EXISTING ISSUES REOFFERED

On June 23, 2014, the date of reissuance of the Bonds, Fulbright & Jaworski LLP, a member of Norton Rose Fulbright, delivered its opinion that interest on the Bonds would be exempt from personal income taxes imposed by the State of New York or any political subdivision thereof, including the City, and assuming continuing compliance with the provisions of the Internal Revenue Code of 1986, as amended (the "Code"), interest on the Bonds is not includable in the gross income of the owners thereof for federal income tax purposes. In the opinion of Norton Rose Fulbright US LLP and Bryant Rabbino LLP, Co-Bond Counsel, the conversion to a fixed rate to maturity of the interest rate on the Bonds will not in and of itself adversely affect the exclusion of interest on the Bonds from gross income for purposes of federal income taxation. See "SECTION III: MISCELLANEOUS—Tax Matters" herein for further information.

$120,620,000
The City of New York
General Obligation Bonds
Fiscal 2008 Series L, Subseries L-6

Conversion Date: April 18, 2019 Due: As shown on the inside cover page

On the Conversion Date, the outstanding Bonds are expected to be converted to the Fixed Rate Mode.

The Bonds will be registered in the nominee name of The Depository Trust Company, New York, New York, which acts as securities depository for the Bonds.

Interest on the Bonds will be payable on each April 1 and October 1, commencing October 1, 2019. The Bonds can be purchased in principal amounts of $5,000 or any integral multiple thereof. Other terms of the Bonds including redemption provisions are described herein. *A detailed schedule of the Bonds is set forth on the inside cover page.*

The Bonds are being reoffered by public letting on the basis of electronic competitive bids in accordance with the Notice of Sale dated April 4, 2019, as supplemented. In connection with the conversion to fixed interest rates and other modifications of the Bonds, certain legal matters will be passed upon by Norton Rose Fulbright US LLP, New York, New York, and Bryant Rabbino LLP, New York, New York, Co-Bond Counsel. Certain legal matters will be passed upon for the City by its Corporation Counsel. Certain legal matters in connection with the preparation of this Reoffering Circular will be passed upon for the City by Orrick, Herrington & Sutcliffe LLP, New York, New York, and Law Offices of Joseph C. Reid, P.A., New York, New York, Co-Special Disclosure Counsel to the City. Certain legal matters will be passed upon for the Original Purchaser by Nixon Peabody LLP, New York, New York, and D. Seaton and Associates, P.A., P.C., New York, New York, Co-Counsel to the Original Purchaser. It is expected that the Bonds will be available for delivery in New York, New York, on their date of conversion which is expected to be on April 18, 2019.

April 11, 2019

$120,620,000 General Obligation Bonds
Fiscal 2008 Series L, Subseries L-6

April 1,	Principal Amount	Interest Rate	Yield	CUSIP(1) (Base CUSIP 64966Q)
2028	$32,760,000	5%	1.94%	BS8
2030	35,980,000	5	2.15(2)	BU3
2031	37,705,000	5	2.25(2)	BV1
2032	14,175,000	5	2.30(2)	BW9

(1) Copyright, American Bankers Association (the "ABA"). CUSIP data herein are provided by CUSIP Global Services ("CGS"), operated on behalf of the ABA by S&P Global Market Intelligence, a division of S&P Global Inc. These data are not intended to create a database and do not serve in any way as a substitute for the CGS database. CUSIP numbers listed above have been assigned by an independent company not affiliated with the City and are being provided solely for the convenience of Bondholders only at the time of issuance of the Bonds, and none of the City or the Original Purchaser makes any representation with respect to such numbers or undertakes any responsibility for their accuracy now or at any time in the future. The CUSIP number for a specific maturity is subject to being changed after the reoffering of the Bonds as a result of various subsequent actions including, but not limited to, a refunding in whole or in part of such maturity or as a result of the procurement of secondary market portfolio insurance or other similar enhancement by investors that is applicable to all or a portion of certain maturities of the Bonds.

(2) Priced to first optional call on April 1, 2029.

REOFFERING CIRCULAR OF THE CITY OF NEW YORK

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No dealer, broker, salesperson or other person has been authorized by the City or the Original Purchaser to give any information or to make any representations in connection with the Bonds or the matters described herein, other than those contained in this Reoffering Circular, and, if given or made, such other information or representations must not be relied upon as having been authorized by the City or the Original Purchaser. This Reoffering Circular does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the Bonds by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information and expressions of opinion contained herein are subject to change without notice, and neither the delivery of this Reoffering Circular, nor any sale made hereunder, shall, under any circumstances, create any implication that there has been no change in the matters described herein since the date hereof. This Reoffering Circular is submitted in connection with the sale of the Bonds referred to herein and may not be reproduced or used, in whole or in part, for any other purpose. The Original Purchaser may offer and sell Bonds to certain dealers and others at prices lower than the offering prices stated on the inside cover page hereof. The offering prices may be changed from time to time by the Original Purchaser. No representations are made or implied by the City or the Original Purchaser as to any offering of any derivative instruments.

The factors affecting the City's financial condition are complex. This Reoffering Circular should be considered in its entirety and no one factor considered less important than any other by reason of its location herein. Where agreements, reports or other documents are referred to herein, reference should be made to such agreements, reports or other documents for more complete information regarding the rights and obligations of parties thereto, facts and opinions contained therein and the subject matter thereof. Any electronic reproduction of this Reoffering Circular may contain computer-generated errors or other deviations from the printed Reoffering Circular. In any such case, the printed version controls.

This Reoffering Circular contains forecasts, projections and estimates that are based on expectations and assumptions which existed at the time such forecasts, projections and estimates were prepared. In light of the important factors that may materially affect economic conditions in the City, the inclusion in this Reoffering Circular of such forecasts, projections and estimates should not be regarded as a representation by the City, its independent auditors or the Original Purchaser that such forecasts, projections and estimates will occur. Such forecasts, projections and estimates are not intended as representations of fact or guarantees of results. If and when included in this Reoffering Circular, the words "expects," "forecasts," "projects," "intends," "anticipates," "estimates" and analogous expressions are intended to identify forward-looking statements and any such statements inherently are subject to a variety of risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, among others, general economic and business conditions, changes in political, social and economic conditions, regulatory initiatives and compliance with governmental regulations, litigation and various other events, conditions and circumstances, many of which are beyond the control of the City. These forward-looking statements speak only as of the date they were prepared. The City disclaims any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in the City's expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based between modifications to the City's financial plan required by law.

Grant Thornton LLP, the City's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Reoffering Circular. The report of Grant Thornton LLP relating to the City's financial statements for the fiscal years ended June 30, 2018 and 2017, which is a matter of public record, is included in the CAFR for the fiscal year ended June 30, 2018, which is included by specific reference in this Reoffering Circular. However, Grant Thornton LLP has not performed any procedures on any financial statements or other financial information of the City, including without limitation any of the information contained, or included by specific reference, in this Reoffering Circular, since the date of such report and has not been asked to consent to the inclusion of its report in this Reoffering Circular.

References to website addresses presented herein are for informational purposes only and may be in the form of a hyperlink solely for the reader's convenience. Unless specified otherwise, such websites and the information or links contained therein are not incorporated into, and are not part of, this Reoffering Circular for purposes of Rule 15c2-12 adopted by the United States Securities and Exchange Commission under the Securities Exchange Act of 1934.

IN CONNECTION WITH THIS OFFERING, THE ORIGINAL PURCHASER MAY OVER-ALLOT OR EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN MARKET PRICES OF THE BONDS AT LEVELS ABOVE THOSE WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, MAY BE DISCONTINUED AT ANY TIME.

THESE SECURITIES HAVE NOT BEEN RECOMMENDED BY ANY FEDERAL OR STATE SECURITIES COMMISSION OR REGULATORY AUTHORITY. FURTHERMORE, THE FOREGOING AUTHORITIES HAVE NOT CONFIRMED THE ACCURACY OR DETERMINED THE ADEQUACY OF THIS DOCUMENT. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE. IN MAKING AN INVESTMENT DECISION, INVESTORS MUST RELY ON THEIR OWN EXAMINATION OF THIS REOFFERING CIRCULAR AND THE TERMS OF THE OFFERING, INCLUDING THE MERITS AND RISKS INVOLVED.

INFORMATION CONCERNING OFFERING RESTRICTIONS IN CERTAIN JURISDICTIONS OUTSIDE THE UNITED STATES

THE CITY OF NEW YORK (REFERRED TO IN THESE LEGENDS AS THE "ISSUER") MAKES NO REPRESENTATION AS TO THE ACCURACY OR ADEQUACY OF SUCH INFORMATION. REFERENCES UNDER THIS CAPTION TO "BONDS" OR "SECURITIES" MEAN THE BONDS OFFERED HEREBY, AND REFERENCES TO THE "UNDERWRITERS" MEAN THE ORIGINAL PURCHASER.

Minimum Unit Sales

THE BONDS WILL TRADE AND SETTLE ON A UNIT BASIS (ONE UNIT EQUALING ONE BOND OF $1,000 PRINCIPAL AMOUNT). FOR ANY SALES MADE OUTSIDE THE UNITED STATES, THE MINIMUM PURCHASE AND TRADING AMOUNT IS 150 UNITS (BEING 150 BONDS IN AN AGGREGATE PRINCIPAL AMOUNT OF $150,000).

Notice to Prospective Investors in the European Economic Area

THE BONDS ARE NOT INTENDED TO BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO AND SHOULD NOT BE OFFERED, SOLD OR OTHERWISE MADE AVAILABLE TO ANY RETAIL INVESTOR IN THE EUROPEAN ECONOMIC AREA ("EEA"). FOR THESE PURPOSES, A RETAIL INVESTOR MEANS A PERSON WHO IS ONE (OR MORE) OF: (I) A RETAIL CLIENT AS DEFINED IN POINT (11) OF ARTICLE 4(1) OF DIRECTIVE 2014/65/EU (AS AMENDED, "MIFID II"); OR (II) A CUSTOMER WITHIN THE MEANING OF DIRECTIVE 2002/92/EC (AS AMENDED, THE "INSURANCE MEDIATION DIRECTIVE"), WHERE THAT CUSTOMER WOULD NOT QUALIFY AS A PROFESSIONAL CLIENT AS DEFINED IN POINT (10) OF ARTICLE 4(1) OF MIFID II; OR (III) NOT A QUALIFIED INVESTOR AS DEFINED IN DIRECTIVE 2003/71/EC (AS AMENDED, THE "PROSPECTUS DIRECTIVE"). CONSEQUENTLY, NO KEY INFORMATION DOCUMENT REQUIRED BY REGULATION (EU) NO 1286/2014 (AS AMENDED, THE "PRIIPS REGULATION") FOR OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO RETAIL INVESTORS IN THE EEA HAS BEEN

PREPARED AND THEREFORE OFFERING OR SELLING THE BONDS OR OTHERWISE MAKING THEM AVAILABLE TO ANY RETAIL INVESTOR IN THE EEA MAY BE UNLAWFUL UNDER THE PRIIPS REGULATION.

THIS REOFFERING CIRCULAR HAS BEEN PREPARED ON THE BASIS THAT ALL OFFERS OF THE BONDS TO ANY PERSON THAT IS LOCATED WITHIN A MEMBER STATE OF THE EEA WILL BE MADE PURSUANT TO AN EXEMPTION UNDER ARTICLE 3 OF THE PROSPECTUS DIRECTIVE, AS IMPLEMENTED IN MEMBER STATES OF THE EEA, FROM THE REQUIREMENT TO PRODUCE A PROSPECTUS FOR OFFERS OF THE SECURITIES. ACCORDINGLY, ANY PERSON MAKING OR INTENDING TO MAKE ANY OFFER IN THE EEA OF THE BONDS SHOULD ONLY DO SO IN CIRCUMSTANCES IN WHICH NO OBLIGATION ARISES FOR THE ISSUER OR ANY OF THE UNDERWRITERS TO PRODUCE A PROSPECTUS FOR SUCH OFFER. NEITHER THE ISSUER NOR THE UNDERWRITERS HAS AUTHORIZED, NOR DO THEY AUTHORIZE, THE MAKING OF ANY OFFER OF BONDS THROUGH ANY FINANCIAL INTERMEDIARY, OTHER THAN OFFERS MADE BY THE UNDERWRITERS, WHICH CONSTITUTE THE FINAL PLACEMENT OF THE BONDS CONTEMPLATED IN THIS REOFFERING CIRCULAR.

IN RELATION TO EACH MEMBER STATE OF THE EEA THAT HAS IMPLEMENTED THE PROSPECTUS DIRECTIVE (EACH, A "RELEVANT MEMBER STATE"), WITH EFFECT FROM AND INCLUDING THE DATE ON WHICH THE PROSPECTUS DIRECTIVE IS IMPLEMENTED IN THAT RELEVANT MEMBER STATE, THE OFFER OF ANY BONDS WHICH IS THE SUBJECT OF THE OFFERING CONTEMPLATED BY THIS REOFFERING CIRCULAR IS NOT BEING MADE AND WILL NOT BE MADE TO THE PUBLIC IN THAT RELEVANT MEMBER STATE, OTHER THAN: (A) TO ANY LEGAL ENTITY WHICH IS A "QUALIFIED INVESTOR" AS SUCH TERM IS DEFINED IN THE PROSPECTUS DIRECTIVE; (B) TO FEWER THAN 150 NATURAL OR LEGAL PERSONS (OTHER THAN "QUALIFIED INVESTORS" AS SUCH TERM IS DEFINED IN THE PROSPECTUS DIRECTIVE), SUBJECT TO OBTAINING THE PRIOR CONSENT OF THE RELEVANT UNDERWRITER OR THE ISSUER FOR ANY SUCH OFFER OR (C) IN ANY OTHER CIRCUMSTANCES FALLING WITHIN ARTICLE 3(2) OF THE PROSPECTUS DIRECTIVE; PROVIDED THAT NO SUCH OFFER OF THE BONDS SHALL REQUIRE THE ISSUER OR ANY UNDERWRITER TO PUBLISH A PROSPECTUS PURSUANT TO ARTICLE 3 OF THE PROSPECTUS DIRECTIVE OR A SUPPLEMENT TO A PROSPECTUS PURSUANT TO ARTICLE 16 OF THE PROSPECTUS DIRECTIVE.

FOR THE PURPOSES OF THIS PROVISION, THE EXPRESSION AN "OFFER OF SECURITIES TO THE PUBLIC" IN RELATION TO THE BONDS IN ANY RELEVANT MEMBER STATE MEANS THE COMMUNICATION IN ANY FORM AND BY ANY MEANS OF SUFFICIENT INFORMATION ON THE TERMS OF THE OFFER AND THE BONDS TO BE OFFERED SO AS TO ENABLE AN INVESTOR TO DECIDE TO PURCHASE THE BONDS, AS THE SAME MAY BE VARIED IN THAT RELEVANT MEMBER STATE BY ANY MEASURE IMPLEMENTING THE PROSPECTUS DIRECTIVE IN THAT RELEVANT MEMBER STATE.

EACH SUBSCRIBER FOR OR PURCHASER OF THE SECURITIES IN THE OFFERING LOCATED WITHIN A RELEVANT MEMBER STATE WILL BE DEEMED TO HAVE REPRESENTED, ACKNOWLEDGED AND AGREED THAT IT IS A "QUALIFIED INVESTOR" WITHIN THE MEANING OF ARTICLE 2(1)(E) OF THE PROSPECTUS DIRECTIVE. THE ISSUER AND EACH UNDERWRITER AND OTHERS WILL RELY ON THE TRUTH AND ACCURACY OF THE FOREGOING REPRESENTATION, ACKNOWLEDGEMENT AND AGREEMENT.

Notice to Prospective Investors in The United Kingdom

THIS REOFFERING CIRCULAR IS FOR DISTRIBUTION ONLY TO, AND IS DIRECTED SOLELY AT, PERSONS WHO (I) ARE INVESTMENT PROFESSIONALS AS SUCH TERM IN DEFINED IN ARTICLE 19(5) OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (FINANCIAL PROMOTION) ORDER 2005, AS AMENDED (THE "FINANCIAL PROMOTION ORDER"), (II) ARE PERSONS FALLING WITHIN ARTICLE 49(2)(A) TO (D) OF THE FINANCIAL PROMOTION ORDER, (III) ARE OUTSIDE THE UNITED KINGDOM, OR (IV) ARE PERSONS TO WHOM AN INVITATION OR INDUCEMENT TO ENGAGE IN INVESTMENT ACTIVITY (WITHIN THE MEANING OF SECTION 21 OF THE FINANCIAL SERVICES AND MARKETS ACT 2000 (THE "FSMA")) IN CONNECTION WITH THE ISSUE OR SALE OF ANY BONDS MAY OTHERWISE BE LAWFULLY COMMUNICATED OR CAUSED TO BE COMMUNICATED (ALL SUCH PERSONS TOGETHER BEING REFERRED TO AS "RELEVANT PERSONS"). THIS REOFFERING CIRCULAR IS DIRECTED ONLY AT RELEVANT PERSONS AND MUST NOT BE ACTED ON OR RELIED ON BY PERSONS WHO ARE NOT RELEVANT PERSONS. ANY INVESTMENT OR INVESTMENT ACTIVITY TO WHICH THIS REOFFERING CIRCULAR RELATES IS AVAILABLE ONLY TO RELEVANT PERSONS AND WILL BE ENGAGED IN ONLY WITH RELEVANT PERSONS. ANY PERSON WHO IS NOT A RELEVANT PERSON SHOULD NOT ACT OR RELY ON THIS REOFFERING CIRCULAR OR ANY OF ITS CONTENTS. THIS REOFFERING CIRCULAR HAS NOT BEEN APPROVED FOR THE PURPOSES OF SECTION 21 OF THE FSMA AND DOES NOT CONSTITUTE AN OFFER TO THE PUBLIC IN ACCORDANCE WITH THE PROVISIONS OF SECTION 85 OF THE FSMA.

Notice to Prospective Investors in Taiwan

THE OFFER OF THE BONDS HAS NOT BEEN AND WILL NOT BE REGISTERED WITH THE FINANCIAL SUPERVISORY COMMISSION OF TAIWAN (THE "FSC") PURSUANT TO APPLICABLE SECURITIES LAWS AND REGULATIONS OF TAIWAN AND THE BONDS, INCLUDING ANY COPY OF THIS REOFFERING CIRCULAR OR ANY OTHER DOCUMENTS RELATING TO THE BONDS, MAY NOT BE OFFERED, SOLD, DELIVERED OR DISTRIBUTED WITHIN TAIWAN (THE REPUBLIC OF CHINA) THROUGH A PUBLIC OFFERING OR IN CIRCUMSTANCES WHICH CONSTITUTE AN OFFER WITHIN THE MEANING OF THE SECURITIES AND EXCHANGE ACT OF TAIWAN THAT REQUIRES THE REGISTRATION WITH OR APPROVAL OF THE FSC. NO PERSON OR ENTITY IN TAIWAN (THE REPUBLIC OF CHINA) HAS BEEN AUTHORIZED TO OFFER, SELL, DISTRIBUTE, GIVE ADVICE REGARDING OR OTHERWISE INTERMEDIATE THE OFFERING, SALE OR DISTRIBUTION OF THE BONDS. TAIWAN INVESTORS WHO SUBSCRIBE AND PURCHASE THE BONDS MUST COMPLY WITH ALL RELEVANT SECURITIES, TAX AND FOREIGN EXCHANGE LAWS AND REGULATIONS IN EFFECT IN TAIWAN.

Notice to Prospective Investors in Switzerland

THIS REOFFERING CIRCULAR IS NOT INTENDED TO CONSTITUTE AN OFFER OR A SOLICITATION TO PURCHASE OR INVEST IN THE BONDS. THE BONDS MAY NOT BE PUBLICLY OFFERED, SOLD OR ADVERTISED, DIRECTLY OR INDIRECTLY, IN, INTO OR FROM SWITZERLAND AND WILL NOT BE LISTED ON THE SIX SWISS EXCHANGE LTD. OR ON ANY OTHER EXCHANGE OR REGULATED TRADING FACILITY IN SWITZERLAND. NEITHER THIS REOFFERING CIRCULAR NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS CONSTITUTES A PROSPECTUS AS SUCH TERM IS UNDERSTOOD PURSUANT TO ART. 652A OR ART. 1156 OF THE SWISS CODE OF OBLIGATIONS OR A LISTING PROSPECTUS WITHIN THE MEANING OF THE LISTING RULES OF THE SIX SWISS EXCHANGE LTD. OR ANY OTHER REGULATED TRADING FACILITY IN SWITZERLAND, AND NEITHER

THIS REOFFERING CIRCULAR NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE BONDS MAY BE PUBLICLY DISTRIBUTED OR OTHERWISE MADE PUBLICLY AVAILABLE IN OR FROM SWITZERLAND. ACCORDINGLY, THIS REOFFERING CIRCULAR IS COMMUNICATED IN OR FROM SWITZERLAND TO A LIMITED NUMBER OF SELECTED INVESTORS ONLY. NEITHER THIS REOFFERING CIRCULAR NOR ANY OTHER OFFERING OR MARKETING MATERIAL RELATING TO THE OFFERING, NOR THE ISSUER, NOR THE BONDS HAVE BEEN OR WILL BE FILED WITH OR APPROVED BY ANY SWISS REGULATORY AUTHORITY. THE BONDS ARE NOT SUBJECT TO SUPERVISION BY ANY SWISS REGULATORY AUTHORITY, E.G., THE SWISS FINANCIAL MARKET SUPERVISORY AUTHORITY FINMA, AND INVESTORS IN THE BONDS WILL NOT BENEFIT FROM PROTECTION OR SUPERVISION BY SUCH AUTHORITY.

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REOFFERING CIRCULAR
OF
THE CITY OF NEW YORK

This Reoffering Circular provides certain information concerning The City of New York (the "City") in connection with the conversion to the Fixed Rate Mode and reoffering by the City of $120,620,000 aggregate principal amount of the City's General Obligation Bonds, Fiscal 2008 Series L, Subseries L-6 (the "Bonds").

If certain conditions are met on the conversion date set forth on the cover page of this Reoffering Circular (the "Conversion Date"), from and after the Conversion Date, the Bonds will bear interest in the Fixed Rate Mode. On the Conversion Date, the Bonds will be mandatorily tendered by the Holders thereof for purchase at a price of par, plus accrued interest to the Conversion Date. The Bonds are being reoffered by this Reoffering Circular.

The factors affecting the City's financial condition described throughout this Reoffering Circular are complex and are not intended to be summarized in the Introductory Statement below. The economic and financial condition of the City may be affected by various changes in laws, including tax law, financial, social, economic, political, geo-political and environmental factors, cybersecurity threats, terrorist events, hostilities or war, and other factors which could have a material effect on the City. For a discussion of additional factors affecting the City's financial condition, see below under "INTRODUCTORY STATEMENT" and "SECTION VII: FINANCIAL PLAN—Assumptions." This Reoffering Circular should be read in its entirety.

INTRODUCTORY STATEMENT

The Bonds are general obligations of the City for the payment of which the City has pledged its faith and credit. All real property subject to taxation by the City is subject to the levy of *ad valorem* taxes, without limitation as to rate or amount, to pay the principal of, applicable redemption premium, if any, and interest on the Bonds.

The City, with an estimated population of approximately 8.6 million, is an international center of business and culture. Its non-manufacturing economy is broadly based, with the banking, securities, insurance, technology, information, publishing, fashion, design, retailing, education and health care industries accounting for a significant portion of the City's total employment earnings. Additionally, the City is a leading tourist destination. Manufacturing activity in the City is conducted primarily in apparel and printing.

For each of the 1981 through 2018 fiscal years, the City's General Fund had an operating surplus, before discretionary and other transfers, and achieved balanced operating results as reported in accordance with generally accepted accounting principles ("GAAP"), after discretionary and other transfers and except for the application of Governmental Accounting Standards Board ("GASB") Statement No. 49 ("GASB 49"), as described below. City fiscal years end on June 30 and are referred to by the calendar year in which they end. The City has been required to close substantial gaps between forecast revenues and forecast expenditures in order to maintain balanced operating results. There can be no assurance that the City will continue to maintain balanced operating results as required by New York State (the "State") law without proposed tax or other revenue increases or reductions in City services or entitlement programs, which could adversely affect the City's economic base.

As required by the New York State Financial Emergency Act For The City of New York (the "Financial Emergency Act" or the "Act") and the New York City Charter (the "City Charter"), the City prepares a four-year annual financial plan, which is reviewed and revised on a quarterly basis and which includes the City's capital, revenue and expense projections and outlines proposed gap-closing programs for years with projected budget gaps. The City's current financial plan projects budget balance in the 2019 and 2020 fiscal years in accordance with GAAP except for the application of GASB 49. In 2010, the Financial Emergency Act was amended to waive the budgetary impact of GASB 49 by enabling the City to continue to finance with bond proceeds certain pollution remediation costs. The City's current financial plan projects budget gaps for the 2021 through 2023 fiscal years. A pattern of current year balance and projected future year budget gaps has been consistent through the entire period since 1982, during which the City has achieved an excess of revenues over expenditures, before discretionary transfers, for each fiscal year. For information regarding the current financial plan, see "SECTION I: RECENT FINANCIAL DEVELOPMENTS" and "SECTION VII: FINANCIAL PLAN." For information regarding the June 2010 amendment of the Financial Emergency Act with respect to the application of GASB 49 to the City budget, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS." The City is required to submit its financial plans to the New York State Financial Control Board (the "Control Board"). For further information regarding the Control Board, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Review and Oversight*."

For its normal operations, the City depends on aid from the State both to enable the City to balance its budget and to meet its cash requirements. There can be no assurance that there will not be delays or reductions in State aid to the City from amounts currently projected; that State budgets for future State fiscal years will be adopted by the April 1 statutory deadline, or interim appropriations will be enacted; or that any such reductions or delays will not have adverse effects on the City's cash flow or expenditures. In addition, the City has made various assumptions with respect to federal aid. Future federal actions or inactions could have adverse effects on the City's cash flow or revenues. See "SECTION I: RECENT FINANCIAL DEVELOPMENTS—2019-2023 Financial Plan."

The Mayor is responsible for preparing the City's financial plan which relates to the City and certain entities that receive funds from the City. The financial plan is modified quarterly. The City's projections set forth in the financial plan are based on various assumptions and contingencies which are uncertain and which may not materialize. Such assumptions and contingencies include the condition of the international, national, regional and local economies, the provision of State and federal aid, the impact on City revenues and expenditures of any future federal or State legislation and policies affecting the City and the cost of pension structures and healthcare. See "SECTION I: RECENT FINANCIAL DEVELOPMENTS."

Implementation of the financial plan is dependent on the City's ability to market successfully its bonds and notes. Implementation of the financial plan is also dependent upon the ability to market the securities of other financing entities including the New York City Municipal Water Finance Authority (the "Water Authority") and the New York City Transitional Finance Authority ("TFA"). See "SECTION VII: FINANCIAL PLAN—Financing Program." The success of projected public sales of City, Water Authority, TFA and other bonds and notes will be subject to prevailing market conditions. Future developments in the financial markets generally, as well as future developments concerning the City, and public discussion of such developments, may affect the market for outstanding City general obligation bonds and notes.

The City Comptroller and other agencies and public officials, from time to time, issue reports and make public statements which, among other things, state that projected revenues and expenditures may be different from those forecast in the City's financial plans. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

SECTION I: RECENT FINANCIAL DEVELOPMENTS

For the 2018 fiscal year, the City's General Fund had a total surplus of $4.581 billion, before discretionary and other transfers, and achieved balanced operating results in accordance with GAAP, except for the application of GASB 49 as described above, after discretionary and other transfers. The 2018 fiscal year is the thirty-eighth consecutive year that the City has achieved balanced operating results when reported in accordance with GAAP, except for the application of GASB 49.

2019-2023 Financial Plan

On June 14, 2018, the City submitted to the Control Board the financial plan for the 2019 through 2022 fiscal years (the "June Financial Plan"), which was consistent with the City's capital and expense budgets as adopted for the 2019 fiscal year. On November 8, 2018, the City submitted to the Control Board a modification to the June Financial Plan (as so modified, the "November Financial Plan"). On February 7, 2019, the Mayor released his preliminary budget for the 2020 fiscal year and the City submitted to the Control Board a modification to the financial plan for the 2019 through 2023 fiscal years (as so modified, the "Financial Plan").

The Financial Plan projects revenues and expenses for the 2019 and 2020 fiscal years balanced in accordance with GAAP, except for the application of GASB 49, and projects gaps of approximately $3.52 billion, $2.94 billion and $3.3 billion in fiscal years 2021 through 2023, respectively. The June Financial Plan had projected revenues and expenses for the 2019 fiscal year balanced in accordance with GAAP, except for the application of GASB 49, and had projected gaps of approximately $3.26 billion, $2.89 billion and $2.29 billion in fiscal years 2020 through 2022, respectively.

The Financial Plan reflects, since the June Financial Plan, increases in projected net revenues of $1.08 billion, $554 million and $420 million in fiscal years 2019, 2020 and 2022, respectively, and a decrease in projected net revenues of $7 million in fiscal year 2021. Changes in projected revenues include: (i) increases in real property tax revenues of $76 million, $234 million, $198 million and $448 million in fiscal years 2019 through 2022, respectively; (ii) increases in personal income tax revenues of $67 million, $24 million and $12 million in fiscal years 2019, 2020 and 2022, respectively, and a decrease in personal income tax revenues of $81 million in fiscal year 2021; (iii) increases in business tax revenues of $90 million, $3 million and $76 million in fiscal years 2019, 2020 and 2022, respectively, and a decrease in business tax revenues of $21 million in fiscal year 2021; (iv) increases in sales tax revenues of $47 million and $2 million in fiscal years 2019 and 2020, respectively, and decreases in sales tax revenues of $52 million and $39 million in fiscal years 2021 and 2022, respectively; (v) increases in real estate transaction tax revenues of $228 million and $15 million in fiscal years 2019 and 2020, respectively, and decreases in real estate transaction tax revenues of $33 million and $51 million in fiscal years 2021 and 2022, respectively; (vi) a decrease in State School Tax Relief Program ("STAR Program") revenues of $4 million in fiscal year 2019; (vii) increases in hotel tax revenues of $15 million, $31 million, $14 million and $13 million in fiscal years 2019 through 2022, respectively; and (viii) an increase in other tax revenues of $85 million in fiscal year 2019 and decreases in other tax revenues of $20 million, $20 million and $25 million in fiscal years 2020 through 2022, respectively. Changes in projected revenues also include (i) an increase in tax audit revenues of $275 million in fiscal year 2020; and (ii) a net increase in other revenues of $471 million in fiscal year 2019 and net decreases in other revenues of $10 million, $12 million and $14 million in fiscal years 2020 through 2022, respectively.

The Financial Plan also reflects, since the June Financial Plan, a decrease in projected net expenditures of $2.09 billion in fiscal year 2019 and increases in projected net expenditures of $463 million, $620 million and $1.07 billion in fiscal years 2020 through 2022, respectively. Changes in projected expenditures include: (i) increases in agency expenses of $253 million, $344 million, $284 million and $321 million in fiscal years 2019 through 2022, respectively; (ii) increases in the labor reserve of $227 million, $704 million, $967 million and $1.44 billion in fiscal years 2019 through 2022, respectively; (iii) decreases in pension contributions of $50 million, $92 million and $151 million in fiscal years 2020 through 2022, respectively, primarily as a result of strong investment earnings in fiscal year 2018; (iv) a decrease in the general reserve of $825 million in fiscal year 2019; (v) a decrease in the capital stabilization reserve of $250 million in fiscal year 2019; and (vi) a decrease of $400 million in fiscal year 2019 reflecting a re-estimate of prior years' expenses and receivables.

Changes in projected net expenditures also include decreases in net expenditures of $1.1 billion, $535 million, $539 million and $540 million in fiscal years 2019 through 2022, respectively, to be achieved as a result of the Citywide Savings Program (which includes increases in tax revenue of $1 million, $3 million, $1 million and $1 million in fiscal years 2019 through 2022, respectively, and increases in miscellaneous revenue of $298 million, $55 million, $27 million and $27 million in fiscal years 2019 through 2022, respectively, that are not reflected within the revenue changes described above). The Citywide Savings Program also reflects $372 million from New York City Health and Hospitals ("NYCHH") to satisfy an outstanding payment due to the City from prior fiscal years. Concurrent with the release of the Financial Plan on February 7, 2019, the Mayor announced an additional agency savings program to be implemented with the release of the Executive Budget and Financial Plan modification in April 2019. Such agency savings program is expected to reflect reductions in expenditures or increases in revenues with a net total impact of $750 million in fiscal years 2019 and 2020.

The Financial Plan reflects, since the June Financial Plan, provision for $3.17 billion for the prepayment in fiscal year 2019 of fiscal year 2020 expenses and an expenditure reduction of $3.17 billion in fiscal year 2020.

The Financial Plan also reflects contract settlements with District Council 37 of AFSCME ("DC 37") and the United Federation of Teachers ("UFT") and others which, together, represent approximately 62% of the City's workforce, and the application of the pattern increases established in those settlements to the entire workforce over a 43-month contract period. The pattern framework provides for a 2% wage increase on the first month of the contract, a 2.25% wage increase on the 13th month, and a 3% wage increase on the 26th month. The pattern also provides funding equivalent to 0.25% of wages to be used to fund benefit items. The DC 37 settlement covers the period from September 26, 2017 through May 25, 2021. The UFT settlement covers the period from February 14, 2019 through September 13, 2022. Such settlements also include health insurance savings as part of a new Municipal Labor Committee ("MLC") agreement, in addition to those previously agreed upon, which are contractually enforceable through arbitration. For further information, see "SECTION VII: FINANCIAL PLAN—Assumptions—Expenditure Assumptions—1. PERSONAL SERVICE COSTS" and "SECTION V: CITY SERVICES AND EXPENDITURES—Employees and Labor Relations—Labor Relations."

The Financial Plan reflects funding for the NYC Care program, which ensures that primary and specialty care is available to all uninsured City residents within the NYCHH, of $25 million in fiscal year 2020, $75 million in fiscal year 2021, and $100 million in each of fiscal years 2022 and 2023.

The Financial Plan reflects the cost of the Fair Fares Program, which provides reduced fares to low income subway and bus riders, in fiscal years 2019 and 2020, but does not currently reflect funding beyond fiscal year 2020. It is expected that funding sources for the continuation of the program will be identified in coordination with the City Council.

On January 31, 2019, New York City Housing Authority ("NYCHA"), the City and the U.S. Department of Housing and Urban Development ("HUD") entered into an agreement relating to lead-based paint and other health and safety concerns in NYCHA's properties, pursuant to which additional City funding will be provided to NYCHA and a federal monitor will be appointed to oversee NYCHA. Pursuant to the agreement, the 2019-2023 Capital Commitment Plan (defined herein) reflects $1.2 billion in additional City capital funds, with an additional $1 billion in City capital funds reflected in the remaining years of the Preliminary Ten Year Capital Strategy for fiscal years 2020 through 2029. NYCHA has announced that it may be out of compliance with federal requirements beyond the regulations concerning lead-based paint and other health and safety concerns that were the subject of such agreement. NYCHA has estimated the total cost of its outstanding repairs at approximately $32 billion.

The Financial Plan does not reflect the impact of an adjustment to the number of New York City Employees' Retirement System ("NYCERS") members resulting from a previous calculation error, which is expected to increase the City's required pension contribution by $156 million annually in fiscal years 2019 through 2022. The

Financial Plan also does not reflect the cost of changes to pension assumptions and methods proposed by the City Actuary following draft recommendations by an independent actuarial consultant. Such recommended changes have been accepted by NYCERS and, if accepted by all five pension systems, would result in increased pension contributions by the City of $30 million annually. The Financial Plan includes reserves of $100 million in each of fiscal years 2019 and 2020 and $400 million in each of fiscal years 2021 through 2023, which would be available to cover such increased pension contributions.

On April 1, 2019, the State legislature passed the State fiscal year 2020 budget (the "State 2020 Budget"). The State 2020 Budget is expected to be signed by the Governor and be enacted into law. The Financial Plan does not include certain costs to the City reflected in the State 2020 Budget including (i) school aid which is $25 million, $111 million, $204 million and $155 million lower than assumed in the Financial Plan in fiscal years 2020 through 2023, respectively; (ii) decreased funding of $63 million in fiscal year 2019 and $125 million in each of fiscal years 2020 through 2023 for Temporary Assistance for Needy Families Family Assistance Program; (iii) decreases in the General Public Health Work reimbursement of $59 million in each of fiscal years 2020 through 2023; (iv) election reform mandates that could result in total costs to the City of at least $140 million in fiscal year 2020 and $120 million in each year thereafter, which would be partially offset by a State-wide allocation of $24.7 million per year, a portion of which would be made available to the City; and (v) a $23 million City matching contribution to the Hudson River Park Trust not currently reflected in the 2019-2023 Capital Commitment Plan. The Financial Plan also does not reflect potential Medicaid cuts, up to $190 million Statewide in each of State fiscal years 2020 and 2021, authorized, but not required, by the State 2020 Budget. The City's share of the Medicaid budget is estimated to be one sixth of the State-wide share. It is not known whether such cuts will be made and if so, in what amounts.

The State 2020 Budget also includes legislation authorizing cuts of up to 1% to local assistance payments if the State Budget Director reasonably anticipates a year end shortfall of $500 million or more in the State general fund. Upon such determination, the State Budget Director's proposed cuts would be subject to approval of the State legislature, which would have 30 days to propose its own cuts.

The State 2020 Budget also includes enactment of congestion tolling for vehicles entering a designated congestion zone in Manhattan below 60th Street, with a start date no earlier than December 31, 2020, the revenues from which will be directed to the Metropolitan Transportation Authority ("MTA") for transit improvements. Details of the plan, including pricing and the start date, have yet to be determined. In addition, the State 2020 Budget includes legislation authorizing the imposition of sales tax on certain additional internet sales and providing that sales tax revenues in the amount of $127.5 million in State fiscal year 2020 (reflecting the portion of the year in which it is effective) and $170 million in State fiscal year 2021 and thereafter increasing by one percent per year, will be directed to the MTA for transit improvements. Revenues from such additional sales tax are currently estimated to be approximately $170 million per year and are in addition to existing sales taxes attributable to certain other internet transactions. The State 2020 Budget also includes legislation increasing real estate transfer taxes on properties valued at more than $2 million, which will also be directed to the MTA for transit improvements.

Although the Financial Plan reflects the projected direct impact to City tax revenues of the Federal Tax Cuts and Jobs Act of 2017 ("TCJA") which, among other provisions, lowered corporate and personal income tax rates and limited the deductibility of state and local taxes and mortgage interest, it does not reflect the indirect impacts of the TCJA. Such indirect impacts include the effect of State legislation which, among other things, increases the opportunities for charitable contributions, and provides an option to employers to shift to an employer compensation tax and reduce State personal income taxes, the effect of which is uncertain at this time. In addition, local legislation has been introduced in the City Council that would establish a City-operated charity to which taxpayers could contribute in exchange for a credit against property taxes, with the intent of permitting those taxpayers to deduct those contributions from federal income tax. Money received by the charity would be used for City operations. The State has passed legislation permitting municipalities to create charitable funds allowing a local property tax credit of 95% of the contribution. The Internal Revenue Service has issued proposed rules that would make such credits ineligible for federal tax deductions in most cases.

The Financial Plan does not reflect future increases in the charter school per-pupil tuition rate, which if not offset by changes to State education aid to the City that occur each year during the State budget process, are preliminarily estimated to cost the City $119 million in fiscal year 2020, $281 million in fiscal year 2021, $478 million in fiscal year 2022, and $758 million in fiscal year 2023. These figures are based on preliminary data. Final figures that would determine the actual costs to the City will not be finalized until the time of the State budget process for the applicable year.

The Preliminary Ten Year Capital Strategy covering fiscal years 2020-2029 was released on February 7, 2019, reflecting a total cost of $104.1 billion. Among many other projects, the Preliminary Ten Year Capital Strategy reflects $2 billion for the reconstruction of the Brooklyn Queens Expressway Triple Cantilever reconstruction project and $1.1 billion (including amounts in fiscal year 2019) for the replacement of the Rikers Island jails complex with a system of borough based jails. The ultimate cost of such projects is uncertain at this time but is expected to be significantly higher than amounts currently provided in the Preliminary Ten Year Capital Strategy.

The Financial Plan assumes that the City's direct costs (including costs of NYCHH and NYCHA) as a result of Superstorm Sandy ("Sandy") will largely be paid from non-City sources, primarily the federal government. For further information, see "SECTION X: OTHER INFORMATION—Environmental Matters."

The City receives significant funding from the federal government for community development, social services, education and other purposes pursuant to various federal programs. The federal government has made and discussed a number of proposals which would lead to reductions in existing federal spending programs, including Medicaid, the repeal of the Affordable Care Act, reduction of funding for housing, including public housing, and changes to regulations affecting numerous industries in the City, including the financial services industry. The TCJA and other federal actions and proposed legislation could also affect the State budget and economy, which could have an impact on the City. It is not possible at this time to predict the form such proposals will ultimately take and, when taken as a whole, the effect they will have on the City's economy and the Financial Plan.

In January 2017, GASB issued Statement No. 84, Fiduciary Activities, effective for fiscal years beginning after December 15, 2018 (City fiscal year 2020). For a description, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—Financial Reporting and Control Systems."

From time to time, the City Comptroller, the Control Board staff, the Office of the State Deputy Comptroller for the City of New York ("OSDC"), the Independent Budget Office ("IBO") and others issue reports and make public statements regarding the City's financial condition, commenting on, among other matters, the City's financial plans, projected revenues and expenditures and actions by the City to eliminate projected operating deficits. It is reasonable to expect that reports and statements will continue to be issued and may contain different perspectives on the City's budget and economy and may engender public comment. For information on reports issued on the November Financial Plan and to be issued on the Financial Plan by the City Comptroller and others reviewing, commenting on and identifying various risks therein, see "SECTION VII: FINANCIAL PLAN—Certain Reports."

The State

The State Legislature completed action on the $175.5 billion State 2020 Budget for its 2020 fiscal year on April 1, 2019. The State 2020 Budget provides for balanced operations on a cash basis in the State's general fund (the "General Fund"), as required by law. The State Annual Information Statement, as updated March 6, 2019 (the "Annual Information Statement"), reflects the State's Fiscal Year 2020 Executive Budget Financial Plan, as amended (the "State Financial Plan"). The State plans to release the State 2020 Budget financial plan in May, 2019, and plans to update the Annual Information Statement thereafter, to reflect the State 2020 Budget financial plan.

In the Annual Information Statement, the State projected a 2019 fiscal year closing balance of $6.5 billion in the General Fund (including $3.9 billion in monetary settlements), projected a balanced budget, on a cash basis, in fiscal year 2020, and projected General Fund gaps in fiscal years 2021, 2022 and 2023 of $4.8 billion, $4.6 billion and $5.2 billion, respectively, prior to proposed actions to adhere to the State's two percent spending benchmark, and gaps in fiscal years 2021 and 2022 of $2.0 billion and $490 million, respectively, and a surplus in fiscal year 2023 of $717 million following approval by the State Legislature of the proposed actions.

The Annual Information Statement and the State Financial Plan identify a number of risks inherent in the implementation of the State 2020 Budget and the State Financial Plan. Such risks include, but are not limited to, the performance of the national and State economies, and the collection of economically sensitive tax receipts in the amounts projected; national and international events; ongoing financial risks in the Euro-zone; changes in consumer confidence, oil supplies and oil prices; cybersecurity threats; major terrorist events, hostilities or war; climate change and extreme weather events; federal statutory and regulatory changes concerning financial sector activities; the impact of the TCJA and the implementation of tax reforms enacted by the State in response thereto; changes to federal programs; changes concerning financial sector bonus payouts and any future legislation governing the structure of compensation; shifts in monetary policy affecting interest rates and the financial markets; credit rating agency actions; the impact of financial and real estate market developments on bonus income and capital gains realizations; tech industry developments and employment; the effect of household debt on consumer spending and State tax collections; the outcome of litigation and other claims affecting the State; wage and benefit increases for State employees that exceed projected annual costs; changes in the size of the State's workforce; the realization of the projected rate of return for pension fund assets and current assumptions with respect to wages for State employees affecting the State's required pension fund contributions; the willingness and ability of the federal government to provide the aid expected in the State Financial Plan; the ability of the State to implement cost reduction initiatives and the success with which the State controls expenditures; and the ability of the State and public authorities to issue securities successfully in the public credit markets.

SECTION II: THE BONDS

General

The Bonds will be general obligations of the City issued pursuant to the Constitution and laws of the State, including the Local Finance Law (the "LFL"), and the City Charter and in accordance with bond resolutions of the Mayor and a certificate of the Deputy Comptroller for Public Finance (with related proceedings, the "Certificate"). The Bonds will mature and bear interest as described on the cover and inside cover page of this Reoffering Circular. Interest on the Bonds, calculated on the basis of a 360-day year of 30-day months, will be payable to the registered owners thereof as shown on the registration books of the City on the Record Date, the fifteenth day of the calendar month immediately preceding the applicable interest payment date.

The State Constitution requires that the City pledge its faith and credit to the payment of its bonds and notes. All real property subject to taxation by the City will be subject to the levy of *ad valorem* taxes, without limitation as to rate or amount, to pay the principal of and interest on the Bonds. The City is not permitted by the State Constitution to issue revenue bonds.

Payment Mechanism

Pursuant to the Financial Emergency Act, a general debt service fund (the "General Debt Service Fund" or the "Fund") has been established for City bonds and certain City notes. Pursuant to the Act, payments of the City real estate tax must be deposited upon receipt in the Fund, and retained under a statutory formula, for the payment of debt service (with exceptions for debt service, such as principal of seasonal borrowings, that is set aside under other procedures). The statutory formula has in recent years resulted in retention of sufficient real estate taxes to comply with the City Covenants (as defined in "—Certain Covenants and Agreements"). If the statutory formula does not result in retention of sufficient real estate taxes to comply with the City Covenants, the City will comply with the City Covenants either by providing for early retention of real estate taxes or by making cash payments into the Fund. The principal of and interest on the Bonds will be paid from the Fund until the Act terminates, and thereafter from a separate fund maintained in accordance with the City Covenants. Since its inception in 1978, the Fund has been fully funded at the beginning of each payment period.

If the Control Board determines that retentions in the Fund are likely to be insufficient to provide for the debt service payable therefrom, it must require that additional real estate tax revenues be retained or other cash resources of the City be paid into the Fund. In addition, the Control Board is required to take such action as it determines to be necessary so that the money in the Fund is adequate to meet debt service requirements. For information regarding the termination date of the Act, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Emergency Act and City Charter*."

Enforceability of City Obligations

As required by the State Constitution and applicable law, the City pledges its faith and credit for the payment of the principal of and interest on all City indebtedness. Holders of City debt obligations have a contractual right to full payment of principal and interest when due. If the City fails to pay principal or interest, the holder has the right to sue and is entitled to the full amount due, including interest to maturity at the stated rate and at the rate authorized by law thereafter until payment. Under the New York General Municipal Law, if the City fails to pay any money judgment, it is the duty of the City to assess, levy and cause to be collected amounts sufficient to pay the judgment. Decisions indicate that judicial enforcement of statutes such as this provision in the New York General Municipal Law is within the discretion of a court. Other judicial decisions also indicate that a money judgment against a municipality may not be enforceable against municipal property devoted to public use.

The rights of the owners of Bonds to receive interest, principal and applicable redemption premium, if any, from the City could be adversely affected by a restructuring of the City's debt under Chapter 9 of the Federal

Bankruptcy Code. No assurance can be given that any priority of holders of City securities (including the Bonds) to payment from money retained in the Fund or from other sources would be recognized if a petition were filed by or on behalf of the City under the Federal Bankruptcy Code or pursuant to other subsequently enacted laws relating to creditors' rights; such money might then be available for the payment of all City creditors generally. Judicial enforcement of the City's obligation to make payments into the Fund, of the obligation to retain money in the Fund, of the rights of holders of bonds and notes of the City to money in the Fund, of the obligations of the City under the City Covenants and of the State under the State Pledge and Agreement (in each case, as defined in "—Certain Covenants and Agreements") may be within the discretion of a court. For further information concerning rights of owners of Bonds against the City, see "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities."

Certain Covenants and Agreements

The City will covenant that: (i) a separate fund or funds for the purpose of paying principal of and interest on bonds and interest on notes of the City (including required payments into, but not from, City sinking funds) shall be maintained by an officer or agency of the State or by a bank or trust company; and (ii) not later than the last day of each month, there shall be on deposit in a separate fund or funds an amount sufficient to pay principal of and interest on bonds and interest on notes of the City due and payable in the next succeeding month. The City currently uses the debt service payment mechanism described above to perform these covenants. The City will further covenant in the Bonds to provide a general reserve for each fiscal year to cover potential reductions in its projected revenues or increases in its projected expenditures during each such fiscal year, to comply with the financial reporting requirements of the Act, as in effect from time to time and to limit its issuance of bond anticipation notes and tax anticipation notes as required by the Act, as in effect from time to time, and to include as terms of the Bonds the applicable multi-modal provisions and to comply with such provisions and with the statutory restrictions on multi-modal rate bonds in effect from time to time.

The State pledges and agrees in the Financial Emergency Act that the State will not take any action that will impair the power of the City to comply with the covenants described in the preceding paragraph (the "City Covenants") or any right or remedy of any owner of the Bonds to enforce the City Covenants (the "State Pledge and Agreement"). The City will covenant to make continuing disclosure with respect to the Bonds (the "Undertaking") to the extent summarized in "SECTION X: OTHER INFORMATION—Continuing Disclosure Undertaking." In the opinion of Co-Bond Counsel, the enforceability of the City Covenants, the Undertaking and the State Pledge and Agreement may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted and may also be subject to the exercise of the State's police powers and of judicial discretion in appropriate cases. The City Covenants, the Undertaking and the State Pledge and Agreement shall be of no force and effect with respect to any Bond if there is a deposit in trust with a bank or trust company of sufficient cash or equivalents to pay when due all principal of, applicable redemption premium, if any, and interest on such Bond.

Optional Redemption and Mandatory Tender

The Bonds maturing before April 1, 2029 are not subject to optional redemption or mandatory tender prior to their stated maturity dates.

The Bonds maturing after April 1, 2029 are subject to redemption or mandatory tender, at the option of the City, in whole or in part, on any date on or after April 1, 2029 (the "Call Date") upon 30 days' notice, at a price of 100% of their principal amount plus accrued interest to the Call Date.

Any Bonds that are subject to optional redemption or mandatory tender and are escrowed to maturity will remain subject to optional redemption or mandatory tender by the City.

Tender of Multi-Modal Bonds in the Fixed Rate Mode

The Bonds are being reoffered as multi-modal bonds in the Fixed Rate Mode. The City may cause a mandatory tender of the Bonds at the applicable optional redemption price on any date such Bonds are subject to optional redemption by giving 30 days' written notice to the Holders, subject to the City's providing a source of payment therefor in accordance with law. If notice of mandatory tender has been given and funds prove insufficient, the Bonds not purchased shall continue in the Fixed Rate Mode, without change in interest rate, maturity date or other terms. Other modes to which the Bonds may be converted following a mandatory tender are not described in this Reoffering Circular.

Notice of Redemption or Tender; Selection of Bonds to be Redeemed or Tendered

On or after any redemption date or successful tender date, interest will cease to accrue on the Bonds called for redemption or successfully tendered.

The particular series, maturities, amounts and interest rates of the Bonds to be redeemed or called for mandatory tender at the option of the City will be determined by the City in its sole discretion.

Notice of redemption or tender will be given by mail to the Holders of the Bonds to be redeemed or tendered not less than 30 days prior to the date set for redemption or tender. Failure by a particular Holder to receive notice, or any defect in the notice to such Holder, will not affect the redemption or purchase of any other Bond.

If less than all of the Bonds of a series and maturity, amount and interest rate are called for prior redemption or tender, such Bonds will be selected for redemption or tender, in accordance with DTC procedures, by lot.

Book-Entry Only System

The Depository Trust Company ("DTC"), New York, New York, acts as securities depository for the Bonds. Reference to the Bonds under this caption "Book-Entry Only System" shall mean all Bonds held through DTC. The Bonds will be issued as fully-registered bonds registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Bond certificate will be issued for each maturity of the Bonds of a series or subseries, each in the aggregate principal amount of such maturity, and will be deposited with DTC. Purchasers may own beneficial interests in the Bonds through DTC, Clearstream Banking, S.A. ("Clearstream") or Euroclear Bank S.A./N.V. as operator of the Euroclear System ("Euroclear").

DTC is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code, and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity, corporate and municipal debt issues, and money market instruments from over 100 countries that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts, thereby eliminating the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). The DTC rules applicable to its Participants are on file with the Securities and Exchange Commission.

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond (under this caption, "Book-Entry Only System," a "Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants records. Beneficial Owners will not receive written confirmation from DTC of their purchase, but Beneficial Owners are expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of Cede & Co. or such other name as may be requested by an authorized representative of DTC. The deposit of Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee effect no change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are credited, which may or may not be the Beneficial Owners. The Direct Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to Bonds unless authorized by a Direct Participant in accordance with DTC's procedures. Under its usual procedures, DTC mails an omnibus proxy (the "Omnibus Proxy") to the City as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

Redemption notices will be sent to DTC. If less than all of the Bonds within a series, subseries, maturity or interest rate are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such series, subseries, maturity or interest rate to be redeemed.

Payment of redemption proceeds and principal and interest on the Bonds will be made to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the City or its Fiscal Agent, The Bank of New York Mellon, on the payment date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC, the Fiscal Agent, or the City, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of redemption proceeds and principal and interest payments to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the City or the Fiscal Agent, disbursement of such payments to Direct Participants shall be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners shall be the responsibility of Direct and Indirect Participants.

The services of DTC as securities depository with respect to the Bonds of a series or subseries may be discontinued at any time by giving reasonable notice to the City or the Fiscal Agent. Under such circumstances, in the event that a successor securities depository is not obtained, Bond certificates of such series or subseries will be printed and delivered.

No assurance can be given by the City that DTC will make prompt transfer of payments to the Participants or that Participants will make prompt transfer of payments to Beneficial Owners. The City is not responsible or liable for payment by DTC or Participants or for sending transaction statements or for maintaining, supervising or reviewing records maintained by DTC or Participants.

For every transfer and exchange of the Bonds, the Beneficial Owners may be charged a sum sufficient to cover any tax, fee or other charge that may be imposed in relation thereto.

Unless otherwise noted, certain of the information contained under this caption "Book-Entry Only System" has been extracted from information furnished by DTC. None of the City or the Original Purchaser make any representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

Global Clearance Procedures

Euroclear and Clearstream. Euroclear and Clearstream have advised the City as follows:

Euroclear and Clearstream each hold securities for their customers and facilitate the clearance and settlement of securities transactions by electronic book-entry transfer between their respective account holders. Euroclear and Clearstream provide various services including safekeeping, administration, clearance and settlement of internationally traded securities and securities lending and borrowing. Euroclear and Clearstream also deal with domestic securities markets in several countries through established depositary and custodial relationships. Euroclear and Clearstream have established an electronic bridge between their two systems across which their respective participants may settle trades with each other.

Euroclear and Clearstream customers are worldwide financial institutions, including underwriters, securities brokers and dealers, banks, trust companies and clearing corporations. Indirect access to Euroclear and Clearstream is available to other institutions that clear through or maintain a custodial relationship with an account holder of either system, either directly or indirectly.

Clearing and Settlement Procedures. The Bonds sold in offshore transactions will be initially issued to investors through the book-entry facilities of DTC, or Clearstream and Euroclear in Europe if the investors are participants in those systems, or indirectly through organizations that are participants in the systems. For any of such Bonds, the record holder will be DTC's nominee. Clearstream and Euroclear will hold omnibus positions on behalf of their participants through customers' securities accounts in Clearstream's and Euroclear's names on the books of their respective depositories.

The depositories, in turn, will hold positions in customers' securities accounts in the depositories' names on the books of DTC. Because of time zone differences, the securities account of a Clearstream or Euroclear participant as a result of a transaction with a participant, other than a depository holding on behalf of Clearstream or Euroclear, will be credited during the securities settlement processing day, which must be a business day for Clearstream or Euroclear, as the case may be, immediately following the DTC settlement date. These credits or any transactions in the securities settled during the processing will be reported to the relevant Euroclear participant or Clearstream participant on that business day. Cash received in Clearstream or Euroclear as a result of sales of securities by or through a Clearstream participant or Euroclear participant to a DTC Participant, other than the depository for Clearstream or Euroclear, will be received with value on the DTC settlement date but will be available in the relevant Clearstream or Euroclear cash account only as of the business day following settlement in DTC.

Transfers between participants will occur in accordance with DTC rules. Transfers between Clearstream participants or Euroclear participants will occur in accordance with their respective rules and operating procedures. Cross-market transfers between persons holding directly or indirectly through DTC, on the one hand, and directly or indirectly through Clearstream participants or Euroclear participants, on the other, will be effected in DTC in accordance with DTC rules on behalf of the relevant European international clearing system by the relevant depositories; however, cross-market transactions will require delivery of instructions to the relevant European international clearing system by the counterparty in the system in accordance with its rules and procedures and within its established deadlines in European time. The relevant European international clearing system will, if the transaction meets its settlement requirements, deliver instructions to its depository to take action to effect final settlement on its behalf by delivering or receiving securities in DTC, and making or receiving payment in accordance with normal procedures for same day funds settlement applicable to DTC. Clearstream participants or Euroclear participants may not deliver instructions directly to the depositories.

The City will not impose any fees in respect of holding the Bonds; however, holders of book-entry interests in the Bonds may incur fees normally payable in respect of the maintenance and operation of accounts in the DTC, Euroclear and Clearstream.

Initial Settlement. Interests in the Bonds will be in uncertified book-entry form. Purchasers electing to hold book-entry interests in the Bonds through Euroclear and Clearstream accounts will follow the settlement procedures applicable to conventional Eurobonds. Book-entry interests in the Bonds will be credited to Euroclear and Clearstream participants' securities clearance accounts on the business day following the date of delivery of the Bonds against payment (value as on the date of delivery of the Bonds). DTC participants acting on behalf of purchasers electing to hold book-entry interests in the Bonds through DTC will follow the delivery practices applicable to securities eligible for DTC's Same Day Funds Settlement system. DTC participants' securities accounts will be credited with book-entry interests in the Bonds following confirmation of receipt of payment to the City on the date of delivery of the Bonds.

Secondary Market Trading. Secondary market trades in the Bonds will be settled by transfer of title to book-entry interests in Euroclear, Clearstream or DTC, as the case may be. Title to such book-entry interests will pass by registration of the transfer within the records of Euroclear, Clearstream or DTC, as the case may be, in accordance with their respective procedures. Book-entry interests in the Bonds may be transferred within Euroclear and within Clearstream and between Euroclear and Clearstream in accordance with procedures established for these purposes by Euroclear and Clearstream. Book-entry interests in the Bonds may be transferred within DTC in accordance with procedures established for this purpose by DTC. Transfer of book-entry interests in the Bonds between Euroclear or Clearstream and DTC may be effected in accordance with procedures established for this purpose by Euroclear, Clearstream and DTC.

Special Timing Considerations. Investors should be aware that investors will only be able to make and receive deliveries, payments and other communications involving the Bonds through Euroclear or Clearstream on days when those systems are open for business. In addition, because of time-zone differences, there may be complications with completing transactions involving Clearstream and/or Euroclear on the same business day as in the United States. U.S. investors who wish to transfer their interests in the Bonds, or to receive or make a payment or delivery of Bonds, on a particular day, may find that the transactions will not be performed until the next business day in Luxembourg if Clearstream is used, or Brussels if Euroclear is used.

General. Neither Euroclear or Clearstream is under any obligation to perform or continue to perform the procedures referred to above, and such procedures may be discontinued at any time.

Neither the City nor any of its agents will have any responsibility for the performance by Euroclear or Clearstream or their respective direct or indirect participants or account holders of their respective obligations under the rules and procedures governing their operations or the arrangements referred to above.

The information in this subsection concerning DTC, Euroclear and Clearstream has been obtained from sources that the City and the Original Purchaser believe to be reliable, but none of the City or the Original Purchaser take any responsibility for the accuracy thereof or make any representation as to the completeness or the accuracy of such information or as to the absence of material adverse changes in such information subsequent to the date hereof.

SECTION III: GOVERNMENT AND FINANCIAL CONTROLS

Structure of City Government

The City of New York is divided into five counties, which correspond to its five boroughs. The City, however, is the only unit of local government within its territorial jurisdiction with authority to levy and collect taxes, and is the unit of local government primarily responsible for service delivery. Responsibility for governing the City is currently vested by the City Charter in the Mayor, the City Comptroller, the City Council, the Public Advocate and the Borough Presidents.

— *The Mayor.* Bill de Blasio, the Mayor of the City, took office on January 1, 2014 and was elected to a second term commencing on January 1, 2018. The Mayor is elected in a general election for a four-year term and is the chief executive officer of the City. The Mayor has the power to appoint the commissioners of the City's various departments. The Mayor is responsible for preparing and administering the City's annual Expense and Capital Budgets (as defined below) and financial plan. The Mayor has the power to veto local laws enacted by the City Council, but such a veto may be overridden by a two-thirds vote of the City Council. The Mayor has powers and responsibilities relating to land use and City contracts and all residual powers of the City government not otherwise delegated by law to some other public official or body. The Mayor is also a member of the Control Board.

— *The City Comptroller.* Scott M. Stringer, the Comptroller of the City, took office on January 1, 2014 and was elected to a second term commencing on January 1, 2018. The City Comptroller is elected in a general election for a four-year term and is the chief fiscal officer of the City. The City Comptroller has extensive investigative and audit powers and responsibilities which include keeping the financial books and records of the City. The City Comptroller's audit responsibilities include a program of performance audits of City agencies in connection with the City's management, planning and control of operations. In addition, the City Comptroller is required to evaluate the Mayor's budget, including the assumptions and methodology used in the budget. The Office of the City Comptroller is responsible under the City Charter and pursuant to State law and City investment guidelines for managing and investing City funds for operating and capital purposes. The City Comptroller is also a member of the Control Board and is a trustee, the custodian and the delegated investment advisor of the City's five pension systems.

— *The City Council.* The City Council is the legislative body of the City and consists of the Public Advocate and 51 members elected for four-year terms who represent various geographic districts of the City. Under the City Charter, the City Council must annually adopt a resolution fixing the amount of the real estate tax and adopt the City's annual Expense Budget and Capital Budget. The City Council does not, however, have the power to enact local laws imposing other taxes, unless such taxes have been authorized by State legislation. The City Council has powers and responsibilities relating to franchises and land use and as provided by State law.

— *The Public Advocate.* Letitia James took office as the Public Advocate on January 1, 2014 and was elected to a second term commencing on January 1, 2018. In November 2018, Ms. James was elected Attorney General of the State of New York for a term commencing in January 2019. Jumaane Williams was elected as Public Advocate in a special election to hold office until December 31, 2019. A special election for the next Public Advocate for the remainder of the four-year term will be held in November 2019. The Public Advocate is elected in a general election for a four-year term. The Public Advocate is first in the line of succession to the Mayor in the event of the disability of the Mayor or a vacancy in the office, pending an election to fill the vacancy. The Public Advocate appoints a member of the City Planning Commission and has various responsibilities relating to, among other things, monitoring the activities of City agencies, the investigation and resolution of certain complaints made by members of the public concerning City agencies and ensuring appropriate public access to government information and meetings.

— *The Borough Presidents.* Each of the City's five boroughs elects a Borough President who serves for a four-year term concurrent with other City elected officials. The Borough Presidents consult with the Mayor in the preparation of the City's annual Expense Budget and Capital Budget. Five percent of discretionary increases proposed by the Mayor in the Expense Budget and, with certain exceptions, five percent of the appropriations supported by funds over which the City has substantial discretion proposed by the Mayor in the Capital Budget, must be based on appropriations proposed by the Borough Presidents. Each Borough President also appoints one member to the Panel for Educational Policy (as described below) and has various responsibilities relating to, among other things, reviewing and making recommendations regarding applications for the use, development or improvement of land located within the borough, monitoring and making recommendations regarding the performance of contracts providing for the delivery of services in the borough and overseeing the coordination of a borough-wide public service complaint program.

On November 2, 2010, the City Charter was amended to provide that no person shall be eligible to be elected to or serve in the office of Mayor, Public Advocate, City Comptroller, Borough President or Council member if that person has previously held such office for two or more consecutive full terms, unless one full term or more has elapsed since that person last held such office. Such term limit applies only to officials first elected to office on or after November 2, 2010.

City Financial Management, Budgeting and Controls

The Mayor is responsible under the City Charter for preparing the City's annual expense and capital budgets (as adopted, the "Expense Budget" and the "Capital Budget," respectively, and collectively, the "Budgets") and for submitting the Budgets to the City Council for its review and adoption. The Expense Budget covers the City's annual operating expenditures for municipal services, while the Capital Budget covers expenditures for capital projects, as defined in the City Charter. Operations under the Expense Budget must reflect the aggregate expenditure limitations contained in financial plans.

The City Council is responsible for adopting the Expense Budget and the Capital Budget. Pursuant to the City Charter, the City Council may increase, decrease, add or omit specific units of appropriation in the Budgets submitted by the Mayor and add, omit or change any terms or conditions related to such appropriations. The City Council is also responsible, pursuant to the City Charter, for approving modifications to the Expense Budget and adopting amendments to the Capital Budget beyond certain latitudes allowed to the Mayor under the City Charter. However, the Mayor has the power to veto any increase or addition to the Budgets or any change in any term or condition of the Budgets approved by the City Council, which veto is subject to an override by a two-thirds vote of the City Council, and the Mayor has the power to implement expenditure reductions subsequent to adoption of the Expense Budget in order to maintain a balanced budget. In addition, the Mayor has the power to determine the non-property tax revenue forecast on which the City Council must rely in setting the property tax rates for adopting a balanced City budget.

Office of Management and Budget

The City's Office of Management and Budget ("OMB"), with a staff of approximately 340, is the Mayor's primary advisory group on fiscal issues and is also responsible for the preparation, monitoring and control of the City's Budgets and four-year financial plans. In addition, OMB is responsible for the preparation of a Ten-Year Capital Strategy.

State law and the City Charter require the City to maintain its Expense Budget balanced when reported in accordance with GAAP. For fiscal years 2009 and 2010, the City was authorized to phase in implementation of GASB 49 for budgetary purposes. In June 2010, the Financial Emergency Act was amended to permanently waive the budgetary impact of GASB 49 by allowing the City to include certain pollution remediation costs in its capital budget and to finance such costs with the issuance of bonds. In addition to the Budgets, the City prepares a four-year financial plan which encompasses the City's revenue, expenditure, cash flow and capital projections. All Covered Organizations (as defined below) are also required to maintain budgets that are balanced when reported in accordance with GAAP. From time to time certain Covered Organizations have had budgets providing for operations on a cash basis but not balanced under GAAP.

To assist in achieving the goals of the financial plan and budget, the City reviews its financial plan periodically and, if necessary, prepares modifications to incorporate actual results and revisions to projections and assumptions to reflect current information. The City's revenue projections are continually reviewed and periodically updated with the benefit of discussions with a panel of private economists analyzing the effects of changes in economic indicators on City revenues and information from various economic forecasting services.

Office of the Comptroller

The City Comptroller is the City's chief fiscal officer and is responsible under the City Charter for reviewing and commenting on the City's Budgets and financial plans, including the assumptions and methodologies used in their preparation. The City Comptroller, as an independently elected public official, is required to report annually to the City Council on the state of the City's economy and finances and periodically to the Mayor and the City Council on the financial condition of the City and to make recommendations, comments and criticisms on the operations, fiscal policies and financial transactions of the City. Such reports, among other things, have differed with certain of the economic, revenue and expenditure assumptions and projections in the City's financial plans and Budgets. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

The Office of the City Comptroller establishes the City's accounting and financial reporting practices and internal control procedures. The City Comptroller is also responsible for the preparation of the City's annual financial statements, which, since 1978, have been required to be reported in accordance with GAAP.

The Comprehensive Annual Financial Report of the Comptroller (the "CAFR") for the 2018 fiscal year, which includes, among other things, the City's financial statements for the 2018 and 2017 fiscal years, was issued on October 30, 2018. The CAFR for the 2018 fiscal year received the Government Finance Officers Association award of the Certificate of Achievement for Excellence in Financial Reporting, the thirty-ninth consecutive year the CAFR has won such award.

All contracts for goods and services requiring the expenditure of City monies must be registered with the City Comptroller. No contract can be registered unless funds for its payment have been appropriated by the City Council or otherwise authorized. The City Comptroller also prepares vouchers for payments for such goods and services and cannot prepare a voucher unless funds are available in the Budgets for its payment.

The City Comptroller is also required by the City Charter to audit all City agencies and has the power to audit all City contracts. The Office of the Comptroller conducts both financial and management audits and has the power to investigate corruption in connection with City contracts or contractors.

The Mayor and City Comptroller are responsible for the issuance of City indebtedness. The City Comptroller oversees the payment of such indebtedness and is responsible for the custody of certain sinking funds.

Financial Reporting and Control Systems

Since 1978, the City's financial statements have been required to be audited by independent certified public accountants and to be presented in accordance with GAAP. The City has completed thirty-eight consecutive fiscal years with a General Fund surplus when reported in accordance with then applicable GAAP, except with regard to the application of GASB 49.

In fiscal year 2014, the City implemented GASB Statement No. 68, Accounting and Financial Reporting for Pensions ("GASB 68"). The adoption of GASB 68 resulted in the restatement of the City's fiscal year 2013 government-wide financial statements. The City implemented GASB 68 concurrently with the implementation by the five major actuarial pension systems of GASB Statement No. 67 ("GASB 67"), Financial Reporting for Pension Plans. For further information about the implementation of GASB 67 and GASB 68 and the resulting impact on the City's financial statements, see "SECTION IX: PENSION SYSTEMS AND OPEB."

In January 2017, GASB issued Statement No. 84, Fiduciary Activities ("GASB 84"), effective for fiscal years beginning after December 15, 2018 (City Fiscal Year 2020), with early implementation encouraged. Implementation of GASB 84 could affect the City's financial statements by requiring that certain activities currently accounted for as fiduciary activities be reported as governmental activities going forward. This might result in certain resources being reported as operating revenue in periods prior to the related expenditures being incurred, negatively affecting the City's ability to meet its obligation to balance each year's operating budget in accordance with GAAP unless there is a change in applicable law. The City intends to seek legislation to eliminate the budgetary impact of GASB 84 and is preparing to implement GASB 84 with respect to its financial statements.

Both OMB and the Office of the Comptroller utilize a financial management system which provides comprehensive current and historical information regarding the City's financial condition. This information, which is independently evaluated by each office, provides a basis for City action required to maintain a balanced budget and continued financial stability.

The City's operating results and forecasts are analyzed, reviewed and reported on by each of OMB and the Office of the Comptroller as part of the City's overall system of internal control. Internal control systems are reviewed regularly, and the City Comptroller requires an annual report on internal control and accountability from each agency. Comprehensive service level and productivity targets are formulated and monitored for each agency by the Mayor's Office of Operations and reported publicly in a semiannual management report.

The City has developed and utilizes a cash forecasting system which forecasts its daily cash balances. This enables the City to predict its short-term borrowing needs and maximize its return on the investment of available cash balances. Monthly statements of operating revenues and expenditures, capital revenues and expenditures and cash flow are reported after each month's end, and major variances from the financial plan are identified and explained.

City funds held for operating and capital purposes are managed by the Office of the City Comptroller, with specific guidelines as to investment vehicles. The City invests primarily in obligations of the United States Government, its agencies and instrumentalities, high grade commercial paper and repurchase agreements with primary dealers. The repurchase agreements are collateralized by United States Government treasuries, agencies and instrumentalities, held by the City's custodian bank and marked to market daily.

More than 97% of the aggregate assets of the City's five defined benefit pension systems are managed by outside managers, supervised by the Office of the City Comptroller, and the remainder is held in cash or managed by the City Comptroller. Allocations of investment assets are determined by each fund's board of trustees. As of January 31, 2019, aggregate pension assets were allocated approximately as follows: 29% U.S. equity; 27% fixed income; 19% international equity; 10% alternative credit; 6% private equity; 5% private real estate; 2% hedge funds; 1% real estate investment trusts; 1% infrastructure investments; and 1% cash (percentages do not add to 100% due to rounding).

Financial Emergency Act and City Charter

The Financial Emergency Act requires that the City submit to the Control Board, at least 50 days prior to the beginning of each fiscal year (or on such other date as the Control Board may approve), a financial plan for the City and certain State governmental agencies, public authorities or public benefit corporations which receive or may receive monies from the City directly, indirectly or contingently (the "Covered Organizations") covering the four-year period beginning with such fiscal year. The New York City Transit Authority and the Manhattan and Bronx Surface Transit Operating Authority (collectively, "New York City Transit" or "NYCT" or "Transit

Authority"), NYCHH and NYCHA are examples of Covered Organizations. The Act requires that the City's four-year financial plans conform to a number of standards. Subject to certain conditions, the Financial Emergency Act and the City Charter require the City to prepare and balance its budget covering all expenditures other than capital items so that the results of such budget will not show a deficit when reported in accordance with GAAP. Provision must be made, among other things, for the payment in full of the debt service on all City securities. The budget and operations of the City and the Covered Organizations must be in conformance with the financial plan then in effect.

From 1975 to June 30, 1986, the City was subject to a Control Period, as defined in the Act, which was terminated upon the satisfaction of the statutory conditions for termination, including the termination of all federal guarantees of obligations of the City, a determination by the Control Board that the City had maintained a balanced budget in accordance with GAAP for each of the three immediately preceding fiscal years and a certification by the State and City Comptrollers that sales of securities by or for the benefit of the City satisfied its capital and seasonal financing requirements in the public credit markets and were expected to satisfy such requirements in the 1987 fiscal year. With the termination of the Control Period, certain Control Board powers were suspended including, among others, its power to approve or disapprove certain contracts (including collective bargaining agreements), long-term and short-term borrowings, and the four-year financial plan and modifications thereto of the City and the Covered Organizations. Pursuant to the Act and the City Charter, the City is required to develop a four-year financial plan each year and to modify the plan as changing circumstances require. Under current law, prior to July 1, 2008, the Control Board was required to reimpose a Control Period upon the occurrence or substantial likelihood and imminence of the occurrence of any one of certain events specified in the Act. These events were (i) failure by the City to pay principal of or interest on any of its notes or bonds when due or payable, (ii) the existence of a City operating deficit of more than $100 million, (iii) issuance by the City of notes in violation of certain restrictions on short-term borrowing imposed by the Act, (iv) any violation by the City of any provision of the Act which substantially impaired the ability of the City to pay principal of or interest on its bonds or notes when due and payable or its ability to adopt or adhere to an operating budget balanced in accordance with the Act, or (v) joint certification by the State and City Comptrollers that they could not at that time make a joint certification that sales of securities in the public credit market by or for the benefit of the City during the immediately preceding fiscal year and the current fiscal year satisfied its capital and seasonal financing requirements during such period and that there was a substantial likelihood that such securities could be sold in the general public market from the date of the joint certification through the end of the next succeeding fiscal year in amounts that would satisfy substantially all of the capital and seasonal financing requirements of the City during such period in accordance with the financial plan then in effect.

In 2003, the State Legislature amended the Act to change its termination date from the *earlier* of July 1, 2008 or the date on which certain bonds are discharged to the *later* of July 1, 2008 or the date on which such bonds are discharged. The bonds referred to in the amended section of the Act are all bonds containing the State pledge and agreement authorized under section 5415 of the Act (the "State Covenant").

The State Covenant is authorized to be included in bonds of the City. Since the 2003 enactment of this amendment to the Act, the City has not issued bonds containing the State Covenant. However, many City bonds issued prior to the amendment do contain the State Covenant. Because the City has issued such bonds with maturities as long as 30 years, the effect of the amendment was to postpone termination of the Act from July 1, 2008 to 2033 (or earlier if all City bonds containing the State Covenant are discharged). The State Legislature could, without violation of the State Covenant contained in the City's outstanding bonds, enact legislation that would terminate the Control Board and the Act because, at the time of issuance of those bonds, the latest termination date of the Act was July 1, 2008.

While the State Legislature amended the Act to extend the termination date of the Control Board, the power to impose or continue a Control Period terminated July 1, 2008. The power to impose or continue a Control Period is covered by a section of the Act that provides that no Control Period shall continue beyond July 1, 2008.

The State Legislature did not amend this provision. Therefore, under current law, although the Act continues in effect, no Control Period may be imposed.

Financial Review and Oversight

The Control Board, with the OSDC, reviews and monitors revenues and expenditures of the City and the Covered Organizations. In addition, the IBO has been established pursuant to the City Charter to provide analysis to elected officials and the public on relevant fiscal and budgetary issues affecting the City.

The Control Board is required to: (i) review the four-year financial plan of the City and of the Covered Organizations and modifications thereto; (ii) review the operations of the City and the Covered Organizations, including their compliance with the financial plan; and (iii) review certain contracts, including collective bargaining agreements, of the City and the Covered Organizations. The requirement to submit four-year financial plans and budgets for review was in response to the severe financial difficulties and loss of access to the credit markets encountered by the City in 1975. The Control Board must reexamine the financial plan on at least a quarterly basis to determine its conformance to statutory standards.

The *ex officio* members of the Control Board are the Governor of the State of New York (Chairman); the Comptroller of the State of New York; the Mayor of The City of New York; and the Comptroller of The City of New York. In addition, there are three private members appointed by the Governor. The Executive Director of the Control Board is appointed jointly by the Governor and the Mayor. The Control Board is assisted in the exercise of its responsibilities and powers under the Financial Emergency Act by the State Deputy Comptroller.

SECTION IV: SOURCES OF CITY REVENUES

The City derives its revenues from a variety of local taxes, user charges and miscellaneous revenues, as well as from federal and State unrestricted and categorical grants. State aid as a percentage of the City's revenues has remained relatively constant over the period from 1980 to 2018, while federal aid has been sharply reduced. The City projects that local revenues will provide approximately 74.0% of total revenues in the 2019 fiscal year, while federal aid, including categorical grants, will provide 9.4%, and State aid, including unrestricted aid and categorical grants, will provide 16.6%. Adjusting the data for comparability, local revenues provided approximately 60% of total revenues in 1980, while federal and State aid each provided approximately 20%. A discussion of the City's principal revenue sources follows. For additional information regarding assumptions on which the City's revenue projections are based, see "SECTION VII: FINANCIAL PLAN—Assumptions." For information regarding the City's tax base, see "APPENDIX A—ECONOMIC AND DEMOGRAPHIC INFORMATION."

Real Estate Tax

The real estate tax, the single largest source of the City's revenues, is the primary source of funds for the City's General Debt Service Fund. The City expects to derive approximately 45.9% of its total tax revenues and 30.3% of its total revenues for the 2019 fiscal year from the real estate tax. For information concerning tax revenues and total revenues of the City for prior fiscal years, see "SECTION VI: FINANCIAL OPERATIONS—2014-2018 Summary of Operations."

The State Constitution authorizes the City to levy a real estate tax without limit as to rate or amount (the "debt service levy") to cover scheduled payments of the principal of and interest on indebtedness of the City. However, the State Constitution limits the amount of revenue which the City can raise from the real estate tax for operating purposes (the "operating limit") to 2.5% of the average full value of taxable real estate in the City for the current and the last four fiscal years, which amount may be further limited by the State Constitution or laws. On June 24, 2011 the Governor signed into law the State's tax levy limitation law which restricts, among other things, the amount of real property taxes that may be levied by or on behalf of a municipality in a particular year. Such law does not apply to the City. Although legislation applying such law to the City has been proposed in each year since it was enacted, it has never passed. Were it to be enacted into law, it would have a material adverse impact on projected City revenues. The table below sets forth the percentage the debt service levy represents of the total levy. The City Council has adopted a distinct tax rate for each of the four categories of real property established by State legislation.

On April 24, 2017, a lawsuit was filed challenging the City's real property tax system and valuation methodology. See "SECTION X: OTHER INFORMATION—Litigation—*Taxes*."

Comparison of Real Estate Tax Levies, Tax Limits and Tax Rates

Fiscal Year	Total Levy(1)	Levy Within Operating Limit	Debt Service Levy(2)	Debt Service Levy as a Percentage of Total Levy	Operating Limit	Levy Within Operating Limit as a Percentage of Operating Limit	Rate Per $100 of Full Valuation(3)	Average Tax Rate Per $100 of Assessed Valuation
				(Dollars in Millions, except for Tax Rates)				
2014	$21,285.5	$18,779.8	$1,435.8	6.7%	$19,601.7	95.8%	$2.36	$12.28
2015	22,591.5	17,923.1	3,623.5	16.0	20,164.1	88.9	2.43	12.28
2016	24,145.0	20,761.2	2,310.6	9.6	21,130.6	98.3	2.45	12.28
2017	25,794.1	22,303.5	2,353.6	9.1	22,377.8	99.7	2.45	12.28
2018	27,726.2	24,005.2	2,599.9	9.4	24,448.7	98.2	2.38	12.28
2019	29,574.7	26,274.6	2,095.6	7.1	26,437.7	99.4	2.36	12.28

(1) As approved by the City Council.

(2) The debt service levy includes a portion of the total reserve for uncollected real estate taxes.

(3) Full valuation is based on the special equalization ratios (discussed below) and the billable assessed valuation. Special equalization ratios and full valuations are revised periodically as a result of surveys by the State Office of Real Property Tax Services.

Assessment

The City has traditionally assessed real property at less than market value. The State Office of Real Property Tax Services (the "State Office") is required by law to determine annually the relationship between taxable assessed value and market value which is expressed as the "special equalization ratio." The special equalization ratio is used to compute full value for the purpose of measuring the City's compliance with the operating limit and general debt limit. For a discussion of the City's debt limit, see "Section VIII: Indebtedness—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness.*" The ratios are calculated by using the most recent market value surveys available and a projection of market value based on recent survey trends, in accordance with methodologies established by the State Office from time to time. Ratios, and therefore full values, may be revised when new surveys are completed. The ratios and full values shown in the table below, which were used to compute the 2019 fiscal year operating limit and general debt limit, have been established by the State Office and include the results of the fiscal year 2017 market value survey.

Billable Assessed and Full Value of Taxable Real Estate(1)

Fiscal Year	Billable Assessed Valuation of Taxable Real Estate(2)	÷	Special Equalization Ratio	=	Full Valuation(2)
2015	$184,059,201,523		0.2065		$ 891,327,852,412
2016	196,710,908,548		0.2005		981,101,788,269
2017	210,130,499,481		0.1982		1,060,194,245,616
2018	225,863,036,909		0.2008		1,124,815,920,862
2019	240,777,862,121		0.1919		1,254,704,857,327
				Average:	$1,062,428,932,897

(1) Also assessed by the City, but excluded from the computation of taxable real estate, are various categories of property exempt from taxation under State law. For the 2018 fiscal year, the billable assessed value of all real estate (taxable and exempt) was $382.4 billion, comprised of $134.2 billion of fully exempt real estate, $73.9 billion of partially taxable real estate (including both taxable and exempt real estate) and $174.3 billion of fully taxable real estate.

(2) Figures are based on estimates of the special equalization ratio which are revised annually. These figures are derived from official City Council Tax Resolutions adopted with respect to the 2019 fiscal year. These figures differ from the assessed and full valuation of taxable real estate reported in the CAFR, which excludes veterans' property subject to tax for school purposes and is based on estimates of the special equalization ratio which are not revised annually.

State law provides for the classification of all real property in the City into one of four statutory classes. Class one primarily includes one-, two- and three-family homes; class two includes certain other residential property not included in class one; class three includes most utility real property; and class four includes all other real property. The total tax levy consists of four tax levies, one for each class. Once the tax levy is set for each class, the tax rate for each class is then fixed annually by the City Council by dividing the levy for such class by the billable assessed value for such class.

Assessment procedures differ for each class of property. For fiscal year 2019, class one was assessed at approximately 6% of market value and classes two, three and four were each assessed at 45.0% of market value. In addition, individual assessments on class one parcels cannot increase by more than 6% per year or 20% over a five-year period. Market value increases and decreases for most of class two and all of class four are phased in over a period of five years. Increases in class one market value in excess of applicable limitations are not phased in over subsequent years. There is also no phase in for class three property.

Class two and class four real property have three assessed values: actual, transitional and billable. Actual assessed value is established for all tax classes without regard to the five-year phase-in requirement applicable to most class two and all class four properties. The transitional assessed value reflects this phase-in. Billable assessed value is the basis for tax liability and is the lower of the actual or transitional assessment.

The share of the total levy that can be borne by each class is regulated by the provisions of the State Real Property Tax Law. Each class share of the total tax levy is updated annually to reflect new construction, demolition, alterations or changes in taxable status and is subject to limited adjustment to reflect market value changes among the four classes. Class share adjustments are limited to a 5% maximum increase per year. Maximum class increases below 5% must be, and typically are, approved by the State legislature. Fiscal year 2019 tax rates were set on June 14, 2018 and reflect a 5% limitation on the market value adjustment for 2018. The average tax rate for fiscal year 2019 was maintained at $12.28 per $100 of assessed value. For fiscal year 2019, at the request of the City, the State approved an adjustment of the maximum rate of increase to 0.5%. The tax rates were amended and revised property tax bills with the new tax rates for fiscal year 2019 were sent to taxpayers in November 2018.

City real estate tax revenues may be reduced in future fiscal years as a result of tax refund claims asserting overvaluation, inequality of assessment and illegality. The State Office annually certifies various class ratios and class equalization rates relating to the four classes of real property in the City. "Class ratios" are determined for each class by the State Office by calculating the ratio of assessed value to market value. Various proceedings challenging assessments of real property for real estate tax purposes, and one action challenging the constitutionality of the real property tax system, are pending. For further information regarding the City's potential exposure in certain of these proceedings, see "SECTION X: OTHER INFORMATION—Litigation—*Taxes*" and "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

Trend in Taxable Assessed Value

State law provides for increases in assessed values of most properties to be phased into property tax bills over five-year periods. The billable assessed valuation, as determined by the City Department of Finance, rose to $182.5 billion, $195.2 billion, $208.6 billion, $224.5 billion and $239.7 billion for fiscal years 2015 through 2019, respectively. The Department of Finance released the tentative assessment for fiscal year 2020 on January 16, 2019. The billable assessed value rose by $20.0 billion over the fiscal year 2019 assessment roll to $259.7 billion, reflecting growth of 8.3%. However, the final roll for fiscal year 2020, which is expected to be released in late May 2019, is expected to show a growth of 6.7% over fiscal year 2019. With moderate growth forecast in the class two and class four market values combined with a deflated level of existing pipeline of deferred assessment increases yet to be phased in, the billable assessed valuations are forecast to grow by 5.2%, 4.0% and 3.0% in fiscal years 2021 through 2023, respectively.

Collection of the Real Estate Tax

Real estate tax payments are due each July 1 and January 1. Owners of all properties assessed at $250,000 or less are eligible to make tax payments in quarterly installments on July 1, October 1, January 1 and April 1. An annual interest rate of 7% compounded daily is imposed upon late payments on properties with an assessed value of $250,000 or less except in the case of (i) any parcel with respect to which the real estate taxes are held in escrow and paid by a mortgage escrow agent and (ii) parcels consisting of vacant or unimproved land. An interest rate of 18% compounded daily is imposed upon late payments on all other properties. These interest rates are set annually.

The City primarily uses two methods to enforce the collection of real estate taxes. The City has been authorized to sell real estate tax liens on class one properties which are delinquent for at least three years and class two, three and four properties which are delinquent for at least one year. The authorization to sell real estate tax liens was extended through December 31, 2020. In addition, the City is entitled to foreclose delinquent tax liens by *in rem* proceedings after one year of delinquency with respect to properties other than one- and two-family dwellings and condominium apartments for which the annual tax bills do not exceed $2,750, as to which a three-year delinquency rule is in effect.

The real estate tax is accounted for on a modified accrual basis in the General Fund. Revenue accrued is limited to prior year payments received, offset by refunds made, within the first two months of the following fiscal year. In deriving the real estate tax revenue forecast, a reserve is provided for cancellations or abatements of taxes and for nonpayment of current year taxes owed and outstanding as of the end of the fiscal year.

The following table sets forth the amount of delinquent real estate taxes (owed and outstanding as of the end of the fiscal year of levy) for each of the fiscal years indicated. Delinquent real estate taxes do not include real estate taxes subject to cancellation or abatement under various exemption or abatement programs. Delinquent real estate taxes generally increase during a recession and when the real estate market deteriorates. Delinquent real estate taxes generally decrease as the City's economy and real estate market recover.

From time to time, the City sells tax liens to separate statutory trusts. In fiscal years 2014 through 2018, the City's tax lien program resulted in net proceeds of approximately $81.2 million, $96.0 million, $80 million, $95.5 million and $101.1 million, respectively. The Financial Plan reflects receipt of $50 million in fiscal year 2019 from the tax lien program.

REAL ESTATE TAX COLLECTIONS AND DELINQUENCIES

Fiscal Year	Tax Levy(1)	Tax Collections on Current Year Levy	Tax Collections as a Percentage of Tax Levy	Prior Year (Delinquent Tax) Collections	Refunds	Cancellations, Net Credits, Abatements, Exempt Property Restored and Shelter Rent	Delinquent as of End of Fiscal Year	Delinquency as a Percentage of Tax Levy	Lien Sale Program
				(Dollars In Millions)					
2014	$21,285.5	$19,909.2	93.5%	$280.5	$(293.5)	$(1,070.6)	$(305.5)	1.44%	$ 81.2
2015	22,591.5	21,107.2	93.4	318.5	(204.5)	(1,129.7)	(354.6)	1.57	96.0
2016	24,145.0	22,835.8	94.6	281.0	(222.9)	(975.4)	(333.8)	1.38	80.0
2017	25,794.1	24,283.6	94.1	317.1	(220.7)	(1,185.9)	(324.6)	1.26	95.5
2018	27,726.2	26,166.0	94.4	324.0	(372.2)	(1,219.2)	(341.0)	1.23	101.1
2019(2)	29,574.7	27,904.9	94.4	310.0	(400.0)	(1,277.9)	(391.9)	1.33	50.0

(1) As approved by the City Council.

(2) Forecast.

Other Taxes

The City expects to derive 54.1% of its total tax revenues for the 2019 fiscal year from a variety of taxes other than the real estate tax, such as: (i) the 4.5% sales and compensating use tax, which commenced August 1, 2009, in addition to the 4% sales and use tax imposed by the State upon receipts from retail sales of tangible personal property and certain services in the City; (ii) the personal income tax on City residents; (iii) a general corporation tax levied on the income of corporations doing business in the City; and (iv) a banking corporation tax imposed on the income of banking corporations doing business in the City.

For local taxes other than the real estate tax, the City may adopt and amend local laws for the levy of local taxes to the extent authorized by the State. This authority can be withdrawn, amended or expanded by State legislation.

Revenues from taxes other than the real estate tax in the 2018 fiscal year increased by $2.91 billion from the 2017 fiscal year. The following table sets forth, by category, revenues from taxes, other than the real estate tax, for each of the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
			(In Millions)		
Personal Income(1)	$10,152	$11,264	$11,340	$11,230	$13,380
General Corporation	2,766	2,873	3,354	3,527	3,454
Banking Corporation(2)	1,227	1,214	268	(82)	(17)
Unincorporated Business Income	1,882	1,962	2,040	2,005	2,182
Sales(3)	6,494	6,742	6,911	7,017	7,443
Commercial Rent	710	735	779	816	853
Real Property Transfer	1,527	1,765	1,775	1,415	1,388
Mortgage Recording	961	1,155	1,234	1,118	1,050
Utility	405	384	354	371	371
Cigarette	54	50	45	37	36
Hotel	536	556	565	579	597
All Other(4)	548	591	614	654	819
Audits	911	1,132	1,161	1,296	1,337
Total	$28,173	$30,423	$30,440	$29,983	$32,893

Note: Totals may not add due to rounding.

(1) Personal Income includes the personal income tax revenues of $1.641 billion, $556 million, $180 million, $297 million and $181 million in fiscal years 2014 through 2018, respectively, retained by the TFA for funding requirements associated with TFA Future Tax Secured Bonds. Personal income taxes flow directly from the State to the TFA, and from the TFA to the City only to the extent not required by the TFA for debt service, operating expenses and contractual and other obligations incurred pursuant to the TFA indenture. In fiscal years 2014 through 2017, Personal Income includes $613 million, $635 million, $607 million and $166 million, respectively, which was provided to the City by the State as a reimbursement for the reduced personal income tax revenues resulting from the STAR Program.

(2) With the enactment of corporate tax reform that merged the general corporation tax with the banking corporation tax in 2015, most banking corporation tax payments are now being reported as business corporation taxes. However, refunds arising from prior year returns filed as banking corporation taxes are still paid out as refunds under the banking corporation tax. In fiscal year 2017, the amount refunded exceeded the gross receipts resulting in net negative revenues for such fiscal year.

(3) A portion of sales tax revenues payable to the City would be paid to the TFA if personal income tax revenues did not satisfy specified debt service ratios.

(4) All Other includes, among others, beer and liquor taxes and the automobile use tax, but excludes the STAR Program aid of $838 million, $835 million, $814 million, $340 million and $189 million in fiscal years 2014 through 2018, respectively.

Miscellaneous Revenues

Miscellaneous revenues include revenue sources such as charges collected by the City for the issuance of licenses, permits and franchises, interest earned by the City on the investment of City cash balances, tuition and fees at the Community Colleges, reimbursement to the City from the proceeds of water and sewer rates charged by the New York City Water Board (the "Water Board") for costs of delivery of water and sewer services and paid to the City by the Water Board for its lease interest in the water and sewer system, rents collected from tenants in City-owned property and from The Port Authority of New York and New Jersey (the "Port Authority") with respect to airports and the collection of fines. The following table sets forth amounts of miscellaneous revenues for each of the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
			(In Millions)		
Licenses, Permits and Franchises	$ 648	$ 703	$ 728	$ 770	$ 776
Interest Income	16	30	79	73	125
Charges for Services	951	974	1,001	1,033	1,027
Water and Sewer Payments	1,491	1,439	1,297	1,385	1,390
Rental Income	311	284	279	253	261
Fines and Forfeitures	892	959	995	985	1,027
Other	1,313	1,828	725	565	413
Total	$5,622	$6,217	$5,104	$5,064	$5,019

Note: Totals may not add due to rounding.

Rental income in fiscal years 2014 through 2018 includes approximately $128.5 million, $128.5 million, $128.5 million, $144.5 million and $153.6 million, respectively, in Port Authority lease payments for the City airports.

Fees and charges collected from the users of the water and sewer system of the City are revenues of the Water Board, a body corporate and politic, constituting a public benefit corporation, all of the members of which are appointed by the Mayor. The Water Board currently holds a long-term leasehold interest in the water and sewer system pursuant to a lease between the Water Board and the City.

Other miscellaneous revenues for fiscal years 2014 through 2018 include $132.5 million, $113.4 million, $229 million, $100.3 million and $108.7 million, respectively, of tobacco settlement revenues ("TSRs") from the settlement of litigation with certain cigarette manufacturers that were not retained by TSASC. Other miscellaneous revenues for fiscal years 2014 through 2018 do not include TSRs retained by TSASC for debt service and operating expenses totaling $79 million, $68 million, $137 million, $60 million and $65 million, respectively. Pursuant to the TSASC indenture, less than 40% of the TSRs are pledged to the TSASC bondholders and the remainder flow to the City. For further information see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—4. MISCELLANEOUS REVENUES" and "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities."

Other miscellaneous revenues for fiscal year 2014 include $338 million from the sale of taxi medallions, a payment of $50 million from Verizon to settle cost overruns caused by delays on the Emergency Communications Transformation Program, $214 million from the sale of two City office buildings and $103 million from the reconciliation of prior years health insurance premiums. Other miscellaneous revenues for fiscal year 2015 include $174 million from the sale of a former City Department of Sanitation site and $82 million from a deferred prosecution agreement under the Manhattan District Attorney's Office and the US Department of Justice related to sanctions violations against Commerzbank. Other miscellaneous revenues for fiscal year 2016 include $74 million from a deferred prosecution agreement under the Manhattan District Attorney's Office and the US Department of Justice related to sanctions violations against Credit Agricole and Investment Bank. Other miscellaneous revenues for fiscal year 2017 include $78 million from the Department of Education and $30 million from the sale of the Brooklyn Heights library development rights. Other miscellaneous revenues for fiscal year 2018 include $39 million from affordable housing development fees.

Unrestricted Intergovernmental Aid

Unrestricted federal and State aid are not subject to any substantial restriction as to their use and are used by the City as general support for its Expense Budget. For a further discussion of federal and State aid, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS."

The following table sets forth amounts of unrestricted federal and State aid received by the City in each of its 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
			(In Millions)		
Unrestricted Intergovernmental Aid	$1	$1	$6	$59	—

Federal and State Categorical Grants

The City makes certain expenditures for services required by federal and State mandates which are then wholly or partially reimbursed through federal and State categorical grants. State categorical grants are received by the City primarily in connection with City welfare, education, higher education, health and mental health expenditures. The City also receives substantial federal categorical grants in connection with the federal Community Development Block Grant Program ("Community Development"). The federal government also provides the City with substantial public assistance, social service and education grants as well as reimbursement for all or a portion of certain costs incurred by the City in maintaining programs in a number of areas, including housing, criminal justice and health. All City claims for federal and State grants are subject to subsequent audit by federal and State authorities. Certain claims submitted to the State Medicaid program by the City are the subject of investigation by the Office of the Inspector General of the United States Department of Health and Human Services ("OIG"). For a discussion of claims for which a final audit report has been issued by OIG, see "SECTION X: OTHER INFORMATION—Litigation—*Miscellaneous*." The City provides a reserve for disallowances resulting from these audits which could be asserted in subsequent years. Federal grants are also subject to audit under the Single Audit Act Amendments of 1996. For a further discussion of federal and State categorical grants, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS." For information regarding certain recent developments, see "SECTION I: RECENT FINANCIAL DEVELOPMENTS."

On January 25, 2017, President Trump signed an executive order, among other things, directing the United States Attorney General and the Secretary of Homeland Security to ensure that state and local jurisdictions that willfully refuse to comply with federal law concerning the provision of information on individuals' immigration status will not be eligible to receive federal grants except as deemed necessary for law enforcement purposes. On August 1, 2018, the United States Court of Appeals for the Ninth Circuit held this provision of the executive order unconstitutional. The Ninth Circuit vacated a nationwide permanent injunction enjoining enforcement of this provision entered by the District Court for the Northern District of California because the record before the court entitled the plaintiffs to an injunction as to the executive order's effect in California only.

The United States Attorney General has also sought to condition grants under the Department of Justice's Edward Byrne Justice Assistance Grant program on compliance with the same federal law concerning the provision of information on individuals' immigration status and on additional conditions related to immigration enforcement. In order to vigorously defend its policies, its compliance with federal law, and its right to the approximately $4 million it annually receives through the Edward Byrne Justice Assistance Grant program, the City filed suit against the Justice Department on July 18, 2018. In October 2018, the Justice Department approved the City's fiscal year 2017 application for the grant. The City accepted the award, which was made available to the City in February 2019. In November 2018, the United States District Court for the Southern District of New York ruled that the Justice Department did not have lawful authority to impose these conditions and enjoined it from enforcing the conditions on the City's fiscal year 2017 grant. This decision is now on appeal at the Second Circuit. The City has not yet received a determination on its fiscal year 2018 application.

The following table sets forth amounts of federal and State categorical grants received by the City for each of the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
			(In Millions)		
Federal(1)					
Community Development(2)	$ 337	$ 537	$ 780	$ 1,108	$ 1,081
Social Services	3,206	3,076	3,225	3,454	3,362
Education	1,672	1,677	1,698	1,709	1,786
Other(3)	1,747	1,692	1,691	1,656	1,737
Total	$ 6,962	$ 6,982	$ 7,394	$ 7,927	$ 7,966
State					
Social Services	$ 1,415	$ 1,410	$ 1,490	$ 1,709	$ 1,611
Education	7,907	9,131	9,612	10,250	10,710
Higher Education	221	227	239	248	255
Health and Mental Health	454	364	535	573	535
Other	919	965	1,126	1,210	1,342
Total	$10,916	$12,097	$13,002	$13,990	$14,453

(1) Federal funding includes amounts received under the American Recovery and Reinvestment Act of $296 million, $230 million, $203 million, $199.8 million and $198 million in fiscal years 2014 through 2018, respectively.

(2) Amounts represent actual funds received and may be lower or higher than the appropriation of funds actually provided by the federal government for the particular fiscal year due either to underspending or the spending of funds carried forward from prior fiscal years. Community Development includes $145.5 million, $338.7 million, $669.4 million, $874.8 million and $884.4 million in fiscal years 2014 through 2018, respectively, in disaster recovery funding for storm damage remediation as a result of Superstorm Sandy.

(3) Other includes $154.4 million, $48.0 million, $74.5 million, $51.7 million and $20.1 million in fiscal years 2014 through 2018, respectively, of FEMA funding for expenditures for storm damage remediation as a result of Superstorm Sandy.

SECTION V: CITY SERVICES AND EXPENDITURES

Expenditures for City Services

Three types of governmental agencies provide public services within the City's borders and receive financial support from the City. One category is the mayoral agencies established by the City Charter which include, among others, the Police, Fire and Sanitation Departments. Another is the independent agencies which are funded in whole or in part through the City Budget by the City but which have greater independence in the use of appropriated funds than the mayoral agencies. Included in this category are certain Covered Organizations such as NYCHH and the Transit Authority. A third category consists of certain public benefit corporations ("PBCs") which were created to finance the construction of housing, hospitals, dormitories and other facilities and to provide other governmental services in the City. The legislation establishing this type of agency contemplates that annual payments from the City, appropriated through its Expense Budget, may or will constitute a substantial part of the revenues of the agency. Included in this category is, among others, the City University Construction Fund ("CUCF"). For information regarding expenditures for City services, see "SECTION VI: FINANCIAL OPERATIONS—2014-2018 Summary of Operations."

Federal and State laws require the City to provide certain social services for needy individuals and families who qualify for such assistance. The City receives federal Temporary Assistance for Needy Families ("TANF") block grant funds through the State for the Family Assistance Program. The Family Assistance Program provides benefits for households with minor children subject, in most cases, to a five-year time limit. The Safety Net Assistance Program provides benefits for adults without minor children, families who have reached the Family Assistance Program time limit, and others, including certain immigrants, who are ineligible for the Family Assistance Program but are eligible for public assistance. Historically, the cost of the Safety Net Assistance Program was borne equally by the City and the State. In the 2011-2012 State Budget the State implemented new funding formulas, increasing the City share of the Safety Net Assistance Program to 71% and eliminating the City Share of 25% for the Family Assistance Program by fully funding it with TANF block grant funds.

The City also provides funding for many other social services, such as day care, foster care, family planning, services for the elderly and special employment services for welfare recipients, some of which are mandated, and may be wholly or partially subsidized, by either the federal or State government. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—5. FEDERAL AND STATE CATEGORICAL GRANTS."

In July 2002, the Board of Education was replaced by the City's Department of Education (the "DOE") which is overseen by a Chancellor, appointed by the Mayor, and the 13-member Panel for Educational Policy where the Mayor appoints eight members including the Chancellor, and the Borough Presidents each appoint one member. The number of pupils in the school system is estimated to be approximately 1.1 million in each of the 2019 through 2023 fiscal years. Actual enrollment in fiscal years 2014 through 2018 has been 1,062,275, 1,073,445, 1,081,324, 1,086,672 and 1,083,158, respectively. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS—*Department of Education.*" The City's system of higher education, consisting of its Senior Colleges and Community Colleges, is operated under the supervision of the City University of New York ("CUNY"). The City is projected to provide approximately 42.7% of the costs of the Community Colleges in the 2019 fiscal year. The State has full responsibility for the costs of operating the Senior Colleges, although the City is required initially to fund these costs which are then reimbursed by the State.

The City administers health services programs for the care of the physically and mentally ill and the aged. NYCHH maintains and operates the City's 11 municipal acute care hospitals, five long-term care facilities, six free standing diagnostic and treatment centers, a certified home health-care program, many hospital-based and neighborhood clinics and a health maintenance organization. NYCHH is funded primarily by third party reimbursement collections from Medicare and Medicaid and by payments from bad debt/charity care pools, with significant contributions from the City. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS— *New York City Health and Hospitals*."

Medicaid provides basic medical assistance to needy persons. The City is required by State law to furnish medical assistance through Medicaid to all City residents meeting eligibility requirements established by the State. Prior to State legislation in fiscal year 2006 capping City Medicaid payments, the State had assumed 81.2% of the non-federal share of long-term care costs, all of the costs of providing medical assistance to the mentally disabled, and 50% of the non-federal share of Medicaid costs for all other clients. As a result of State legislation in fiscal years 2006 and 2012 capping City Medicaid payments, the State percentage of the non-federal share may vary. The federal government pays 50% of Medicaid costs for federally eligible recipients and a higher share for federally eligible childless adults.

The City's Expense Budget increased during the five-year period ended June 30, 2018, due to, among other factors, the increasing costs of pensions and Medicaid, the costs of labor settlements and the impact of inflation on various other than personal services costs.

Employees and Labor Relations

Employees

The following table presents the number of full-time and full-time equivalent employees of the City, including the mayoral agencies, the DOE and CUNY, at the end of each of the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
Education	134,426	137,078	141,311	144,740	146,134
Police	50,565	50,851	51,929	52,976	53,755
Social Services, Homeless and Children's Services	21,341	21,639	21,805	22,047	22,003
City University Community Colleges and Hunter Campus Schools	8,633	8,749	8,979	9,184	9,414
Environmental Protection and Sanitation	14,890	15,258	15,710	16,000	16,152
Fire	15,565	16,301	16,845	17,463	17,228
All Other	51,929	53,527	56,513	59,997	60,983
Total	297,349	303,403	313,092	322,407	325,669

The following table presents the number of full-time employees of certain Covered Organizations, as reported by such Organizations, at the end of each of the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018
Transit Authority	46,271	46,862	47,354	48,495	49,415
Housing Authority	11,311	11,251	10,796	10,737	10,491
NYCHH	35,554	36,691	37,650	36,213	35,484
Total(1)	93,136	94,804	95,800	95,445	95,390

(1) The definition of "full-time employees" varies among the Covered Organizations and the City.

The foregoing tables include persons whose salaries or wages are paid by certain public employment programs, including programs funded under the Workforce Investment Act, which support employees in non-profit and State agencies as well as in the mayoral agencies and the Covered Organizations.

Labor Relations

Substantially all of the City's employees are members of labor unions. For those employees, wages, hours or working conditions may be changed only as provided for under collective bargaining agreements. Although State law prohibits strikes by municipal employees, strikes and work stoppages by employees of the City and the Covered Organizations have occurred.

Collective bargaining for City employees is under the jurisdiction of either the New York City Office of Collective Bargaining, which was created under the New York City Collective Bargaining Law, or the New York State Public Employment Relations Board ("PERB"), which was created under the State Employees Fair Employment Act. Collective bargaining matters relating to police, firefighters and pedagogical employees are under the jurisdiction of PERB. Under applicable law, the terms of future wage settlements could be determined through an impasse procedure which, except in the case of pedagogical employees, can result in the imposition of a binding decision. Pedagogical employees do not have access to binding arbitration but are covered by a fact-finding impasse procedure under which a binding decision may not be imposed. Although the impasse procedure may not impose a binding settlement, it may influence ongoing collective bargaining.

For information regarding the City's assumptions with respect to the current status of the City's agreements with its labor unions, the cost of future labor settlements and related effects on the Financial Plan, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—1. PERSONAL SERVICES COSTS."

Pensions

The City maintains a number of pension systems providing benefits for its employees and employees of various independent agencies (including certain Covered Organizations). For further information regarding the City's pension systems and the City's obligations thereto, see "SECTION IX: PENSION SYSTEMS AND OPEB."

Capital Expenditures

The City makes substantial capital expenditures to reconstruct, rehabilitate and expand the City's infrastructure and physical assets, including City mass transit facilities, water and sewer facilities, streets, bridges and tunnels, and to make capital investments that will improve productivity in City operations. For additional information regarding the City's infrastructure, physical assets and capital program, see "SECTION VII: FINANCIAL PLAN—Long-Term Capital Program" and "—Financing Program."

The City utilizes a three-tiered capital planning process consisting of the Ten-Year Capital Strategy (previously, the Ten-Year Capital Plan), the four-year capital plan and the current-year Capital Budget. The Ten-Year Capital Strategy, which is published once every two years in conjunction with the Executive Budget as required by the City Charter, is a long-term planning tool designed to reflect fundamental allocation choices and basic policy objectives. The four-year capital plan, which is updated three times a year, as required by the City Charter, translates mid-range policy goals into specific projects. The Capital Budget defines for each fiscal year specific projects and the timing of their initiation, design, construction and completion.

On February 7, 2019, the City published the Preliminary Ten-Year Capital Strategy for fiscal years 2020 through 2029. The Preliminary Ten-Year Capital Strategy totals $104.1 billion, of which approximately 94% would be financed with City funds. See "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness.*"

The Preliminary Ten-Year Capital Strategy includes, among other items: (i) $23.6 billion to construct new schools and improve existing educational facilities, including CUNY; (ii) $19.7 billion for improvements to the water and sewer system; (iii) $13.0 billion for expanding and upgrading the City's housing stock; (iv) $6.1 billion for reconstruction or resurfacing of City streets; (v) $428.6 million for continued City-funded investment in mass transit; (vi) $8.0 billion for the continued reconstruction and rehabilitation of all four East River bridges and 108 other bridge structures; (vii) $1.8 billion to expand current jail capacity; and (viii) $2.0 billion for construction and improvement of court facilities.

Those programs in the Preliminary Ten-Year Capital Strategy financed with City funds are currently expected to be funded primarily from the issuance of bonds by the City, the Water Authority and the TFA. From time to time, during recessionary periods when operating revenues have come under increasing pressure, capital funding levels have been reduced from those previously contemplated in order to reduce debt service costs. For information concerning the City's long-term financing program for capital expenditures, see "SECTION VII: FINANCIAL PLAN—Financing Program."

The City's capital expenditures, including expenditures funded by State and federal grants, totaled $42.3 billion during the 2014 through 2018 fiscal years. City-funded expenditures, which totaled $36.4 billion during the 2014 through 2018 fiscal years, have been financed through the issuance of bonds by the City, the TFA and the Water Authority. The following table summarizes the major categories of capital expenditures in the City's 2014 through 2018 fiscal years.

	2014	2015	2016	2017	2018	Total
			(In Millions)			
Education	$2,107	$2,631	$2,475	$2,706	$2,353	$12,272
Environmental Protection	1,578	1,373	1,378	1,454	1,688	7,471
Transportation	902	758	1,032	1,139	1,461	5,292
Transit Authority(1)	36	115	231	91	55	528
Housing	428	561	753	950	1,412	4,104
Hospitals	197	136	104	130	217	784
Sanitation	264	246	324	324	290	1,448
All Other(2)	2,391	2,016	1,784	2,032	2,164	10,386
Total Expenditures(3)	$7,903	$7,836	$8,080	$8,826	$9,640	$42,285
City-funded Expenditures(4)	$7,468	$5,949	$6,676	$7,444	$8,887	$36,424

(1) Excludes the Transit Authority's non-City portion of the MTA capital program.

(2) All Other includes, among other things, parks, correction facilities, public structures and equipment.

(3) Total Expenditures for the 2014 through 2018 fiscal years include City, State and federal funding and represent amounts which include an accrual for work-in-progress. These figures are derived from the CAFR.

(4) City-funded Expenditures do not include accruals, but represent actual cash disbursements occurring during the fiscal year.

The City annually issues a condition assessment and a proposed maintenance schedule for the major portion of its assets and asset systems which have a replacement cost of $10 million or more and a useful life of at least ten years, as required by the City Charter. For information concerning a report which sets forth the recommended capital investment to bring certain identified assets of the City to a state of good repair, see "SECTION VII: FINANCIAL PLAN—Long-Term Capital Program."

SECTION VI: FINANCIAL OPERATIONS

The City's CAFR for the fiscal year ended June 30, 2018 is included by specific reference in this Reoffering Circular as "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT." The CAFR for the fiscal year ended June 30, 2018 is available for inspection at the Office of the City Comptroller and at https://comptroller.nyc.gov/reports/comprehensive-annual-financial-reports/ and is available on EMMA (as defined herein) (https://emma.msrb.org). For a summary of the City's significant accounting policies, see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A." For a summary of the City's operating results for the previous five fiscal years, see "2014-2018 Summary of Operations" below.

Except as otherwise indicated, all of the financial data relating to the City's operations contained herein, although derived from the City's books and records, are unaudited. In addition, neither the City's independent auditors, nor any other independent accountants, have compiled, examined or performed any procedures with respect to the Financial Plan or other estimates or projections contained elsewhere herein, nor have they expressed any opinion or any other form of assurance on such prospective financial information or its achievability, and assume no responsibility for, and disclaim any association with, all such prospective financial information.

The Financial Plan is prepared in accordance with standards set forth in the Financial Emergency Act and the City Charter. The Financial Plan contains projections and estimates that are based on expectations and assumptions which existed at the time such projections and estimates were prepared. The estimates and projections contained in this Section and elsewhere herein are based on, among other factors, evaluations of historical revenue and expenditure data, analyses of economic trends and current and anticipated federal and State legislation affecting the City's finances. The City's financial projections are based upon numerous assumptions and are subject to certain contingencies and periodic revisions which may involve substantial change. This prospective information is not fact and should not be relied upon as being necessarily indicative of future results. The City makes no representation or warranty that these estimates and projections will be realized. The estimates and projections contained in this Section and elsewhere herein were not prepared with a view towards compliance with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information.

2014-2018 Summary of Operations

The following table sets forth the City's results of operations for its 2014 through 2018 fiscal years in accordance with GAAP.

The information regarding the 2014 through 2018 fiscal years has been derived from the City's audited financial statements and should be read in conjunction with the notes accompanying this table and the City's 2017 and 2018 financial statements included in "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT." The 2014 through 2016 financial statements are not separately presented herein. For further information regarding the City's revenues and expenditures, see "SECTION IV: SOURCES OF CITY REVENUES" and "SECTION V: CITY SERVICES AND EXPENDITURES."

	Fiscal Year(1)				
	Actual				
	2014	2015	2016	2017	2018
	(In Millions)				
Revenues and Transfers					
Real Estate Tax(2)	$20,202	$21,518	$23,181	$24,679	$26,408
Other Taxes(3)(4)	28,173	30,423	30,440	29,983	32,696
Miscellaneous Revenues(3)	5,622	6,216	5,104	5,064	5,019
Other Categorical Grants	1,023	908	861	1,208	1,255
Unrestricted Federal and State Aid	1	1	6	59	—
Federal Categorical Grants	6,962	6,982	7,394	7,927	7,966
State Categorical Grants	10,916	12,097	13,002	13,990	14,453
Disallowances Against Categorical Grants	(18)	(110)	(1)	558	139
Total Revenues and Transfers(5)	$72,881	$78,035	$79,987	$83,468	$87,936
Expenditures and Transfers					
Social Services	$13,473	$13,844	$13,801	$14,485	$15,208
Board of Education	18,672	20,458	21,974	23,318	25,026
City University	853	904	956	1,067	1,087
Public Safety and Judicial	8,472	8,827	9,326	9,694	10,024
Health Services	1,622	1,708	2,667	2,233	2,401
Pensions(6)	8,141	8,490	9,171	9,281	9,513
Debt Service(3)(7)	4,798	7,421	5,874	5,890	6,673
All Other(8)	16,845	16,378	16,213	17,495	17,999
Total Expenditures and Transfers(5)	$72,876	$78,030	$79,982	$83,463	$87,931
Surplus(9)	$ 5	$ 5	$ 5	$ 5	$ 5

(1) The City's results of operations refer to the City's General Fund revenues and transfers reduced by expenditures and transfers. The revenues and assets of PBCs included in the City's audited financial statements do not constitute revenues and assets of the City's General Fund, and, accordingly, the revenues of such PBCs are not included in the City's results of operations. Expenditures required to be made and revenues earned by the City with respect to such PBCs are included in the City's results of operations. For further information regarding the particular PBCs included in the City's financial statements, see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note A."

(2) In fiscal years 2014 through 2018, Real Estate Tax includes $224.6 million, $201 million, $207 million, $204 million and $188.7 million, respectively, which was provided to the City by the State as a reimbursement for the reduced property tax revenues resulting from the State's STAR Program.

(3) Other Taxes includes as revenues to the City the personal income tax revenues retained by the TFA of $1.641 billion, $556 million, $180 million, $297 million and $181 million in fiscal years 2014 through 2018, respectively. Debt Service includes as a debt service expense the funding requirements associated with TFA Future Tax Secured Bonds of $1.641 billion, $556 million, $180 million, $297 million and $181 million in fiscal years 2014 through 2018, respectively. Debt Service does not include debt service on TSASC bonds. Miscellaneous Revenues includes TSRs that are not retained by TSASC for debt service and operating expenses.

(4) Other Taxes includes tax audit revenues. For further information regarding the City's revenues from Other Taxes, see "SECTION IV: SOURCES OF CITY REVENUES—Other Taxes."

(5) Total Revenues and Transfers and Total Expenditures and Transfers exclude Inter-Fund Revenues.

(6) For information regarding pension expenditures, see "SECTION X: OTHER INFORMATION."

(7) Debt Service includes discretionary transfers of $621 million, $1.976 billion, $1.760 billion, $1.560 billion and $1.902 billion into the General Debt Service Fund in fiscal years 2014 through 2018, respectively, and grants from the City to the TFA of $1.362 billion, $1.578 billion, $1.734 billion, $1.909 billion and $2.174 billion in fiscal years 2014 through 2018, respectively, which were used by the TFA to pay debt service in the following fiscal year thereby decreasing the TFA funding requirements.

(8) All Other includes payments into the Retiree Health Benefits Trust Fund of $955 million, $500 million, $100 million and $100 million in fiscal years 2015, 2016, 2017 and 2018, respectively.

(9) Surplus is the surplus after discretionary and other transfers and expenditures. The City had general fund operating revenues exceeding expenditures of $2.011 billion, $3.606 billion, $4.043 billion, $4.185 billion and $4.581 billion before discretionary and other transfers and expenditures for the 2014 through 2018 fiscal years, respectively. Discretionary and other transfers are included in Debt Service and All Other.

Forecast of 2019 Results

The following table compares the forecast for the 2019 fiscal year contained in the financial plan, submitted to the Control Board in June 2018 (the "June 2018 Forecast"), with the forecast contained in the Financial Plan, which was submitted to the Control Board on February 7, 2019 (the "February 2019 Forecast"). Each forecast was prepared on a basis consistent with GAAP except for the application of GASB 49. For information regarding recent developments, see "SECTION I: RECENT FINANCIAL DEVELOPMENTS."

	June 2018 Forecast	February 2019 Forecast	Increase/(Decrease) from June 2018 Forecast
		(In Millions)	
REVENUES			
Taxes			
General Property Tax	$27,789	$27,865	$ 76
Other Taxes	31,231	31,759	528(1)
Tax Audit Revenues	1,056	1,057	1
Subtotal – Taxes	$60,076	$60,681	$ 605
Miscellaneous Revenues	6,792	7,633	841(2)
Unrestricted Intergovernmental Aid	—	151	151
Less: Intra-City Revenue	(1,825)	(2,154)	(329)
Disallowances Against Categorical Grants	(15)	91	106
Subtotal – City Funds	$65,028	$66,402	$1,374
Other Categorical Grants	880	1,198	318(3)
Inter-Fund Revenues	682	690	8
Federal Categorical Grants	7,592	8,471	879(4)
State Categorical Grants	14,976	15,258	282(5)
Total Revenues	$89,158	$92,019	$2,861
EXPENDITURES			
Personal Services			
Salaries and Wages	$28,746	$29,016	$ 270(6)
Pensions	9,852	9,850	(2)
Fringe Benefits	10,737	10,643	(94)
Subtotal – Personal Services	$49,335	$49,509	$ 174
Other Than Personal Services			
Medical Assistance	5,915	5,915	—
Public Assistance	1,605	1,595	(10)
All Other	30,342	31,524	1,182(7)
Subtotal – Other Than Personal Services	$37,862	$39,034	$1,172
Debt Service	6,987	6,737	(250)(8)
FY 2018 Budget Stabilization	(4,576)	(4,576)	—
FY 2019 Budget Stabilization	—	3,169	3,169(9)
Capital Stabilization Reserve	250	—	(250)
General Reserve	1,125	300	(825)
Less: Intra-City Revenue	(1,825)	(2,154)	(329)
Net Total Expenditures	$89,158	$92,019	$2,861

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(1) The increase in Other Taxes is due to increases of $277 million in general corporation tax, $151 million in mortgage recording tax, $77 million in real property transfer tax, $76 million in all other taxes, $67 million in personal income taxes, $47 million in sales tax, $15 million in hotel tax, $9 million in commercial rent tax and $1 million in cigarette tax offset by decreases of $71 million in banking corporation tax, $116 million in unincorporated business tax, $1 million in utility tax and $4 million in STAR Program aid.

(2) The increase in Miscellaneous Revenues is due to increases of $396 million in miscellaneous and other revenues, $37 million in fines and forfeitures, $29 million in permit revenues, $20 million in charges for services, $12 million in water and sewer charges, $10 million in franchises, $5 million in rental charges, $3 million in interest income and $329 million in intra-city revenues.

(3) The increase in Other Categorical Grants is due to increases of $195 million in miscellaneous agency funding, $28 million in health and mental hygiene funding, $26 million in education funding, $20 million in parks department funding, $12 million in housing preservation and development funding, $10 million in information technology and telecommunications department funding and $43 million in other agencies funding offset by a decrease of $16 million in debt service funding.

(4) The increase in Federal Categorical Grants is due to increases of $382 million in community development funding, primarily disaster recovery funding, $162 million in children services funding, $115 million in police funding, $77 million in social services funding, $58 million in fire department funding, $31 million in youth and community development funding, $31 million in health and mental hygiene funding, $23 million in transportation funding, $16 million in housing preservation and development funding, $13 million in emergency management services funding, $11 million in homeless services funding, $11 million in mayoral agency funding, $10 million in small business services funding and $36 million in other agencies funding offset by a decrease of $97 million in education funding.

(5) The increase in State Categorical Grants is due to increases of $54 million in police funding, $49 million in education funding, $43 million in social services funding, $42 million in miscellaneous agency funding, $33 million in health and mental hygiene funding, $23 million in children services funding, $14 million in district attorney funding and $24 million in other agencies funding.

(6) The increase in Salaries and Wages is primarily due to increased costs associated with collective bargaining settlements with City employees.

(7) The increase in Other Than Personal Services – All Other is primarily due to an increase of $1.051 billion in budget modifications reflecting increases in federal and categorical expenditures which are offset by federal and categorical grants and an increase of $131 million in net agency spending.

(8) The decrease in General Obligation, Lease and TFA Debt Service is primarily due to debt refinancing transactions and lower actual interest rates on floating rate obligations.

(9) FY 2019 Budget Stabilization reflects a discretionary transfer of $850 million to the General Debt Service Fund and a grant of $2.319 billion to the TFA in fiscal year 2019 for debt service due in fiscal year 2020.

SECTION VII: FINANCIAL PLAN

The following table sets forth the City's projected operations on a basis consistent with GAAP, except for the application of GASB 49, for the 2019 through 2023 fiscal years as contained in the Financial Plan. This table should be read in conjunction with the accompanying notes, "Actions to Close the Remaining Gaps" and "Assumptions" below. For information regarding recent developments, see "SECTION I: RECENT FINANCIAL DEVELOPMENTS."

	Fiscal Years(1)(2)				
	2019	2020	2021	2022	2023
			(In Millions)		
REVENUES					
Taxes					
General Property Tax(3)	$27,865	$29,529	$30,909	$32,150	$ 33,110
Other Taxes(4)	31,759	32,389	33,138	34,059	35,064
Tax Audit Revenue	1,057	998	721	721	721
Subtotal – Taxes	$60,681	$62,916	$64,768	$66,930	$ 68,895
Miscellaneous Revenues(5)	7,633	6,799	6,772	6,747	6,735
Unrestricted Intergovernmental Aid	151	—	—	—	—
Less: Intra-City Revenue	(2,154)	(1,794)	(1,796)	(1,794)	(1,792)
Disallowances Against Categorical Grants	91	(15)	(15)	(15)	(15)
Subtotal – City Funds	$66,402	$67,906	$69,729	$71,868	$ 73,823
Other Categorical Grants	1,198	926	868	862	862
Inter-Fund Revenues(6)	690	661	662	661	661
Federal Categorical Grants	8,471	7,327	7,205	7,133	7,120
State Categorical Grants	15,258	15,390	15,837	16,305	16,353
Total Revenues	$92,019	$92,210	$94,301	$96,829	$ 98,819
EXPENDITURES					
Personal Service					
Salaries and Wages	$29,016	$30,240	$31,258	$31,115	$ 31,642
Pensions	9,850	9,951	10,418	10,864	11,070
Fringe Benefits	10,643	11,536	12,028	12,705	13,385
Subtotal – Personal Service	$49,509	$51,727	$53,704	$54,684	$ 56,097
Other Than Personal Service					
Medical Assistance	5,915	5,915	5,915	5,915	5,915
Public Assistance	1,595	1,617	1,617	1,617	1,617
All Other(7)	31,524	29,319	29,469	29,759	29,942
Subtotal – Other Than Personal Service	$39,034	$36,851	$37,001	$37,291	$ 37,474
Debt Service(8)	6,737	7,345	7,658	8,337	9,086
FY 2018 Budget Stabilization & Discretionary Transfers(9)	(4,576)	—	—	—	—
FY 2019 Budget Stabilization(10)	3,169	(3,169)	—	—	—
Capital Stabilization Reserve(11)	—	250	250	250	250
General Reserve	300	1,000	1,000	1,000	1,000
Less: Intra-City Expenses	(2,154)	(1,794)	(1,796)	(1,794)	(1,792)
Total Expenditures	$92,019	$92,210	$97,817	$99,768	$102,115
Gap to be Closed	$ —	$ -—	$ (3,516)	$ (2,939)	$ (3,296)

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(1) The four year financial plan for the 2019 through 2022 fiscal years, as submitted to the Control Board on June 14, 2018, contained the following projections for the 2019-2022 fiscal years: (i) for 2019, total revenues of $89.158 billion and total expenditures of $89.158 billion; (ii) for 2020, total revenues of $91.238 billion and total expenditures of $94.498 billion; (iii) for 2021, total revenues of $94.048 billion and total expenditures of $96.973 billion; and (iv) for 2022, total revenues of $96.257 billion and total expenditures of $98.542 billion.

The four year financial plan for the 2018 through 2021 fiscal years, as submitted to the Control Board on June 7, 2017, contained the following projections for the 2018-2021 fiscal years: (i) for 2018, total revenues of $85.239 billion and total expenditures of $85.239 billion; (ii) for 2019, total revenues of $87.820 billion and total expenditures of $91.293 billion, with a gap to be closed of $3.473 billion; (iii) for 2020, total revenues of $90.941 billion and total expenditures of $93.748 billion, with a gap to be closed of $2.807 billion; and (iv) for 2021, total revenues of $93.614 billion and total expenditures of $95.944 billion, with a gap to be closed of $2.330 billion.

The four year financial plan for the 2017 through 2020 fiscal years, as submitted to the Control Board on June 14, 2016, contained the following projections for the 2017-2020 fiscal years: (i) for 2017, total revenues of $82.116 billion and total expenditures of $82.116 billion; (ii) for 2018, total revenues of $84.456 billion and total expenditures of $87.272 billion, with a gap to be closed of $2.816 billion; (iii) for 2019, total revenues of $87.479 billion and total expenditures of $90.454 billion, with a gap to be closed of $2.945 billion; and (iv) for 2020, total revenues of $90.363 billion and total expenditures of $92.689 billion, with a gap to be closed of $2.326 billion.

The four year financial plan for the 2016 through 2019 fiscal years, as submitted to the Control Board on June 26, 2015, contained the following projections for the 2016-2019 fiscal years: (i) for 2016, total revenues of $78.528 billion and total expenditures of $78.528 billion; (ii) for 2017, total revenues of $80.729 billion and total expenditures of $82.194 billion, with a gap to be closed of $1.465 billion; (iii) for 2018, total revenues of $82.699 billion and total expenditures of $84.606 billion, with a gap to be closed of $1.907 billion; and (iv) for 2019, total revenues of $85.015 billion and total expenditures of $87.868 billion, with a gap to be closed of $2.853 billion.

(2) The Financial Plan combines the operating revenues and expenditures of the City, the DOE and CUNY. The Financial Plan does not include the total operations of NYCHH, but does include the City's subsidy to NYCHH and the City's share of NYCHH revenues and expenditures related to NYCHH's role as a Medicaid provider. Certain Covered Organizations and PBCs which provide governmental services to the City, such as the Transit Authority, are separately constituted and their revenues, are not included in the Financial Plan; however, City subsidies and certain other payments to these organizations are included. Revenues and expenditures are presented net of intra-City items, which are revenues and expenditures arising from transactions between City agencies.

(3) For a description of the STAR Program, and other real estate tax assumptions, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Revenue Assumptions*—2. REAL ESTATE TAX."

(4) Personal income taxes flow directly from the State to the TFA, and from the TFA to the City only to the extent not required by the TFA for debt service, reserves, operating expenses and contractual and other obligations incurred pursuant to the TFA indenture. Sales taxes will flow directly from the State to the TFA to the extent necessary to provide statutory coverage. Other Taxes includes amounts that are expected to be retained by the TFA for its funding requirements associated with TFA Future Tax Secured Bonds.

(5) Miscellaneous Revenues reflects the receipt by the City of TSRs not used by TSASC for debt service and other expenses. For information on TSASC, see "SECTION IV: SOURCES OF CITY REVENUES—Miscellaneous Revenues."

(6) Inter-Fund Revenues represents General Fund expenditures, properly includable in the Capital Budget, made on behalf of the Capital Projects Fund pursuant to inter-fund agreements.

(7) For a discussion of the categories of expenditures in Other Than Personal Services—All Other, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS."

(8) For a discussion of the debt service in General Obligation, Lease and TFA Debt Service, see "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—3. GENERAL OBLIGATION, LEASE AND TFA DEBT SERVICE."

(9) FY 2018 Budget Stabilization reflects the discretionary transfer of $1.902 billion into the General Debt Service Fund, $300 million into the Retiree Health Benefits Trust, payment of $200 million of subsidies to NYCHH in fiscal year 2018 otherwise due in fiscal year 2019 and a grant of $2.174 billion to the TFA in fiscal year 2018 for debt service due in fiscal year 2019.

(10) FY 2019 Budget Stabilization reflects a discretionary transfer of $850 million to the General Debt Service Fund and a grant of $2.319 billion to the TFA in fiscal year 2019 for debt service due in fiscal year 2020.

(11) The Capital Stabilization Reserve reflects a capital reserve which will be available to make capital projects more efficient or for debt retirement in an economic downturn.

Implementation of various measures in the Financial Plan may be uncertain. If these measures cannot be implemented, the City will be required to take actions to decrease expenditures or increase revenues to maintain a balanced financial plan. See "Assumptions" and "Certain Reports" below.

Actions to Close the Remaining Gaps

Although the City has maintained balanced budgets in each of its last 38 fiscal years, except for the application of GASB 49 with respect to fiscal years 2010 through 2018, and is projected to achieve balanced operating results for the 2019 fiscal year, except for the application of GASB 49, there can be no assurance that the Financial Plan or future actions to close projected outyear gaps can be successfully implemented or that the City will maintain a balanced budget in future years without additional State aid, revenue increases or expenditure reductions. Additional tax increases and reductions in essential City services could adversely affect the City's economic base.

Assumptions

The Financial Plan is based on numerous assumptions, including the condition of the City's and the region's economies and the concomitant receipt of economically sensitive tax revenues in the amounts projected. The Financial Plan is subject to various other uncertainties and contingencies relating to, among other factors, the extent, if any, to which wage increases for City employees exceed the annual wage costs assumed; realization of projected earnings for pension fund assets and current assumptions with respect to wages for City employees affecting the City's required pension fund contributions; the willingness and ability of the State to provide the aid contemplated by the Financial Plan and to take various other actions to assist the City; the ability of NYCHH and other such entities to maintain balanced budgets; the willingness of the federal government to provide the amount of federal aid contemplated in the Financial Plan; the impact on City revenues and expenditures of federal and State legislation affecting Medicare or other entitlement programs; adoption of the City's budgets by the City Council in substantially the forms submitted by the Mayor; the ability of the City to implement cost reduction initiatives, and the success with which the City controls expenditures; the impact of conditions in the real estate market on real estate tax revenues; and the ability of the City and other financing entities to market their securities successfully in the public credit markets. See "SECTION I: RECENT FINANCIAL DEVELOPMENTS." Certain of these assumptions are reviewed in reports issued by the City Comptroller and other public officials. See "SECTION VII: FINANCIAL PLAN—Certain Reports."

The projections and assumptions contained in the Financial Plan are subject to revision, which may be substantial. No assurance can be given that these estimates and projections, which include actions the City expects will be taken but are not within the City's control, will be realized. For information regarding certain recent developments, see "SECTION I: RECENT FINANCIAL DEVELOPMENTS."

Revenue Assumptions

1. GENERAL ECONOMIC CONDITIONS

The Financial Plan assumes softer growth in economic activity in calendar year 2019 compared to calendar year 2018. The following table presents a forecast of the key economic indicators for the calendar years 2018 through 2023. This forecast is based upon information available in January 2019.

FORECAST OF KEY ECONOMIC INDICATORS

	Calendar Years					
	2018	2019	2020	2021	2022	2023
U.S. ECONOMY						
Economic Activity and Income						
Real GDP (billions of 2012 dollars)	18,574	19,035	19,410	19,699	19,989	20,273
Percent Change	2.9	2.5	2.0	1.5	1.5	1.4
Non-Agricultural Employment (millions)	149.0	151.0	152.5	153.3	153.9	154.4
Percent Change	1.6	1.4	1.0	0.5	0.4	0.3
CPI-All Urban (1982-84=100)	251	256	263	269	275	281
Percent Change	2.4	2.0	2.5	2.5	2.3	2.2
Wage Rate ($ per year)	59,235	60,893	63,083	65,518	68,134	70,858
Percent Change	2.7	2.8	3.6	3.9	4.0	4.0
Personal Income ($ billions)	17,565	18,341	19,175	19,988	20,828	21,675
Percent Change	4.4	4.4	4.5	4.2	4.2	4.1
Pre-Tax Corp Profits ($ billions)	2,187	2,303	2,385	2,458	2,528	2,659
Percent Change	0.3	5.3	3.6	3.1	2.8	5.2
Unemployment Rate (Percent)	3.9	3.6	3.7	3.9	4.1	4.3
10-year Treasury Bond Rate	2.9	3.0	3.3	3.4	3.4	3.4
Federal Funds Rate	1.8	2.6	3.0	3.1	3.1	3.0
NEW YORK CITY ECONOMY						
Real Gross City Product (billions of 2012 dollars)	856	873	884	891	899	901
Percent Change	3.9	1.9	1.2	0.9	0.8	0.3
Non-Agricultural Employment (thousands)	4,496	4,551	4,594	4,642	4,691	4,738
Percent Change	1.5	1.2	1.0	1.0	1.0	1.0
CPI-All Urban NY-NJ Area (1982-84=100)	274	279	286	293	300	307
Percent Change	1.9	1.9	2.5	2.5	2.4	2.3
Wage Rate ($ per year)	92,371	94,856	96,940	99,595	102,379	104,760
Percent Change	2.8	2.7	2.2	2.7	2.8	2.3
Personal Income	638	659	680	702	724	746
Percent Change	4.4	3.3	3.2	3.2	3.2	3.0
NEW YORK CITY REAL ESTATE MARKET						
Manhattan Primary Office Market						
Asking Rental Rate ($ per square feet)	77.28	82.09	84.47	87.66	91.87	93.43
Percent Change	-2.24	6.24	2.89	3.78	4.80	1.70
Vacancy Rate – Percent	8.5	10.3	10.6	9.8	11.8	12.2

Source: OMB

2. REAL ESTATE TAX

Projections of real estate tax revenues are based on a number of assumptions, including, among others, assumptions relating to the tax rate, the assessed valuation of the City's taxable real estate, the delinquency rate, debt service needs, a reserve for uncollectible taxes and the operating limit. See "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax."

Projections of real estate tax revenues include net revenues from the sale of real property tax liens of $50 million in fiscal year 2019 and $80 million in each of fiscal years 2020 through 2023. Projections of real estate tax revenues include the effects of the STAR Program which will reduce the real estate tax revenues by an estimated $181 million in fiscal year 2018. Projections of real estate tax revenues reflect the estimated cost of extending the current tax reduction for owners of cooperative and condominium apartments amounting to $581 million, $577 million, $606 million, $631 million and $657 million in fiscal years 2019 through 2023, respectively.

The delinquency rate was 1.4% in fiscal year 2014, 1.6% in fiscal year 2015, 1.4% in fiscal year 2016, 1.3% in fiscal year 2017 and 1.2% in fiscal year 2018. The Financial Plan projects delinquency rates of 1.3% in fiscal year 2019 and 1.8% in each of fiscal years 2020 through 2023. For information concerning the delinquency rates for prior years, see "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax—*Collection of the Real Estate Tax.*" For a description of proceedings seeking real estate tax refunds from the City, see "SECTION X: OTHER INFORMATION—Litigation—*Taxes.*"

On April 24, 2017, a lawsuit was filed challenging the City's real property tax system and valuation methodology. See "SECTION X: OTHER INFORMATION—Litigation—*Taxes*."

3. OTHER TAXES

The following table sets forth amounts of revenues (net of refunds) from taxes other than the real estate tax projected to be received by the City in the Financial Plan. The amounts set forth below exclude the Criminal Justice Fund and audit revenues.

	2019	2020	2021	2022	2023
			(In Millions)		
Personal Income(1)	$12,445	$12,993	$13,309	$13,734	$14,209
General Corporation	3,870	3,651	3,660	3,712	3,774
Banking Corporation	(71)	—	—	—	—
Unincorporated Business Income	2,155	2,330	2,427	2,458	2,525
Sales(2)	7,809	8,169	8,439	8,740	9,022
Commercial Rent	876	855	878	912	947
Real Property Transfer	1,528	1,441	1,460	1,496	1,541
Mortgage Recording	1,097	933	944	964	989
Utility	386	396	410	421	430
Cigarette	36	34	33	32	31
Hotel Tax(3)	621	638	629	643	651
All Other(4)	1,007	951	949	947	945
Total	$31,759	$32,389	$33,138	$34,059	$35,064

Note: Totals may not add due to rounding.

(1) Personal Income includes $599 million, $696 million, $3.203 billion, $3.549 billion and $3.915 billion of personal income tax revenues projected to be retained by the TFA for debt service and other expenses in the 2019 through 2023 fiscal years, respectively.

(2) Sales tax is net of the payment to the State pursuant to the State Enacted Budget of $150 million in fiscal year 2019 that would otherwise be payable to the City, in order to provide the State with the benefit of savings from the refinancing of debt by STAR Corp.

(3) Hotel includes the impact of an additional temporary hotel occupancy tax of 0.875 percent resulting in additional revenues of $90 million, $90 million, $92 million, $94 million and $94 million in fiscal years 2019 through 2023, respectively.

(4) All Other includes, among others, beer and liquor taxes and the automobile use tax. All Other also includes $185 million, $182 million, $180 million, $178 million and $176 million in fiscal years 2019 through 2023, respectively, to be provided to the City by the State as reimbursement for the reduced property tax resulting from the STAR Program.

The Financial Plan reflects the following assumptions regarding projected baseline revenues from Other Taxes: (i) with respect to the personal income tax, revenue declines in fiscal year 2019 reflecting a return to more typical levels after the high growth in fiscal year 2018 and reflecting the impact of changes in State law, stronger than expected bonus growth and continued employment and wage gains, and growth in fiscal years 2020 through 2023 reflecting steady economic growth; (ii) with respect to the business corporation tax, strong growth in fiscal year 2019 supported by healthy levels of corporate profits in part the result of additional corporate investments propagated from the Federal business tax cuts, a decline in growth in fiscal year 2020 reflecting a decline in Wall Street profitability and a slowing economy, weak growth for fiscal years 2021 through 2023 reflecting a slowdown in corporate profits; (iii) with respect to the unincorporated business income tax, growth declines in fiscal year 2019 following the strong growth seen the prior year (the result of the repatriation of non-qualified deferred compensation and taxpayer behavior in response to the TCJA), growth rebounds for fiscal year 2020 following the prior year's growth decline; and mild growth in fiscal years 2021 through fiscal year 2023 reflecting steady economic growth; (iv) with respect to the sales tax, moderate growth in fiscal year 2019 reflecting employment gains, wage growth and tourist consumption reduced by the payment to the State of $150 million in sales tax otherwise payable to the City in order to provide the State with the benefit of savings from the refinancing of debt by STAR Corp., moderate growth continues in fiscal year 2020 reflecting employment gains and wage growth, continued healthy levels of tourist consumption, as well as the lack of payment of sales tax to the State relating to STAR Corp. (payments to the State will conclude in fiscal year 2019); and modest growth in fiscal years 2021 through 2023 reflecting steady economic growth; (v) with respect to real property transfer tax, growth in 2019 reflecting strength in large commercial transactions, decline in 2020 as the volume of large commercial transactions drops from the high levels seen in the prior years; growth in fiscal years 2021 through 2023 reflecting steady economic growth; (vi) with respect to mortgage recording tax, growth in 2019 mirroring strength in large commercial transaction activity, decline in 2020 as the volume of large commercial transactions drops; growth in fiscal years 2021 through 2023 reflecting steady economic growth; and (vii) with respect to the commercial rent tax, growth in 2019 reflecting employment gains, decline in 2020 reflecting a recently enacted tax program that increased the base rent subject to tax providing relief for tax payers; growth in fiscal years 2021 through 2023, as the local office market improves with employment gains.

4. Miscellaneous Revenues

The following table sets forth amounts of miscellaneous revenues projected to be received by the City in the Financial Plan.

	2019	2020	2021	2022	2023
			(In Millions)		
Licenses, Permits and Franchises	$ 728	$ 755	$ 739	$ 747	$ 751
Interest Income	193	230	256	259	250
Charges for Services	1,025	1,009	1,008	1,008	1,007
Water and Sewer Payments (1)	1,464	1,456	1,446	1,426	1,426
Rental Income	259	254	250	250	250
Fines and Forfeitures	980	956	933	920	916
Other	830	345	344	343	343
Intra-City Revenues	2,154	1,794	1,796	1,794	1,792
	$7,633	$6,799	$6,772	$6,747	$6,735

(1) Received from the Water Board. The City is no longer requesting the rental payment due to the City from the Water Board in the years of the Financial Plan. For further information regarding the Water Board, see "SECTION VII: FINANCIAL PLAN—Financing Program."

Rental Income reflects approximately $153.6 million in each of fiscal years 2019 through 2023 for lease payments for the City's airports.

Other reflects $112.0 million, $128.3 million, $127.8 million, $127.5 million and $127.4 million of projected resources in fiscal years 2019 through 2023, respectively, from the receipt by the City of TSRs. For more information, see "SECTION IV: SOURCES OF CITY REVENUES—Miscellaneous Revenues." Economic and legal uncertainties relating to the tobacco industry and the settlement may significantly affect the receipt of TSRs by TSASC and the City.

5. Federal and State Categorical Grants

The following table sets forth amounts of federal and State categorical grants projected to be received by the City in the Financial Plan.

	2019	2020	2021	2022	2023
			(In Millions)		
Federal					
Community Development	$ 973	$ 396	$ 298	$ 280	$ 274
Social Services	3,855	3,491	3,498	3,498	3,498
Education	1,848	2,080	2,082	2,044	2,044
Other	1,795	1,360	1,327	1,311	1,304
Total	$ 8,471	$ 7,327	$ 7,205	$ 7,133	$ 7,120
State					
Social Services	$ 1,844	$ 1,811	$ 1,820	$ 1,812	$ 1,812
Education	11,157	11,460	11,891	12,330	12,324
Higher Education	297	297	297	297	297
Health and Mental Hygiene	583	558	542	542	542
Other	1,377	1,264	1,287	1,324	1,378
Total	$15,258	$15,390	$15,837	$16,305	$16,353

The Financial Plan assumes that all existing federal and State categorical grant programs will continue, unless specific legislation provides for their termination or adjustment, and assumes increases in aid where increased costs are projected for existing grant programs. For information concerning federal and State aid and the possible impacts on the Financial Plan, see "Introductory Statement" and "Section I: Recent Financial Developments."

As of December 31, 2018, approximately 15.3% of the City's full-time and full-time equivalent employees (consisting of employees of the mayoral agencies and the DOE) were paid by Community Development funds, water and sewer funds and from other sources not funded by unrestricted revenues of the City.

A major component of federal categorical aid to the City is the Community Development program. Pursuant to federal legislation, Community Development grants are provided to cities primarily to aid low and moderate income persons by improving housing facilities, parks and other improvements, by providing certain social programs and by promoting economic development. These grants are based on a formula that takes into consideration such factors as population, age of housing and poverty.

The City's receipt of categorical aid is contingent upon the satisfaction of certain statutory conditions and is subject to subsequent audits, possible disallowances and possible prior claims by the State or federal governments. The general practice of the State and federal governments has been to deduct the amount of any disallowances against the current year's payment, although in some cases the City remits payment for disallowed amounts to the grantor. Substantial disallowances of aid claims may be asserted during the course of the Financial Plan. The City estimates probable amounts of disallowances of recognized grant revenues and makes the appropriate adjustments to recognized grant revenue for each fiscal year. The amounts of such downward adjustments to revenue for disallowances attributable to prior years increased from $124 million in the 1977 fiscal year to $542 million in the 2006 fiscal year. The amounts of such disallowances were $103 million and $114 million in fiscal years 2007 and 2008, respectively. There were no adjustments for estimated disallowances in fiscal years 2009 and 2010. In fiscal year 2011 the downward adjustment for disallowances was $113 million and in fiscal year 2012 an upward adjustment of $166 million was made, reflecting a reduced estimate of disallowances attributable to prior years as of June 30, 2012. In fiscal years 2013, 2014, 2015, 2016, 2017 and 2018 downward adjustments of $59 million, $18 million, $110 million, $1 million, $558 million and $139 million, respectively, were made. As of June 30, 2018, the City had an accumulated reserve of $413 million for all disallowances of categorical aid.

Expenditure Assumptions

1. Personal Services Costs

The following table sets forth projected expenditures for personal services costs contained in the Financial Plan.

	2019	2020	2021	2022	2023
			(In Millions)		
Wages and Salaries	$28,338	$28,361	$28,934	$29,388	$29,456
Pensions	9,850	9,951	10,418	10,864	11,070
Other Fringe Benefits	10,643	11,536	12,028	12,705	13,385
Reserve for Collective Bargaining	678	1,879	2,324	1,727	2,186
Total	$49,509	$51,727	$53,704	$54,684	$56,097

The Financial Plan projects that the authorized number of City-funded full-time and full-time equivalent employees will increase from an estimated level of 280,333 as of June 30, 2019 to an estimated level of 281,120 by June 30, 2023.

Other Fringe Benefits includes $2.486 billion, $2.626 billion, $2.718 billion, $2.856 billion and $3.010 billion in fiscal years 2019 through 2023, respectively, for post-employment benefits other than pensions (“OPEB”) expenditures for current retirees, which costs are currently paid by the City on a pay-as-you-go basis. For information on deposits to the Retiree Health Benefits Trust to fund a portion of the future cost of OPEB for current and future retirees, see “Section VI: Financial Operations—2014-2018 Summary of Operations.”

The Financial Plan reflects contract settlements with DC 37 and the UFT and others (which, together, represent approximately 62% of the City’s workforce) and the application of the pattern increases established in those settlements to the entire workforce over a 43-month contract period. The pattern framework provides for a 2% wage increase on the first month of the contract, a 2.25% wage increase on the 13th month, and a 3% wage increase on the 26th month. The pattern also provides funding equivalent to 0.25% of wages to be used to fund benefit items. The DC 37 Settlement covers the period from September 26, 2017 through May 25, 2021. The UFT Settlement covers the period from February 14, 2019 through September 13, 2022. Such settlements also include health insurance savings as part of a new Municipal Labor Committee (“MLC”) agreement (the “MLC Agreement”), in addition to those previously agreed upon. Negotiations with unsettled unions are ongoing. The PBA has filed for arbitration with the City over new contract terms.

The amounts in the Financial Plan reflect the offsets from health insurance savings of $200 million in fiscal year 2019, $300 million in fiscal year 2020, and $600 million in fiscal year 2021 and thereafter. These savings are pursuant to the MLC Agreement. The City has the right to enforce the agreement through a binding arbitration process. If total health insurance savings in fiscal year 2021 are greater than $600 million, the first $68 million of such additional savings will be used by the City to make a $100 per member per year increase to welfare funds effective July 1, 2021. If a savings amount over $600 million but less than $668 million is achieved, the $100 per member per year increase will be prorated. Any savings thereafter are to be divided equally between the City and the unions. These savings are in addition to the $3.4 billion of health insurance savings the City achieved in fiscal years 2015 through 2018, $1.3 billion of which are recurring, which were negotiated pursuant to a previous MLC agreement.

For a discussion of the City’s pension systems, see “Section IX: Pension Systems and OPEB” and “Appendix B—Comprehensive Annual Financial Report—Notes to Financial Statements—Note E.5.”

2. Other Than Personal Services Costs

The following table sets forth projected other than personal services ("OTPS") expenditures contained in the Financial Plan.

	2019	2020	2021	2022	2023
			(In Millions)		
Administrative OTPS and Energy	$25,799	$23,945	$23,993	$24,168	$24,277
Public Assistance	1,595	1,617	1,617	1,617	1,617
Medical Assistance	5,915	5,915	5,915	5,915	5,915
NYCHH Support	935	998	1,035	1,083	1,084
Other	4,790	4,376	4,441	4,508	4,581
Total	$39,034	$36,851	$37,001	$37,291	$37,474

Administrative OTPS and Energy

The Financial Plan contains estimates of the City's administrative OTPS expenditures for general supplies and materials, equipment and selected contractual services, and the impact of agency gap-closing actions relating to such expenditures in the 2019 fiscal year. Thereafter, to account for inflation, administrative OTPS expenditures are projected to rise by 2.5% annually in fiscal years 2020 through 2023. Energy costs for each of the 2019 through 2023 fiscal years are assumed to vary annually, with total energy expenditures projected at $906 million in fiscal year 2019 and increasing to $995 million by fiscal year 2023.

Public Assistance

Of total cash assistance expenditures in the City, the City-funded portion is projected to be $640 million in fiscal year 2019 and $719 million in each of fiscal years 2020 through 2023.

Medical Assistance

Medical assistance payments projected in the Financial Plan consist of payments to voluntary hospitals, skilled nursing facilities, intermediate care facilities, home care providers, pharmacies, managed care organizations, physicians and other medical practitioners. The City-funded portion of medical assistance payments is estimated at $5.8 billion for the 2019 fiscal year.

The City-funded portion of medical assistance payments is expected to be $5.8 billion in each of fiscal years 2020 through 2023. Such payments include the City's capped share of local Medicaid expenditures as well as Supplemental Medicaid payments to NYCHH.

New York City Health and Hospitals

NYCHH, which provides essential services to over 1.1 million New Yorkers annually, faces near- and long-term financial challenges resulting from, among other things, changes in hospital reimbursement under the Affordable Care Act and the statewide transition to managed care. On April 26, 2016, the City released "One New York: Health Care for Our Neighborhoods," a report outlining the City's plan to address NYCHH's financial shortfall.

In February 2019, NYCHH released a cash-based financial plan, which projected City-funded expenditures of $784 million, $998 million, $1.0 billion, $1.1 billion, and $1.1 billion in fiscal years 2019 through 2023, respectively, in addition to the forgiveness of debt service and the City's contribution to supplemental Medicaid payments which is consistent with the City's Financial Plan. NYCHH's financial plan projected total receipts of $8.5 billion, $7.9 billion, $7.8 billion, $7.8 billion, and $7.8 billion, and total disbursements of $8.4 billion, $7.8 billion, $7.9 billion, $8.1 billion, and $8.2 billion in fiscal years 2019 through 2023, respectively.

NYCHH relies on significant projected revenue from Medicaid, Medicare and other third-party payor programs. Future changes to such programs could have adverse impacts on NYCHH's financial condition.

Other

The projections set forth in the Financial Plan for OTPS-Other include the City's contributions to NYCT, NYCHA and CUNY and subsidies to libraries and various cultural institutions. They also include projections for the cost of future judgments and claims which are discussed below under "Judgments and Claims." In the past, the City has provided additional assistance to certain Covered Organizations which had exhausted their financial resources prior to the end of the fiscal year. No assurance can be given that similar additional assistance will not be required in the future.

New York City Transit

NYCT operates under its own section of the Financial Plan as a Covered Organization. The financial plan for NYCT covering its 2018 through 2022 fiscal years was prepared in November 2018. The NYCT fiscal year coincides with the calendar year. The NYCT financial plan reflects City assistance to the NYCT operating budget of $627.4 million in 2018, decreasing to $410.9 million in 2022; 2018 assistance includes $254.0 million in City funding for the Subway Action Plan, the MTA's emergency plan to address subway delays, which is expected to be funded through a separate revenue stream starting in 2019. In addition, the NYCT financial plan projects real estate transfer tax revenue dedicated for NYCT use of $681.3 million in 2018, decreasing to $656.9 million in 2022.

The NYCT financial plan includes reforecasts of baseline revenue reflecting current declining ridership trends and baseline cost increases. Further, the NYCT financial plan contains increased costs for subway car upkeep and maintenance. Based on OMB review and analysis, the NYCT accrual-based financial plan reflects $10.9 billion in revenues and $14.1 billion in expenses for 2018, leaving a budget gap of $3.3 billion. After accounting for accrual adjustments and cash carried over from 2017, accrual-based operating budget gaps of $150.5 million in 2018, $558.0 million in 2019, $1.4 billion in 2020, $2.6 billion in 2021, and $3.9 billion in 2022 are projected. On February 25, 2019, an updated financial plan for NYCT, covering fiscal years 2018 through 2022, was released, which is currently being reviewed by OMB.

In 2009, a Payroll Mobility Tax ("PMT") was enacted into State law to provide $0.34 for every $100 of payroll in the MTA's twelve-county service area. The PMT is currently expected to raise revenues for the MTA in the amount of $812.1 million in 2018, increasing to $895.4 million in 2022.

In September 2014, the MTA proposed the 2015-2019 Capital Program. The proposed plan included $32.0 billion for all MTA agencies, including $17.1 billion to be invested in the NYCT core system, and $1.5 billion for NYCT network expansion. On October 2, 2014, the Capital Program Review Board ("CPRB") vetoed the proposed program without prejudice to permit additional time to resolve issues related to fully funding the program. On October 28, 2015, the MTA Board voted on and approved a revised 2015-2019 Capital Program. The revised plan included $29.0 billion for all MTA agencies, including $15.8 billion to be invested in the NYCT core system and $535.0 million for NYCT network expansion. On April 20, 2016, the MTA Board voted on and approved another revised 2015-2019 Capital Program, which included $29.5 billion for all MTA agencies, including $15.8 billion to be invested in the NYCT core system and $1.0 billion for NYCT network expansion. The additional City capital funding will be provided concurrently with the additional State capital funding. On May 24, 2017, the MTA Board voted on and approved a revised 2015-2019 Capital Program. The revised plan includes $32.5 billion for all MTA agencies, including $16.3 billion to be invested in the NYCT core system and $1.7 billion for NYCT network expansion. This amendment was approved by the CPRB in July 2017. On December 13, 2017 the MTA Board voted on and approved a further revised 2015-2019 Capital Program. The revised plan includes $32.8 billion for all MTA agencies, including $16.7 billion to be invested in the NYCT core system and $1.7 billion for NYCT network expansion. This amendment was not subject to CPRB approval. The 2015-2019 Capital Program expects $8.5 billion from the State. On April 25, 2018 the MTA Board voted on and approved a further revised 2015-2019 Capital Program. The revised plan includes $33.3 billion for all MTA agencies, including $16.7 billion to be invested in the NYCT core system and $1.7 billion for NYCT network expansion. This amendment was approved by the CPRB in May 2018. On November 15, 2018, the MTA released its 2019 Financial Plan, which is subject to MTA Board approval in December 2018.

The State has agreed to contribute $8.6 billion towards the 2015-2019 Capital Program, which has not yet been fully reflected in the State's capital plan. The City has agreed to contribute $2.7 billion (which has not yet been fully reflected in the City's capital plan), including $164.0 million for the Subway Action Plan. The additional City capital funding will be provided concurrently with the additional State capital funding.

On June 29, 2017 Governor Cuomo announced the State would be increasing its contribution to the 2015-2019 Capital Program by $1.0 billion and signed an Executive Order declaring a State-wide disaster emergency related to the MTA. The Order temporarily suspends provisions of Public Authority, State Finance, and Environmental Conservation Laws if compliance "would prevent, hinder or delay action necessary to cope with the disaster." The Governor has not provided additional details or identified additional funding for the $1.0 billion.

Various actions have been taken to increase funding to the MTA for NYCT. The State budget for State fiscal year 2019, adopted on March 30, 2018, includes a requirement for the City to provide payments totaling an additional $418.0 million to the MTA through calendar year 2018 to fund the Subway Action Plan described above, which is reflected in the Financial Plan, including $164.0 million in capital funding, as discussed above, and $254.0 million in expense funding. The State budget for State fiscal year 2019 also imposes an additional surcharge, which was slated to start January 1, 2019, on for-hire vehicles and taxis traveling below 96th Street in Manhattan, to be used to fund the Subway Action Plan and other MTA projects. In December 2018, a lawsuit was filed in New York State Supreme Court seeking to block implementation of the surcharge and a temporary restraining order was issued blocking the surcharge. In January 2019, the court lifted the temporary restraining order and allowed collection of the surcharge to begin on February 4, 2019, pending the outcome of the litigation.

The State 2020 Budget includes enactment of congestion tolling for vehicles entering a designated congestion zone in Manhattan below 60th Street, with a start date no earlier than December 31, 2020, the revenues from which will be directed to the MTA for transit improvements. Details of the plan, including pricing and the start date, have yet to be determined. In addition, the State 2020 Budget includes legislation authorizing the imposition of sales tax on certain additional internet sales and providing that sales tax revenues in the amount of $127.5 million in State fiscal year 2020 (reflecting the portion of the year in which it is effective) and $170 million in State fiscal year 2021 and thereafter increasing by one percent per year, will be directed to the MTA for transit improvements. Revenues from such additional sales tax are currently estimated to be approximately $170 million per year and are in addition to existing sales taxes attributable to certain other internet transactions. The State 2020 Budget also includes legislation increasing real estate transfer taxes on properties valued at more than $2 million, which will also be directed to the MTA for transit improvements.

Department of Education

State law requires the City to provide City funds for the DOE each year in an amount not less than the amount appropriated for the preceding fiscal year, excluding amounts for debt service and pensions for the DOE. Such City funding must be maintained, unless total City funds for the fiscal year are estimated to be lower than in the preceding fiscal year, in which case the mandated City funding for the DOE may be reduced by an amount up to the percentage reduction in total City funds.

Judgments and Claims

In the fiscal year ended on June 30, 2018, the City expended $730.4 million for judgments and claims. The Financial Plan includes provisions for judgments and claims of $697.0 million, $711.9 million, $727.1 million, $742.3 million and $758.2 million for the 2019 through 2023 fiscal years, respectively. These projections incorporate a substantial amount of claims costs attributed to NYCHH, estimated to be $140 million in each year of the Financial Plan, for which NYCHH reimburses the City unless otherwise forgiven by the City, which was the case in fiscal years 2013 and 2016. The City is a party to numerous lawsuits and is the subject of numerous claims and investigations. The City has estimated that its potential future liability on account of outstanding claims against it as of June 30, 2018 amounted to approximately $6.7 billion. This estimate was made by categorizing the various claims and applying a statistical model, based primarily on actual settlements by type of claim during the preceding ten fiscal years, and by supplementing the estimated liability with information supplied by the City's Corporation Counsel. For further information regarding certain of these claims, see "SECTION X: OTHER INFORMATION—Litigation."

In addition to the above claims, numerous real estate tax *certiorari* proceedings involving allegations of inequality of assessment, illegality and overvaluation are currently pending against the City. The City's Financial Statements for the fiscal year ended June 30, 2018 include an estimate that the City's liability in the *certiorari* proceedings, as of June 30, 2018, could amount to approximately $1,208 million. Provision has been made in the Financial Plan for estimated refunds of $400 million in fiscal years 2019 through 2022, respectively. For further information concerning these claims, certain remedial legislation related thereto and the City's estimates of potential liability, see "SECTION X: OTHER INFORMATION—Litigation—*Taxes*" and "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

3. GENERAL OBLIGATION, LEASE AND TFA DEBT SERVICE

Debt service estimates for fiscal years 2019 through 2023 include debt service on outstanding general obligation bonds and conduit debt, and the funding requirements associated with outstanding TFA Future Tax Secured Bonds, and estimates of debt service costs of, or funding requirements associated with, future general obligation, conduit and TFA Future Tax Secured debt issuances based on projected future market conditions. Such debt service estimates also include estimated payments pursuant to interest rate exchange agreements but do not reflect receipts pursuant to such agreements.

In July 2009, the State amended the New York City Transitional Finance Authority Act to expand the borrowing capacity of the TFA by providing that it may have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds) and may issue additional Future Tax Secured Bonds provided that the amount of such additional bonds, together with the amount of indebtedness contracted by the City, does not exceed the debt limit of the City. The City currently expects to continue to finance approximately half of its capital program through the TFA, exclusive of Department of Environmental Protection capital budget items financed by the Water Authority.

The Financial Plan reflects general obligation debt service of $3.84 billion, $4.20 billion, $4.33 billion, $4.66 billion and $5.02 billion in fiscal years 2019 through 2023, respectively, conduit debt service of $123 million, $128 million, $127 million, $127 million and $148 million in fiscal years 2019 through 2023, respectively, and TFA debt service of $2.77 billion, $3.02 billion, $3.20 billion, $3.55 billion and $3.92 billion in fiscal years 2019 through 2023, respectively, in each case prior to giving effect to prepayments. Such debt service requirements are projected to be below 15% of projected City tax revenues for each year of the Financial Plan.

Certain Reports

On March 6, 2019, the City Comptroller released a report entitled "Comments on New York City's Preliminary Budget for Fiscal Year 2020 and Financial Plan for Fiscal Years 2019-2023." In the report, the City Comptroller projects net additional resources of $160 million, $249 million, $285 million and $117 million in fiscal years 2019, 2021, 2022 and 2023, respectively, as well as a net risk of $1 million in fiscal year 2020, which when added to the results projected in the Financial Plan, would result in a budget surplus of approximately $160 million in fiscal year 2019 and gaps of approximately $1 million, $3.27 billion, $2.65 billion and $3.18 billion in fiscal years 2020 through 2023, respectively.

The differences from the Financial Plan projections result in part from the City Comptroller's net expenditure projections, which are lower than the Financial Plan projections by $107 million in fiscal year 2019, and higher than the Financial Plan projections by $459 million, $755 million, $952 million and $1.23 billion in fiscal years 2020 through 2023, respectively, as a result of: (i) additional overtime expenditures of $193 million in fiscal year 2019, $122 million in fiscal year 2020 and $150 million in each of fiscal years 2021 through 2023; (ii) increased expenditures associated with increases in charter school tuition rates of $119 million, $281 million, $478 million and $758 million in fiscal years 2020 through 2023, respectively; (iii) uncertainty of federal Medicaid reimbursement for special education services of $20 million in each of fiscal years 2019 through 2023; (iv) increased expenditures associated with payments to parents who legally seek reimbursement for placing special needs children in non-public schools of $80 million in each of fiscal years 2019 through 2023; (v) increased expenditures to fund the Fair Fares program of $106 million in fiscal year 2020 and $212 million in each of fiscal years 2021 through 2023; and (vi) increased homeless shelter operation expenditures of $12 million in each of fiscal years 2020 through 2023. The report also projects (i) decreased expenditures of $50 million in fiscal year 2019 to fund the Fair Fares program; (ii) anticipated debt service savings from low interest rates on variable rate bonds of $50 million in fiscal year 2019; and (iii) decreased expenditures of $300 million in fiscal year 2019 due to the assumption that the $300 million fiscal year 2019 general reserve in the Financial Plan will not be needed for budget balance.

The differences from the Financial Plan projections also result from the City Comptroller's net revenue projections, which are higher than the Financial Plan projections by $53 million, $458 million, $1.00 billion, $1.24 billion and $1.35 billion in fiscal years 2019 through 2023, respectively. The report projects: (i) property tax revenues will be higher by $200 million, $387 million, $735 million and $1.09 billion in fiscal years 2020 through 2023, respectively; (ii) personal income tax revenues will be higher by $49 million, $88 million and $46 million in fiscal years 2020 through 2022, respectively; (iii) business tax revenues will be higher by $145 million, $9 million, and $31 million in fiscal years 2019, 2022 and 2023, respectively; (iv) sales tax revenues will be higher by $77 million, $158 million, $165 million, $150 million and $107 million in fiscal years 2019 through 2023, respectively; (v) real-estate-related tax revenues will be higher by $108 million, $166 million and $82 million in fiscal years 2020 through 2022, respectively; (vi) revenues from audit collections will be higher by $179 million in each of fiscal years 2021 through 2023; (vii) Environmental Control Board fine revenues will be higher by $4 million, $13 million, $13 million, $19 million and $19 million in fiscal years 2019 through 2023, respectively; (viii) Department of Buildings penalty revenues will be higher by $4 million in each of fiscal years 2019 and 2020 and $10 million in each of fiscal years 2021 through 2023; (ix) motor vehicle fine revenues will be higher by $2 million in each of fiscal years 2019 through 2023; and (x) parking violation fine revenues will be higher by $8 million in fiscal year 2019 and $5 million in each of fiscal years 2020 through 2023. The report also identifies certain risks to projected revenues that result in differences from the Financial Plan: (i) personal income tax revenues will be lower by $103 million and $59 million in fiscal years 2019 and 2023, respectively; (ii) business tax revenues will be lower by $81 million and $11 million in fiscal years 2020 and 2021, respectively; and (iii) real-estate-related tax revenues will be lower by $84 million and $30 million in fiscal years 2019 and 2023, respectively.

On March 20, 2019, the OSDC released a report on the Financial Plan. The report states that the Financial Plan projects a surplus of $3.2 billion in fiscal year 2019, which results mostly from a drawdown of unneeded reserves in fiscal year 2019, resources from the citywide savings program and higher-than-expected revenues, and projects budget gaps in fiscal years 2021 through 2023 due to the cost of wage increases for the municipal work force, higher costs for debt service and health insurance, and an anticipated slowdown in job growth and tax collections. The report notes that these out-year budget gaps are manageable under current conditions. The City's economy continues to set records, benefitting from record tourism, continued job expansion, high consumer confidence and increased wages. The City continues to post solid job gains although it expects job growth to slow.

The report also identifies a number of potential risks the City may need to address during the Financial Plan period, noting that external risks are growing. The most immediate risk is the potential impact of the State budget, which includes a number of proposals that could have an adverse impact on the Financial Plan. The largest risk to the Financial Plan remains the potential for an economic setback, which would make it more difficult to close the out-year budget gaps. The report also notes that the City's pension fund investment earnings have trailed expectations. The MTA is facing a crisis, and while it projects a balanced operating budget for fiscal year 2019, budget gaps remain in the years thereafter despite planned fare and toll increases. There is also still a risk of federal budget cuts during the Financial Plan period given the growing federal deficit.

The OSDC report quantifies certain risks and offsets to the Financial Plan. The report identifies net risks to the Financial Plan of $45 million in each of fiscal years 2019 and 2020 and $327 million in each of fiscal years 2021 through 2023. When combined with the results projected in the Financial Plan, the report estimates budget gaps of $45 million in each of fiscal years 2019 and 2020 and $3.84 billion, $3.27 billion and $3.62 billion in fiscal years 2021 through 2023, respectively. The risks to the Financial Plan identified in the report include: (i) increased pension contributions of $105 million in each of fiscal years 2019 and 2020; (ii) increased funding costs for the Department of Education of $170 million in each of fiscal years 2019 through 2023; (iii) increased uniform services overtime costs of $70 million in each of fiscal years 2019 through 2023; and (iv) increased expenditures to fund the Fair Fares program of $212 million in each of fiscal years 2021 through 2023. The report also identifies: (i) additional tax revenues of $225 million and $125 million in fiscal years 2019 and 2020, respectively; (ii) additional miscellaneous revenues (including fines, license fees, water and sewer charges, and asset sales) of $75 million in fiscal year 2019 and $125 million in each of fiscal years 2020 through 2023; and (iii) additional debt services savings of $50 million in fiscal year 2020.

On March 26, 2019, the staff of the Control Board issued a report reviewing the Financial Plan. The report states the City has been able to manage the fiscal year 2019 budget to build a surplus to help balance next year's budget despite a shortfall in personal income tax revenue, which was offset by higher collections in the general corporation tax, and property and real estate related taxes. By minimizing new agency needs, reducing the general reserve, and adopting an agency savings program, the City was able to increase funds in the Budget Stabilization Account in order to prepay fiscal year 2020 expenses and balance the fiscal year 2020 budget. The report states that the City will maintain a general reserve of at least $1 billion and a capital stabilization account of $250 million in each of fiscal years 2019 through 2023. The report states the City will also create a $750 million program to eliminate the gap to be included in the Mayor's fiscal year 2020 executive budget. The report identifies a number of concerns, including economic concerns such as the Federal Reserve policy on interest rates, trade frictions, economic slowdowns in Europe and China, increasing federal deficits and borrowing and a possible pullback in domestic consumer spending, and the possibility of actions that may be taken by the state and federal governments which could have an impact on the budget. The report states that if the City is able to develop actions with recurring savings in the program to eliminate the gap, it will be able to manage its finances with the least service disruption, even if unforeseen events occur.

The report identifies net offsets to the Financial Plan of $161 million and $196 million in fiscal years 2019 and 2020, respectively, and net risks of $184 million in each of fiscal years 2021 through 2023, resulting in estimated surpluses of $161 million and $196 million in fiscal years 2019 and 2020, respectively, and estimated gaps of $3.70 billion, $3.12 billion and $3.48 billion in fiscal years 2021 through 2023, respectively. Such net risks and offsets result from: (i) increased nonproperty tax revenues of $150 million in each of fiscal years 2019 and 2020; (ii) increased miscellaneous revenues of $40 million in fiscal year 2019 and $100 million in each of fiscal years 2020 through 2023; (iii) increased expenditures to fund the Fair Fares program of $212 million in each of fiscal years 2021 through 2023; and (iv) increased uniform services overtime expenses of $29 million and $54 million in fiscal years 2019 and 2020, respectively, and $72 million in each of fiscal years 2021 through 2023.

Long-Term Capital Program

The City makes substantial capital expenditures to reconstruct and rehabilitate the City's infrastructure and physical assets, including City mass transit facilities, water and sewer facilities, streets, bridges and tunnels, and to make capital investments that will improve productivity in City operations.

The City utilizes a three-tiered capital planning process consisting of the Ten-Year Capital Strategy, the four-year capital plan and the current-year Capital Budget. The Ten-Year Capital Strategy is a long-term planning tool designed to reflect fundamental allocation choices and basic policy objectives. The four-year capital plan, which is updated three times a year as required by the City Charter, translates mid-range policy goals into specific projects. The Capital Budget defines specific projects and the timing of their initiation, design, construction and completion. On February 7, 2019, the City released the five-year capital commitment plan for fiscal years 2019 through 2023 which covers the current fiscal year and the four-year capital plan for fiscal years 2020 through 2023 (the "2019-2023 Capital Commitment Plan").

City-funded commitments, which were $344 million in fiscal year 1979, are projected to reach $17.4 billion in fiscal year 2019. City-funded expenditures are forecast at $8.5 billion in fiscal year 2019; total expenditures are forecast at $9.9 billion in fiscal year 2019. For additional information concerning the City's capital expenditures and the Preliminary Ten-Year Capital Strategy covering fiscal years 2020 through 2029, see "SECTION V: CITY SERVICES AND EXPENDITURES—Capital Expenditures."

The following table sets forth the major areas of capital commitment projected in the 2019-2023 Capital Commitment Plan.

2019-2023 CAPITAL COMMITMENT PLAN

(In Millions)

	2019		2020		2021		2022		2023		TOTALS	
	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds	City Funds	All Funds
Mass Transit(1)	$ 547	$ 566	$ 54	$ 54	$ 54	$ 54	$ 40	$ 40	$ 40	$ 40	$ 735	$ 755
Roadway, Bridges	1,470	1,719	1,613	1,844	1,846	2,015	1,961	2,074	2,412	2,677	9,302	10,329
Environmental Protection(2)	2,341	2,395	2,754	2,926	2,637	2,646	2,501	2,501	2,876	2,876	13,108	13,343
Education	4,331	4,996	3,500	3,507	2,680	3,424	3,426	3,426	3,414	3,414	17,351	18,767
Housing	1,312	1,346	1,236	1,268	1,305	1,337	1,174	1,206	902	934	5,929	6,091
Sanitation	413	417	556	565	266	266	367	367	467	467	2,070	2,082
City Operations/Facilities	6,205	7,041	6,847	7,816	5,334	6,000	4,155	4,498	2,569	2,848	25,110	28,202
Economic Development	822	910	507	660	1,062	1,100	996	1,013	490	512	3,878	4,195
Subtotal Commitments	17,440	19,388	17,067	18,639	15,184	16,842	14,622	15,126	13,170	13,769	77,483	83,764
Reserve for Unattained Commitments	(5,284)	(5,284)	(1,574)	(1,574)	(856)	(856)	(103)	(103)	472	472	(7,345)	(7,345)
Total Commitments(3)	$12,156	$14,104	$15,493	$17,065	$14,328	$15,986	$14,519	$15,023	$13,642	$14,241	$70,138	$76,419
Total Expenditures(4)	$ 8,462	$ 9,866	$10,136	$11,405	$11,363	$12,935	$12,713	$13,989	$13,288	$14,312	$55,962	$62,507

Note: Individual items may not add to totals due to rounding.

(1) Excludes NYCT's non-City portion of the MTA capital program.

(2) Includes water supply, water mains, water pollution control, sewer projects and related equipment.

(3) Commitments represent contracts registered with the City Comptroller, except for certain projects which are undertaken jointly by the City and State.

(4) Expenditures represent cash payments and appropriations planned to be expended for capital costs, excluding amounts for original issue discount.

Currently, if all City capital projects were implemented, expenditures would exceed the City's financing projections in the current fiscal year and subsequent years. The City has therefore established capital budgeting priorities to maintain capital expenditures within the available long-term financing. Due to the size and complexity of the City's capital program, it is difficult to forecast precisely the timing of capital project activity so that actual capital expenditures may vary from the planned annual amounts.

On November 15, 2017, the Mayor issued Housing New York 2.0, which updates and revises the Mayor's previously announced affordable housing initiatives. The updated plan, inclusive of prior commitments, proposes to build and preserve 300,000 affordable units by 2026, reflecting an increase of 100,000 units above what was previously announced. The expected costs associated with these revisions are reflected in the 2019-2023 Capital Commitment Plan, with additional resources as necessary to be reflected in future commitment plans.

On February 4, 2016, the Mayor announced a plan to build the Brooklyn-Queens Connector, a streetcar line which would run along the East River waterfront between Astoria, Queens and Red Hook, Brooklyn. The direct costs of the project, which are estimated to be $2.7 billion, are not reflected in the Financial Plan or the Ten-Year Capital Strategy. The City has conducted an in-depth study of this project and is proceeding with the environmental assessment beginning in early 2019.

In December 2018, the City issued an Asset Information Management System Report (the "AIMS Report"), which is its annual assessment of the asset condition and a proposed maintenance schedule for its assets and asset systems which have a replacement cost of $10 million or more and a useful life of at least ten years, as required by the City Charter. This report does not reflect any policy considerations which could affect the appropriate amount of investment, such as whether there is a continuing need for a particular facility or whether there have been changes in the use of a facility. The AIMS Report estimated that $9.5 billion in capital investment would be needed for fiscal years 2020 through 2023 to bring the assets to a state of good repair. The report also estimated that $512 million, $235 million, $301 million and $254 million should be spent on maintenance in fiscal years 2020 through 2023, respectively.

The recommended capital investment for each inventoried asset is not readily comparable to the capital spending allocated by the City in the 2019-2023 Capital Commitment Plan and the Preliminary Ten-Year Capital Strategy. Only a portion of the funding set forth in the 2019-2023 Capital Commitment Plan is allocated to specifically identified assets, and funding in the subsequent years of the Preliminary Ten-Year Capital Strategy is even less identifiable with individual assets. Therefore, there is a substantial difference between the amount of investment recommended in the report for all inventoried City assets and amounts allocated to the specifically identified inventoried assets in the 2019-2023 Capital Commitment Plan. The City also issues an annual report (the "Reconciliation Report") that compares the recommended capital investment with the capital spending allocated by the City in the four-year capital plan to the specifically identified inventoried assets.

The most recent Reconciliation Report, issued in July 2018, concluded that the capital investment in the five-year capital plan for fiscal years 2018 through 2022, released on April 26, 2018, for the specifically identified inventoried assets, funded 70% of the total investment recommended in the preceding AIMS Report issued in December 2017. Capital investment allocated in the Ten-Year Capital Strategy published in April 2017 funded an additional portion of the recommended investment. In the same Reconciliation Report, OMB estimated that 60% of the expense maintenance levels recommended were included in the financial plan.

Financing Program

The following table sets forth the amount of bonds issued and expected to be issued during the 2019 through 2023 fiscal years (as set forth in the Financial Plan) to implement the 2019-2023 Capital Commitment Plan. See "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities." From time to time, the City and its related issuers also issue bonds to refinance existing debt for economic savings. Such refunding bonds are not included in the following table.

2019-2023 FINANCING PROGRAM

	2019	2020	2021	2022	2023	Total
			(In Millions)			
City General Obligation Bonds	$2,300	$4,040	$ 4,650	$ 5,280	$ 5,500	$21,770
TFA Future Tax Secured Bonds	3,900	4,040	4,650	5,280	5,500	23,370
Water Authority Bonds	1,701	1,652	1,667	1,752	1,993	8,765
Total	$7,901	$9,732	$10,967	$12,312	$12,993	$53,905

Note: Totals may not add due to rounding.

The City's financing program includes the issuance of water and sewer revenue bonds by the Water Authority which is authorized to issue bonds to finance capital investment in the City's water and sewer system. Pursuant to State law, debt service on Water Authority indebtedness is secured by water and sewer fees paid by users of the water and sewer system. Such fees are revenues of the Water Board, which holds a lease interest in the City's water and sewer system. After providing for debt service on obligations of the Water Authority and certain incidental costs, the revenues of the Water Board are paid to the City to cover the City's costs of operating the water and sewer system and as rental for the system. Beginning in fiscal year 2017, the City has not requested the rental payment due to the City from the Water Board. The City's Preliminary Ten-Year Capital Strategy applicable to the City's water and sewer system covering fiscal years 2020 through 2029, projects City-funded water and sewer investment (which is expected to be financed with proceeds of Water Authority debt) at approximately $19.3 billion. The 2019-2023 Capital Commitment Plan reflects total anticipated City-funded water and sewer commitments of $13.1 billion which are expected to be financed with the proceeds of Water Authority debt.

The TFA is authorized to have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds). The TFA may have outstanding Future Tax Secured Bonds in excess of $13.5 billion provided that the amount of the Future Tax Secured Bonds, together with the amount of indebtedness contracted by the City, do not exceed the debt limit of the City. Future Tax Secured Bonds are issued for general City capital purposes and are secured by the City's personal income tax revenues and, to the extent such revenues do not satisfy specified debt ratios, sales tax revenues. In addition, the TFA is authorized to have outstanding $9.4 billion of Building Aid Revenue Bonds to pay for a portion of the City's five-year educational facilities capital plan. Building Aid Revenue Bonds are secured by State building aid, which the Mayor has assigned to the TFA. The Financial Plan reflects the issuance of $500 million, $103 million, $31 million, $78 million and $25 million of Building Aid Revenue Bonds by TFA in fiscal years 2019 through 2023.

Implementation of the financing program is dependent upon the ability of the City and other financing entities to market their securities successfully in the public credit markets which will be subject to prevailing market conditions at the times of sale. No assurance can be given that the credit markets will absorb the projected amounts of public bond sales. A significant portion of bond financing is used to reimburse the City's General Fund for capital expenditures already incurred. If the City and such other entities are unable to sell such amounts of bonds, it would have an adverse effect on the City's cash position. In addition, the need of the City to fund future debt service costs from current operations may also limit the City's capital program. The Preliminary Ten-Year Capital Strategy for fiscal years 2020 through 2029 totals $104.1 billion, of which approximately 94% is to be financed with funds borrowed by the City and such other entities. See "INTRODUCTORY STATEMENT" and "SECTION VIII: INDEBTEDNESS—Indebtedness of the City and Certain Other Entities—*Limitations on the City's Authority to Contract Indebtedness*." Congressional developments affecting federal taxation generally could reduce the market value of tax-favored investments and increase the debt-service costs of carrying out the major portion of the City's capital plan which is currently eligible for tax-exempt financing.

Interest Rate Exchange Agreements

In an effort to reduce its borrowing costs over the life of its bonds, the City began entering into interest rate exchange agreements commencing in fiscal year 2003. For a description of such agreements, see "APPENDIX B—FINANCIAL STATEMENTS—Notes to Financial Statements—Note A.12." As of December 31, 2018, the aggregate notional amount of the City's interest rate exchange agreements was $1,099,350,000 and the total marked-to-market value of such agreements was ($55,165,931).

In March 2019, the City terminated a $500 million notional amount basis swap, with no termination payment required to be made by either the City or the counterparty.

In addition, in connection with its Courts Facilities Lease Revenue Bonds (The City of New York Issue) Series 2005A and B, the Dormitory Authority of the State of New York ("DASNY") entered into interest rate exchange agreements with Goldman Sachs Mitsui Marine Derivative Products, L.P. and JPMorgan Chase Bank, National Association. The City is obligated, subject to appropriation, to make lease payments to DASNY reflecting DASNY's obligations under these interest rate exchange agreements. Under such agreements, with a notional amount of $125,500,000, an effective date of June 15, 2005 and a termination date of May 15, 2039, DASNY pays a fixed rate of 3.017% and receives payments based on a LIBOR-indexed variable rate. As of December 31, 2018, the total marked-to-market value of the DASNY agreements was ($22,450,205).

Seasonal Financing Requirements

The City since 1981 has fully satisfied its seasonal financing needs, when necessary, in the public credit markets, repaying all short-term obligations within their fiscal year of issuance. The City has not issued short-term obligations to finance projected cash flow needs since fiscal year 2004. The City regularly reviews its cash position and the need for short-term borrowing. The Financial Plan does not reflect the issuance of short-term obligations.

SECTION VIII: INDEBTEDNESS

Indebtedness of the City and Certain Other Entities

Outstanding City and PBC Indebtedness

The following table sets forth outstanding City and PBC indebtedness as of March 31, 2019. "City indebtedness" refers to general obligation debt of the City, net of reserves. "PBC indebtedness" refers to obligations of the City, net of reserves, to the following PBCs: the New York City Educational Construction Fund ("ECF"), and DASNY (for health facilities, court facilities and CUCF as described below). PBC indebtedness is not debt of the City. However, the City has entered into agreements to make payments, subject to appropriation, to PBCs to be used for debt service on certain obligations constituting PBC indebtedness. Neither City indebtedness nor PBC indebtedness includes outstanding debt of the TFA, TSASC, Fiscal Year 2005 Securitization Corp. or STAR Corp., which are not obligations of, and are not paid by, the City; nor does such indebtedness include obligations of the Hudson Yards Infrastructure Corporation ("HYIC"), for which the City has agreed to pay, as needed and subject to appropriation, interest on but not principal of such obligations.

	(In Thousands)	
Gross City Long-Term Indebtedness(1)	$37,635,660	
Less: Assets Held for Debt Service(2)	(15,005)	
Net City Long-Term Indebtedness		37,620,655
PBC Indebtedness		
Bonds Payable	264,037	
Capital Lease Obligations	840,720	
Gross PBC Indebtedness	1,104,757	
Less: Assets Held for Debt Service	(84,848)	
Net PBC Indebtedness		1,019,909
Combined Net City and PBC Indebtedness		$38,640,564

(1) Reflects capital appreciation bonds at accreted values as of June 30, 2018.

(2) Assets Held for Debt Service consists of General Debt Service Fund assets.

Trend in Outstanding Net City and PBC Indebtedness

The following table shows the trend in the outstanding net City and PBC indebtedness as of June 30 of each of the fiscal years 2009 through 2018 and at March 31, 2019.

	City Indebtedness			
	Long-Term	Short-Term	PBC Indebtedness(1)	Total
	(In Millions)			
2009	$38,648	—	$1,484	$40,131
2010	41,490	—	1,395	42,885
2011	41,737	—	1,550	43,287
2012	40,913	—	1,486	42,399
2013	38,844	—	1,413	40,257
2014	41,033	—	1,347	42,380
2015	38,497	—	1,261	39,758
2016	36,147	—	1,236	37,383
2017	36,324	—	1,182	37,506
2018	36,725	—	1,155	37,880
March 31, 2019	37,621	—	1,020	38,641

(1) Includes obligations of New York State Urban Development Corporation ("UDC") through June 30, 2016.

Rapidity of Principal Retirement

The following table details, as of March 31, 2019, the cumulative percentage of total City indebtedness that is scheduled to be retired in accordance with its terms in each prospective five-year period.

Period	Cumulative Percentage of Debt Scheduled for Retirement
5 years	24.27%
10 years	52.75
15 years	72.95
20 years	88.04
25 years	96.60
30 years	100.00

City and PBC Debt Service Requirements

The following table summarizes future debt service requirements, as of March 31, 2019, on City and PBC indebtedness.

	City Long-Term Debt		PBC		
Fiscal Years	Principal	Interest	Indebtedness	Interest	Total
	(In Thousands)				
2019	$ 87,834	$ 301,796	$ 41,767	$ 10,005	$ 441,402
2020	2,217,407	1,633,358	57,312	51,516	3,959,593
2021	2,182,441	1,535,604	60,175	48,706	3,826,926
2022 through 2147	33,147,978	12,937,825	945,504	362,301	47,393,608
Total	$37,635,660	$16,408,583	$1,104,757	$472,528	$55,621,528

Certain Debt Ratios

The following table sets forth the approximate ratio of City net general obligation bonded debt to assessed taxable property value as of June 30 of each of the fiscal years 2009 through 2018.

Fiscal Year	City General Obligation Bonded Debt(1)	Debt Service Restricted Cash(2)	City General Obligation Bonded Debt Net of Debt Service Restricted Cash	City Net General Obligation Bonded Debt as a Percentage of Assessed Taxable Value of Property(3)	Per Capita
	(in millions)	(in millions)	(in millions)		
2009	$39,991	$3,376	$36,615	24.09%	$4,503
2010	41,555	2,926	38,629	24.46	4,715
2011	41,785	2,818	38,967	24.40	4,704
2012	42,286	1,374	40,912	23.88	4,893
2013	41,592	2,766	38,826	21.68	4,610
2014	41,665	639	41,026	21.57	4,843
2015	40,460	1,970	38,490	18.97	4,519
2016	38,073	1,775	36,298	16.68	4,252
2017	37,891	1,583	36,308	15.48	4,253
2018	38,628	1,922	36,706	14.60	4,257

Source: CAFR for the fiscal year ended June 30, 2018; New York City Comptroller's Office.

(1) General Obligation Bonded Debt is presented at par value and does not reflect GASB 44 reporting methodology netting premium and discount. See "APPENDIX B—FINANCIAL STATEMENTS—Notes to Financial Statements—Note D.5—*Changes in Long-term liabilities*."

(2) Primarily comprised of restricted cash and investments held in the General Debt Service Fund.

(3) Based on full valuations for each fiscal year derived from the application of the special equalization ratio reported by the State Office of Real Property Tax Services for such fiscal year.

Indebtedness of the City and Related Issuers

The following table sets forth obligations of the City and other issuers as of June 30 of each of the fiscal years 2009 through 2018. General obligation bonds are debt of the City. Although IDA Stock Exchange bonds and PBC indebtedness are not debt of the City, the City has entered into agreements to make payments, subject to appropriation, to the respective issuers to be used for debt service on the indebtedness included in the following table. ECF bonds are also not debt of the City. ECF bonds are expected to be paid from revenues of ECF, provided, however, that if such revenues are insufficient, the City has agreed to make payments, subject to appropriation, to ECF for debt service on its bonds. Indebtedness of the TFA, TSASC and STAR Corp. does not constitute debt of, and is not paid by, the City.

Fiscal Year	General Obligation Bonds	ECF	TFA	TSASC	STAR	HYIC	PBC Indebtedness and Other(1)	IDA Stock Exchange
				(In Millions)				
2009	$39,991	$102	$16,913	$1,274	$2,253	$2,033	$1,937	$99
2010	41,555	150	20,094	1,265	2,178	2,000	1,859	99
2011	41,785	281	23,820	1,260	2,117	2,000	1,895	98
2012	42,286	274	26,268	1,253	2,054	3,000	1,818	95
2013	41,592	268	29,202	1,245	1,985	3,000	1,739	93
2014	41,665	266	31,038	1,228	1,975	3,000	1,701	90
2015	40,460	264	33,850	1,222	2,035	3,000	1,639	87
2016	38,073	240	37,358	1,145	1,961	3,000	1,571	84
2017	37,891	236	40,696	1,089	1,884	2,751	1,549	80
2018	38,628	231	43,355	1,071	1,805	2,724	1,659	77

Source: CAFR for the fiscal year ended June 30, 2018; New York City Comptroller's Office.

(1) PBC Indebtedness and Other includes capital lease obligations of the City and excludes Fiscal Year 2005 Securitization Corporation, ECF and Tax Lien Collateralized Bonds.

As of March 31, 2019, approximately $37.64 billion of City general obligation bonds were outstanding. For information regarding the City's variable rate bonds, see APPENDIX E hereto.

Currently, HYIC has outstanding $2.72 billion aggregate principal amount of bonds. In addition, HYIC has entered into a term loan facility with Bank of America, N.A. pursuant to which HYIC may draw up to an aggregate amount of $350 million, none of which has been drawn. The bonds financed the extension of the Number 7 subway line and other public improvements in the Hudson Yards area, and the term loan will be used to finance any remaining costs of completion of the original project and the expansion of the park in the Hudson Yards area. HYIC's bonds and, on a subordinate basis, draws under the term loan facility are secured by and payable from payments in lieu of taxes and other revenues generated by development in the Hudson Yards area. However, HYIC expects to repay amounts drawn under the term loan facility with the proceeds of its long-term bonds prior to maturity on June 30, 2022. To the extent payments in lieu of taxes and other HYIC revenues are insufficient to pay interest on the HYIC bonds or the term loan, the City has agreed to pay the amount of any shortfall in interest, subject to appropriation. The Financial Plan provides $0 in fiscal years 2019 through 2023 for such interest support payments. The City has no obligation to pay the principal of such bonds or of such term loan.

Certain Provisions for the Payment of City Indebtedness

The State Constitution requires the City to make an annual appropriation for: (i) payment of interest on all City indebtedness; (ii) redemption or amortization of bonds; and (iii) redemption of short-term indebtedness issued in anticipation of the collection of taxes or other revenues, such as tax anticipation notes ("TANs") and revenue anticipation notes ("RANs") which (with permitted renewals thereof) are not retired within five years of the date of original issue. If this appropriation is not made, a sum sufficient for such purposes must be set apart from the first revenues thereafter received by the City and must be applied for these purposes.

The City's debt service appropriation would provide for the interest on, but not the principal of, short-term indebtedness, if any. If such principal were not provided for from the anticipated sources, it would be, like debt service on City bonds, a general obligation of the City.

Pursuant to the Financial Emergency Act, a general debt service fund (the "General Debt Service Fund" or the "Fund") has been established for the purpose of paying Monthly Debt Service, as defined in the Act. In addition, as required under the Act, accounts have been established by the State Comptroller within the Fund to pay the principal of City TANs and RANs when outstanding. For the expiration date of the Financial Emergency Act, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Emergency Act and City Charter.*"

Limitations on the City's Authority to Contract Indebtedness

The Financial Emergency Act imposes various limitations on the issuance of City indebtedness. No TANs may be issued by the City which would cause the principal amount of such issue of TANs to exceed 90% of the "available tax levy," as defined in the Act, with respect to such issue; TANs and renewals thereof must mature not later than the last day of the fiscal year in which they were issued. No RANs may be issued by the City which would cause the principal amount of RANs outstanding to exceed 90% of the "available revenues," as defined in the Act, for that fiscal year; RANs must mature not later than the last day of the fiscal year in which they were issued; and in no event may renewals of RANs mature later than one year subsequent to the last day of the fiscal year in which such RANs were originally issued. No bond anticipation notes ("BANs") may be issued by the City in any fiscal year which would cause the principal amount of BANs outstanding, together with interest due or to become due thereon, to exceed 50% of the principal amount of bonds issued by the City in the twelve months immediately preceding the month in which such BANs are to be issued.

The State Constitution provides that, with certain exceptions, the City may not contract indebtedness, including contracts for capital projects to be paid with the proceeds of City bonds ("contracts for capital projects"), in an amount greater than 10% of the average full value of taxable real estate in the City for the most recent five years (the "general debt limit"). See "SECTION IV: SOURCES OF CITY REVENUES—Real Estate Tax—*Assessment*." Certain indebtedness ("excluded debt") is excluded in ascertaining the City's authority to contract indebtedness within the constitutional limit. TANs, RANs and BANs, and long-term indebtedness issued for specified purposes are considered excluded debt. The City's authority for variable rate bonds is currently limited, with statutory exceptions, to 25% of the general debt limit. The State Constitution also provides that, subject to legislative implementation, the City may contract indebtedness for low-rent housing, nursing homes for persons of low income and urban renewal purposes in an amount not to exceed 2% of the average assessed valuation of the taxable real estate of the City for the most recent five years (the "2% debt limit"). Excluded from the 2% debt limit, after approval by the State Comptroller, is indebtedness for certain self-supporting programs aided by City guarantees or loans.

Water Authority and TSASC indebtedness and the City's commitments with other PBCs or related issuers are not chargeable against the City's constitutional debt limit. The TFA and TSASC were created to provide financing for the City's capital program. Without the TFA and TSASC, or other legislative relief, new contractual commitments for the City's general obligation financed capital program would have been virtually brought to a halt during the financial plan period beginning early in the 1998 fiscal year. As of December 31, 2018, TSASC has approximately $1.1 billion of bonds outstanding that are payable from TSRs. The TFA is permitted to have outstanding $13.5 billion of Future Tax Secured Bonds (excluding Recovery Bonds) and the TFA may have outstanding Future Tax Secured Bonds in excess of $13.5 billion, provided that the amount of such additional Future Tax Secured Bonds, together with the amount of indebtedness contracted by the City, do not exceed the debt limit of the City. Future Tax Secured Bonds are secured by the City's personal income tax revenues and sales tax revenues, if personal income tax revenues do not satisfy specified debt ratios. The TFA, as of March 31, 2019, has outstanding approximately $36.4 billion of Future Tax Secured Bonds (excluding Recovery Bonds). The TFA is authorized to have outstanding $9.4 billion of Building Aid Revenue Bonds, which are secured by State building aid and are not chargeable against the City's constitutional debt limit.

The following table sets forth the calculation of debt-incurring power as of March 31, 2019.

		(In Thousands)
Total City Debt-Incurring Power under General Debt Limit		$106,242,893
Gross Debt-Funded(1)	$37,430,887	
Less: Excluded Debt	43,256	
	37,387,631	
Less: Appropriations for Payment of Principal	87,371	
	37,300,259	
Contracts and Other Liabilities, Net of Prior Financings Thereof	13,583,073	
Less: Total City Indebtedness		(50,883,333)
Less: TFA Debt Outstanding above $13.5 billion		(22,897,635)
Debt-Incurring Power		$ 32,461,925

Note: Numbers may not add due to rounding.

(1) Debt issued at an original issue discount is reflected at the discounted amount rather than the par amount.

Federal Bankruptcy Code

Under the Federal Bankruptcy Code, a petition may be filed in the federal bankruptcy court by a municipality which is insolvent or unable to meet its debts as they mature. The filing of such a petition would operate as a stay of any proceeding to enforce a claim against the City. Under such circumstances, the Federal Bankruptcy Code requires the municipality to file a plan for the adjustment of its debts, which may modify or alter the rights of creditors and may provide for the municipality to issue indebtedness, which could have priority over existing creditors and which could be secured. Any plan of adjustment confirmed by the court must be approved by the requisite majority of creditors. If confirmed by the bankruptcy court, the plan would be binding upon all creditors affected by it. Pursuant to authorization by the State, each of the City and the Control Board, acting on behalf of the City pursuant to the Financial Emergency Act, has the legal capacity to file a petition under the Federal Bankruptcy Code. For the expiration date of the Financial Emergency Act, see "SECTION III: GOVERNMENT AND FINANCIAL CONTROLS—City Financial Management, Budgeting and Controls—*Financial Emergency Act and City Charter*."

Public Benefit Corporation Indebtedness

City Financial Commitments to PBCs

PBCs are corporate governmental agencies created by or under State law to finance and operate projects of a governmental nature or to provide governmental services. Generally, PBCs issue bonds and notes to finance construction of housing, hospitals, dormitories and other facilities and receive revenues from the collection of fees, charges or rentals for the use of their facilities, including subsidies and other payments from the governmental entity whose residents have benefited from the services and facilities provided by the PBC. These bonds and notes do not constitute debt of the City.

The City has undertaken various types of financial commitments with certain PBCs which, although they do not represent City indebtedness, have a similar budgetary effect. The principal forms of the City's financial commitments with respect to PBC debt obligations are as follows:

1. *Capital Lease Obligations*—These are leases of facilities by the City or a Covered Organization, entered into with PBCs, under which the City has no liability beyond monies legally available for lease payments. State law generally provides, however, that in the event the City fails to make any required lease payment, the amount of such payment will be deducted from State aid otherwise payable to the City and will be paid to the PBC.

2. *Executed Leases*—These are leases pursuant to which the City is legally obligated to make the required rental payments.

3. *Capital Reserve Fund Arrangements*—Under these arrangements, State law requires the PBC to maintain a capital reserve fund in a specified minimum amount to be used solely for the payment of the PBC's obligations. State law further provides that in the event the capital reserve fund is depleted, State aid otherwise payable to the City may be paid to the PBC to restore such fund.

Certain PBCs are further described below.

New York City Educational Construction Fund

As of December 31, 2018, $223.2 million principal amount of ECF bonds to finance costs related to the school portions of combined occupancy structures was outstanding. Under ECF's leases with the City, debt service on the ECF bonds is payable by the City to the extent third party revenues are not sufficient to pay such debt service.

Dormitory Authority of the State of New York

As of December 31, 2018, $395.7 million principal amount and $452.3 million principal amount of DASNY bonds issued to finance the design, construction and renovation of court facilities and health facilities, respectively, in the City were outstanding. The court facilities and health facilities are leased to the City by DASNY, with lease payments made by the City in amounts sufficient to pay debt service on DASNY bonds and certain fees and expenses of DASNY.

City University Construction Fund

As of December 31, 2018, approximately $63.7 million principal amount of DASNY bonds, relating to Community College facilities, subject to capital lease arrangements was outstanding. The City and the State are each responsible for approximately one-half of the CUCF's annual rental payments to DASNY for Community College facilities which are applied to the payment of debt service on the DASNY's bonds issued to finance the leased projects plus related overhead and administrative expenses of DASNY.

For further information regarding the particular PBCs included in the City's financial statements, see "APPENDIX B—FINANCIAL STATEMENTS—Notes to Financial Statements—Note A."

SECTION IX: PENSION SYSTEMS AND OPEB

Pension Systems

The City maintains five actuarial pension systems, providing benefits for its employees and employees of various independent agencies (including certain Covered Organizations). Such systems consist of the New York City Employees' Retirement System ("NYCERS"), the Teachers' Retirement System of the City of New York ("TRS"), the New York City Board of Education Retirement System ("BERS"), the New York City Police Pension Fund ("PPF") and the New York City Fire Pension Fund ("FPF") (together, the New York City Retirement Systems, "NYCRS"). Members of these actuarial pension systems are categorized into tiers depending on date of membership. The systems combine features of defined benefit pension plans with those of defined contribution pension plans. Three of the five actuarial pension systems (NYCERS, TRS and BERS) are cost-sharing multiple employer systems that include public employees who are not City employees. Each public employer in these multiple employer systems has primary responsibility for funding and reporting in the employer's financial statements on its share of the systems' liabilities. Total membership in the City's five actuarial pension systems on June 30, 2016 consisted of 379,458 active employees, 339,113 retirees and beneficiaries receiving benefits and other vested members terminated but not receiving benefits, and 29,699 other inactives. Of the total membership of 748,270, City membership was 572,755. The City also contributes to three other pension systems, maintains a closed non-actuarial retirement program for certain retired individuals not covered by the five actuarial pension systems, provides other supplemental benefits to retirees and makes contributions to certain union annuity funds.

Each of the City's five actuarial pension systems is managed by a board of trustees which includes representatives of the City and the employees covered by such system. The City Comptroller is the custodian of, and has been delegated investment responsibilities for, the actuarial pension systems, subject to the policies established by the boards of trustees of the systems and State law. The City Actuary (the "Actuary"), an independent professional who is also the Chief Actuary of each of the five actuarial pension systems, determines annual employer contributions and prepares other actuarial analyses and reports that are used by the City for Financial Plan and financial reporting purposes, as further described below. The State Constitution provides that pension rights of public employees are contractual and shall not be diminished or impaired. Constitutional protection applies only to the basic pension benefits provided through each pension system's Qualified Pension Plan ("QPP") and does not extend to the Variable Supplements Funds ("VSFs") or Tax-Deferred Annuity Programs ("TDA Programs") that are also administered by some of the pension systems, as discussed below.

City Pension Contributions

The City has consistently made its full statutorily required pension contributions based on then-current actuarial valuations. For fiscal years 2017 and 2018, the City's pension contributions for the five actuarial pension systems, plus other pension expenditures, were approximately $9.4 billion and $9.6 billion, respectively, and were in addition to employee contributions. For fiscal years 2017 and 2018, 57% and 59% of the City pension contributions for such years, respectively, were attributable to the amortizations of Unfunded Accrued Liability ("UAL") described herein, see "—*Actuarial Assumptions and Methods*" below.

For the 2018 fiscal year, the City's total annual pension contribution expenditures, including pension costs not associated with the five actuarial pension systems, plus Social Security tax payments by the City for the year, were approximately 43% of total wage and salary costs. In addition, contributions are made by certain component units of the City and other government units directly to the three cost-sharing multiple employer actuarial pension systems on behalf of their participating employees and retirees.

Annual pension contributions for each system are determined by the Actuary using actuarial methods and assumptions that provide for orderly budgeting and planning, and that differ from the assumptions and methodologies used in financial reporting. The annual statutorily required pension contribution has four major cost components: (i) the service or normal cost, which is the cost of the future liability associated with pension benefits earned that year; (ii) scheduled amortization of the initial UAL established as of June 30, 2011; (iii) amortization of positive or negative adjustments to UAL from factors such as net investment returns above or below the assumed rate of return, changes in or deviations from actuarial assumptions and methods, and changes in benefits; and (iv) administrative expenses. Investment earnings reflect the impact of transfers within each pension system between the QPP and other employee benefit funds, including TDA Programs and VSFs, and within each QPP with regard to certain supplemental, voluntary member contribution accounts, as discussed below.

For further information on phasing in of changes in UAL, see "—*Actuarial Assumptions and Methods*" below. For further information on potential transfers within the pension systems, see "—*Fiduciary Fund Reporting*" below.

Each year, the Actuary provides each NYCRS with preliminary and final appropriation amounts equal to the statutorily required pension contribution for its respective QPP. For the NYCRS that are multi-employer plans, the Actuary also provides a schedule of allocations among the participating employers. The Boards of Trustees of each QPP vote to adopt the appropriation amount and the participating employers are billed. Interest is charged on late payments, if any.

The New York City Off-Track Betting Corporation ("OTB") is a participating employer in NYCERS. OTB, which operated off-track betting facilities in the City, functioned under the direction of a board appointed by the Governor with input from leaders of the State legislature at the time it ceased operations in December 2010. The pension obligations of OTB have continued to accrue since it ceased operations, and the cumulative unfunded liability as of January 1, 2019 is approximately $132 million. In March 2018 NYCERS identified the State as a successor obligor to OTB. The State's position with respect to the pension obligations of OTB is not known at this time.

The following tables summarize the components of City pension contributions by system for fiscal years 2017, 2018 and 2019 (preliminary).

New York City Retirement Systems
Components of Employer Contribution—City Share

Fiscal Year 2017
(In Millions)

	NYCERS[1]	TRS[2]	BERS[3]	POLICE	FIRE
Entry Age Normal Cost	$ 837.5	$1,097.2	$125.9	$1,236.1	$ 409.4
Initial UAAL Contribution	$ 965.0	$1,743.4	$114.3	$1,150.7	$ 618.1
Subsequent UAAL Contribution	$ (25.7)	$ 903.5	$ 35.4	$ (113.5)	$ 33.7
Administrative Expenses	$ 31.3	$ 51.6	$ 12.5	$ 20.5	N/A
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$1,808.1	$3,795.7	$288.1	$2,293.8	$1,061.2

Fiscal Year 2018
(In Millions)

	NYCERS[1]	TRS[2]	BERS[3]	POLICE	FIRE
Entry age Normal Cost	$ 837.2	$1,138.4	$137.9	$1,271.5	$ 414.1
Initial UAAL Contribution	$ 994.0	$1,795.8	$117.7	$1,185.2	$ 636.6
Subsequent UAAL Contribution	$ (26.0)	$ 793.2	$ 48.3	$ (62.7)	$ 149.7
Administrative Expenses	$ 33.4	$ 52.8	$ 14.7	$ 21.2	N/A
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$1,838.6	$3,780.2	$318.6	$2,415.2	$1,200.4

Fiscal Year 2019—Preliminary
(In Millions)

	NYCERS(1)	TRS(2)	BERS(3)	POLICE	FIRE
Entry age Normal Cost	$ 870.2	$1,232.9	$144.0	$1,365.4	$ 433.5
Initial UAAL Contribution	$1,023.8	$1,849.7	$121.2	$1,220.8	$ 655.7
Subsequent UAAL Contribution	$ (28.1)	$ 550.6	$ 8.8	$ (50.8)	$ 157.1
Administrative Expenses	$ 35.5	$ 56.4	$ 17.7	$ 21.7	$ —
Interest on Late Employer Contributions	$ —	$ —	$ —	$ —	$ —
Total	$1,901.4	$3,689.5	$291.7	$2,557.1	$1,246.3

(1) Includes the New York City School Construction Authority, Transit Police and CUNY Community Colleges.

(2) Includes CUNY Community Colleges.

(3) Includes the New York City School Construction Authority and CUNY Community Colleges.

The Financial Plan reflects projected City pension contributions of $9.850 billion, $9.951 billion, $10.418 billion, $10.864 billion, and $11.070 billion for fiscal years 2019 through 2023, respectively. These projections are based on the valuation from the Actuary as of June 30, 2017. The pension contributions projected in the Financial Plan reflect changes to funding assumptions and methods first implemented in 2012 as recommended by the Actuary and adopted by the boards of trustees of each of the City's five actuarial pension systems. The Financial Plan also reflects amortization of subsequent positive or negative adjustments to UAL as described above, including the phase-in of QPP investment earnings in fiscal years 2011 – 2018, as calculated by the Actuary. Investment earnings varied by system and are calculated differently from the investment performance reported by the City Comptroller's office, as described below. The adjustments to UAL reflected in the Financial Plan also include increased pension contributions resulting, in part, from recommendations of an independent actuarial auditor engaged, pursuant to the City Charter, to review actuarial methods and assumptions every two years, as described below. Such changes to actuarial methods and assumptions resulted in an annual increase of approximately $600 million to the City's annual pension contribution starting in fiscal year 2016.

The City Comptroller's office reports investment returns using the time-weighted calculation methodology, which facilitates measurement of relative performance across systems. Using this methodology, aggregate returns on investment assets advised by the Comptroller's office for fiscal years 2011 to 2018 were 23.23%, 1.37%, 12.12%, 17.48%, 3.15%, 1.46%, 12.95%, and 8.67%, respectively. Returns in fiscal years 2011 through 2014 were gross of public market fees and net of private market fees. Returns for fiscal years 2015 to 2018 were net of all investment fees. These returns varied by pension system. These reported returns refer only to those investment assets of the pension systems for which the City Comptroller's office is the investment advisor. These investment assets exclude certain QPP funds advised outside the City Comptroller's office, and include pension system assets outside the QPPs. The returns do not reflect the impact of transfers within each pension system between the QPP and other employee benefit funds, such as TDAs and VSFs, or within each QPP with regard to certain supplemental, voluntary member contribution accounts. Such transfers can be material, and, as such, the earnings used by the Actuary in determining required City contributions may differ materially from the earnings implied by the investment-only rates of return above.

Actuarial Assumptions and Methods

This section describes the actuarial assumptions and methods used for determining the City's pension contributions. As mentioned previously, these actuarial assumptions and methods may differ from those used for financial reporting, or for other pension system administrative purposes.

An actuarial valuation requires an initial set of information and assumptions about future events. Pursuant to the City Charter, studies of the actuarial assumptions used to value liabilities of the five actuarial pension systems are conducted by an independent actuarial firm every two years. Such studies assess the reasonableness of the

Actuary's calculations of the employer contributions and make recommendations about actuarial methods and assumptions. The Actuary may recommend changes to methods and assumptions based on these studies. In addition, every four to seven years, the Actuary conducts a full review of the actuarial assumptions and methods used to fund the NYCRS. These reviews may lead to recommendations of changes to the actuarial assumptions and methods. The most recent changes were presented in reports that are referred to as the "Silver Books" and were published during February 2012. The Silver Books presented the recommendations of the Actuary for determining employer contributions to the NYCRS, and where applicable, Net Pension Liabilities of the NYCRS, beginning in fiscal year 2012.

The implementation of the Actuary's Silver Books recommendations involved adoption of the tabular (i.e., demographic) assumptions by the Boards of Trustees of the NYCRS; enactment of legislation by the New York State Legislature and Governor for the Actuarial Interest Rate, Actuarial Cost Method, and Amortization Period and Method for any UAL; and establishment of an Actuarial Value of Assets ("AVA") by the Actuary. The AVA is calculated as a modified six-year moving average of the market value of assets, starting with the market value reset as of June 30, 2011.

The actuarial methods and assumptions adopted in 2012 included an Actuarial Interest (discount) Rate assumption of 7% per annum which is based on investment earnings net of investment expenses, updated mortality tables (which were updated again in December 2015, as discussed below) to account for longer life expectancy, and the use of the Entry Age Actuarial Cost Method. The initial UAL recognized as a result of such changes in assumptions and methods, excluding the December 2015 mortality change, is being amortized, with interest of 7% through City contributions over a 22-year period that commenced in fiscal year 2012 with dollar payments increasing at a rate of 3% per year.

Under the 2012 methods and assumptions, emerging unfunded liabilities are recognized and amortized over closed, fixed periods using level dollar payments. Future UAL attributable to actuarial gains and losses is amortized over 15 years; future UAL attributable to changes in actuarial assumptions and methods is amortized over 20 years; and future changes in UAL attributed to benefit improvements is generally amortized over periods reasonably consistent with the remaining working lifetimes of those impacted. Investment earnings above or below expectation are reflected in City pension contributions in two stages: first, the annual earnings above or below expectation are phased in to the actuarial value of assets over a six-year period, with 15% of the total recognized per year in years 1-4 and 20% per year in years 5 and 6. Second, the portion recognized in each year is then amortized over a 15-year period for the purpose of calculating the City's annual pension contributions. The Actuary uses investment earnings in this calculation and does not calculate an investment rate of return.

The 2012 methods and assumptions included continued use of the One Year Lag methodology, where census data and asset information as of the June 30 second preceding a fiscal year is used to determine the employer contribution for that fiscal year. For example, for the fiscal year 2018 pension contribution calculation, employee data and the AVA as of June 30, 2016 were used. On March 12, 2018, an independent actuarial auditor released a report analyzing experience for the four-year and ten-year periods ending June 30, 2015. Such report confirmed that the Actuary's calculations of employer contributions for fiscal year 2015 were reasonable, but recommended the consideration of certain changes to the calculations, including a recommendation to prefund the cost of providing a guaranteed return of 8.25% on the TDA fixed fund accounts for certain members of TRS and BERS. Previously, this cost was treated as an actuarial loss and amortized in future years' contributions. This change increased the final fiscal year 2018 contribution and contributions for future years by approximately $50 million per year. For further information on TDAs, see "—Fiduciary Fund Reporting" below.

The Financial Plan does not reflect the impact of an adjustment to the number of NYCERS members resulting from a previous calculation error, which is expected to increase the City's required pension contribution by $150 million to $200 million annually commencing in fiscal year 2019. The Financial Plan also does not reflect the cost of changes to pension assumptions and methods proposed by the Actuary following draft recommendations by an independent actuarial consultant in December 2018. Such recommended changes have been accepted by NYCERS and, if accepted by all five pension systems, would result in increased pension contributions by the City of $30 million annually. The Financial Plan includes reserves of $100 million in each of fiscal years 2019 and 2020 and $400 million in each of fiscal years 2021 through 2023, which would be available to cover such increased pension contributions. The Financial Plan also reflects increases in pension contributions due to recent collective bargaining agreements for the 2017-2021 pattern.

In December 2015, the Actuary proposed updated post-retirement mortality assumptions for use in determining employer QPP contributions beginning in fiscal year 2016. The Boards of Trustees of each of the five actuarial pension systems adopted the proposed assumptions. In addition, beginning in fiscal year 2016, the Actuary revised the Actuarial Asset Valuation Method to constrain the AVA to be no more than 120% and no less than 80% of the market value of assets, known as a 20% corridor.

The Silver Books are available on the web site of the New York City Office of the Actuary (www.nyc.gov/actuary). Such website, and the information and links contained therein, are not incorporated into, and are not part of, this section.

Financial Reporting

City Pension Fund Financial Reporting

The City accounts for its pensions consistent with the requirements of GASB. In fiscal year 2014, the City implemented GASB 68. The GASB 68 standards apply to actuarial calculations for financial reporting but not to the actuarial calculation of annual City employer pension contributions, which continue to be determined as described above. The City implemented GASB 68 concurrently with the implementation by the five major actuarial pension systems of GASB 67.

GASB 68 changed many but not all aspects of calculating the City's reported pension fund assets and liabilities. In broad terms, GASB 68 separates pension accounting in the City's government-wide financial statements from the phased or smoothed asset and liability figures that the Actuary uses in determining the City's annual pension contributions, as described above. For financial reporting purposes, most changes in assets and liabilities are reflected in the year in which they occur. As a result, pension fund accounting under GASB 68 has increased year-to-year volatility in reported net pension liability. Under GASB 68, net pension liabilities are reported on employers' Government-Wide Statements of Net Assets when the fair value of pension assets falls short of actuarially calculated liabilities, when both are measured as of the same date (fiscal year end). For the cost-sharing multiple employer pension systems, only the City share of net pension liabilities is reported in the Government-Wide Statement of Net Assets. As reported in the Government-Wide financial statements for fiscal years 2014 through 2018, the City membership (active, inactive and retired) and the City's share of total pension liability, Plan fiduciary net position, net pension liability, and plan fiduciary net position as a percent of total pension liability, aggregated across the five pension systems, were as follows:

Summary of City Pension Information, Fiscal Years 2014-2018 (1)
(Dollars in billions)

	2014	2015	2016	2017	2018
City Membership (active, inactive, retired)(2)	546,519	545,646	551,080	559,210	572,755
Total Pension Liability (TPL)	$169.7	$177.3	$188.2	$195.2	$198.2
Less Plan Fiduciary Net Position (PFNP)	123.1	124.2	123.4	138.9	150.4
Net Pension Liability (NPL)	$ 46.6	$ 53.1	$ 64.8	$ 56.3	$ 47.8
PFNP as percent of TPL	72.5%	70.1%	65.6%	71.2%	75.9%

Source: NYC CAFRs

(1) Data are aggregated across the five pension systems. Funding amounts and percentages vary between systems. Data for NYCERS, PPF and FPF include the QPP and VSFs, and data for TRS and BRS are QPP only.

(2) Membership data for fiscal year 2014 are as of June 30, 2012; for fiscal year 2015, as of June 30, 2013; for fiscal year 2016, as of June 30, 2014; for fiscal year 2017, as of June 30, 2015; and for fiscal year 2018, as of June 30, 2016.

The reported net pension liabilities do not include future payments on fixed return TDA funds, described below, where the statutory rate of interest for members is higher than the assumed 7% return on QPP assets.

For further information see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT."

Fiduciary Fund Reporting

The fiscal year 2018 CAFR contains Fiduciary Funds financial statements for each of the five actuarial pension systems. These financial statements report on the entirety of the five systems, not just the City share. Each of the five actuarial pension systems administers programs in addition to its respective QPP, and these programs are also reported as part of each system's financial statements in the Fiduciary Fund financial statements. The City CAFRs for fiscal years 2014 through 2018 report a net position (assets plus deferred outflows, less liabilities and deferred inflows), for the five actuarial pension systems, in aggregate, restricted for QPPs, restricted for TDAs, and restricted for VSFs as shown in the following chart. For further information, see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Pension and Other Employee Benefit Trust Funds Combining Statement of Fiduciary Net Position."

New York City Retirement Systems
Aggregate Net Position,

Fiscal Years 2014-2018
(In Millions)

	2014	2015	2016	2017	2018
Net Position:					
Restricted for QPPs	$144,537.9	$145,769.3	$146,917.9	$163,025.5	$175,638.0
Restricted for VSFs	3,540.8	3,775.1	2,642.2	4,911.9	5,926.4
Restricted for TDAs	27,311.0	28,844.9	30,074.4	32,851.8	35,349.8
Total Net Position	$175,389.7	$178,389.3	$179,634.5	$200,789.2	$216,914.2

Source: City CAFRs

In addition to the QPPs, TRS and BERS administer TDA Programs. Benefits provided under the TDA programs are derived from members' accumulated contributions. No direct contributions are provided by employers. However certain investment and benefit options, if selected by TDA members, may indirectly affect employer financial obligations, as described below. As of June 30, 2017 and 2018, the total fiduciary net position restricted for TDA benefits was $32.9 billion and $35.3 billion, respectively. Each of the TDA Programs has at least two investment options, broadly categorized as a fixed return fund and one or more variable return funds.

Deposits from members' TDA Program accounts into the fixed return funds are used by the respective QPP to purchase investments, and such TDA Program accounts are credited with a statutory rate of interest, currently 7% for United Federation of Teachers members and 8.25% for all other members. If earnings on the respective QPP are less than the amount credited to the TDA Program members' accounts, the higher cost to the QPP could require additional payments by the City to the pension funds. If the earnings are higher, then lower payments by the City to the pension funds could be required. The City's pension fund contribution methodology described above incorporates these effects.

All investment securities purchased and invested by the QPPs with TDA Programs' fixed return funds' balances are owned and reported by the QPP. A receivable due from the respective QPP equal in amount to the aggregate original principal amounts contributed by TDA Programs' members to the respective fixed return funds, plus accrued interest at the statutory rate, is owned by each of the TDA Programs. The balances of TDA Program fixed return funds held by the TRS QPP as of June 30, 2017 and 2018 were $22.0 billion and $23.7 billion, respectively, and interest paid on TDA Program fixed return funds by the TRS QPP for the years then ended were $1.5 billion and $1.6 billion, respectively. The balances of TDA Program fixed return funds held by the BERS QPP as of June 30, 2017 and 2018 were $1.4 billion and $1.6 billion, respectively, and interest paid on TDA Program fixed return funds by the BERS QPP for the years then ended were $106.6 million and $128.0 million, respectively. Deposits from members' TDA Program accounts into the variable return funds are credited with actual returns on the underlying investments of the specific fund selected. Members may reallocate all or a part of their TDA Program contributions between the fixed and variable return funds on a quarterly basis. Retired TDA members may make withdrawals from their TDA accounts or elect to take the balance in the form of an annuity that is calculated based on a statutory rate of interest and mortality assumptions, which are separate and different from the mortality assumptions used in pension liability calculations. Once an annuity has been selected by a member, the payment of those benefits is guaranteed by the QPP.

In addition, certain Tier I and Tier II pension plan members have the right to make supplemental, voluntary member contributions into the QPPs. These contributions are credited with interest at rates set by statute or, for certain employees that may choose variable return investments, the actual return, and may be withdrawn or annuitized at retirement. In general, the assets and liabilities associated with these member contributions are included in the reported assets and actuarially-determined net pension obligations of the respective plans. Ultimately, investment earnings of the fixed rate funds that are less than the amounts credited to the members could result in additional required contributions by the City to the pension funds and investment earnings that are greater than the amounts credited to the members could result in lower required contributions by the City to the pension funds.

Pursuant to State law, certain retirees of NYCERS, PPF and FPF are eligible to receive scheduled supplemental benefits from VSFs. Where assets in the VSFs are insufficient, NYCERS, PPF and FPF are required to transfer assets to their respective VSFs to fund those payments that are statutorily guaranteed. The effects of these transfers are included by the Office of the Actuary in calculating required employer contributions to the pension funds. However under current State law, the VSFs are not pension funds or retirement systems and are subject to change by the State legislature.

For information regarding the amount and investment allocation of investments in the pension systems see "Section III: Governmental and Financial Controls." For further information regarding the City's pension systems see "Appendix B—Comprehensive Annual Financial Report—Notes to Financial Statements—Note E.5," "—Pension and Other Employee Benefit Trust Funds—Combining Statement of Fiduciary Net Position" and "—Required Supplementary Information."

Other Post-Employment Benefits

Post-employment benefits other than pensions (referred to as OPEB), which include health insurance, Medicare Part B premium reimbursements and welfare fund contributions, are provided to eligible retirees of the City and their eligible beneficiaries and dependents.

City OPEB Contributions

OPEB costs are currently paid by the City in each fiscal year on a pay-as-you-go basis. The City is not required by law or contractual agreement to fund the OPEB obligation other than the pay-as-you-go amounts necessary to provide current benefits to eligible retirees of the City and their eligible beneficiaries and dependents. The Financial Plan reflects OPEB costs of $2.486 billion, $2.626 billion, $2.718 billion, $2.856 billion and $3.010 billion in fiscal years 2019 through 2023, respectively.

In 2006, the City created the Retiree Health Benefits Trust (the "RHBT") which is used to receive, hold, and disburse assets accumulated to address the OPEB liabilities. Amounts contributed to the RHBT by the City are held in an irrevocable trust and may not be used for any purpose other than to fund the costs of health and welfare benefits of its eligible participants. In fiscal years 2014 through 2018, the City contributed $864 million, $955 million, $500 million, $100 million and $100 million, respectively, to the RHBT in excess of the City's contributions for OPEB costs due in those fiscal years, which resulted in increases in the net assets in the RHBT. The following table shows the net position of the RHBT as of the end of each of fiscal years 2014 through 2018.

Retiree Health Benefits Trust
Net Position
(In Millions)

2014	$2,378
2015	3,397
2016	4,036
2017	4,654
2018	4,766

Source: NYC CAFRs

Actuarial Assumptions and Methods

In June 2015, GASB issued Statement No. 74 ("GASB 74") and Statement No. 75 ("GASB 75"), which update financial reporting standards for state and local government OPEB Plans. GASB 74 applies to financial reporting by post-employment benefit plans and GASB 75 covers reporting on post-employment benefit plans by employers. The City implemented GASB 74 and GASB 75 for its financial statements beginning in fiscal year 2017. The fiscal year 2018 CAFR reported the City's net OPEB liabilities as $88.4 billion and $98.5 billion as of June 30, 2017 and 2018, respectively.

The actuarial assumptions and methods used in the OPEB valuations are a combination of those used in the NYCRS pension valuations, such as the Entry Age Actuarial Cost Method, and certain demographic and economic assumptions proposed by the Actuary that were adopted by each respective Board of Trustees of NYCRS in fiscal years 2012 and 2016 as discussed above in "City Pension Contributions—*Actuarial Assumptions and Methods*," in addition to those specific to the OPEB valuations, such as the discount rate described below. As required under GASB 75, the net OPEB liability attributable to benefit changes is now recognized in the current reporting period, investment earnings above or below expectations are recognized over a five year period, and other actuarial liability gains and losses are amortized over the average remaining working lifetimes of all plan members, including inactive plan members. In addition, as required under GASB 75, OPEB valuations assume a discount rate based on a long-term expected rate of return on assets and the index rate for certain highly rated municipal bonds. The fiscal year 2018 OPEB valuation assumed a discount rate of 3.01% per annum.

Summary OPEB Information

As reported in the City's financial statements, the following table summarizes City OPEB information for fiscal years 2016 through 2018.

Summary of City OPEB Information, Fiscal Years 2016 – 2018
(Dollars in billions)

	2016	2017	2018
Participants (active/inactive plan members receiving or eligible to receive benefits)	544,120	554,028	563,901
Total OPEB Liability (TOL)	$ 98.54	$ 93.08	$ 103.26
Less Fiduciary Net Position (FNP)	(4.04)	(4.65)	(4.77)
Net OPEB Liability (NOL)	94.50	88.42	98.50
FNP as percent of TOL	4.1%	5.0%	4.6%
Covered Employee Payroll	$ 24.27	$ 25.18	$ 26.23
NOL as a percent of Covered Employee Payroll	389.4%	351.2%	375.5%

Source: NYC CAFRs
Totals may not add due to rounding.

For further information regarding OPEB, see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note E.4," "—Pension and Other Employee Benefit Trust Funds—Combining Statement of Fiduciary Net Position" and "—Required Supplementary Information."

SECTION X: OTHER INFORMATION

Litigation

The following paragraphs describe certain material legal proceedings and claims involving the City and Covered Organizations other than routine litigation incidental to the performance of their governmental and other functions and certain other litigation arising out of alleged constitutional violations, torts, breaches of contract and other violations of law and condemnation proceedings. While the ultimate outcome and fiscal impact, if any, on the City of the proceedings and claims described below are not currently predictable, adverse determinations in certain of them might have a material adverse effect upon the City's ability to carry out the Financial Plan. The City has estimated that its potential future liability on account of outstanding claims against it as of June 30, 2018 amounted to approximately $6.7 billion. See "SECTION VII: FINANCIAL PLAN—Assumptions—*Expenditure Assumptions*—2. OTHER THAN PERSONAL SERVICES COSTS—*Judgments and Claims.*"

Taxes

1. Numerous real estate tax *certiorari* proceedings alleging overvaluation, inequality and illegality are pending against the City. Based on historical settlement activity, and including an estimated premium for inequality of assessment, the City estimates its potential future liability for outstanding *certiorari* proceedings to be $1,208 million at June 30, 2018. For a discussion of the City's accounting treatment of its inequality and overvaluation exposure, see "APPENDIX B—COMPREHENSIVE ANNUAL FINANCIAL REPORT—Notes to Financial Statements—Note D.5."

2. Con Edison has challenged the City's method of valuation for determining assessments of certain of its properties in two separate actions. Con Edison has challenged the City's tax assessments on its Manhattan power plants and equipment for tax years 1994/95 through 2016/17 and the special franchise assessments on its electric, gas and steam equipment located in the public right of way for tax years 2009/10 through 2016/17 and 2018/19. In March 2018, the City's and State's motions to dismiss challenges to the special franchise assessments for tax years 2009/10 through 2012/13 were granted, leaving four tax years before the court. Con Edison filed Notices of Appeal to this decision on April 10, 2018 and the City expects to file reply papers in April 2019. With respect to the East 74th Street power plant, a monetary settlement was finalized and paid in the approximate amount of $31,000,000 from City monies appropriated for such expenditures, and a monetary settlement in the approximate amount of $20,000,000 was finalized and paid from City monies appropriated for such expenditures for the West 59th Street power plant. Con Edison and the City are presently negotiating a settlement for the East 60th Street Steam Plant. Disbursements will be made from City monies appropriated for such expenditures. The remaining challenges could result in substantial real property tax refunds in fiscal years 2019 and beyond.

3. Tax Equity Now New York LLC (composed of certain advocacy groups and owners and tenants of properties in the City) commenced an action in New York State Supreme Court on April 24, 2017 against the City and the State. The action alleges that the City's real property tax system violates the State and federal constitutions as well as the Fair Housing Act. The action further alleges the valuation methodology as mandated by certain provisions of the State Real Property Tax Law results in a disparity and inequality in the amount of taxes paid by black and hispanic Class 1 property owners and renters. The City and State defendants moved to dismiss the case. In a decision dated September 24, 2018, the Court denied the City's motion to dismiss the complaint and partially granted the State's motion to dismiss the complaint. The City and State filed respective Notices of Appeal of the lower court decision on October 5, 2018 and on November 1, 2018 the City made a motion before the trial court for a declaration that a statutory stay of the lower court proceeding was in effect by virtue of its filing the Notice of Appeal, or in the alternative, for a discretionary stay of all proceedings pending the appeal. The State joined in seeking a discretionary stay of the lower court proceedings pending appeal. In a decision dated November 30, 2018, and released on December 4, 2018, the lower court granted the respective motions of the City and State to stay all proceedings pending appeal of the court's decision denying the motions to dismiss the complaint in its entirety. Tax Equity Now New York LLC shortly thereafter appealed the lower court's stay decision to the Appellate Division, First Department and the matter has been fully briefed by the parties.

Miscellaneous

1. Complaints on behalf of approximately 11,900 plaintiffs alleging respiratory or other injuries from alleged exposures to World Trade Center dust and debris at the World Trade Center site or the Fresh Kills landfill were commenced against the City and other entities involved in the post-September 11 rescue and recovery process. Plaintiffs include, among others, Department of Sanitation employees, firefighters, police officers, construction workers and building clean-up workers. The actions were consolidated in federal District Court pursuant to the Air Transportation and System Stabilization Act, which grants exclusive federal jurisdiction for all claims related to or resulting from the September 11 attack. A not-for-profit "captive" insurance company, WTC Captive Insurance Company, Inc. (the "WTC Insurance Company") was formed to cover claims against the City and its private contractors relating to debris removal work at the World Trade Center site and the Fresh Kills landfill. The WTC Insurance Company was funded by a grant from the Federal Emergency Management Agency in the amount of $999,900,000. On June 10, 2010, the WTC Insurance Company announced that a settlement was reached with attorneys for the plaintiffs. On November 19, 2010, District Court Judge Hellerstein announced that more than the required 95% of plaintiffs agreed to the settlement, thus making it effective. Approximately $700 million has been paid under the settlement, leaving residual funds of approximately $290 million to insure and defend the City and its contractors against any new claims. Since the applicable statute of limitations runs from the time a person learns of his or her injury or should reasonably be aware of the injury, additional plaintiffs may bring lawsuits in the future for late emerging cancers, which could result in substantial damages. No assurance can be given that the remaining insurance will be sufficient to cover all liability that might arise from such claims.

2. In 1996, a class action was brought against the City Board of Education and the State under Title VII of the Civil Rights Act of 1964 alleging that the use by the Board of Education of two teacher certification examinations mandated by the State had a disparate impact on minority candidates. In 2006, the United States Court of Appeals for the Second Circuit dismissed the claims against the State. In December 2012, the District Court decided a controlling legal question against the City. On February 4, 2013, the Second Circuit affirmed the District Court's decision. The District Court has appointed a Special Master to oversee claimants' individualized hearings both as to damages and eligibility for Board of Education employment. The hearings relate to members of the class that took the Liberal Arts and Science Test ("LAST") from 1996 to 2004. Currently, approximately 4,000 such individuals have submitted claim forms and may be eligible for damages. On June 5, 2015, the Court ruled that a second version of LAST, LAST-2, that was administered from 2004 to 2014, violated Title VII because it did not measure skills necessary to do the job. Currently, up to 700 potential LAST-2 class members have submitted claim forms and may be eligible for damages. In August 2015, the Court found that the State's new teacher certification test, the Academic Literacy Skills Test (ALST), administered since Spring 2014, was not discriminatory and evaluated skills necessary to do the job. Hearings to determine each claimant's damages are ongoing but no final judgments have been entered. The potential cost to the City is uncertain at this time but could be significant.

3. The Office of Inspector General of the United States Department of Health and Human Services ("OIG") conducted a review of Medicaid Personal Care Services claims made by providers in the City from January 1, 2004 through December 31, 2006, and concluded that 18 out of 100 sampled claims by providers failed to comply with federal and State requirements. The Medicaid Personal Care Services program in the City is administered by the City's Human Resources Administration. In its audit report issued in June 2009, the OIG, extrapolating from the case sample, estimated that the State improperly claimed $275.3 million in federal Medicaid reimbursement during the audit period and recommended to the Centers for Medicare and Medicaid Services ("CMS") that it seek to recoup that amount from the State. To the City's knowledge, CMS has not taken any action to recover amounts from the State based on the findings in this audit, but no assurance can be given that it will not do so in the future.

Section 22 of Part B of Chapter 109 of the Laws of 2010 amended an earlier unconsolidated State law to set forth a process under which the State Department of Health may recover from a social services district, including the City, the amount of a federal Medicaid disallowance or recovery that the State Commissioner of Health "determines was caused by a district's failure to properly administer, supervise or operate the Medicaid program." Such a determination would require a finding that the local agency had "violated a statute, regulation or clearly articulated written policy and that such violation was a direct cause of the federal disallowance or recovery." It is not clear whether the recovery process set out in the amendment can be applied to a federal disallowance against the State based upon a pre-existing audit; however, in the event that it does, and results in a final determination by the State Commissioner of Health against the City, such a determination could result in substantial liability for the City as a result of the audit.

4. In July 2014 disability rights advocates organizations and disabled individuals commenced a putative class action against the City in the United States District Court for the Southern District of New York. Plaintiffs allege, among other matters, that the City has not complied with certain requirements of the Americans with Disabilities Act with respect to the installation, configuration and maintenance of curb ramps on sidewalks and requirements for sidewalk walkways in general in Manhattan south of 14th Street. In March 2019, plaintiffs and the City agreed to a settlement that will require the City to undertake a comprehensive survey of all City street corners and to install Americans with Disabilities Act-compliant curb ramps on all City street corners on an agreed upon schedule. The court issued an order granting preliminary approval of the settlement subject to completion of a fairness hearing process.

5. On December 21, 2015, the United States Attorney for the Southern District of New York ("USAO-SDNY") sent a findings letter to the DOE indicating various areas in which he alleged that the City elementary schools were not accessible to students with disabilities in violation of the Americans with Disabilities Act of 1990. The City and USAO-SDNY are currently in discussion as to the matters raised in the letter. While the City has an ongoing program to make smaller schools accessible, an acceleration of alterations to City elementary schools to address concerns raised in the findings letter could result in a substantial acceleration of compliance costs to the City but not damages.

6. In late 2015, a putative class action was filed against the City and the New York City Taxi and Limousine Commission ("TLC") alleging numerous commercial claims in connection with the November 2013 and February 2014 auctions of wheelchair accessible taxi medallions. Plaintiffs allege that the TLC negligently posted false information about average medallion transfer prices in advance of the auction falsely inducing plaintiffs to bid higher amounts for their medallions as well as failed to inform prospective bidders that the TLC would allow black cars to utilize electronic apps to prearrange rides, which plaintiffs argue violates their street hail exclusivity. In June 2017, the City's motion for summary judgment was granted due to plaintiffs' failure to file notices of claim with the Office of the City Comptroller. Plaintiffs withdrew their appeal of that ruling to pursue related actions subsequently filed. On January 31, 2017 and on March 23, 2017 in State Supreme Court, Queens County, a second and a third putative class action were filed alleging similar claims. In September 2017, the Court dismissed all but the breach of contract rescission and implied covenant of good faith and fair dealing claims in the second filed action. Motion practice remains ongoing in the second filed action. The Court recently denied plaintiffs' motion for class certification as premature. In November 2017, the Court dismissed the third filed action, which plaintiffs appealed. In March 2019, the Court granted the plaintiffs' motion to reargue and the discovery is underway. If a class of plaintiffs who purchased medallions at the auctions were certified and were to prevail in any of the remaining described cases, damages of several hundred million dollars could be sought.

7. In an action filed in December 2015, plaintiffs that include owners of taxi medallions, taxi drivers, groups that finance taxi medallions, and taxi medallion interest groups, raised numerous constitutional claims challenging regulations on taxi medallions that allegedly are not applied to for-hire vehicles ("FHVs") that operate via electronic apps. The plaintiffs also claimed that such FHVs benefit from additional TLC regulations that effected an alleged taking of the plaintiffs' taxi medallions. In March 2017, the City was granted its motion to dismiss. The U.S. Court of Appeals for the Second Circuit upheld the dismissal of all federal claims in May 2018, while indicating that it would not rule on plaintiffs' takings claim because plaintiffs failed to avail themselves of State procedures for seeking remedy. Although plaintiffs may elect to file a takings claim in State court, in a May 2018 decision on a similar case that did not seek monetary relief, the Supreme Court of the State of New York, Appellate Division, Second Judicial Department opined that the TLC's actions permitting FHVs to operate via electronic apps do not constitute a taking under State law. If the plaintiffs were to ultimately prevail on a takings claim, the City could be subject to substantial liability.

Environmental Matters

Sandy

On Monday, October 29, 2012, Sandy hit the Mid-Atlantic East Coast. The storm caused widespread damage to the coastal and other low lying areas of the City and power failures in various parts of the City, including most of downtown Manhattan. On January 29, 2013, President Obama signed legislation providing for approximately $50.5 billion in storm-related aid for the region affected by the storm. Although it is not possible for the City to quantify the full, long-term impact of the storm on the City and its economy, the current estimate of the direct costs to the City, NYCHH and NYCHA is approximately $10.7 billion (comprised of approximately $1.8 billion of expense costs and approximately $8.9 billion of capital project costs). Such direct costs represent funding for emergency response, debris removal, emergency protective measures, repair of damaged infrastructure and long-term hazard mitigation investments. In addition, the City is delivering Sandy-related disaster recovery assistance services, benefiting impacted communities, businesses, homeowners and renters, which the City anticipates will be fully reimbursed by federal funds.

The Financial Plan assumes that the direct costs described above will largely be paid from non-City sources, primarily the federal government, and that the disaster assistance services costs described above will be fully reimbursed by federal funds. The City expects reimbursements to come from two separate federal sources of funding, FEMA and HUD. The City has secured approximately $10.4 billion in FEMA assistance and other federal emergency response grants. The maximum reimbursement rate from FEMA is 90% of total costs. Other federal emergency response grants may have larger local share percentages. The City expects to use $734 million of Community Development Block Grant Disaster Recovery funding allocated by HUD to meet the local share requirements of the FEMA funding, as well as recovery work not funded by FEMA or other federal sources. This allocation would be available to fill gaps in such FEMA funding. As of December 31, 2018, the City, NYCHH and NYCHA have received $3.1 billion in reimbursements from FEMA for the direct costs described above. In addition, HUD has made available over $4.2 billion, of which over $3.0 billion has been received through December 31, 2018 for the direct costs and disaster recovery assistance services described above. No assurance can be given that the City will be reimbursed for all of its costs or that such reimbursements will be received within the time periods assumed in the Financial Plan.

Climate Change

In June 2013, the City released a report, updated in April 2015 with the release of *One New York: the Plan for a Strong and Just City*, which analyzed the City's climate risks and outlined recommendations to address those risks (the "OneNYC Report"). The City issues progress reports to the OneNYC Report annually, with the most recent issued in April 2018. A new update to the OneNYC Report is expected to be issued in April 2019. As stated in the section entitled "Vision 4" in the OneNYC Report, the City's climate resiliency planning is based on the climate change impact projections from the New York City Panel on Climate Change ("NPCC"), a body of more than a dozen leading independent climate and social scientists. The NPCC has identified that the City is already experiencing the impacts of climate change and projects dramatic impacts from climate change on the City in the future. The NPCC is required to make recommendations to the City regarding climate change projections at least every three years, and has published four reports, most recently in March 2019.

Building on the recommendations contained in the Report, the City is in the process of implementing, over the next ten years, climate resiliency projects costing in excess of $20 billion, most of which are dedicated to areas previously affected by Sandy and some of which are directed toward mitigating the risks identified in the NPCC report. Such plans include both stand-alone resiliency projects and the integration of resiliency protection into the City's ongoing investments. These projects are in various stages of feasibility review, design and construction and/or implementation. Funding for these projects is expected to come from City, State and federal sources. Some projects are expected to require additional funding to the extent that they are in the planning stages or current funding does not provide for the costs of construction. In addition to such projects, the City expects that additional resiliency projects will be identified and implemented in the coming years, including additional projects inside and outside of the areas affected by Sandy and addressing risks identified in the NPCC report including coastal storms, sea level rise, extreme heat and intense rainfall.

In 2015, FEMA issued preliminary updated flood insurance rate maps (FIRMs), which would have expanded the 100-year floodplain beyond the areas designated in the flood maps issued in 2007. The City appealed the 2015 preliminary flood maps challenging the modelling FEMA used to develop them. The 2015 preliminary flood maps were adopted into the building code, but the prior 2007 flood maps remain in effect for flood insurance purposes. In 2016, FEMA agreed with the City's appeal, and the City is currently working with FEMA to update the maps. The new maps are expected to generally expand the 100-year floodplain from the 2007 flood maps and may cover different areas than the 2015 preliminary flood maps. Such expansion could negatively impact property values in those newly designated areas. In addition, an increase in areas of the City susceptible to flooding resulting from climate change could result in greater recovery costs to the City if flooding were to occur within such larger areas.

On April 12, 2018, the National Association of Manufacturers released a letter (the "NAM Letter") to the SEC dated March 27, 2018, asking the SEC to investigate the possibility that certain California municipalities and the City, which are separately suing certain oil companies for damages resulting from climate change, had misleading statements or omissions in their respective bond official statements with regard to the impact of climate change on such municipalities. The City believes that the allegations set forth in the NAM Letter with respect to the City are without merit.

Superfund Designations

On March 2, 2010, the United States Environmental Protection Agency ("EPA") listed the Gowanus Canal (the "Canal"), a waterway located in the City, as a federal Superfund site under the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA"). EPA considers the City a potentially responsible party ("PRP") under CERCLA, based on contaminants from currently and formerly City-owned and operated properties, as well as from the City's combined sewer overflows ("CSOs"). On September 30, 2013 EPA issued the Record of Decision ("ROD") for the Canal, setting forth requirements for dredging contaminated sediment in the Canal and covering it with a cap as well as source control requirements. The ROD requires that two CSO retention tanks be constructed as part of the source control component of the remedy. EPA estimates that the costs of the tanks will be approximately $85 million. The City estimates that the tanks will actually cost in excess of $735 million, which is included in the City's capital plan. EPA also estimates the overall cleanup costs (to be allocated among potentially responsible parties) will be $506 million. The City anticipates that the actual cleanup costs could substantially exceed EPA's cost estimate. On May 28, 2014, EPA issued a unilateral administrative order requiring the City to design major components of the remedy for the Canal, including the CSO retention tanks and other storm water control measures, and remediate the First Street basin (a currently filled-in portion of the Canal). As required under the Unilateral Order, the City submitted its siting recommendations for the CSO tanks to EPA on June 30, 2015. As set forth in a consent order which was fully executed on June 9, 2016, EPA agrees with the City's preferred location for one of the tanks and, with respect to the other tank, EPA has directed the City to site the tank at the City's preferred location subject to certain milestones. An allocation process has recently been completed between the City and approximately 20 other parties to allocate costs of the design of the in-canal portion of the remediation, which includes dredging and capping the canal. Prior to completion of the allocation process, the City paid a portion of the design costs based on an estimate of the City's potential share of the costs. As a result of the agreed upon allocation process, the City will be required to provide additional funding over the next three years. Such additional funding for design costs is not expected to be a material cost.

On September 27, 2010, EPA listed Newtown Creek, the waterway on the border between Brooklyn and Queens, New York, as a Superfund site. On April 6, 2010, EPA notified the City that EPA considers the City a PRP under CERCLA for hazardous substances in Newtown Creek. In its Newtown Creek PRP notice letter, EPA identified historical City activities that filled former wetlands and low lying areas in and around Newtown Creek and releases from formerly City-owned and operated facilities, including municipal incinerators, as well as discharges from sewers and CSO outfalls, as potential sources of hazardous substances in Newtown Creek. In July, 2011, the City entered into an Administrative Settlement Agreement and Order on Consent with EPA and five other PRPs to conduct an investigation of conditions in Newtown Creek and evaluate feasible remedies. The investigation and feasibility study is expected to take approximately eleven years. The City's share will be determined in a future allocation proceeding. The settlement does not cover any remedy that may ultimately be chosen by EPA to address the contamination identified as a result of the investigation and evaluation.

On May 12, 2014, EPA listed the former Wolff-Alport Chemical Company site ("Wolff-Alport Site") in Ridgewood, Queens, as a Superfund site. The designation is based on radioactive contamination resulting from the operations of the Wolff-Alport Chemical Company during the 1920s to 1950s, which, among other things, disposed of radioactive material on-site, on the adjacent right-of-way, and via the sewer system. In 2013, EPA, in cooperation with City and State agencies, completed a response action to implement certain interim remedial measures at the Wolff-Alport Site to address the site's short-term public health risks. In 2015 to 2017, EPA undertook a remedial investigation and feasibility study that assessed, among other things, impacts to the sewer system and City right-of-way from operations at the Wolff-Alport Site, and evaluated a range of remedial alternatives. In September 2017, EPA issued its ROD identifying its selected remedy. The ROD requires jet washing and replacement of sewers, and excavation of contaminated portions of the right-of-way. EPA estimated work for the entire Wolff-Alport Site to cost $39 million. The City anticipates that the costs for work in the sewers and the right-of-way could significantly exceed that estimate. In December 2017, EPA notified the City of its status as a PRP for the work on City property and sought to have the City perform some of the work. In February 2018, the City notified EPA that, subject to certain conditions, it was willing to undertake such work and will negotiate an agreement to address that work.

The National Park Service ("NPS") is undertaking a CERCLA removal action at Great Kills Park on Staten Island to address radioactive contamination that has been detected at the site. Great Kills Park was owned by the City until roughly 1972, when it was transferred to NPS for inclusion in the Gateway National Recreation Area. While owned by the City, the site was used as a sanitary landfill, and the park was also expanded using urban fill. NPS believes that the radioactive contamination is the result of City activities and that the City is therefore liable for the investigation and remediation under CERCLA. The City has negotiated a settlement with NPS to address a remedial investigation and feasibility study. No other PRPs have been identified at this time.

Under CERCLA, a responsible party may be held responsible for monies expended for response actions at a Superfund site, including investigative, planning, removal, remedial and EPA enforcement actions. A responsible party may also be ordered by EPA to take response actions itself. Responsible parties include, among others, past or current owners or operators of a facility from which there is a release of a hazardous substance that causes the incurrence of response costs. The nature, extent, and cost of response actions at either the Canal, Newtown Creek, the Wolff-Alport site or Great Kills Park, the contribution, if any, of discharges from the City's sewer system or other municipal operations, and the extent of the City's liability, if any, for monies expended for such response actions, will likely not be determined for several years and could be material.

Cybersecurity

The City relies on a large and complex technology environment to conduct its operations. As a recipient and provider of personal, private or sensitive information, the City and its agencies and offices face multiple cyber threats including, but not limited to, hacking, viruses, malware and other attacks on computers and other sensitive digital networks and systems. In 2017, pursuant to a Mayoral Executive Order, the Mayor established the New York City Cyber Command (the "Cyber Command"), led by the City's Chief Information Security Officer, to protect the people and technological assets of the City. In collaboration with the New York City Department of Information Technology and Telecommunications, the Cyber Command is charged with setting information security policies and standards, directing citywide cyber defense and incident response, deploying defensive technical and administrative controls and providing guidance to the Mayor and City agencies on cyber defense. In carrying out these functions, it works with a range of City, State, and federal law enforcement agencies, including the New York City Police Department and the Federal Bureau of Investigation's Joint Terrorism Task Force.

While the City conducts periodic tests and reviews of its networks, no assurances can be given that such security and operational control measures will be successful in guarding against all cyber threats and attacks. The results of any successful attack on the City's computer and information technology systems could impact its operations and damage the City's digital networks and systems, and the costs of remedying any such damage could be substantial.

Tax Matters

On the original issuance date of the Bonds, Sidley Austin LLP ("Sidley Austin") delivered its approving opinion in the form attached in APPENDIX C (the "Original Opinion").

On May 29, 2014, Sidley Austin delivered its opinion in the form attached in APPENDIX C (the "Prior Conversion Opinion") as to the legality of the prior conversion in 2014. On June 23, 2014, the date of such prior conversion of the interest rate mode on the Bonds, Fulbright & Jaworski LLP, a member of Norton Rose Fulbright, delivered its opinion in the form attached in APPENDIX C (the "Prior Reissuance Opinion") as to the exclusion of interest on the Bonds from gross income for federal income tax purposes. The Prior Reissuance Opinion concluded that under then existing law interest on the Bonds would not be includable in the gross income of the owners thereof for purposes of federal income taxation; however, interest on the Bonds would be includable in gross income of the owners thereof retroactive to the date of original issuance of the Bonds in the event of a failure by the City to comply with applicable requirements of the Code. The Prior Reissuance Opinion further concluded that, under then existing law, interest on the Bonds would not be a specific preference item for purposes of the federal alternative minimum tax; however, holders may be subject to other federal income tax consequences. In addition, the Prior Reissuance Opinion concluded that, under then existing law, interest on the Bonds would be exempt from personal income taxes of the State of New York and its political subdivisions, including the City.

On the Conversion Date of the interest rate on the Bonds to a fixed rate to maturity, as herein contemplated, Co-Bond Counsel will deliver their opinions (the "No-Adverse-Effect Opinions") to the effect that such conversion will not in and of itself adversely affect the exclusion of interest on the Bonds from gross income for purposes of federal income taxation. The forms of the No-Adverse-Effect Opinions are contained in APPENDIX D.

In rendering the No-Adverse-Effect Opinions, Co-Bond Counsel will assume the correctness of the Original Opinion, the Prior Conversion Opinion, and the Prior Reissuance Opinion. Except as set forth in the No-Adverse-Effect Opinions, Co-Bond Counsel will express no opinion as to the exclusion from gross income of the interest on the Bonds for federal income tax purposes.

General

Except as described above, Co-Bond Counsel express no opinion with respect to any federal, state or local tax consequences under present law, or proposed legislation, resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Prospective purchasers of the Bonds should be aware that the ownership of tax-exempt obligations such as the Bonds may result in collateral federal tax consequences to, among others, financial institutions, life insurance companies, property and casualty insurance companies, certain foreign corporations doing business in the United States, S corporations with subchapter C earnings and profits, individual recipients of Social Security or Railroad Retirement benefits, individuals otherwise qualifying for the earned income tax credit, owners of an interest in a financial asset securitization investment trust, and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax-exempt obligations. Prospective purchasers should consult their own tax advisors as to the applicability of these consequences to their particular circumstances.

The purchase price of certain Bonds (the "Premium Bonds") paid by an owner may be greater than the amount payable on such Bonds at maturity. An amount equal to the excess of a purchaser's tax basis in a Premium Bond over the amount payable at maturity constitutes premium to such purchaser. The basis for federal income tax purposes of a Premium Bond in the hands of such purchaser must be reduced each year by the amortizable bond premium, although no federal income tax deduction is allowed as a result of such reduction in basis for amortizable bond premium. Such reduction in basis will increase the amount of any gain (or decrease the amount of any loss) to be recognized for federal income tax purposes upon a sale or other taxable disposition of a Premium Bond. The amount of premium which is amortizable each year by a purchaser is determined by using such purchaser's yield to maturity. Purchasers of the Premium Bonds should consult with their own tax advisors with respect to the determination of amortizable bond premium on Premium Bonds for federal income tax purposes and with respect to the state and local tax consequences of owning and disposing of Premium Bonds.

The opinions of Co-Bond Counsel are not a guarantee of result, but represent their legal judgment based upon their review of existing statutes, regulations, published rulings and court decisions and certain covenants of the City. No ruling has been sought from the Internal Revenue Service (the "IRS") with respect to the matters addressed in the opinions of Co-Bond Counsel, and such opinions are not binding on the IRS. The IRS has an ongoing program of auditing the tax-exempt status of the interest on tax-exempt obligations. If an audit of the Bonds is commenced, under current procedures the IRS is likely to treat the City as the "taxpayer," and the owners of the Bonds would have no right to participate in the audit process. In responding to or defending an audit of the tax-exempt status of the interest on the Bonds, the City may have different or conflicting interests from the owners of the Bonds. Public awareness of any future audit of the Bonds could adversely affect the value and liquidity of the Bonds during the pendency of the audit, regardless of its ultimate outcome.

Existing law may change so as to reduce or eliminate the benefit to holders of the Bonds of the exclusion of interest thereon from gross income for federal income tax purposes. Proposed legislative or administrative action, whether or not taken, could also affect the value and marketability of the Bonds. Prospective purchasers of the Bonds should consult with their own tax advisors with respect to any proposed changes in tax law.

Ratings

The Bonds have been rated "Aa1" by Moody's Investors Service, Inc. ("Moody's"), "AA" by S&P Global Ratings ("S&P") and "AA" by Fitch, Inc. ("Fitch"). Such ratings reflect only the views of Moody's, S&P and Fitch from which an explanation of the significance of such ratings may be obtained. There is no assurance that such ratings will continue for any given period of time or that they will not be revised downward or withdrawn entirely. Any such downward revision or withdrawal could have an adverse effect on the market prices of such bonds. A securities rating is not a recommendation to buy, sell or hold securities.

Legal Opinions

The Original Opinion, the Prior Conversion Opinion and the Prior Reissuance Opinion are attached in APPENDIX C.

The opinions of Norton Rose Fulbright US LLP and Bryant Rabbino LLP, Co-Bond Counsel to the City, with respect to the Bonds will be substantially in the forms attached hereto as Appendix D. Reference should be made to the forms of such opinions for the matters covered by such opinions and the scope of Co-Bond Counsel's engagement in relation to the issuance of the Bonds.

Certain legal matters are being passed upon for the City by its Corporation Counsel.

Orrick, Herrington & Sutcliffe LLP, New York, New York, and Law Offices of Joseph C. Reid, P.A., New York, New York, Co-Special Disclosure Counsel to the City, will pass upon certain legal matters in connection with the preparation of this Reoffering Circular.

Certain legal matters will be passed upon for the Original Purchaser by Nixon Peabody LLP, New York, New York, and D. Seaton and Associates, P.A., P.C., New York, New York, Co-Counsel for the Original Purchaser.

Reoffering

The Bonds will be purchased for reoffering by Morgan Stanley & Co. LLC, the Original Purchaser of the Bonds. The compensation for services rendered in connection with the reoffering of the Bonds will be $163,859.39, inclusive of expenses.

Continuing Disclosure Undertaking

As authorized by the Act, and to the extent that (i) Rule 15c2-12 (the "Rule") of the Securities and Exchange Commission ("SEC") under the Securities Exchange Act of 1934, as amended (the "1934 Act") requires the underwriters (as defined in the Rule) of securities offered hereby (under this caption, if subject to the Rule, the "securities") to determine, as a condition to purchasing the securities, that the City will covenant to the effect of the Undertaking, and (ii) the Rule as so applied is authorized by a federal law that as so construed is within the powers of Congress, the City agrees with the record and beneficial owners from time to time of the outstanding securities (under this caption, if subject to the Rule, "Bondholders") to provide:

(a) within 185 days after the end of each fiscal year, to the Electronic Municipal Market Access system ("EMMA") (www.emma.msrb.org) established by the Municipal Securities Rulemaking Board (the "MSRB"), core financial information and operating data for the prior fiscal year, including, (i) the City's audited general purpose financial statements, prepared in accordance with generally accepted accounting principles in effect from time to time, and (ii) material historical quantitative data on the City's revenues, expenditures, financial operations and indebtedness generally of the type found herein in Sections IV, V, VIII and IX, and under the caption "2014-2018 Summary of Operations" in Section VI, provided that if the inclusion or format of such information is changed or new information is added in such sections in any future official statement, thereafter the information provided to EMMA will contain or include by reference information of the type included in that official statement as so changed or added; and

(b) in a timely manner, not in excess of 10 Business Days after the occurrence of any event described below, notice to EMMA, of any of the following events with respect to the securities:

(1) principal and interest payment delinquencies;

(2) non-payment related defaults, if material;

(3) unscheduled draws on debt service reserves reflecting financial difficulties;

(4) unscheduled draws on credit enhancements reflecting financial difficulties;

(5) substitution of credit or liquidity providers, or their failure to perform;

(6) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;

(7) modifications to rights of security holders, if material;

(8) Bond calls, if material, and tender offers;

(9) defeasances;

(10) release, substitution, or sale of property securing repayment of the Bonds, if material;

(11) rating changes;

(12) bankruptcy, insolvency, receivership or similar event of the City; which event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for the City in a proceeding under the U.S. Bankruptcy Code or in any other proceeding

under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the City, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the City;

(13) the consummation of a merger, consolidation, or acquisition involving the City or the sale of all or substantially all of the assets of the City, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;

(14) appointment of a successor or additional Fiscal Agent or the change of name of a Fiscal Agent, if material;

(15) incurrence of a Financial Obligation (as defined below) of the City, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the City, any of which affect Holders of the Bonds, if material;

(16) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the City, any of which reflect financial difficulties; and

(17) failure of the City to comply with clause (a) above.

Event (3) is included pursuant to a letter from the SEC staff to the National Association of Bond Lawyers dated September 19, 1995. However, event (3) may not be applicable, since the terms of the securities do not provide for "debt service reserves."

Events (4) and (5). The City does not undertake to provide any notice with respect to credit enhancement added after the primary offering of the securities, unless the City applies for or participates in obtaining the enhancement.

Event (6) is relevant only to the extent interest on the securities is tax-exempt.

Event (8). The City does not undertake to provide the above-described event notice of a mandatory scheduled redemption, not otherwise contingent upon the occurrence of an event, if (i) the terms, dates and amounts of redemption are set forth in detail in the final official statement (as defined in the Rule), (ii) the only open issue is which securities will be redeemed in the case of a partial redemption, (iii) notice of redemption is given to the Bondholders as required under the terms of the securities and (iv) public notice of redemption is given pursuant to Exchange Act Release No. 23856 of the SEC, even if the originally scheduled amounts are reduced prior to optional redemptions or security purchases.

Events (15) and (16). "Financial Obligation" (i) means a (A) debt obligation; (B) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation; or (C) guarantee of (A) or (B) but (ii) shall not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

No Bondholder may institute any suit, action or proceeding at law or in equity ("Proceeding") for the enforcement of the Undertaking or for any remedy for breach thereof, unless such Bondholder shall have filed with the Corporation Counsel of the City evidence of ownership and a written notice of and request to cure such breach, and the City shall have refused to comply within a reasonable time. All Proceedings shall be instituted only as specified herein, in the federal or State courts located in the Borough of Manhattan, State and City of New York, and for the equal benefit of all holders of the outstanding securities benefitted by the same or a substantially similar covenant, and no remedy shall be sought or granted other than specific performance of the covenant at issue.

Any amendment to the Undertaking may only take effect if:

(a) the amendment is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature, or status of the City, or type of business conducted; the Undertaking, as amended, would have complied with the requirements of the Rule at the time of award of the securities after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and the amendment does not materially impair the interests of Bondholders, as determined by parties unaffiliated with the City (such as, but without limitation, the City's financial advisor or bond counsel); and the annual financial information containing (if applicable) the amended operating data or financial information will explain, in narrative form, the reasons for the amendment and the "impact" (as that word is used in the letter from the staff of the SEC to the National Association of Bond Lawyers dated June 23, 1995) of the change in the type of operating data or financial information being provided; or

(b) all or any part of the Rule, as interpreted by the staff of the SEC at the date of the Undertaking, ceases to be in effect for any reason, and the City elects that the Undertaking shall be deemed terminated or amended (as the case may be) accordingly.

For purposes of the Undertaking, a beneficial owner of a security includes any person who, directly or indirectly, through any contract, arrangement, understanding, relationship or otherwise has or shares investment power which includes the power to dispose, or to direct the disposition of, such security, subject to certain exceptions, as set forth in the Undertaking. An assertion of beneficial ownership must be filed, with full documentary support, as part of the written request to the Corporation Counsel described above.

Financial Advisors

The City has retained Public Resources Advisory Group and Public Financial Management, Inc. to act as financial advisors with respect to the City's general obligation bond financing program and the issuance of the Bonds.

Financial Statements

The City's CAFR for the fiscal year ended June 30, 2018 is included by specific reference in this Reoffering Circular as APPENDIX B. Grant Thornton LLP, the City's independent auditor, has not reviewed, commented on or approved, and is not associated with, this Reoffering Circular. The report of Grant Thornton LLP relating to the City's financial statements for the fiscal years ended June 30, 2018 and 2017, which is a matter of public record, is included in the CAFR for the fiscal year ended June 30, 2018, which is included by specific reference in this Reoffering Circular. However, Grant Thornton LLP has not performed any procedures on any financial statements or other financial information of the City, including without limitation any of the information contained, or included by specific reference, in this Reoffering Circular, since the date of such report and has not been asked to consent to the inclusion of its report in this Reoffering Circular.

Further Information

The references herein to, and summaries of, provisions of federal, State and local laws, including but not limited to the State Constitution, the Financial Emergency Act and the City Charter, and documents, agreements and court decisions, including but not limited to the Financial Plan, are summaries of certain provisions thereof. Such summaries do not purport to be complete and are qualified in their entirety by reference to such acts, laws, documents, agreements or decisions, copies of which are available for inspection during business hours at the office of the Corporation Counsel.

Copies of the most recent financial plan submitted to the Control Board are at www.nyc.gov/omb. Copies of the published Comprehensive Annual Financial Reports of the Comptroller are available at www.comptroller.nyc.gov or upon written request to the Office of the Comptroller, Deputy Comptroller for Public Finance, Municipal Building, One Centre Street, New York, New York 10007 and are available on EMMA (https://emma.msrb.org). Financial plans are prepared quarterly, and the Comprehensive Annual Financial Report of the Comptroller is typically published at the end of October of each year.

Neither this Reoffering Circular nor any statement which may have been made orally or in writing shall be construed as a contract or as a part of a contract with any purchaser or any holders of the Bonds.

THE CITY OF NEW YORK

APPENDIX A

ECONOMIC AND DEMOGRAPHIC INFORMATION

This section presents certain economic and demographic information about the City. All information is presented on a calendar year basis unless otherwise indicated. The data set forth are the latest available. Sources of information are indicated in the text or immediately following the tables. Although the City considers the sources to be reliable, the City has made no independent verification of the information provided by non-City sources and does not warrant its accuracy.

New York City Economy

The City has a diversified economic base, with a substantial volume of business activity in the financial, professional service, education, health care, hospitality, wholesale and retail trade, technology, information services, and manufacturing industries, and is the location of many securities, banking, law, accounting, new media, and advertising firms.

The City is a major seaport and focal point for international business. Many of the major corporations headquartered in the City are multinational in scope and have extensive foreign operations. Numerous foreign-owned companies in the United States are also headquartered in the City. These firms, which have increased substantially in number over the past decade, are found in all sectors of the City's economy, but are concentrated in trade, professional and business services, tourism, and finance. The City is the location of the headquarters of the United Nations and several affiliated organizations maintain their principal offices in the City. A large diplomatic community exists in the City to staff the missions to the United Nations and the foreign consulates. No single assessed property in the City accounts for more than .5% of the City's real property tax revenue.

Economic activity in the City has experienced periods of growth and recession and can be expected to experience periods of growth and recession in the future. The City experienced a recession in the early 1970s through the middle of that decade, followed by a period of expansion in the late 1970s through the late 1980s. The City fell into recession again in the early 1990s which was followed by an expansion that lasted until 2001. The economic slowdown that began in 2001 as a result of the September 11 attack, a national economic recession, and a downturn in the securities industry came to an end in 2003. Subsequently, Wall Street activity, tourism, and the real estate market drove a broad-based economic recovery until the second half of 2007. A decrease in economic activity began in the second half of 2007 and continued through the first half of 2010. The Financial Plan assumes that the gradual increase in economic activity that began in the second half of 2010 will continue through the Financial Plan period.

The United States Department of Commerce Bureau of Economic Analysis produces measures of Gross Domestic Product ("GDP") by metropolitan area. The New York metropolitan area – defined geographically as New York City; Long Island; the Lower Hudson Valley, New York; parts of Northern and Central New Jersey; and Pike County Pennsylvania – is the largest metropolitan economy in the United States.

	Top Ten GDP by Metropolitan Area (millions of current dollars)					GDP Per Capita (2009 Dollars)
	2013	2014	2015	2016	2017*	2017*
United States (metropolitan areas)	$14,966,839	$15,628,087	$16,358,498	$16,857,169	$17,547,902	$54,410
New York-Newark-Jersey City, NY-NJ-PA	1,477,043	1,542,763	1,618,366	1,662,671	1,717,712	71,084
Los Angeles-Long Beach-Anaheim, CA.	852,034	901,980	967,100	996,432	1,043,735	67,763
Chicago-Naperville-Elgin, IL-IN-WI.	585,948	608,805	639,033	657,589	679,699	61,170
Dallas-Fort Worth-Arlington, TX.	448,178	475,929	491,879	503,667	535,499	64,824
Washington-Arlington-Alexandria, DC-VA-MD-WV	459,268	471,254	491,779	509,599	529,990	74,000
Houston-The Woodlands-Sugar Land, TX	488,430	507,183	494,837	472,331	490,074	63,311
San Francisco-Oakland-Hayward, CA.	385,451	413,026	445,124	475,417	500,710	89,978
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD	389,787	400,621	418,605	431,384	444,975	63,519
Boston-Cambridge-Newton, MA-NH.	364,804	380,769	407,675	419,783	438,684	78,465
Atlanta-Sandy Springs-Roswell, GA	307,750	326,502	347,604	369,806	385,542	56,840

Source: U.S. Bureau of Economic Analysis

* Advance statistics.

Personal Income

From 2007 through 2017 (the most recent year for which City personal income data are available), total personal income for City residents, unadjusted for the effects of inflation, grew at a compounded annual average rate of 4.0% and 3.4% for the City and the nation, respectively. The City's total personal income per capita grew at a compounded annual average rate of 3.2% per year for the same period. In 2017, total personal income per capita in the City exceeded that of the U.S. by 37%.

The following table sets forth information regarding personal income in the City from 2007 to 2017.

Personal Income(1)

Year	Total NYC Personal Income ($ billions)	Per Capita Personal Income NYC	Per Capita Personal Income U.S.	NYC as a Percent of U.S.
2007	$413.8	51,642	39,844	130%
2008	413.6	51,263	40,904	125%
2009	406.9	50,044	39,284	127%
2010	428.3	52,273	40,545	129%
2011	460.0	55,468	42,727	130%
2012	484.0	57,735	44,582	130%
2013	498.8	58,966	44,826	132%
2014	524.0	61,498	47,025	131%
2015	547.1	63,815	48,940	130%
2016	571.1	66,283	49,831	133%
2017	611.2	70,879	51,640	137%

Sources: U.S. Department of Commerce, Bureau of Economic Analysis and the Bureau of the Census.

(1) In current dollars. Personal Income is based on the place of residence and is measured from income which includes wages and salaries, supplements to wages and salaries, proprietors' income, personal dividend income, personal interest income, rental income of persons, and transfer payments.

Employment

The City is a leading center for the banking and securities industry, life insurance, communications, fashion design, health care, education, technology, information services, hospitality and retail fields. Over the past two decades the City has experienced a number of business cycles. From 1992 to 2000, the City added 456,500 private sector jobs (growth of 17%). From 2000 to 2003, the City lost 173,200 private sector jobs (decline of 5%). From 2003 to 2008, the City added 257,600 private sector jobs (growth of 9%). From 2008 to 2009, the City lost 103,100 private sector jobs (decline of 3%). From 2009 to 2018, the City added 818,400 private sector jobs (growth of 26%). All such changes are based on average annual employment levels through and including the years referenced.

As of February 2019, total employment in the City was 4,569,400 compared to 4,493,000 in February 2018, an increase of approximately 1.7% based on data provided by the New York State Department of Labor, which is not seasonally adjusted.

The table below shows the distribution of employment from 2009 to 2018.

EMPLOYMENT DISTRIBUTION

	Average Annual Employment (in thousands)									
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Goods Producing Sectors										
Construction	120.8	112.5	112.4	116.2	122.3	129.3	139.4	147.2	152.5	157.8
Manufacturing	81.6	76.3	75.7	76.4	76.4	76.6	77.9	76.2	73.2	70.6
Service Producing Sectors										
Trade, Transportation & Utilities	551.9	559.0	574.9	589.7	603.9	619.2	628.6	628.3	631.5	631.2
Information	165.9	166.6	171.5	176.5	180.2	186.3	190.4	194.2	200.5	204.4
Financial Activities	432.9	427.3	438.1	437.8	436.4	448.0	457.9	464.6	467.5	474.7
Professional & Business Services	569.1	575.3	597.4	619.2	643.0	669.1	700.0	722.7	742.8	762.1
Education & Health Services	752.6	771.6	789.2	805.6	831.1	866.4	896.9	928.7	961.9	1,006.2
Leisure & Hospitality	309.5	323.1	343.2	366.7	386.6	409.7	429.1	441.6	458.4	463.0
Other Services	160.3	160.6	165.2	170.4	174.9	180.2	185.7	190.1	191.6	193.1
Total Private	3,144.7	3,172.4	3,267.5	3,358.5	3,454.5	3,584.6	3,705.9	3,793.5	3,880.0	3,963.0
Total Government	586.3	579.0	573.3	570.6	570.6	573.3	579.5	583.7	584.7	588.3
Total	3,730.9	3,751.4	3,840.8	3,929.0	4,025.0	4,157.9	4,285.4	4,377.2	4,464.7	4,551.3

Note: Totals may not add due to rounding.
Source: New York State Department of Labor. Data are presented using the North American Industry Classification System ("NAICS").

Sectoral Distribution of Employment and Earnings

In 2017, the City's service producing sectors provided approximately 3.7 million jobs and accounted for approximately 82% of total employment. Figures on the sectoral distribution of employment in the City from 1980 to 2000 reflect a significant shift to the service producing sectors and a shrinking manufacturing base relative to the nation.

The structural shift to the service producing sectors affects the total earnings as well as the average wage per employee because employee compensation in certain of those sectors, such as financial activities and professional and business services, tends to be considerably higher than in most other sectors. Moreover, average wage rates in these sectors are significantly higher in the City than in the nation. In the City in 2017, the employment share for the financial activities and professional and business services sectors was approximately 27% while the earnings share for those same sectors was approximately 47%. In the nation, those same service producing sectors accounted for only approximately 20% of employment and 27% of earnings in 2017. Due to the earnings distribution in the City, sudden or large shocks in the financial markets may have a disproportionately adverse effect on the City relative to the nation.

The City's and the nation's employment and earnings by sector for 2017 are set forth in the following table.

SECTORAL DISTRIBUTION OF EMPLOYMENT AND EARNINGS IN 2017(1)

	Employment		Earnings(2)	
	NYC	U.S.	NYC	U.S.
Goods Producing Sectors				
Mining and Logging	0.0%	0.5%	0.4%	1.2%
Construction	3.4%	4.8%	3.4%	6.2%
Manufacturing	1.6%	8.5%	1.0%	9.2%
Total Goods Producing	5.1%	13.7%	4.9%	16.6%
Service Producing Sectors				
Trade, Transportation and Utilities	14.1%	18.7%	8.8%	15.3%
Information	4.5%	1.9%	7.6%	3.6%
Financial Activities	10.5%	5.8%	26.6%	9.7%
Professional and Business Services	16.6%	14.0%	20.8%	17.3%
Education and Health Services	21.5%	15.8%	11.6%	12.9%
Leisure & Hospitality	10.3%	10.9%	5.6%	4.8%
Other Services	4.3%	3.9%	2.9%	3.6%
Total Service Producing	81.8%	71.1%	83.9%	67.2%
Total Private Sector	86.9%	84.8%	89.6%	83.8%
Government(3)	13.1%	15.2%	10.4%	16.2%

Note: Data may not add due to rounding or disclosure limitations. Data are presented using NAICS.

Sources: The primary sources are the New York State Department of Labor, U.S. Department of Labor, Bureau of Labor Statistics, and the U.S. Department of Commerce, Bureau of Economic Analysis.

(1) The sectoral distributions are obtained by dividing each industry's employment or earnings by total non-agricultural employment or earnings.

(2) Includes the sum of wage and salary disbursements, other labor income and proprietor's income. The latest information available is 2017 data.

(3) Excludes military establishments.

The comparison of employment and earnings in 1980 and 2000 set forth below is presented using the industry classification system which was in use until the adoption of NAICS in the late 1990's. Though NAICS has been implemented for most government industry statistical reporting, most historical earnings data have not been converted. Furthermore, it is not possible to compare data from the two classification systems except in the general categorization of government, private and total employment. The table below reflects the overall increase in the service producing sectors and the declining manufacturing base in the City from 1980 to 2000.

The City's and the nation's employment and earnings by industry are set forth in the following table.

SECTORAL DISTRIBUTION OF EMPLOYMENT AND EARNINGS(1)

	Employment				Earnings(2)			
	1980		2000		1980		2000	
	NYC	U.S.	NYC	U.S.	NYC	U.S.	NYC	U.S.
Private Sector:								
Non-Manufacturing:								
Services	27.0%	19.8%	39.1%	30.7%	26.0%	18.4%	30.2%	28.7%
Wholesale and Retail Trade	18.6	22.5	16.8	23.0	15.1	16.6	9.3	14.9
Finance, Insurance and Real Estate	13.6	5.7	13.2	5.7	17.6	5.9	35.5	10.0
Transportation and Public Utilities	7.8	5.7	5.7	5.3	10.1	7.6	5.2	6.8
Contract Construction	2.3	4.8	3.3	5.1	2.6	6.3	2.9	5.9
Mining	0.0	1.1	0.0	0.4	0.4	2.1	0.1	1.0
Total Non-Manufacturing	69.3	59.6	78.1	70.3	71.8	56.9	83.2	67.3
Manufacturing:								
Durable	4.4	13.4	1.6	8.4	3.7	15.9	1.3	10.5
Non-Durable	10.6	9.0	4.9	5.6	9.5	8.9	4.8	6.1
Total Manufacturing	15.0	22.4	6.5	14.0	13.2	24.8	6.1	16.6
Total Private Sector	84.3	82.0	84.7	84.3	85.2	82.1	89.8	84.6
Government(3)	15.7	18.0	15.3	15.7	14.8	17.9	10.3	15.4

Note: Totals may not add due to rounding. Data are presented using the Standard Industrial Classification System ("SICS").

Sources: The two primary sources of employment and earnings information are U.S. Department of Labor, Bureau of Labor Statistics and U.S. Department of Commerce, Bureau of Economic Analysis.

(1) The sectoral distributions are obtained by dividing each industry's employment or earnings by total non-agricultural employment or earnings.

(2) Includes the sum of wage and salary disbursements, other labor income, and proprietors' income. The latest information available for the City is 2000 data.

(3) Excludes military establishments.

Unemployment

As of February 2019, the total unemployment rate in the City was 4.6%, compared to 4.6% in February 2018, based on data provided by the New York State Department of Labor, which is not seasonally adjusted. The annual unemployment rate of the City's resident labor force is shown in the following table.

ANNUAL UNEMPLOYMENT RATE(1)
(Average Annual)

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
New York City	9.3%	9.5%	9.1%	9.3%	8.8%	7.3%	5.7%	5.2%	4.6%	4.1%
United States	9.3%	9.6%	8.9%	8.1%	7.4%	6.2%	5.3%	4.9%	4.4%	3.9%

Source: New York State Department of Labor and U.S. Department of Labor, Bureau of Labor Statistics.

(1) Percentage of civilian labor force unemployed: excludes those persons unable to work and discouraged workers (i.e., persons not actively seeking work because they believe no suitable work is available).

Public Assistance

As of December 2018, the number of persons receiving cash assistance in the City was 346,145 compared to 367,997 in December 2017. The following table sets forth the number of persons receiving public assistance in the City.

PUBLIC ASSISTANCE

(Annual Averages in Thousands)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
416.9	393.1	360.8	341.8	346.9	350.5	351.7	353.9	356.0	342.3	361.9	370.5	366.3	356.1

Taxable Sales

The City is a major retail trade market with the greatest volume of retail sales of any city in the nation. The sales tax is levied on a variety of economic activities including retail sales, utility and communication sales, services and manufacturing. Taxable sales and purchases reflects data from the State Department of Taxation and Finance publication "Taxable Sales and Purchases, County and Industry Data." The yearly data presented in this paragraph and the table below covers the period from March 1 of the year prior to the listed year through the last day of February of the listed year. Between 2003 and 2008, total taxable sales volume growth rate averaged 7.0%. From 2009 to 2010, total taxable sales volume decreased by 6.3%, reflecting a decline in consumption, as a result of local employment losses and the local and national recessions. Between 2010 to 2018, total taxable sales volume growth rate averaged 5.3% primarily as a result of an increase in consumption as a result of local employment gains and the local and national recoveries, as well as two sales tax base expansions enacted by the City, effective August 1, 2009.

The following table illustrates the volume of sales and purchases subject to the sales tax from 2007 to 2018.

TAXABLE SALES AND PURCHASES SUBJECT TO SALES TAX
(In Billions)

Year(1)	Retail(2)	Utility & Communication Sales(3)	Services(4)	Manufacturing	Other(5)	All Total
2007	33.4	19.1	28.1	2.4	23.7	106.7
2008	33.3	20.6	31.5	2.8	26.7	115.0
2009	31.3	22.0	31.8	2.7	25.9	113.6
2010	31.0	20.6	30.1	2.2	22.5	106.4
2011	36.6	21.4	33.7	4.6	20.1	116.4
2012	41.3	20.9	37.2	4.9	22.0	126.3
2013	41.2	20.6	39.2	5.2	23.3	129.5
2014	46.1	22.8	43.9	5.6	20.7	139.1
2015	47.3	23.1	47.3	5.8	22.2	145.7
2016	47.9	21.9	51.1	5.7	23.1	149.7
2017	48.4	22.6	53.0	6.0	23.4	153.4
2018	49.7	24.2	55.2	6.6	24.6	160.3

Source: State Department of Taxation and Finance publication "Taxable Sales and Purchases, County and Industry Data." Data are presented using NAICS.

(1) The yearly data is for the period from March 1 of the year prior to the listed year through the last day of February of the listed year.

(2) Retail sales include building materials, general merchandise, food, auto dealers/gas stations, apparel, furniture, eating and drinking and miscellaneous retail.

(3) Utility and Communication sales include both residential and non-residential electric, and residential and non-residential gas and communication.

(4) Services include business services, hotel occupancy services (stays for the first 90 days), and other services (auto repair, parking and others).

(5) Other sales include construction, wholesale trade, arts, entertainment and recreation, and others. Also included in other are local tax base components of City taxable sales and purchases which include Manhattan parking services, hotel occupancy services (stays 91 to 180 days), and miscellaneous services (credit rating and reporting services, miscellaneous personal services, and other services). Other includes items previously identified as "City Other" except for residential utility, which is reflected in "Utility and Communication Sales."

Population

The City has been the most populous city in the United States since 1790. The City's population is larger than the combined population of Los Angeles and Chicago, the next most populous cities in the nation.

POPULATION

Year	Total Population
1970	7,895,563
1980	7,071,639
1990	7,322,564
2000	8,008,278
2010	8,175,133

Note: Figures do not include an undetermined number of undocumented aliens.
Source: U.S. Department of Commerce, Bureau of the Census.

The United States Census Bureau estimates that the City's population increased to 8,622,698 as of July 2017.

The following table sets forth the distribution of the City's population by age between 2000 and 2010.

DISTRIBUTION OF POPULATION BY AGE

	2000		2010	
Age		% of Total		% of Total
Under 5	540,878	6.8	517,724	6.3
5 to 14	1,091,931	13.6	941,313	11.5
15 to 19	520,641	6.5	535,833	6.6
20 to 24	589,831	7.4	642,585	7.9
25 to 34	1,368,021	17.1	1,392,445	17.0
35 to 44	1,263,280	15.8	1,154,687	14.1
45 to 54	1,012,385	12.6	1,107,376	13.5
55 to 64	683,454	8.5	890,012	10.9
65 and Over	937,857	11.7	993,158	12.1

Source: U.S. Department of Commerce, Bureau of the Census.

Housing

In 2017, the housing stock in the City consisted of approximately 3,469,240 housing units, excluding certain special types of units primarily in institutions such as hospitals and universities ("Housing Units") according to the 2017 Housing and Vacancy Survey released February 9, 2018. The 2017 housing inventory represented an increase of approximately 69,000 units, or 2.0%, since 2014. The 2017 Housing and Vacancy Survey indicates that rental housing units continue to predominate in the City. Of all occupied housing units in 2017, approximately 32.4% were conventional home-ownership units, cooperatives or condominiums and approximately 67.6% were rental units. Due to changes in the inventory basis beginning in 2002, it is not possible to accurately compare Housing and Vacancy Survey results beginning in 2002 to the results of earlier Surveys until such time as the data is reweighted. The following table presents trends in the housing inventory in the City.

Housing Inventory
(In Thousands)

Ownership/Occupancy Status	1993	1996	1999	2002	2005	2008	2011	2014	2017
Total Housing Units	2,977	2,995	3,039	3,209	3,261	3,328	3,352	3,400	3,469
Owner Units	825	858	932	997	1,032	1,046	1,015	1,033	1,038
Owner-Occupied	805	834	915	982	1,010	1,019	984	1,015	1,006
Vacant for Sale	20	24	17	15	21	26	31	18	32
Rental Units	2,040	2,027	2,018	2,085	2,092	2,144	2,173	2,184	2,183
Renter-Occupied	1,970	1,946	1,953	2,024	2,027	2,082	2,105	2,109	2,104
Vacant for Rent	70	81	64	61	65	62	68	75	79
Vacant Not Available for Sale or Rent(1)	111	110	89	127	137	138	164	183	248

Note: Details may not add up to totals due to rounding.

Sources: U.S. Bureau of the Census, 1993, 1996, 1999, 2002, 2005, 2008, 2011, 2014 and 2017 New York City Housing and Vacancy Surveys.

(1) Vacant units that are dilapidated, intended for seasonal use, held for occasional use, held for maintenance purposes or other reasons.

APPENDIX B

COMPREHENSIVE ANNUAL FINANCIAL REPORT

The CAFR for the fiscal year ended June 30, 2018 is included by specific reference in this Reoffering Circular as Appendix B. The report of Grant Thornton LLP relating to the City's financial statements for the fiscal years ended June 30, 2018 and 2017, which is a matter of public record, is included in the CAFR for the fiscal year ended June 30, 2018, which is included by specific reference in this Reoffering Circular. However, Grant Thornton LLP has not performed any procedures on any financial statements or other financial information of the City, including without limitation any of the information contained in this Reoffering Circular, since the date of such report and has not been asked to consent to the inclusion of its report in this Reoffering Circular.

The CAFR for the fiscal year ended June 30, 2018 is available for inspection at the Office of the City Comptroller and at https://comptroller.nyc.gov/reports/comprehensive-annual-financial-reports/ and is available on EMMA (https://emma.msrb.org).

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SIDLEY AUSTIN LLP
SIDLEY

SIDLEY AUSTIN LLP
787 SEVENTH AVENUE
NEW YORK, NY 10019
(212) 839 5300
(212) 839 5599 FAX

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FOUNDED 1866

April 23, 2008

HONORABLE WILLIAM C. THOMPSON, JR.
COMPTROLLER
The City of New York
Municipal Building
New York, New York 10007

Dear Comptroller Thompson:

We have acted as counsel to The City of New York (the "City"), a municipal corporation of the State of New York (the "State"), in the issuance of its General Obligation Bonds, Fiscal 2008 Series L (the "'Bonds").

The Bonds arc issued pursuant to the provisions of the Constitution of the State, the Local Finance Law of the State, and the Charter of the City, and in accordance with a certificate of the Deputy Comptroller for Public Finance and related proceedings (the "Certificate").

Based on our examination of existing law, such legal proceedings and such other documents as we deem necessary to render this opinion, we are of the opinion that:

1. The Bonds have been duly authorized, executed and issued in accordance with the Constitution and statutes of the State and the Charter of the City and constitute valid and legally binding obligations of the City for the payment of which the City has validly pledged its faith and credit, and all real property within the City subject to taxation by the City is subject to the levy by the City of *ad valorem* taxes, without limit as to rate or amount, for payment of the principal of and interest on the Bonds.

2. Interest on the Bonds is exempt from personal income taxes imposed by the State or any political subdivision thereof, including the City.

3. Except as provided in the following sentence, interest on the Subseries L-I and L-3 through L-6 Bonds (the "Tax-Exempt Bonds") is not includable in the gross income of the owners of the Tax-Exempt Bonds for purposes of federal income taxation under existing law. Interest on the Tax-Exempt Bonds will be includable in the gross income of the owners thereof retroactive to the date of issue of the Tax-Exempt Bonds in the event of a failure by the City to comply with the applicable requirements of the Internal Revenue Code of 1986, as amended (the "Code"), and the covenants regarding use, expenditure and investment of bond proceeds and the timely payment of certain investment earnings to the United States Treasury; and we render no opinion as to the exclusion from gross income of interest on the Tax-Exempt Bonds for federal income tax purposes on or after the date on which any action is taken under the Certificate upon the approval of counsel other than ourselves.

4. Interest on the Tax-Exempt Bonds is not a specific preference item for purposes of the federal individual or corporate alternative minimum tax. The Code contains other provisions that could result in tax consequences, upon which we render no opinion, as a result of ownership of such Bonds or the inclusion in certain computations (including without limitation those related to the corporate alternative minimum tax) of interest that is excluded from gross income.

5. The excess, if any, of the amount payable at maturity of any maturity of the Tax-Exempt Bonds over the initial offering price of such Tax-Exempt Bonds to the public at which price a substantial amount of such maturity is sold represents original issue discount which is excluded from gross income for federal income tax purposes to the same extent as interest on the Tax-Exempt Bonds. The Code further provides that such original issue discount excluded as interest accrues in accordance with a constant interest method based on the compounding of interest, and that a holder's adjusted basis for purposes of determining a holder's gain or loss on disposition of Tax-Exempt Bonds with original issue discount will be increased by the amount of such accrued interest.

The rights of the owners of the Bonds and the enforceability thereof may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted, to the extent constitutionally applicable, and the enforcement of related contractual and statutory covenants of the City and the State may also be subject to the exercise of the State's police powers and of judicial discretion in appropriate cases.

The opinions expressed herein arc based on an analysis of existing laws, regulations, rulings and court decisions. Such opinions may be adversely affected by actions taken or events occurring, including a change in law, regulation or ruling (or in the application or official interpretation of any law, regulation or ruling) after the date hereof. We have not undertaken to determine, or to inform any person, whether such actions are taken or such events occur and we have no obligation to update this opinion in light of such actions or events.

Very truly yours,

Sidley Austin LLP

SIDLEY AUSTIN LLP
SIDLEY

SIDLEY AUSTIN LLP
787 SEVENTH AVENUE
NEW YORK, NY 10019
(212) 839 5300
(212) 839 5599 FAX

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FOUNDED 1866

May 29, 2014

The City of New York
Wells Fargo Municipal Capital Strategies, LLC
New York, New York
Fulbright & Jaworski LLP
As Bond Counsel to the City for Tax Matters

We have acted as Bond Counsel to The City of New York (the "City") in connection with (i) the Continuing Covenant Agreement dated as of May 29, 2014 (the "Continuing Covenant Agreement") between the City and Wells Fargo Municipal Capital Strategies, LLC (the "Purchaser") with respect to the City's $150,000,000 General Obligation Bonds, Fiscal 2008 Series L, Subseries L-6 due April 1, 2032 (the "Bonds") and (ii) the conversion of the Bonds to the Index Rate (the "Conversion") through the adoption of the Supplemental Certificate, dated May 29, 2014, of the Deputy Comptroller for Public Finance (the "Supplemental Certificate," and together with the Continuing Covenant Agreement, the "Agreements"). This letter is delivered pursuant to the Supplemental Certificate and to the Certificate of the Deputy Comptroller for Public Finance, dated April 23, 2008, with respect to the original issuance of the Bonds (the "Certificate"). Terms not defined herein are used as defined in the Agreements.

In rendering the opinions set forth herein, we have examined a transcript of proceedings relating to the Conversion, and have reviewed certificates of the City and such other agreements, documents and matters, and have reviewed such questions of law and made such other inquiries, to the extent we deemed necessary to render our opinions. We have not undertaken an independent audit or investigation of the matters described or contained in the foregoing certificates, agreements and documents. We have assumed, without undertaking to verify, the genuineness of all documents and signatures presented to us; the due and legal execution and delivery thereof by, and validity against, any parties other than the City; and the accuracy of the factual matters represented, warranted or certified therein.

Based on our examination of existing law, such legal proceedings and such other documents as we deem necessary to render this opinion, we are of the opinion that:

1. The execution, delivery and performance by the City of the Agreements are within the City's powers; have been duly authorized by all necessary action; require no action by or in respect of, or filing with, any governmental body, agency or official that has not been accomplished; and will not result in a violation of or be in conflict with any existing law.

2. The Agreements have been duly executed and delivered and constitute valid and binding agreements of the City, and the covenants made by the City in the Continuing Covenant Agreement are legally binding obligations of the City, enforceable in accordance with their terms.

3. The actions directed in the Supplemental Certificate are authorized by law and the Certificate.

The enforceability of the Agreements may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted to the extent constitutionally applicable; to securities laws that may affect the City's indemnification obligations; and to the exercise of the State's police powers and of judicial discretion in appropriate cases.

The opinion expressed is not to be considered our approval of the actions taken in connection with the Conversion with respect to its effect on the exclusion from gross income of interest on the Bonds. The City has received the opinion of Fulbright & Jaworski LLP ("Bond Counsel to the City for Tax Matters") regarding the exclusion from gross income for federal income tax purposes of interest on the Bonds and we express no opinion as to such matters.

The Purchaser and Bond Counsel to the City for Tax Matters have received a copy of our original approving opinion with respect to the Bonds addressed to the Comptroller of the City, and may rely thereon as if such opinion were addressed to them as of the date of such opinion. This letter is not to be construed as a reissuance or republication of our opinion, which speaks as to the law, facts and circumstances as of its date.

The opinions expressed herein are based on an analysis of existing laws, regulations, rulings and court decisions. Such opinions may be adversely affected by actions taken or events occurring, including a change in law, regulation or ruling (or in the application or official interpretation of any law, regulation or ruling) after the date hereof. We have not undertaken to update this opinion in light of such actions or events.

This opinion is solely for the information of, and assistance to, the addressees and is not to be used, circulated, quoted or otherwise referred to in connection with the remarketing of the Bonds except that reference hereto may be made in any list of closing documents pertaining to the Continuing Covenant Agreement.

Sidley Austin LLP

NORTON ROSE FULBRIGHT

Fulbright & Jaworski LLP
666 Fifth Avenue, 31st Floor
New York, New York 10103-3198
United States

Tel +1 212 318 3000
Fax +1 212 318 3400
nortonrosefulbright.com

June 23, 2014

The City of New York
Wells Fargo Municipal Capital Strategies, LLC
New York, New York

We have acted as counsel to The City of New York (the "City"), a municipal corporation of the State of New York (the "State"), in connection with the conversion of the City's $150,000,000 General Obligation Bonds, Fiscal 2008 Series L, Subseries L-6 due April 1, 2032 (the "Bonds") to the Index Rate Mode (the "Conversion") on the date hereof, pursuant to the Supplemental Certificate of the Deputy Comptroller for Public Finance, dated May 29, 2014 (the "Supplemental Certificate").

The Bonds are issued pursuant to the Constitution of the State, the Local Finance Law of the State, and the Charter of the City, and in accordance with a certificate of the Deputy Comptroller for Public Finance and related proceedings. We have examined, and in expressing the opinions hereinafter described we rely upon, certificates of the City and such other agreements, documents and matters as we deem necessary to render our opinions. We have not undertaken an independent audit or investigation of the matters described or contained in the foregoing certificates, agreements and documents. We have assumed, without undertaking to verify, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified copies, the genuineness of all signatures, and the accuracy of the statements contained in such documents.

In rendering the opinions below, we have assumed the correctness of the approving opinion delivered by Sidley Austin LLP in connection with the issuance of the Bonds, which concluded that the Bonds are duly authorized and issued in accordance with the Constitution and statutes of the State and the Charter of the City and constitute valid and legally binding obligations of the City, and, without investigation, have assumed that there have been no events or circumstances since the date of that opinion that have adversely affected the opinion expressed therein to the effect that the Bonds constitute valid and binding obligations of the City. We are also relying on the opinion of Sidley Austin LLP dated May 29, 2014 to the effect that the actions directed in the Supplemental Certificate with respect to the Conversion are lawful and permitted.

Based upon the foregoing and our examination of existing law, we are of the opinion that:

1. Interest on the Bonds is exempt from personal income taxes imposed by the State or any political subdivision thereof, including the City.

2. The City has covenanted in a tax certificate dated the date hereof to comply with applicable provisions of the Internal Revenue Code of 1986, as amended to the date hereof (the "Code"), relating to the exclusion from gross

income of the interest on the Bonds for purposes of federal income taxation. Assuming compliance by the City with such covenants, interest on the Bonds will be excludable from the gross income of the owners thereof for federal income tax purposes.

3. Interest on the Bonds is not an item of tax preference for purposes of the federal individual or corporate alternative minimum tax. The Code contains other provisions that could result in tax consequences, upon which we render no opinion, as a result of ownership of such Bonds or the inclusion in certain computations (including without limitation those related to the corporate alternative minimum tax) of interest that is excluded from gross income.

We express no opinion with respect to any other federal, state or local tax consequences under present law or any proposed legislation resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Furthermore, we express no opinion as to the effect on the exclusion from gross income of interest on the Bonds of any action taken or not taken after the date of this opinion without our approval. Ownership of tax-exempt obligations such as the Bonds may result in collateral federal tax consequences to, among others, financial institutions, life insurance companies, property and casualty insurance companies, certain foreign corporations doing business in the United States, "S" corporations with subchapter C earnings and profits, owners of an interest in a financial asset securitization investment trust, individual recipients of Social Security or Railroad Retirement Benefits, individuals otherwise qualifying for the earned income tax credit and taxpayers who may be deemed to have incurred or continued indebtedness to purchase or carry, or who have paid or incurred certain expenses allocable to, tax-exempt obligations.

Our opinions are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. We assume no duty to update or supplement our opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in any law that may hereafter occur or become effective. Moreover, our opinions are not a guarantee of result and are not binding on the Internal Revenue Service; rather, such opinions represent our legal judgment based upon our review of existing law that we deem relevant to such opinions and in reliance upon the representations and covenants referenced above.

Very truly yours,

Fulbright & Jaworski LLP

NORTON ROSE FULBRIGHT

April 18, 2019

Norton Rose Fulbright US LLP
1301 Avenue of the Americas
New York, New York 10019-6022
United States

Tel +1 212 318 3000
Fax +1 212 318 3400
nortonrosefulbright.com

The City of New York

Dear Comptroller Stringer:

We have acted as Co-Bond Counsel to The City of New York (the "City"), a municipal corporation of the State of New York (the "State"), in connection with the adoption of the Supplemental Certificate of the Deputy Comptroller for Public Finance, dated April 18, 2019 (the "Supplemental Certificate"), with respect to the City's General Obligation Bonds, Fiscal 2008 Series L, Subseries L-6 (the "Bonds"). The Supplemental Certificate supplements the original Certificate of the Deputy Comptroller for Public Finance identified therein (the "Certificate") to provide for the conversion of the Bonds to bear interest at fixed rates.

This letter is delivered pursuant to the Supplemental Certificate and the Certificate.

We have examined, and in expressing the opinions hereinafter described we rely upon, certificates of the City and such other agreements, documents and matters as we deem necessary to render our opinions. We have not undertaken an independent investigation of the matters described or contained in the foregoing certificates, agreements and documents. We have assumed, without undertaking to verify, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified copies, the genuineness of all signatures, and the accuracy of the statements contained in such documents.

In rendering the opinions below, we have assumed the correctness of (i) the approving opinion delivered by Sidley Austin LLP in connection with the original issuance of the Bonds, which concluded that the Bonds were duly authorized and issued in accordance with the Constitution and statutes of the State and the Charter of the City and constitute valid and legally binding obligations of the City and (ii) the opinion delivered by Sidley Austin LLP on May 29, 2014 to the effect that the conversion of the Bonds to an index rate mode was lawful and permitted.

Based upon the foregoing and our examination of existing law, we are of the opinion that:

1. The Supplemental Certificate and the actions ordered thereby are authorized by law and the Certificate.

2. The adoption of the Supplemental Certificate will not in and of itself adversely affect any exclusion of interest on the Bonds from gross income for purposes of federal income taxation.

At the time of reissuance of the Bonds, the City covenanted to comply with applicable provisions of the Code relating to the exclusion from gross income of the interest on the Bonds for purposes of federal income taxation. Noncompliance with such requirements could cause interest on the Bonds to be includable in the gross income of the owners thereof retroactive to the issue date. We have not been engaged to assess the adequacy of such covenants or to determine whether the City has complied with such requirements. Furthermore, in rendering this opinion, we have not obtained, verified or reviewed any information concerning any event that might have occurred subsequent to the reissuance of the Bonds, except the adoption of the Supplemental Certificate, that might affect the exclusion from gross income of the interest on the Bonds for federal income tax purposes.

In addition, we have not been engaged, nor have we undertaken, to advise any party or to opine as to any matter not specifically covered herein, and, except as expressly stated herein, we express no opinion as to the exclusion from gross income of the interest on the Bonds for federal income tax purposes.

The rights of the owners of the Bonds and the enforceability thereof may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted, to the extent constitutionally applicable, and the enforcement of related contractual and statutory covenants of the City and the State may also be subject to the exercise of the State's police powers and of judicial discretion in appropriate cases.

We express no opinion with respect to any other federal, state, or local tax consequences under present law or any proposed legislation resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Our opinions are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. We assume no duty to update or supplement our opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in any law that may hereafter occur or become effective. Moreover, our opinions are not a guarantee of result and are not binding on the Internal Revenue Service; rather, such opinions represent our legal judgment based upon our review of existing law that we deem relevant to such opinions and in reliance upon the representations and covenants referenced above.

Very truly yours,

BRYANT RABBINO LLP
650 Fifth Avenue, Suite 3300, New York, NY 10019
Tel: 212-967-1800 Fax: 212-967-1811
www.bryantrabbino.com

April 18, 2019

The City of New York

Dear Comptroller Stringer:

We have acted as Co-Bond Counsel to The City of New York (the "City"), a municipal corporation of the State of New York (the "State"), in connection with the adoption of the Supplemental Certificate of the Deputy Comptroller for Public Finance, dated April 18, 2019 (the "Supplemental Certificate"), with respect to the City's General Obligation Bonds, Fiscal 2008 Series L, Subseries L-6 (the "Bonds"). The Supplemental Certificate supplements the original Certificates of the Deputy Comptroller for Public Finance identified therein (the "Certificate") to provide for the conversion of the Bonds to bear interest at fixed rates.

This letter is delivered pursuant to the Supplemental Certificate and the Certificate.

We have examined, and in expressing the opinions hereinafter described we rely upon, certificates of the City and such other agreements, documents and matters as we deem necessary to render our opinions. We have not undertaken an independent investigation of the matters described or contained in the foregoing certificates, agreements and documents. We have assumed, without undertaking to verify, the authenticity of all documents submitted to us as originals, the conformity to originals of all documents submitted to us as certified copies, the genuineness of all signatures, and the accuracy of the statements contained in such documents.

In rendering the opinions below, we have assumed the correctness of (i) the approving opinion delivered by Sidley Austin LLP in connection with the original issuance of the Bonds, which concluded that the Bonds were duly authorized and issued in accordance with the Constitution and statutes of the State and the Charter of the City and constitute valid and legally binding obligations of the City, (ii) the opinion delivered by Sidley Austin LLP on May 29, 2014, which concluded that the conversion of the Bonds to an index rate mode was lawful and permitted, and (iii) the opinion of Norton Rose Fulbright US LLP or its predecessor firm delivered on June 23, 2014, which concluded that under then-existing law interest on the converted Bonds would not be includable in the gross income of the owners thereof for purposes of federal income taxation.

Based upon the foregoing and our examination of existing law, we are of the opinion that:

1. The Supplemental Certificate and the actions ordered thereby are authorized by law and the Certificate.

2. The adoption of the Supplemental Certificate will not in and of itself adversely affect any exclusion of interest on the Bonds from gross income for purposes of federal income taxation.

At the time of reissuance of the Bonds the City covenanted to comply with applicable provisions of the Code relating to the exclusion from gross income of the interest on the Bonds for purposes of federal income taxation. Noncompliance with such requirements could cause interest on the Bonds to be includable in the gross income of the owners thereof retroactive to the issue date. We have not been engaged to assess the adequacy of such covenants or to determine whether the City has complied with such requirements. Furthermore, in rendering this opinion, we have not obtained, verified or reviewed any information concerning any event that might have occurred subsequent to the reissuance of the Bonds, except the adoption of the Supplemental Certificate, that might affect the exclusion from gross income of the interest on the Bonds for federal income tax purposes.

In addition, we have not been engaged, nor have we undertaken, to advise any party or to opine as to any matter not specifically covered herein, and, except as expressly stated herein, we express no opinion as to the exclusion from gross income of the interest on the Bonds for federal income tax purposes.

The rights of the owners of the Bonds and the enforceability thereof may be subject to bankruptcy, insolvency, reorganization, moratorium and other similar laws affecting creditors' rights heretofore or hereafter enacted, to the extent constitutionally applicable, and the enforcement of related contractual and statutory covenants of the City and the State may also be subject to the exercise of the State's police powers and of judicial discretion in appropriate cases.

We express no opinion with respect to any other federal, state, or local tax consequences under present law or any proposed legislation resulting from the receipt or accrual of interest on, or the acquisition or disposition of, the Bonds. Our opinions are based on existing law, which is subject to change. Such opinions are further based on our knowledge of facts as of the date hereof. We assume no duty to update or supplement our opinions to reflect any facts or circumstances that may hereafter come to our attention or to reflect any changes in any law that may hereafter occur or become effective. Moreover, our opinions are not a guarantee of result and are not binding on the Internal Revenue Service; rather, such opinions represent our legal judgment based upon our review of existing law that we deem relevant to such opinions and in reliance upon the representations and covenants referenced above.

Yours truly,

VARIABLE RATE BONDS

Variable Rate Demand Bonds

Series	Outstanding Principal Amount	Provider	Facility Type	Expiration
2004A-4	$ 25,000,000	Bank of Montreal	LOC[1]	August 12, 2020
2004A-5	50,000,000	Bank of Montreal	LOC	August 12, 2020
2004H-5	21,210,000	Dexia Crédit Local	LOC	February 2, 2022
2004H-6	25,320,000	Bank of America, N.A.	LOC	February 28, 2022
2004H-8	17,040,000	Bank of America, N.A.	LOC	February 28, 2022
2006E-2	87,530,000	Bank of America, N.A.	LOC	August 1, 2019
2006E-3	87,530,000	Bank of America, N.A.	LOC	August 1, 2019
2006E-4	87,525,000	Bank of America, N.A.	LOC	August 1, 2019
2006F-3	75,000,000	Sumitomo Mitsui Banking Corporation	LOC	September 17, 2021
2006F-4A	40,000,000	Sumitomo Mitsui Banking Corporation	LOC	September 17, 2021
2006F-4B	35,000,000	Bank of Tokyo-Mitsubishi UFJ, LTD	LOC	November 15, 2019
2006H-1	50,535,000	JPMorgan Chase Bank, N.A.	SBPA[2]	October 14, 2019
2006H-2	50,530,000	JPMorgan Chase Bank, N.A.	SBPA	October 14, 2019
2006I-3	50,000,000	Bank of America, N.A.	LOC	May 12, 2020
2006I-4	125,000,000	TD Bank, N.A.	LOC	May 24, 2019
2006I-5	75,000,000	The Bank of New York Mellon	LOC	May 31, 2019
2006I-6	75,000,000	The Bank of New York Mellon	LOC	May 31, 2019
2006I-7	50,000,000	Bank of America, N.A.	LOC	May 12, 2020
2006I-8	50,000,000	State Street Bank and Trust Company	SBPA	July 10, 2019
2008D-3	50,000,000	Bank of Montreal	SBPA	December 3, 2019
2008D-4	50,000,000	Bank of Montreal	SBPA	December 3, 2019
2008J-5	31,855,000	Bank of America, N.A.	SBPA	March 29, 2021
2008J-6	111,225,000	Landesbank Hessen-Thüringen Girozentrale	LOC	December 14, 2020
2008J-8	28,900,000	Sumitomo Mitsui Banking Corporation	LOC	August 2, 2021
2008J-10	100,000,000	Bank of Tokyo-Mitsubishi UFJ, LTD.	LOC	April 27, 2020
2008L-3	80,000,000	Bank of America, N.A.	LOC	April 21, 2020
2008L-4	100,000,000	US Bank, N.A.	LOC	December 18, 2020
2008L-5	145,400,000	Bank of America, N.A.	SBPA	April 19, 2021
2009B-3	100,000,000	TD Bank, N.A.	LOC	January 15, 2020
2010G-4	150,000,000	Barclays Bank, PLC	SBPA	March 29, 2024
2012A-3	25,000,000	Landesbank Hessen-Thüringen Girozentrale	SBPA	December 14, 2020
2012A-4	100,000,000	Bank of Tokyo-Mitsubishi UFJ, LTD.	LOC	June 26, 2020
2012D-3A	76,665,000	The Bank of New York Mellon	SBPA	October 30, 2020
2012G-3	300,000,000	Citibank, N.A.	LOC	March 30, 2021
2012G-4	100,000,000	Citibank, N.A.	LOC	March 30, 2021
2012G-6	200,000,000	Mizuho Bank, Ltd.	LOC	March 16, 2021
2012G-7	85,000,000	Bank of Tokyo-Mitsubishi UFJ, LTD	LOC	April 1, 2021
2013A-2	100,000,000	Mizuho Bank, Ltd.	LOC	October 9, 2021
2013A-3	100,000,000	Mizuho Bank, Ltd.	LOC	October 9, 2021
2013A-4	75,000,000	Sumitomo Mitsui Banking Corporation	LOC	October 15, 2020
2013A-5	50,000,000	Sumitomo Mitsui Banking Corporation	LOC	October 15, 2020
2013F-3	180,000,000	Bank of America, N.A.	SBPA	March 15, 2022
2014D-3	225,000,000	JPMorgan Chase Bank, N.A.	SBPA	October 14, 2019
2014D-4	100,000,000	TD Bank, N.A.	LOC	October 16, 2023
2014D-5	75,000,000	PNC Bank, National Association	LOC	October 14, 2019

See footnotes on page E-2

Series	Outstanding Principal Amount	Provider	Facility Type	Expiration
2014I-2	100,000,000	JPMorgan Chase Bank, N.A.	SBPA	March 24, 2020
2015F-4	100,000,000	Bank of Tokyo-Mitsubishi UFJ, LTD	LOC	June 14, 2021
2015F-5	100,000,000	Barclays Bank, PLC	SBPA	June 18, 2019
2015F-6	100,000,000	JPMorgan Chase Bank, N.A.	SBPA	June 17, 2022
2017A-4	200,000,000	Citibank, N.A.	LOC	August 16, 2019
2017A-5	81,000,000	Landesbank Hessen-Thüringen Girozentrale	SBPA	August 17, 2021
2017A-6	50,000,000	Landesbank Hessen-Thüringen Girozentrale	SBPA	August 17, 2021
2017A-7	50,000,000	Bank of the West	LOC	August 16, 2019
2018B-4	100,000,000	Barclays Bank, PLC	SBPA	October 1, 2021
2018B-5	100,000,000	Barclays Bank, PLC	SBPA	October 1, 2021
2018E-5	50,000,000	TD Bank, N.A.	LOC	March 10, 2023
2019D-4	150,000,000	Barclays Bank, PLC	SBPA	December 16, 2022
	$4,997,265,000			

Index Rate Bonds[3]

Series	Outstanding Principal Amount	Step up Date
1994E-4	$ 50,000,000	none
1995F-4	20,800,000	none
2008L-6[4]	150,000,000	June 23, 2019
2012A-5	50,000,000	June 28, 2022
2012D-3B	50,000,000	June 28, 2022
2012G-5	75,000,000	April 3, 2020
2014I-3	200,000,000	August 15, 2019
2015F-7	50,000,000	June 28, 2022
2018E-4	200,000,000	March 1, 2023
	$ 845,800,000	

Auction Rate Bonds

Series	Outstanding Principal Amount
Various	$ 634,900,000

(1) Letter of Credit.

(2) Standby Bond Purchase Agreement.

(3) The City's index rate bonds pay interest based on a specified index. Such bonds, other than the Series 1994E-4 and 1995F-4 Bonds, also provide for an increased rate of interest commencing on an identified step up date if such bonds are not converted or refunded.

(4) As described in this Reoffering Circular, these Bonds will be converted to the Fixed Rate Mode.