City of New York – General Obligation Bonds

Issuer Assigned	Ratings	Outlook
General Obligation Bonds	AA+	Stable

Methodology
- U.S. Local Government General Obligation Rating Methodology
- ESG Global Rating Methodology

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Rating Summary: The City of New York ("NYC" or the "City") general obligation bonds are secured by the City's faith and credit pledge. All taxable real property is subject to the levy of ad valorem taxes, without limitation as to rate or amount, for payment of debt service. Pursuant to the Financial Emergency Act for the City of New York (the "FEA" or the "Act"), a general debt service fund ("the Fund") is established for bonds and certain notes. Payments of the City real estate tax must be deposited upon receipt into the Fund and retained under a statutory formula. Since its inception in 1978, the Fund has been fully funded at the beginning of the payment period.

The rating recognizes the City's preeminent role as a domestic and international center of business and culture, the broad and diverse economic base which has demonstrated historic resiliency, elevated, yet manageable debt obligations, and institutionalized procedures and plans for confronting near-term financial challenges, which have assisted in navigating through the COVID-19 pandemic. These factors underpin KBRA's belief in NYC's eventual recovery. The combination of the City's role on the world's stage and the legal mechanics described herein support the assigned rating.

New York's economy has been challenged by the COVID-19 pandemic, but KBRA believes that with increased vaccination rates, absent a new surge in variants, availability of significant federal stimulus funding, and the reopening of business, cultural, and retail outlets, recovery is taking hold. KBRA does acknowledge that the City's economy suffered severe dislocation due to social distancing and shelter in place requirements in response to the COVID-19 pandemic, and for certain segments of the population and the economy recovery will be slower. As of May 2021, the labor market had recovered only 49% of the 910,000 jobs lost in March/April 2020 at the height of the pandemic, a recovery rate significantly lagging the nation. Unemployment reached 20% in May 2020 and had only fallen below 11% as of May 2021, based on preliminary data, a level almost twice the 5.8% national rate. In KBRA's estimation, there has been an uneven impact on residents/workers as most job losses are concentrated among lower wage service employees in hospitality, food service, entertainment, and retail. In contrast, higher wage workers who can work remotely have largely been insulated from the most dire financial impacts of the pandemic. Personal income and business tax forecasts have been revised upward, bolstered by strong securities industry performance in 2020, while sales tax collections have lagged due to the effects of the pandemic on the hospitality sector.

Commercial vacancy rates remain high, and while office workers are expected to return in significant numbers later this year, it is not clear how the rebound will be affected by what is expected to be a permanent partial shift toward working remotely. Leasing rates and commercial valuations have declined. Without a robust recovery, businesses that cater to office workers may not re-open or fully recover. The hospitality and leisure sector is critically important to the City's overall economic health. As recently as 2019, the City welcomed 67 million visitors. As a means of luring them back, the City has announced a $30 million campaign to promote tourism and attract visitors, its largest tourism campaign ever. KBRA believes business and tourism activity have started to return to the City. Continued improvement is pivotal to reduction of the unemployment rate and a sustained economic recovery.

KBRA views the City's financial management as sound. The FEA and the City Charter require balanced budgets, with year-end results required to be balanced under generally accepted accounting principles ("GAAP"), and a four-year Financial Plan, updated quarterly, that must show current year balance and, starting in January, balance in the following fiscal year. City-wide cash flow reports are generated monthly, and the Financial Management System provides current information on the operating and capital budgets. In reaction to the pandemic, the City adopted a Citywide Savings Program that is projected to result in expenditure reductions of $2.0 billion and $2.0 billion in FY 2021 and FY 2022, respectively, with a significant portion of savings realized from debt service reductions. Reductions in expenditures and employee headcount through attrition have averted layoffs. Headcount is currently 14,000 or 4% below the September 2019 high of 327,000, although budgeted positions are projected to increase.

The receipt of federal pandemic aid totaling $22 billion, including Coronavirus Aid, Relief and Economic Security ("CARES") Act, Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA"), and American Rescue Plan Act ("ARPA") funds has been highly beneficial to financial operations in FY 2020 and FY 2021 and will provide essential out-year support through FY 2025. The funds have assisted COVID response and recovery and allowed for restoration of spending

reductions, payment of expenses previously funded with City generated revenues, and program expansions and improvements. Federal grant monies facilitated the City's decision to increase FY 2022 reserves to $5.09 billion from the $2.8 billion originally planned in the January 2021 Preliminary Budget. Notably, the planned withdrawal of $1.6 billion from the Retiree Health Benefits Trust ("RHBT") was reversed in FY 2021, following a $1 billion draw during FY 2020. The RHBT is dedicated solely to the payment of OPEB costs but can be used as a rainy day fund by applying amounts therein to current year OPEB expenses in lieu of an appropriation of current-year revenues. City officials expect to further augment reserves in the out-years of the Financial Plan. Planned available FY 2022 reserves approximate 5.2% of budgeted expenditures, which KBRA views as adequate.

While fiscal years 2021 and 2022 are balanced, the City's June 2021 Financial Plan indicates budget gaps of $4.1 billion, $3.8 billion, and $4.1 billion for fiscal years 2023 through 2025, which is consistent with prior out-year gaps. KBRA believes that officials will achieve budgetary balance as each out-year approaches, as is legally required and has been demonstrated over time. KBRA believes the largest expenditure risks in the Financial Plan are the assumed $1 billion in unspecified labor savings, and responsible resolution of expiring labor contracts. KBRA also notes that while the federal aid supports critical fiscal needs, the Financial Plan also adds new recurring spending which is supported by stimulus payments. KBRA believes the absence of identified City funding sources may exacerbate out-year gaps as federal resources are depleted.

As of December 31, 2020, approximately $37.59 billion of general obligation bonds were outstanding. In addition, there were $40.8 billion of New York City Transitional Finance Authority ("TFA") Future Tax Secured ("FTS") bonds outstanding, excluding Recovery Bonds. KBRA believes affordability considerations are underscored by the City's maintenance of annual debt service requirements below 15% of City tax revenues, while amortizing debt at an average rate.

The Stable Outlook reflects the City's fiscally responsible actions in confronting COVID-19 induced challenges, and the significant amount of federal stimulus aid made available. While an economic recovery is taking hold in the City, high unemployment rates remain, and in KBRA's opinion, slow improvement in low wage worker employment may hinder the trajectory of the rebound.

Key Credit Considerations

KBRA continues to monitor the direct and indirect impacts of the COVID-19 virus. Click here to access KBRA's ongoing research on the topic.

The rating was assigned because of the following key credit considerations:

Credit Positives

- City's role as international business and cultural center commensurate with its status as the nation's largest city, and position as the center of a large metropolitan economy.
- Institutionalized policies and procedures and tenor of actions enacted during the pandemic support financial stability.
- Long range financial and capital planning; pension funded ratios and unfunded liabilities have trended positively, while annual debt service requirements continue to be maintained at below 15% of City tax revenues.

Credit Challenges

- Economic base remains susceptible to financial services sector cycles, although reliance has moderated with increasing diversification.
- Financial Plan identifies out-year budget gaps, which must be closed.
- Coastline location and associated exposure to climate change related rising sea levels and intensifying storms.

Rating Sensitivities

▪ Further increases in reserve levels. ▪ Reduction in out-year budget gaps.	+
▪ Secular economic decline. ▪ Relaxation of, or less adherence to well-established policies and procedures.	-

Key Facts	
Overall Debt Per Capita	$9,915
Overall Debt as a % of Full Market Value	7.1%
Debt Amortization Within 10 Years	52%
General Fund Balance as a % of General Fund Expenditures (FY 2020)	3.7%
Fixed Costs as a % of Governmental Expenditures (FY 2020)	17.6%
Population Growth 2010-2019	
City of New York	1.9%
MSA	1.6%
State of New York	0.3%
United States	6.1%
Per Capita Income[1]	
as a % of State	102.8%
as a % of United States	120.7%

[1] *Source: U.S. Census Bureau*

Rating Determinants (RD)	
1. Management Structure and Policies	AA+
2. Debt and Additional Continuing Obligations	AA
3. Financial Performance and Liquidity Position	AA+
4. Municipal Resource Base	AA+

RD 1: Management Structure and Policies

KBRA views the City management structure and adopted policies as affording a strong framework for day-to-day operations and service delivery, financial monitoring and oversight, and long-term financial and capital planning. Sound financial management practices are mandated under the City Charter and the FEA. KBRA views the City's financial and budgetary procedures as strong. A four-year Financial Plan is required to show current year balance, and at the midpoint of each fiscal year, balance in the following year. Year-end results are required to be balanced in accordance with GAAP. The Financial Plan is updated quarterly and must be submitted to the State Financial Control Board (the "Control Board") for review. Fiscal monitoring of the Financial Plan is also performed by the City and State Comptrollers. Capital planning is comprehensive as illustrated by a four-year Capital Commitment Plan that is modified three times per year, and a ten-year capital strategy that is updated every two years. Citywide cash flow reports are generated monthly, and the City's Financial Management System ("FMS") provides current information on operating and capital budgets.

The city's management team has significant experience and draws from an array of disciplines. Areas of responsibility are well-defined. Financial responsibilities are divided among the Mayor's Office of Management and Budget (OMB) and the Office of the City Comptroller. City government is divided among executive and legislative branches. The Mayor is the chief executive and is empowered to appoint commissioners of the various city departments. The Mayor is also responsible for preparation of the city's executive and capital budgets, and financial plan. The Mayor has powers and responsibilities relating to land use and city contracts and residual powers not otherwise delegated by law to another public official or body. The Mayor is also a member of the Control Board. The City Council consists of the public advocate and 51 members elected on a district basis. The mayor can veto council decisions, which may be overridden with a two-thirds council vote. Reporting to the Mayor is a First Deputy Mayor and four deputy mayors, each with a distinct portfolio of responsibilities. Elections are held every four years. The 2021 election features ranked choice voting for the first time. In addition to the Mayor, the City Comptroller and Public Advocate are elected city-wide.

Comptroller
The Comptroller is the chief fiscal officer of the city and is independently elected. Responsibilities include reporting annually to the City Council on the economic and financial condition of the city and periodically to the Mayor and Council on financial issues. The Comptroller is also responsible for maintaining the books and financial records of the city and holds significant audit and investigative powers over city departments. Responsibilities also include managing and investing city funds for operating and capital purposes and, together with OMB, implementing the City's borrowing programs. The Comptroller is a member of the Control Board.

Mayor's Office of Management and Budget ("OMB")
OMB, the City's chief financial agency, assembles and oversees the City's expense and capital budgets and the budgets of more than 80 agencies and covered organizations. OMB is also charged with evaluating the efficiency and cost-effectiveness of City services and proposals. It conducts legal reviews of capital projects to be financed with bond proceeds and, together with the Comptroller's office, it implements the City's borrowing programs.

Public Advocate
The Public Advocate is first in line of succession to the Mayor in the event of vacancy or disability, pending an election to fill the vacancy. Among the office's responsibilities is the appointment of one member of the City Planning Commission, the monitoring of city agencies and the investigation and resolution of complaints made by citizens concerning city agencies.

Covered Organizations

Department of Education ("DOE")
The New York City Department of Education is responsible for the largest school system in the U.S., providing primary and secondary education for over one million school-age children. Through a network of elementary, junior high, intermediate, and high schools as well as full-day pre-kindergarten programs and special education schools, DOE provides basic instructional services, special education, instruction for English Language Learners and career and technical training. Support services include free and subsidized transportation, free meals, and the operation and maintenance of approximately 1,800 schools. The Mayor exercises control over the DOE by appointing the school chancellor and 9 of the 15 members of the Panel for Educational Policy, which runs the city DOE. Each borough president appoints one member of the Panel, and Community Education Council Presidents elect one member. Mayoral control is not in perpetuity as the state legislature must periodically renew the mayor's authority, which is now set to expire in 2022.

For FY 2020, City funds covered approximately one-half of the DOE's operating budget, and the bulk of education-related pension, debt service and other fringe costs.

NYC Health and Hospitals

The Deputy Mayor for Health and Human Services, along with a management team and a 16-member Board of Directors has responsibility for Health + Hospitals, the largest public health system in the nation. Health + Hospitals includes 11 acute care hospitals, five skilled nursing facilities, and nearly 60 community health centers. The system provides comprehensive health care services including preventive and primary care, behavioral health, substance abuse, trauma, high-risk neonatal and obstetric care, and burn care. Health + Hospitals is the City's single largest provider of care to Medicaid patients, mental health patients, and the uninsured, serving 1.1 million residents. Net appropriations from the City of New York were $673.3 million in FY 2020.

Metropolitan Transportation Authority

The MTA is governed by a 21-member Board nominated by the Governor, including four recommended by the Mayor. The City provides subsidies to those component units of the MTA that primarily operate in New York City, including New York City Transit ("NYCT"), Staten Island Rapid Transit Operating Authority ("SIRTOA") and MTA Bus Company ("MTABC"), and also contributes directly to the MTA to maintain Long Island Rail Road and Metro-North Commuter Railroad stations in the five boroughs and for operating assistance to the commuter railroads as part of the local State match. Overall, the City annually provides the MTA with approximately $1 billion in direct subsidies and $1 billion of in-kind contributions (NYPD Transit Bureau, debt service for MTA capital projects, and homeless outreach). The City's 2022-2031 Ten-Year Capital Plan totals $1.7 billion for NYCT including $710.0 million in the 2022-2025 Four-Year Plan.

New York City Housing Authority ("NYCHA")

NYCHA is a public benefit corporation organized under the Public Housing Law to provide public housing in the City. NYCHA consists of seven members, of which the chairman is appointed by and serves at the pleasure of the Mayor, while the others are appointed for three-year terms by the Mayor. More than 400,000 New Yorkers reside in NYCHA's 325 public housing developments across the City's five boroughs. Another 235,000 receive subsidized rental assistance in private homes through the NYCHA-administered Section 8 Leased Housing Program. While not a covered agency, the City's Department of Housing Preservation and Development ("HPD") is responsible for a city-wide initiative to build or maintain 300,000 affordable units. City funds represent $353 million of HPD's $1.17 billion operating budget. HPD's operating budget includes $337 million in pass-through funding for NYCHA, of which $227 million is City funds. Nearly $783 million, or 67% of HPD's expense budget, is supported by Federal and State funding programs.

In January 2019, NYCHA, the City, and the U.S. Department of Housing and Urban Development ("HUD") entered into an agreement regarding lead-based paint abatement and other health concerns at NYCHA properties. Pursuant to the Agreement, a federal monitor has been appointed to oversee NYCHA's compliance with the Agreement terms and the City has agreed to provide $1.2 billion in additional capital funds through its 2021- 2024 Capital Commitment Plan and an additional $1 billion through 2029.

City University of New York ("CUNY")

CUNY is the largest municipal university system in the United States and ranks third in number of students among the public university systems in the nation. The system consists of 11 senior and 7 community colleges, an Honors College, Graduate Center, Graduate School of Journalism, Graduate School of Labor and Urban Studies, School of Law, School of Professional Studies, and School of Public Health and Health Policy. For FY 2021, the City is projected to provide approximately 46.4% of the costs of the Community Colleges. The State has full responsibility for the operating costs of the Senior Colleges, although the City is required to initially fund these costs, which are then reimbursed by the State.

CUNY's 2022-2025 Capital Plan totals $561.1 million ($557 million in City funds and $4.1 million in non-City funds). Community college maintenance and new capital construction projects approved by the City are eligible for an equal amount of State matching funds. The State provides its 50 percent share for such projects through annual State budget capital appropriations.

Policies and Procedures / Oversight

New York City Charter
The Charter dates to the consolidation of the City in 1898. The Charter was amended in 1989, following a judicial determination that the structure which placed significant power in the Board of Estimate (5 borough presidents) was unconstitutional. Power was redistributed to the Mayor and City Council where it currently resides. In 2019, voters approved the establishment of a "rainy day fund and a ranked choice voting mechanism, which was utilized for the first time in the 2021 primary election.

New York State Financial Emergency Act for the City of New York ("FEA")
The FEA was enacted in 1975 as a response to the City's fiscal crisis. The FEA imposed a financial planning management process, and notably created the Financial Control Board ("FCB", or "the Control Board") consisting of the Governor (Chairman), State Comptroller, Mayor, City Comptroller, and three public members appointed by the Governor. The Control Board is assisted by the State Deputy Comptroller for the City of New York ("OSDC"). The FEA required the city to adopt: a budget balanced in accordance with GAAP, with an allowance for a maximum $100 million year-end operating deficit and a four-year financial plan. The FEA also provides for stricter limits on both the amount and term of short-term debt than what would normally be allowed under the state Local Finance Law and for the creation of a separate fund, overseen by the state Comptroller, for debt service on city bonds.

From 1975 through 1986, the city was in a control period, during which the FCB exercised the power to approve or disapprove the City's financial plans, contracts, and borrowing. Since fiscal year 1987, upon the City successfully meeting conditions spelled out in the Act, the control period ended and the Control Board's power to approve or disapprove financial plans, contracts, and borrowing, was suspended. The Control Board now reviews the financial plan and the City's compliance with it, and issues staff reports reviewing and commenting on each financial plan update. Prior to 2008, if certain trigger events occurred or were likely to occur, including an operating deficit of more than $100 million, short-term borrowing not in conformance with the FEA, or an inability to borrow in the public credit markets, a control period would be automatically re-imposed.

The Act was set to expire coincident with the final maturity of Municipal Assistance Corporation bonds in 2008. The remaining outstanding MAC bonds were refunded, and the Act now is set to expire in 2033 (or when City GO bonds that have the state covenant authorized by the FEA are no longer outstanding). The ability to impose a Control Period was not continued, even though the Act remains in effect. Therefore, the FCB does not have the authority to impose a Control Period under the Act as currently in effect. The Act also directs that the Control Board coordinate with OSDC with respect to the Control Board's review and monitoring of revenues and expenditures.

New York State Financial Control Board
The New York State Financial Control Board was created by the State legislature in September 1975 pursuant to the FEA. The FEA gives the Control Board powers and responsibilities of review and oversight with respect to the financial management of the City government and certain related public authorities. Among other things the FEA requires the City to prepare and submit a "rolling" four-year financial plan to the Control Board prior to the beginning of each City fiscal year and, to modify the plan as necessary from time to time to conform with standards set forth in the FEA.

Office of the Deputy Comptroller for the City of New York
OSDC monitors the fiscal condition of the City, assists the Control Board, and provides technical assistance to other divisions within the State Comptroller's Office. In this role, OSDC issues a range of reports that include the City's financial plans and major budgetary and policy issues, economy, economic development trends and issues that affect the City, including the securities industry, housing, energy and immigration, and public authorities in the New York metropolitan area, including the MTA.

Independent Budget Office of the City of New York ("IBO")
The IBO's primary responsibility is to provide nonpartisan information about the City budget and tax revenues. Reports discuss issues ranging from agency spending to more in-depth considerations of program costs, historical trends, tax burdens, debt, and capital finances. The IBO publishes three annual reports, as required by the City Charter. The Fiscal Outlook, issued prior to the upcoming fiscal year, provides an independent forecast of revenue and spending for the year ahead. The Analysis of the Preliminary Budget offers a comprehensive review of the Mayor's January proposals, and the Analysis of the Executive Budget (April) highlights changes from the Preliminary Budget.

Debt Management Policy
Debt issuance considerations for the issuance of general obligation debt and New York City Transitional Finance Authority ("TFA") Future Tax Secured ("FTS") obligations are consistent with the New York State Local Finance Law ("LFL") and other applicable laws, but also incorporate further controls. Terms and conditions of bond issues are reviewed and approved by the Office of the State Comptroller. Refunding bonds must generate present value savings of at least 3%, with refunding issues structured to achieve no dis-savings in any year unless approved by OMB and the Comptroller's

Office, and no extension of debt service. Annual principal amortization in any given year cannot exceed any prior year principal amount by more than 50% or the bond structure must result in substantially level or declining debt service, with annual debt service not exceeding the debt service in any prior year by more than 5%. Debt is required to begin amortizing no later than 24 months from the date of the bonds or if the bonds are issued to take out BANs, no later than 24 months from the issue date of the BANs.

Under the LFL, the City can issue variable rate bonds up to 25% of the general debt limit. This limitation is subject to renewal annually by the State Legislature. However, the City seeks to maintain its variable rate exposure to be no more than 20% of debt outstanding across the GO and TFA FTS credits.

The City also maintains an Interest Rate Exchange Agreement Policy, which provides that any interest rate exchange agreement that the City enters into shall, to the extent possible, contain the terms and conditions set forth in the International Swap and Derivatives Association, Inc. ("ISDA") Master Agreement, and that quarterly reports describing swaps the City is a party to be sent to the State, the State legislature, and the State Comptroller. In addition, the Director of OMB annually issues a Statement of Debt Affordability, which includes an analysis of the City's financing program. The primary metric used to determine debt affordability is that debt service (GO, TFA FTS and City-related subject to appropriation debt) as a percent of tax revenues should be no more than 15%.

Tax Limitations/Classifications

The State Constitution limits the amount of revenue that can be raised from the property tax for operating purposes to 2.5% of the average full value of real estate in the City for the current and the last four fiscal years. In June 2011, the State's tax limitation law was enacted, which limits the amount of real property taxes that may be levied by or on behalf of a municipality each year. The law does not apply to the City, although legislation to apply the law to the City has been proposed annually since its enactment.

All real property in the City is classified into one of four statutory classes. Class 1 includes one, two, and three family homes; Class 2 includes other residential property; Class 3 includes utility property; and class 4 includes all other real property. Assessment practices differ for each class.

Other than property taxes, the City may amend local laws for the imposition of taxes only with authorization from the State. These taxes include, sales tax, personal income tax, business corporation tax and unincorporated business tax.

Under the State Constitution, outstanding general obligation debt is limited to 10% of the average full value of taxable real property over the last five years (the "general debt limit"). TANs, RANs, and BANs are considered excluded debt. Variable rate debt, with certain exceptions, is limited to 25% of the general debt limit. NYW, TSASC, Inc. and contractual obligations that support debt of other public benefit corporations are also excluded. The Transitional Finance Authority ("TFA") is permitted to have $13.5 billion of Future Tax Secured Bonds outstanding and may have in excess of this level, if TFA-supported debt together with debt contracted by the City does not exceed the general debt limit.

The FEA imposes further limitations on City indebtedness. Outstanding TANs may not exceed 90% of the available tax levy and are required to mature within the fiscal year in which they were issued. Likewise, RANs must mature within the fiscal year they were issued, and renewals are required to mature within one year. BANs, including interest, cannot exceed 50% of the principal amount of bonds issued in the prior 12 months.

Budget Cycle

The City operates on a July 1 through June 30 fiscal year. Under the City Charter, by September 3rd, the Mayor releases the proposed Capital Commitment Plan which outlines capital investment over the next five fiscal years. Before October 31st, Community Boards complete capital and expense budget consultations with City agencies, and by October 31st established priorities are submitted to OMB. By January 16th, the Mayor releases the Preliminary Budget for the upcoming Fiscal Year. In addition, the Mayor releases the Preliminary Ten-Year Capital Strategy if it is an odd calendar year, and Community Boards receive responses to their budget priorities. From January 16th to February 15th, the Community Boards review the Preliminary Budget and submit a written response to the Mayor. By February 25th, Borough Boards submit their priorities to the Mayor and City Council. On March 10th, the City Council submits its operating budget, and the Borough Presidents issue recommendations for the Preliminary Budget. By March 25th, the City Council holds hearings and proposes recommendations for the Preliminary Budget. On April 26th, the Mayor submits the Executive Budget and the Message of the Mayor, releases the Ten-Year Capital Strategy if it is an odd calendar year, and Community Boards receive responses to their budget priorities. From May 6th to May 25th, the City Council holds hearings on the Executive Budget. By June 5th, the Executive Budget is adopted by the City Council, becoming the Adopted Budget. All dates are subject to change by the City Council.

Financial and Capital Management
OMB functions as the Mayor's primary advisory group on fiscal matters, and holds responsibility for the preparation, monitoring and control of Budgets, Financial Plans, and the Ten-Year Capital Strategy. The Financial Plan is reviewed quarterly, and revisions are made to incorporate actual results and modifications to projections and assumptions based on current information. Revenue projections are continually reviewed with information from economic forecasting services.

The City Comptroller reviews and comments on the City's Budgets and financial plans, fiscal policies, and financial transactions. The Comptroller's office establishes the City's accounting and financial reporting practices and internal control procedures. The City Comptroller is required by the City Charter to audit all City agencies and is empowered to audit all City contracts. Both financial and management audits are undertaken and the investigation of corruption in connection with City contracts or contractors is under the Comptroller's purview.

The City has developed and utilizes a cash management system which forecasts daily cash balances. Monthly statements of operating revenues and expenditures, capital revenues and expenditures and cash flow are prepared at each month-end, and major variances from the financial plan are identified and explained.

Commencing in January, the City submits to the Control Board at least 50 days before the beginning of each fiscal year a financial plan for the City and covered organizations covering the next succeeding four-year period. The Control Board, along with the OSDC, reviews and monitors City revenues and expenditures and those of Covered Organizations. The IBO provides analysis to elected officials and the public on fiscal and budget issues.

Annual Four-Year Financial Plan
The Plan is prepared by the City as required by FEA and City Charter and is reviewed and revised on a quarterly basis. It includes the City's revenue and expense projections, and outlines proposed gap closing measures for projected budget shortfalls.

Capital Planning
City capital needs are significant and largely City-funded. The City employs a three-tiered capital planning process that consists of the Ten-Year Capital Strategy for long-term planning, the four-year capital plan and the current year's Capital Budget. The Ten-Year Capital Strategy reflects capital investment allocation preferences and policy objectives. The four-year capital plan is updated three times a year, as required by the City Charter and transforms policy objectives into specific projects, while the Capital Budget is more precise in terms of design, commencement of construction, and completion.

As required by the City Charter, the City annually issues a condition assessment and proposed maintenance schedule for its assets and asset systems that have a replacement cost of $10 million or more and a useful life in excess of ten years.

Labor Relations
The City's Office of Labor Relations ("OLR") is authorized by Executive Order to represent the Mayor in all labor relations between the City of New York and labor unions. The Commissioner serves on behalf of the Mayor as the City's liaison with both labor and management in the private sector. OLR is focused on labor relations and administration of the Employee Benefits Program. Additionally, OLR serves as a resource to agencies regarding workforce labor issues. The City has now reached settlements with approximately 85% of the represented workforce for the 2017-2021 round of collective bargaining.

ESG Management

Environmental Factors

The City has more than 500 miles of coastline, as well as rivers, bays, and inlets. Therefore, it is directly impacted by rising sea levels and exposed to intensifying storms. The City's 2007 strategic plan, "plaNYC, A Greener, Greater New York" recognized the need to develop a comprehensive adaptation strategy to prepare for climate shifts. Actions taken included the start of work with FEMA to update City floodplain maps to reflect the most current information and the creation of the New York City Panel on Climate Change ("NPCC"). NPCC produced its first report in 2010, and additional reports in 2015 and 2019, and is required to make recommendations to the City regarding climate change projections at least every three years. NPCC projections form the basis for City climate resiliency planning. Pursuant to the OneNYC 2050 Plan, the city's long-term strategic plan to address climate change as well as a variety of social factors, the City has already invested billions since 2015 to strengthen core infrastructure and adapt to climate change.

In October 2012, Superstorm Sandy caused extensive damage to coastal and low-lying areas and power failures in various parts of the City. The City is in the process of implementing climate resiliency projects costing over $20 billion over the next 10 years, mostly dedicated to areas affected by Sandy, and some related to addressing risks identified in NPCC reports. The City's Financial Plan assumes that associated costs will primarily be reimbursed from Federal Emergency Management Agency ("FEMA") and Housing and Urban Development ("HUD") funds. The City has secured approximately $10.7 billion in FEMA assistance (maximum reimbursement rate 90% of total costs).

Several coastal resiliency projects are currently underway. The East Side Coastal Resiliency Project constructs an integrated coastal flood protection system on Manhattan's east side from 25th Street on the north to Montgomery Street on the south. The Staten Island project will create a 5.5-mile line of coastal protection, while the Rockaways Project constructs coastal protection elements on the Atlantic Ocean shorefront and Jamaica Bay. The City expects additional coastal protection projects to be identified and implemented in coming years.

Superfund Designations

The Gowanus Canal was listed by the U.S. Environmental Protection Agency ("EPA") in March 2010 as a federal Superfund site, based on contaminants from formerly and currently owned City properties and private properties, and from combined sewer overflows ("CSOs"). EPA's unilateral administrative order, issued in May 2014, requires the City to design CSO retention tanks and other stormwater control measures. The City estimates the tanks will cost more than $735 million and the cost is included in the City's capital plan, with funding to be provided by the proceeds of bonds to be issued by the New York City Municipal Water Finance Authority ("NYW"). With respect to the in-Canal portion of the remedy, the EPA issued a unilateral order in January 2020 to the six largest potentially responsible parties ("PRPs"), including the City, requiring a remedy consisting of dredging and capping of sediments. The City's liability is presently unknown and may be determined through litigation.

In September 2010, the EPA listed Newtown Creek, a waterway on the border between Brooklyn and Queens as a Superfund site. EPA identified City activities that filled former wetlands in the area and releases from private and City-owned and operated facilities, including municipal incinerators, and 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 of Consent with EPA and five other PRPs to conduct an investigation of Newtown Creek conditions. The investigation is expected to take approximately 11 years, and the City's allocable share will be determined in a future proceeding.

Additional Superfund sites have been listed including a former chemical company site in Queens and at a former sanitary landfill in Staten Island that is now part of the National Park Service.

Social Factors

While income inequality and access to affordable housing remain an issue in the City, the City's adopted FY 2022 Budget significantly increases funding for social programs, including schools and special education programs, expanded early childhood education, new summer academic, recreational and employment programs, public and mental health, senior care initiatives, emergency food distribution programs, and assistance for small businesses.

Governance Factors

Strong institutional policies and procedures are followed with significant oversight, and fiscal discipline has been demonstrated during the COVID-19 pandemic.

In 2017, pursuant to a Mayoral Executive Order, the New York City Cyber Command was established, under the City's Chief Information Security Officer. The Cyber Command collaborates with the City's Department of Information Technology and Telecommunications and is charged with setting information security policies and standards, directing city-wide cyber defense and incident response, and providing guidance to the Mayor and City agencies on cyber defense.

In carrying out its responsibilities, Cyber Command collaborates with City, State, and federal law enforcement agencies, which include the New York City Police Department and the Federal Bureau of Investigation's Joint Terrorism Task Force.

Bankruptcy Analysis

KBRA has consulted outside counsel regarding municipal bankruptcy in the State of New York. To be a debtor under the municipal bankruptcy provisions of the U.S. Bankruptcy Code ("Chapter 9"), a local governmental entity must, among other things, qualify under the definition of "municipality" in the Bankruptcy Code, and must also be specifically authorized to file a bankruptcy petition by the State of formation. The City is a municipal corporation and city of the State of New York organized and existing under state law, and thus is a "municipality" as defined under the Bankruptcy Code. As to authorization, New York's Local Finance Law contains specific authorization for any "municipality" in the State (defined in the Local Finance Law as a county, city, town, or village), or its emergency financial control board, to file a petition under any provision of Federal bankruptcy law for the composition or adjustment of municipal indebtedness. The City, or the Control Board on behalf of the City, is thus authorized to file a petition under Chapter 9.

RD 2: Debt and Additional Continuing Obligations

Debt Metrics

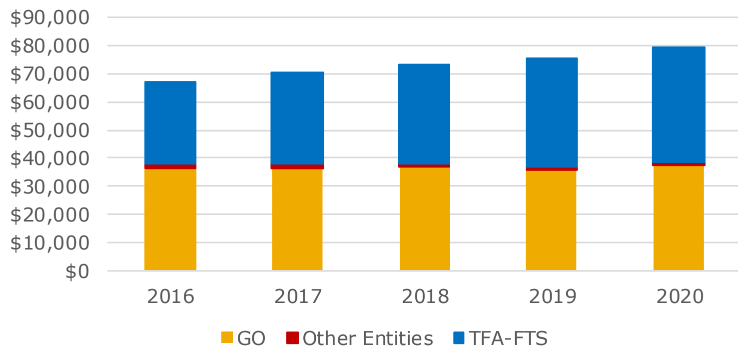
The following categories of debt are considered by KBRA as indebtedness of the City:

- General Obligation debt, net of assets held for debt service.
- Public Benefit Corporation ("PBC") indebtedness and certain contract liabilities, net of assets held for debt service. PBC indebtedness refers to the City's obligations to i) the Educational Construction Fund (ECF), and ii) the Dormitory Authority of the State of New York ("DASNY") for Municipal Health Facilities Improvements Lease Revenue Bonds, the Court Facilities Program and City University Construction Fund. PBC indebtedness is not a debt of the City, but the City has entered into agreements to make payments, subject to appropriation, to PBCs for debt service on certain obligations constituting PBC indebtedness.
- Other issuers' indebtedness for which the City is either directly or contingently obligated either to make payment of debt service subject to appropriation, or, in the case of HHC, to restore the capital reserve, including:
    - New York City Industrial Development Agency - ("IDA") Stock Exchange Project: The City has an absolute and unconditional obligation to make lease payments, subject to appropriation.
    - Capital lease obligations of the City.
    - Hudson Yards Infrastructure Corporation ("HYIC") – The City is obligated to include interest support payments in an amount sufficient to cover interest shortfalls on outstanding HYIC debt, subject to appropriation.
    - New York City Health and Hospitals Corporation ("HHC") – State law obligates the City to fund any shortfall in HHC's Capital Reserve Fund, subject to appropriation.
    - New York City Transitional Finance Authority ("TFA") Future Tax Secured ("FTS") Bonds - Obligations of the TFA do not constitute debt of and are not paid by the City. TFA Senior and Subordinate FTS Bonds are secured by personal income tax and, if necessary, sales tax which would otherwise be available for City operations. While legally separate from the City, the TFA's primary purpose is to finance capital projects of the City.

Net indebtedness of the City and certain other entities listed above totaled $79.45 billion as of June 30, 2020, and was comprised primarily of GO debt (47.3%) and TFA-FTS debt (51.2%). Over the past five years, net indebtedness of the City has grown at a compound annual growth rate ("CAGR") of 4.3%, attributable primarily to growth in outstanding TFA-FTS debt. GO debt outstanding was relatively flat during this period, growing at a CAGR of only 0.85%. (Figure 1).

Figure 1

Net Indebtedness of the City and Certain Other Entities[1] ($ millions)



1. HYIC 2016-2019 Interest Support Payments and HHC 2016-2019 Capital Reserve Requirement are estimates based on 2020 data.

Source: CAFRs

The magnitude of outstanding indebtedness, including primarily General Obligation debt issued by the City and Future Tax Secured ("FTS") debt issued by the Transitional Finance Authority ("TFA"), reflects New York City's vast capital funding responsibilities, which are far greater in scope than those of other major U.S. cities and translate into a very high debt burden, both on a per capita basis and as a percentage of the full market value of real property. FY 2020 indebtedness of the City, at $9,915 per capita, is approximately 2.4 times the direct and overlapping debt burden of Los Angeles, and 1.14 times that of Chicago. Indebtedness of the City as a percentage of the full value of real property is average at 7.1%, exceeding that of Los Angeles, at 2.5%, and slightly below that of Chicago, at 7.6%. Again, KBRA notes that in Los Angeles and Chicago, separate issuing authorities such as counties and school districts constitute an overlapping debt burden on city taxpayers, whereas this is not the case in New York City.

Figure 2

New York City	
FY 2020 Debt Ratios[1]	
Indebtedness of the City and Certain Other Entities Per Capita	$9,915
Indebtedness of the City and Certain Other Entities as a % of Full Market Value	7.1%
GO Debt Amortization Within 10 Years	52%
GO Debt Amortization Within 20 Years	87%
Debt Service on NYC GO, other absolute and unconditional obligations of the City[2], and TFA-FTS as a % of Governmental Expenditures (FY 2020)	8.3%

1. For purposes of calculating debt per capita and debt as a percentage of full market value, KBRA considers Indebtedness of the City to include i) GO debt net of assets held for debt service, ii) PBC indebtedness, subject to appropriation, which includes ECF, DASNY (Municipal Health Facilities Lease Revenue Bonds, Court Facilities Program Bonds and approximately half of rental payments for City University Construction Fund bonds relating to community college facilities), iii) IDA Stock Exchange Bonds; iv) the amount of the City's contingent obligations to HYIC and HHC as of June 30, 2020, subject to appropriation and iv) TFA-FTS Senior and Subordinated Bonds. Although TFA-FTS indebtedness does not constitute debt of, and is not paid by the City, it is included in the debt ratios because it is payable from personal income tax revenues and, if necessary, sales tax revenues of the City which would otherwise be available for operations, and because of the TFA's significant role in funding the City's capital needs.
The City's obligations to cover congtingent liabilities have not been triggered in recent years.
2. For purposes of calculating debt service as a percentage of governmental expenditures, KBRA considers only debt obligations for which the City is directly responsible, or for which it is obligated to make debt service payments subject to appropriation.

Source: CAFRs, U.S. Census Bureau.

KBRA's calculation of the City's debt service obligation as a percentage of governmental expenditures includes i) debt service on obligations for which the City is directly (but not contingently) obligated to make payments in amounts equal to debt service. Such obligations include City GO Bonds, DASNY Municipal Health Facilities Improvement Lease Revenue Bonds, and IDA Stock Exchange Bonds.

Debt Limitations

Long-term debt may only be issued to fund capital projects and certain pollution remediation costs, and to provide capital grants to other entities. New York State's constitutional debt limit restricts the amount of indebtedness that the City may contract to an amount no greater than 10% of the most recent five-year average full value of taxable real estate in the City. This limitation is also set forth in Section 104.00 of the Local Finance Law.

The City's debt limit as of FY 2021 was $123.02 billion. Indebtedness counting against the debt limit (which includes outstanding GO debt, capital contract liabilities and outstanding TFA debt above $13.5 billion[1]) totaled $77.2 billion, leaving remaining debt incurring power of $45.8 billion as of July 1, 2020 (FY 2021). Although the level of outstanding debt that counts against the debt limit is expected to increase to approximately $100.4 billion by 2024, rapid amortization of outstanding GO and TFA debt during this period is expected to allow the City to remain well within the statutory debt limit.

Capital Plan

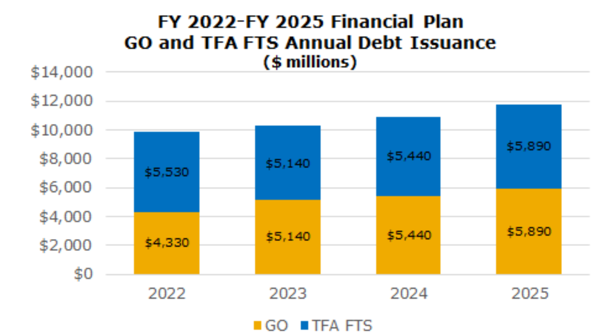
The Adopted Four-Year Capital Plan for FY 2022 through FY 2025 includes projected capital commitments of $71.229 billion and projected capital expenditures of $54.555 billion. Approximately 92% of expenditures are to be City funded, with Federal, State, and other reimbursable capital providing the remaining funding. City capital expenditures are initially paid from the General Fund and reimbursed with bond proceeds. The City's practice is to finance portions of multiple projects with each bond issuance.

The Adopted Four-Year FY 2022-2025 Capital Plan contemplates the issuance of $20.80 billion GO bonds and $22.0 billion TFA-FTS bonds (Figure 3). Additionally, the FY 2022-2025 Plan includes approximately $8.23 billion NYW bonds through FY 2025.

Pursuant to the FY 2022 borrowing schedule, the City plans quarterly GO issuances of approximately $1.082 billion each in FY 2022. TFA-FTS issuances will also likely occur quarterly.

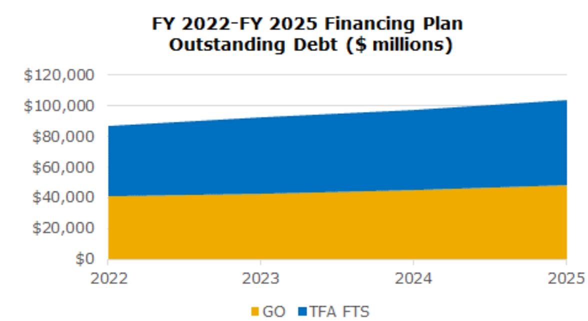
Taking into consideration scheduled maturities, the Adopted FY 2022-2025 Capital Plan entails a 5.6% average annual increase in outstanding GO Bonds and a 6.4% average annual increase in TFA-FTS bonds outstanding over the five-year period (Figure 4).

Figure 3



Source: Adopted Financial Plan Supplemental Data.

Figure 4



Does not include TFA BARBs or NYW Bonds.
Source: NYC Preliminary Ten-Year Capital Strategy FY 2022-FY 2031.

Impact of Planned Capital Borrowing on Annual Debt Service

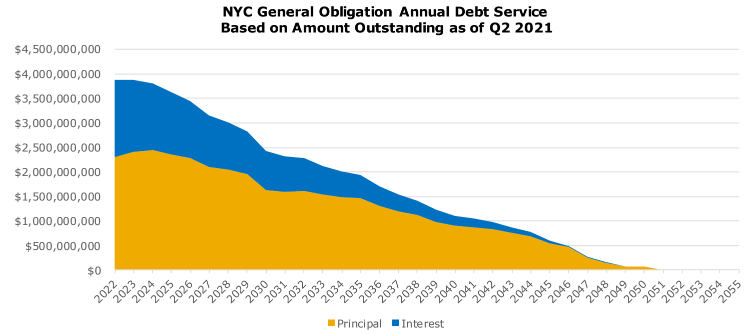
Factoring in the planned $42.8 billion in GO and TFA-FTS borrowings discussed above, debt service[2] is expected to increase from $6.88 billion or 6.5% of governmental expenditures in FY 2020 to $9.353 billion[3] (8.9% of projected governmental expenditures and 13.47% of projected tax revenues) by FY 2025, remaining below the City's debt affordability policy cap of 15% of tax revenues assuming revenue projections are met. The rapid increase in debt service obligations contributes to projected budgetary gaps of approximately $4 billion in each of fiscal years 2023 through 2025.

[1] Capital commitments are funded with both GO and TFA Bonds. In July 2009, the State Legislature authorized the issuance of TFA Future Tax Secured bonds above the initial authorization of $13.5 billion, with the condition that such amounts would be counted against the City's general debt limit. TFA Recovery Bonds, authorized in the amount of $2.5 billion, of which $2 billion has been issued, do not count against the debt limit.
[2] Including primarily GO and TFA-FTS debt service.
[3] Prior to FY 2021 Budget Stabilization and Discretionary Transfers including GO of $3.00 billion and TFA-FTS of $2.682 billion.

GO Debt Structure

All City and TFA bond issuances must be structured in compliance with the requirements of Local Finance Law, which establishes parameters for debt amortization and periods of probable usefulness ("PPUs"). The amortization rules effectively result in level or declining annual debt service. Currently outstanding GO debt service is projected to decline steadily from $3.888 billion in FY 2023 ("MADS"), with approximately half of the debt scheduled to be retired over the next ten years. (Figure 5).

Figure 5



Source: New York City Comptroller's Website

Variable Rate Debt

Local Finance Law limits the issuance of variable rate debt to 25% of the general debt limit.[4] The City, per its debt policy, seeks to maintain variable rate exposure at no more than 20% of outstanding debt across both the GO and TFA-FTS credits. As of December 31, 2020, the City had $37.59 billion of GO debt outstanding, of which 85.5% was fixed rate, and 14.5% was variable rate.

Variable rate demand bonds ("VRDBs") with accompanying bank facilities represent the majority of the City's variable rate portfolio. The City had 40 outstanding series of VRDBs totaling $4.09 billion in par amount as of December 31, 2020.

Presence of Swaps/Counterparty Risk

While General Fund balances, which are primarily invested in short-term assets, serve as an internal hedge against rising interest rates, the City is also specifically authorized by Local Finance Law to enter into interest rate exchange agreements. An Interest Rate Exchange Agreement Policy governs the City's use of derivative contracts in connection with debt. As of FYE 2021, the outstanding notional amount of interest rate swaps entered into in connection with GO debt and City related debt of the Dormitory Authority of the State of New York was $541.675 million, with a negative mark-to-market value of $97.65 million. All outstanding derivative instruments include ratings-based collateral posting requirements on the part of both the City and the counterparty. Credit risk on derivatives is currently spread among four highly rated counterparties, and the City has never needed to access collateral.

Pension Obligations

The City Comptroller is the legal custodian of the assets of the City's five primary Public Pension Funds, which include the New York City Employees' Retirement System ("NYCERS"), Teachers' Retirement System of the City of New York (TRS), New York City Police Pension Fund (Police), New York City Fire Pension Fund (Fire) and the New York City Board of Education Retirement System (BERS), collectively, (the Systems). The Police and Fire pension funds are single employer plans, while the other three are cost-sharing plans for which the City holds primary responsibility.

The Systems' portfolios are externally managed and mostly invested in publicly traded securities, with some allocations to private equity, real estate, infrastructure, hedge funds and opportunistic fixed income. Three of the five pension funds (NYCERS, TRS, and BERS) voted in January 2021 to divest approximately $4 billion from securities related to fossil fuel companies, marking one of the largest such divestments ever to have occurred.

The Comptroller, who serves as a Trustee of four of the five funds, is delegated to serve as an investment advisor for the Systems and through the Bureau of Asset Management oversees the investment portfolio of each fund as well as related defined contribution funds. As of June 30, 2020, the Bureau of Asset Management was responsible for $213.6 billion of investment assets. Historical investment performance has exceeded the City's assumed 7% investment return in five of the last nine years. FY 2021 returns as of May 31, 2021, were 24.5%. The independent New York City Office of the Actuary determines pension contributions and is involved in the management of the Systems.

Funded Level of Pensions

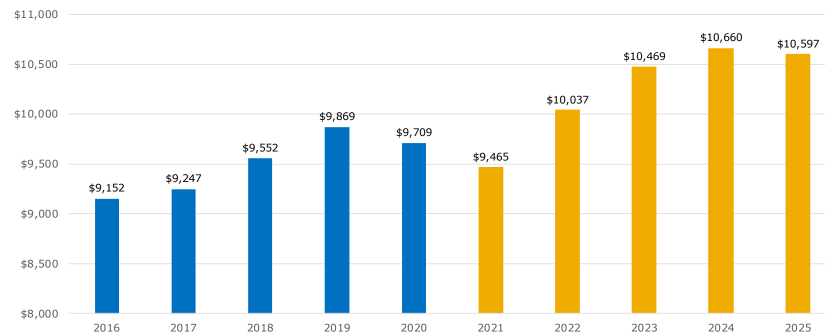
Institutionalized governance, including oversight of actuarial practices and assumptions, and the City's decades-long policy of fully funding the actuarially determined contribution have contributed to stable pension funding progress. The funded ratio of the Systems, on a combined basis, was approximately 78% at FYE 2020, up from 65.5% in FY 2016.

[4] The TFA may issue up to 20% of its debt capacity as variable rate bonds pursuant to Public Authorities Law.

The annual pension contribution grew at a CAGR of 1.49% from 2016 through 2020 to $9.7 billion or 9.2% of total governmental expenditures. The rate of growth in the annual contribution is expected to almost double to 2.86% from FY 2021 ($9.5 billion) through 2025 ($10.6 billion), reflecting the growth rate of the actuarially determined contribution (Figure 6).

Figure 6

Historic and Projected Pension Contributions ($ millions)



Source: FY 2020 CAFR and Adopted Budget FY 2022 Financial Plan Summary

The Systems' aggregate FY 2020 net pension liability ("NPL") of $46.38 billion equates to a favorably low 3.99% of full market value which, pursuant to KBRA's methodology, corresponds to a "AA" rating for this sub-determinant. The NPL is also manageable on both a per capita basis at $5,563, and as a share of personal income at 12.9%. The FY 2020 NPL has declined by 28.5% since FY 2016, illustrating consistent funding progress over this period.

Pension Reform Measures

Although the State Constitution limits changes to benefits for current employees, in recent years the City has limited growth in the pension liability through the imposition of new benefit tiers for newly hired employees. The City and State have not, however, taken steps to transition the pension plans of new employees to a defined contribution system.

Conservative Actuarial Assumptions

The City Charter requires that biennial studies of the actuarial assumptions used to value the liabilities of the Systems be undertaken by an independent actuary. Current assumptions include a 7% actuarial interest rate (discount rate) and an assumed growth in annual general salary of 3%, which exceeds the assumed inflation rate of 2.5%.

Other Post-Employment Benefits (OPEB)

The OPEB plan is composed of i) direct pay-go funding from general City resources, and ii) the Retiree Health Benefits Trust ("RHBT"). On June 30, 2019 (FY 2020), there were 596,681 active/inactive plan members receiving or eligible to receive benefits, including 300,500 active plan members. The number of City-funded full-time and full-time equivalent employees has since decreased to an estimated 270,099 as of June 30, 2021, although the Adopted Budget includes funding for additional headcount in FY 2022.

Like many cities, New York City does not make OPEB payments on the actuarial liability but contributes OPEB funding on a pay-as-you-go basis in amounts necessary to meet current benefit obligations. The City is not legally required to provide OPEB funding in excess of this amount. The City made OPEB pay-go contributions of between $2.65 billion and $3.02 billion per year from FY 2016 through FY 2019, which KBRA views as manageable as a percentage of budget. The FY 2020 required OPEB contribution of $2.059 billion (1.9% of total governmental expenditures) was well below the actuarially determined OPEB expense of $6.9 billion.

The lack of actuarial funding and depletion of amounts in the RHBT for budget balancing purposes has resulted in an exceptionally high unfunded FY 2020 actuarial OPEB liability of $109.5 billion which has grown rapidly from $98.5 billion in 2018 and equates to $183,443 per participant or 388.1% of FY 2020 covered employee payroll and is likely to continue to grow. As of June 30, 2020, the OPEB plan had a fiduciary net position as a percentage of the total liability (funded status) of only 3.4%.

The RHBT, established in 2006 to build resources to fund the OPEB liability, is dedicated solely to the payment of OPEB costs; by using amounts on deposit in the RHBT to pay current-year OPEB costs instead of using current- year revenues, the RHBT also serves as a rainy-day fund that may be drawn upon, if necessary, to provide budget relief in an amount up to the current-year's OPEB costs. By 2008, $3.2 billion had accumulated in the RHBT, but revenue shortfalls incurred during the Great Recession led the City to draw upon this amount through 2013. Moreover, in 2010, the City began to provide only partial funding of the RHBT's current year expenses. Deposits to the RHBT were reinstated by the de Blasio administration beginning in 2014, and the RHBT's net position recovered to $4.68 billion by FY 2019. In response to the pandemic, the City reduced the transfer to the RHBT in FY 2020. Plans to draw down $1.6 billion from the RHBT in FY 2021 to balance the budget were reversed upon the receipt by the City of ARPA funding in late March 2021, resulting in a FY 2021 estimated ending net position of $3.8 billion, or 3.85% of FY 2022 budgeted expenditures. The Adopted FY 2022 Financial Plan does not specify any dollar amount of funding for the RHBT through FY 2025, in excess of each year's OPEB costs.

The City provides generous health benefits to eligible retirees, their beneficiaries, and dependents. Civilian retirees with at least ten years of service receive health insurance with no required premium contribution and are eligible to retire at either age 57 or 62, depending on the plan. Uniformed employees are eligible to retire at younger ages than other retirees. The City's current practice is to pay the full cost of basic coverage for non-Medicare-eligible and Medicare-eligible retiree participants, regardless of income level. The City also reimburses covered retirees and eligible spouses 100% of the Medicare Part B Premium rate, and there is no retiree participant contribution to union Welfare Funds, which provide supplemental benefits based on negotiated contract provisions.

The net OPEB liability is highly sensitive to changes in the health care cost trend rate. Efforts to manage the growing OPEB liability have focused on the management of health costs through Health Savings Agreements, which are guaranteed and enforceable through arbitration. The Health Savings Agreements are estimated to have saved approximately $8.4 billion since FY 2015.

Fixed Cost Ratio is High but Below that of Other Large U.S. Cities

Fixed costs, including annual debt service on Governmental Activities debt (primarily GO and TFA-FTS), the actual pension contribution and the actual OPEB cost, were 17.6% of total governmental expenditures in FY 2020. The fixed cost burden, while substantial, compares favorably to that of other major cities and reflects the City's actions to consistently fund the full pension ADC, as well as the broad scope of its capital funding responsibilities, which contribute to high levels of debt service. We expect that the City's ability to support the growth in fixed costs anticipated during the financial plan period will require continued spending restraint, as well as the realization of the City's optimistic assumptions for recovery and growth in the tax base during the post-pandemic period and over the longer term.

Rating Determinant 3: Financial Performance and Liquidity

Revenue Sources

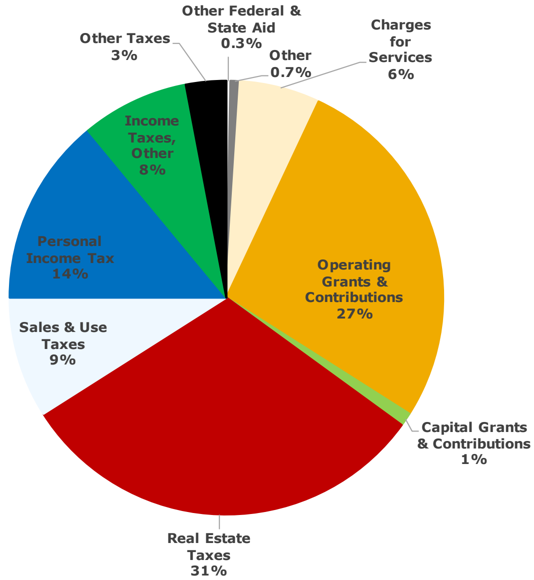
City revenues are derived from varied sources that include local taxes, user charges, miscellaneous revenues, and federal and state categorical and unrestricted grants. Local taxes include the real property tax (31.3% of FY 2020 revenues); multiple other taxes (35.3%), including personal income, general corporation, unincorporated business income, and sales; and miscellaneous revenues (5.6%), including fines and forfeitures, charges for services, licenses, permits and franchises. State categorical grants (16.2%) and federal categorical grants (10.1%) are additional important revenue components.

The State Constitution limits the amount of revenue the City can raise from property taxes for operating purposes to 2.5% of the average full value of taxable real estate in the City for the current and last four fiscal years. Property tax revenues increased at a compound annual growth rate of 6.6% between FY 2016 and FY 2020, but growth is now expected to taper off due to COVID-related impacts on assessed valuation. Rates of other taxes are set at the state level.

The FY 2022 Adopted Budget forecasted 4.4% FY 2021 property tax revenue growth, followed by a 5.1% decline in FY 2022, and modest increases in the ensuing years, reaching the FY 2021 level in FY 2025. Other taxes are projected to decline by 5.9% in FY 2021, followed by a 5.2% CAGR through 2025, based on an expected rebound in economic activity. There are risks associated with this forecast. Although a recovery is in process with increased vaccination rates paving the way for the reopening of businesses, schools, retail establishments, restaurants, and tourism venues, the ultimate impact of hybrid work patterns, and changes in consumer behavior remain to be determined.

Figure 7

Revenue by Source - Governmental Activities for FY ended June 30, 2020



Source: City of New York, Comprehensive Annual Financial Report, FY 2020

Expenditures

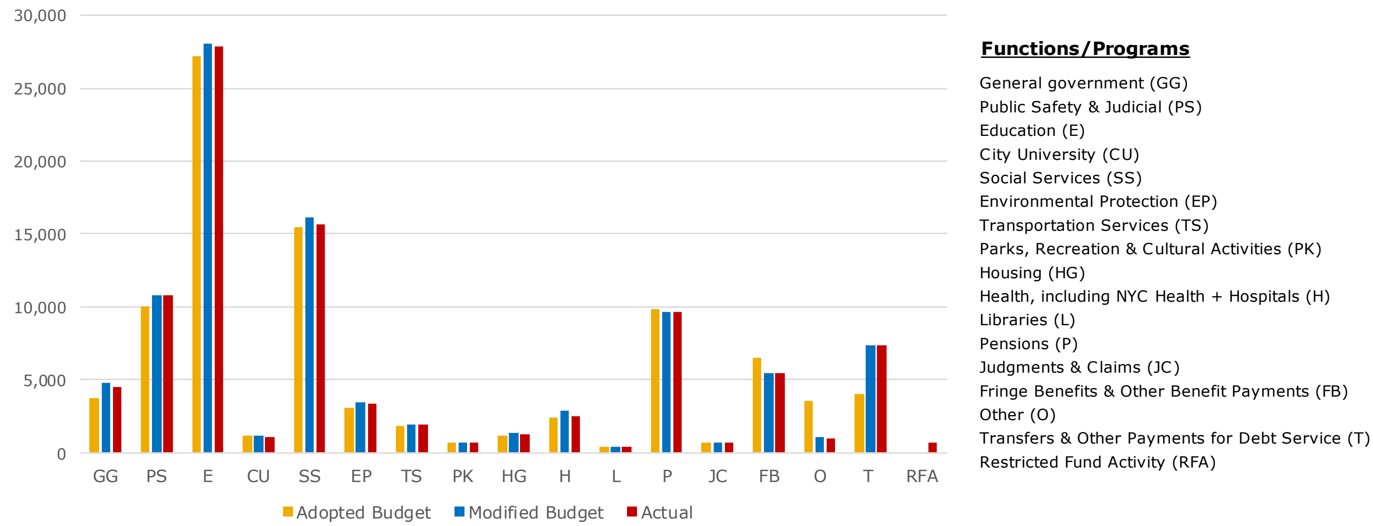
Expenditures reflect the City's wide-ranging responsibilities as it functions as an all-purpose government without overlapping county or school district jurisdictions. As such, the City is exposed to a larger array of spending obligations and potentially unanticipated mandates from the federal and State governments than a city with more narrowly defined obligations. This was underscored by the City's 2019 agreement with the federal government to spend $2.2 billion over ten years on rehabilitation of the New York City Housing Authority (NYCHA) facilities, and the Governor's past proposal for localities to assume a greater share of Medicaid expenses. In addition, the City provides operating and capital support to the Metropolitan Transportation Authority ("MTA") and subsidies to New York City Health and Hospitals ("NYCHH").

Education accounts for more than 30% of annual expenditures, and social services represent in excess of 16% of expenditures, while public safety and judicial, the latter of which is generally a county function, account for a rather low 11.4% of expenditures. Total expenditure growth in the June Plan is projected at 1.9% between FY 2021 and FY 2025 (0.6% CAGR). Spending growth is driven by increases in debt service, health insurance, pension contributions, and other fringe benefits, which are budgeted to be up 24.9% (5.7% CAGR) year over year. The balance of expenditures is projected to decline by 5.8% over the same period, with a projected annual average decline of 1.5%. Growth is tempered by the drop in COVID-related spending from $6.94 billion in FY 2021 to $2.62 billion in FY 2022. COVID-related spending tapers off to $907 million by FY 2025. Net of COVID-related spending, adjusted expenditures before reserves and prior-year adjustment are projected to grow by 10% between FY 2021 and FY 2025.

The City's FY 2021 and FY 2022 general fund is balanced. Out-year budget gaps are now projected at $4.05 billion in FY 2023, $3.84 billion in FY 2024, and $4.07 billion in FY 2025. The City has demonstrated an ability to close out-year gaps and KBRA would expect a similar outcome going forward. The largest unknown is the Plan's assumption of $1 billion in unspecified labor savings in each of the three out-years. The Financial Plan reflects no wage increases for the two-year period following the expiration of the current labor contracts covering the 2017 -2021 period, followed by 1% annual wage increases.

Figure 8

General Fund Expenditures
FY2020
(in millions)



Source: City of New York Comprehensive Annual Financial Report, FY 2020

Figure 9

Statement of Revenues, Expenditures and Changes in Fund Balance ($ in millions)

	2016	2017	2018	2019	2020
Revenues and Transfers					
Real estate taxes	$23,181	$24,679	$26,408	$27,885	$29,816
Sales and use taxes	8,540	8,296	8,651	9,083	8,478
Personal income tax	11,392	11,258	13,411	13,377	13,591
Income taxes, other	6,948	7,121	7,329	7,416	7,862
Other taxes	3,560	3,308	3,306	3,733	3,343
Federal State and other categorical aid	20,898	23,345	23,465	23,805	25,693
Unrestricted Federal and State aid	6	59		151	11
Charges for services	2,624	2,711	2,712	2,801	2,855
Investment income	79	73	125	226	137
Other revenues	2,172	2,179	2,073	2,868	2,833
Total Revenues & Transfers	**$79,400**	**$83,030**	**$87,480**	**$91,344**	**$94,618**
Expenditures and Transfers					
General government	2,985	3,247	3,495	3,437	4,542
Public safety and judicial	9,326	9,694	10,024	10,358	10,791
Education	21,974	23,318	25,026	26,906	27,903
City University	956	1,067	1,087	1,114	1,117
Social services	13,801	14,485	15,208	15,833	15,631
Environmental protection	2,569	2,923	3,016	3,088	3,380
Transportation services	1,708	1,754	1,757	2,068	1,932
Parks, recreation and cultural activities	534	599	622	647	658
Housing	1,023	1,220	1,217	1,230	1,291
Health (including payments to NYC Health + Hospitals)	2,667	2,233	2,401	2,656	2,520
Libraries	360	370	378	398	427
Pensions	9,171	9,281	9,513	9,829	9,672
Judgments and claims	720	750	730	706	709
Fringe benefits and other benefit payments	5,512	5,910	5,717	5,743	5,477
Administration and other	198	147	380	651	1,701
Lease payments	199	30	130	97	101
Total Expenditures & Transfers	**$73,701**	**$77,028**	**$80,701**	**$84,758**	**$87,850**
Excess (deficiency) of revenues over expenditures	$5,699	$6,002	$6,779	$6,586	$6,769
Total other financing sources (uses)	($5,694)	($5,997)	($6,774)	($6,581)	($6,811)
Net change in fund balance	$5	$5	$5	$5	($41)

Source: City of New York, Comprehensive Annual Financial Reports

Figure 10

General Fund Balance Sheet ($ in millions)	2016	2017	2018	2019	2020
Assets					
Cash and cash equivalents	$6,219	$6,030	$6,735	$6,178	$7,324
Investments	8,026	6,127	4,420	3,525	2,924
Accounts receivable	-	-	-	-	-
Real estate taxes (less allowance for uncollectible amounts)[1]	353	350	361	375	358
Federal, State and other aid	6,437	7,872	9,701	10,875	12,975
Taxes other than real estate	5,388	5,706	5,972	6,188	7,397
Other receivables, net	1,252	1,400	2,087	2,299	1,788
Due from other funds	3,231	3,610	2,432	3,716	2,844
Due from component units, net	1,156	1,790	2,388	3,697	4,815
Restricted cash and investments	-	-	-	2,798	2,752
Other assets	-	-	-	-	99
Total Assets	**$32,061**	**$32,884**	**$34,095**	**$39,651**	**$43,276**
Liabilities					
Accounts payable and accrued liabilities	$12,657	$12,919	$13,072	$14,390	$17,531
Accrued tax refunds	-	-	-	-	-
Real estate taxes	45	62	77	90	33
Personal income tax	57	60	60	55	236
Other	36	52	121	65	123
Accrued judgments and claims	510	534	496	505	489
Due to other funds	-	-	-	-	-
Due to component units, net	217	58	42	27	115
Estimated disallowance of Federal, State & other aid	1,111	553	413	297	299
Other liabilities	3,809	4,464	5,218	6,946	7,668
Total Liabilities	**$18,442**	**$18,702**	**$19,500**	**$22,374**	**$26,494**
Deferred Inflows of Resources					
Prepaid real estate taxes	$8,105	$8,749	$8,813	$8,649	$8,808
Grant advances	31	18		3	37
Uncollected real estate taxes	287	270	283	254	240
Taxes and other real estate	4,496	4,429	4,768	4,822	4,163
Other deferred inflows of resources	226	239	249	263	288
Total deferred inflows of resources	**$13,145**	**$13,704**	**$14,112**	**$13,991**	**$13,536**
Fund Balance (Deficit)					
Nonspendable	$473	$478	$483	$488	-
Spendable					
Restricted	-	-	-	2,798	2,752
Committed	-	-	-	-	493
Assigned	-	-	-	-	-
Unassigned	-	-	-	-	-
Total fund balance (deficit)	**$473**	**$478**	**$483**	**$3,286**	**$3,245**
Total liabilities, deferred inflows of resources and fund balances	**$32,060**	**$32,884**	**$34,095**	**$39,651**	**$43,276**

[1] $223 million in FY 2016, $221 million in FY 2017, $228 million in FY 2018, $237 million in FY 2019, and $226 million in FY 2020.
Source: City of New York, Comprehensive Annual Financial Reports.

Financial Reserves and Liquidity

The City maintains various financial reserves and has committed in the June Financial Plan to replenish balances going forward. The RHBT, which is used to make annual pay as you go ("PAYGO") payments for current year health costs, had a balance of $3.8 billion at FYE 2020.

The June Financial Plan includes a general reserve of $20 million in FY 2021, $300 million in FY 2022 and $1 billion in each of fiscal years 2023 through 2025. In addition, the June Financial Plan reflects the Capital Stabilization reserve of $250 million in each fiscal year between 2023 and 2025. Furthermore, because of recent State legislation, City has established its first Rainy Day Fund with a scheduled deposit of $500 million in FY 2022. The $5.09 billion in projected FY 2022 reserves is an approximate $2.3 billion increase from the preliminary January budget, and represents about 5.2% of budgeted FY 2022 general fund expenditures.

Despite economic and financial pressures due to COVID, the City has maintained strong cash balances. There has been no need for cash flow borrowing. At the end of Q3 of FY 2021 (March 31), the unrestricted cash balance measured $12.1 billion, $4.1 billion higher on a fiscal year to date basis. Cash balances in the third quarter averaged $9.3 billion, compared to $7.2 billion during the third quarter of FY 2020. The City recorded $28.6 billion in revenue in the FY 2021 third quarter, the highest amount on record, due to increased state aid payments. Expenditures in the third quarter measured $24.3 billion, down 3.3% compared to last year. Overall, in third quarter FY 2021 receipts exceeded expenditures by $4.348 billion. The City began FY 2021 (in July 2020) with $6.6 billion in cash-on-hand, compared to $7.1 billion in the prior year. During the first nine months of FY 2021, the City collected $80.6 billion in revenue and incurred $75.2 billion in expenditures, for a net gain of $5.4 billion. Revenues rose 0.5% and expenditures decreased 5.2%, compared to the same period last year. The cash balance as of June 7, 2021, was $10.5 billion.

Federal Stimulus Funding

Federal funding under the Coronavirus Aid, Relief, and Economic Security Act ("CARES Act"), Coronavirus Response and Relief Supplemental Appropriations Act of 2021 ("CRRSAA") and the American Rescue Plan Act ("ARPA") has been critical to City operations and recovery. COVID-related federal stimulus to the City totals $22.3 billion, including $6.6 billion in funds previously allocated and $1.4 billion in FEMA aid. The Adopted Budget proposes using $15.7 billion through FY 2025 in the following areas: COVID Recovery and Response - $8.6 billion; labor savings substitution - $1.3 billion; program expansion and enhancements - $3.6 billion; restoration of planned cuts - $867 million; and operating budget relief - $1.4 billion.

While the stimulus funds address relief and recovery needs, they are also being used to fund recurring programs and new initiatives. In KBRA's view, this use introduces potential risks as there are no identified city resources for these programs. Therefore, once the federal funds are depleted, sizable out-year budget gaps may need to be closed.

FY 2021 Financial Operations

At the time of adoption of the FY 2021 Budget there was substantial uncertainty regarding the trajectory of the COVID-19 pandemic and the social, economic, and financial impacts on residents/commuters, businesses, and the City itself. However, the Budget has been balanced in all Financial Plans since its introduction in January 2020. Following the onset of the pandemic last year, the FY 2021 Executive Budget and Financial Plan reduced tax revenues over FY 2020 and FY 2021 by $7.67 billion. Subsequent large federal funding increases of direct local and educational aid, along with enhanced educational funding from the State and the successful rollout of vaccines, changed the dynamic. The improved funding outlook for FY 2021 is mainly due to increased federal stimulus grants, including $1.95 billion from ARPA, $146 million from CRRSA, and $1.38 billion in additional FEMA grants. Tax revenues were adjusted upward by $1.37 billion to reflect stronger than anticipated personal and business income tax collections, largely attributable to an exceptional year for the securities industry. Collections through March were $1.15 billion above the January projection, driven by strong collections in property, personal income, and business tax revenues. The City-Wide Savings Program, a collaborative program between OMB and City agencies to seek efficiencies and re-examine policies and processes is projected to result in $2.0 billion in savings during FY 2021, with debt service accounting for about one-half of the savings through restructuring and lowered capital budget borrowing and associated debt service. An expected $6.1 billion surplus will be applied to FY 2022 in the amount of $3 billion general obligation debt service, $2.68 billion to TFA debt service, as well as a $425 million deposit to the RHBT.

FY 2022 Budget

The FY 2022 Adopted Budget reflects the continuation of an improving economic outlook for the City. The $98.7 billion Budget is $4.4 billion less than the FY 2021 budget. The decrease reflects reduced COVID-related spending. Net of COVID-related spending, the FY 2022 Adopted Budget is $2.37 billion higher than the FY 2021 Budget. The Budget is $6.3 billion more than the Preliminary Budget, reflecting an increase of $6.5 billion in stimulus grants. Approximately $2 billion is assumed from the Citywide Savings Program, 45% of which is attributable to debt service reductions. The increase in overall local tax revenues is driven almost entirely by an expected rebound in non-property tax revenues as the City's economy recovers from the pandemic. Property tax revenues, on the other hand, are projected to fall significantly in FY 2022, by 5.4%, and to grow only gradually through the remainder of the Plan. In FY 2025, property tax revenues are expected to be essentially unchanged compared to FY 2021, a significant reversal from the projected growth of previous forecasts.

Figure 11

Five Year Financial Plan Revenues and Expenditures ($ in millions)	2021	2022	2023	2024	2025
Revenues					
Taxes					
General Property Tax	30,954	29,284	30,042	30,471	30,881
Other Taxes	32,380	32,151	34,674	36,372	37,833
Tax Audit Revenue	1,171	921	721	721	721
Subtotal: Taxes	$64,505	$62,356	$65,437	$67,564	$69,435
Miscellaneous Revenues	7,265	6,873	6,472	6,461	6,474
Unrestricted Intergovernmental Aid	1	-	-	-	-
Less: Intra-City Revenue	(2,123)	(1,891)	(1,440)	(1,439)	(1,434)
Disallowances Against Categorical Grants	(15)	(15)	(15)	(15)	(15)
Subtotal: City Funds	$69,633	$67,323	$70,454	$72,571	$74,460
Other Categorical Grants	1,146	1,025	993	991	990
Inter-Fund Revenues	633	725	725	725	725
Federal Categorical Grants	16,658	13,697	9,244	8,603	7,908
State Categorical Grants	15,029	15,953	16,308	16,626	16,877
Total Revenues	**$103,099**	**$98,723**	**$97,724**	**$99,516**	**$100,960**
Expenditures					
Personal Service					
Salaries and Wages	29,601	31,423	30,811	30,946	31,228
Pensions	9,465	10,037	10,469	10,660	10,597
Fringe Benefits[2]	11,256	12,377	11,839	12,933	13,890
Subtotal: Personal Service	$50,322	$53,837	$53,119	$54,539	$55,715
Other Than Personal Service					
Medical Assistance	5,665	6,546	6,494	6,494	6,494
Public Assistance	1,604	1,651	1,650	1,650	1,650
All Other	38,991	36,858	32,311	32,070	32,001
Subtotal: Other Than Personal Service	$46,260	$45,055	$40,455	$40,214	$40,145
Debt Service[1,2]	6,332	7,029	8,391	8,789	9,353
FY 2020 Budget Stabilization[1]	(3,819)	-	-	-	-
FY 2021 Budget Stabilization & Discretionary Tr	6,107	(6,107)	-	-	-
Capital Stabilization Reserve	-	-	250	250	250
General Reserve	20	300	1,000	1,000	1,000
Deposit to the Rainy Day Fund	-	500	-	-	-
Less: Intra-City Expenses	(2,123)	(1,891)	(1,440)	(1,439)	(1,434)
Total Expenditures	**$103,099**	**$98,723**	**$101,775**	**$103,353**	**$105,029**
Gap To Be Closed	**$0**	**$0**	**($4,051)**	**($3,837)**	**($4,069)**

[1] Fiscal Year 2020 Budget Stabilization totals $3.819 billion, including GO of $1.269 billion and TFA-FTS of $2.550 billion.

[2] Fiscal Year 2021 Budget Stabilization and Discretionary Transfers total $6.107 billion, including GO of $3.000 billion, TFA-FTS of $2.682 billion and Retiree Health Benefits of $425 million.

Source: City of New York Financial Plan, June 2021 Adopted Budget, Fiscal Year 2022

State Aid

When the State's proposed FY 2022 budget was released in January, the City was threatened with significant aid cuts. The enacted State budget rejected most of the proposed spending cuts while increasing funding for education, health care, and pandemic relief through a combination of Federal stimulus and tax increases on high earners and corporations. Most significantly for the New York City budget, the State agreed to fully fund Foundation Aid, the State's main source of educational funding, over the next three years. The agreement increases State school aid to the City by $530 million in FY 2022, $800 million in FY 2023, and $1,070 million in FY 2024. Despite annual increases since FY 2014, Foundation Aid has never been fully funded. Recently enacted state legislation to increase both personal and business income taxes does not directly impact the City. However, KBRA believes these tax increases reduce the risk of future cuts to the City, although potential relocations due to higher taxes need to be monitored.

Rating Determinant 4: Municipal Resource Base

New York City Economy
New York City, the nation's most populous city, is an international hub for global business and commerce, culture, and entertainment. The New York Metropolitan Area has a GDP of approximately $1.6 trillion (2019) which makes it the largest regional economy within the U.S. The City is ranked number one on A.T. Kearney's 2020 Global Cities Index based on business activity, human capital, information exchange, cultural experience, and political engagement. It is the largest financial center in the U.S. with Manhattan home to the two largest stock exchanges in the world, the New York Stock Exchange and the NASDAQ, and home to 44 of the State's 53 Fortune 500 headquarters, with many of the remainder based throughout the broader New York-Newark-Jersey City MSA.

Financial activities have long been considered a key sector in the New York City economy, accounting for approximately 36% of total wages in 2007. Although, still an important sector, diversification is noted in the intervening years as financial activities' share of total wages approximated 28% in 2019. Noteworthy in recent years is the emergence of the technology sector as an economic indicator. According to City officials, the City is the fastest growing tech hub in the U.S. with an 18% job growth rate over the past 10 years, now accounting for over 291,000 jobs. Amazon, Facebook, Apple, and Google have all added to their physical footprint and have collectively increased 2020 employment in the City by 2,600, despite the pandemic.

The COVID-19 pandemic ended a period of economic expansion for the City during which new records for tourism, employment and property values were achieved. Shelter-in-place and social distancing requirements in March and April 2020 resulted in job losses that were the largest since the Great Depression. The City lost approximately 516,700 jobs in 2020, over one-tenth of total employment in 2019, erasing over half of the gains of the past decade. According to the Center for New York City Affairs at the New School, the City had an 11.8% decline in jobs from February 2020 to April 2021, almost three times the loss at the national level. After reaching a record low pre-pandemic of 3.9% in 2019, the unemployment rate spiked to 20.2% in May 2020. While unemployment receded to 9.9% in May 2021, it remains almost twice the national average. The economic impact is more nuanced. Higher wage workers employed in industries that have adapted to telework experienced a less severe impact, with employment remaining relatively stable, while industries employing lower wage workers providing in-person goods and services to consumers: hotels, restaurants, bars, spas, hair salons, and retail stores, have borne the brunt of the restrictions. Despite the pandemic, over 100,000 healthcare jobs were lost between February and April 2020 as many people delayed healthcare visits out of caution, and hospitals cancelled elective surgeries. The recovery continues to be uneven, with particularly slow hiring in the leisure and hospitality sector. Overall, the City's job growth has been more measured than the nation. As of May 2021, 49% of the jobs that were lost in the downturn have been recovered. Private employment remains 449,000 below pre-pandemic peak levels, but 452,000 above the pandemic low in April 2020.

Increased vaccination rates and the relaxation of restrictions provide a basis for optimism. The focus now is on September, when many companies plan to bring their workers back to the office and Broadway theaters reopen, attracting more visitors. Nonetheless, the shape of the recovery is uncertain. Some office workers currently telecommuting on a full-time basis will continue to do so. Many others, if not most, will enjoy the flexibility of doing so on a part-time basis, and this could have permanent effects on demand for New York City mass transit and office space, dining, and on choices for home ownership. The rapid shift to telecommuting arrangements during the pandemic reduced new office leasing by more than half in 2020 and pushed office vacancy rates to 27-year highs. A sizeable amount of sublease space has entered the market, putting downward pressure on asking rents, as will the pipeline of new commercial construction, which will likely depress commercial valuation in the near-term.

Population & Demographics
The City, with a population of approximately 8.3 million in 2020, is the largest city in the U.S. Population is more than the combined total for Los Angeles and Chicago, which rank second and third, respectively. While population has grown since the 2010 decennial census, a plateau was reached in 2017, based on intercensal estimates, which may reflect several factors, including a slowing of net migration and international migration. In addition, the City's relatively high cost of living and shortage of affordable housing are deterrents to population growth despite ongoing efforts to address them.

With the onset of the COVID-19 pandemic, population is likely to have declined, in line with a national trend of COVID-related shifts in population from urban areas to suburban and rural ones. Higher income residents moved to second homes outside of the City, office workers shifted to remote work, and in-migration of new students, recent graduates, new hires, and international immigrants slowed considerably. Approximately 5 percent of residents, or about 420,000 people, were estimated to have left the city between March 1 and May 1, 2020, based on cell phone data[5]. Later estimates based on postal change of address data showed a smaller decline of 100,000 to 200,000[6]. KBRA does not believe that conclusions can be drawn from this data, since recovery is taking hold and it remains to be seen how the City's population will ultimately be affected.

Educational attainment is strong relative to the State and U.S., though the level of poverty (at 16%) is higher than the State and national average. In 2019, the City's per capita income of $43,046 represents 102.8% of the State average.

Figure 12

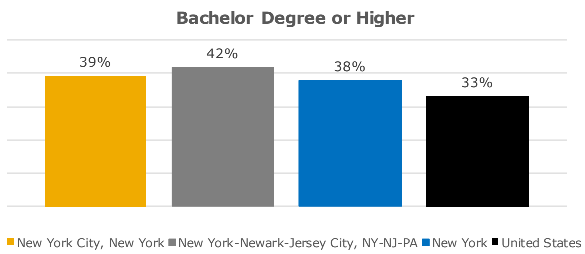
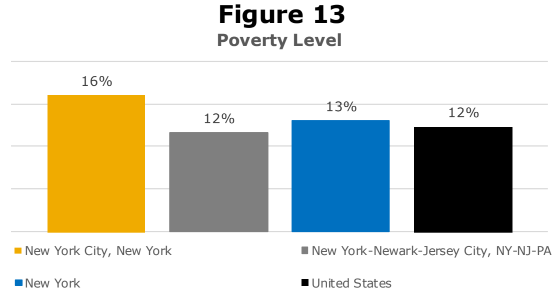


Figure 13



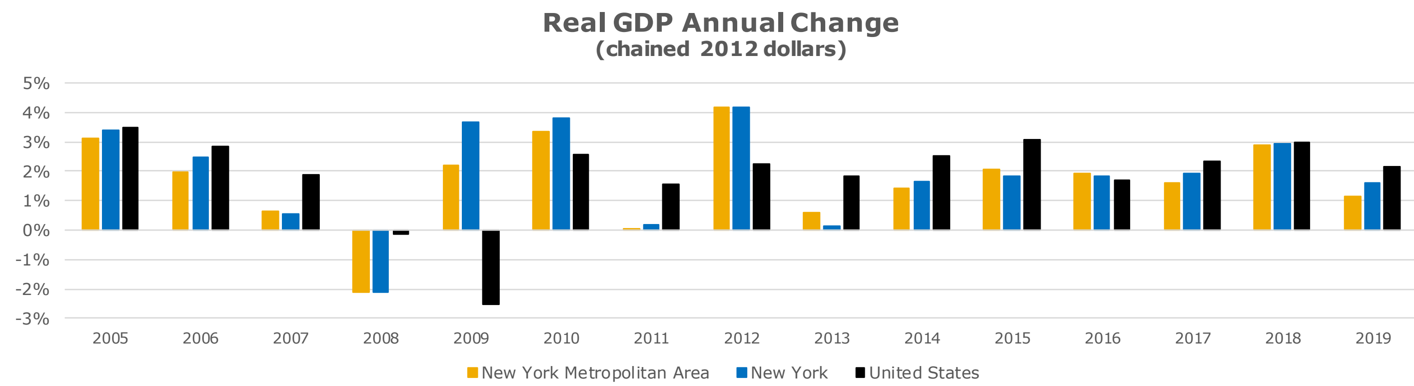
	As of 2019 Point Δ 2010 to 2019	As of 2019 Point Δ 2010 to 2019
New York City, New York	5.8	-4.1
New York-Newark-Jersey City, NY-NJ-PA	5.8	-2.2
New York	5.3	-1.9
United States	4.9	-3.0

Source: U.S Census
Bachelor degree or higher defined as "% of population over 25 with Bachelor's degree or higher".
Poverty level defined as "portion of population living below the poverty line".

Real Gross Domestic Product

The New York Metropolitan Statistical Area's real (inflation adjusted) GDP experienced a deeper decline but markedly more robust recovery following the Great Recession relative to the rest of the nation. Financial services activities remain the largest industry in the City at 28% of real GDP in 2019 compared to 19% across the U.S., reflecting the City's status as the banking and securities capital of the world. The City contributed approximately 8.2% of total U.S. GDP in 2019.

Figure 14



($ in Millions)	2000	2010	2019	Δ 2010 to 2019	10-Year CAGR (2019)
New York Metropolitan Area	-	1,343,980,498	1,573,857,186	17.1%	1.9%
New York	1,084,844,300	1,267,972,000	1,490,678,500	17.6%	2.0%
United States	13,130,987,000	15,598,753,000	19,091,662,000	22.4%	2.3%

Source: U.S. Bureau of Economic Analysis

[5] The Richest Neighborhoods Emptied Out Most as Coronavirus Hit New York City, The New York Times, May 15, 2020.
[6] COVID-19 Impact on Migration Patterns, CBRE

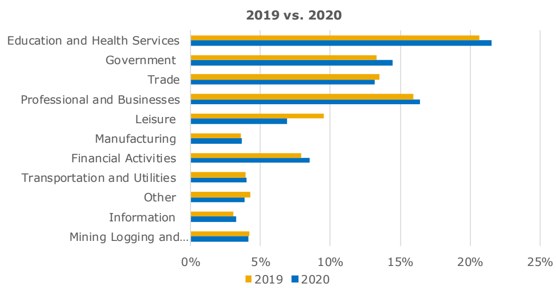
Employment

Economic diversity is underscored by significant employment and activity in banking and securities, life insurance, mass media, journalism and publishing, fashion design, health care, higher education, technology, information services, tourism, theater and the arts, and retail. The City's employment distribution has shifted over time from manufacturing to services with the latter accounting for 92.2% of employment in 2020. Manufacturing activity is mainly centered on apparel and printing. The City's strong transportation infrastructure, despite requiring substantial reinvestment, supports a large workforce and provides an array of domestic and international connection options.

Employment losses were mostly concentrated within leisure (34.6% YoY decline), trade (12.2% YoY decline) and other industries (18.7% YoY decline) in the New York-Newark-Jersey City MSA.

Figure 15

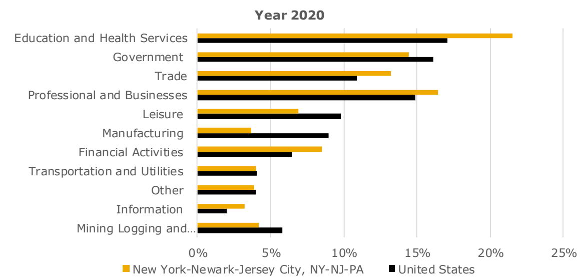
New York-Newark-Jersey City, NY-NJ-PA Employment by Sector



Source: U.S. Bureau of Economic Analysis

Figure 16

New York-Newark-Jersey City, NY-NJ-PA vs. United States Employment by Sector

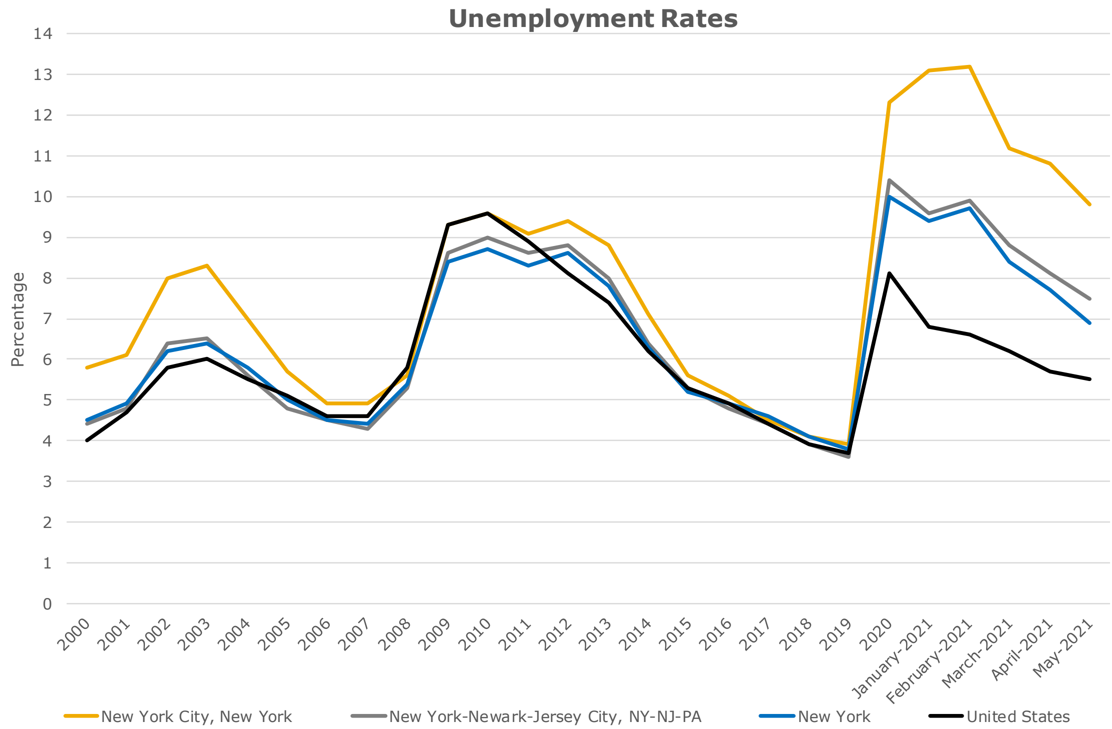


In 2019, New York City was home to over 23,650 restaurants that employed over 317,800 people and paid $10.7 billion in total wages and $27 billion in taxable sales. The New York State Comptroller estimates the potential permanent closures of restaurants and bars, through September 2021, to range from one-third to one-half of all establishments that existed before the pandemic.[7] Such closures have the potential to result in a permanent loss of nearly 12,000 restaurants and bars and over 159,000 industry jobs, although the opening of new restaurants would mitigate some of these losses.

Since the Great Recession, the City's unemployment rate has trended above the State's average. Employment within the City declined by 11.1% year-over-year in 2020 due to the economic disruption caused by the pandemic, and recovery has been relatively slow. As of May 2021, the City's unemployment rate of 9.9% remains higher than the State's at 7.0% and the nation's at 5.8%. The City's overall employment has declined at a 0.5% CAGR within the last ten years, influencing the State's overall employment level which has declined at a similar rate of 0.5%.

[7] Thomas P. DiNapoli, "The Restaurant Industry in New York City: Tracking the Recovery," Office of the New York State Comptroller, September 2020

Figure 17



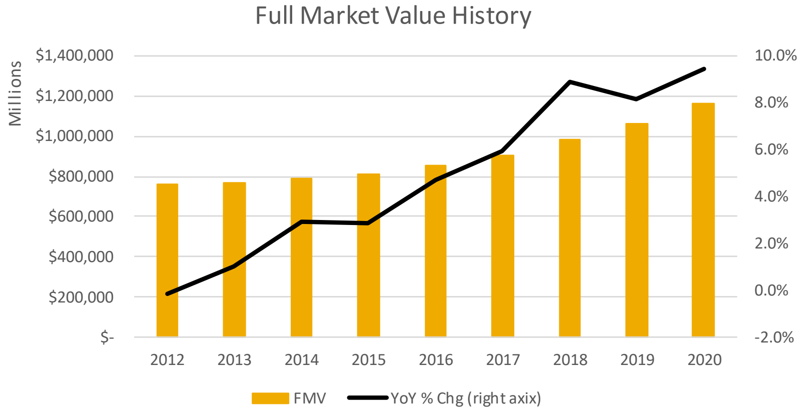
	New York City, New York	New York-Newark-	New York	United States
May 2021	9.8	7.5	6.9	5.5
April 2021	10.8	8.1	7.7	5.7
Great Recession Peak	9.6	9.0	8.7	9.6
Point Δ Since Great Recession Peak	0.2	-1.5	-1.8	-4.1

Source: U.S Bureau of Labor Statistics

Tax Base/Assessed Valuation

Full Market Value ("FMV") growth has been strong, increasing at an annual average rate of 7.4% over the last five years. The City's FMV for FY 2020 is $1.3 trillion. The City assesses property at approximately 40% of FMV for commercial and industrial property and 20% of FMV for residential property. Commercial/industrial properties account for 54% of AV followed by residential properties at 46%. Residential growth has outpaced commercial/industrial growth. In FY 2020, residential properties increased at an annual rate of 6.3% while commercial/industrial properties increased by 3.9%.

Figure 18



Source: New York City CAFR

The City's top 10 real estate taxpayers account for 8.29% of total AV with the property tax collection averaging 92.9% during the last 10 years.

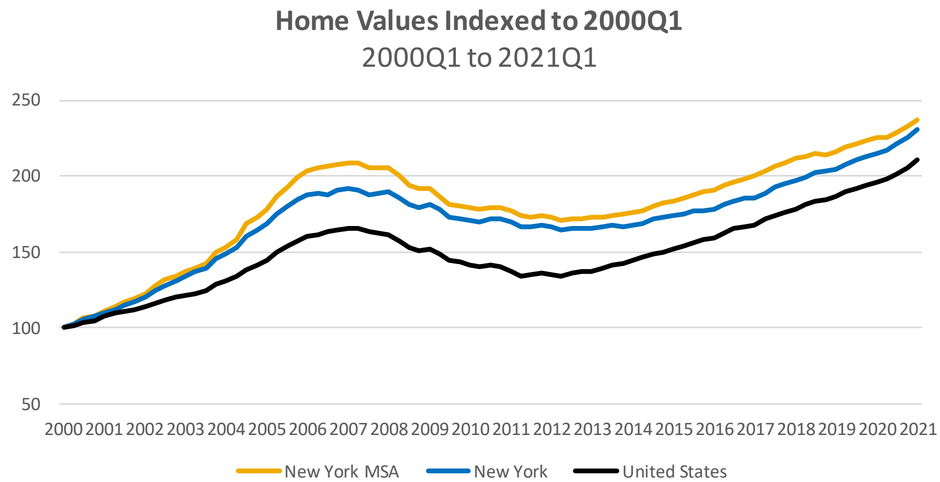
Office Vacancy

According to the real estate firm Newmark, 18.7% of all office space in Manhattan is available for lease, which is more than the 15% recorded at the end of 2020 and double the rate before the pandemic. Property taxes are the largest source of revenue for New York City, with commercial property accounting for the largest share of that at 48%.

Home Values

Home value appreciation within the New York MSA has historically surpassed that of the State and nation, even factoring in the annual declines in home values experienced in the years following the Great Recession. By 2014, home values within the MSA began to exhibit gradual year-over-year improvement and as of Q1 2021, were 13.5% above the prior Q1 2007 peak. In comparison, State and U.S. home values were 20.5% and 27.2%, respectively, above their prior peaks. Looking only at the period from the start of the pandemic in March 2020, home values in the MSA have increased 5.3%, which, while favorable, lags the rate of increase of the State at 7.1% and the U.S., at 7.2%.

Figure 19



Source: Federal Housing Finance Agency