NEW YORK CITY COMPTROLLER
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December 3, 2018

# Fiscal Year 2019 Annual Report on Capital Debt and Obligations

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# I. Executive Summary

Debt for the City of New York (the "City") has grown from $4,923 per capita in FY 2000 to $10,399 per capita in FY 2018, an increase of 111 percent. Over the same period, New York City personal income grew by 109 percent and New York City local tax revenues by 166 percent.[1] The City's debt finances the capital maintenance and upkeep of an infrastructure that must accommodate not only 8.6 million City residents but also about one million daily commuters and over 62 million tourists annually. While such spending is necessary, it is oftentimes costly because of the City's varied and aging infrastructure.

Debt is issued directly by the City or on behalf of the City through a number of public benefit corporations or authorities. This report assesses the debt condition of the City of New York in accordance with Section 232 of the City Charter. The Charter requires the Comptroller to report the amount of debt the City may incur for capital projects during the current fiscal year and each of the three succeeding fiscal years.

The City may issue long-term debt only for capital purposes (assets with useful lives of five years or greater and value of more than $35,000, as defined in Comptroller's Office Directive #10), to finance certain pollution remediation costs per a 2010 amendment to the Financial Emergency Act, and to provide capital grants to other entities such as the Metropolitan Transportation Authority (MTA).

Despite its magnitude, the amount of outstanding City debt counted against the City's debt limit is well under the City's statutory debt-incurring power for the current year. New York City's general debt limit, as set forth in the New York State Constitution, is 10 percent of the five-year rolling average of the full value of taxable City real property. The City's FY 2019 general debt-incurring power of $106.24 billion is projected to increase to $111.72 billion in FY 2020, $117.77 billion in FY 2021 and $123.54 billion by FY 2022.

Outstanding City debt that is counted against the debt limit totaled $69.01 billion as of July 1, 2018, leaving the City with a net debt-incurring power of $37.24 billion. The outstanding debt total included $36.29 billion of net General Obligation (GO) debt, $21.18 billion of NYC Transitional Finance Authority (TFA) debt above its $13.5 billion authorized base, and $11.54 billion in contract and other liabilities, as shown in the Debt-Incurring Power Table on page 6. Forty-eight percent of outstanding GO and TFA debt is scheduled to come due over the next ten years.

By the beginning of FY 2022, the City's total indebtedness is expected to grow to $96.61 billion. The City is projected to have remaining debt-incurring capacity of $35.35 billion on July 1, 2019, $30.92 billion on July 1, 2020 and $26.93 billion on July 1, 2021, based on growth of the full value of taxable real property.

Certain entities aside from the City issue debt to finance capital programs for the City. While the City may pay a certain portion of these debts, they are not counted towards the City's statutory debt limit. Significant funding for the City's Capital Plan is provided by debt issued by the New York City Municipal Water Finance Authority (NYW), which is backed by water and sewer system revenues. TFA Building Aid Revenue Bonds (BARBs) are issued to finance construction and other capital needs in City schools and are reimbursed from revenues the City receives from New York State.

New York City's FY 2017 per capita debt burden was double the average of comparable large U.S. cities. However, it should be noted that New York City has responsibilities that in other cities are distributed more broadly among states, counties, unified school districts, and public authorities.

[1] The FY 2018 New York City personal income is estimated from the Bureau of Economic Analysis (BEA) 2017 data.

Among the cities compared in this report, New York City ranks the highest in two measures of debt burden that factor in a locality's taxable base, and is well above the averages of the comparable cities and counties. New York City's outstanding debt as a percentage of full value of real property in FY 2017 was 8.1 percent. This is about twice the average of 4.1 percent of the other comparable cities. Of the comparable cities, San Antonio, at 7.6 percent, and Chicago at 7.0 percent were close to New York City. The next largest city by population, Los Angeles, has a ratio of 3.1 percent, well below that of the City. New York City's debt per capita as a percentage of personal income per capita in FY 2017 was 14.3 percent, almost twice the average of the other comparable cities.[2] San Antonio and Houston were the next highest, at 12.8 and 11.4 percent, respectively, while Boston had the lowest debt to personal income ratio at 2.9 percent.

While New York City has a large amount of outstanding debt, its credit rating remains strong, as shown in the table below. Rating agencies cite the City's large and diverse economy, strong financial management, and liquidity among positive credit attributes that support GO ratings. High TFA and NYW ratings reflect their strong legal frameworks and debt service coverage by pledged revenues.

## Table I. Ratings of Major New York City Debt

| Rating Agency | GO | TFA Senior Bonds | TFA Subordinate | TFA BARBs | NYW First Resolution | NYW Second Resolution |
|---|---|---|---|---|---|---|
| S&P | AA | AAA | AAA | AA | AAA | AA+ |
| Moody's | Aa2 | Aaa | Aa1 | Aa2 | Aa1 | Aa1 |
| Fitch | AA | AAA | AAA | AA | AA+ | AA+ |

[2] The latest available BEA data for personal income is 2017.

## Table II. NYC Debt-Incurring Power

($ in millions)

| | July 1, 2018 | July 1, 2019 [a] | July 1, 2020 [a] | July 1, 2021 [a] |
|---|---|---|---|---|
| **Gross Statutory Debt-Incurring Power** | **$106,243** | **$111,715** | **$117,769** | **$123,535** |
| Actual Bonds Outstanding as of July 1, 2018 (net) [b] | 38,363 | 36,314 | 34,067 | 31,870 |
| Plus: New Capital Commitments [c] | | | | |
| FY 2019 | | 10,840 | 10,840 | 10,840 |
| FY 2020 | | | 14,015 | 14,015 |
| FY 2021 | | | | 13,469 |
| Less: Appropriations for General Obligation Principal | (2,071) | (2,261) | (2,209) | (2,305) |
| Incremental TFA Bonds Outstanding Above $13.5 billion | 21,175 | 19,936 | 18,602 | 17,179 |
| **Subtotal: Net Funded Debt Against the Limit** | **$57,467** | **$64,829** | **$75,315** | **$85,068** |
| Plus: Contract and Other Liability | 11,540 | 11,540 | 11,540 | 11,540 |
| **Subtotal: Total Indebtedness Against the Limit** | **$69,007** | **$76,369** | **$86,855** | **$96,608** |
| **Remaining Debt-Incurring Power within General Limit** | **$37,236** | **$35,346** | **$30,914** | **$26,927** |

[a] FYs 2020 through 2022 debt limits are based on the NYC Comptroller's Office's forecasts of assessed value and related full market value of real property.

[b] Net adjusted for Original Issue Discount, Capital Appreciation Bonds, GO bonds issued for the water and sewer system and Business Improvement District debt. The $38.363 billion is derived from the $38.628 billion GO total minus $265 million of the aforementioned adjustments.

[c] Reflect City-funds capital commitments as of the FY 2019 Adopted Capital Commitment Plan (released in October 2018) and includes cost of issuance and certain Inter-Fund Agreements. 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 this debt would be counted against the general debt limit. Thus, City capital commitments will be funded with TFA debt as well.

NOTE: The Debt Affordability Statement released by the City in April 2018 presents data for the last day of each fiscal year, June 30th, instead of the first day of each fiscal year, July 1, as reflected in this table. The City's Debt Affordability Statement forecasts that indebtedness would be below the general debt limit by $27.3 billion at the end of FY 2019.

SOURCE: NYC Comptroller's Office and the NYC Office of Management and Budget.

# II. Profile of New York City Debt

Debt is issued directly by New York City, or on behalf of the City through a number of different debt issuing entities. This debt (gross NYC debt) is used to finance the City's capital projects, and includes the City's General Obligation (GO) bonds, all categories of NYC Transitional Finance Authority bonds (TFA), TSASC, Inc. bonds, Sales Tax Asset Receivable Corporation (STAR) bonds and other conduit issuers included in the Capital Lease Obligations and other category (see Table 1).[3] While New York City Water Municipal Finance Authority (NYW) bonds also fund City capital projects, they are not included in gross NYC debt as they are paid for principally through charges for water and sewer service set and billed by the NYC Water Board.

In the 1980s, gross NYC debt grew at an average annual rate of 4.5 percent. During the 1990s, it increased by 6.4 percent annually. The substantial increase during the 1990s resulted mainly from the rehabilitation of facilities that were neglected during the 1970s fiscal crisis. Gross debt outstanding grew at a rate of 4.7 percent per year from FY 2000 to FY 2018. The FY 2019 Adopted Budget and Financial Plan shows that growth will increase by approximately 5.5 percent annually through 2022.[4] Projections for growth rates may change as more detailed information about funding needs becomes available over time.

## Composition of Debt

Excluding NYW bonds, the City issues five types of debt to finance or refinance its capital program with GO and TFA bonds accounting for 43.1 percent and 48.4 percent of the outstanding total, respectively (Table 1). Debt service on these bonds, with the exception of debt service, is paid with funds that would otherwise be General Fund revenues. STAR debt service is paid by an annual transfer of $170 million of New York State (NYS) sales tax revenues from the Local Government Assistance Corporation (LGAC). NYW debt service is paid for by water and sewer user fees. Table 1 contains information on General Fund supported and STAR debt.

Each of the categories of debt is comprised of both tax-exempt and taxable bonds, with the exception of TSASC and STAR debt, which have been issued solely as tax-exempt bonds. Tax-exempt debt accounted for 81.7 percent of the total par amount of the City's outstanding debt at the end of FY 2018.

All City debt is issued to finance projects that have a public purpose, with taxable debt issued for projects that have a public purpose but are ineligible for Federal tax exemption, such as housing loan programs that benefit from Federal tax credits. Certain bonds that the City issues are hybrids of taxable and tax-exempt. The City was authorized to issue Build America Bonds (BABs) in calendar years 2009 and 2010. In addition, the City issued taxable Qualified School Construction Bonds (QSCBs) until October 2013 when the Federal allocation was exhausted. Even though BABs and QSCBs are taxable, because the City receives Federal interest subsidy payments for these bonds, they must meet the same public purpose standards as tax-exempt bonds. While BABs and QSCBs are classified as taxable debt, due to the federal interest subsidies, the net cost of borrowing to the City on these bonds is less than or similar to that of tax-exempt bonds. Including these bonds among the tax-exempt bonds would increase the share of outstanding debt with a tax-exemption cost of borrowing to 91.2 percent.

[3] Except for STAR debt, all bonds cited are paid from General Fund revenues.

[4] GO, TSASC and TFA debt outstanding are used as primary drivers for the estimated growth rate due to the unavailability of data regarding future lease-purchase debt issuance.

To diversify interest rate risk, gross NYC debt consists of both fixed and variable rate debt, with the bulk of the debt in fixed rate borrowing. At the end of FY 2018, fixed rate debt accounted for 87.7 percent of gross NYC debt outstanding.

## Table 1. Gross NYC Debt Outstanding as of June 30, 2018

($ in millions)

| | GO Bonds | TFA | TSASC | STAR Corporation | Capital Lease Obligations & Other [a] | Gross Debt Outstanding |
|---|---|---|---|---|---|---|
| **Tax-Exempt** | | | | | | |
| Fixed Rate | $24,780 | $30,710[c] | $1,071 | $1,805 | $3,888 | $62,254 |
| Variable Rate[b] | 6,742 | 4,105[c] | 0 | 0 | 156 | 11,003 |
| Subtotal | $31,522 | $34,815 | $1,071 | $1,805 | $4,044 | $73,257 |
| **Taxable** | | | | | | |
| Fixed Rate | $7,106 | $8,540 | $0 | $0 | $725 | $16,371 |
| Variable Rate[b] | 0 | 0 | 0 | 0 | 0 | 0 |
| Subtotal | $7,106 [d] | $8,540 [d] | $0 | $0 | $725 | $16,371 |
| **Total** | **$38,628** | **$43,355** | **$1,071** | **$1,805** | **$4,769** | **$89,628** [e] |
| **Percent of Total** | **43.1%** | **48.4%** | **1.2%** | **2.0%** | **5.3%** | **100.0%** |

[a] Capital Lease Obligations & Other does not include outstanding FY 2005 Securitization Corporation debt which is included in the New York City Comprehensive Annual Financial Report (CAFR), but includes $46 million of City University Construction Fund (CUCF) debt which is not included in the CAFR.

[b] Variable rate debt varies in term from two to 30 years, with interest-payment terms that are reset on a daily, weekly, or other periodic basis.

[c] TFA fixed rate debt includes $7.94 billion of TFA BARBs. The variable rate debt includes $550 million of Recovery Bonds.

[d] NYC GO taxable bond debt includes $4.34 billion of BABs and $59.7 million of QSCBs. The TFA taxable fixed rate debt includes $2.91 billion of BABs and $1.14 billion of QSCBs.

[e] Total does not include impact of premiums/discounts on debt outstanding estimated at $5.38 billion in FY 2018.

SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2018.

### General Obligation Debt

GO debt is backed by the full faith and credit of the City of New York. As of June 30, 2018, GO debt totaled $38.63 billion and accounted for 43.1 percent of gross NYC debt outstanding, an increase of 2.0 percent from FY 2017. Debt service for GO bonds is paid from real property taxes which are deposited with and retained by the State Comptroller under a statutory formula for the payment of debt service. This “lock-box” mechanism assures that debt service obligations are satisfied before property tax revenues are released to the City’s General Fund. NYC property tax revenues were $26.4 billion in FY 2018, almost seven times FY 2018 GO debt service.

The FY 2018 GO debt total is $737 million more than debt outstanding at the end of FY 2017. The increase of two percent reflects higher bond issuance relative to GO bonds redeemed during the course of FY 2018. During FY 2018, the City issued $3.3 billion of new-money bonds for capital projects.

### Transitional Finance Authority Debt

The TFA issues two different types of debt — Future Tax Secured (FTS) bonds backed primarily by the City’s personal income tax (PIT) revenues and BARBs, supported by revenues the City receives from New York State. At the close of FY 2018, TFA debt totaled $43.36 billion, comprised of $35.41 billion of FTS debt and $7.94 billion of BARBs. This total is 6.5 percent greater than at the close of FY 2017. As a result, the TFA’s share of gross NYC debt outstanding increased from

47.2 percent in FY 2017 to 48.4 percent in FY 2018. The increase reflects the issuance of $4.12 billion of TFA bonds in support of the City's capital program during the course of FY 2018.

The TFA was created as a public benefit corporation in 1997 with the power and authorization to issue bonds up to an initial limit of $7.5 billion, but after several legislative changes the limit was increased to $13.5 billion. This borrowing did not count against the City's general debt limit.[5] The City exhausted the $13.5 billion bonding limit in FY 2007. In July 2009, the State Legislature authorized TFA to issue debt beyond the $13.5 billion limit. However, this additional borrowing was made subject to the City's general debt limit. Thus, the incremental TFA debt issued in FY 2010 and beyond, to the extent the amount outstanding exceeds $13.5 billion, has been combined with City GO debt when calculating the City's indebtedness within the debt limit.

In April 2006, the State Legislature authorized the TFA to issue $9.4 billion of BARBS supported by building aid payments the City receives from the State. This debt is to be used to finance a portion of the City's five-year educational facilities capital plan. Between FY 2007 and FY 2009, $4.25 billion of BARBs were issued. Additional BARBs in the amount of $2.15 billion were issued over the FY 2011 – FY 2013 period along with $1.5 billion in FY 2015, $750 million in FY 2016 and $500 million in FY 2018.[6] As a result of those debt issues, minus amortization through June 30, 2018, there are currently $7.94 billion of BARBs outstanding. BARBs are excluded from the calculation of the City's debt counted against the debt limit. Going forward, projected BARBs borrowing averages about $213 million per year over FY 2019 – FY 2022 to keep within its $9.4 billion limit as specified in the School Financing Act. The TFA, working with the New York City Comptroller's Office, retains discretion with regard to the specific amount of annual BARBs borrowing.

## TSASC INC. Debt

TSASC debt, which does not count toward the City's general debt limit, totaled $1.07 billion as of June 30, 2018. This represents an $18 million decrease from FY 2017. There currently are no plans for future new money TSASC offerings. TSASC is a local development corporation created under and subject to the provisions of the Not-for-Profit Corporation Law of the State of New York. TSASC bonds are secured by tobacco settlement revenues as described in the Master Settlement Agreement among 46 states, six jurisdictions, and the major tobacco companies. In January 2017, TSASC refinanced all bonds issued under the Amended and Restated 2006 Indenture. The refunding bond structure continues to allow the tobacco settlement revenues (TSRs) to flow to both TSASC and the City, with 37.4 percent of the TSRs pledged to TSASC bondholders, and the remainder going into the City's General Fund.[7]

## Sales Tax Asset Receivable Corporation (STAR) Debt

STAR debt, which does not count toward the City's general debt limit, totaled $1.81 billion at the end of FY 2018. This represents a decrease of $79 million from FY 2017. Initially, the proceeds of STAR bonds were used to pay off the remaining debt of the Municipal Assistance Corporation (MAC) in FY 2005. STAR is a local development corporation organized under the Not-for-Profit Corporation Law of the State of New York. While the Corporation is separate and apart from the City of New York, for City accounting purposes, it is a blended component unit of the City. Debt service for STAR bonds is paid by the Local Government Assistance Corporation (LGAC), a State

[5] The debt limit is discussed in further detail in Section III.

[6] The TFA did not issue any BARBs in FY 2014 and FY 2017.

[7] The former TSASC indenture called for all tobacco revenues to flow first to TSASC and then to the City's General Fund.

public benefit corporation, and is not counted against the City's debt limit.[8] During the course of FY 2015, STAR refinanced and restructured its remaining debt of just below $2.0 billion and produced savings of $649 million to lower TFA debt service costs through the defeasance of bonds. However, New York State captured those savings through an adjustment of sales tax receipts that would have been otherwise payable to the City over the past three fiscal years. No further issuance is planned at this time.[9]

## Capital Lease (Conduit Debt) and Other Obligations

Capital Lease and Other Obligations totaled $4.77 billion as of June 30, 2018, an increase of $62 million from FY 2017. The City makes annual appropriations from its General Fund for agreements with other entities that issue debt to build or maintain facilities on behalf of the City. These agreements are known as "leaseback" transactions and result in a capital lease obligation. These capital lease obligations are included in the gross NYC debt outstanding, but are excluded in the calculation of the City's indebtedness under the general debt limit. Capital lease obligations include debt issued by Health + Hospitals (H+H) ($513 million), the Dormitory Authority of the State of New York (DASNY) for the New York City Courts Capital Program ($396 million), the Educational Construction Fund ($231 million), the City University Construction Fund (CUCF) ($46 million), the Industrial Development Agency ($77 million), the Primary Care Development Corporation ($25 million), as well as general lease obligations ($725 million).[10] In addition, due to Governmental Accounting Standards Board (GASB) reporting requirements, $32 million of NYC Tax Lien Trust debt was included in this category.

The Hudson Yards Infrastructure Corporation (HYIC) is a not-for-profit local development corporation formed in July 2004, to finance development in the Hudson Yards district of Manhattan — primarily the extension of the Number 7 Subway line westward to 11th Avenue and 34th Street which was completed in September 2015. In May of 2017, the HYIC issued $2.14 billion of bonds to refund a portion of its outstanding debt. The refunding bonds are a serial structure that begins amortizing in FY 2022 and due to coverage tests outlined in the original indenture, the un-refunded bonds were converted to establish a sinking fund structure. As of June 30, 2018 the HYIC had $2.72 billion in debt outstanding. No interest support payments were made by the City to the HYIC in FY 2017 nor are any planned for in the future. In August 2018, however, the City Council passed a resolution authorizing the issuance of up to $500 million in additional HYIC debt to fund Phase 2 of the Hudson Boulevard expansion and related park/infrastructure improvements from West 36th Street to West 39th Street in the Hudson Yards Financing district. It is unclear if this will result in a resumption of interest support payments by the City.

## Other Issuing Authorities

In addition to the financing mechanisms cited above, a number of independent authorities issue bonds to finance infrastructure projects in the City and throughout the metropolitan area. The two largest issuers are NYW and the New York State Metropolitan Transportation Authority (MTA). Both of these entities have no statutory claim on revenues of the City of New York. Thus, the debt of NYW and MTA is not an obligation of the City. Nevertheless, bond proceeds from these entities are used to support services provided to City residents. The outstanding indebtedness of these two authorities is summarized in Tables 2 and 3.

[8] LGAC receives its revenues primarily from its share of the New York State 4.0 percent Sales Tax. The estimated sales tax revenues in FY 2018 were $3.4 billion.

[9] At the time of refunding, the City recognized approximately $210 million in Debt Service savings in each of FY 2016 through FY 2018. However, the State FY 2017 Adopted Budget contained a provision that allowed the State to intercept $600 million of City sales tax revenues over State fiscal years 2017 through 2019.

[10] Although for reporting purposes $513 million of Health + Hospitals (H+H) debt is included in the category of Capital Lease Obligations, the debt of H+H is not fully guaranteed by New York City.

NYW had $30.02 billion in debt outstanding as of June 30, 2018, a decrease of $15 million, or about 0.05 percent, from FY 2017. Debt issued by NYW is supported by fees and charges for the use of services provided by the system. Created by State law in 1984, NYW is responsible for funding the City's water and sewer-related capital projects administered by the City's Department of Environmental Protection (DEP), such as the construction, maintenance and repair of sewers, water mains, and water pollution control plants. Avoiding the need to build water filtration plants for upstate watersheds continues to be a high priority for DEP. Land acquisition strategies along with conservation-focused local development help the goal of continued water quality. DEP's FY 2019 – FY 2022 Four-Year Capital Program assumes an average annual cash funding need of $2.18 billion.[11] The Capital Plan will continue to be a driver of water and sewer rate increases over the Financial Plan period. The current City-funds commitment plan annual average of $3.02 billion per year is 51 percent higher than the agency's annual average actual capital commitments of $2.0 billion between FY 2015 and FY 2018. For the first time in the past 20 years, the current Plan is higher than the FY 2007 – FY 2010 period, when Federal mandates drove much of the program and DEP's City-funds commitments averaged $2.8 billion per year. NYW also has retired debt before its final maturity date in recent years, as monies become available. This practice is likely to continue in the future.

## Table 2. NYW Debt Outstanding as of June 30, 2018

($ in millions)

| Tax Exempt & Taxable | |
|---|---|
| Fixed Rate | $24,984[a] |
| Variable Rate | 5,031 |
| **Total** | **$30,015** |

[a] Includes $215 million of Bond Anticipation Notes and $4.07 billion of Build America Bonds (Taxable).
SOURCE: New York Water Finance Authority.

The MTA, a State controlled authority is composed of six major agencies providing transportation throughout the metropolitan area. The MTA is responsible for the maintenance and operation of the New York City Transit bus and subway system as well as the Long Island and Metro-North Railroads and various bridges and tunnels.

## Table 3. MTA Debt Outstanding as of June 30, 2018

($ in millions)

| Tax Exempt & Taxable | |
|---|---|
| Fixed Rate | $35,585 |
| Variable Rate | 4,566 |
| **Total** | **$40,151** |

SOURCE: Metropolitan Transportation Authority.
NOTE: $556 million of the above figure is classified as taxable debt.

Debt issued to fund the MTA's capital program is secured by several revenue sources: revenues from system operations, surplus MTA Bridges and Tunnels revenue, state and local government funding, and certain taxes imposed in the metropolitan commuter transportation mobility tax district, which includes the counties of New York, Bronx, Kings, Queens, Richmond, Rockland, Nassau, Suffolk, Orange, Putnam, Dutchess, and Westchester.

As of June 30, 2018, the MTA had $40.15 billion of debt outstanding, an increase of $1.85 billion, or 4.8 percent, from June 30, 2017. Outstanding MTA debt has increased in all but one of the last eighteen years. MTA debt has grown by 183 percent or $25.96 billion since FY 2000. This growth

[11] This figure represents the estimated borrowing need for DEP, issued via NYW. Source: OMB Capital Cash Flow document, October 2018.

rate is 56 percentage points higher than the growth rate in gross NYC indebtedness over the same period.

## Analysis of Principal and Interest among the Major NYC Issuers

The two major debts that finance City capital projects outside the water and sewer system are NYC General Obligation and TFA bonds. TSASC bonds are a small component of debt outstanding and there is no additional planned new money debt issuance of TSASC debt. As a result, any new debt issuances will involve a mix of GO debt, TFA bonds, and TFA BARBs.

## Table 4. NYC Projected Combined Debt Outstanding for GO, TFA, STAR and TSASC, FY 2018 – FY 2027

($ in millions)

| End of Fiscal Year | Debt Outstanding for GO, TFA, STAR & TSASC | Estimated Annual Borrowing | Percent Change in Debt Outstanding |
|---|---|---|---|
| 2018 | $84,859 | | 4.0% |
| 2019 | $88,397 | $7,188 | 4.2% |
| 2020 | $92,899 | $8,428 | 5.1% |
| 2021 | $98,662 | $9,849 | 6.2% |
| 2022 | $104,945 | $10,716 | 6.4% |
| 2023 | $110,240 | $10,143 | 5.0% |
| 2024 | $114,451 | $9,270 | 3.8% |
| 2025 | $117,439 | $8,146 | 2.6% |
| 2026 | $118,177 | $6,144 | 0.6% |
| 2027 | $117,557 | $5,300 | (0.5%) |

NOTE: TFA figures include TFA BARBs.
SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2018 and the NYC Office of Management and Budget, June 2018 Financial Plan.

Based on NYC Office of Management and Budget (OMB) forecasts, the annual growth rate in debt outstanding, which averaged 4.7 percent per year from FY 2000 to FY 2018, is expected to slow to 3.7 percent between FY 2018 to FY 2027. However, the average annual growth rate of debt outstanding in the first half of this period, FY 2018 – FY 2022 (5.5 percent) is higher than the rate for the period as a whole.[12]

As shown in Table 4, between FY 2019 and FY 2022, the growth rate averages 5.9 percent per year. Growth estimates beyond the Financial Plan period tend to be lower because of the greater uncertainty of project specifics in the outyears. Since City agencies are typically not yet focused on the latter years of the Ten-Year Capital Strategy, their future projections are oftentimes less defined. Projections for this slower rate of growth are likely to change as more detailed information becomes available.

The combined principal and interest composition for GO, TFA and TSASC is shown in Table 5.[13] The Financial Plan assumes principal repayments totaling $3.447 billion in FY 2019, $3.687 billion in FY 2020, $3.779 billion in FY 2021, and $4.042 billion in FY 2022. Principal is estimated to be

[12] The growth rate of 4.7 percent from FY 2000 to FY 2018 is based on gross debt outstanding as reflected in the NYC Comptroller's Comprehensive Annual Reports minus bond premiums. Projections of growth rates beyond FY 2018 are based on OMB's FY 2019 Adopted Budget and June 2018 Financial Plan.

[13] Since TFA BARB and STAR debt service are not paid with City General Fund revenues, they are *not* included in Table 5.

49.9 percent of debt service in FY 2019, 49.8 percent in FY 2020, 48.5 percent in FY 2021 and 47.6 percent in FY 2022.[14]

## Table 5. Estimated Principal and Interest Payments GO, TFA, and TSASC

($ in millions)

| Fiscal Year | Estimated Principal Amount | Estimated Interest | Estimated Total Debt Service | Principal as Percent of Total |
|---|---|---|---|---|
| 2019 | $3,447 | $3,464 | $6,911 | 49.9% |
| 2020 | $3,687 | $3,718 | $7,405 | 49.8% |
| 2021 | $3,779 | $4,009 | $7,788 | 48.5% |
| 2022 | $4,042 | $4,445 | $8,487 | 47.6% |

NOTE: Adjusted for prepayments and excludes interest on short-term notes and debt service for capital lease / conduit debt. TFA BARBs and STAR debt not included in this table.
SOURCE: NYC Office of Management and Budget, June 2018 Financial Plan and Office of the NYC Comptroller.

During FY 2018, the City issued $5.14 billion of GO debt, $1.84 billion of which was used for refunding transactions. The refundings produced gross savings of $341.9 million over the life of the bonds. The City also converted $625.1 million of variable rate debt to fixed rate. At the end of FY 2018, outstanding GO debt totaled $38.63 billion. Approximately $21.83 billion of the total GO debt currently outstanding (56.5 percent) will mature in the next ten years, as shown in Table 6.

## Table 6. Amortization of Principal of the Three General Fund Issuers

($ in millions)

| Fiscal Years | GO | TFA[a] | GO and TFA | Percent of Total | TSASC | Grand Total |
|---|---|---|---|---|---|---|
| 2019-2028 | $21,826 | $17,160 | $38,986 | 47.6% | $271 | $39,257 |
| 2029-2038 | $12,876 | $18,062 | $30,938 | 37.7% | $268 | $31,206 |
| 2039 and After | $3,926 | $8,133 | $12,059 | 14.7% | $532 | $12,591 |
| **Total** | **$38,628** | **$43,355** | **$81,983** | **100.0%** | **$1,071** | **$83,054** |

(a) Includes $682.1 million of TFA Recovery bonds.

TFA issued a total of $5.86 billion of debt, including BARBs, in FY 2018, of which $4.12 billion was new debt. The remainder was for $1.58 billion of refunding transactions and $161 million for the conversion of variable rate bond to fixed-rate debt. The TFA BARBs refunding produced budgetary savings of $271 million over the life of the bonds. TFA's debt outstanding was $43.36 billion at the end of FY 2018. Of the total TFA debt outstanding, $17.16 billion, or 39.6 percent, will come due over the next ten years, as shown in Table 6.

[14] Debt service excludes lease-purchase debt, interest on short-term notes, debt service on STAR and TFA BARBs, and is as of the FY 2019 Adopted Budget and June 2018 Financial Plan.

# III. Debt Limit

## The City's Debt-Incurring Power

NYC's general debt limit, as provided in the New York State Constitution, is 10 percent of the five-year rolling average of the full value of taxable real property. The process by which the City's annual debt limit is established involves a number of different elements:

- No later than February 15th, the New York City Department of Finance issues a preliminary estimate of the assessed value of taxable real property for the ensuing fiscal year. Assessed value is statutorily less than the market value of properties.
- The general debt limit is based on the full market value of taxable real property and not on assessed value. To derive a market value of taxable properties, the New York State Office of Real Property Tax Services (ORPTS) develops special equalization ratios that express the relationship between assessed value and market value. ORPTS uses the most recent market survey and a projection of recent market values to obtain the full market value for the ensuing fiscal year. The special equalization ratio is then expressed as the ratio of the assessed value of taxable real property to the full market value of taxable real property. ORPTS calculates equalization ratios for the ensuing fiscal year and the four fiscal years preceding it. These equalization ratios are used to compute the market values that are used to establish the City's debt-incurring power (debt limit) for the current fiscal year. Market values of the ensuing fiscal years are forecasted by the Comptroller's Office.
- The State Constitution provides that, with certain exceptions, the City's outstanding debt cannot exceed an amount equal to 10 percent of the average full value of taxable real property in the City over the most recent five years. Full values of real property are established using the equalization ratios and the assessed values of taxable real property for the relevant five-year period. The City's debt limit for the ensuing fiscal year is then calculated by averaging the estimated full values of real property over the five-year period.
- By June 30th, the New York City Council adopts the City's yearly budget and fixes the property tax rates for the ensuing fiscal year. The resolution fixing the property tax contains the five-year average of the full value of real property that is used to derive the debt limit.
- The debt limit is effective as of July 1st, the start of each fiscal year.

Table 7 illustrates the calculation of the FY 2018 debt limit. The full market value for each of FY 2014 through FY 2018 was calculated by dividing the assessed value of taxable real property for each year by the special equalization ratios provided by ORPTS. The average of the computed full market values of this five-year period is then calculated. Finally, the FY 2019 debt limit ($106.243 billion) is derived by multiplying the five-year average value ($1.062 trillion) by 10 percent.

## Table 7. Calculation of Full Value of Real Property in New York City and the General Debt Limit, FY 2019

| Fiscal Year | Assessed Valuations of Taxable Real Property | Special Equalization Ratio | Full Value |
|---|---|---|---|
| 2015 | $184,059,201,523 | 0.2065 | $891,327,852,412 |
| 2016 | $196,710,908,548 | 0.2005 | $981,101,788,269 |
| 2017 | $210,130,499,481 | 0.1982 | $1,060,194,245,616 |
| 2018 | $225,863,036,909 | 0.2008 | $1,124,815,920,862 |
| 2019 | $240,777,862,121 | 0.1919 | $1,254,704,857,327 |
| 5-Year Average Value | | | $1,062,428,932,897 |
| 10 Percent of the 5-Year Average | | | $106,242,893,290 |

SOURCE: New York City Council Tax Fixing Resolution for FY 2018.

Table 8 summarizes the estimated growth in the City's debt-incurring power. The City's FY 2019 general debt-incurring power of $106.24 billion is projected to increase to $111.72 billion in FY 2020, $117.77 billion in FY 2021 and $123.54 billion by FY 2022.[15] The City's indebtedness counted against the statutory debt limit is projected to grow from $69.01 billion at the beginning of FY 2019 to $96.61 billion by the beginning of FY 2022.

[15] The full value of taxable real property in the outyears is based on the NYC Comptroller's Office forecast of future real estate trends.

## Table 8. NYC Debt-Incurring Power

($ in millions)

| | July 1, 2018 | July 1, 2019 [a] | July 1, 2020 [a] | July 1, 2021 [a] |
|---|---|---|---|---|
| **Gross Statutory Debt-Incurring Power** | **$106,243** | **$111,715** | **$117,769** | **$123,535** |
| Actual Bonds Outstanding as of July 1, 2018 (net) [b] | 38,363 | 36,314 | 34,067 | 31,870 |
| Plus: New Capital Commitments [c] | | | | |
| FY 2019 | | 10,840 | 10,840 | 10,840 |
| FY 2020 | | | 14,015 | 14,015 |
| FY 2021 | | | | 13,469 |
| Less: Appropriations for General Obligation Principal | (2,071) | (2,261) | (2,209) | (2,305) |
| Incremental TFA Bonds Outstanding Above $13.5 billion | 21,175 | 19,936 | 18,602 | 17,179 |
| **Subtotal: Net Funded Debt Against the Limit** | **$57,467** | **$64,829** | **$75,315** | **$85,068** |
| Plus: Contract and Other Liability | 11,540 | 11,540 | 11,540 | 11,540 |
| **Subtotal: Total Indebtedness Against the Limit** | **$69,007** | **$76,369** | **$86,855** | **$96,608** |
| **Remaining Debt-Incurring Power within General Limit** | **$37,236** | **$35,346** | **$30,914** | **$26,927** |

[a] FYs 2020 through 2022 debt limits are based on the NYC Comptroller's Office's forecasts of assessed value and related full market value of real property.

[b] Net adjusted for Original Issue Discount, Capital Appreciation Bonds, GO bonds issued for the water and sewer system and Business Improvement District debt. The $38.363 billion is derived from the $38.628 billion GO total minus $265 million of the aforementioned adjustments.

[c] Reflect City-funds capital commitments as of the FY 2019 Adopted Capital Commitment Plan (released in October 2018) and includes cost of issuance and certain Inter-Fund Agreements. 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 this debt would be counted against the general debt limit. Thus, City capital commitments will be funded with TFA debt as well.

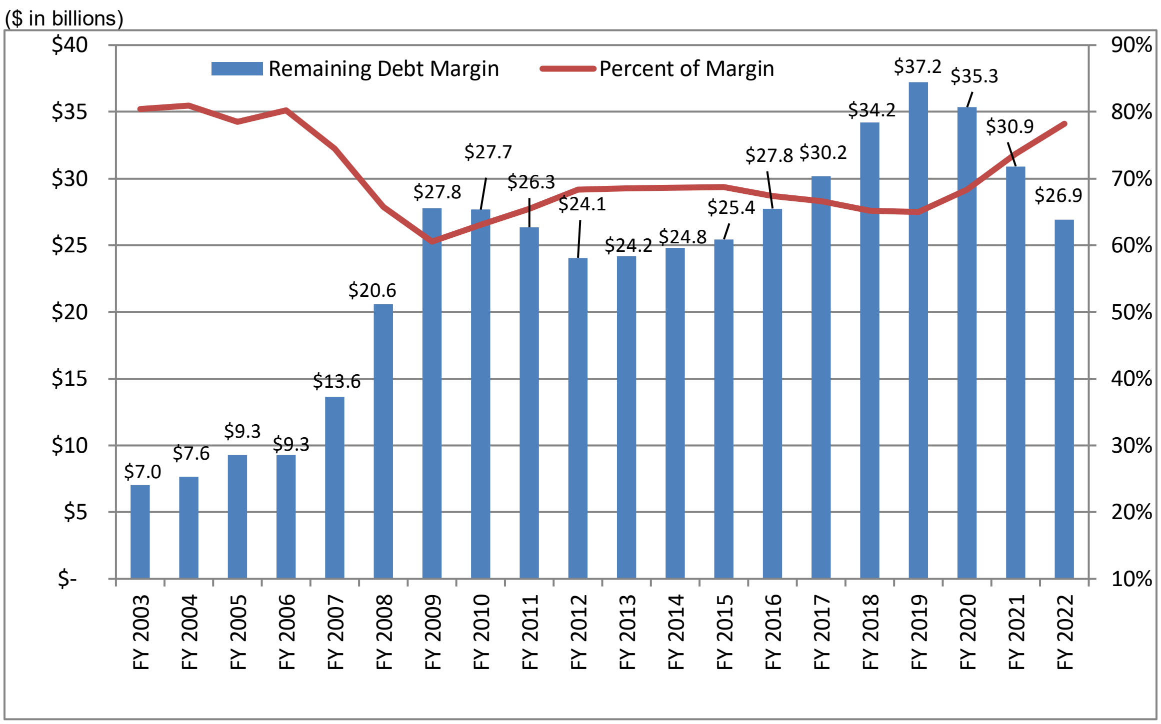
NOTE: The Debt Affordability Statement released by the City in April 2018 presents data for the last day of each fiscal year, June 30th, instead of the first day of each fiscal year, July 1, as reflected in this table. The City's Debt Affordability Statement forecasts that indebtedness would be below the general debt limit by $27.3 billion at the end of FY 2019.

SOURCE: NYC Comptroller's Office and the NYC Office of Management and Budget.

As shown in Chart 1, the City's debt margin, defined as the difference between debt outstanding and the debt limit, is forecast to decrease from $37.2 billion at the beginning of FY 2019 to $26.9 billion by the beginning of FY 2022. The debt limit is projected to increase by 5.2 percent per year from FY 2019 to FY 2022, outpaced by the projected 11.9 percent annual increase of total indebtedness during the same period, thereby driving the decline in the debt limit. The City will continue to monitor this differential in growth rates to ensure the general debt limit is not exhausted. At this time, borrowing is not expected to be constrained by the general debt limit.

While the remaining debt margin is forecast to decline from current levels in FY 2019 through FY 2022, the FY 2018 margin of $37.2 billion is the highest in more than a decade. The City's remaining debt margin reached $27.8 billion in FY 2009 up from a low of $7.0 billion at the beginning of FY 2003. The significant increase in the City's debt margin over this period was a manifestation of the City's rising real estate values. Between FY 2003 and FY 2011, the City's debt limit grew at an average of 9.8 percent per year. From FY 2011 to FY 2018, annual growth slowed to 3.7 percent per year. The Comptroller's Office projects that annual debt limit growth will average 5.2 percent over the next three years.

### Chart 1. NYC's Debt Margin for FY 2004 – FY 2022 and Debt Outstanding as a Percent of Debt Limit




SOURCE: NYC Comptroller's Office and the NYC Office of Management and Budget. (First day of Fiscal Year Method)

# IV. Debt Burden and Affordability of NYC Debt

This section presents statistics assessing the size of the City's debt burden and its affordability. No single measure completely captures debt affordability; hence we employ several measures that can be used to assess a locality's debt burden. This section provides measures of debt per capita, debt as a percent of the value of real property, debt as a percent of personal income, and debt as a percent of local tax revenues and total expenditures. For three of these measures, comparisons with other jurisdictions are presented.

Recently, ratings agencies have moved towards assessing debt together with pension and other post-employment benefits (OPEB) liabilities. While these analyses are beyond the scope of this report at this time, the combined metric is of growing interest to the rating community.[16]

## Background

The Capital Commitment Plan published by NYC OMB is a compilation of estimated future contract registrations for a wide variety of physical improvements or equipment purchases on assets valued at $35,000 or more with a useful life of at least five years. About 25 agencies engage in some form of capital work, with about 13 agencies accounting for approximately 93 percent of capital commitments. This planning document serves as the foundation for the registration of contracts from which future capital expenditures occur. A capital commitment refers to a contract registration. It does not represent a capital expenditure. Capital expenditures occur after a contract is registered and the related spending against that contract can last several years. The financing of capital projects takes place after spending occurs to reimburse the City's General Fund. GO and TFA bonds finance all City agencies capital projects, with the exception of DEP, which is financed by the NYW. In addition, the City does not finance individual projects in isolation, but rather finances portions of multiple projects simultaneously with each bond issuance.

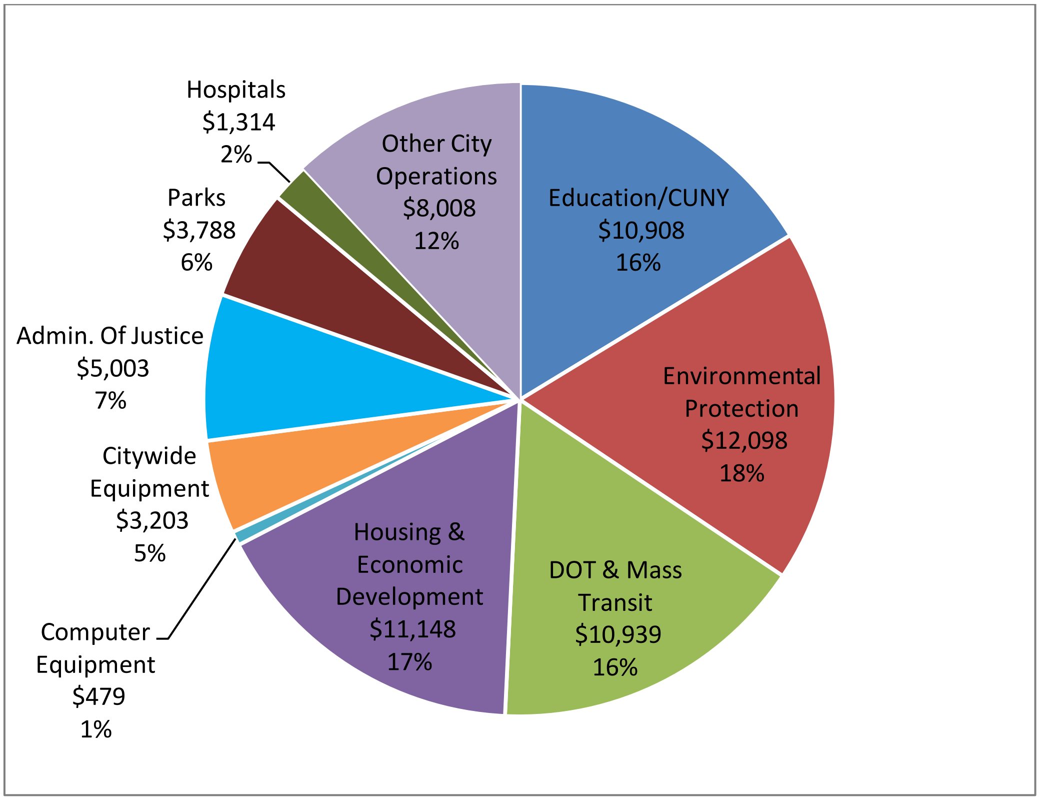
The City-funded share of the FY 2019 Adopted Commitment Plan's authorized commitments over FY 2019 – FY 2022 sums to $66.89 billion, about $5.6 billion higher than at this time last year. City-funded commitments, after adjusting for the reserve for unattained commitments of $7.74 billion, total $59.15 billion.[17] Four programmatic areas comprise 67 percent of the City-funded plan, as shown in Chart 2. DEP related capital projects comprise 18 percent of the four-year plan, followed by Housing and Economic Development related projects at 17 percent, Department of Transportation (DOT) and Mass Transit at 16 percent, and the Department of Education (DOE)/City University of New York (CUNY) at 16 percent. Combined, these four areas account for $45.1 billion of the $66.89 billion authorized plan.

[16] The Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2018 discusses OPEB and Pensions in the "Notes to the Financial Statements" on pages 86 and 117.

[17] The reserve for unattained commitments represents projected shortfall in commitments.

## *Chart 2. Allocation of City-Funds Capital Commitment FY 2019 Adopted Four-Year Commitment Plan*

($ in millions)



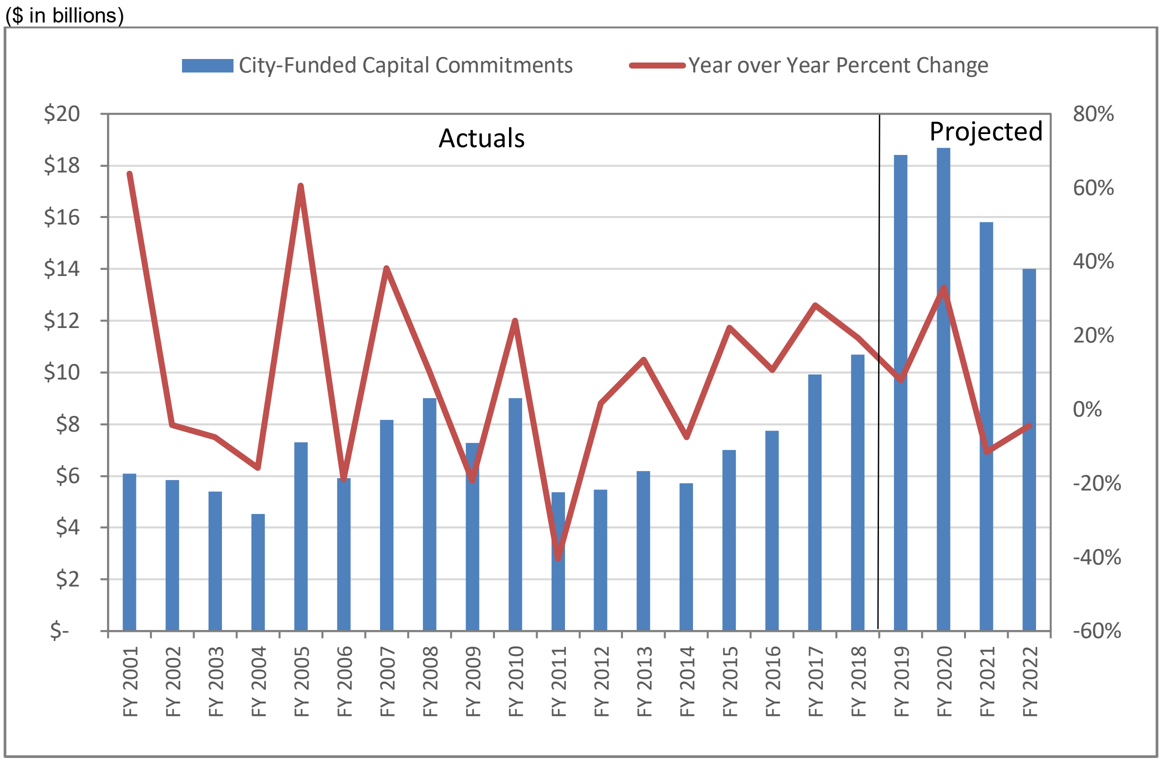

SOURCE: NYC Office of Management and Budget, FY 2019 Adopted Capital Commitment Plan, October 2018

Historically, capital commitments have fluctuated widely year to year, as shown in Chart 3. In FY 2001, the City embarked on what was then a historically high capital commitment program, with City-funded capital commitments totaling $6.1 billion, a 63.8 percent increase over FY 2000. In FY 2018, there were City-funded commitments of $10.8 billion. This is the highest level of capital commitments ever achieved by the City which will have future borrowing implications.

Going forward, the FY 2019 Adopted Capital Commitment Plan, after the reserve for unattained commitments, projects an average of $14.79 billion per year in City-funded commitments over FY 2019 – FY 2022, the highest annual average over the past 40 plus published plans. This represents an increase of 7 percent from the average in last year's Adopted Commitment Plan. The Capital Commitment Plan is somewhat front-loaded with 28 percent of the total City Plan commitments, net of the reserve for unattained commitments, slated for FY 2019, which is an improvement from this time last year when 34 percent of the Plan commitment was in the first year.[18]

[18] Authorized plan numbers were used to derive these percentages.

## *Chart 3. City-Funded Capital Commitments*




The City's capital program is financed almost exclusively by the issuance of bonds, which are repaid through the City's expense budget – referred to as debt service. The City's annual borrowing, excluding NYW debt, grew from $2.58 billion in FY 1990 to $7.42 billion in FY 2018, with the highest annual borrowing of $7.75 billion occurring in FY 2009. The FY 2018 borrowing was above the prior ten-year average of $5.85 billion. OMB expects the City's borrowing to average $9.05 billion annually between FY2019 through FY 2022, with a peak estimated borrowing of $10.72 billion in FY 2022.[19]

The annual average growth rate of City debt service payments between FY 1990 and FY 2018 was 6.2 percent per year, growing from $1.1 billion in FY 1990 to $5.88 billion in FY 2018.[20] According to OMB, over the next ten years, the City's debt service is expected to grow at an average rate of 6.4 percent to $10.29 billion by FY 2027, as illustrated in Chart 4. Projected growth during the first four years of the Financial Plan period is 9.3 percent per annum, with an average annual growth rate of 4.1 percent per year in FY 2023 – FY 2027.[21] However, the rate of growth over the Financial Plan period (FY 2019 – FY 2022) will likely be lower as the projection does not take into account the likelihood of refunding actions, conservative variable rate demand bonds (VRDB) rate assumptions, and fairly conservative long-term bond interest rate assumptions. Conversely, the

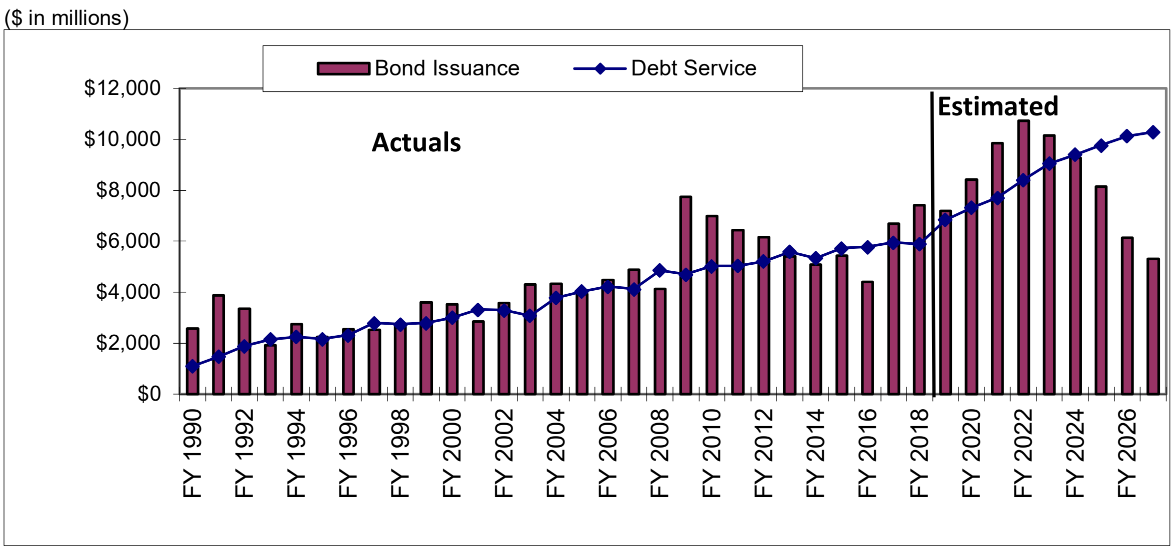
[19] This includes estimated bond proceeds for TFA BARBs, GO, and TFA bonds. Without BARBs, estimated borrowing for FY 2019 – FY 2022 would be $8.83 billion per year. While City-funded commitments include DEP commitments because it is a mayoral operating agency, borrowing for DEP capital projects is not included in the NYC Comptroller Office's analysis of the City's debt. Financing for DEP's capital program is done by the NYW and is not included in the General Debt Limit.

[20] This includes GO and TFA FTS debt service only.

[21] These figures are as of the FY 2019 Adopted Budget and Financial Plan, June 2018.

outyear growth estimate is low and will likely be higher than the projected pace over this latter period because of lower projected commitments discussed earlier in the report.[22]

### *Chart 4. Bond Issuance and Debt Service, FY 1990 – FY 2027*




SOURCE: Comprehensive Annual Financial Reports Office of the NYC Comptroller, 1990 – 2018. Debt-service payments exclude interest on short-term notes, Municipal Assistance Corporation (MAC) debt, BARBs debt and lease-purchase debt and are adjusted for budget surpluses prepaid to the debt-service fund. However, BARBs are included in proceeds. OMB's FY 2019 Adopted Budget and Financial Plan, June 2018, was used for outyear forecasts.

## Debt Burden

New York City's debt has expanded significantly since FY 2000. Debt per capita, which was $4,923 in FY 2000, has grown to $10,399 in FY 2018, an increase of 111 percent.[23] The growth in debt per capita over this same period was roughly the same as the growth in NYC personal income (109 percent) and 0.7 times the growth of NYC local tax revenues (166 percent).[24] The debt per capita figure does not include the debts of the NYW and the MTA, both of which rely upon user fees paid by residents in the City and the metropolitan area.

### Historical Debt Outstanding as a Percent of Personal Income, FY 1970 – FY 2022

In the early 1970s, the City issued short-term notes which it did not entirely redeem at the end of each fiscal year. From 1970 to 1975, the City's year-end short-term note balance averaged $2.77 billion, with $4.44 billion outstanding at the end of FY 1975. This signal of financial stress contributed to the City's inability to access credit markets and the eventual involvement of the State and Federal governments beginning in March 1975. Confronted with external controls in the aftermath of the fiscal crisis, the City rapidly brought down its indebtedness in the late 1970s. This, combined with the resurgence of Wall Street in the 1980s, resulted in the decline of the ratio of debt to personal income from 1976 to 1990.

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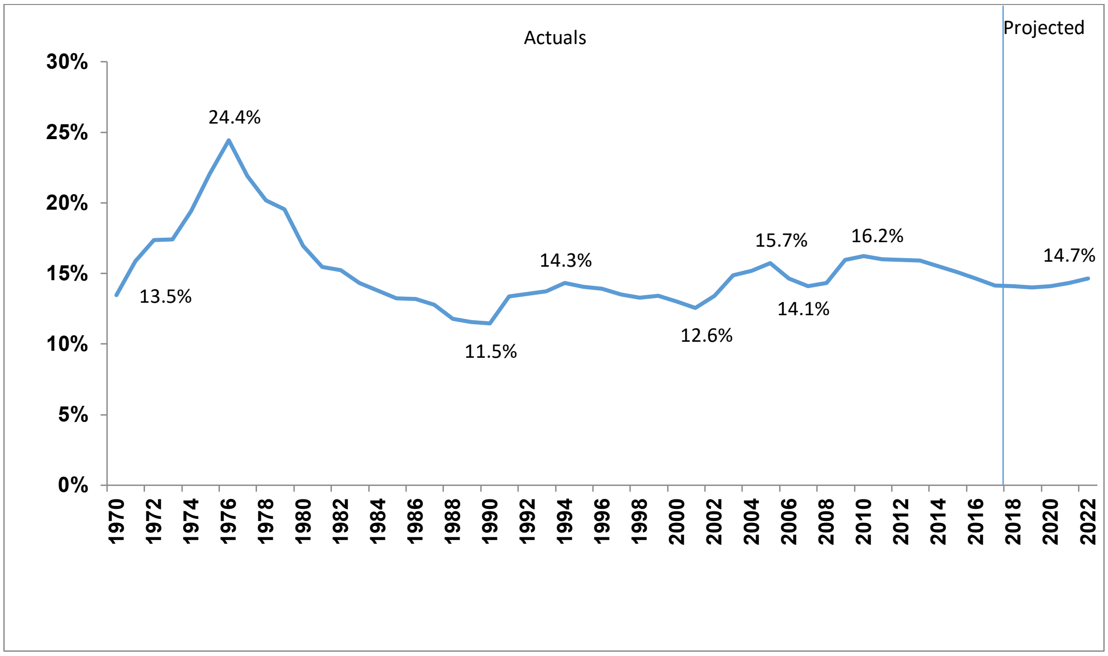
[22] Debt service excludes TSASC, interest on short-term notes, and lease-purchase debt service as well as the State-supported BARBs debt service.

[23] Debt per capita excludes bond premium and discount adjustments. FY 2018 debt per capita of $10,399 is used above as the latest reference; however, FY 2017's debt per capita figure of $10,113 is used when comparing other municipalities, due to the unavailability of data from the other sample cities.

[24] FY 2018 figure was derived from the latest Bureau of Economic Analysis data as of 2017 using a 4.2 percent growth rate from 2017 to 2018.

## *Chart 5. NYC Gross Debt as a Percent of Personal Income, FY 1970 – FY 2022*




SOURCES: Office of the NYC Comptroller, Comprehensive Annual Financial Reports for the Fiscal Years ended June 30, 1990, 1999, 2010 and 2018. The U.S. Bureau of Economic Analysis, FY 2017 personal income for counties and NYC OMB, Message of the Mayor, April 2018.

Chart 5 illustrates the historical trend of gross debt outstanding as a percentage of personal income from FY 1970 to FY 2016.[25] After reaching a peak of 24.4 percent in FY 1976, gross debt as a percent of NYC personal income trended downward, reaching a low of 11.5 percent in FY 1990. Through the 1990s, the ratio averaged 13.5 percent before rising to 15.7 percent in FY 2005 in the aftermath of the September 11th attacks. Between FY 2007 and FY 2017, the ratio averaged 15.3 percent. This ratio is estimated to remain relatively flat at about 14 percent in FY 2018 and FY 2019 before increasing modestly to 14.7 percent in FY 2022.

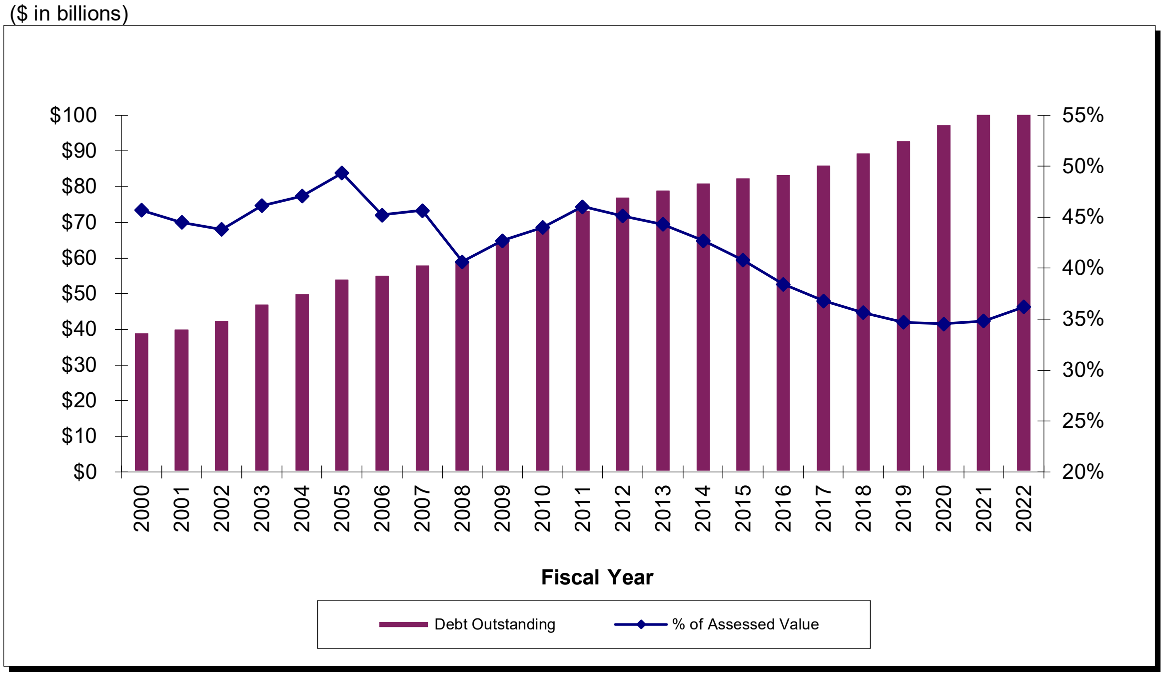
### NYC Debt Outstanding as a Percent of Assessed Value of Taxable Real Property

Over the period from FY 2000 – FY 2018, the ratio of debt outstanding to taxable assessed value of real property averaged 43.4 percent. Since FY 2011, the ratio of debt outstanding to taxable assessed value of real property has declined in each fiscal year from 46 percent in FY 2011 to 35.7 percent in FY 2018, the lowest level over the FY 2000 – FY 2018 period, as shown in Chart 6. This ratio is projected to decline to 34.6 percent by FY 2020, before increasing to 36.2 percent by FY 2022. The estimated annual growth rate for taxable assessed value is 4.1 percent from FY 2019 – FY 2022 compared with a 5.6 percent annual growth rate in debt outstanding.

[25] Personal income data from the Bureau of Economic Analysis as of 2017 was used.

## Chart 6. NYC Outstanding Debt as a Percentage of the Assessed Value of Taxable Real Property

($ in billions)



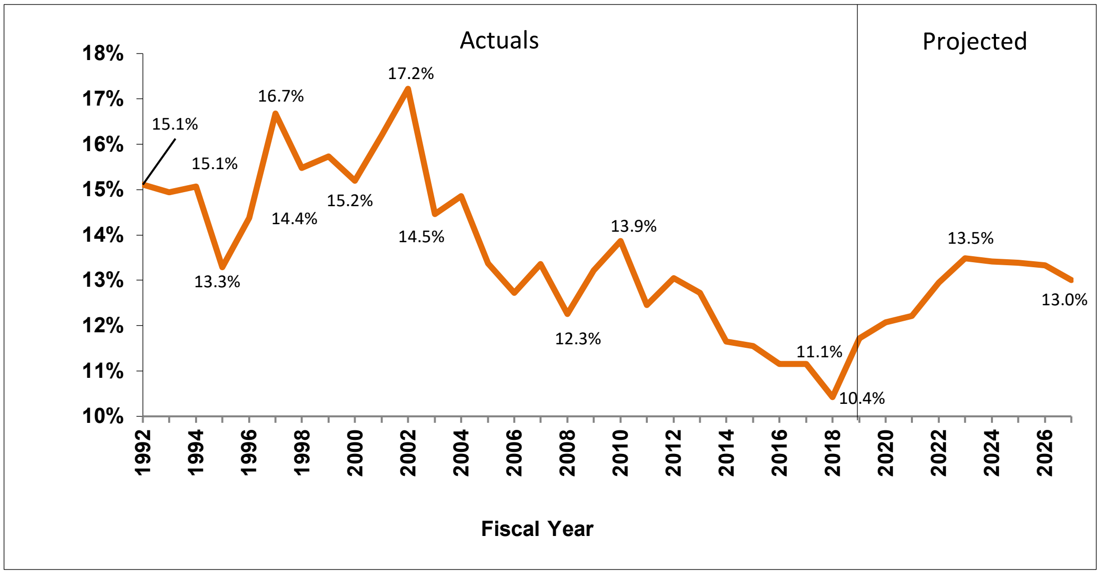

SOURCE: Comprehensive Annual Financial Reports of the Comptroller, and the NYC Department of Finance, FY 2018 Annual Property Tax Report.

### NYC Debt Service as a Percent of Tax Revenues

Another measure of debt affordability is annual debt service expressed as a percent of annual local tax revenues. This measure shows the pressure that debt service exerts on a municipality's locally-generated revenues. Debt service exceeded 15 percent of tax revenues in 8 of the 11 years from FY 1992 to FY 2002, with a peak of 17.2 percent in FY 2002.[26] Since then, this ratio has trended downward reaching lows of 11.1 percent in FY 2017 and 10.4 percent in FY 2018, as shown in Chart 7. Debt service as a percentage of tax revenues is projected by the Comptroller's Office to reach a high of 13.5 percent in FY 2023 before declining to 13.0 percent by FY 2027. As noted above, the rate of growth of debt service is likely somewhat overstated in the beginning of the period, and understated in the latter part of the period.

[26] Aside from the recent one-year aberration in FY 2002 related to the World Trade Center (WTC) disaster, the ratio of 15 percent is more comparable to the early 1980's and early and mid-1990's when the City was emerging from recessionary periods.

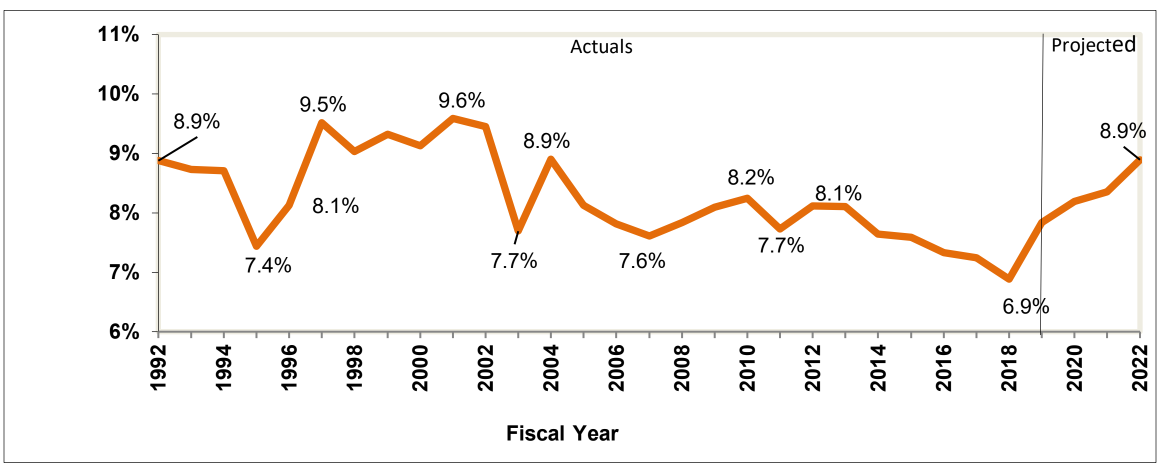
## Chart 7. NYC Debt Service as a Percent of Tax Revenues




SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 1992 – FY 2018, and NYC Office of Management and Budget, FY 2019 Adopted Financial Plan, June 2018.

Debt service as a percent of total revenues ranged from 6.9 percent to 9.6 percent over FY 1992 – FY 2018 as shown in Chart 8. Over this period, this ratio averaged 8.3 percent, with a median of 8.1 percent. The ratio trended up from 8.9 percent in FY 1992 to a high of 9.6 percent in FY 2001, before trending down to 6.9 percent in FY 2018. The ratio is forecast to reach 8.9 percent in FY 2022 due to a projected average annual growth rate of debt service exceeding the estimated average annual growth rate of total revenues by a margin of almost seven percentage points, 8.8 percent versus 2.1 percent, respectively.

## Chart 8. NYC Debt Service as a Percent of Total Revenues




SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 1992 – FY 2018, and NYC Office of Management and Budget, FY 2019 Adopted Financial Plan, June 2018.

## Comparison with Selected Municipalities

New York City is the largest city in the U.S. and has a complex, varied, and aging infrastructure. The City has more school buildings, firehouses, health facilities, community colleges, roads and bridges, libraries, and police precincts than any other city in the country. Moreover, New York City has responsibilities that in other cities are distributed more broadly throughout their state, counties, unified school districts and public authorities. When comparing levels of debt with other jurisdictions, it is important to adjust the data to establish a comparable measure among and between jurisdictions. The use of the Direct and Overlapping Debt tables from each sample city's Comprehensive Annual Financial Report (CAFR) attempts to achieve greater comparability of the debt burden among municipalities. In addition, the use of debt per capita metrics serves as an aid to better visualize a given city's outstanding debt.

As shown in Table 9, in FY 2017, NYC's debt per capita was more than twice the average of a sample of eleven other large U.S. cities and 1.32 times the per capita debt of Chicago, which had the next highest debt burden.[27]

### Table 9. Debt Per Capita for Selected Cities, 2017

| City | Population | Direct and Overlapping Debt Outstanding ($ 000) | Debt Per Capita |
|---|---|---|---|
| Boston | 672,840 | $1,440,662 | $2,141 |
| Seattle | 713,700 | 1,611,535 | 2,258 |
| Phoenix | 1,579,253 | 5,900,979 | 3,737 |
| San Jose | 1,046,000 | 4,036,473 | 3,859 |
| Los Angeles | 4,041,707 | 15,694,592 | 3,883 |
| Philadelphia | 1,567,872 | 6,881,800 | 4,389 |
| Dallas | 1,270,170 | 5,839,074 | 4,597 |
| Houston | 2,303,482 | 11,502,565 | 4,994 |
| San Francisco | 879,862 | 4,613,823 | 5,244 |
| San Antonio | 1,469,824 | 8,727,680 | 5,938 |
| Chicago | 2,695,598 | 20,598,244 | 7,641 |
| **New York City** | **8,537,673** | **$86,345,000** | **$10,113** |

SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 2000 and FY 2017 and Comprehensiive Annuals Reports of various cities, FY 2000 and FY 2017.
NOTE: Based on data extracted from each city's "Direct and Overlapping Debt Outstanding" exhibit included in that city's Comprehensive Annual Financial Report. While the individual exhibits are similar in format, there is no assurance that the components of the data published in those exhibits are comparable.

While gross NYC debt per capita is higher than all other cities in the sample, NYC's growth in debt per capita between 2000 and 2017 is lower than seven of the eleven sample cities. Gross NYC debt per capita grew by 105.4 percent from 2000 to 2017. This growth is below the average growth of 142 percent for the 11 sample cities as shown in Table 10.

[27] The sample cities consist mostly of the highest population cities in the U.S. Among the cities, San Francisco and Boston were selected due to their density.

## Table 10. Debt per Capita Comparisons for Selected Cities – 2000 and 2017

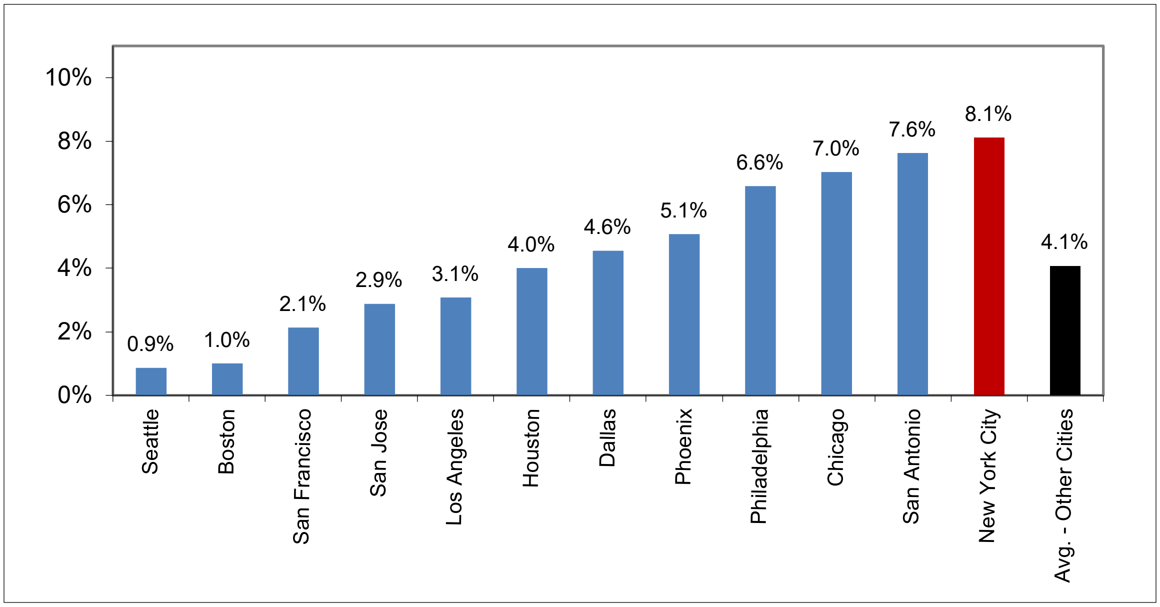
| City | Debt per Capita in 2000 | Debt per Capita in 2017 | Percentage Change 2000 – 2017 |
|---|---|---|---|
| Seattle | $1,694 | $2,258 | 33.3% |
| Philadelphia | $3,241 | $4,389 | 35.4% |
| Boston | $1,376 | $2,141 | 55.6% |
| Phoenix | $2,041 | $3,737 | 83.1% |
| Houston | $2,187 | $4,994 | 128.3% |
| Los Angeles | $1,464 | $3,883 | 165.2% |
| Chicago | $2,863 | $7,641 | 166.9% |
| San Antonio | $1,929 | $5,938 | 207.8% |
| Dallas | $1,273 | $4,597 | 261.1% |
| San Jose | $943 | $3,859 | 309.2% |
| San Francisco | $1,139 | $5,244 | 360.4% |
| **National CPI (FY)** | **169.3** | **242.7** | **43.4%** |
| **New York City** | **$4,923** | **$10,113** | **105.4%** |

SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 2000 and FY 2017 and Comprehensive Annual Reports of various cities, FY 2000 and FY 2017.
NOTE: Based on data extracted from each city's "Direct and Overlapping Debt Outstanding" exhibit included in that city's Comprehensive Annual Financial Report. While the individual exhibits are similar in format, there is no assurance that the components of the data published in those exhibits are comparable.

Another way to examine the debt burden of a municipality or city is to measure its debt relative to its taxable base. Two traditional measures of this relationship are debt divided by the full value of real property and debt divided by personal income. The rationale behind the use of the full value of real property is that the property tax base provides a substantial revenue source for debt payment and that there is generally some reasonable limit on the amount of debt that can be borrowed against the property tax base. Similarly, personal income is a measure of a municipality's personal income tax base.

Among the cities surveyed in this report, New York City ranks the highest in both the debt to personal income measure and the debt to property value measure. In addition, NYC is well above the averages of the sample cities and counties. As shown in Chart 9, gross NYC debt as a percentage of the full value of real property in FY 2017 was 8.1 percent, almost twice the sample city average of 4.1 percent. San Antonio was the next highest among the sample cities with a debt to full value of real property ratio of 7.6 percent.

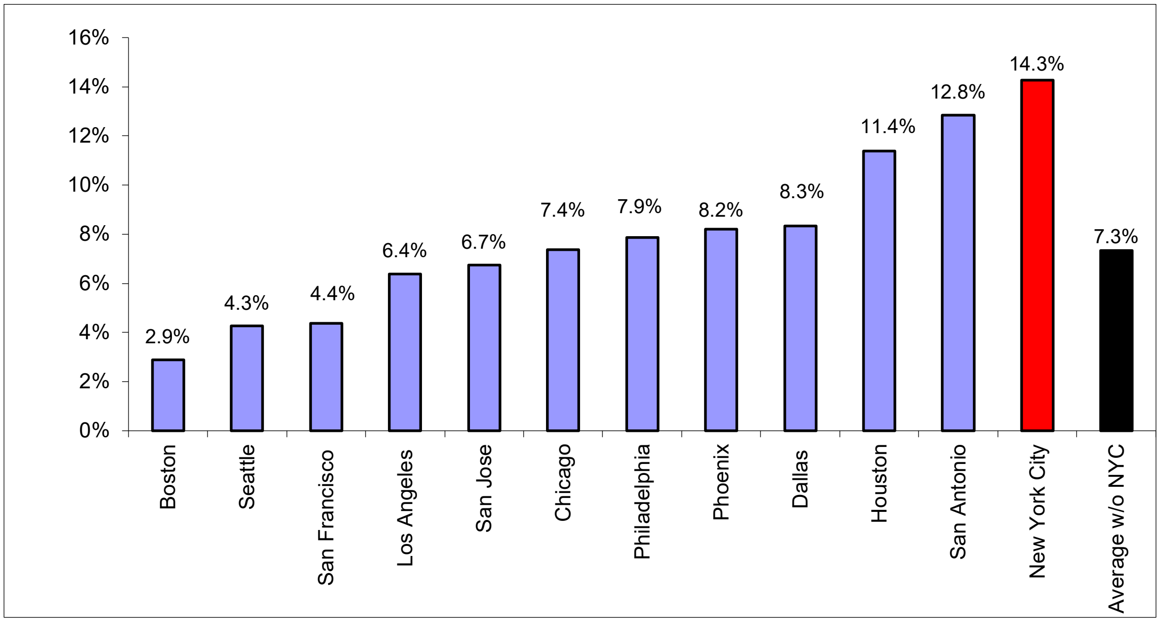
## *Chart 9. Debt Outstanding as a Percent of the Full Value of Real Property, FY 2017*




SOURCE: Each city's Comprehensive Annual Financial Report for FY 2017.
NOTE: Debt per capita is based on data extracted from each city's "Direct and Overlapping Debt Outstanding" exhibit included in that city's Comprehensive Annual Financial Report. While the individual exhibits are similar in format, there is no assurance that the components of the data published in those exhibits are comparable.

Gross NYC debt per capita as a percentage of personal income per capita in FY 2017 was 14.3 percent, the highest among the sample cities as shown in Chart 10. Gross NYC debt as a percentage of personal income is almost twice the 7.3 percent average of the 11 sample cities. The next highest cities in the survey are San Antonio at 12.8 percent, Houston at 11.4 percent, and Dallas at 8.3 percent.

## *Chart 10. Debt Outstanding as a Percent of Personal Income, FY 2017 per capita)*




[1.] Debt per capita is based on data extracted from each city's and select counties' Direct and Overlapping Debt Outstanding exhibits included in that city's or county's Comprehensive Annual Financial Report. While the individual exhibits are similar in form, there is no assurance that the components of the data published in those exhibits are comparable.
[2.] 2017 Personal Income is the most recent personal income data available from the BEA.

SOURCE: FY 2017 Comprehensive Annual Financial Reports of Sample Counties and the U.S. Department of Commerce, – BEA, along with City CAFR information on debt when needed.

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