



NEW YORK CITY COMPTROLLER
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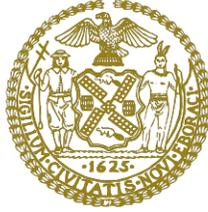


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Fiscal Year 2020 Annual Report on Capital Debt and Obligations

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I. Executive Summary

The City of New York's (the "City") debt finances the capital maintenance and upkeep of an infrastructure that must accommodate not only 8.4 million City residents but also about one million daily commuters and over 65 million tourists annually. While such spending is necessary, it is costly because of the City's extensive and complex infrastructure. Debt for the City has grown from \$39.55 billion in FY 2000 to \$91.56 billion in FY 2019, an increase of 132 percent. Over the same period, New York City personal income grew by 117 percent and New York City local tax revenues by 174 percent.¹

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 three years, for certain technology purposes, or 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).²

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 2020 general debt-incurring power of \$116.27 billion is projected to increase to \$123.01 billion in FY 2021, \$129.93 billion in FY 2022 and \$136.50 billion by FY 2023.

Outstanding City debt that is counted against the debt limit totaled \$74.71 billion as of July 1, 2019, leaving the City with a net debt-incurring power of \$41.56 billion. The outstanding debt total included \$35.06 billion of net General Obligation (GO) debt, \$24.37 billion of NYC Transitional Finance Authority (TFA) debt above its \$13.5 billion authorized base, and \$15.28 billion in contract and other liabilities, as shown in the Debt-Incurring Power Table on page 7. By the beginning of FY 2023, the City's total indebtedness is expected to grow 36 percent to \$101.94 billion. The City's remaining debt-incurring capacity of \$41.59 billion as of July 1, 2020, will decline to \$39.24 billion on July 1, 2021 and \$34.56 billion on July 1, 2022, based on projected growth of the full value of taxable real property. Forty-eight percent of outstanding GO and TFA debt is scheduled to come due over the next ten years.

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 State Building Aid the City receives, subject to appropriation, from New York State.

New York City's FY 2018 per capita debt burden was more than twice the average of comparable large U.S. cities. While New York City has responsibilities that in other cities are distributed more

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

² A minimum useful life of three years for certain information technology projects became effective July 1, 2019. On July 1, 2020, the minimum cost of a capital-eligible project will rise to \$50,000.

broadly among states, counties, unified school districts, public improvement districts, and public authorities, 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 2018 was 7.8 percent. This is about twice the average of 4.0 percent of the other comparable cities. Of the comparable cities, San Antonio at 7.5 percent was the next highest followed by Philadelphia at 6.7 percent. New York City’s debt per capita as a percentage of personal income per capita in FY 2018 was 13.9 percent, almost twice the average of the other comparable cities.³ San Antonio and Houston were the next highest, at 13.3 and 12.2 percent, respectively, while Boston had the lowest debt to personal income ratio at 2.7 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	TFA Future Tax Secured (FTS)			TFA BARBs	NYW First Resolution	NYW Second Resolution
	GO	Senior	TFA FTS Subordinate			
S&P	AA	AAA	AAA	AA	AAA	AA+
Moody’s	Aa1	Aaa	Aa1	Aa2	Aa1	Aa1
Fitch	AA	AAA	AAA	AA	AA+	AA+

³ The latest available BEA data for personal income is 2018.

Table II. NYC Debt-Incurring Power

(\$ in millions)

	July 1, 2019	July 1, 2020 ^a	July 1, 2021 ^a	July 1, 2022 ^a
Gross Statutory Debt-Incurring Power	\$116,266	\$123,008	\$129,926	\$136,498
Actual Bonds Outstanding as of July 1, 2019 (net) ^b	37,276	35,078	32,910	30,655
Plus: New Capital Commitments ^c				
FY 2020		10,165	10,165	10,165
FY 2021			12,982	12,982
FY 2022				15,016
Less: Appropriations for General Obligation Principal	(2,215)	(2,179)	(2,273)	(2,359)
Incremental TFA Bonds Outstanding Above \$13.5 billion	24,370	23,071	21,625	20,202
Subtotal: Net Funded Debt Against the Limit	\$59,431	\$66,135	\$75,409	\$86,661
Plus: Contract and Other Liability	15,280	15,280	15,280	15,280
Subtotal: Total Indebtedness Against the Limit	\$74,711	\$81,415	\$90,689	\$101,941
Remaining Debt-Incurring Power within General Limit	\$41,555	\$41,593	\$39,237	\$34,557

^a FYs 2021 through 2023 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 \$37.28 billion is derived from the \$37.52 billion GO total minus \$240 million of the aforementioned adjustments.

^c Reflect City-funds capital commitments as of the FY 2020 Adopted Capital Commitment Plan (released in October 2019) 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 are funded with TFA debt as well as City GO bonds.

NOTE: The Debt Affordability Statement released by the City in April 2019 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 \$31.1 billion at the end of FY 2020.

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

II. Profile of New York City Debt

Debt to support New York City's capital program is issued directly by the City, or on its behalf, 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).⁴ 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 4.5 percent per year from FY 2000 to FY 2019. The FY 2020 Adopted Budget and Financial Plan shows growth of approximately 5.4 percent annually through 2023.⁵ 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 41.0 percent and 50.9 percent of the outstanding total, respectively (Table 1). Debt service on these bonds, with the exception of STAR Corporation (STAR) debt service, is paid with 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 81.0 percent of the total par amount of the City's outstanding debt at the end of FY 2019. Taxable debt is 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.⁶

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 2019, fixed rate debt accounted for 88.1 percent of gross NYC debt outstanding.

⁴ Except for STAR debt, all bonds cited are paid from General Fund revenues.

⁵ GO 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.

⁶ 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.

Table 1. Gross NYC Debt Outstanding, June 30, 2019

(\$ in millions)

	GO Bonds	TFA	TSASC	STAR Corporation	Capital Lease Obligations & Other ^a	Gross Debt Outstanding
Tax-Exempt						
Fixed Rate	\$24,131	\$32,630 ^c	\$1,053	\$1,721	\$3,739	\$63,274
Variable Rate ^b	<u>6,328</u>	<u>4,444^c</u>	<u>0</u>	<u>0</u>	<u>156</u>	<u>10,928</u>
Subtotal	\$30,459	\$37,074	\$1,053	\$1,721	\$3,895	\$74,202
Taxable						
Fixed Rate	\$7,060	\$9,550	\$0	\$0	\$746	\$17,356
Variable Rate ^b	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Subtotal	\$7,060 ^d	\$9,550 ^d	\$0	\$0	\$746	\$17,356
Total	\$37,519	\$46,624	\$1,053	\$1,721	\$4,641	\$91,558^e
Percent of Total	41.0%	50.9%	1.1%	1.9%	5.1%	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 \$38 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 \$8.11 billion of TFA BARBs. The variable rate debt includes \$450 million of Recovery Bonds.

^d NYC GO taxable bond debt includes \$4.24 billion of Build America Bonds and \$51.8 million of Qualified School Construction Bonds and RZEDBs bonds. The TFA taxable fixed rate debt includes \$2.85 billion of Build America Bonds and \$1.14 billion of Qualified School Construction Bonds.

^e Total does not include impact of premiums/discounts on debt outstanding estimated at \$5.54 billion in FY 2019.

SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2019.

General Obligation bonds and Transitional Finance Authority Future Tax Secured bonds above \$13.5 billion are the only two forms of debt included when calculating indebtedness under the general debt limit. Building Aid Revenue Bonds (BARBs), TSASC, Sales Tax Asset Receivable (STAR), and lease-purchase/ conduit debt are excluded from the indebtedness under the general debt limit calculation.

General Obligation Debt

Use of GO debt, which is backed by the full faith and credit of the City of New York, declined in FY 2019. As of June 30, 2019, GO debt totaled \$37.52 billion and accounted for 41.0 percent of gross NYC debt outstanding, a 2.1 percentage point decrease in share from FY 2018. GO debt outstanding also includes, Build America Bonds (“BABs”) Recovery Zone Economic Development Bonds (“RZEDBs”) and Qualified School Construction Bonds (“QSCBs”). The FY 2019 GO debt total is \$1.11 billion less than GO debt outstanding at the end of FY 2018. The decrease of 2.9 percent reflects lower bond issuance during FY 2019 relative to GO bonds redeemed during FY 2019. During FY 2019, the City issued \$1.2 billion of new money bonds for capital projects.

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 \$27.89 billion in FY 2019, over four times FY 2019 GO debt service.

Transitional Finance Authority Debt

In contrast to GO issuance, use of TFA debt increased in FY 2019. 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 2019, TFA debt totaled \$46.62 billion, comprised of \$38.51 billion of FTS debt and \$8.11 billion of BARBs. This total is 7.5 percent greater than at the close of FY 2018. As a result, the TFA’s share of gross NYC debt outstanding increased from 48.4 percent in FY 2018 to 50.9 percent in FY 2019. The increase reflects the issuance of \$4.98 billion of TFA bonds in support of the City’s capital program during the course of FY 2019.

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 does not count against the City’s general debt limit.⁷ 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 is 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.

Debt not Subject to the General Debt Limit

In April 2006, the State Legislature authorized the TFA to issue BARBs supported by building aid payments the City receives from the State in an amount not in excess of \$9.4 billion outstanding. This debt is used to finance a portion of the City’s five-year educational facilities capital plan. Because they are repaid with State funds, BARBs are excluded from the calculation of the City’s debt counted against the debt limit. 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 each of FYs 2018 and 2019.⁸ As a result of those debt issues, excluding amortization through June 30, 2019, there are currently \$8.11 billion of BARBs outstanding. Going forward, projected BARBs borrowing averages about \$96 million per year over FY 2020 – FY 2023 to keep within its \$9.4 billion limit on outstanding bonds 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.

In September of 2001, the State Legislature amended Chapter 16, the Laws of 1997, to permit the TFA to have outstanding an additional \$2.5 billion of its bonds and notes to pay for any and all expenses related to the terrorist attack on New York City on September 11, 2001. These “Recovery Bonds” were not used for capital financing purposes and are excluded from the debt limit.

TSASC Inc. Debt

TSASC debt, which does not count toward the City’s general debt limit, totaled \$1.05 billion as of June 30, 2019. This represents an \$18 million decrease from FY 2018. 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

⁷ The debt limit is discussed in further detail in Section III.

⁸ The TFA did not issue any BARBs in FY 2014 and FY 2017.

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.⁹

Sales Tax Asset Receivable Corporation (STAR) Debt

STAR debt, which does not count toward the City's general debt limit, totaled \$1.72 billion at the end of FY 2019. This represents a decrease of \$84 million from FY 2018. 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 public benefit corporation, and is not counted against the City's debt limit.¹⁰ 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 which were used to defease TFA FTS bonds, thereby lowering TFA debt service costs. 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.¹¹

Capital Lease (Conduit Debt) and Other Obligations

Capital Lease and Other Obligations totaled \$4.64 billion as of June 30, 2019, a decrease of \$128 million from FY 2018. 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 Dormitory Authority of the State of New York (DASNY) New York City Health + Hospitals (H+H) (\$420 million), the DASNY New York City Courts Capital Program (\$365 million), the Educational Construction Fund (\$218 million), the City University Construction Fund (CUCF) (\$38 million), the Industrial Development Agency (\$62 million), the Primary Care Development Corporation (\$22 million), as well as general lease obligations (\$746 million).¹² In addition, due to Governmental Accounting Standards Board (GASB) reporting requirements, \$46 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 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 unrefunded bonds were converted to establish a sinking fund structure. As of June 30, 2019 the HYIC had \$2.72 billion in debt outstanding. No interest support payments were made by the City to the HYIC in FY 2019 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

⁹ The former TSASC indenture called for all tobacco revenues to flow first to TSASC and then to the City's General Fund.

¹⁰ 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 2019 were \$3.57 billion.

¹¹ 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.

¹² Although for reporting purposes \$420 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.

Street to West 39th Street in the Hudson Yards Financing district. To date, the additional debt has not been issued.

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.

NYW had \$30.05 billion in debt outstanding as of June 30, 2019, a decrease of \$31 million, or less than one-half percent, from FY 2018. 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 preserving water quality. DEP’s FY 2020 – FY 2023 Four-Year Capital Program assumes an average annual cash funding need of \$2.15 billion.¹³ The Capital Plan will continue to be a driver of water and sewer rate increases over the Financial Plan period. DEP’s current City-funds commitment plan annual average of \$2.67 billion per year is 34 percent higher than the agency’s annual average actual capital commitments of \$1.99 billion between FY 2016 and FY 2019. NYW also has retired debt before its final maturity date in recent years, as resources become available. This practice mitigates debt growth and is likely to continue in the future.

Table 2. NYW Debt Outstanding as of June 30, 2019

(\$ in millions)

Tax Exempt & Taxable	
Fixed Rate	\$24,915 ^a
Variable Rate	5,131
Total	\$30,046

^a Includes \$28 million of Bond Anticipation Notes and \$3.4 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.

¹³This figure represents the estimated borrowing need for DEP, issued via NYW. Source: OMB Capital Cash Flow document, October 2019.

Table 3. MTA Debt Outstanding as of June 30, 2019

(\$ in millions)

Tax Exempt & Taxable	
Fixed Rate	\$38,294
Variable Rate ^a	4,384
Total	\$42,678

SOURCE: Metropolitan Transportation Authority.

^a Variable rate included \$2.25 billion of synthetic fixed bonds. NOTE: \$515 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.

The MTA will also be the beneficiary of the State of New York's April 2019 enactment of the Central Business District Tolling program and the 2019 Real Estate Transfer Tax and Internet Sales Taxes. The three revenue sources are intended to provide a stable and recurring source of support to finance the MTA's capital program needs. It is estimated that these sources will support \$25 billion of capital projects. However, these resources will not be available to fund the operating budget, which faces fiscal challenges over Calendar Years 2020-2023.

As of June 30, 2019 as shown in Table 3, the MTA had \$42.68 billion of debt outstanding, an increase of \$2.53 billion, or 6.3 percent, from June 30, 2018. Outstanding MTA debt has increased in all but one of the last 19 years. MTA debt has grown by 201 percent, or \$28.49 billion, since FY 2000. This growth rate is about 70 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 types of debt 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 FTS bonds, and TFA BARBs.

Table 4. NYC Projected Combined Debt Outstanding for GO, TFA, STAR and TSASC, FY 2019 – FY 2029

(\$ in millions)

End of Fiscal Year	Debt Outstanding for GO, TFA, STAR & TSASC	Annual Borrowing ^a	Percent Change in Debt Outstanding
2019	\$86,917	\$6,180	2.4%
2020	\$90,656	\$7,530	4.3%
2021	\$95,162	\$8,471	5.0%
2022	\$101,082	\$10,203	6.2%
2023	\$108,279	\$11,887	7.1%
2024	\$115,399	\$12,148	6.6%
2025	\$121,751	\$11,532	5.5%
2026	\$125,815	\$9,546	3.3%
2027	\$128,492	\$8,745	2.1%
2028	\$129,240	\$6,932	0.6%
2029	\$129,053	\$5,968	(0.1%)

^a FY 2019 is actual borrowing. FY 2020 – FY 2029 are estimated borrowing.

NOTE: TFA figures include TFA BARBs.

SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2019 and the NYC Office of Management and Budget, June 2019 Financial Plan, and NYC OMB capital cash flow estimates.

Based on NYC Office of Management and Budget (OMB) forecasts, the annual growth rate in debt outstanding, which averaged 4.5 percent per year from FY 2000 to FY 2019, is expected to slow to 4.0 percent between FY 2019 to FY 2029. However, the average annual growth rate of debt outstanding in the first half of this period, FY 2019 – FY 2023 (5.6 percent) is higher than the rate for the period as a whole.¹⁴ In addition, estimated borrowing over FY 2022 – FY 2025 averages \$11.4 billion per year, the highest level in the City’s history. This high level of borrowing will put pressure on the City’s operating budget if tax and other revenue sources falter.

As inferred from Table 4, between FY 2020 and FY 2023, debt outstanding is projected to grow at an average of 6.1 percent per year. Average annual growth beyond the Financial Plan period is projected to drop to 3.0 percent, primarily because of the greater uncertainty of project specifics in the later years. Since City agencies are typically not yet focused on the later 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 debt service is shown in Table 5.¹⁵ The Financial Plan assumes principal repayments totaling \$3.642 billion in FY 2020, \$3.766 billion in FY 2021, \$4.012 billion in FY 2022, and \$4.263 billion in FY 2023. Principal is estimated to be 51.3 percent of debt service in FY 2020, 50.7 percent in FY 2021, 49.7 percent in FY 2022 and 48.5 percent in FY 2023.¹⁶

¹⁴ The growth rate of 4.5 percent from FY 2000 to FY 2019 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 2019 are based on OMB’s FY 2020 Adopted Budget and June 2019 Financial Plan.

¹⁵ Since TFA BARB and STAR debt service are not paid with City General Fund revenues, they are not included in Table 5.

¹⁶ Debt service excludes lease-purchase debt, interest on short-term notes, debt service on STAR and TFA BARBs, and is as of the FY 2020 Adopted Budget and June 2019 Financial Plan.

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

(\$ in millions)

Fiscal Year	Estimated Principal Amount	Estimated Interest	Estimated Total Debt Service	Principal as Percent of Total
2020	\$3,642	\$3,461	\$7,103	51.3%
2021	\$3,766	\$3,656	\$7,422	50.7%
2022	\$4,012	\$4,056	\$8,068	49.7%
2023	\$4,263	\$4,528	\$8,791	48.5%

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 2019 Financial Plan and Office of the NYC Comptroller.

During FY 2019, the City issued \$3.02 billion of GO debt, \$1.82 billion of which was used for refunding transactions. These refundings produced gross savings of \$264 million over the life of the bonds. The City also converted \$316.13 million of variable rate debt to fixed rate. At the end of FY 2019, outstanding GO debt totaled \$37.52 billion. Approximately \$21.58 billion of the total GO debt currently outstanding (57.5 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
2020-2029	\$21,582	\$18,403	\$39,984	47.6%	\$280	\$40,264
2030-2039	\$12,215	\$20,250	\$32,465	37.7%	\$266	\$32,731
2040 and After	\$3,722	\$7,972	\$11,694	14.7%	\$507	\$12,201
Total	\$37,519	\$46,624	\$84,143	100.0%	\$1,053	\$85,196

^(a) Includes \$558 million of TFA Recovery bonds.

TFA issued a total of \$7.29 billion of debt, including BARBs, in FY 2019, of which \$4.98 billion was new debt. The remainder was for \$1.96 billion of refunding transactions and \$351.5 million for the conversion of variable rate bonds to fixed-rate debt. The TFA BARBs refundings produced budgetary savings of \$348 million over the life of the bonds. TFA's debt outstanding was \$46.62 billion at the end of FY 2019. Of the total TFA debt outstanding, \$18.40 billion, or 39.5 percent, will come due over the next ten years, as shown in Table 6.

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 City's annual debt limit is established through the following steps:

- No later than February 15th, the New York City Department of Finance (DOF) 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 its most recent market survey and a projection of 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 DOF 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.
- The City's debt limit for the ensuing fiscal year is then calculated by averaging the estimated full values of real property over the prior five-year period, and multiplying by 10 percent.
- 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 2020 debt limit. The full market value for each of FY 2016 through FY 2020 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 2020 debt limit (\$116.266 billion) is derived by multiplying the five-year average value (\$1.163 trillion) by 10 percent.

Table 7. Calculation of Full Value of Real Property in New York City and the General Debt Limit, FY 2020

Fiscal Year	Assessed Valuations of Taxable Real Property	Special Equalization Ratio	Full Value
2016	\$196,710,908,548	0.2005	\$981,101,788,269
2017	\$210,130,499,481	0.1981	\$1,060,729,426,961
2018	\$225,863,036,909	0.1937	\$1,166,045,621,626
2019	\$240,777,862,121	0.1959	\$1,229,085,564,681
2020	\$257,509,634,870	0.1871	\$1,376,320,870,497
5-Year Average Value			\$1,162,656,654,407
10 Percent of the 5-Year Average			\$116,265,665,441

SOURCE: New York City Council Tax Fixing Resolution for FY 2020.

Table 8 summarizes the estimated growth in the City's debt-incurring power. The City's FY 2020 general debt-incurring power of \$116.27 billion is projected to increase to \$123.01 billion in FY 2021, \$129.93 billion in FY 2022 and \$136.50 billion by FY 2023.¹⁷ The City's indebtedness counted against the statutory debt limit is projected to grow from \$74.71 billion at the beginning of FY 2020 to \$101.94 billion by the beginning of FY 2023.

¹⁷ 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, 2019	July 1, 2020 ^a	July 1, 2021 ^a	July 1, 2022 ^a
Gross Statutory Debt-Incurring Power	\$116,266	\$123,008	\$129,926	\$136,498
Actual Bonds Outstanding as of July 1, 2019 (net) ^b	37,276	35,078	32,910	30,655
Plus: New Capital Commitments ^c				
FY 2020		10,165	10,165	10,165
FY 2021			12,982	12,982
FY 2022				15,016
Less: Appropriations for General Obligation Principal	(2,215)	(2,179)	(2,273)	(2,359)
Incremental TFA Bonds Outstanding Above \$13.5 billion	24,370	23,071	21,625	20,202
Subtotal: Net Funded Debt Against the Limit	\$59,431	\$66,135	\$75,409	\$86,661
Plus: Contract and Other Liability	15,280	15,280	15,280	15,280
Subtotal: Total Indebtedness Against the Limit	\$74,711	\$81,415	\$90,689	\$101,941
Remaining Debt-Incurring Power within General Limit	\$41,555	\$41,593	\$39,237	\$34,557

^a FYs 2021 through 2023 projected 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 \$37.28 billion is derived from the \$37.52 billion GO total minus \$240 million of the aforementioned adjustments.

^c Reflect City-funds capital commitments as of the FY 2020 Adopted Capital Commitment Plan (released in October 2019) 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.

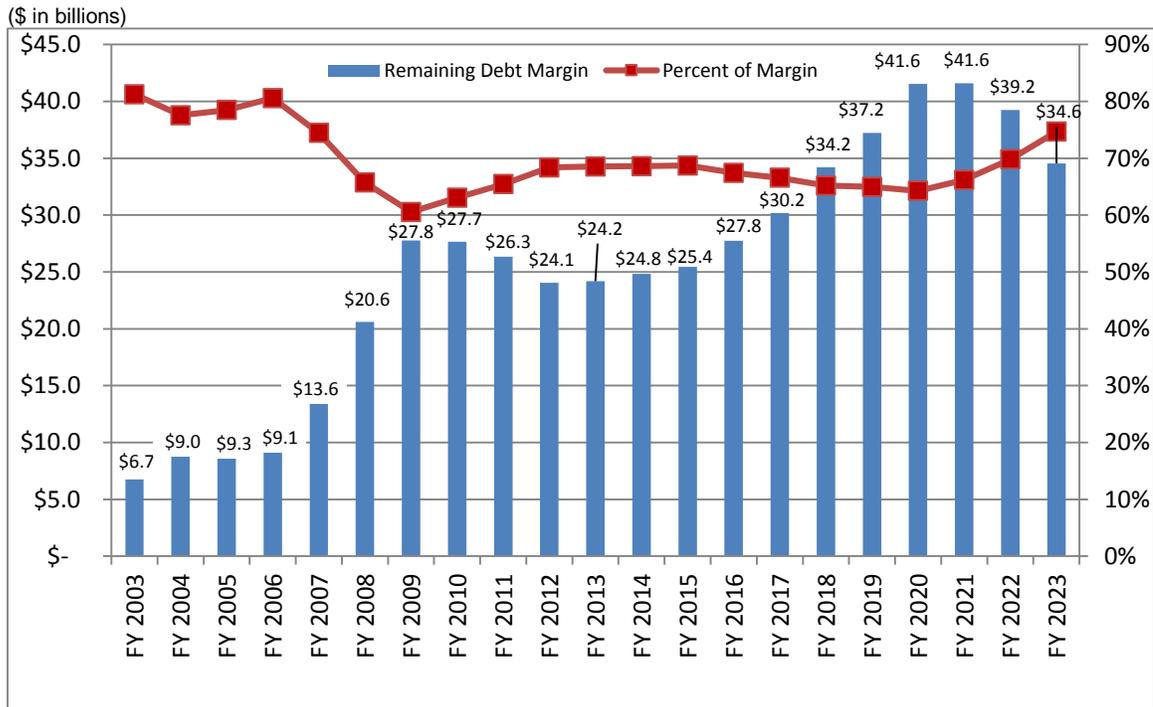
NOTE: The Debt Affordability Statement released by the City in April 2019 presents data for the last day of each fiscal year, June 30th, instead of the first day of each fiscal year, July 1, as reflected in this table. The City's Debt Affordability Statement forecasts that indebtedness would be below the general debt limit by \$31.1 billion at the end of FY 2020.

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 \$41.55 billion at the beginning of FY 2020 to \$34.56 billion by the beginning of FY 2023. The debt limit is projected to increase by 5.5 percent per year from FY 2020 to FY 2023, outpaced by the projected 10.9 percent annual increase of total indebtedness, or by 36 percent from FY 2020 to FY 2023, thereby driving the decline in the remaining margin. At this time, borrowing for capital projects is not expected to be constrained during the financial plan period by the general debt limit.

While the remaining debt margin is forecast to decline from current levels in FY 2019 through FY 2023, the FY 2019 remaining margin of \$41.55 billion is the highest over the past 20 years. The City's remaining debt margin reached \$27.8 billion in FY 2009 up from a low of \$6.7 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 2019, annual growth slowed to 4.2 percent per year. The Comptroller's Office projects that annual debt limit growth will average 5.5 percent over the next three fiscal years.

Chart 1. NYC's Debt Margin for FY 2004 – FY 2023 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.¹⁸

Background

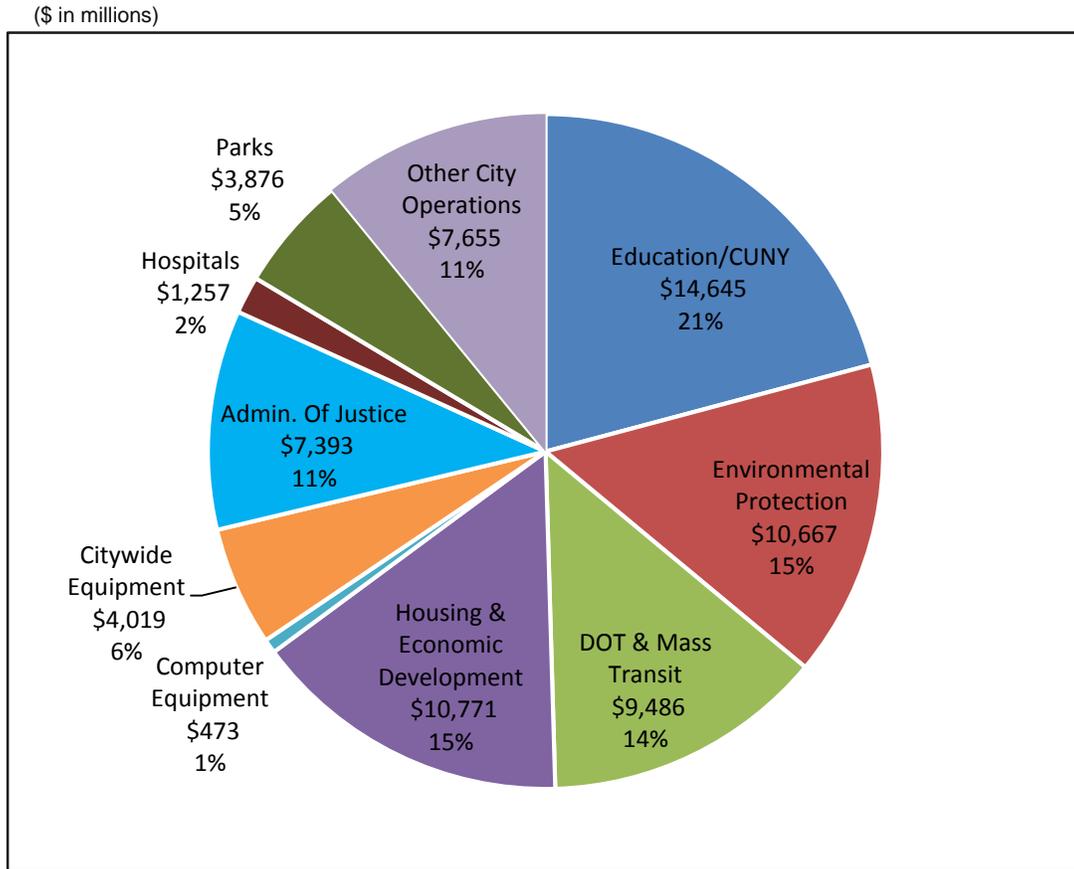
The Capital Commitment Plan published by NYC OMB is a compilation of estimated future contract registrations for all the City’s new construction, physical improvements and equipment purchases that meet capital eligibility requirements. About 25 agencies engage in some form of capital work, with about 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, and does not represent a capital expenditure. Capital expenditures occur after a contract is registered and the related spending against that contract occurs, which 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 2020 Adopted Commitment Plan’s authorized commitments over FY 2020 – FY 2023 sums to \$70.24 billion, about \$3.35 billion higher than at this time last year. City-funded commitments, after adjusting for the reserve for unattained commitments of \$9.17 billion, total \$61.07 billion.¹⁹ Four programmatic areas comprise 65 percent of the City-funded plan, as shown in Chart 2. Department of Education (DOE)/City University of New York (CUNY) related capital projects comprise 20.8 percent of the four-year plan, followed by Housing and Economic Development related projects at 15.3 percent, the Department of Environmental Protection (DEP) at 15.2 percent, and the Department of Transportation (DOT) and Mass Transit at 13.5 percent. Combined, these four areas account for \$45.57 billion, or 65 percent, of the \$70.24 billion authorized plan.

¹⁸ The *Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2019* discusses OPEB and Pensions in the “Notes to the Financial Statements” on pages 77, 86 and 119.

¹⁹ The reserve for unattained commitments represents projected shortfall in commitments.

**Chart 2. Allocation of City-Funds Capital Commitment
FY 2020 Adopted Four-Year Commitment Plan, Shares of \$70.24 Billion**



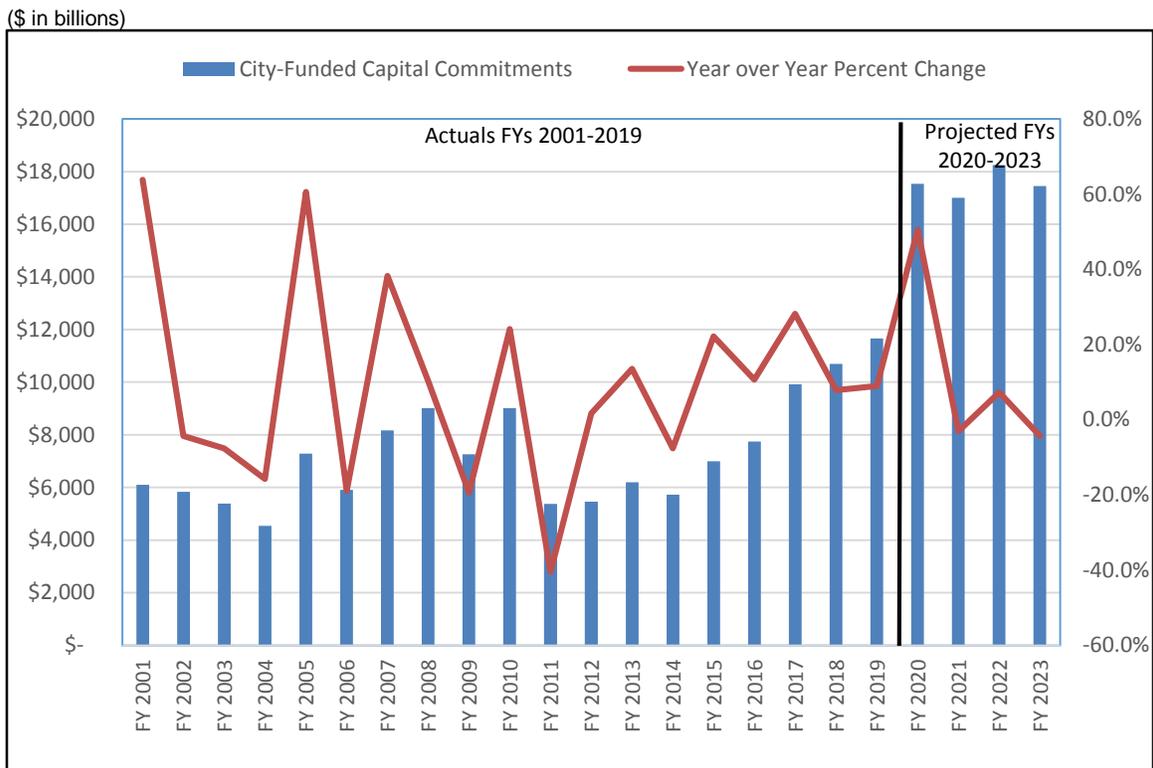
SOURCE: NYC Office of Management and Budget, FY 2020 Adopted Capital Commitment Plan, October 2019
Pie Chart figures may not tie due rounding.

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. City-funded commitments have increased each year since FY 2014, reaching \$11.65 billion in FY 2019. This is the highest level of capital commitments ever achieved by the City which will have future borrowing implications.

Going forward, the FY 2020 Adopted Capital Commitment Plan, after the reserve for unattained commitments, projects an average of \$15.27 billion per year in City-funded commitments over FY 2020 – FY 2023, the highest annual average over more than 40 past capital plans. This represents an increase of 3.2 percent from the average in last year’s Adopted Commitment Plan. Unlike previous capital plans which were front-loaded, approximately a quarter of the commitments of the current four-year Plan is slated for FY 2020.²⁰

²⁰ 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 paid out of the City’s expense budget in the form of debt service payments. The City’s annual borrowing, excluding NYW debt, grew from \$2.58 billion in FY 1990 to \$6.18 billion in FY 2019, with the highest annual borrowing of \$7.75 billion occurring in FY 2009. OMB expects the City’s borrowing to average \$9.52 billion annually between FY 2020 through FY 2023, with a peak estimated borrowing of \$11.89 billion in FY 2023.²¹ This significant increase in projected borrowing, if fully executed, will put pressure on the operating budget in the event tax revenues do not meet the Financial Plan’s expectations.

The annual average growth rate of City debt service payments between FY 1990 and FY 2019 was 6.2 percent per year, growing from \$1.1 billion in FY 1990 to \$6.33 billion in FY 2019.²² According to OMB, over the next ten years, the City’s debt service is expected to grow at an average rate of 6.1 percent to \$11.5 billion by FY 2029, as illustrated in Chart 4. Projected growth during the first four years of the Financial Plan period is 8.6 percent per annum, with an average annual growth rate of 4.1 percent per year in FY 2024 – FY 2029.²³ However, the rate of growth over the Financial Plan period (FY 2020– FY 2023) 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

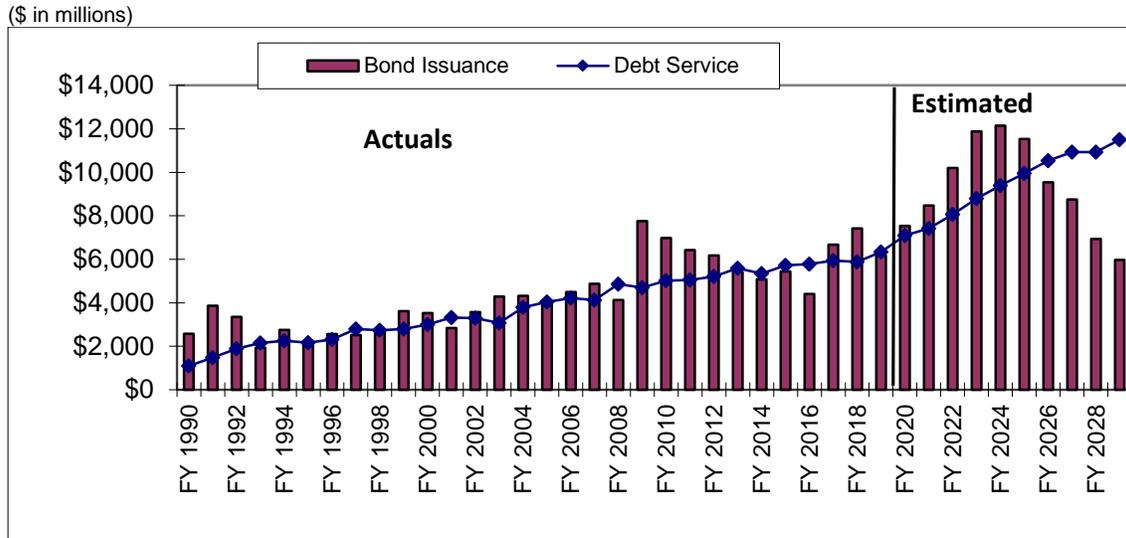
²¹ This includes estimated bond proceeds for TFA BARBs, GO, and TFA FTS bonds. Without BARBs, estimated borrowing for FY 2020 – FY 2023 would be \$9.41 billion per year. While City-funded commitments include DEP commitments because it is a mayoral operating agency, borrowing for DEP capital projects 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 counted against the General Debt Limit.

²² This includes GO and TFA FTS debt service only.

²³ These figures are as of the FY 2020 Adopted Budget and June 2019 Financial Plan.

outyear growth estimate is low and will likely be higher than the projected pace over this latter period because of lower projected outyear commitments discussed earlier in the report.²⁴

Chart 4. Bond Issuance and Debt Service, FY 1990 – FY 2029



SOURCE: Comprehensive Annual Financial Reports Office of the NYC Comptroller, 1990 – 2019. 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 2020 Adopted Budget and Financial Plan, June 2019, was used for outyear forecasts .

Debt Burden

The growth in NYC debt outstanding has increased from \$39.55 billion to \$91.58 billion, or by 132 percent, over FY 2000- FY 2019. Over this same period, the growth in NYC personal income was 117 percent with growth in NYC local tax revenues at 174 percent.²⁵ The debt per capita and debt outstanding figures does not include the debt of the NYW and the MTA, both of which rely upon user fees paid by residents in the City and the metropolitan area.

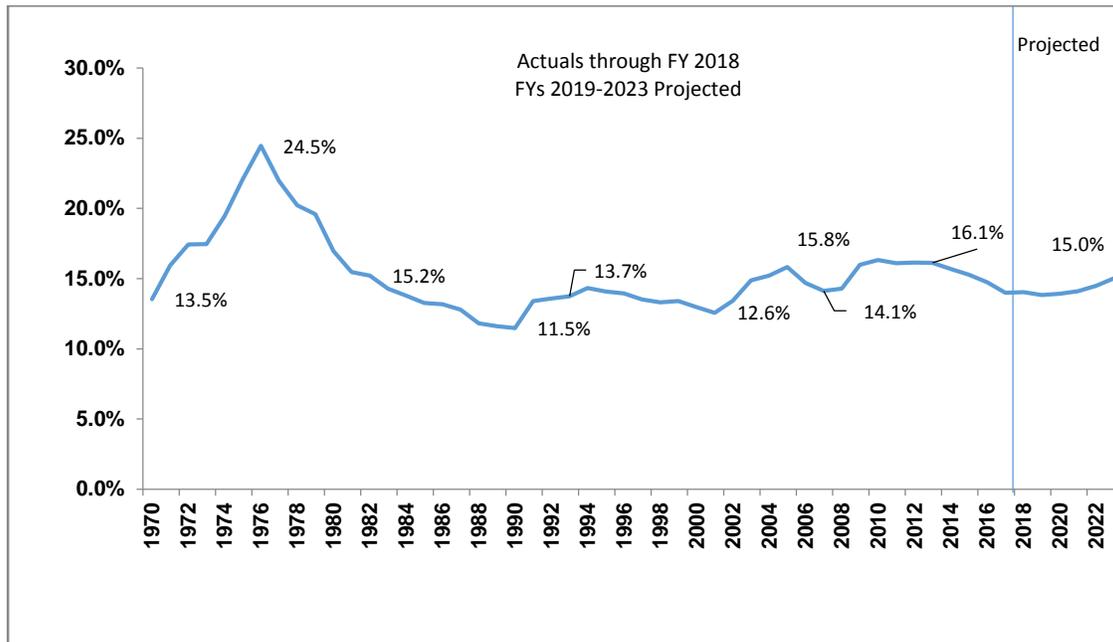
Historical Debt Outstanding as a Percent of Personal Income, FY 1970 – FY 2023

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.

²⁴ Debt service excludes TSASC, interest on short-term notes, and lease-purchase debt service as well as the State-supported BARBs debt service.

²⁵ FY 2019 figure was derived from the latest Bureau of Economic Analysis data as of 2018 using a 2.7 percent growth rate from 2018 to 2019.

Chart 5. NYC Gross Debt as a Percent of Personal Income, FY 1970 – FY 2023



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 2018 personal income for counties and NYC OMB, Message of the Mayor, April 2019.

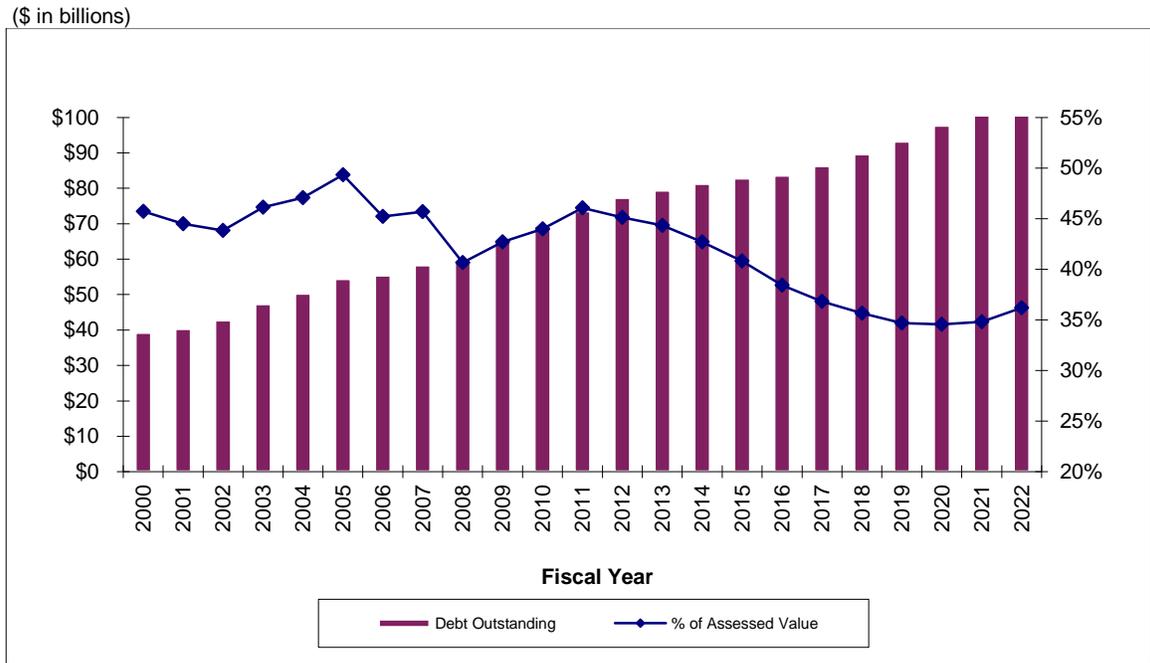
Chart 5 illustrates the historical trend of gross debt outstanding as a percentage of personal income from FY 1970 to FY 2018.²⁶ After reaching a peak of 24.4 percent in FY 1976, gross debt as a percent of NYC personal income trended downward, reaching a low of 11.5 percent in FY 1990. Through the 1990s, the ratio averaged 13.5 percent before rising to 15.8 percent in FY 2005 in the aftermath of the September 11th attacks. Between FY 2007 and FY 2018, the ratio averaged 15.2 percent. This ratio is estimated to remain relatively flat at about 13.9 percent in FY 2019 and FY 2020 before increasing to 15.0 percent in FY 2023.

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

Over the period from FY 2000 – FY 2019, the ratio of debt outstanding to taxable assessed value of real property averaged 42.9 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 34.2 percent in FY 2019, the lowest level over the FY 2000 – FY 2019 period, as shown in Chart 6. This ratio is projected to decline to 33.7 percent by FY 2020, before increasing to 35.2 percent by FY 2023. The estimated annual growth rate for taxable assessed value is 4.2 percent from FY 2020 – FY 2023 compared with a 4.9 percent annual growth rate in debt outstanding.

²⁶ Personal income data from the Bureau of Economic Analysis as of 2018 was used.

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



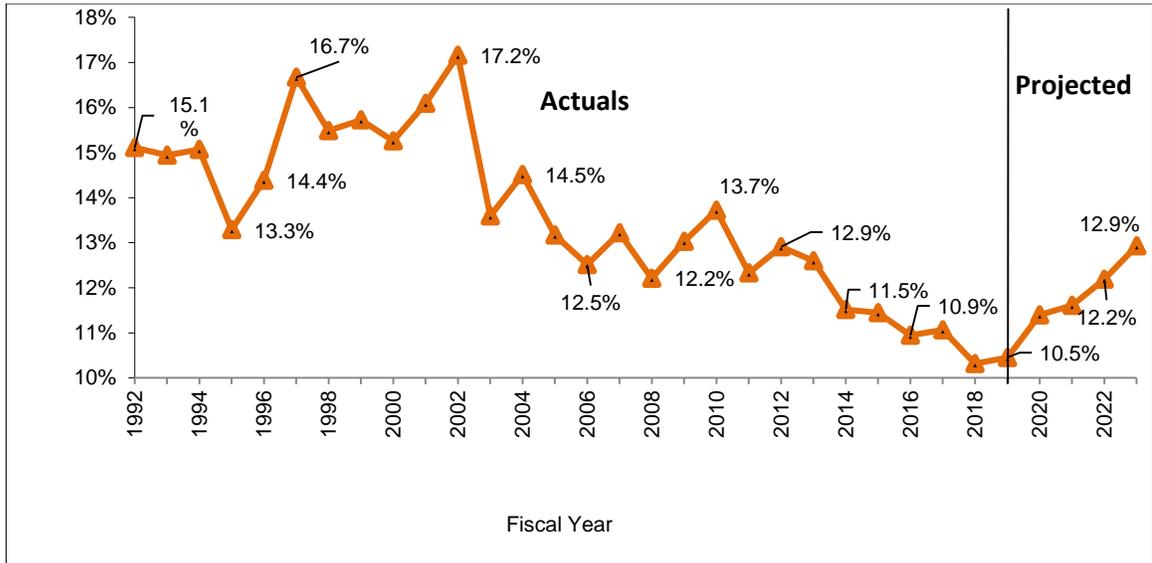
SOURCE: Comprehensive Annual Financial Reports of the Comptroller, and the NYC Department of Finance, FY 2019 Annual Property Tax Report.

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 2002.²⁷ Since then, this ratio has trended downward reaching lows of 10.4 percent in FY 2018 and 10.5 percent in FY 2019, as shown in Chart 7. Debt service as a percentage of tax revenues is projected to reach a high of 12.9 percent in FY 2023. This is driven by estimated debt service growth of 8.6 percent per year over the Plan period compared to 3.0 percent per year growth for local revenues.

²⁷ 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.

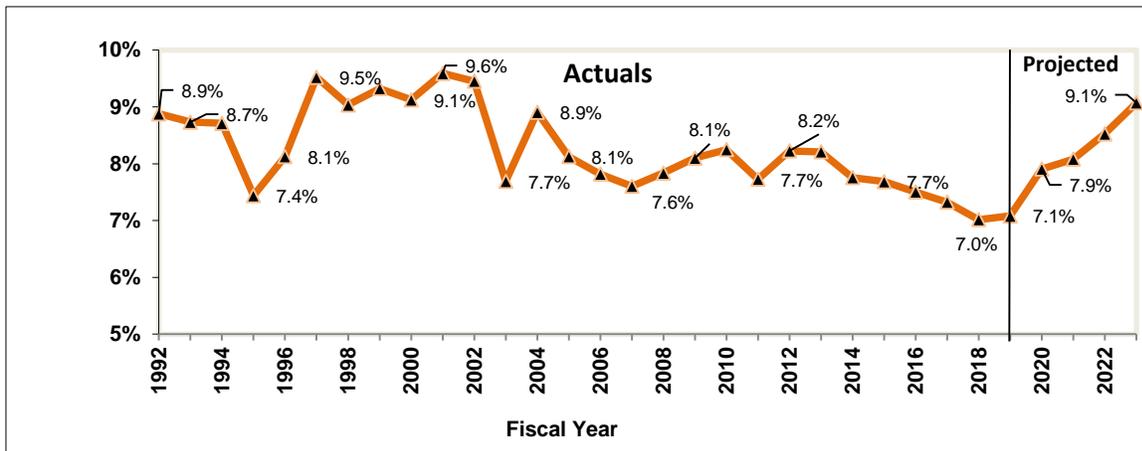
Chart 7. NYC Debt Service as a Percent of Tax Revenues



SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 1992 – FY 2019, and NYC Office of Management and Budget, FY 2020 Adopted Budget, June 2019 Financial Plan.

Debt service as a percent of total revenues ranged from 7.0 percent to 9.6 percent over FY 1992 – FY 2019 as shown in Chart 8. Over this period, this ratio averaged 8.2 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 7.1 percent in FY 2019. The ratio is forecast to reach 9.1 percent in FY 2023 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 over six percentage points, 8.5 percent versus 2.0 percent, respectively.

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



SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 1992 – FY 2019, and NYC Office of Management and Budget, FY 2020 Adopted Budget, June 2019 Financial Plan.

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 2018, NYC's debt per capita was more than twice the average of a sample of eleven other large U.S. cities and 1.5 times the per capita debt of Chicago, which had the next highest debt burden.²⁸

Table 9. Debt Per Capita for Selected Cities, 2018

City	Population	Direct and Overlapping Debt Outstanding (\$ 000)	Debt Per Capita
Boston	683,015	\$1,470,114	\$2,152
Seattle	730,400	1,530,159	2,095
Phoenix	1,598,736	5,822,977	3,642
San Jose	1,051,000	4,211,797	4,007
Los Angeles	4,054,400	16,082,513	3,967
Philadelphia	1,580,863	7,314,100	4,627
Dallas	1,286,380	5,820,297	4,525
Houston	2,312,717	12,712,391	5,497
San Francisco	892,701	5,604,551	6,278
San Antonio	1,517,866	9,213,865	6,070
Chicago	2,695,598	19,227,272	7,133
New York City	8,398,748	\$89,668,000	\$10,676

SOURCE: Comprehensive Annual Financial Reports of the NYC Comptroller, FY 2000, FY 2018, and FY 2019 for NYC population figure, along with Comprehensive Annual Reports of various cities, FY 2000 and FY 2018.

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 2018 is lower than seven of the eleven sample cities. Gross NYC debt per capita grew by 117 percent from 2000 to 2018. This growth is below the average growth of 148 percent for the 11 sample cities as shown in Table 10.²⁹

²⁸ 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.

²⁹ Collective sample city growth derived by average debt per capita among the eleven sample cities.

Table 10. Debt per Capita Comparisons for Selected Cities – 2000 and 2018

City	Debt per Capita in 2000	Debt per Capita in 2018	Percentage Change 2000 – 2018
Seattle	\$1,694	\$2,095	23.7%
Philadelphia	\$3,241	\$4,627	42.8%
Boston	\$1,376	\$2,152	56.4%
Phoenix	\$2,041	\$3,642	78.5%
Chicago	\$2,863	\$7,133	149.1%
Houston	\$2,187	\$5,497	151.3%
Los Angeles	\$1,464	\$3,967	170.9%
San Antonio	\$1,929	\$6,070	214.7%
Dallas	\$1,273	\$4,525	255.4%
San Jose	\$943	\$4,007	325.0%
San Francisco	\$1,139	\$6,278	451.2%
National CPI (FY)	169.3	253.3	49.6%
New York City	\$4,923	\$10,676	116.8%

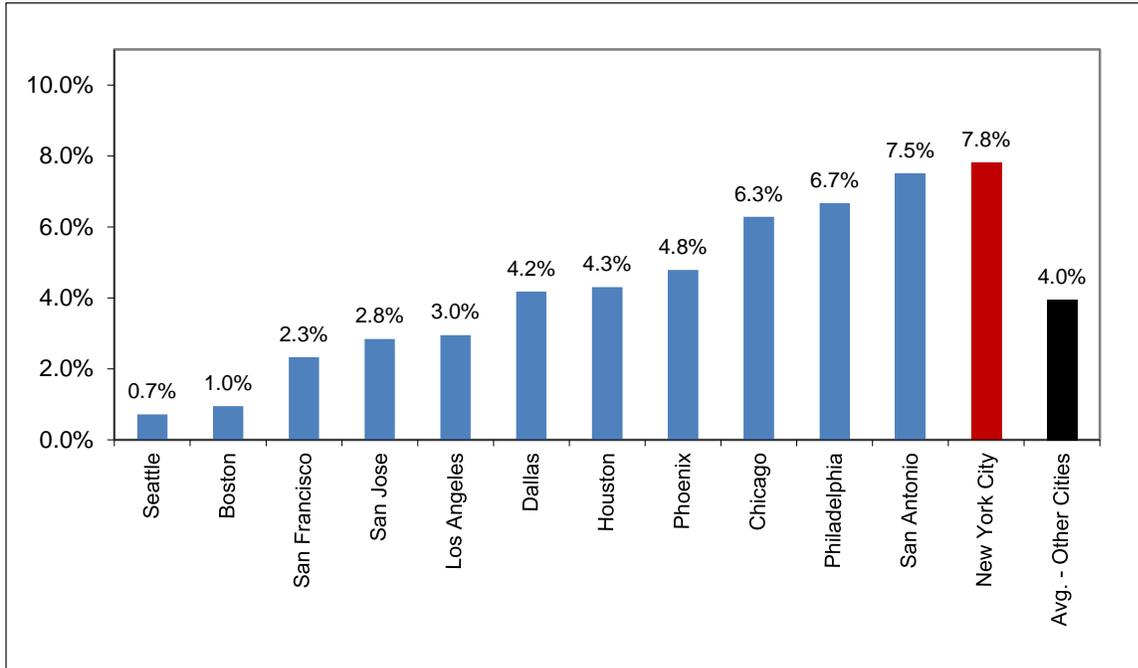
SOURCE: Comprehensive Annual Financial Reports of the Comptroller, FY 2000 and FY 2018 and Comprehensive Annual Reports of various cities, FY 2000 and FY 2018.

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 commonly-used 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 2018 was 7.8 percent, almost twice the sample city average of 4.0 percent. San Antonio was the highest among the sample cities with a debt to full value of real property ratio of 7.5 percent with Philadelphia following at 6.7 percent.

Chart 9. Debt Outstanding as a Percent of the Full Value of Real Property, FY 2018

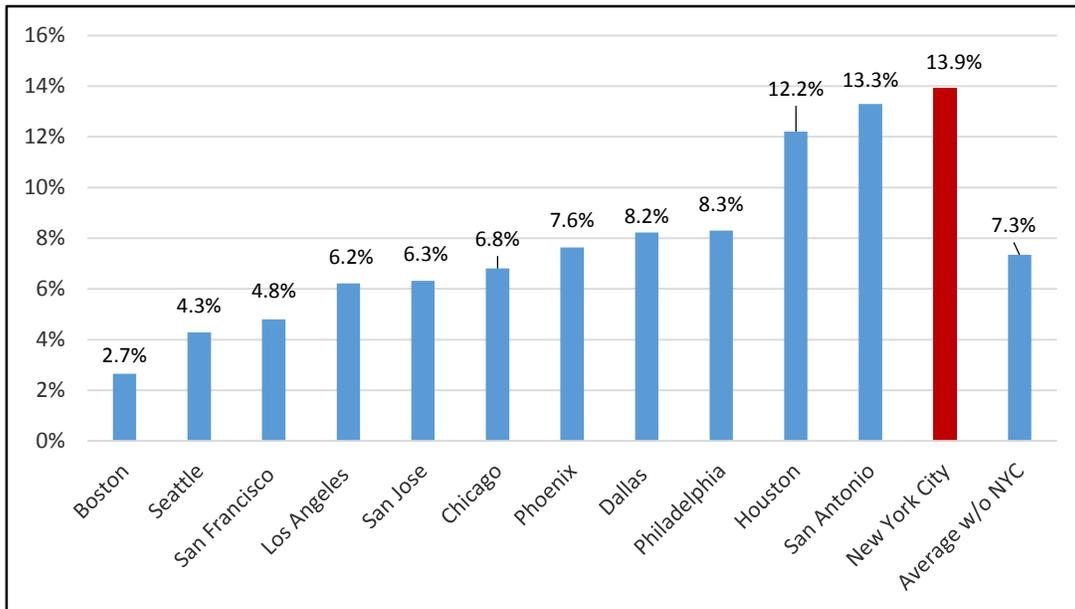


SOURCE: Each city's Comprehensive Annual Financial Report for FY 2018.

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 2018 was 13.9 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 13.3 percent, Houston at 12.2 percent, and Philadelphia at 8.3 percent.

Chart 10. Debt Outstanding Per Capita as a Percent of Per Capita Personal Income, FY 2018



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 2018 Personal Income is the most recent personal income data available from the BEA.

SOURCE: FY 2018 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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