTA, following the New York State Senate’s confirmation, on June 21, 2017, of Governor Cuomo’s nomination of Mr. Lhota.

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# METROPOLITAN TRANSPORTATION AUTHORITY

(A Component Unit of the State of New York)

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

(\$ In millions)

	June 30, 2017 (Unaudited)	December 31, 2016
<b>ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>		
<b>CURRENT ASSETS:</b>		
Cash (Note 3)	\$ 643	\$ 732
Unrestricted investments (Note 3)	3,481	3,995
Restricted investments (Note 3)	2,466	1,425
Restricted investments held under capital lease obligations (Notes 3 and 8)	4	93
Receivables:		
Station maintenance, operation, and use assessments	203	120
State and regional mass transit taxes	1,560	150
Mortgage Recording Tax receivable	41	45
State and local operating assistance	166	11
Other receivable from New York City and New York State	157	309
Due from Build America Bonds	1	1
Capital project receivable from federal and state government	178	222
Other	283	605
Less allowance for doubtful accounts	(36)	(130)
Total receivables — net	2,553	1,333
Materials and supplies	605	566
Prepaid expenses and other current assets (Note 2)	127	151
Total current assets	9,879	8,295
<b>NON-CURRENT ASSETS:</b>		
Capital assets (Note 6):		
Land and construction work-in-progress	17,776	16,459
Other capital assets (net of accumulated depreciation)	48,119	48,059
Unrestricted investments (Note 3)	34	28
Restricted investments (Note 3)	397	418
Restricted investments held under capital lease obligations (Notes 3 and 8)	368	273
Other non-current receivables	30	124
Receivable from New York State	76	114
Other non-current assets	13	16
Total non-current assets	66,813	65,491
<b>TOTAL ASSETS</b>	<b>76,692</b>	<b>73,786</b>
<b>DEFERRED OUTFLOWS OF RESOURCES:</b>		
Accumulated decreases in fair value of derivative instruments (Note 7)	440	439
Loss on debt refunding (Note 7)	1,023	968
Deferred outflows related to pensions (Note 4)	2,543	2,425
<b>TOTAL DEFERRED OUTFLOWS OF RESOURCES</b>	<b>4,006</b>	<b>3,832</b>
<b>TOTAL ASSETS AND DEFERRED OUTFLOWS OF RESOURCES</b>	<b>\$ 80,698</b>	<b>\$ 77,618</b>

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 JUNE 30, 2017 AND CONSOLIDATED STATEMENT OF NET POSITION AS OF DECEMBER 31, 2016 (\$ In millions)

	June 30, 2017 (Unaudited)	December 31, 2016
<b>LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable	\$ 535	\$ 526
Accrued expenses:		
Interest	227	226
Salaries, wages and payroll taxes	258	251
Vacation and sick pay benefits	926	911
Current portion — retirement and death benefits	20	15
Current portion — estimated liability from injuries to persons (Note 10)	379	415
Capital accruals	493	436
Other	572	648
Total accrued expenses	2,875	2,902
Current portion — long-term debt (Note 7)	1,644	1,977
Current portion — obligations under capital lease (Note 8)	4	4
Current portion — pollution remediation projects (Note 12)	23	23
Derivative fuel hedge liability (Note 14)	4	-
Unearned revenues	683	571
Total current liabilities	5,768	6,003
<b>NON-CURRENT LIABILITIES:</b>		
Net pension liability (Note 4)	8,983	8,983
Estimated liability arising from injuries to persons (Note 10)	3,218	3,026
Post employment benefits other than pensions (Note 5)	15,953	15,156
Long-term debt (Note 7)	38,721	36,945
Obligations under capital leases (Note 8)	430	429
Pollution remediation projects (Note 12)	63	65
Contract retainage payable	328	309
Derivative liabilities (Note 7)	452	454
Other long-term liabilities	330	317
Total non-current liabilities	68,478	65,684
<b>TOTAL LIABILITIES</b>	<b>74,246</b>	<b>71,687</b>
<b>DEFERRED INFLOWS OF RESOURCES:</b>		
Gain on debt refunding	28	29
Deferred Inflows related to pensions (Note 4)	295	295
<b>TOTAL DEFERRED INFLOWS OF RESOURCES</b>	<b>323</b>	<b>324</b>
<b>NET POSITION:</b>		
Net investment in capital assets	25,972	25,756
Restricted for debt service	966	352
Restricted for claims	157	178
Restricted for other purposes (Note 2)	998	935
Unrestricted	(21,964)	(21,614)
<b>TOTAL NET POSITION</b>	<b>6,129</b>	<b>5,607</b>
<b>TOTAL LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND NET POSITION</b>	<b>\$ 80,698</b>	<b>\$ 77,618</b>

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

SIX-MONTH PERIODS ENDED JUNE 30, 2017 AND 2016

(\$ In millions)

	June 30, 2017 (Unaudited)	June 30, 2016 (Unaudited)
OPERATING REVENUES:		
Fare revenue	\$ 3,026	\$ 2,966
Vehicle toll revenue	910	911
Rents, freight, and other revenue	309	301
Total operating revenues	4,245	4,178
OPERATING EXPENSES:		
Salaries and wages	2,889	2,772
Retirement and other employee benefits	1,494	1,496
Postemployment benefits other than pensions (Note 5)	1,073	1,073
Electric power	218	195
Fuel	77	63
Insurance	6	24
Claims	192	129
Paratransit service contracts	190	191
Maintenance and other operating contracts	270	276
Professional service contracts	157	167
Pollution remediation projects (Note 12)	1	3
Materials and supplies	281	287
Depreciation (Note 2)	1,211	1,221
Other	95	90
Total operating expenses	8,154	7,987
Net expenses related to asset impairment	-	1
OPERATING LOSS	(3,909)	(3,810)
NON-OPERATING REVENUES (EXPENSES):		
Grants, appropriations and taxes:		
Tax-supported subsidies — NYS:		
Mass Transportation Trust Fund subsidies	297	301
Metropolitan Mass Transportation Operating Assistance subsidies	1,668	1,669
Payroll Mobility Tax subsidies	900	859
MTA Aid Trust Account subsidies	145	146
Tax-supported subsidies — NYC and Local:		
Mortgage Recording Tax subsidies	223	222
Urban Tax subsidies	268	421
Other subsidies:		
New York State Service Contract subsidy	3	5
Operating Assistance - 18-B program	217	217
Build America Bond subsidy	44	45
Subtotal grants, appropriations and taxes	\$ 3,765	\$ 3,885

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

SIX-MONTH PERIODS ENDED JUNE 30, 2017 AND 2016

(\$ In millions)

	June 30, 2017	June 30, 2016
	(Unaudited)	(Unaudited)
NON-OPERATING REVENUES (EXPENSES):		
Connecticut Department of Transportation	\$ 51	\$ 58
Subsidies paid to Dutchess, Orange, and Rockland Counties	(3)	(3)
Interest on long-term debt (Note 2)	(822)	(732)
Station maintenance, operation and use assessments	82	81
Operating subsidies recoverable from NYC	212	223
Other net non-operating expenses	48	85
Net non-operating revenues	<u>3,333</u>	<u>3,597</u>
LOSS BEFORE APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	(576)	(213)
APPROPRIATIONS, GRANTS AND OTHER RECEIPTS EXTERNALLY RESTRICTED FOR CAPITAL PROJECTS	<u>1,098</u>	<u>967</u>
CHANGE IN NET POSITION	522	754
NET POSITION — Beginning of period	<u>5,607</u>	<u>5,833</u>
NET POSITION — End of period	<u>\$ 6,129</u>	<u>\$ 6,587</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

SIX-MONTH PERIODS ENDED JUNE 30, 2017 AND 2016

(\$ In millions)

	June 30, 2017 (Unaudited)	June 30, 2016 (Unaudited)
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>		
Passenger receipts/tolls	\$ 3,997	\$ 3,940
Rents and other receipts	364	301
Payroll and related fringe benefits	(4,641)	(4,458)
Other operating expenses	(1,406)	(1,397)
Net cash used by operating activities	(1,686)	(1,614)
<b>CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES:</b>		
Grants, appropriations, and taxes	2,523	2,529
Operating subsidies from CDOT	48	60
Subsidies paid to Dutchess, Orange, and Rockland Counties	(6)	(5)
Net cash provided by noncapital financing activities	2,565	2,584
<b>CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES:</b>		
MTA bond proceeds	1,850	3,363
MTA Bridges and Tunnels bond proceeds	1,427	646
MTA bonds refunded/reissued	(900)	(2,254)
MTA Bridges and Tunnels bonds refunded/reissued	(1,081)	(288)
MTA anticipation notes proceeds	1,210	1,419
MTA anticipation notes redeemed	(924)	(1,004)
MTA credit facility proceeds	200	-
MTA credit facility refunded	(200)	-
Capital lease payments and terminations	(1)	(1)
Grants and appropriations	1,192	1,036
Payment for capital assets	(2,367)	(2,401)
Debt service payments	(1,056)	(907)
Net cash used by capital and related financing activities	(650)	(391)
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>		
Purchase of long-term securities	(4,681)	(5,209)
Sales or maturities of long-term securities	4,648	4,522
Net sales (purchases) or maturities of short-term securities	(311)	(50)
Earnings on investments	26	21
Net cash used by investing activities	(318)	(716)
<b>NET DECREASE IN CASH</b>	<b>(89)</b>	<b>(137)</b>
<b>CASH — Beginning of period</b>	<b>732</b>	<b>454</b>
<b>CASH — End of period</b>	<b>\$ 643</b>	<b>\$ 317</b>

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

SIX-MONTH PERIODS ENDED JUNE 30, 2017 AND 2016

(\$ In millions)

	June 30, 2017 (Unaudited)	June 30, 2016 (Unaudited)
RECONCILIATION OF OPERATING LOSS TO NET CASH USED BY OPERATING ACTIVITIES:		
Operating loss (Note 2)	\$ (3,909)	\$ (3,810)
Adjustments to reconcile to net cash used in operating activities:		
Depreciation and amortization	1,211	1,221
Net increase in payables, accrued expenses, and other liabilities	806	779
Net decrease in receivables	162	154
Net decrease in materials and supplies and prepaid expenses	44	42
NET CASH USED BY OPERATING ACTIVITIES	<u>\$ (1,686)</u>	<u>\$ (1,614)</u>
NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES:		
Noncash investing activities:		
Interest expense includes amortization of net (premium) / discount	\$ 111	\$ (33)
Interest expense which was capitalized	24	24
Total Noncash investing activities	<u>135</u>	<u>(9)</u>
Noncash capital and related financing activities:		
Capital assets related liabilities	493	405
Capital leases related liabilities	434	521
Total Noncash capital and related financing activities	<u>927</u>	<u>926</u>
TOTAL NONCASH INVESTING, CAPITAL AND RELATED FINANCING ACTIVITIES	<u>\$ 1,062</u>	<u>\$ 917</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 JUNE 30, 2017 AND DECEMBER 31, 2016 AND  
FOR THE SIX-MONTH PERIODS ENDED JUNE 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 June 30, 2017 and 2016 totaled \$3.8 billion and \$3.9 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 June 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.

<b>GASB Statement No.</b>	<b>GASB Accounting Standard</b>	<b>MTA Required Year of Adoption</b>
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 June 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 June 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 June 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 six months ended June 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 June 30, 2017 and 2016 were \$10.7 and \$10.0, respectively. The amounts recovered for the periods ended June 30, 2017 and 2016 were approximately \$6.9 and \$6.5, 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 \$97.6 and \$104.2 for the six months ended June 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 December 31, 2016, the balance of the assets in this program was \$122.8.

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 six 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 six 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 June 30, 2017 and December 31, 2016 (in millions):

	<u>June 30, 2017</u>		<u>December 31, 2016</u>	
	(Unaudited)			
	Carrying Amount	Bank Balance	Carrying Amount	Bank Balance
FDIC insured or collateralized deposits	\$ 201	\$ 197	\$ 182	\$ 162
Uninsured and not collateralized	<u>442</u>	<u>388</u>	<u>550</u>	<u>155</u>
<b>Total Balance</b>	<u>\$ 643</u>	<u>\$ 585</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 June 30, 2017 and December 31, 2016 (in millions):**

Investments by fair value level	June 30, 2017	Fair Value Measurements		December 31, 2016	Fair Value Measurements	
	(Unaudited)	Level 1	Level 2		Level 1	Level 2
<b>Debt Securities:</b>						
U.S. treasury securities	\$ 4,209	\$ 4,030	\$ 179	\$ 3,546	\$ 3,359	\$ 187
U.S. government agency	402	35	367	549	-	549
Commercial paper	1,251	-	1,251	1,397	-	1,397
Asset-backed securities	40	-	40	35	-	35
Commercial mortgage-backed securities	29	-	29	33	-	33
Foreign bonds	13	13	-	13	13	-
Corporate bonds	157	157	-	165	165	-
<b>Tax Benefit Lease Investments:</b>						
U.S. treasury securities	176	176	-	172	172	-
U.S. government agency	109	109	-	103	-	103
Repurchase agreements	215	215	-	73	73	-
Money Market Funds	6	-	6	6	-	6
Total debt securities	6,607	4,735	1,872	6,092	3,782	2,310
Equity securities	23	23	-	21	21	-
<b>Total investments by fair value level</b>	<b>6,630</b>	<b>\$ 4,758</b>	<b>\$ 1,872</b>	<b>6,113</b>	<b>\$ 3,803</b>	<b>\$ 2,310</b>
Other	120			119		
<b>Total Investments</b>	<b>\$ 6,750</b>			<b>\$ 6,232</b>		

Investments classified as Level 1 of the fair value hierarchy, totaling \$4,758 and \$3,803 as of June 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 \$367 and \$652, U.S. treasury securities totaling \$179 and \$187, commercial paper totaling \$1,251 and \$1,397, asset-backed securities totaling \$40 and \$35, commercial mortgage-backed securities totaling \$29 and \$33, and money market instruments totaling \$6 and \$6, as of June 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 0.91% and 0.56% for the six months ended June 30, 2017 and year ended December 31, 2016, respectively.

**Credit Risk** — At June 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	June 30, 2017	Percent of Portfolio	December 31, 2016	Percent of Portfolio
	(Unaudited)			
A-1+	\$ 359	5 %	\$ 504	8 %
A-1	1,251	19	1,397	23
AAA	87	1	88	1
AA+	50	1	46	1
AA	32	1	35	0
A	91	1	100	2
BBB	48	1	49	1
Not rated	245	4	101	2
U.S. Government	4,444	67	3,774	62
Total	6,607	100 %	6,094	100 %
Equities and capital leases	143		138	
Total investment	<u>\$ 6,750</u>		<u>\$ 6,232</u>	

**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)	June 30, 2017		December 31, 2016	
	(Unaudited)			
	Fair Value	Duration (in years)	Fair Value	Duration (in years)
U.S. Treasuries	\$ 4,209	4.06	\$ 3,546	5.44
Federal Agencies	402	2.86	549	2.95
Tax benefits lease investments	285	9.51	275	8.87
Repurchase agreement	215	-	73	-
Certificate of deposits	6	-	6	-
Commercial paper	1,251	0.05	1,397	0.04
Asset-backed securities <sup>(1)</sup>	40	1.23	35	1.04
Commercial mortgage-backed securities <sup>(1)</sup>	29	2.92	33	3.04
Foreign bonds <sup>(1)</sup>	13	0.00	13	0.00
Corporates <sup>(1)</sup>	157	2.65	165	2.56
Total fair value	6,607		6,092	
Modified duration		3.26		3.93
Equities <sup>(1)</sup>	23		21	
Total	6,630		6,113	
Investments with no duration reported	120		119	
Total investments	<u>\$ 6,750</u>		<u>\$ 6,232</u>	

<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 a member retires with more than 20 years of service, an additional benefit of 2% of final average salary is applied for each year of service over 20 years. Tier 6 members with 10 or more years of service can retire as early as age 55 with reduced benefits. Final average salary is the average of the wages earned in the five highest consecutive years. 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
Total	48	6,320	14,570	29,955	50,893

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
Total	60	6,477	14,011	29,148	49,696

## ***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, June 30, 2017, or the completion of required years of credited service as per the relevant collective bargaining agreements.

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

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.

### 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%
	<b>100.00%</b>		<b>100.00%</b>	
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 Expected Real Rate of Return	Target Asset Allocation	Long-Term 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 Expected Real Rate of Return	Target Asset Allocation	Long-Term 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,  Pension Plan	Discount Rate			
	2016		2015	
	Plan Measurement Date	Rate	Plan Measurement Date	Rate
<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>NYSLERS</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)					
<b>Balance as of December 31, 2014</b>	\$ 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)
<b>Balance as of December 31, 2015</b>	<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
Changes for fiscal year 2014:						
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
Changes for fiscal year 2015:						
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
Changes for fiscal year 2014:						
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 June 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 June 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 six-month period ended June 30, 2017 and year ended December 31, 2016, the MTA recognized pension expense related to each pension plan as follows (in \$ thousands):

Pension Plan	June 30, 2017	December 31, 2016
Additional Plan	\$ 40,850	\$ 78,604
MaBSTOA Plan	100,369	159,377
MNR Cash Balance plan	-	4
MTA Defined Benefit Plan	143,575	239,927
NYCERS	380,224	691,210
NYSLERS	2,502	17,880
<b>Total</b>	<b>\$ 667,520</b>	<b>\$ 1,187,002</b>

For the six-month period ended June 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  
June 30, 2017**

	<b>Additional Plan</b>		<b>MaBSTOA Plan</b>		<b>MNR Cash Balance Plan</b>		<b>MTA Defined Benefit Plan</b>	
	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	-	211,392	-	23	-	283,956	-
Total	\$ 349,049	\$ -	\$ 385,404	\$ 59,108	\$ 42	\$ (6)	\$ 661,043	\$ 69,643

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

	<b>NYCERS</b>		<b>NYSLERS</b>		<b>TOTAL</b>	
	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	400,995	-	12,980	-	1,205,446	-
Total	\$ 1,089,764	\$ 160,669	\$ 57,379	\$ 5,954	\$ 2,542,681	\$ 295,368

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

	<b>Additional Plan</b>		<b>MaBSTOA Plan</b>		<b>MNR Cash Balance Plan</b>		<b>MTA Defined Benefit Plan</b>	
	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	-
Total	\$ 204,049	\$ -	\$ 394,709	\$ 59,108	\$ 42	\$ (6)	\$ 657,854	\$ 69,643

**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 six-month period ended June 30, 2017 and year ended December 31, 2016, \$1,205.4 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 accept 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.



	December 31,	
	2016	2015
	(In thousands)	
Employer 401K contributions	\$ 3,973	\$ 4,878

## 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. The remaining amortization period at December 31, 2016 is 13 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				MTA Bus	
		< 65	>=65	< 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	30,967	5,432	3,803	1,316	515	830	95	1,686	44,644
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, Vesteers (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. Vesteers 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 vesteers 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 six-month period ended June 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)	June 30, 2017 (Unaudited)	December 31, 2016
Annual required contribution ("ARC")	\$ 1,453.7	\$ 2,907.3
Interest on net OPEB obligation	237.3	474.6
Adjustment to ARC	(617.8)	(1,235.5)
OPEB cost	1,073.2	2,146.4
Payments made	(275.5)	(551.0)
Increase in net OPEB obligation	797.7	1,595.4
Net OPEB obligation — beginning of period	15,155.5	13,560.1
Net OPEB obligation — end of period	\$ 15,953.2	\$ 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 June 30, 2017 (in millions):

	Balance December 31, 2015	Additions / Reclassifications	Deletions / Reclassifications	Balance December 31, 2016	Additions / Reclassifications (Unaudited)	Deletions / Reclassification (Unaudited)	Balance June 30, 2017 (Unaudited)
Capital assets not being depreciated:							
Land	\$ 208	\$ 2	\$ 7	\$ 203	\$ -	\$ -	\$ 203
Construction work-in-progress	12,949	5,915	2,608	16,256	3,094	1,777	17,573
Total capital assets not being depreciated	13,157	5,917	2,615	16,459	3,094	1,777	17,776
Capital assets being depreciated:							
Buildings and structures	17,104	354	-	17,458	122	-	17,580
Bridges and tunnels	3,195	121	-	3,316	36	-	3,352
Equipment:							
Passenger cars and locomotives	13,764	102	3	13,863	-	2	13,861
Buses	3,229	217	-	3,446	113	-	3,559
Infrastructure	21,423	661	6	22,078	511	20	22,569
Other	19,356	773	7	20,122	509	2	20,629
Total capital assets being depreciated	78,071	2,228	16	80,283	1,291	24	81,550
Less accumulated depreciation:							
Buildings and structures	6,194	489	-	6,683	266	-	6,949
Bridges and tunnels	717	29	-	746	14	-	760
Equipment:							
Passenger cars and locomotives	6,427	415	3	6,839	164	1	7,002
Buses	1,782	223	-	2,005	137	-	2,142
Infrastructure	8,031	607	3	8,635	274	3	8,906
Other	6,667	684	35	7,316	356	-	7,672
Total accumulated depreciation	29,818	2,447	41	32,224	1,211	4	33,431
Total capital assets being depreciated — net	48,253	(219)	(25)	48,059	80	20	48,119
Capital assets — net	\$ 61,410	\$ 5,698	\$ 2,590	\$ 64,518	\$ 3,174	\$ 1,797	\$ 65,895

Interest capitalized in conjunction with the construction of capital assets for the periods ended June 30, 2017 and December 31, 2016 was \$24.2 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 June 30, 2017 and December 31, 2016, these securities, which are not included in these financial statements, totaled \$106.1 and \$100.5, respectively, and had a market value of \$91.3 and \$95.4, respectively.

## 7. LONG-TERM DEBT

(In millions)	Original Issuance	December 31, 2016	Issued (Unaudited)	Retired (Unaudited)	June 30, 2017 (Unaudited)
<b>MTA:</b>					
Transportation Revenue Bonds					
1.37%–6.68% due through 2057	\$ 32,211	\$ 21,209	\$ 325	\$ 151	\$ 21,383
Bond Anticipation Notes					
2.0% due through 2018	4,600	948	1,200	924	1,224
State Service Contract Bonds					
4.125%–5.70% due through 2031	2,395	145	-	38	107
Dedicated Tax Fund Bonds					
2.05%–5.00% due through 2056	11,039	5,009	993	387	5,615
	50,245	27,311	2,518	1,500	28,329
Net unamortized bond premium		1,345	193	85	1,453
	<b>50,245</b>	<b>28,656</b>	<b>2,711</b>	<b>1,585</b>	<b>29,782</b>
<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
	18,746	8,337	1,203	1,084	8,456
Net unamortized bond premium		735	224	19	940
	<b>18,746</b>	<b>9,072</b>	<b>1,427</b>	<b>1,103</b>	<b>9,396</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		137	-	7	130
	<b>1,057</b>	<b>1,194</b>	<b>-</b>	<b>7</b>	<b>1,187</b>
<b>Total</b>	<b>\$ 70,048</b>	<b>\$ 38,922</b>	<b>\$ 4,138</b>	<b>\$ 2,695</b>	<b>\$ 40,365</b>
Current portion		\$ 1,977			\$ 1,644
Long-term portion		\$ 36,945			\$ 38,721

(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	-
	48,534	27,574	5,681	5,944	27,311
Net unamortized bond discount and premium		564	808	27	1,345
	<b>48,534</b>	<b>28,138</b>	<b>6,489</b>	<b>5,971</b>	<b>28,656</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
	17,543	8,334	541	538	8,337
Net unamortized bond premium		656	48	(31)	735
	<b>17,543</b>	<b>8,990</b>	<b>589</b>	<b>507</b>	<b>9,072</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>1,057</b>	<b>-</b>	<b>1,189</b>	<b>(5)</b>	<b>1,194</b>
Total	<b>\$ 67,134</b>	<b>\$ 37,128</b>	<b>\$ 8,267</b>	<b>\$ 6,473</b>	<b>\$ 38,922</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.

**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.

**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 \$107. 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 \$33,762. 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 June 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.

(In millions)	June 30, 2017 (Unaudited)	December 31, 2016
MTA Transit and Commuter Facilities:		
Transit Facilities Revenue Bonds	\$ 208	\$ 208
Commuter Facilities Revenue Bonds	214	214
Transit and Commuter Facilities Service Contract Bonds	65	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>\$ 1,365</u>	<u>\$ 1,459</u>

For the six months ended June 30, 2017, MTA refunding transactions decreased aggregate debt service payments by \$269 and provided an economic gain of \$192. For the six months ended June 30, 2016, MTA refunding transactions decreased aggregate debt service payments by \$567 and provided an economic gain of \$449. For the six months ended June 30, 2017 and 2016, the accounting loss on bond refundings totaled \$40 and \$379, respectively.

Unamortized losses related to bond refundings were as follows:

(In millions)	December 31, 2015		Net increase/ (decrease)		December 31, 2016		Net increase/ (decrease)		June 30, 2017 (Unaudited)
	2015		(decrease)		2016		(decrease)		
<b>MTA:</b>									
Transportation Revenue Bonds	\$ 335	\$	222	\$	557	\$	(39)	\$	518
State Service Contract Bonds	(5)		(2)		(7)		(2)		(9)
Dedicated Tax Fund Bonds	101		114		215		47		262
	431		334		765		6		771
<b>TBTA:</b>									
General Revenue Bonds	161		23		184		37		221
Subordinate Revenue Bonds	34		(15)		19		12		31
	195		8		203		49		252
<b>Total</b>	<b>\$ 626</b>	<b>\$</b>	<b>342</b>	<b>\$</b>	<b>968</b>	<b>\$</b>	<b>55</b>	<b>\$</b>	<b>1,023</b>

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

	MTA		MTA BRIDGES AND TUNNELS		Debt Service	
	Principal	Interest	Principal	Interest	Principal	Interest
2017	\$ 1,427	\$ 1,422	\$ 217	\$ 204	\$ 1,644	\$ 1,626
2018	1,317	1,398	325	368	1,642	1,766
2019	746	1,350	338	354	1,084	1,704
2020	747	1,307	343	339	1,090	1,646
2021	795	1,264	349	323	1,144	1,587
2022-2026	4,815	5,479	1,996	1,354	6,811	6,833
2027-2031	6,014	3,880	2,355	851	8,369	4,731
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
	<b>\$ 29,386</b>	<b>\$ 20,540</b>	<b>\$ 8,456</b>	<b>\$ 4,494</b>	<b>\$ 37,842</b>	<b>\$ 25,034</b>

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

**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 June 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.

Resolution	Series	Swap	Provider (Insurer)	Type of Facility	Exp. Date
Transportation Revenue	2005D-1	Y	Helaba	LOC	11/7/2018
Transportation Revenue	2005D-2	Y	Helaba	LOC	11/10/2017
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 Mitsubishi	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 Mitsubishi	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 Mitsubishi	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 June 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)

(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 June 30, 2017	
						Notional Amount	Fair Value
(Unaudited)							
Cashflow Hedges							
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	191.300	(31.901)
MTA Bridges and Tunnels Senior Revenue Bonds	2005B-2,3,4	Libor Fixed Payer	Cash Flow	Synthetic Instrument	6/2/2005	573.900	(95.703)
MTA Bridges and Tunnels Senior Revenue Bonds	2005A (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	22.765	(3.403)
MTA Bridges and Tunnels Senior Revenue Bonds	2001C (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/5/2016	57.475	(3.274)
MTA Bridges and Tunnels Subordinate Revenue Bonds	2000ABCD	SIFMA Fixed Payer	Cash Flow	Synthetic Instrument	8/12/1998	34.150	(2.427)
MTA Dedicated Tax Fund Bonds	2008A	Libor Fixed Payer	Cash Flow	Synthetic Instrument	3/8/2005	328.980	(50.560)
MTA Transportation Revenue Bonds	2002D-2	Libor Fixed Payer	Cash Flow	Synthetic Instrument	7/11/2002	200.000	(68.808)
MTA Transportation Revenue Bonds	2005D & 2005E	Libor Fixed Payer	Cash Flow	Synthetic Instrument	9/10/2004	394.980	(73.230)
MTA Transportation Revenue Bonds	2012G	Libor Fixed Payer	Cash Flow	Synthetic Instrument	12/12/2007	357.500	(85.669)
MTA Transportation Revenue Bonds	2002G-1 (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	142.015	(13.809)
MTA Transportation Revenue Bonds	2011B (COPS 2004A)	Libor Fixed Payer	Cash Flow	Synthetic Instrument	4/1/2016	56.220	(15.794)
Total						\$ 2,359.285	\$ (444.578)



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

(in \$ millions)

(in \$ millions)						As of December 31, 2016	
Bond Resolution Credit	Underlying Bond Series	Type of Derivative	Cash Flow or Fair Value Hedge	Effective Methodology	Trade/Hedge Association Date	Notional Amount	Fair Value
Cashflow Hedges							
MTA Bridges and Tunnels Senior Revenue Bonds	2002F & 2003B-2 (Citi 2005B)	Libor Fixed Payer	Cash-Flow	Synthetic Instrument	6/2/2005	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						\$ 2,402.160	\$ (442.807)

	Changes In Fair Value		Fair Value at June 30, 2017	
	Classification	Amount (in millions)	Classification	Amount (in millions)
<b>Government activities</b>		(Unaudited)		(Unaudited)
Cash Flow hedges:				
Pay-fixed interest rate swaps	Deferred outflow of resources	\$ (1.771)	Debt	\$ (444.578)
				\$ 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 June 30, 2017).

Metropolitan Transportation Authority						
Related Bonds	Notional Amount as of 6/30/17 (Unaudited)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 6/30/17 (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-)	\$ (68.808)
TRB 2005D & 2005E	296.235	11/02/05	11/01/35	Pay 3.561%; receive 67% 1M LIBOR	UBS AG (A+ / A1 / A+)	(54.922)
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+)	(18.308)
TRB 2012G	357.500	11/15/12	11/01/32	Pay 3.563%; receive 67% 1M LIBOR	JPMorgan Chase Bank, NA (A+ / Aa3 / AA-)	(85.669)
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)	(50.560)
<b>Total</b>	<b>\$1,281.460</b>					<b>\$ (278.267)</b>

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

MTA Bridges and Tunnels						
Related Bonds	Notional Amount as of 6/30/17 (Unaudited)	Effective Date	Maturity Date	Terms	Counterparty and Ratings (S&P / Moody's / Fitch)	Fair Value as of 6/30/17 (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+)	\$ (31.901)
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-)	(31.901)
TBTA 2005B-3	191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	BNP Paribas North America (A / A1 / A+)	(31.901)
TBTA 2005B-4	191.300	07/07/05	01/01/32	Pay 3.076%; receive 67% 1M LIBOR	UBS AG (A+ / A1 / A+)	(31.901)
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-)	(2.427)
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)	(18.140) <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)	(18.140) <sup>3</sup>
<b>Total</b>	<b>\$1,077.825</b>					<b>\$ (166.311)</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 June 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 June 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	A+	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	A1	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 June 30, 2017, the aggregate mid-market valuation of the MTA's swaps subject to collateral posting agreements was (\$235.625); as of this date, the MTA was not subject to collateral posting based on its credit ratings (see further details below).

As of June 30, 2017, the aggregate mid-market valuation of MTA Bridges and Tunnels' swaps subject to collateral posting agreements was (\$166.054); as of this date, MTA Bridges and Tunnels was not subject to collateral posting based on its credit ratings (see further details below).

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

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

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



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

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

MTA Bridges and Tunnels Senior Lien		
Counterparty	MTA Bridges and Tunnels Collateral Thresholds (based on highest rating)	Counterparty Collateral Thresholds (based on highest rating)
BNP Paribas 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.*

MTA Bridges and Tunnels Subordinate Lien		
Counterparty	MTA Bridges and Tunnels Collateral Thresholds (based on lowest rating)	Counterparty Collateral Thresholds (based on lowest rating)
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 (note: only applicable as cure for Termination Event)	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 June 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 June 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 June 30, 2017, the market value of total collateral funds was \$37.3.

On January 12, 2009, MTA provided a short-term U.S. Treasury debt obligation as additional collateral in addition to the Ambac Assurance Corp. surety bond for the lease transaction that closed on September 29, 2003. From time to time, additional collateral has been required to be added such that the total market value of the securities being held as additional collateral are expected to be sufficient to pay the remainder of the regularly scheduled lease rent payments under the lease. As of June 30, 2017, the market value of total collateral funds was \$52.6.

**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 June 30, 2017 (Unaudited):

Year	ERY	WRY	Total
2017	4	-	4
2018	9	14	23
2019	18	16	34
2020	19	16	35
2021	19	32	51
Thereafter	906	1,591	2,497
Total	<b>\$ 975</b>	<b>\$ 1,669</b>	<b>\$ 2,644</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 \$13 and \$25 for the period ended June 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 \$35.8 and \$22.7 for the periods ended June 30, 2017 and 2016, respectively.



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

<b>Years</b>	<b>Operating (Unaudited)</b>	<b>Capital (Unaudited)</b>
2017	\$ 48	\$ 18
2018	62	19
2019	62	22
2020	60	30
2021	60	21
2022–2026	224	140
2027–2031	281	102
2032–2036	273	545
2037–2041	243	139
2042–2046	243	153
Thereafter	485	249
Future minimum lease payments	<u>\$ 2,041</u>	<u>1,438</u>
Amount representing interest		<u>(1,004)</u>
Total present value of capital lease obligations		434
Less current present value of capital lease obligations		<u>4</u>
Noncurrent present value of capital lease obligations		<u>\$ 430</u>

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

<b>Description</b>	<b>December 31, 2016</b>	<b>Increase</b>	<b>Decrease</b>	<b>June 30, 2017</b>
		<b>(Unaudited)</b>		<b>(Unaudited)</b>
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-paragraph is equal to a net present value as of January 1, 2010 (calculated based on each applicable payment) of the product of that sub-paragraph’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 June 30, 2017 and year ended December 31, 2016 is presented below (in millions):

	<u>June 30, 2017</u>	<u>December 31, 2016</u>
	(Unaudited)	
Balance — beginning of year	\$ 3,441	\$ 2,883
Activity during the year:		
Current year claims and changes in estimates	371	1,448
Claims paid	(215)	(890)
Balance — end of year	<u>3,597</u>	<u>3,441</u>
Less current portion	<u>(379)</u>	<u>(415)</u>
Long-term liability	<u>\$ 3,218</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 \$1 and \$3 for the periods ended June 30, 2017 and 2016, respectively. A summary of the activity in pollution remediation liability at June 30, 2017 and December 31, 2016 were as follows:

	June 30, 2017 (Unaudited)	December 31, 2016
Balance at beginning of year	\$ 88	\$ 100
Current year expenses/changes in estimates	1	12
Current year payments	(3)	(24)
Balance at end of year	86	88
Less current portion	23	23
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 June 30, 2017 and December 31, 2016 are presented below:

	Balance December 31, 2015	Additions	Reductions	Balance December 31, 2016	Additions	Reductions	Balance June 30, 2017
					(Unaudited)		(Unaudited)
<b>Current liabilities:</b>							
Accounts payable	\$ 409	\$ 117	\$ -	\$ 526	\$ 9	\$ -	\$ 535
Interest	210	16	-	226	1	-	227
Salaries, wages and payroll taxes	256	-	(5)	251	7	-	258
Vacation and sick pay benefits	880	31	-	911	15	-	926
Current portion — retirement and death benefits	15	-	-	15	5	-	20
Capital accrual	479	-	(43)	436	57	-	493
Other accrued expenses	560	88	-	648	-	(76)	572
Unearned revenues	563	8	-	571	112	-	683
<b>Total current liabilities</b>	<u>\$ 3,372</u>	<u>\$ 260</u>	<u>\$ (48)</u>	<u>\$ 3,584</u>	<u>\$ 206</u>	<u>\$ (76)</u>	<u>\$ 3,714</u>
<b>Non-current liabilities:</b>							
Contract retainage payable	\$ 281	\$ 28	\$ -	\$ 309	\$ 19	\$ -	\$ 328
Other long-term liabilities	307	10	-	317	13	-	330
<b>Total non-current liabilities</b>	<u>\$ 588</u>	<u>\$ 38</u>	<u>\$ -</u>	<u>\$ 626</u>	<u>\$ 32</u>	<u>\$ -</u>	<u>\$ 658</u>

#### 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	Bank of America Merrill Lynch	Bank of America Merrill Lynch	Bank of America Merrill Lynch	J. Aron & Company	Bank of America Merrill Lynch	J. Aron & Company	J. Aron & Company	JPM - Ventures Energy Corp
Trade Date	7/30/2015	8/27/2015	9/28/2015	10/29/2015	11/24/2015	12/17/2015	1/27/2016	2/23/2016
Effective Date	7/1/2016	8/1/2016	9/1/2016	2/1/2016	11/1/2016	12/1/2016	1/1/2017	2/1/2017
Termination Date	6/30/2017	7/31/2017	8/31/2017	9/30/2017	10/31/2017	11/30/2017	12/31/2017	1/31/2018
Price/Gal	\$1.8145	\$1.6600	\$1.6950	\$1.7100	\$1.6515	\$1.4825	\$1.2760	\$1.3100
Original Notional Quantity	5,298,402	4,847,240	5,130,241	5,631,317	4,863,189	4,266,180	3,745,930	3,845,749

Counterparty	Macquarie Energy LLC	Macquarie Energy LLC	Macquarie Energy LLC	J. Aron & Company	J. Aron & Company	Macquarie Energy LLC	J. Aron & Company	Macquarie Energy LLC
Trade Date	3/29/2016	4/28/2016	5/26/2016	6/30/2016	7/28/2016	8/24/2016	9/22/2016	10/26/2016
Effective Date	3/1/2017	4/1/2017	5/1/2017	6/1/2017	7/1/2017	8/1/2017	9/1/2017	10/1/2017
Termination Date	2/28/2018	3/31/2018	4/30/2018	5/31/2018	6/30/2018	7/31/2018	8/31/2018	9/30/2018
Price/Gal	\$1.3820	\$1.5535	\$1.6225	\$1.6515	\$1.5020	\$1.6350	\$1.5975	\$1.6240
Original Notional Quantity	3,926,350	4,527,533	4,728,640	4,813,146	4,498,206	4,780,987	4,671,339	4,801,475

Counterparty	J. Aron & Company	J. Aron & Company	JPM - Ventures Energy Corp	Cargill	J. Aron & Company	J. Aron & Company	J. Aron & Company	J. Aron & Company
Trade Date	11/22/2016	12/20/2016	1/26/2017	2/28/2017	3/28/2017	4/27/2017	5/30/2017	6/27/2017
Effective Date	11/1/2017	12/1/2017	1/1/2018	2/1/2018	3/1/2018	4/1/2018	5/1/2018	6/1/2018
Termination Date	10/31/2018	11/30/2018	12/31/2018	1/31/2019	2/28/2019	3/31/2019	4/30/2019	5/31/2019
Price/Gal	\$1.6670	\$1.7657	\$1.7485	\$1.6824	\$1.6090	\$1.5915	\$1.6085	\$1.5225
Original Notional Quantity	4,879,859	5,122,068	5,111,306	4,918,086	4,703,517	4,594,937	4,687,603	4,436,967

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 June 30, 2017, the total outstanding notional value of the ULSD contracts was 54.3 million gallons with a negative fair market value of \$4 (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).

June 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	\$ 8,827	\$ 213	\$ 213	\$ 551	\$ 430	\$ (355)	\$ 9,879
Capital assets	9,576	4,649	5,818	40,222	5,630	-	65,895
Other Assets	10,545	5	-	-	600	(10,233)	918
Intercompany receivables	599	68	114	1,948	(6)	(2,723)	-
Deferred outflows of resources	1,608	235	366	1,924	545	(672)	4,006
<b>Total assets and deferred outflows of resources</b>	<b>\$ 31,155</b>	<b>\$ 5,170</b>	<b>\$ 6,511</b>	<b>\$ 44,645</b>	<b>\$ 7,199</b>	<b>\$ (13,983)</b>	<b>\$ 80,698</b>
Current liabilities	\$ 3,226	\$ 256	\$ 240	\$ 1,793	\$ 787	\$ (534)	\$ 5,768
Non-current liabilities	33,360	1,082	2,178	21,483	10,434	(59)	68,478
Intercompany payables	2,648	78	23	108	334	(3,191)	-
Deferred inflows of resources	54	25	24	741	40	(562)	323
<b>Total liabilities and deferred inflows of resources</b>	<b>\$ 39,288</b>	<b>\$ 1,441</b>	<b>\$ 2,465</b>	<b>\$ 24,125</b>	<b>\$ 11,595</b>	<b>\$ (4,346)</b>	<b>\$ 74,569</b>
Net investment in capital assets	\$ (25,524)	\$ 4,635	\$ 5,818	\$ 40,053	\$ 1,051	\$ (61)	\$ 25,972
Restricted	1,842	-	-	-	722	(443)	2,121
Unrestricted	15,549	(906)	(1,772)	(19,533)	(6,169)	(9,133)	(21,964)
<b>Total net position</b>	<b>\$ (8,133)</b>	<b>\$ 3,729</b>	<b>\$ 4,046</b>	<b>\$ 20,520</b>	<b>\$ (4,396)</b>	<b>\$ (9,637)</b>	<b>\$ 6,129</b>
<b>For the period ended June 30, 2017 (Unaudited)</b>							
Fare revenue	\$ 110	\$ 354	\$ 354	\$ 2,208	\$ -	\$ -	\$ 3,026
Vehicle toll revenue	-	-	-	-	910	-	910
Rents, freight and other revenue	41	28	29	222	16	(27)	309
<b>Total operating revenue</b>	<b>151</b>	<b>382</b>	<b>383</b>	<b>2,430</b>	<b>926</b>	<b>(27)</b>	<b>4,245</b>
Total labor expenses	604	486	565	3,660	158	(17)	5,456
Total non-labor expenses	196	173	172	872	108	(34)	1,487
Depreciation	54	118	170	791	78	-	1,211
<b>Total operating expenses</b>	<b>854</b>	<b>777</b>	<b>907</b>	<b>5,323</b>	<b>344</b>	<b>(51)</b>	<b>8,154</b>
<b>Operating (deficit) surplus</b>	<b>(703)</b>	<b>(395)</b>	<b>(524)</b>	<b>(2,893)</b>	<b>582</b>	<b>24</b>	<b>(3,909)</b>
Subsidies and grants	260	-	-	40	4	220	524
Tax revenue	3,259	-	-	1,302	-	(1,060)	3,501
Interagency subsidy	353	179	389	110	-	(1,031)	-
Interest expense	(654)	-	-	-	(155)	(13)	(822)
Other	(1,285)	51	-	(1)	1	1,364	130
<b>Total non-operating revenues (expenses)</b>	<b>1,933</b>	<b>230</b>	<b>389</b>	<b>1,451</b>	<b>(150)</b>	<b>(520)</b>	<b>3,333</b>
<b>Loss before appropriations</b>	<b>1,230</b>	<b>(165)</b>	<b>(135)</b>	<b>(1,442)</b>	<b>432</b>	<b>(496)</b>	<b>(576)</b>
<b>Appropriations, grants and other receipts externally restricted for capital projects</b>	<b>46</b>	<b>148</b>	<b>307</b>	<b>527</b>	<b>(351)</b>	<b>421</b>	<b>1,098</b>
<b>Change in net position</b>	<b>1,276</b>	<b>(17)</b>	<b>172</b>	<b>(915)</b>	<b>81</b>	<b>(75)</b>	<b>522</b>
<b>Net position, beginning of period</b>	<b>(9,409)</b>	<b>3,746</b>	<b>3,874</b>	<b>21,435</b>	<b>(4,477)</b>	<b>(9,562)</b>	<b>5,607</b>
<b>Net position, end of period</b>	<b>\$ (8,133)</b>	<b>\$ 3,729</b>	<b>\$ 4,046</b>	<b>\$ 20,520</b>	<b>\$ (4,396)</b>	<b>\$ (9,637)</b>	<b>\$ 6,129</b>
<b>For the period ended June 30, 2017 (Unaudited)</b>							
Net cash (used in) / provided by operating activities	\$ (404)	\$ (217)	\$ (392)	\$ (1,316)	\$ 675	\$ (32)	\$ (1,686)
Net cash provided by / (used in) non-capital financing activities	2,298	227	426	1,557	(360)	(1,583)	2,565
Net cash (used in) / provided by capital and related financing activities	(1,414)	(13)	(37)	(485)	(283)	1,582	(650)
Net cash (used in) / provided by investing activities	(446)	-	-	236	(141)	33	(318)
Cash at beginning of period	524	14	13	61	120	-	732
<b>Cash at end of period</b>	<b>\$ 558</b>	<b>\$ 11</b>	<b>\$ 10</b>	<b>\$ 53</b>	<b>\$ 11</b>	<b>\$ -</b>	<b>\$ 643</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 June 30, 2016 (Unaudited)</b>							
Fare revenue	\$ 108	\$ 334	\$ 345	\$ 2,179	\$ -	\$ -	\$ 2,966
Vehicle toll revenue	-	-	-	-	911	-	911
Rents, freight and other revenue	42	31	27	216	15	(30)	301
<b>Total operating revenue</b>	<b>150</b>	<b>365</b>	<b>372</b>	<b>2,395</b>	<b>926</b>	<b>(30)</b>	<b>4,178</b>
Total labor expenses	583	452	567	3,607	150	(18)	5,341
Total non-labor expenses	205	162	161	833	100	(35)	1,426
Depreciation	44	117	170	831	59	-	1,221
<b>Total operating expenses</b>	<b>832</b>	<b>731</b>	<b>898</b>	<b>5,271</b>	<b>309</b>	<b>(53)</b>	<b>7,988</b>
<b>Operating (deficit) surplus</b>	<b>(682)</b>	<b>(366)</b>	<b>(526)</b>	<b>(2,876)</b>	<b>617</b>	<b>23</b>	<b>(3,810)</b>
Subsidies and grants	263	58	-	40	4	180	545
Tax revenue	3,222	-	-	1,456	-	(1,060)	3,618
Interagency subsidy	368	138	288	118	-	(912)	-
Interest expense	(556)	-	-	(5)	(167)	(4)	(732)
Other	(1,354)	-	-	1	1	1,518	166
<b>Total non-operating revenues (expenses)</b>	<b>1,943</b>	<b>196</b>	<b>288</b>	<b>1,610</b>	<b>(162)</b>	<b>(278)</b>	<b>3,597</b>
<b>Loss before appropriations</b>	<b>1,261</b>	<b>(170)</b>	<b>(238)</b>	<b>(1,266)</b>	<b>455</b>	<b>(255)</b>	<b>(213)</b>
<b>Appropriations, grants and other receipts externally restricted for capital projects</b>	<b>(180)</b>	<b>106</b>	<b>228</b>	<b>799</b>	<b>(366)</b>	<b>380</b>	<b>967</b>
<b>Change in net position</b>	<b>1,081</b>	<b>(64)</b>	<b>(10)</b>	<b>(467)</b>	<b>89</b>	<b>125</b>	<b>754</b>
<b>Net position, beginning of period</b>	<b>(8,961)</b>	<b>3,699</b>	<b>3,829</b>	<b>21,303</b>	<b>(4,556)</b>	<b>(9,481)</b>	<b>5,833</b>
<b>Net position, end of period</b>	<b>\$ (7,880)</b>	<b>\$ 3,635</b>	<b>\$ 3,819</b>	<b>\$ 20,836</b>	<b>\$ (4,467)</b>	<b>\$ (9,356)</b>	<b>\$ 6,587</b>
<b>For the period ended June 30, 2016 (Unaudited)</b>							
<b>Net cash (used in) / provided by operating activities</b>	<b>\$ (574)</b>	<b>\$ (212)</b>	<b>\$ (287)</b>	<b>\$ (1,274)</b>	<b>\$ 742</b>	<b>\$ (9)</b>	<b>(1,614)</b>
<b>Net cash provided by / (used in) non-capital financing activities</b>	<b>2,475</b>	<b>199</b>	<b>316</b>	<b>1,700</b>	<b>(375)</b>	<b>(1,731)</b>	<b>2,584</b>
<b>Net cash (used in) / provided by capital and related financing activities</b>	<b>(1,549)</b>	<b>11</b>	<b>(25)</b>	<b>(463)</b>	<b>(69)</b>	<b>1,704</b>	<b>(391)</b>
<b>Net cash (used in) / provided by investing activities</b>	<b>(484)</b>	<b>-</b>	<b>-</b>	<b>29</b>	<b>(297)</b>	<b>36</b>	<b>(716)</b>
<b>Cash at beginning of period</b>	<b>357</b>	<b>15</b>	<b>5</b>	<b>63</b>	<b>14</b>	<b>-</b>	<b>454</b>
<b>Cash at end of period</b>	<b>\$ 225</b>	<b>\$ 13</b>	<b>\$ 9</b>	<b>\$ 55</b>	<b>\$ 15</b>	<b>\$ -</b>	<b>\$ 317</b>

## 16. SUBSEQUENT EVENTS

On July 26, 2017, MTA executed a 2,914,252 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.618 (whole dollars) per gallon. The hedge covers the period from July 2018 through June 2019.

On August 24, 2017, MTA entered into a \$350 taxable revolving credit agreement with JPMorgan Chase Bank, National Association that is active through August 24, 2022. An initial draw of \$3.5 was executed upon closing. This balance will remain throughout the duration of the agreement.

On August 29, 2017, MTA executed a 2,914,252 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.632 (whole dollars) per gallon. The hedge covers the period from August 2018 through July 2019.

On September 22, 2017, MTA executed a 2,914,252 gallon ultra-low sulfur diesel fuel hedge with Goldman Sachs & Co./J Aron at an all-in price of \$1.7205 (whole dollars) per gallon. The hedge covers the period from September 2018 through August 2019.

On September 28, 2017, MTA issued \$662 of MTA Transportation Revenue Green Bonds, Series 2017B, with maturities from November 15, 2021 to November 15, 2028. The bonds were issued to refund certain outstanding MTA Transportation Revenue Bonds.

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.

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

**REQUIRED SUPPLEMENTARY INFORMATION**

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

(\$ in thousands)	<b>Additional Plan</b>		<b>MaBSTOA Plan</b>		<b>MNR Cash Balance Plan</b>		<b>MTA Defined Benefit Plan</b>	
<b>Plan Measurement Date (December 31):</b>	<b>2015</b>	<b>2014</b>	<b>2015</b>	<b>2014</b>	<b>2015</b>	<b>2014</b>	<b>2015</b>	<b>2014</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:	<b>NYCERS Plan</b>		<b>NYSLERS Plan</b>	
	<u>June 30, 2016</u>	<u>June 30, 2015</u>	<u>March 31, 2016</u>	<u>March 31, 2015</u>
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.

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**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	N/A	N/A	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A	N/A	N/A

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



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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	N/A	N/A	N/A	N/A	N/A	N/A

\*\* For the NYSLERS plan, information was not readily available for periods prior to 2014. This schedule is intended to show information for ten years. Additional years will be displayed as they become available.

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

	<b>Additional Plan</b>		<b>MaBSTOA Plan</b>	
<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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**Notes to Schedule of the MTA's Contributions for All Pension Plans**

**(continued)**

	<b>MNR Cash Balance Plan</b>		<b>MTA Defined Benefit Plan</b>	
<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.

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**REQUIRED SUPPLEMENTARY INFORMATION**

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

**(continued)**

	<b>NYCERS Plan</b>		<b>NYSLERS Plan</b>	
<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 thorough 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 thorough 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.

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**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

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## REQUIRED SUPPLEMENTARY INFORMATION

### SCHEDULE OF FUNDING PROGRESS FOR THE MTA POSTEMPLOYMENT BENEFIT PLAN

(\$ in millions)

Year Ended	Actuarial Valuation Date	Actuarial Value of Assets {a}	Actuarial Accrual Liability (AAL) {b}	Unfunded Actuarial Accrual 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	\$ 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



**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 JUNE 30, 2017**

**(\$ in millions)**

**(Unaudited)**

<b>Category</b>	<b>Financial Plan Actual</b>	<b>Statement GAAP Actual</b>	<b>Variance</b>
<b>REVENUE:</b>			
Farebox revenue	\$ 3,026	\$ 3,026	\$ -
Vehicle toll revenue	917	910	(7)
Other operating revenue	338	309	(29)
Total revenue	<u>4,281</u>	<u>4,245</u>	<u>(36)</u>
<b>OPERATING EXPENSES:</b>			
<b>Labor:</b>			
Payroll	2,466	2,460	(6)
Overtime	424	429	5
Health and welfare	578	580	2
Pensions	663	672	9
Other fringe benefits	450	441	(9)
Postemployment benefits	1,079	1,073	(6)
Reimbursable overhead	(225)	(199)	26
Total labor expenses	<u>5,435</u>	<u>5,456</u>	<u>21</u>
<b>Non-labor:</b>			
Electric power	218	218	-
Fuel	77	77	-
Insurance	6	6	-
Claims	192	192	-
Paratransit service contracts	190	190	-
Maintenance and other	292	270	(22)
Professional service contract	204	157	(47)
Pollution remediation project costs	1	1	-
Materials and supplies	281	281	-
Other business expenses	97	95	(2)
Total non-labor expenses	<u>1,558</u>	<u>1,487</u>	<u>(71)</u>
Depreciation	1,217	1,211	(6)
Other Expenses Adjustment	27	-	(27)
Total operating expenses	<u>8,237</u>	<u>8,154</u>	<u>(83)</u>
<b>NET OPERATING LOSS</b>	<u>\$ (3,956)</u>	<u>\$ (3,909)</u>	<u>\$ 47</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 JUNE 30, 2017

(\$ in millions)

(Unaudited)

	Financial Plan Actual	Financial Statement GAAP Actual	Variance	
<b>Accrued Subsidies</b>				
Mass transportation operating assistance	\$ 1,668	\$ 1,668	\$ -	
Mass transit trust fund subsidies	297	297	-	
Mortgage recording tax 1 and 2	223	223	-	
MRT transfer	(3)	(3)	-	
Urban tax	268	268	-	
State and local operating assistance	217	217	-	
Station maintenance	82	82	-	
Connecticut Department of Transportation (CDOT)	50	51	1	{1}
Subsidy from New York City for MTA Bus and SIRTOA	306	212	(94)	{1}
NYS Grant for debt service	-	3	3	{3}
Build American Bonds Subsidy	44	44	-	
Mobility tax	1,045	1,045	-	
Other non-operating income	-	48	48	{2}
Total accrued subsidies	4,197	4,155	(42)	
Net operating deficit before subsidies and debt service	(3,956)	(3,909)	47	
Debt Service	(1,250)	(822)	428	
Conversion to Cash basis: Depreciation	1,217	-	(1,217)	
Conversion to Cash basis: OPEB Obligation	801	-	(801)	
Conversion to Cash basis: GASB 68 pension adjustment	6	-	(6)	
Conversion to Cash basis: Pollution & Remediation	1	-	(1)	
Total net operating surplus/(deficit) before appropriation, grants and other receipts restricted for capital projects	\$ 1,016	\$ (576)	\$ (1,592)	

{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 JUNE 30, 2017**

(\$ in millions)

(Unaudited)

Financial Plan Actual Operating Loss at June 30, 2017	\$ (3,956)
---	------------

**The Financial Plan Actual Includes:**

Higher other operating revenues	(9)
Higher other operating expense adjustments	27

**The Audited Financial Statements Includes:**

Lower OPEB expense based on the most recent actuarial calculations	6
Higher pension expense based on most recent actuarial calculations	(9)
Higher labor expense primarily from reimbursable overhead	(24)
Lower non-labor expense primarily from lower depreciation	42
Intercompany eliminations and other adjustments	14

**Total Operating Reconciling Items**

47

Unaudited Financial Statement Operating Loss	\$ (3,909)
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Financial Plan Actual Surplus after Subsidies and Debt Service at June 30, 2017	\$ 1,016
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**The Financial Plan Actual Includes:**

Debt Service Bond Principal Payments	428
Adjustments for non-cash liabilities:	
Depreciation	(1,217)
Unfunded OPEB Expense	(801)
Unfunded GASB 68 Pension adjustment	(6)
Unfunded Pollution Remediation Expense	(1)
	(2,025)

**The Audited Financial Statements Includes:**

Higher subsidies and other non-operating revenues	(42)
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**Total Operating Reconciling Items**

47

Financial Statements Loss Before Appropriations	\$ (576)
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**Report on**  
**2015 Inspection of Deloitte & Touche LLP**  
**(Headquartered in New York, New York)**

**Issued by the**  
**Public Company Accounting Oversight Board**  
**August 10, 2016**

**THIS IS A PUBLIC VERSION OF A PCAOB INSPECTION REPORT**  
**PORTIONS OF THE COMPLETE REPORT ARE OMITTED**  
**FROM THIS DOCUMENT IN ORDER TO COMPLY WITH**  
**SECTIONS 104(g)(2) AND 105(b)(5)(A)**  
**OF THE SARBANES-OXLEY ACT OF 2002**

PCAOB RELEASE NO. 104-2016-141



## 2015 INSPECTION OF DELOITTE & TOUCHE LLP

### Preface

In 2015, the Public Company Accounting Oversight Board ("PCAOB" or "the Board") conducted an inspection of the registered public accounting firm Deloitte & Touche LLP ("the Firm") pursuant to the Sarbanes-Oxley Act of 2002 ("the Act").

Inspections are designed and performed to provide a basis for assessing the degree of compliance by a firm with applicable requirements related to auditing issuers. For a description of the procedures the Board's inspectors may perform to fulfill this responsibility, see Part I.D of this report (which also contains additional information concerning PCAOB inspections generally). The inspection included reviews of portions of selected issuer audits. These reviews were intended to identify whether deficiencies existed in the reviewed work, and whether such deficiencies indicated defects or potential defects in the Firm's system of quality control over audits. In addition, the inspection included a review of policies and procedures related to certain quality control processes of the Firm that could be expected to affect audit quality.

The Board is issuing this report in accordance with the requirements of the Act. The Board is releasing to the public Part I of the report, portions of Appendix B, Appendix C, and Appendix D. Appendix B consists of the Firm's comments, if any, on a draft of the report. If the nonpublic portions of the report discuss criticisms of or potential defects in the Firm's system of quality control, those discussions also could eventually be made public, but only to the extent the Firm fails to address the criticisms to the Board's satisfaction within 12 months of the issuance of the report. Appendix C presents the text of the paragraphs of the auditing standards that are referenced in Part I.A in relation to the description of auditing deficiencies there.

*Note on this report's citations to auditing standards:* On March 31, 2015, the PCAOB adopted a reorganization of its auditing standards using a topical structure and a single, integrated numbering system. See *Reorganization of PCAOB Auditing Standards and Related Amendments to PCAOB Standards and Rules*, PCAOB Release No. 2015-002 (Mar. 31, 2015). The reorganization will be effective as of December 31, 2016, but the reorganized numbering system may be used before that date. In this report, citations to PCAOB auditing standards use the numbering system and titles of standards that were in effect at the time of the primary inspection procedures. A table cross-referencing the section numbers of those standards included in Part I of this report as reorganized is included at Appendix D.



## **PART I**

### **INSPECTION PROCEDURES AND CERTAIN OBSERVATIONS**

Members of the Board's staff ("the inspection team") conducted primary procedures<sup>1</sup> for the inspection from October 2014 to April 2016. The inspection team performed field work at the Firm's National Office and at 31 of its approximately 65 U.S. practice offices.

#### **A. Review of Audit Engagements**

The inspection procedures included reviews of portions of 54 issuer audits performed by the Firm and a review of the Firm's audit work on one other issuer audit engagement in which the Firm played a role but was not the principal auditor. The inspection team identified matters that it considered to be deficiencies in the performance of the work it reviewed. One of the deficiencies related to auditing aspects of an issuer's financial statements that the issuer restated after the primary inspection procedures.<sup>2</sup> In addition, in this audit, the Firm revised its opinion on the effectiveness of the issuer's internal control over financial reporting ("ICFR") after the primary inspection procedures to express an adverse opinion.

The descriptions of the deficiencies in Part I.A of this report include, at the end of the description of each deficiency, references to specific paragraphs of the auditing standards that relate to those deficiencies. The text of those paragraphs is set forth in Appendix C to this report. The references in this sub-Part include only standards that

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<sup>1</sup> For this purpose, the time span for "primary procedures" includes field work, other review of audit work papers, and the evaluation of the Firm's quality control policies and procedures through review of documentation and interviews of Firm personnel. The time span does not include (1) inspection planning, which may commence months before the primary procedures, and (2) inspection follow-up procedures, wrap-up, analysis of results, and the preparation of the inspection report, which generally extend beyond the primary procedures.

<sup>2</sup> The 2015 inspection did not include review of any additional audit work related to the restatement.



primarily relate to the deficiencies; they do not present a comprehensive list of every auditing standard that applies to the deficiencies. Further, certain broadly applicable aspects of the auditing standards that may be relevant to a deficiency, such as provisions requiring due professional care, including the exercise of professional skepticism; the accumulation of sufficient appropriate audit evidence; and the performance of procedures that address risks, are not included in the references to the auditing standards in this sub-Part, unless the lack of compliance with these standards is the primary reason for the deficiency. These broadly applicable provisions are described in Part I.B of this report.

Certain of the deficiencies identified were of such significance that it appeared to the inspection team that the Firm, at the time it issued its audit report, had not obtained sufficient appropriate audit evidence to support its opinion that the financial statements were presented fairly, in all material respects, in accordance with the applicable financial reporting framework and/or its opinion about whether the issuer had maintained, in all material respects, effective ICFR. In other words, in these audits, the auditor issued an opinion without satisfying its fundamental obligation to obtain reasonable assurance about whether the financial statements were free of material misstatement and/or the issuer maintained effective ICFR.

The fact that one or more deficiencies in an audit reach this level of significance does not necessarily indicate that the financial statements are misstated or that there are undisclosed material weaknesses in ICFR. It is often not possible for the inspection team, based only on the information available from the auditor, to reach a conclusion on those points.

Whether or not associated with a disclosed financial reporting misstatement, an auditor's failure to obtain the reasonable assurance that the auditor is required to obtain is a serious matter. It is a failure to accomplish the essential purpose of the audit, and it means that, based on the audit work performed, the audit opinion should not have been issued.<sup>3</sup>

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<sup>3</sup> Inclusion in an inspection report does not mean that the deficiency remained unaddressed after the inspection team brought it to the firm's attention. Depending upon the circumstances, compliance with PCAOB standards may require the firm to perform additional audit procedures, or to inform a client of the need for changes to its financial statements or reporting on internal control, or to take steps to

The audit deficiencies that reached this level of significance are described in Part I.A.1 through I.A.13, below.

*Effects on Audit Opinions*

Deficiencies in all of the 13 audits that appear in Part I.A relate to testing controls for purposes of the ICFR opinion, and deficiencies in nine audits relate to the substantive testing performed for purposes of the opinion on the financial statements, as noted in the table below. Of the nine audits in which substantive testing deficiencies were identified, two audits included deficiencies in substantive testing that the inspection team determined were caused by a reliance on controls that was excessive in light of deficiencies in the testing of controls.

	Number of Audits
Deficiencies included in Part I.A related to both the financial statement audit and the ICFR audit	9
Deficiencies included in Part I.A related to the ICFR audit only	4
Total	13

*Most Frequently Identified Audit Deficiencies*

The following table lists, in summary form, the types of deficiencies that are included most frequently in Part I.A of this report. A general description of each type is provided in the table; the description of each deficiency in Part I.A contains more specific information about the individual deficiency. The table includes only the three

prevent reliance on its previously expressed audit opinions. The Board expects that firms will comply with these standards, and an inspection may include a review of the adequacy of a firm's compliance with these requirements, either with respect to previously identified deficiencies or deficiencies identified during that inspection. Failure by a firm to take appropriate actions, or a firm's misrepresentations in responding to an inspection report about whether it has taken such actions, could be a basis for Board disciplinary sanctions.



most frequently identified deficiencies that are in Part I.A of this report and is not a summary of all deficiencies in Part I.A.

Issue	Part I.A Audits
Failure to sufficiently test the design and/or operating effectiveness of controls that the Firm selected for testing.	<u>9 Audits:</u> Issuers B, C, E, F, G, J, K, L, and M
Failure to sufficiently test significant assumptions or data that the issuer used in developing an estimate.	<u>5 Audits:</u> Issuers B, C, E, F, and G
Failure to identify and test any controls that addressed the risks related to a particular account or assertion.	<u>4 Audits:</u> Issuers A, H, I, and J

### *Audit Deficiencies*

#### A.1. Issuer A

In this audit, the Firm failed in the following respects to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR. The issuer entered into arrangements with multiple elements that consisted of services and software and that represented a significant portion of total revenue. The issuer's policy was to first allocate the arrangement consideration to the services deliverables using vendor-specific objective evidence ("VSOE") of fair value and then allocate any residual consideration to the software deliverable. The issuer deferred the recognition of revenue for services until they were rendered and recognized revenue for software upon delivery. The Firm failed to perform sufficient procedures related to revenue from multiple-element arrangements, for which the Firm identified a fraud risk. Specifically –

- The Firm's procedures related to the allocation of revenue were insufficient as follows –

- The Firm identified and tested two controls over the allocation of revenue to the services and software deliverables. The controls consisted of the reviews of (1) the issuer's input of certain contract terms into its financial reporting system and (2) adjustments to defer revenue for certain services deliverables when the issuer's VSOE of fair value, determined using a standard price, exceeded its contract price. The Firm failed to identify that these controls were not designed to address whether (1) VSOE of fair value existed for the issuer's services and (2) the total arrangement consideration was appropriately allocated to the services and software deliverables in the arrangement; the Firm failed to identify and test any other controls that addressed these matters. (AS No. 5, paragraph 39)
- The Firm failed to sufficiently test whether VSOE of fair value existed for the issuer's services included in multiple-element arrangements. For one category of services, the Firm failed to perform any procedures to test whether the contract price, which the issuer asserted was representative of the VSOE of fair value, was consistent with the prices that the issuer customarily charged when this category of services was sold separately. For the other category of services, the Firm tested the issuer's assertion that VSOE of fair value existed by comparing prices in a sample of invoices obtained from the issuer's general ledger to a standard price. The Firm, however, failed to test whether the population of general ledger transactions from which it selected its sample was limited to standalone and separate sales. In addition, the Firm failed to test, through any of its procedures, whether the total arrangement consideration was appropriately allocated to the services and software deliverables in the arrangement. (AS No. 13, paragraphs 8 and 13; AU 350, paragraph .17)
- The Firm's procedures related to the recognition of revenue were insufficient as follows –
  - The Firm failed to identify and test any controls that addressed the issuer's evaluation of (1) whether revenue for software and services was recorded in the appropriate period and (2) whether the total



arrangement consideration was fixed or determinable given the contract terms. (AS No. 5, paragraph 39)

- The Firm failed to perform sufficient substantive procedures to test certain aspects of the recognition of revenue for certain elements in the arrangement. Specifically, the Firm's procedures to determine whether software had been delivered or services had been rendered were insufficient, as those procedures were limited to inquiring of management and inspecting dates recorded in the issuer's systems without testing the accuracy of these dates. In addition, in determining that revenue recognition for the arrangements was appropriate, the Firm failed to take into account that the service periods and related fees were not known until after the software was installed. (AS No. 13, paragraphs 8 and 13)
- The Firm designed its procedures to test the allocation and recognition of revenue – including sample sizes – based on a level of control reliance that was not supported due to the deficiencies in the Firm's testing of controls that are discussed above. As a result, the sample sizes that the Firm used to test revenue were too small to provide sufficient evidence. (AS No. 13, paragraphs 16, 18, and 37; AU 350, paragraphs .19, .23, and .23A)

A.2. Issuer B

In this audit, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR. The issuer reported its mortgage loans at fair value and determined the fair values using a discounted cash-flow model. The Firm's procedures to test the valuation of mortgage loans, which were a significant portion of the issuer's total assets, were not sufficient. Specifically –

- Two of the significant assumptions that the issuer used in its discounted cash-flow model were (1) the estimated fair value of properties underlying the mortgage loans and (2) the discount rate applied to the estimated future cash flows. The Firm selected for testing three controls that consisted of periodic reviews and approvals of certain information,

including these two assumptions, but the Firm's procedures to test these controls were not sufficient. Specifically –

- The issuer determined the estimated fair value of the underlying properties based, in part, on broker quotes. One of the controls that the Firm selected for testing consisted of periodic comparisons of the recorded fair values to updated broker quotes. For those properties with differences over an established threshold, the control owner obtained a valuation from an external party and used the valuation in determining the fair value of the property. While the Firm inspected evidence that the issuer obtained updated valuations for those properties with differences in excess of an established threshold, it failed to ascertain and evaluate the appropriateness of the procedures that the control owner performed to determine the final fair value of these properties. (AS No. 5, paragraphs 42 and 44)
- The other two controls that the Firm selected for testing consisted of monthly reviews and approvals of assumptions used in the discounted cash-flow model. The Firm's procedures to test these controls were limited to identifying changes in certain assumptions, inquiring of issuer personnel, comparing the assumptions to supporting documents, obtaining evidence of review and approval, and inspecting certain documents used in the operation of the control. The Firm failed to sufficiently test whether these controls operated at a level of precision that would prevent or detect material misstatements, as it failed to evaluate the nature of the specific procedures performed by the control owners, including the criteria used to identify matters for follow up and the resolution of such matters. (AS No. 5, paragraphs 42 and 44)
- The Firm failed to perform sufficient procedures to test the valuation of the issuer's mortgage loans. An important assumption that the issuer used in its discounted cash-flow model was a factor to account for the lack of liquidity related to the underlying properties. The Firm's procedures to test the liquidity factors consisted of (1) comparing the issuer's liquidity factors for underlying properties to a range that the Firm's internal specialist indicated was typical based on his experience with models used by others



and noting that the issuer's liquidity factors fell within this range and (2) performing a sensitivity analysis by changing the issuer's liquidity factors for individual properties to reflect the midpoint in the issuer's range of factors for all properties. The Firm, however, failed to evaluate whether the range of values indicated by its internal specialist related to loans that were comparable to those that the issuer held and provided a reasonable basis to enable the Firm to identify potential material misstatements in the valuation of the issuer's mortgage loans. In addition, the Firm's use of the midpoint in the issuer's range of factors when performing its sensitivity analysis did not provide the Firm with any information to evaluate whether the range provided by the internal specialist was appropriate to provide sufficient evidence. (AU 328, paragraphs .26, .28, .31, and .36)

A.3. Issuer C

In this audit of an issuer that provides equipment and services to companies in the oil and gas industry, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR, as its procedures related to long-lived assets, which represented a significant portion of the issuer's total assets, were insufficient. Specifically –

- The Firm selected for testing a control that consisted of the following elements: (1) the review of certain events or changes in circumstances to identify long-lived assets with carrying amounts that may not be recoverable and (2) the preparation and review of an impairment analysis for each of the identified long-lived assets. The Firm's procedures to test this control were not sufficient. Specifically –
  - The Firm failed to evaluate whether this control was designed to prevent or detect material misstatements related to the identification of long-lived assets that might not be recoverable. Specifically, the Firm failed to determine whether the criteria that the issuer used in the operation of the control to identify assets that might not be recoverable were appropriate to identify all events or changes in circumstances contemplated in Financial Accounting Standards Board ("FASB") Accounting Standard Codification Subtopic 360-10, *Property, Plant, and Equipment – Overall*. (AS No. 5, paragraph 42)

- While the Firm inspected evidence that the issuer prepared and reviewed an impairment analysis for each identified asset, the Firm's procedures to test the effectiveness of the review of the significant assumptions used in these analyses were limited to inquiring of management, attending certain meetings, and inspecting evidence that the review occurred and resulting changes were made to the analyses. These procedures were insufficient, as the Firm failed to evaluate the appropriateness of the specific review activities that the control owner performed to assess the reasonableness of the significant assumptions. (AS No. 5, paragraphs 42 and 44)
- The Firm's substantive testing of long-lived assets was not sufficient in the following respects –
  - The Firm failed to evaluate whether the following events and changes in circumstances, which were documented in its work papers, could affect the recoverability of the issuer's long-lived assets: (1) significant declines in oil prices during the year; (2) significant declines in the amount of time certain assets were used in the current year compared to the prior year; and (3) the scheduled expiration of certain significant customer contracts in the upcoming year without replacement contracts. (AS No. 14, paragraph 3; AU 342, paragraph .11)
  - The cash-flow forecasts that the issuer used in evaluating the long-lived assets for possible impairment incorporated assumptions about the price it expected to charge customers and the utilization of each asset. The issuer created multiple scenarios by varying the expected price and utilization, and it judgmentally weighted each scenario to develop a probability-weighted estimate of undiscounted cash flows for each long-lived asset. The Firm failed to sufficiently evaluate the reasonableness of certain significant assumptions underlying the cash-flow forecasts. First, the Firm's procedures to test the reasonableness of the issuer's weighting of the scenarios were limited to inquiring of management. In addition, the Firm's procedures to test the reasonableness of the expected price and utilization assumptions were limited to inquiring of



management and comparing these assumptions to historical data for consistency, without considering the events and changes in circumstances described above. (AS No. 14, paragraph 3; AU 342, paragraph .11)

A.4. Issuer D

In this audit, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR. Most of the issuer's revenue was derived from long-term contracts, including government contracts, and was recognized using the percentage-of-completion ("POC") method. The Firm's procedures related to the issuer's revenue were insufficient. Specifically –

- For a category of POC revenue that represented a significant portion of the issuer's total revenue, the Firm selected for testing two controls that involved reviews of the estimated costs to complete and the status of each project. The Firm, however, failed to identify and test any controls over the accuracy and completeness of certain important data that the control owners used in the operation of these controls. (AS No. 5, paragraph 39)
- The issuer entered into an agreement close to year end that modified the terms of certain of its existing and future POC contracts. The modifications related to the recovery of plant and equipment costs and also required the issuer to increase its future investments in plant and equipment. The issuer accounted for this agreement as a change order that significantly increased its net income for the year. The Firm's procedures to test the issuer's accounting for this agreement, and the adequacy of the related disclosures, were insufficient. Specifically –
  - The Firm failed to sufficiently evaluate whether the issuer's recording of revenue and profit during the year related to this agreement was appropriate. Specifically, in considering whether a portion of these amounts should have been deferred, the Firm failed to take into account anticipated future contracts and the issuer's commitment to make future investments in plant and equipment pursuant to the agreement. (AS No. 14, paragraph 30)

- Based on the agreement, the issuer reduced the estimated useful lives of certain plant and equipment for financial reporting purposes to be consistent with the revised cost recovery period specified in the agreement. While the Firm obtained an understanding of the issuer's rationale for changing the estimated useful lives of the plant and equipment, the Firm failed to evaluate the reasonableness of the revised estimated useful lives. (AU 342, paragraph .11)
- The Firm failed to evaluate whether the disclosures in the issuer's financial statements related to the agreement were in conformity with GAAP. (AS No. 14, paragraphs 30 and 31)

**A.5. Issuer E**

In this audit, the Firm failed in the following respects to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR –

- The Firm failed to perform sufficient procedures related to goodwill and other intangible assets, which represented a significant portion of total assets. Specifically –
  - The Firm selected for testing a control that consisted of reviews of the issuer's budget and forecasted financial results by senior management. The issuer used the budget and forecasted financial results to prepare cash-flow projections that it used in its annual assessment of the possible impairment of goodwill and indefinite-lived intangible assets and in its determination of the fair value of acquired intangible assets. The Firm failed to sufficiently test this control, as its procedures were limited to (1) inquiring of the control owners and other issuer personnel and (2) inspecting emails and documents with notations that indicated the reviews and certain other actions performed as a result of the reviews had occurred. The Firm's testing did not include evaluating the review procedures performed, including the basis for the control owners' expectations and whether matters identified for follow up were appropriately resolved. (AS No. 5, paragraphs 42 and 44)



- The Firm's procedures to test the valuation of goodwill and other intangible assets were insufficient. Specifically –
  - For two of the issuer's reporting units, the Firm's procedures to test the projected profit margins and/or the forecasted revenue growth rates underlying the cash-flow projections that the issuer used in the assessment of the possible impairment of goodwill consisted of (1) comparing the assumptions noted above to historical information and/or selected peer data, which showed variances; (2) inquiring of management; and (3) developing independent estimates of the cash-flow projections. These procedures did not provide sufficient evidence because the Firm failed to identify a significant mathematical error in each of its independent estimates of the cash-flow projections, which caused both of the reporting units' calculated fair values to be greater than their carrying values. (AU 328, paragraphs .26, .28, .31, .36, and .40)
  - For another reporting unit, the issuer recorded an impairment charge for an indefinite-lived intangible asset. The forecasted revenue growth rate for this reporting unit was a significant assumption that the issuer used in its determination of this impairment charge. The Firm failed to sufficiently evaluate the reasonableness of the forecasted revenue growth rate. Specifically, in evaluating whether the forecasted growth rate was reasonable, the Firm limited its procedures to inquiry, even though the following circumstances were documented in its work papers: (1) a decline in demand for the reporting unit's products; (2) increased competition; (3) the significant shortfall in this reporting unit's actual revenue for the current year compared to its previously budgeted revenue; (4) the decline in this reporting unit's revenue over the previous six years; and (5) for certain future years, the fact that the revenue growth projections used by the issuer were higher than industry averages that the Firm obtained from an external source. In addition, the Firm failed to evaluate whether these events

and changes in circumstances, including the impairment charge that the issuer had recorded for the indefinite-lived intangible asset, were indicators that the carrying value of other intangible assets held by this reporting unit might not be recoverable. (AS No. 14, paragraph 3; AU 328, paragraphs .26, .28, .31, and .36; AU 342, paragraph .11)

- The Firm failed to perform sufficient procedures to test a category of revenue at one of the issuer's reporting units; this revenue represented a significant portion of the issuer's total revenue. The Firm performed analytical procedures that it intended to be its primary substantive testing of this revenue, and it developed the expectations that it used in the analytical procedures using historical data adjusted for certain current-period activity and industry information. In developing these expectations, however, the Firm used sales volume data that were derived from the same information source that the issuer used to calculate and record this revenue. The Firm's procedures to test the sales volume data were limited to testing one control that consisted of the issuer's comparison of recorded sales volume data to forecasted amounts. This control, however, relied on the effectiveness of the control noted above, which the Firm had insufficiently tested. In addition, when developing its expectations, the Firm failed to consider that the industry survey information, which was referenced in its work papers, indicated variability in current-period revenue activity among certain geographical markets within this reporting unit. (AU 329, paragraphs .16 and .17)

A.6. Issuer F

In this audit of a manufacturer of technology products, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR, as its procedures related to the valuation of one category of inventory, which represented a significant portion of the issuer's total inventory and had increased significantly from the prior year, were insufficient. Specifically –

- The Firm selected for testing a control that consisted of quarterly meetings in which management reviewed forecasted sales of inventory, including this category of inventory. These forecasts were an important factor in the



issuer's determination of its reserve for this inventory. The Firm limited its procedures to test this control to inquiring of management, inspecting meeting invitations, and inspecting a report presented in one meeting. The Firm failed to evaluate whether this control operated at a level of precision that would prevent or detect material misstatements, as it failed to evaluate the nature of the procedures performed by the control owners, including the criteria used to identify matters for follow up and the resolution of such matters. (AS No. 5, paragraphs 42 and 44)

- The Firm failed to perform sufficient procedures to test the issuer's reserve for a new product that represented the majority of this category of inventory. The Firm performed certain procedures with respect to the overall reserve, such as reading public information about the general market for the issuer's products and performing a retrospective review of prior sales forecasts for certain products. The Firm, however, limited its procedures related to the sales forecast for the new product to (1) comparing the sales forecast used in determining the reserve to the forecast approved by the issuer's board of directors and noting that the approved forecast indicated significantly lower sales volume; (2) inquiring of management; (3) reading a memorandum prepared by management; and (4) inspecting a customer-developed sales forecast, which it obtained from the issuer, that covered a small portion of the balance of this new product. (AS No. 14, paragraph 3; AU 342, paragraph .11)

#### A.7 Issuer G

In this audit, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR. During the year, the issuer acquired three significant businesses in one of its segments. The Firm's procedures related to the valuation of the identifiable intangible assets acquired in these business combinations were insufficient. Specifically –

- The Firm selected for testing a control that consisted of management's review of the amounts recorded for assets acquired and liabilities assumed in the business combinations. The Firm's procedures to test this control were limited to inquiring of management and inspecting certain supporting schedules related to one acquisition. The Firm failed to ascertain and evaluate the review activities that the control owner

performed to assess the reasonableness of the fair values recorded for the acquired identifiable intangible assets; therefore, the Firm failed to evaluate whether the control operated at a level of precision that would prevent or detect material misstatements. (AS No. 5, paragraphs 42 and 44)

- The Firm's procedures to evaluate the reasonableness of the fair values recorded for the acquired identifiable intangible assets were insufficient. Specifically, the Firm limited its procedures to (1) obtaining a schedule of purchase price adjustments and (2) comparing the recorded fair values as a percentage of the total acquired intangible assets, including goodwill, to the corresponding percentages, based upon the provisional amounts, for certain previous acquisitions that occurred in another of the issuer's segments. These procedures were insufficient, as the Firm (1) failed to evaluate whether the previous acquisitions were relevant and comparable to these acquisitions and (2) failed to take into account that the issuer had subsequently adjusted the provisional amounts for the previous acquisitions. (AU 328, paragraphs .26, .28, .31, and .36)

A.8. Issuer H

In this audit, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinion on the effectiveness of ICFR, as the controls the Firm selected for testing did not sufficiently address the risks related to the accuracy of the recorded revenue amounts. The Firm identified and tested a total of three controls over revenue. One of the controls consisted of the issuer's comparison of the terms in customer purchase orders to the terms for those orders entered into the issuer's accounting system. The other two controls were automated information technology ("IT") controls designed to (1) compare prices to a master price list and suspend the processing of orders with pricing differences over certain thresholds and (2) generate customer invoices and record product sales at the time products were shipped. The Firm failed to identify that the controls it selected and tested were not designed to address, and it did not identify and test any other controls that addressed, the accuracy of (1) the master price list used in the first IT control and (2) the quantities used in the second IT control that were included in the invoices and used to record product sales. (AS No. 5, paragraph 39)



A.9. Issuer I

In this audit of an oil and gas producer, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinion on the effectiveness of ICFR. The Firm identified one control to address the risks related to the periodic approval and recording of certain significant expenditures that the issuer capitalized. The Firm failed to test the design and operating effectiveness of this control, or to identify and test any other controls that would address the risks. (AS No. 5, paragraph 39)

A.10. Issuer J

In this audit of a retailer of equipment, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR –

- The Firm's procedures related to certain significant property and equipment that was located at the issuer's store locations were insufficient. Specifically –
  - The Firm failed to sufficiently test a control that it had selected for testing, which consisted of management's review of certain information, including historical and projected cash-flow information at the store level, to identify indicators of possible impairment of property and equipment at the store locations. The Firm documented that this control depended on the effectiveness of two other controls to address the reliability of the information used in the operation of this control. The Firm failed, however, to obtain evidence that these two controls were effective to address the reliability of the information, as follows. One of these controls was not designed to address the reliability of the historical and projected cash flows at the individual store level. The other control consisted of a review of the historical and projected cash flows at both the individual store level and the reporting unit level, but the Firm did not test the aspect of the control that addressed the reliability of the cash flows at the individual store level. (AS No. 5, paragraphs 42 and 44)

- The Firm failed to perform sufficient procedures to test the issuer's analysis to identify indicators of possible impairment of certain significant property and equipment at its store locations. Specifically, the Firm failed to test controls over the historical and projected cash flows for the individual stores that the issuer used in its analysis, as described above, and failed to perform any substantive testing of such cash flows. (AU 342, paragraph .11)
- The Firm's procedures related to the existence of certain of the issuer's inventory were insufficient. The Firm identified and tested one control that consisted of a review of the issuer's reconciliation of its cycle-count results to the inventory system and its investigation of variances above certain thresholds. The Firm, however, failed to identify that this control was not designed to address, and failed to identify and test any other controls that addressed, whether sufficient inventory items were counted with sufficient frequency and that the deviations did not exceed an acceptable level. (AS No. 5, paragraph 39)

**A.11 Issuer K**

In this audit, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinion on the effectiveness of ICFR. During the year, the issuer acquired a significant business. The Firm selected for testing two controls over the valuation of the acquired intangible assets. The first control consisted of management's review and approval of the forecasted cash flows that were used in the purchase price allocation, but the Firm's procedures to test this control were not sufficient. Specifically, the Firm's procedures were limited to inquiring of management and attending a meeting, without evaluating the appropriateness of the specific steps that the control owners took to review the forecasts, including the criteria used to identify items for follow up and the process for resolving those items. The second control consisted of management's review of the accounting for the acquisition, but this control depended, in part, on the effectiveness of the first control, which was not sufficiently tested. (AS No. 5, paragraphs 42 and 44)

**A.12. Issuer L**

In this audit of a distributor and retailer of consumer products, the Firm failed to obtain sufficient appropriate audit evidence to support its audit opinion on the



effectiveness of ICFR. Approximately one third of the issuer's inventory was held at one warehouse. The Firm identified and tested one control over the existence of this inventory, which consisted of the issuer's cycle-count procedures. The Firm failed to obtain any evidence about whether the physical cycle counts contemplated by this control were actually performed. In addition, the Firm failed to test the aspect of the control that addressed the accuracy and completeness of reports that the issuer used in this control to monitor and evaluate whether cycle-count deviations exceeded an acceptable level. (AS No. 5, paragraphs 42 and 44)

A.13. Issuer M

In this audit, the Firm failed in the following respects to obtain sufficient appropriate audit evidence to support its audit opinions on the financial statements and on the effectiveness of ICFR. The issuer operated in a large number of tax jurisdictions, and the Firm failed to perform sufficient procedures related to certain aspects of the issuer's accounting for income taxes. Specifically –

- The Firm selected for testing two controls that consisted of quarterly and annual reviews of certain reports and schedules for the identification and valuation of the issuer's uncertain tax positions. The Firm's procedures to test these controls were limited to inquiring of management, inspecting evidence that reviews occurred, tracing certain income tax account balances included in the reports and schedules to the general ledger, and, for a sample of tax jurisdictions, comparing various issuer-prepared reports and schedules for consistency. These procedures were insufficient, as the Firm failed to evaluate the appropriateness of the specific steps that the control owners took to review the issuer's uncertain tax positions. (AS No. 5, paragraphs 42 and 44)
- The Firm designed its substantive procedures to test uncertain tax positions – including sample sizes – based on a level of control reliance that was not supported due to the deficiencies in the Firm's testing of controls that are discussed above. As a result, the sample sizes that the Firm used to test uncertain tax positions were too small to provide sufficient evidence. (AS No. 13, paragraphs 16, 18, and 37; AU 350, paragraphs .19, .23, and .23A)



## **B. Auditing Standards**

Each deficiency described in Part I.A above could relate to several provisions of the standards that govern the conduct of audits. The paragraphs of the standards that are cited for each deficiency are those that most directly relate to the deficiency. The deficiencies also may relate, however, to other paragraphs of those standards and to other auditing standards, including those concerning due professional care, responses to risk assessments, and audit evidence.

Many audit deficiencies involve a lack of due professional care. AU 230, *Due Professional Care in the Performance of Work*, paragraphs .02, .05, and .06, requires the independent auditor to plan and perform his or her work with due professional care and sets forth aspects of that requirement. AU 230, paragraphs .07 through .09, and AS No. 13, *The Auditor's Responses to the Risks of Material Misstatement*, paragraph 7, specify that due professional care requires the exercise of professional skepticism. These standards state that professional skepticism is an attitude that includes a questioning mind and a critical assessment of the appropriateness and sufficiency of audit evidence.

AS No. 13, paragraphs 3, 5, and 8, requires the auditor to design and implement audit responses that address the risks of material misstatement. AS No. 15, *Audit Evidence*, paragraph 4, requires the auditor to plan and perform audit procedures to obtain sufficient appropriate audit evidence to provide a reasonable basis for the audit opinion. Sufficiency is the measure of the quantity of audit evidence, and the quantity needed is affected by the risk of material misstatement (in the audit of financial statements) or the risk associated with the control (in the audit of ICFR) and the quality of the audit evidence obtained. The appropriateness of evidence is measured by its quality; to be appropriate, evidence must be both relevant and reliable in providing support for the related conclusions.

The paragraphs of the standards that are described immediately above are not cited in Part I.A, unless those paragraphs are the most directly related to the relevant deficiency.

### **B.1. List of Specific Auditing Standards Referenced in Part I.A**

The table below lists the specific auditing standards that are referenced in Part I.A of this report, cross-referenced to the issuer audits for which each standard is cited.

For each auditing standard, the table also provides the number of distinct deficiencies for which the standard is cited for each of the relevant issuer audits. This information identifies only the number of times that the standard is referenced, regardless of whether the reference includes multiple paragraphs or relates to multiple financial statement accounts.

PCAOB Auditing Standards	Audits	Number of Deficiencies per Audit
<i>AS No. 5, An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements</i>	Issuer A	2
	Issuer B	2
	Issuer C	2
	Issuer D	1
	Issuer E	1
	Issuer F	1
	Issuer G	1
	Issuer H	1
	Issuer I	1
	Issuer J	2
	Issuer K	1
	Issuer L	1
	Issuer M	1
<i>AS No. 13, The Auditor's Responses to the Risks of Material Misstatement</i>	Issuer A	3
	Issuer M	1
<i>AS No. 14, Evaluating Audit Results</i>	Issuer C	2
	Issuer D	2
	Issuer E	1
	Issuer F	1
<i>AU 328, Auditing Fair Value Measurements and Disclosures</i>	Issuer B	1
	Issuer E	2
	Issuer G	1
<i>AU 329, Substantive Analytical Procedures</i>	Issuer E	1

PCAOB Auditing Standards	Audits	Number of Deficiencies per Audit
AU 342, <i>Auditing Accounting Estimates</i>	Issuer C	2
	Issuer D	1
	Issuer E	1
	Issuer F	1
	Issuer J	1
AU 350, <i>Audit Sampling</i>	Issuer A	2
	Issuer M	1

**B.2. Financial Statement Accounts or Auditing Areas Related to Identified Audit Deficiencies**

The table below lists the financial statement accounts or auditing areas related to each deficiency included in Part I.A of this report and identifies the audits described in Part I.A where deficiencies relating to the respective areas were observed.

	AS No. 5	AS No. 13	AS No. 14	AU 328	AU 329	AU 342	AU 350
Business combinations	G, K			G			
Capitalized costs	I						
Definite-lived long-lived assets, including amortization	C, J		C, D			C, D, J	
Impairment of goodwill and intangible assets	E		E	E		E	
Income taxes	M	M					M
Inventory and related reserves	F, J, L		F			F	
Mortgage loans	B			B			
Revenue, including deferred revenue	A, D, H	A	D		E		A



### B.3. Audit Deficiencies by Industry

The table below lists the industries<sup>4</sup> of the issuers for which audit deficiencies were discussed in Part I.A of this report and cross-references the issuers to the specific auditing standards related to the deficiencies.<sup>5</sup>

	AS No.5	AS No. 13	AS No. 14	AU 328	AU 329	AU 342	AU 350
Consumer Discretionary	E, L		E	E	E	E	
Energy	C, I		C			C	
Financial Services	B			B			
Industrials	D, G, J		D	G		D, J	
Information Technology	A, F, H, K, M	A, M	F			F	A, M

### C. Data Related to the Issuer Audits Selected for Inspection<sup>6</sup>

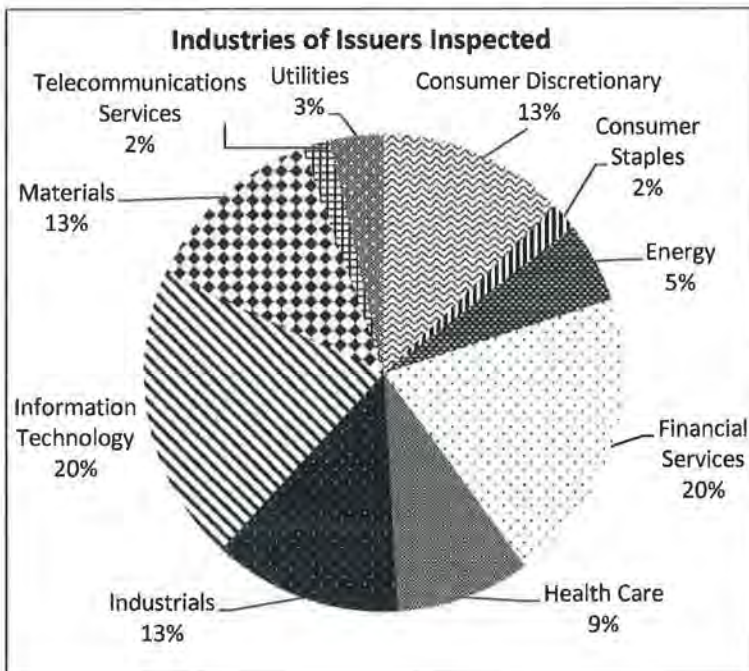
#### C.1. Industries of Issuers Inspected

<sup>4</sup> The majority of industry sector data is based on Global Industry Classification Standard ("GICS") data obtained from Standard & Poor's ("S&P"). In instances where GICS for an issuer is not available from S&P, classifications are assigned based upon North American Industry Classification System data.

<sup>5</sup> Where identifying the industry of the issuer may enhance the understanding of the description of a deficiency in Part I.A, industry information is also provided there, unless doing so would have the effect of making the issuer identifiable.

<sup>6</sup> Where the audit work inspected related to an engagement in which the Firm played a role but was not the principal auditor, the industry and the revenue included in the tables and charts in this section are those of the entity for which an audit report was issued by the primary auditor. As discussed above, the inspection process included reviews of portions of 54 selected issuer audits completed by the Firm and the Firm's audit work on one other issuer audit engagement in which it played a role but was not the principal auditor.

The chart below categorizes the 55 issuers whose audits were inspected in 2015, based on the issuer's industry.<sup>7</sup>



Industry	Number of Audits Inspected	Percentage
Consumer Discretionary	7	13%
Consumer Staples	1	2%
Energy	3	5%
Financial Services	11	20%
Health Care	5	9%
Industrials	7	13%
Information Technology	11	20%
Materials	7	13%
Telecommunications Services	1	2%
Utilities	2	3%

## C.2. Revenue Ranges of Issuers Inspected

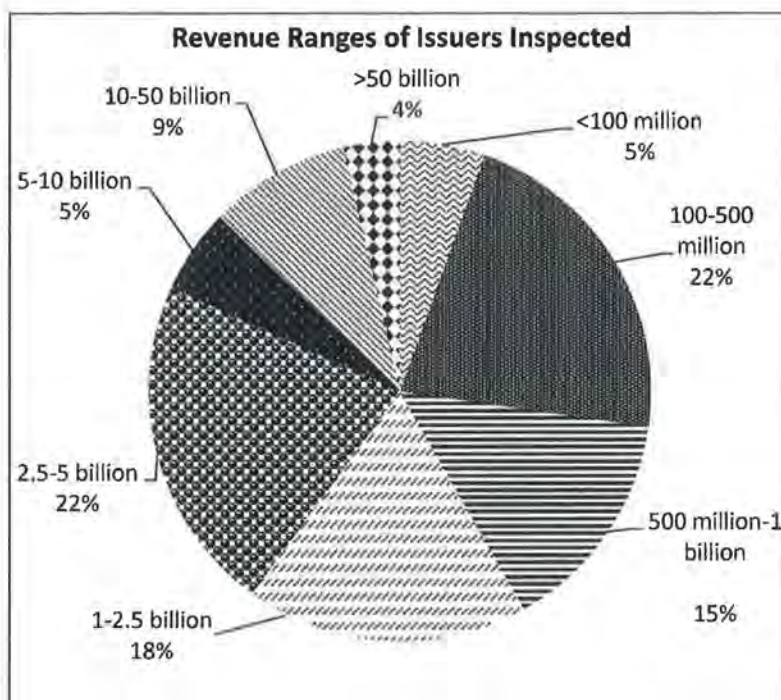
The chart below categorizes, based upon revenue, the 55 issuers whose audits were inspected in 2015.<sup>8</sup> This presentation of revenue data is intended to provide information about the size of issuer audits that were inspected and is not indicative of

<sup>7</sup> See Footnote 4 for additional information on how industry sectors were classified.

<sup>8</sup> The revenue amounts reflected in the chart are for the issuer's fiscal year end that corresponds to the audit inspected by the PCAOB. The revenue amounts were obtained from S&P and reflect a standardized approach to presenting revenue amounts.



whether the inspection included a review of the Firm's auditing of revenue in the issuer audits selected for review.



Revenue (in US\$)	Number of Audits inspected	Percentage
<100 million	3	5%
100-500 million	12	22%
500 million -1 billion	8	15%
1-2.5 billion	10	18%
2.5-5 billion	12	22%
5-10 billion	3	5%
10-50 billion	5	9%
>50 billion	2	4%

**D. Information Concerning PCAOB Inspections that is Generally Applicable to Annually Inspected Firms**

Board inspections include reviews of certain portions of selected audit work performed by the inspected firm and reviews of certain aspects of the firm's quality control system. The inspections are designed to identify deficiencies in audit work and defects or potential defects in the firm's system of quality control related to the firm's audits. The focus on deficiencies, defects, and potential defects necessarily carries through to reports on inspections and, accordingly, Board inspection reports are not intended to serve as balanced report cards or overall rating tools. Further, the inclusion in an inspection report of certain deficiencies, defects, and potential defects should not be construed as an indication that the Board has made any determination about other aspects of the inspected firm's systems, policies, procedures, practices, or conduct not included within the report.

#### D.1. Reviews of Audit Work

Inspections include reviews of portions of selected audits of financial statements and, where applicable, audits of ICFR. For these audits, the inspection team selects certain portions of the audits for inspection, and it reviews the engagement team's work papers and interviews engagement personnel regarding those portions. If the inspection team identifies a potential issue that it is unable to resolve through discussion with the firm and any review of additional work papers or other documentation, the inspection team ordinarily provides the firm with a written comment form on the matter and the firm is allowed the opportunity to provide a written response to the comment form. If the response does not resolve the inspection team's concerns, the matter is considered a deficiency and is evaluated for inclusion in the inspection report.

The inspection team selects the audits, and the specific portions of those audits, that it will review, and the inspected firm is not allowed an opportunity to limit or influence the selections. Audit deficiencies that the inspection team may identify include a firm's failure to identify, or to address appropriately, financial statement misstatements, including failures to comply with disclosure requirements,<sup>9</sup> as well as a firm's failure to perform, or to perform sufficiently, certain necessary audit procedures. An inspection of an annually inspected firm does not involve the review of all of the firm's audits, nor is it designed to identify every deficiency in the reviewed audits. Accordingly, a Board inspection report should not be understood to provide any assurance that a firm's audit work, or the relevant issuers' financial statements or reporting on ICFR, are free of any deficiencies not specifically described in an inspection report.

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<sup>9</sup> When it comes to the Board's attention that an issuer's financial statements appear not to present fairly, in a material respect, the financial position, results of operations, or cash flows of the issuer in conformity with the applicable financial reporting framework, the Board's practice is to report that information to the Securities and Exchange Commission ("SEC" or "the Commission"), which has jurisdiction to determine proper accounting in issuers' financial statements. Any description in this report of financial statement misstatements or failures to comply with SEC disclosure requirements should not be understood as an indication that the SEC has considered or made any determination regarding these issues unless otherwise expressly stated.



In some cases, the conclusion that a firm did not perform a procedure may be based on the absence of documentation and the absence of persuasive other evidence, even if the firm claimed to have performed the procedure. AS No. 3, *Audit Documentation*, provides that, in various circumstances including PCAOB inspections, a firm that has not adequately documented that it performed a procedure, obtained evidence, or reached an appropriate conclusion must demonstrate with persuasive other evidence that it did so, and that oral assertions and explanations alone do not constitute persuasive other evidence. In reaching its conclusions, an inspection team considers whether audit documentation or any other evidence that a firm might provide to the inspection team supports the firm's contention that it performed a procedure, obtained evidence, or reached an appropriate conclusion. In the case of every matter cited in the public portion of a final inspection report, the inspection team has carefully considered any contention by the firm that it did so but just did not document its work, and the inspection team has concluded that the available evidence does not support the contention that the firm sufficiently performed the necessary work.

Identified deficiencies in the audit work that exceed a significance threshold (which is described in Part I.A of the inspection report) are summarized in the public portion of the inspection report.<sup>10</sup>

The Board cautions against extrapolating from the results presented in the public portion of a report to broader conclusions about the frequency of deficiencies throughout the firm's practice. Individual audits and areas of inspection focus are most often selected on a risk-weighted basis and not randomly. Areas of focus vary among selected audits, but often involve audit work on the most difficult or inherently uncertain areas of financial statements. Thus, the audit work is generally selected for inspection based on factors that, in the inspection team's view, heighten the possibility that auditing

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<sup>10</sup> The discussion in this report of any deficiency observed in a particular audit reflects information reported to the Board by the inspection team and does not reflect any determination by the Board as to whether the Firm has engaged in any conduct for which it could be sanctioned through the Board's disciplinary process. In addition, any references in this report to violations or potential violations of law, rules, or professional standards are not a result of an adversarial adjudicative process and do not constitute conclusive findings for purposes of imposing legal liability.

deficiencies are present, rather than through a process intended to identify a representative sample.

#### D.2. Review of a Firm's Quality Control System

QC 20, *System of Quality Control for a CPA Firm's Accounting and Auditing Practice*, provides that an auditing firm has a responsibility to ensure that its personnel comply with the applicable professional standards. This standard specifies that a firm's system of quality control should encompass the following elements: (1) independence, integrity, and objectivity; (2) personnel management; (3) acceptance and continuance of issuer audit engagements; (4) engagement performance; and (5) monitoring.

The inspection team's assessment of a firm's quality control system is derived both from the results of its procedures specifically focused on the firm's quality control policies and procedures, and also from inferences that can be drawn from deficiencies in the performance of individual audits. Audit deficiencies, whether alone or when aggregated, may indicate areas where a firm's system has failed to provide reasonable assurance of quality in the performance of audits. Even deficiencies that do not result in an insufficiently supported audit opinion or a failure to obtain sufficient appropriate audit evidence to fulfill the objectives of the firm's role in an audit may indicate a defect or potential defect in a firm's quality control system.<sup>11</sup> If identified deficiencies, when accumulated and evaluated, indicate defects or potential defects in the firm's system of quality control, the nonpublic portion of this report would include a discussion of those issues. When evaluating whether identified deficiencies in individual audits indicate a defect or potential defect in a firm's system of quality control, the inspection team

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<sup>11</sup> Not every audit deficiency suggests a defect or potential defect in a firm's quality control system, and this report does not discuss every audit deficiency the inspection team identified.



considers the nature, significance, and frequency of deficiencies;<sup>12</sup> related firm methodology, guidance, and practices; and possible root causes.

Inspections also include a review of certain of the firm's practices, policies, and processes related to audit quality, which constitute a part of the firm's quality control system. The inspection team customizes the procedures it performs with respect to the firm's practices, policies, and processes related to audit quality, bearing in mind the firm's structure, procedures performed in prior inspections, past and current inspection observations, an assessment of risk related to each area, and other factors. The areas generally considered for review include (1) management structure and processes, including the tone at the top; (2) practices for partner management, including allocation of partner resources and partner evaluation, compensation, admission, and disciplinary actions; (3) policies and procedures for considering and addressing the risks involved in accepting and retaining issuer audit engagements, including the application of the firm's risk-rating system; (4) processes related to the firm's use of audit work that the firm's foreign affiliates perform on the foreign operations of the firm's U.S. issuer audits; and (5) the firm's processes for monitoring audit performance, including processes for identifying and assessing indicators of deficiencies in audit performance, independence policies and procedures, and processes for responding to defects or potential defects in quality control. A description of the procedures generally applied to these areas is below.

D.2.a. Review of Management Structure and Processes, Including the Tone at the Top

Procedures in this area are designed to focus on (1) how management is structured and operates the firm's business, and the implications that the management structure and processes have on audit performance and (2) whether actions and communications by the firm's leadership – the tone at the top – demonstrate a

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<sup>12</sup> An evaluation of the frequency of a type of deficiency may include consideration of how often the inspection team reviewed audit work that presented the opportunity for similar deficiencies to occur. In some cases, even a type of deficiency that is observed infrequently in a particular inspection may, because of some combination of its nature, its significance, and the frequency with which it has been observed in previous inspections of the firm, be cause for concern about a quality control defect or potential defect.



commitment to audit quality. To assess this area, the inspection team may interview members of the firm's leadership and review significant management reports and documents, as well as information regarding financial metrics and other processes that the firm uses to plan and evaluate its business.

D.2.b. Review of Practices for Partner Management, Including Allocation of Partner Resources and Partner Evaluation, Compensation, Admission, and Disciplinary Actions

Procedures in this area are designed to focus on (1) whether the firm's processes related to partner evaluation, compensation, admission, termination, and disciplinary actions could be expected to encourage an appropriate emphasis on audit quality and technical competence, as distinct from marketing or other activities of the firm; (2) the firm's processes for allocating its partner resources; and (3) the accountability and responsibilities of the different levels of firm management with respect to partner management. The inspection team may interview members of the firm's management and review documentation related to certain of these topics. In addition, the inspection team's evaluation may include the results of interviews of audit partners regarding their responsibilities and allocation of time. Further, the inspection team may review a sample of partners' personnel files.

D.2.c. Review of Policies and Procedures for Considering and Addressing the Risks Involved in Accepting and Retaining Issuer Audit Engagements, Including the Application of the Firm's Risk-Rating System

The inspection team may consider the firm's documented policies and procedures in this area. In addition, the inspection team may select certain issuer audits to (1) evaluate compliance with the firm's policies and procedures for identifying and assessing the risks involved in accepting or continuing the issuer audit engagements and (2) observe whether the audit procedures were responsive to the risks identified during the firm's process.

D.2.d. Review of Processes Related to a Firm's Use of Audit Work that the Firm's Foreign Affiliates Perform on the Foreign Operations of the Firm's U.S. Issuer Audits

The inspection team may review the firm's policies and procedures related to its supervision and control of work performed by foreign affiliates on the firm's U.S. issuer audits, review available information relating to the most recent internal inspections of foreign affiliated firms, interview members of the firm's leadership, and review the U.S. engagement teams' supervision concerning, and procedures for control of, the audit work that the firm's foreign affiliates performed on a sample of audits.

D.2.e. Review of a Firm's Processes for Monitoring Audit Performance, Including Processes for Identifying and Assessing Indicators of Deficiencies in Audit Performance, Independence Policies and Procedures, and Processes for Responding to Defects or Potential Defects in Quality Control

D.2.e.i. Review of Processes for Identifying and Assessing Indicators of Deficiencies in Audit Performance

Procedures in this area are designed to identify and assess the monitoring processes that the firm uses to monitor audit quality for individual engagements and for the firm as a whole. The inspection team may interview members of the firm's management and review documents relating to the firm's identification and evaluation of, and response to, possible indicators of deficiencies in audit performance. In addition, the inspection team may review documents related to the design, operation, and evaluation of findings of the firm's internal inspection program, and may compare the results of its review of audit work to those from the internal inspection's review of the same audit work.

D.2.e.ii. Review of Response to Defects or Potential Defects in Quality Control

The inspection team may review steps the firm has taken to address possible quality control deficiencies and assess the design and effectiveness of the underlying processes. In addition, the inspection team may inspect audits of issuers whose audits had been reviewed during previous PCAOB inspections of the firm to ascertain whether the audit procedures in areas with previous deficiencies have improved.

D.2.e.iii. Review of Certain Other Policies and Procedures Related to Monitoring Audit Quality

The inspection team may assess policies, procedures, and guidance related to aspects of independence requirements and the firm's consultation processes, as well as the firm's compliance with these requirements and processes. In addition, the inspection team may review documents, including certain newly issued policies and procedures, and interview firm management to consider the firm's methods for developing audit policies, procedures, and methodologies, including internal guidance and training materials.

END OF PART I





PCAOB Release No. 104-2016-141  
Inspection of Deloitte & Touche LLP  
August 10, 2016  
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PART II, PART III, AND APPENDIX A OF THIS REPORT ARE  
NONPUBLIC AND ARE OMITTED FROM THIS PUBLIC DOCUMENT

**APPENDIX B**

**RESPONSE OF THE FIRM TO DRAFT INSPECTION REPORT**

Pursuant to section 104(f) of the Act, 15 U.S.C. § 7214(f), and PCAOB Rule 4007(a), the Firm provided a written response to a draft of this report. Pursuant to section 104(f) of the Act and PCAOB Rule 4007(b), the Firm's response, minus any portion granted confidential treatment, is attached hereto and made part of this final inspection report.<sup>13</sup>

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<sup>13</sup> The Board does not make public any of a firm's comments that address a nonpublic portion of the report unless a firm specifically requests otherwise. In some cases, the result may be that none of a firm's response is made publicly available. In addition, pursuant to section 104(f) of the Act, 15 U.S.C. § 7214(f), and PCAOB Rule 4007(b), if a firm requests, and the Board grants, confidential treatment for any of the firm's comments on a draft report, the Board does not include those comments in the final report at all. The Board routinely grants confidential treatment, if requested, for any portion of a firm's response that addresses any point in the draft that the Board omits from, or any inaccurate statement in the draft that the Board corrects in, the final report.



July 25, 2016

Ms. Patricia J. Thompson  
Deputy Director  
Division of Registration and Inspections  
Public Company Accounting Oversight Board  
1666 K Street NW  
Washington, DC 20006

Re: Deloitte & Touche LLP – Response to Part I of Draft Report on 2015 Inspection

Dear Ms. Thompson:

Deloitte & Touche LLP is pleased to submit this response to the draft Report on the 2015 Inspection of Deloitte & Touche LLP (the Draft Report) of the Public Company Accounting Oversight Board (the PCAOB or the Board). We believe that the PCAOB's inspection process serves an important role in the achievement of our shared objectives of improving audit quality and serving investors and the public interest. We are committed to continuing to work with the PCAOB to further strengthen trust in the integrity of the independent audit.

We have evaluated the matters identified by the Board's inspection team for each of the issuer audits described in Part I of the Draft Report and have taken actions as appropriate in accordance with PCAOB standards to comply with our professional responsibilities under AU 390, *Consideration of Omitted Procedures After the Report Date*, and AU 561, *Subsequent Discovery of Facts Existing at the Date of the Auditor's Report*.

Executing high quality audits is our number one priority. We are confident that the investments we have made and are continuing to make in our audit processes, policies, and quality controls are resulting in significant enhancements to our audit quality.

Sincerely,



Cathy Engelbert  
Chief Executive Officer  
Deloitte LLP



Joe Ucuzoglu  
Chairman and CEO  
Deloitte & Touche LLP

## APPENDIX C

### AUDITING STANDARDS REFERENCED IN PART I.A

This appendix provides the text of the auditing standard paragraphs that are referenced in Part I.A of this report. Footnotes that are included in this appendix, and any other Notes, are from the original auditing standards that are referenced. While this appendix contains the specific portions of the relevant standards cited with respect to the deficiencies in Part I.A of this report, other portions of the standards (including those described in Part I.B of this report) may provide additional context, descriptions, related requirements, or explanations; the complete standards are available on the PCAOB's website at <http://pcaobus.org/STANDARDS/Pages/default.aspx>.

<b>AS No. 5, An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements</b>		
<b>USING A TOP-DOWN APPROACH</b>		
<b>Selecting Controls to Test</b>		
AS No. 5.39	The auditor should test those controls that are important to the auditor's conclusion about whether the company's controls sufficiently address the assessed risk of misstatement to each relevant assertion.	Issuers A, D, H, I, and J
<b>TESTING CONTROLS</b>		
<b>Testing Design Effectiveness</b>		
AS No. 5.42	<p>The auditor should test the design effectiveness of controls by determining whether the company's controls, if they are operated as prescribed by persons possessing the necessary authority and competence to perform the control effectively, satisfy the company's control objectives and can effectively prevent or detect errors or fraud that could result in material misstatements in the financial statements.</p> <p>Note: A smaller, less complex company might achieve its control objectives in a different manner from a larger, more complex organization. For example, a smaller, less complex company might have fewer employees in the accounting function, limiting opportunities to segregate duties and leading the company to implement alternative controls to achieve its control objectives. In such circumstances, the auditor should evaluate whether those alternative controls are effective.</p>	Issuers B, C, E, F, G, J, K, L, and M



**AS No. 5, An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements**

<b>Testing Operating Effectiveness</b>		
AS No. 5.44	<p>The auditor should test the operating effectiveness of a control by determining whether the control is operating as designed and whether the person performing the control possesses the necessary authority and competence to perform the control effectively.</p> <p>Note: In some situations, particularly in smaller companies, a company might use a third party to provide assistance with certain financial reporting functions. When assessing the competence of personnel responsible for a company's financial reporting and associated controls, the auditor may take into account the combined competence of company personnel and other parties that assist with functions related to financial reporting.</p>	Issuers B, C, E, F, G, J, K, L, and M

**AS No. 13, The Auditor's Responses to the Risks of Material Misstatement**

<b>Responses Involving the Nature, Timing, and Extent of Audit Procedures</b>		
AS No. 13.8	The auditor should design and perform audit procedures in a manner that addresses the assessed risks of material misstatement for each relevant assertion of each significant account and disclosure.	Issuer A
<b>RESPONSES TO FRAUD RISKS</b>		
AS No. 13.13	<p><i>Addressing Fraud Risks in the Audit of Financial Statements.</i> In the audit of financial statements, the auditor should perform substantive procedures, including tests of details, that are specifically responsive to the assessed fraud risks. If the auditor selects certain controls intended to address the assessed fraud risks for testing in accordance with paragraphs 16-17 of this standard, the auditor should perform tests of those controls.</p>	Issuer A

<b>AS No. 13, The Auditor's Responses to the Risks of Material Misstatement</b>		
<b>Testing Controls</b>		
<b>TESTING CONTROLS IN AN AUDIT OF FINANCIAL STATEMENTS</b>		
AS No. 13.16	<p><i>Controls to be Tested.</i> If the auditor plans to assess control risk at less than the maximum by relying on controls,<sup>12/</sup> and the nature, timing, and extent of planned substantive procedures are based on that lower assessment, the auditor must obtain evidence that the controls selected for testing are designed effectively and operated effectively during the entire <b>period of reliance</b>.<sup>13/</sup> However, the auditor is not required to assess control risk at less than the maximum for <i>all</i> relevant assertions and, for a variety of reasons, the auditor may choose not to do so.</p>	Issuers A and M
<p><u>Footnotes to AS No. 13.16</u></p> <p><sup>12/</sup> Reliance on controls that is supported by sufficient and appropriate audit evidence allows the auditor to assess control risk at less than the maximum, which results in a lower assessed risk of material misstatement. In turn, this allows the auditor to modify the nature, timing, and extent of planned substantive procedures.</p> <p><sup>13/</sup> Terms defined in Appendix A, <i>Definitions</i>, are set in <b>boldface type</b> the first time they appear.</p>		
AS No. 13.18	<p><i>Evidence about the Effectiveness of Controls in the Audit of Financial Statements.</i> In designing and performing tests of controls for the audit of financial statements, the evidence necessary to support the auditor's control risk assessment depends on the degree of reliance the auditor plans to place on the effectiveness of a control. The auditor should obtain more persuasive audit evidence from tests of controls the greater the reliance the auditor places on the effectiveness of a control. The auditor also should obtain more persuasive evidence about the effectiveness of controls for each relevant assertion for which the audit approach consists primarily of tests of controls, including situations in which substantive procedures alone cannot provide sufficient appropriate audit evidence.</p>	Issuers A and M
<b>Substantive Procedures</b>		
AS No. 13.37	<p>As the assessed risk of material misstatement increases, the evidence from substantive procedures that the auditor should obtain also increases. The evidence provided by the auditor's substantive procedures depends</p>	Issuers A and M



**AS No. 13, *The Auditor's Responses to the Risks of Material Misstatement***

	upon the mix of the nature, timing, and extent of those procedures. Further, for an individual assertion, different combinations of the nature, timing, and extent of testing might provide sufficient appropriate evidence to respond to the assessed risk of material misstatement.	
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**AS No. 14, *Evaluating Audit Results***

<b>Evaluating the Results of the Audit of Financial Statements</b>		
AS No. 14.3	In forming an opinion on whether the financial statements are presented fairly, in all material respects, in conformity with the applicable financial reporting framework, the auditor should take into account all relevant audit evidence, regardless of whether it appears to corroborate or to contradict the assertions in the financial statements.	Issuers C, E, and F
<b>EVALUATING THE PRESENTATION OF THE FINANCIAL STATEMENTS, INCLUDING THE DISCLOSURES</b>		
AS No. 14.30	<p>The auditor must evaluate whether the financial statements are presented fairly, in all material respects, in conformity with the applicable financial reporting framework.</p> <p>Note: AU sec. 411, <i>The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles</i>, establishes requirements for evaluating the presentation of the financial statements. Auditing Standard No. 6, <i>Evaluating Consistency of Financial Statements</i>, establishes requirements regarding evaluating the consistency of the accounting principles used in financial statements.</p> <p>Note: The auditor should look to the requirements of the Securities and Exchange Commission for the company under audit with respect to the accounting principles applicable to that company.</p>	Issuer D
AS No. 14.31	As part of the evaluation of the presentation of	Issuer D



**AS No. 14, Evaluating Audit Results**

	<p>the financial statements, the auditor should evaluate whether the financial statements contain the information essential for a fair presentation of the financial statements in conformity with the applicable financial reporting framework. Evaluation of the information disclosed in the financial statements includes consideration of the form, arrangement, and content of the financial statements (including the accompanying notes), encompassing matters such as the terminology used, the amount of detail given, the classification of items in the statements, and the bases of amounts set forth.</p> <p>Note: According to AU sec. 508, if the financial statements, including the accompanying notes, fail to disclose information that is required by the applicable financial reporting framework, the auditor should express a qualified or adverse opinion and should provide the information in the report, if practicable, unless its omission from the report is recognized as appropriate by a specific auditing standard.<sup>18/</sup></p>	
<p>Footnote to AS No. 14.31</p> <p><sup>18/</sup> AU secs. 508.41-.44.</p>		

**AU 328, Auditing Fair Value Measurements and Disclosures**

<p><b>Testing Management's Significant Assumptions, the Valuation Model, and the Underlying Data</b></p>		
<p>AU 328.26</p>	<p>The auditor's understanding of the reliability of the process used by management to determine fair value is an important element in support of the resulting amounts and therefore affects the nature, timing, and extent of audit procedures. When testing the entity's fair value measurements and disclosures, the auditor evaluates whether:</p> <ul style="list-style-type: none"> <li>a. Management's assumptions are reasonable and reflect, or are not inconsistent with, market information (see paragraph .06).</li> <li>b. The fair value measurement was determined using an appropriate model, if applicable.</li> <li>c. Management used relevant information that was reasonably available at the time.</li> </ul>	<p>Issuers B, E, and G</p>

<b>AU 328, Auditing Fair Value Measurements and Disclosures</b>		
AU 328.28	Where applicable, the auditor should evaluate whether the significant assumptions used by management in measuring fair value, taken individually and as a whole, provide a reasonable basis for the fair value measurements and disclosures in the entity's financial statements.	Issuers B, E, and G
AU 328.31	Assumptions ordinarily are supported by differing types of evidence from internal and external sources that provide objective support for the assumptions used. The auditor evaluates the source and reliability of evidence supporting management's assumptions, including consideration of the assumptions in light of historical and market information.	Issuers B, E, and G
AU 328.36	<p>To be reasonable, the assumptions on which the fair value measurements are based (for example, the discount rate used in calculating the present value of future cash flows),<sup>fn 5</sup> individually and taken as a whole, need to be realistic and consistent with:</p> <ul style="list-style-type: none"> <li>a. The general economic environment, the economic environment of the specific industry, and the entity's economic circumstances;</li> <li>b. Existing market information;</li> <li>c. The plans of the entity, including what management expects will be the outcome of specific objectives and strategies;</li> <li>d. Assumptions made in prior periods, if appropriate;</li> <li>e. Past experience of, or previous conditions experienced by, the entity to the extent currently applicable;</li> <li>f. Other matters relating to the financial statements, for example, assumptions used by management in accounting estimates for financial statement accounts other than those relating to fair value measurements and disclosures; and</li> <li>g. The risk associated with cash flows, if applicable, including the potential variability in the amount and timing of the cash flows and the related effect on the discount rate.</li> </ul> <p>Where assumptions are reflective of management's intent and ability to carry out specific courses of action, the auditor considers whether they are consistent with the entity's plans and past experience.</p>	Issuers B, E and G



**AU 328, Auditing Fair Value Measurements and Disclosures**

Footnote to AU 328.36

<sup>fn 5</sup> The auditor also should consider requirements of GAAP that may influence the selection of assumptions (see FASB Concepts Statement No. 7).

**Developing Independent Fair Value Estimates for Corroborative Purposes**

AU 328.40

The auditor may make an independent estimate of fair value (for example, by using an auditor-developed model) to corroborate the entity's fair value measurement.<sup>fn 6</sup> When developing an independent estimate using management's assumptions, the auditor evaluates those assumptions as discussed in paragraphs .28 to .37. Instead of using management's assumptions, the auditor may develop his or her own assumptions to make a comparison with management's fair value measurements. In that situation, the auditor nevertheless understands management's assumptions. The auditor uses that understanding to ensure that his or her independent estimate takes into consideration all significant variables and to evaluate any significant difference from management's estimate. The auditor also should test the data used to develop the fair value measurements and disclosures as discussed in paragraph .39.

Issuer E

Footnote to AU 328.40

<sup>fn 6</sup> See section 329, *Analytical Procedures*.

**AU 329, Substantive Analytical Procedures**

**Analytical Procedures Used as Substantive Tests**

**Availability and Reliability of Data**

AU 329.16

Before using the results obtained from substantive analytical procedures, the auditor should either test the design and operating effectiveness of controls over financial information used in the substantive analytical procedures or perform other procedures to support the completeness and accuracy of the underlying information. The auditor obtains assurance from analytical procedures based upon the

Issuer E

## AU 329, *Substantive Analytical Procedures*

	<p>consistency of the recorded amounts with expectations developed from data derived from other sources. The reliability of the data used to develop the expectations should be appropriate for the desired level of assurance from the analytical procedure. The auditor should assess the reliability of the data by considering the source of the data and the conditions under which it was gathered, as well as other knowledge the auditor may have about the data. The following factors influence the auditor's consideration of the reliability of data for purposes of achieving audit objectives:</p> <ul style="list-style-type: none"> <li>▪ Whether the data was obtained from independent sources outside the entity or from sources within the entity</li> <li>▪ Whether sources within the entity were independent of those who are responsible for the amount being audited</li> <li>▪ Whether the data was developed under a reliable system with adequate controls</li> <li>▪ Whether the data was subjected to audit testing in the current or prior year</li> <li>▪ Whether the expectations were developed using data from a variety of sources</li> </ul>	
<b>Precision of the Expectation</b>		
AU 329.17	<p>The expectation should be precise enough to provide the desired level of assurance that differences that may be potential material misstatements, individually or when aggregated with other misstatements, would be identified for the auditor to investigate (see paragraph .20). As expectations become more precise, the range of expected differences becomes narrower and, accordingly, the likelihood increases that significant differences from the expectations are due to misstatements. The precision of the expectation depends on, among other things, the auditor's identification and consideration of factors that significantly affect the amount being audited and the level of detail of data used to develop the expectation.</p>	Issuer E

**AU 342, Auditing Accounting Estimates**

Evaluating Reasonableness		
AU 342.11	<p>Review and test management's process. In many situations, the auditor assesses the reasonableness of an accounting estimate by performing procedures to test the process used by management to make the estimate. The following are procedures the auditor may consider performing when using this approach:</p> <ul style="list-style-type: none"> <li>a. Identify whether there are controls over the preparation of accounting estimates and supporting data that may be useful in the evaluation.</li> <li>b. Identify the sources of data and factors that management used in forming the assumptions, and consider whether such data and factors are relevant, reliable, and sufficient for the purpose based on information gathered in other audit tests.</li> <li>c. Consider whether there are additional key factors or alternative assumptions about the factors.</li> <li>d. Evaluate whether the assumptions are consistent with each other, the supporting data, relevant historical data, and industry data.</li> <li>e. Analyze historical data used in developing the assumptions to assess whether the data is comparable and consistent with data of the period under audit, and consider whether such data is sufficiently reliable for the purpose.</li> <li>f. Consider whether changes in the business or industry may cause other factors to become significant to the assumptions.</li> <li>g. Review available documentation of the assumptions used in developing the accounting estimates and inquire about any other plans, goals, and objectives of the entity, as well as consider their relationship to the assumptions.</li> <li>h. Consider using the work of a specialist regarding certain assumptions (section 336, Using the Work of a Specialist).</li> <li>i. Test the calculations used by management to translate the assumptions and key factors into the accounting estimate.</li> </ul>	Issuers C, D, E, F, and J



<b>AU 350, Audit Sampling</b>		
<b>Sampling In Substantive Tests Of Details</b>		
<b>Planning Samples</b>		
AU 350.17	<p>When planning a particular sample, the auditor should consider the specific audit objective to be achieved and should determine that the audit procedure, or combination of procedures, to be applied will achieve that objective. The auditor should determine that the population from which he draws the sample is appropriate for the specific audit objective. For example, an auditor would not be able to detect understatements of an account due to omitted items by sampling the recorded items. An appropriate sampling plan for detecting such understatements would involve selecting from a source in which the omitted items are included. To illustrate, subsequent cash disbursements might be sampled to test recorded accounts payable for understatement because of omitted purchases, or shipping documents might be sampled for understatement of sales due to shipments made but not recorded as sales.</p>	Issuer A
AU 350.19	<p>The second standard of field work states, "A sufficient understanding of the internal control structure is to be obtained to plan the audit and to determine the nature, timing, and extent of tests to be performed." After assessing and considering the levels of inherent and control risks, the auditor performs substantive tests to restrict detection risk to an acceptable level. As the assessed levels of inherent risk, control risk, and detection risk for other substantive procedures directed toward the same specific audit objective decreases, the auditor's allowable risk of incorrect acceptance for the substantive tests of details increases and, thus, the smaller the required sample size for the substantive tests of details. For example, if inherent and control risks are assessed at the maximum, and no other substantive tests directed toward the same specific audit objectives are performed, the auditor should allow for a low risk of incorrect acceptance for the substantive tests of details.<sup>fn 3</sup> Thus, the auditor would select a larger sample size for the tests of details than if he allowed a higher risk of incorrect acceptance.</p>	Issuers A and M
<p><b>Footnote to AU 350.19</b></p> <p><sup>fn 3</sup> Some auditors prefer to think of risk levels in quantitative terms. For example, in the circumstances described, an auditor might think in terms of a 5 percent risk of incorrect acceptance for the substantive test of details. Risk levels used in sampling applications in other fields are not necessarily relevant in determining appropriate levels for applications in auditing because an audit includes many interrelated tests</p>		

## **AU 350, Audit Sampling**

and sources of evidence.

AU 350.23	To determine the number of items to be selected in a sample for a particular substantive test of details, the auditor should take into account tolerable misstatement for the population; the allowable risk of incorrect acceptance (based on the assessments of inherent risk, control risk, and the detection risk related to the substantive analytical procedures or other relevant substantive tests); and the characteristics of the population, including the expected size and frequency of misstatements.	Issuers A and M
AU 350.23A	Table 1 of the Appendix describes the effects of the factors discussed in the preceding paragraph on sample sizes in a statistical or nonstatistical sampling approach. When circumstances are similar, the effect on sample size of those factors should be similar regardless of whether a statistical or nonstatistical approach is used. Thus, when a nonstatistical sampling approach is applied properly, the resulting sample size ordinarily will be comparable to, or larger than, the sample size resulting from an efficient and effectively designed statistical sample.	Issuers A and M



## APPENDIX D

### REORGANIZED STANDARDS REFERENCED IN PART I

On March 31, 2015, the PCAOB adopted the reorganization of its auditing standards using a topical structure and a single, integrated numbering system. See Reorganization of PCAOB Auditing Standards and Related Amendments to PCAOB Standards and Rules, PCAOB Release No. 2015-002 (Mar. 31, 2015). On September 17, 2015, the SEC approved the PCAOB's adoption of the reorganization. The reorganization of the standards will be effective as of December 31, 2016. The citations to PCAOB auditing standards included in this report use the numbering system and titles of standards that were in effect at the time of the primary inspection procedures. This table provides the section numbers of those standards included in Part I of this report as reorganized, as well as the titles of the standards both before and after the reorganization. The complete standards are available on the PCAOB's website at <http://pcaobus.org/STANDARDS/Pages/default.aspx>.

Auditing Standards – before the reorganization		Auditing Standards – as reorganized	
AS No. 3	<i>Audit Documentation</i>	AS 1215	<i>Audit Documentation</i>
AS No. 5	<i>An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements</i>	AS 2201	<i>An Audit of Internal Control Over Financial Reporting That Is Integrated with An Audit of Financial Statements</i>
AS No. 13	<i>The Auditor's Responses to the Risks of Material Misstatement</i>	AS 2301	<i>The Auditor's Responses to the Risks of Material Misstatement</i>
AS No. 14	<i>Evaluating Audit Results</i>	AS 2810	<i>Evaluating Audit Results</i>
AS No. 15	<i>Audit Evidence</i>	AS 1105	<i>Audit Evidence</i>
AU 230	<i>Due Professional Care in the Performance of Work</i>	AS 1015	<i>Due Professional Care in the Performance of Work</i>
AU 328	<i>Auditing Fair Value Measurements and Disclosures</i>	AS 2502	<i>Auditing Fair Value Measurements and Disclosures</i>
AU 329	<i>Substantive Analytical Procedures</i>	AS 2305	<i>Substantive Analytical Procedures</i>
AU 342	<i>Auditing Accounting Estimates</i>	AS 2501	<i>Auditing Accounting Estimates</i>
AU 350	<i>Audit Sampling</i>	AS 2315	<i>Audit Sampling</i>

## INDEPENDENT ACCOUNTANTS' REPORT ON APPLYING AGREED-UPON PROCEDURES

The Audit Committee of the  
Metropolitan Transportation Authority

We have performed the procedures enumerated below, which were agreed to by the Metropolitan Transportation Authority ("MTA"), the MTA Office of the Inspector General (the "IG") and the Auditor General of MTA, related to budget accountability for the IG for the year ended December 31, 2016. The IG is responsible for its budget accountability. The sufficiency of these procedures is solely the responsibility of the parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures enumerated below either for the purpose for which this report has been requested or for any other purpose.

The procedures and the associated findings are as follows:

1. We utilized a random number generator to randomly select five employees from the MTA Headquarters - IG payroll register for December 2016 and we compared each individual's salary to an approved Personnel Action Form.

We found no exceptions as a result of the procedures.

2. We utilized a random number generator to randomly select two terminated employees from the listing of terminated employees for the year ended December 31, 2016 and we read each individual's Personnel Action Form. We read the payroll register subsequent to each employee's termination, and noted that these employees were removed from the payroll register.

We found no exceptions as a result of the procedures.

3. We compared the IG's total payroll per the payroll register for the month of December 2016 to the MTA's monthly expense report for the month of December 2016 and noted they agreed.

We found no exceptions as a result of the procedures.

4. We utilized a random number generator to randomly select five purchases made during the year from the general ledger for the year ended December 31, 2016, and noted that the related requisitions and purchase orders contained an approver's signature, and, where applicable, the bids were obtained.

We found no exceptions as a result of the procedures.

5. We utilized a random number generator to randomly select fifteen disbursements from the IG's General Fund for the year ended December 31, 2016 and compared the selected disbursements to supporting documentation and noted that the disbursements were authorized and supported by proper documentation.

We found no exceptions as a result of the procedures.

6. During the three months ended December 31, 2016, four petty cash vouchers were generated. We selected all four petty cash vouchers from the petty cash vouchers listing for the three months ended December 31, 2016, and noted these vouchers were approved.

We found no exceptions as a result of the procedures.

7. We obtained the IG General Fund's bank reconciliation for the month of December 2016, and noted that the bank balance per the IG's General Fund's bank reconciliation agreed to the Authority's general ledger.

We found no exceptions as a result of the procedures.

8. We utilized a random number generator to randomly select five employee reimbursements from listing of employee reimbursements for the year ended December 31, 2016 and noted the reimbursements were supported. We utilized a random number generator to randomly select five employee expense reports from the listing of employee expenses reports for the year ended December 31, 2016, and noted the expense reports were supported.

We found no exceptions as a result of the procedures.

9. Management informed us that there were no fixed asset addition purchases made during the year ended December 31, 2016.

10. Management informed us that there were no fixed asset disposals made during the year ended December 31, 2016.

11. Management informed us that there was no depreciation expense during the year ended December 31, 2016.

12. We compared the depreciation expense for the month of December 2016 to the MTA's general ledger and noted they were both \$0.

We found no exceptions as a result of the procedures.

13. We read and compared the IG's monthly expense report to the MTA's monthly expense report for the month of December 2016 and noted that they were not equal. We noted the expense reports did not reconcile for the one expense code listed below. The amount per the MTA's monthly expense report for the month of December 2016 exceeded the IG's monthly expense report by \$3,208.

- a. Employee Expense – Tuition Reimbursement (724720)

14. We compared the IG's 2016 expense budget to the actual expenditures for 2016, and noted total actual expenditures were less than the IG's 2016 expense budget by \$2,576,569.

This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The agreed-upon procedures do not constitute an audit of financial statements or any part thereof, the objective of which is the expression of an opinion on the financial statements or a part thereof. Accordingly, we do not express such an opinion.



Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the MTA, the MTA Office of the IG, and the Auditor General of the MTA, and is not intended to be and should not be used by anyone other than the specified parties.

November 13, 2017

DRAFT



## THE METROPOLITAN TRANSPORTATION AUTHORITY

### AUDIT COMMITTEE

This Charter for the Audit Committee was adopted by the Board Chair and a majority of the members of the Board of the Metropolitan Transportation Authority, a public benefit corporation established under the laws of the State of New York (together with any other entity or corporation for which the members of the Metropolitan Transportation Authority serve as a board of directors, the “MTA”), as amended on ~~June 22, 2016~~November 15, 2017.

#### I. PURPOSE

The Audit Committee (the “Committee”) shall assist and provide guidance to the Board Chair and the Board in monitoring and overseeing (a) the conduct of the MTA’s financial reporting process, the application of accounting principles, and the engagement of the MTA’s outside accountants; (b) the MTA’s internal controls and risk management systems; and (c) general matters relating to legal, regulatory and ethical compliance at the MTA (hereinafter referred to as the “Purpose”).

#### II. COMMITTEE AUTHORITY

The Committee’s role is one of oversight. In carrying out this oversight function, the chairperson of the Committee (the “Committee Chair”) and the vice-chairperson of the Committee (the “Committee Vice-Chair”) shall have additional responsibilities, as set forth in Section VI of this Charter. The Committee Chair and/or the Committee Vice-Chair regularly shall report to the entire Committee their findings with respect to these additional responsibilities and refer to the entire Committee for its consideration any matter relating thereto as the Committee Chair and/or the Committee Vice-Chair deem necessary or appropriate. MTA Audit Services’ and MTA Corporate Compliance organizational independence is derived from ~~its~~their reporting structure as ~~it reports~~they report to the MTA Audit Committee and MTA Chairman/CEO.

Notwithstanding these oversight responsibilities, the MTA and each of its subsidiary corporations and affiliates are responsible for preparing their own financial statements and the respective outside auditors are responsible for auditing the respective financial statements. The Committee, the Committee Chair, and the Committee Vice-Chair recognize that the Auditor General and the outside auditors have more time, knowledge and detailed information about the MTA and each of its subsidiary corporations and affiliates than do Committee members. Consequently, in carrying out its oversight responsibilities, no member of the Committee shall be deemed to provide (i) any expert or special assurance as to the financial statements of the MTA or of any subsidiary corporation or affiliate or (ii) any professional certification as to the work of any outside auditor.

In discharging its role, the Committee is empowered to investigate any matter brought to its attention. To facilitate any such investigation, the Committee Chairman and/or Vice Chairman shall have access to all books, records, facilities and staff of the MTA (including any of its subsidiary corporations or affiliates).

The foregoing is not intended to alter or curtail existing rights of individual board members to access books, records or staff in connection with the performance of their fiduciary duties as board members. With the prior approval of the Board Chair or a majority of the Board, the Committee may retain, compensate and/or terminate outside counsel, auditors or other experts as it deems necessary and will receive adequate funding from the MTA to engage such advisors in accordance with MTA procedures.

### III. COMMITTEE MEMBERSHIP

The Committee shall consist of at least ~~three~~ 3 or more members of the Board, appointed by the Board Chair. If not otherwise a member of the Committee, each Vice-Chair of the Board shall be an ex officio member of the Committee. The Board Chair shall appoint the ~~Committee Chair-chairperson~~ and ~~the Committee Vice-Chair~~. ~~A member~~ vice chairperson of the Committee ~~may be removed, for cause or without cause, by the Board Chair~~. In the absence of the ~~Committee Chair or the Committee Vice-Chair~~ chairperson at a meeting of the Committee, the vice chairperson shall chair such meeting. ~~In the absence of the chairperson and the vice chairperson, the~~ Board Chair shall appoint a temporary chairperson to chair such meeting. A member of the Committee may be removed, for cause or without cause, by the Board Chair.

At least one committee member shall have accounting or financial management expertise. No member of the Committee shall be employed by (a) the MTA, or (b) a private entity that does, or is likely to do, business with the MTA.

### IV. COMMITTEE MEETINGS

The Committee shall meet on a regularly-scheduled basis at least 4 times per year, and more frequently as circumstances dictate. The Committee will cause to be kept adequate minutes of all its proceedings and records of any action taken and will report on its proceedings and any action taken to the next full meeting of the Board. Committee members will be furnished with copies of the minutes of each meeting. Meetings of the Committee shall be open to the public, and the Committee shall be governed by the rules regarding public meetings set forth in the applicable provisions of the Public Authorities Law and Article 7 of the Public Officers Law that relate to public notice, public speaking and the conduct of executive session. The Committee may form and assign responsibilities to subcommittees when appropriate.

The Committee may request that any member of the Board, the Auditor General, the Chief Compliance Officer, any officer or staff of the MTA, or any other persons whose advice and counsel are sought by the Committee, attend any meeting of the Committee to provide such pertinent information at the Committee requests. The Auditor General shall (1) furnish the Committee with all material information pertinent to matters appearing on the Committee agenda relating to the Purpose, (2) provide the chairperson of the Committee with all information regarding the Purpose that is material to the Committee's monitoring and

oversight of the Purpose, and (3) inform the chairperson of the Committee of any matters not already on the Committee agenda that should be added to the agenda in order for the Committee to be adequately monitoring and overseeing the Purpose.

## **V. COMMITTEE REPORTS**

The chairperson of the Committee ~~Chair~~ shall report on the Committee's proceedings, and any recommendations made.

## **VI. KEY RESPONSIBILITIES OF COMMITTEE CHAIR AND VICE-CHAIR**

The following responsibilities are set forth as a guide. The Committee ~~Chair~~chairperson and the Committee Vice-~~Chair~~chairperson are authorized to carry out these and such other responsibilities assigned by the Committee, the Board Chair or the Board, from time to time, and take any actions reasonably related to the mandate of this Charter.

To assist the Committee in fulfilling its purpose, the Committee ~~Chair~~chairperson and/or the Committee Vice-~~Chair~~chairperson shall:

### ***Auditors, Financial Statements & Accounting Policies:***

1. review and discuss with the Auditor General, the relevant MTA employees, the outside auditor, and the internal auditors any audit problems or difficulties encountered in the course of audit work, including any restrictions on the scope of activities or access to required information and advise the Committee as to how to resolve any disagreements regarding financial reporting;
2. review and discuss with the Auditor General and outside auditor significant accounting and reporting issues, including complex or unusual transactions and highly judgmental areas, and recent professional and regulatory pronouncements, and understand their impact on the financial statements;
3. inquire as to the outside auditor's view of the accounting treatment related to significant new transactions or other significant matters or events not in the ordinary course of business;
4. review and discuss with the Auditor General, the relevant MTA employees, and the outside auditor and any material financial or non-financial arrangements that do not appear on the financial statements of the MTA (or of any subsidiary corporation or affiliate);
5. review and discuss with the Auditor General and the outside auditor: (i) any accounting adjustments that were noted or proposed by the auditors but were "passed" (as immaterial or otherwise), (ii) any communications between the audit team and the audit firm's national office respecting auditing or accounting issues presented by the engagement and (iii) any "management" or "internal control" letter issued, or proposed to be issued, by any outside auditor to the MTA (including to any subsidiary corporation or affiliate);
6. review with the Auditor General and the outside auditor the periodic financial statements and footnotes of the MTA (and of each subsidiary corporation or affiliate, as applicable)

and discussing the adequacy of the system of internal controls and the appropriateness of the accounting principles used, and the judgments made, in the preparation of such periodic financial statements;

7. meet annually (or more frequently if necessary) with each respective outside auditor (without the Auditor General or any other officers or staff of the MTA present) to discuss the periodic financial statements of the MTA (and of each subsidiary corporation or affiliate, as applicable);

***Internal Controls & Risk Management:***

8. together with the Auditor General and the Chief Compliance Officer, review, discuss and (if necessary) investigate compliance with MTA policies and/or refer instances of non-compliance to the MTA Inspector General for investigation;
9. review and discuss with the Auditor General, the Chief Compliance Officer, the relevant employees of the MTA, and the outside auditor: (i) any significant deficiencies in the design or operation of the internal controls of the MTA, including information technology security and system controls (ii) any fraud, whether or not material, involving MTA and (iii) related findings and recommendations of the outside auditors together with management's responses;
10. review the scope of the external auditors' assessment of internal controls over financial reporting, and obtain reports on significant findings and recommendations, together with management's responses;
11. review and discuss with the Auditor General, the Chief Compliance Officer, the relevant MTA employees, and the outside auditor the MTA's risk assessment and risk management systems, and oversee the underlying policies with respect to risk assessment and risk management;
12. together with the Auditor General and the Chief Compliance Officer, serve as the point of contact for the MTA Inspector General, including by reviewing all reports and draft reports delivered to the MTA by the MTA Inspector General, and being available to meet with the MTA Inspector General as part of the Inspector General's audits of the MTA's books and records;
13. recognizing the statutory obligations of the MTA Inspector General, and without denigrating from those obligations, seek to communicate with the MTA Inspector General with respect to any matter the Committee Chair and/or Vice Chair, the entire Committee, the Board Chair, the Board or the MTA Inspector General deem appropriate;

***Miscellaneous:***

14. submit to the entire Committee for its consideration any matters (including matters relating to the foregoing) that the Committee Chair and/or Committee Vice-Chair deem should appropriately be considered by the entire Committee; and



15. report regularly to the Committee on the findings and recommendations of the Committee Chair and the Committee Vice-Chair relating to the forgoing, and on any other matters the Committee Chair and/or the Committee Vice-Chair deem appropriate or the Committee, the Board Chair or the Board request.

## **VII. KEY RESPONSIBILITIES OF THE COMMITTEE**

The following responsibilities are set forth as a guide with the understanding that the Committee may diverge as appropriate given the circumstances. The Committee is authorized to carry out these and such other responsibilities assigned by the Board Chair or the Board, from time to time, and take any actions reasonably related to the mandate of this Charter.

To fulfill its purpose, the Committee shall:

### ***Auditors, Financial Reporting & Accounting Policies:***

1. in consultation with the Auditor General and the officer primarily responsible for the finances of the MTA and each subsidiary corporation and affiliate, oversee the work of the MTA's outside auditor and provide guidance to the Board Chair and the Board with respect to the appointment (and if appropriate dismissal), evaluation, compensation of the outside MTA's auditors;
2. review and provide guidance to the Board with respect to pre-approving all auditing and non-auditing services provided by the outside auditor to the MTA;
3. provide guidance to the Board with respect to, and approve, the annual audit plan and any subsequent major changes to it and the risk assessment as proposed by the Auditor General in consultation with the MTA Chairman/CEO and the President of each subsidiary and affiliated corporation;
4. review and discuss with the Auditor General, relevant MTA employees, and the outside auditor: (i) any significant audit findings during the year, including the status of previous audit recommendations; (ii) internal audit's activity's performance relative to its plan; (iii) any changes required in the scope of the audit plan; (iv) the audit budget and staffing; and (v) the coordination of audit efforts, status of the internal audit plan and the adequacy of internal audit resources (both numbers and capabilities);
5. on a regular basis, meet with the external auditors to discuss any matters that the committee or internal audit believes should be discussed;
6. review the external auditors' proposed audit scope and approach, including coordination of audit effort with internal audit;
7. review and discuss with the Auditor General, relevant MTA employees, and the outside auditor accounting policies that may be viewed as critical, all matters required to be communicated to the committee under generally accepted auditing standards, as well as any recent or proposed significant changes in MTA accounting policies; and inquire as to the outside auditors' views as to the application of accounting principles;

8. monitor the consistency and comparability of the financial reporting processes of the MTA;
9. monitor the integrity, consistency and comparability of the financial reports and other financial information provided by the MTA to any other governmental or regulatory body, the public or other users thereof, including reconciliations where necessary;
10. review and provide guidance to the Board with respect to the appointment, compensation, and (if necessary) dismissal of the Auditor General.
11. at least annually, review with the Auditor General a report by the outside auditor describing: (i) such outside auditor's internal quality-control procedures; (ii) any material issues raised by the most recent internal quality-control review, or peer review, of the firm, or by any inquiry or investigation by governmental or professional authorities, within the preceding five years, regarding one or more independent audits carried out by the firm, and any steps taken to deal with any such issues; and (iii) all relationships between the outside auditor and the MTA (or any subsidiary corporation or affiliate);
12. on an annual basis, in each case together with the Auditor General: (i) review a formal written statement from the outside auditor delineating all relationships between such outside auditor and the MTA; (ii) actively engage in a dialogue with the outside auditor with respect to any disclosed relationships or services that may impact the objectivity and independence of such outside auditor and take appropriate action in response to such outside auditor's report to satisfy itself of such auditor's independence; (iii) consider whether, in the interest of assuring continuing independence of the outside auditor, the MTA's respective outside auditors should be rotated; and (iv) set clear hiring policies for employees or former employees of the outside auditors;

***Internal Controls & Risk Management:***

13. review and discuss with the Auditor General, the Chief Compliance Officer, the relevant MTA employees, and the outside auditor the adequacy of the MTA's internal and disclosure controls and procedures;
14. together with the Chief Compliance Officer, review and discuss with the relevant MTA employees, and the outside auditor any significant risks or exposures and assess the steps such employees have taken to minimize such risks;
15. review periodically with the Chief Compliance Officer and the General Counsels of the MTA and each subsidiary corporation and affiliate: (i) legal and regulatory matters that may have a material impact on the financial statements of the MTA (or any subsidiary corporation or affiliate); and (ii) the scope and effectiveness of compliance policies and programs;

***Ethics & Conflicts of Interests:***

16. together with the Chief Compliance Officer, review periodically with the relevant MTA employees (i) the process for communicating the code of conduct to company personnel;

- (ii) the level of compliance with all applicable ethics codes, guidelines, and regulations;
- and, (iii) the performance of the MTA Ethics and Compliance programs;

***Miscellaneous:***

17. set the annual work plan for the Committee;

17.18. conduct an annual self-evaluation of the performance of the Committee, including its effectiveness and compliance with this Charter;

18.19. review and reassess the adequacy of this Charter annually;

19.20. approve the internal audit charter;

20.21. consider any matter referred to the entire Committee by the Committee Chair and/or Vice-Chair; and

21.22. report regularly to the Board on Committee findings and recommendations and any other matters the Committee deems appropriate, or the Board Chair or the Board request.