Office of the
New York City Comptroller
**Scott M. Stringer**
**Bureau of Fiscal and Budget Studies**
www.comptroller.nyc.gov
(212) 669-2507

# Fiscal Year 2016 Annual Report on Capital Debt and Obligations

December 1, 2015

SCOTT M. STRINGER
Comptroller

First Deputy Comptroller
Alaina Gilligo

Deputy Comptroller for Budget
Tim Mulligan

Assistant Director for Budget
Suri Grussgott

Bureau Chief
Eng-Kai Tan

Assistant Budget Chief
Peter E. Flynn

Deputy Comptroller for Public Finance
Carol Kostik

# TABLE OF CONTENTS

# LIST OF TABLES



# LIST OF CHARTS

# Executive Summary

New York City's (the "City") debt has grown from $3,619 per capita in FY 1992 to $9,750 in FY 2015, an increase of 169 percent. Over the same 23 year period, the NYC area Consumer Price Index (CPI) grew by 74 percent. The City's debt finances the maintenance and upkeep of an infrastructure that must accommodate not only 8.5 million City residents but also more than 900,000 daily commuters and 56.5 million tourists annually. While such spending is necessary, it is costly because of the City's varied and aging infrastructure.

The City may issue long-term debt only for capital purposes (assets with useful lives of five years or greater). Over forty-six (46.4) percent of the outstanding debt of the three primary issuers of debt backed by City General Fund revenues — General Obligation (GO), New York City Transitional Finance Authority (TFA), and TSASC, Inc. (tobacco settlement) — is scheduled to come due over the next ten years.

Debt is issued by the City, or on behalf of the City, through a number of authorities and other public benefit corporations. 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 projections for each of the three succeeding fiscal years.

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 2016 general debt-incurring power of $85.18 billion is projected to increase to $89.69 billion in FY 2017, $94.09 billion in FY 2018 and $98.60 billion by FY 2019.

Outstanding City debt counted towards the debt limit totaled $57.43 billion as of July 1, 2015, leaving the City with a net debt-incurring power of $27.76 billion. The outstanding debt total included $37.90 billion of net GO debt, $11.99 billion of TFA debt above its $13.5 billion authorization base and $7.54 billion in contract and other liabilities, as shown in the Debt-Incurring Power Table on page vii.

By the beginning of FY 2019, the City's total indebtedness is expected to grow to $73.71 billion. The City is projected to have remaining debt-incurring capacity of $27.05 billion on July 1, 2016, $25.49 billion on July 1, 2017 and $24.88 billion on July 1, 2018.

Certain entities aside from the City issue debt to finance capital programs within the City. While the City may be obligated to pay a certain portion of these debts, they are not counted towards the City's statutory debt limit. Specifically to that end, the City is responsible, subject to appropriation, for the interest on Hudson Yards Infrastructure Corporation (HYIC) debt (but not its related principal of $3 billion) to the extent that revenues from the Hudson Yards district are insufficient to pay interest. In addition, 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 in City schools and are repaid from revenues the City receives from New York State.

Based on a comparison of other jurisdictions, in FY 2014 New York City's debt burden per capita was double the average of comparable large U.S. cities, recognizing that New York City has responsibilities that in other cities are distributed more broadly among states, counties, unified school districts, and public authorities. Among the cities compared in this report, New York City ranks the highest and second 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 2014 was 9.47 percent. This is twice the comparable other-city average of 4.7 percent. Of the comparable cities, only San Antonio, at 9.51 percent, was higher than New York City. The next two largest cities by population, Los Angeles and Chicago, have ratios that are lower than New York City's, 4.1 and 8.3 percent, respectively. New York City's debt as a percentage of personal income in FY 2013 was 16.5 percent, twice the average of the other comparable cities.[1] San Antonio and Philadelphia were the next highest, at 13.8 and 11.6 percent, respectively, while Boston had the lowest debt to personal income ratio at 3.7 percent.

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

**Table I. *Ratings of Major New York City Debt Issuers***

| 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 + |

[1] Since the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) provides personal income figures by county, the analysis in Chart 9 uses annual financial reports, when available, of the county in which each city is located. The latest available BEA data for personal income is 2013. Both the respective cities and counties of San Francisco and Philadelphia are coterminous geographic entities.

## Table II. *NYC Debt-Incurring Power*

($ in millions)

| | July 1, 2015 | July 1, 2016 [a] | July 1, 2017 [a] | July 1, 2018 [a] |
|---|---|---|---|---|
| **Gross Statutory Debt-Incurring Power** | **$85,184** | **$89,694** | **$94,085** | **$98,598** |
| Actual Bonds Outstanding as of July 1, 2015 (net) [b] | 40,116 | 37,916 | 35,637 | 33,389 |
| Plus New Capital Commitments [c] | | | | |
| FY 2016 | | 8,176 | 8,176 | 8,176 |
| FY 2017 | | | 8,957 | 8,957 |
| FY 2018 | | | | 8,176 |
| Less: Appropriations for General Obligation Principal | (2,218) | (2,303) | (2,278) | (2,224) |
| Incremental TFA Bonds Outstanding Above $13.5 billion | 11,988 | 11,310 | 10,562 | 9,699 |
| **Subtotal: Net Funded Debt Against the Limit** | **$49,886** | **$55,099** | **$61,054** | **$66,173** |
| Plus: Contract and Other Liability | 7,542 | 7,542 | 7,542 | 7,542 |
| **Subtotal: Total Indebtedness Against the Limit** | **$57,428** | **$62,641** | **$68,596** | **$73,715** |
| **Remaining Debt-Incurring Power within General Limit** | **$27,756** | **$27,053** | **$25,489** | **$24,883** |

[a] FYs 2017 through 2019 debt limits are based on the NYC Comptroller's Office's forecast of assessed value and related full market value of real property estimates.

[b] Net adjusted for Original Issue Discount, Capital Appreciation Bonds, GO bonds issued for the water and sewer system, Business Improvement District debt, and cash on hand. The $40.12 billion is derived from the $40.46 billion GO total minus $340 million of the aforementioned adjustments.

[c] Reflects City-funds capital commitments as of the FY 2016 Adopted Capital Commitment Plan (released in September 2015) and includes cost of issuance and certain Inter-Fund Agreements. In July 2009, the State Legislature included future debt of the TFA Future Tax Secured bonds under the general debt limit; thus City-funds capital commitments will be funded by the TFA as well.

NOTE: The Debt Affordability Statement released by the City in May 2015 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 $19.5 billion at the end of FY 2016.

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

# I. Profile of New York City Debt

Debt is issued by New York City, or on behalf of New York 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 bonds, all categories of NYC Transitional Finance Authority bonds (TFA), TSASC bonds, Sales Tax Asset Receivable Corporation (STAR) bonds and other conduit issuers included in the Capital Lease Obligations and Other Category (see Table 1).[2] While New York Water Municipal Finance Authority (NYW) bonds also fund City capital projects, they are not included in this figure as they are paid for through fees and other revenues set and billed by the NYC Water Board. These revenues are then used to pay NYW debt-service.

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 5.1 percent per year from FY 2000 to FY 2015. The FY 2016 Adopted Budget and Financial Plan shows a slowing trend and projects that over the next four fiscal years, gross NYC debt will increase by approximately 3.8 percent annually.[3] Projections for lower growth rates may change as more detailed information about funding needs becomes available over time.

## A. COMPOSITION OF DEBT

The City has issued five types of debt, other than NYW, to finance or refinance its capital program with General Obligation (GO) bonds accounting for 48.9 percent of the total, as shown in Table 1. Debt service on these bonds, with the exception of STAR debt service, is paid with General Fund revenues. STAR Corporation debt service is paid by an annual transfer of $170 million of New York State (NYS) sales tax revenues from Local Government Assistance Corporation (LGAC). New York Water Finance Authority (NYW) debt service is paid for by water and sewer user fees. Table 1 contains information on those debts paid for by General Fund revenues and STAR.

Each of the categories of debt, with the exception of TSASC and STAR debt, which have been issued solely as tax-exempt, is comprised of both tax-exempt and taxable bonds.

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 and continued to issue taxable Qualified School Construction Bonds (QSCBs) until October 2013 when the Federal allocation was exhausted.

[2] All bonds cited are paid from General Fund revenues except for STAR Corporation.

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

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. Tax-exempt debt accounted for 83 percent of the total value of the City's outstanding debt at the end of FY 2015.[4] Including BABs and QSCBs in the total of tax-exempt eligible uses, however, the percentage increases to 93.4 percent.

To diversify its interest rate risk, gross NYC debt consists of both fixed and variable rate debt, with the bulk of the debt in fixed rate borrowing. In FY 2015, fixed rate debt accounted for 86.6 percent of gross NYC debt outstanding.

***Table 1. Gross NYC Debt Outstanding as of June 30, 2015***

($ in millions)

| | GO Bonds | TFA | TSASC | STAR Corporation | Capital Lease Obligations & Other[a] | Gross Debt Outstanding |
|---|---|---|---|---|---|---|
| **Tax-Exempt** | | | | | | |
| Fixed Rate | $26,445 | $23,491[c] | $1,222 | $2,035 | $4,439 | $57,632 |
| Variable Rate[b] | 6,878 | 3,954[c] | 0 | 0 | 156 | 10,988 |
| Subtotal | $33,323 | $27,445 | $1,222 | $2,035 | $4,595 | $68,620 |
| **Taxable** | | | | | | |
| Fixed Rate | $7,046 | $6,405 | $0 | $0 | $525 | $13,976 |
| Variable Rate[b] | 92 | 0 | 0 | 0 | 0 | 92 |
| Subtotal | $7,138 [d] | $6,405 [d] | $0 | $0 | $525 | $14,068 |
| **Total** | **$40,461** | **$33,850** | **$1,222** | **$2,035** | **$5,120** | **$82,688** [e] |
| **Percent of Total** | **48.9%** | **40.9%** | **1.5%** | **2.5%** | **6.2%** | **100.0%** |

[a] This figure includes capital leases of $525 million, City University Construction Fund (CUCF) debt of $96 million, and $3 billion of Hudson Yards Infrastructure Corporation (HYIC) debt but excludes FY 2005 Securitization Corporation debt, and includes $34 million of Tax Lien debt.

[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] The New York City Transitional Finance Authority (TFA) fixed rate figure includes $7.43 billion for TFA Building Aid Revenue Bonds (BARBs). The variable rate figure contains $936 million of Recovery Bonds.

[d] The NYC GO Taxable Bond figure includes $4.41 billion of Build America Bonds (BABs) and $91.1 million of Qualified School Construction Bonds (QSCBs), and the TFA taxable fixed rate figure includes $2.99 billion of BABs and $1.14 billion of QSCBs.

[e] Figures do not include premium/discounts impact on debt outstanding which is estimated at $3.83 billion in FY 2015.

SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2015.

## Elements of Outstanding Gross NYC Debt

*General Obligation (GO)* debt is backed by the full faith and credit of the City of New York. As of June 30, 2015, GO debt totaled $40.46 billion and accounted for 48.9 percent of gross NYC debt outstanding. Debt service for GO bonds is paid from the proceeds of 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. The FY 2015 GO debt total is $1.2 billion less than at the same time last year. During FY 2015,

[4] The remaining 17 percent of debt, categorized as taxable, includes Build America Bonds (BABs) and Qualified School Construction Bonds (QSCBs). However, although BABs and QSCBs are taxable, they must meet the same public purpose standards as tax-exempt bonds.

the City issued $1.1 billion of GO bonds for capital projects, a lower level of issuance from prior years. The reduction in outstanding GO debt reflects bond amortization in excess of new borrowing as well as refundings that reduced the principal amount compared to the refunded bonds.

*New York City Transitional Finance Authority (TFA)* issues two different types of debt, one primarily backed by the City's personal income tax (PIT) revenues and known formally as Future Tax Secured bonds and the other supported by revenue the City receives from New York State for School Building Aid Revenue Bonds (BARBs). At the close of FY 2015, TFA debt totaled $33.85 billion, comprised of $26.43 billion of PIT-supported debt and $7.43 billion of BARBs. This total is 9.1 percent greater than at the close of FY 2014. As a result, the TFA's share of gross NYC debt outstanding increased from 38.3 percent in FY 2014 to 40.9 percent in FY 2015. The increase reflects the issuance of $2.89 billion of TFA bonds in support of the City's capital program during the course of FY 2015.

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 authority 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 bond debt issued in FY 2010 and beyond, to the extent the amount outstanding exceed $13.5 billion, has been combined with City GO debt when calculating the City's indebtedness within the debt limit.

*Building Aid Revenue Bonds (BARBs)* – In April 2006, the State Legislature authorized the TFA to issue an additional $9.4 billion of debt 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 FYs 2007 and 2009, $4.25 billion of BARBs were issued. Additional BARBs in the amount of $2.15 billion were issued over the FYs 2011–2013 period along with $1.5 billion in FY 2015. As a result of those debt issues, less amortization through June 30, 2015, there are currently $7.43 billion of BARBs outstanding. TFA BARBs are excluded from the calculation of the City's debt counted against the debt limit. Going forward, the projected TFA BARBs borrowing averages about $340 million per year from FYs 2016-2019 to keep within its $9.4 billion limit.

*TSASC* debt totaled $1.22 billion as of June 30, 2015. This represents a $6 million decrease from FY 2014. There currently are no plans for future 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 February 2006, TSASC refinanced all bonds issued under its original indenture. The revised refunding bond structure allows the tobacco settlement revenues

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

(TSRs) to flow to both TSASC and the City.[6] Approximately 40 percent of the TSRs are pledged to TSASC bondholders and the remainder goes to the City's General Fund.

*Sales Tax Asset Receivable (STAR) Corporation* debt totaled $2.035 billion at the end of FY 2015. This represents an increase of $60 million from FY 2014. Initially, the proceeds of STAR bonds were used to pay off the remaining debt of the Municipal Assistance Corporation (MAC) in FY 2005. The STAR Corporation 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 Corporation bonds is paid by the LGAC, a State agency and is not included when calculating the City's debt limit.[7] 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.

*Capital Lease, Conduit Debt and Other Obligations* totaled $5.12 billion as of June 30, 2015, a decrease of $97 million from FY 2014.

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. These leaseback 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 the Health and Hospitals Corporation (HHC) ($601 million), DASNY for the New York City Courts Capital Program ($481 million), the Educational Construction Fund ($264 million), the City University Construction Fund (CUCF) ($96 million), the Industrial Development Agency ($87 million), the Primary Care Development Corporation ($32 million), as well as general lease obligations ($525 million).[8] In addition, due to Governmental Accounting Standards Board (GASB) reporting requirements, $34 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. HYIC has issued $3 billion in bonds. To the extent that project revenues are insufficient to meet interest payments, the City pays HYIC the amount sufficient to cover such interest on the debt, in the form of interest support payments. The corporation will be considered to be self-sufficient when HYIC has two fiscal years with adequate recurring revenues to pay its debt service directly. When HYIC is self-

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

[7] LGAC receives its revenues primarily from amounts derived from the New York State 1.0 percent Sales Tax. Estimated revenues in FY 2014 were $2.9 billion.

[8] Although for reporting purposes $601 million of Health and Hospitals Corporation (HHC) debt is included in the category of *Capital Lease Obligations*, the debt of HHC is not fully guaranteed by New York City.

sufficient, it will also start paying down principal.[9] Through FY 2015, the City had paid approximately $360 million in interest support payments.

### *Other Issuing Authorities*

In addition to the financing mechanisms cited above, a number of independent authorities issue bonds to finance large infrastructure projects in the City and throughout the metropolitan area. The two largest issuers are the New York City Municipal Water Finance Authority (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 are used to support services provided to City residents. The outstanding debt of these two authorities is summarized in Tables 2 and 3.

*New York City Municipal Water Finance Authority* (NYW) as of June 30, 2015 had $29.97 billion in debt outstanding, a decrease of $419 million, or 1.4 percent less than FY 2014. This decrease is due largely to debt retirement initiatives pursued by the NYW. Debt issued by NYW is supported by rates, fees and charges for the use of services provided by the system. Created by State law in 1984, and controlled by the City, NYW is responsible for funding water and sewer-related City capital projects administered by the City's Department of Environmental Protection (DEP), such as 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 and measured local development help the goals of continued water quality. DEP's FYs 2016-2019 Four-Year Capital Program assumes an average annual cash funding need of $1.57 billion.[10] 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 $1.99 billion per year is 24 percent higher than the agency's capital commitments between FYs 2012 – 2015, when DEP City-funds capital commitments averaged $1.60 billion per year. Although the current Plan is higher than the prior four-year period, it is less than FYs 2007-2010, when Federal mandates drove much of the program and DEP's City-funds commitments averaged $2.8 billion per year. NYW also cash-funds a portion of the capital plan as monies become available, easing pressure on water and sewer rates.

[9] HYIC will be able to pay its debt service directly when its outstanding bonds convert to a self-amortizing fixed rate structure, which will occur when it has: 1) at least 125 percent revenue coverage on Maximum Annual Debt Service (MADS) on then outstanding senior bonds, 2) 105 percent of MADS on all then outstanding bonds from recurring revenues.

[10] This figure represents the estimated borrowing need for DEP, issued via NYW. This differs from the commitment plan figure.

*Table 2. NYW Debt Outstanding as of June 30, 2015*

($ in millions)

| Tax Exempt | |
|---|---|
| Fixed Rate | $24,681[a] |
| Variable Rate | 5,291[b] |
| **Total** | **$29,972** |

[a] Includes $377 million of Bond Anticipation Notes.
[b] Includes $600 million of Commercial Paper.
SOURCE: NYW

*New York State Metropolitan Transportation Authority* – the State-controlled MTA 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, 2015*

($ in millions)

| Tax Exempt | |
|---|---|
| Fixed Rate | $30,914 |
| Variable Rate | 5,135 |
| **Total** | **$36,049** |

SOURCE: Metropolitan Transportation Authority.

Debt issued to fund the MTA's capital program is secured by several 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, 2015, the MTA had $36.05 billion of debt outstanding, an increase of $1.64 billion, or 4.8 percent, from June 30, 2014. Outstanding MTA debt has increased in all but one of the last fifteen years. MTA debt has grown by 154 percent or $21.9 billion since FY 2000. This growth rate is more than 44 percent higher than the growth in gross NYC indebtedness during the same period.

## B. ANALYSIS OF PRINCIPAL AND INTEREST AMONG THE MAJOR NYC ISSUERS

The three major issuers that either have financed and/or continue to finance City capital projects outside the water and sewer system are: NYC General Obligation, TFA, and TSASC bonds. There is no additional planned 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 Bonds Outstanding, Three Major Issuers, FYs 2015 – 2025***

($ in millions)

| End of Fiscal Year | Debt Outstanding for GO, TFA, & TSASC | Estimated Annual Borrowing | Percent Change in Debt Outstanding |
|---|---|---|---|
| 2015 | $77,567 | | 2.2% |
| 2016 | 80,001 | $5,387 | 3.1% |
| 2017 | 82,863 | 6,345 | 3.6% |
| 2018 | 86,368 | 7,081 | 4.2% |
| 2019 | 89,903 | 7,502 | 4.1% |
| 2020 | 93,128 | 7,308 | 3.6% |
| 2021 | 95,586 | 6,794 | 2.6% |
| 2022 | 97,731 | 6,502 | 2.2% |
| 2023 | 99,728 | 6,477 | 2.0% |
| 2024 | 100,890 | 5,775 | 1.2% |
| 2025 | 101,644 | 5,466 | 0.7% |

NOTE: Above figures include STAR debt and TFA BARBs.
SOURCE: Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2015 and the NYC Office of Management and Budget, June 2015 Financial Plan.

Based on Office of Management and Budget (OMB) forecasts, the annual growth rate in debt outstanding, which averaged 5.1 percent per year from FY 2000 to FY 2015, is expected to slow to 2.7 percent between FY 2015 to FY 2025.[11] However, the average annual growth rate of debt outstanding in the first half of this period through FY 2020 (3.7 percent) is higher than the rate for the period as a whole.

As shown in Table 4, between FYs 2015 and 2019, the growth rate averages 3.8 percent per year. Growth estimates beyond the Financial Plan period tend to be lower, due to the lack of OMB and agency focus on capital projects in the years beyond the Plan. Projections for this slower rate of growth are likely to change as more detailed information about funding requirements becomes available. Because City agencies are typically not yet focused on the latter years of the Ten-Year Capital Strategy, their future projections are less defined.

The principal and interest composition for the City's three major issuers combined is shown in Table 5.[12] The Financial Plan assumes principal repayments totaling $2.940 billion in FY 2016, $3.184 billion in FY 2017, $3.195 billion in FY 2018, and $3.421 billion in FY 2019. Principal is estimated to comprise 45.6 percent of debt service in FY 2016, 47.5 percent in FY 2017, 45.6 percent in FY 2018 and 45.5 percent in FY 2019.[13]

[11] *Office of the NYC Comptroller, Comprehensive Annual Financial Report for the Fiscal Year Ended June, 30, 2015*, page 364, used as source for FY 2000 to FY 2015 rate of growth along with prior-year CAFR's. Includes $3 billion of HYIC bonds. Excludes premiums and discounts.

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

[13] Debt service excludes lease-purchase debt, interest on short-term notes, debt service on STAR and TFA BARBs, and as of the FY 2016 Adopted Budget and June 2015 Financial Plan.

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

($ in millions)

| Fiscal Year | Estimated Principal Amount | Estimated Interest | Estimated Total Debt Service | Principal as Percent of Total |
|---|---|---|---|---|
| 2016 | $2,940 | $3,504 | $6,444 | 45.6% |
| 2017 | $3,184 | $3,513 | $6,697 | 47.5% |
| 2018 | $3,195 | $3,808 | $7,003 | 45.6% |
| 2019 | $3,421 | $4,091 | $7,512 | 45.5% |

NOTE: Adjusted for prepayments and includes interest on short-term notes but not debt service for capital lease / conduit debt.
SOURCE: NYC Office of Management and Budget, June 2015 Financial Plan and Office of the NYC Comptroller.

During FY 2015, the City issued $2.83 billion of GO debt, of which $1.78 billion was used for refunding transactions with present-value savings of $242 million. The remaining $1.05 billion represented new debt for capital purposes. The refundings produced savings of $35 million in FY 2015, $135 million in FY 2016, and $29 million in FY 2017. At the end of FY 2015, outstanding GO debt totaled $40.46 billion. Approximately $22.36 billion of the total GO debt currently outstanding (55.3 percent) will mature in the next ten years, as shown in Table 6.

*Table 6. Amortization of Principal of the Three Major Issuers*

($ in millions)

| Fiscal Years | GO | TFA[a] | TSASC | Total | Percent of Total |
|---|---|---|---|---|---|
| 2016-2025 | $22,355 | $12,399 | $307 | $35,061 | 46.4% |
| 2026-2035 | $14,229 | $13,631 | $707 | $28,567 | 37.8% |
| 2036 and After | $3,876 | $7,820 | $208 | $11,904 | 15.8% |
| **Total** | **$40,460** | **$33,850** | **$1,222** | **$75,532** | **100.0%** |

[a] Includes $986 million of Recovery Bonds and $7.43 billion of TFA BARBs.

In FY 2015, TFA issued $3.68 billion of debt, of which $2.89 billion was new debt. The remaining $786 million of debt issuance was for a refunding transaction that produced budgetary savings of $103 million over the life of the bonds. TFA's debt outstanding was $33.85 billion at the end of FY 2015. Of the total TFA debt outstanding, $12.4 billion, or 36.6 percent, will come due over the next ten years, as reflected in Table 6. Of the outstanding debt of the City's three primary issuers, 46.4 percent is scheduled to come due over the next ten years.

# II. Debt Limit

## A. 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 valuation 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 market values based on recent surveys 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 over 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 general debt limit cannot be greater than 10 percent of the average full value of taxable real property in the City over the most recent five years. Full values 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 2016 debt limit. The full market value for each of FYs 2012 through 2016 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 values of this five-year period is calculated. Finally, the FY 2016 debt limit ($85.184 billion) is derived by multiplying the five-year average value ($851.841 billion) by 10 percent.

***Table 7. Calculation of Full Value of Real Property in New York City and the General Debt Limit, FY 2016***

| Fiscal Year | Assessed Valuations of Taxable Real Property | Special Equalization Ratio | Full Value |
|---|---|---|---|
| 2012 | $157,121,003,987 | 0.2048 | $767,192,402,280 |
| 2013 | $164,036,985,806 | 0.2081 | $788,260,383,498 |
| 2014 | $173,429,032,559 | 0.2075 | $835,802,566,549 |
| 2015 | $184,059,201,523 | 0.2087 | $881,931,967,048 |
| 2016 | $196,710,908,548 | 0.1995 | $986,019,591,719 |
| 5-Year Average Value | | | $851,841,382,219 |
| 10 Percent of the 5-Year Average | | | $85,184,138,222 |

SOURCE: New York City Council Tax Fixing Resolution for FY 2016.

Table 8 summarizes the estimated growth in the City's debt-incurring power. The City's FY 2016 general debt-incurring power of $85.18 billion is projected to increase to $89.69 billion in FY 2017, $94.08 billion in FY 2018 and $98.60 billion by FY 2019.[14] The City's indebtedness counted against the statutory debt limit is projected to grow from $57.4 billion at the beginning of FY 2016 to $73.71 billion by the beginning of FY 2019. The TFA is authorized to borrow beyond its original $13.5 billion limit provided the combined additional TFA debt and GO debt does not exceed the City's general debt limit. The impact of these capital costs is discussed in Section III.

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

## *Table 8. NYC Debt-Incurring Power*

($ in millions)

| | July 1, 2015 | July 1, 2016 [a] | July 1, 2017 [a] | July 1, 2018 [a] |
|---|---|---|---|---|
| **Gross Statutory Debt-Incurring Power** | **$85,184** | **$89,694** | **$94,085** | **$98,598** |
| Actual Bonds Outstanding as of July 1, 2015 (net) [b] | 40,116 | 37,916 | 35,637 | 33,389 |
| Plus New Capital Commitments [c] | | | | |
| FY 2016 | | 8,176 | 8,176 | 8,176 |
| FY 2017 | | | 8,957 | 8,957 |
| FY 2018 | | | | 8,176 |
| Less: Appropriations for General Obligation Principal | (2,218) | (2,303) | (2,278) | (2,224) |
| Incremental TFA Bonds Outstanding Above $13.5 billion | 11,988 | 11,310 | 10,562 | 9,699 |
| **Subtotal: Net Funded Debt Against the Limit** | **$49,886** | **$55,099** | **$61,054** | **$66,173** |
| Plus: Contract and Other Liability | 7,542 | 7,542 | 7,542 | 7,542 |
| **Subtotal: Total Indebtedness Against the Limit** | **$57,428** | **$62,641** | **$68,596** | **$73,715** |
| **Remaining Debt-Incurring Power within General Limit** | **$27,756** | **$27,053** | **$25,489** | **$24,883** |

[a] FYs 2017 through 2019 debt limits are based on the NYC Comptroller's Office's forecast of assessed value and related full market value of real property estimates.

[b] Net adjusted for Original Issue Discount, Capital Appreciation Bonds, GO bonds issued for the water and sewer system, Business Improvement District debt, and cash on hand. The $40.12 billion is derived from the $40.46 billion GO total minus $340 million of the aforementioned adjustments.

[c] Reflects City-funds capital commitments as of the FY 2016 Adopted Capital Commitment Plan (released in September 2015) and includes cost of issuance and certain Inter-Fund Agreements. In July 2009, the State Legislature included future debt of the TFA Future Tax Secured bonds under the general debt limit; thus City-funds capital commitments will be funded by the TFA as well.

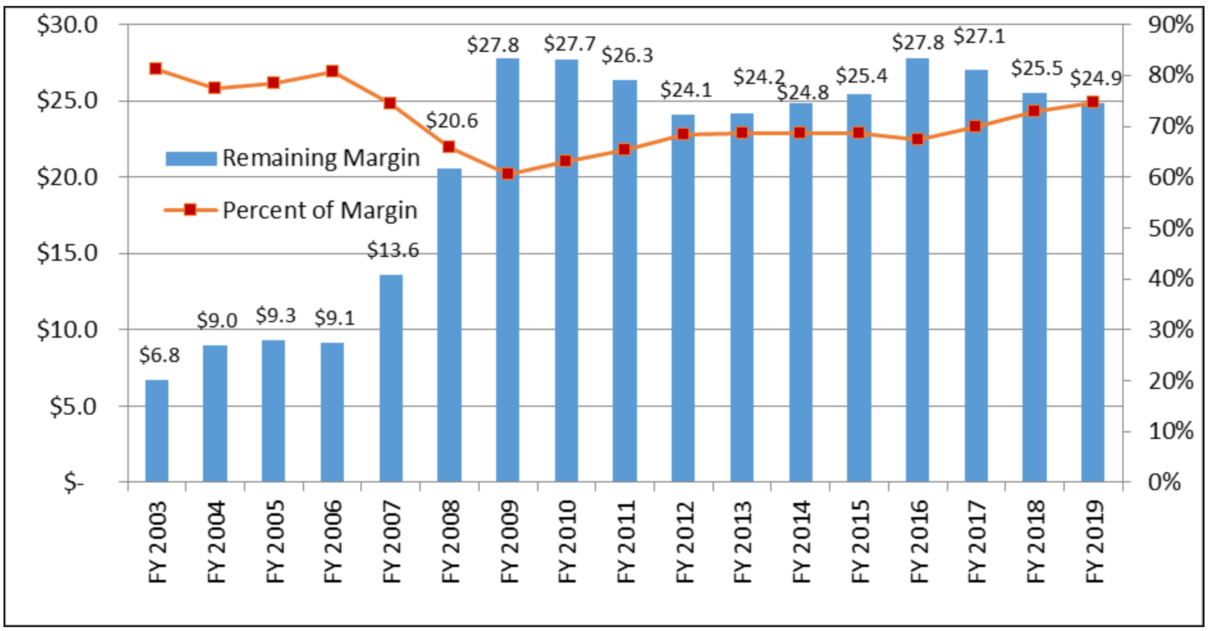
NOTE: The Debt Affordability Statement released by the City in May 2015 presents data for the last day of each fiscal year, June 30th, instead of the first day of each fiscal year, July 1, as reflected in this table. The City's Debt Affordability Statement forecasts that indebtedness would be below the general debt limit by $19.5 billion at the end of FY 2016.

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

As shown in Chart 1, the City's debt margin is forecast to decline from $27.76 billion at the beginning of FY 2016 to $27.05 billion in FY 2017, and then further decrease to $25.49 billion in FY 2018 and to $24.88 billion in FY 2019. The debt limit, which is driven by the full market value of taxable properties, is projected to increase by 5.0 percent per year from FY 2016 to FY 2019, outpaced by the projected 8.7 percent annual increase of total indebtedness during the same period. The City must continue to monitor this growth differential to ensure the general debt limit is not exhausted. At this time, there are no risks to the general debt limit over the Financial Plan period.

While the remaining debt margin is forecast to decline from current levels in FYs 2016 through 2019, the FY 2016 level is near the high for the last decade. The City's remaining debt margin reached a high of $27.8 billion in FY 2009 up from the low of $6.8 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 2002 and FY 2010, the City's debt limit grew at an average of 9.8 percent per year. The Comptroller's Office projects that annual debt limit growth will be 5.0 percent per year over the next three years.

***Chart 1.* NYC's Remaining Debt-Incurring Power FYs 2003 – 2019 and Debt Outstanding as a Percent of Debt Limit, ($'s in billions)**




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

# III. Debt Burden and Affordability of NYC Debt

This section presents statistics assessing the size of the City's debt burden and its affordability. The proper measure of affordability is subject to debate since there are alternative measures that can be used to assess a locality's available resources. 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.[15] 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 a growing interest to the rating community.[16]

## A. 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 participate in some form of capital work, with 13 agencies accounting for approximately 95 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. Thus, after spending occurs, the financing of capital projects takes place to reimburse the City's General Fund. GO and TFA bonds finance all City agencies, with the exception of DEP, which is financed by the New York Water Finance Authority (NYW). In addition, the City does not project finance but rather finances portions of multiple projects simultaneously with each bond issuance.

The City-funded share of the FY 2016 Adopted Commitment Plan sums to an authorized level of $43.18 billion and after the reserve for unattained commitments of $4.76 billion, it drops to $38.42 billion.[17] Four major programmatic areas comprise 70 percent of the City-funded plan as shown in Chart 2. DOE/CUNY related capital projects comprise 23 percent of the four-year plan, followed by DEP at 18 percent, DOT and Mass Transit at 14 percent, and Housing and Economic Development related projects at 14 percent. Combined, these four areas account for $30.0 billion of the $43.2 billion authorized plan.

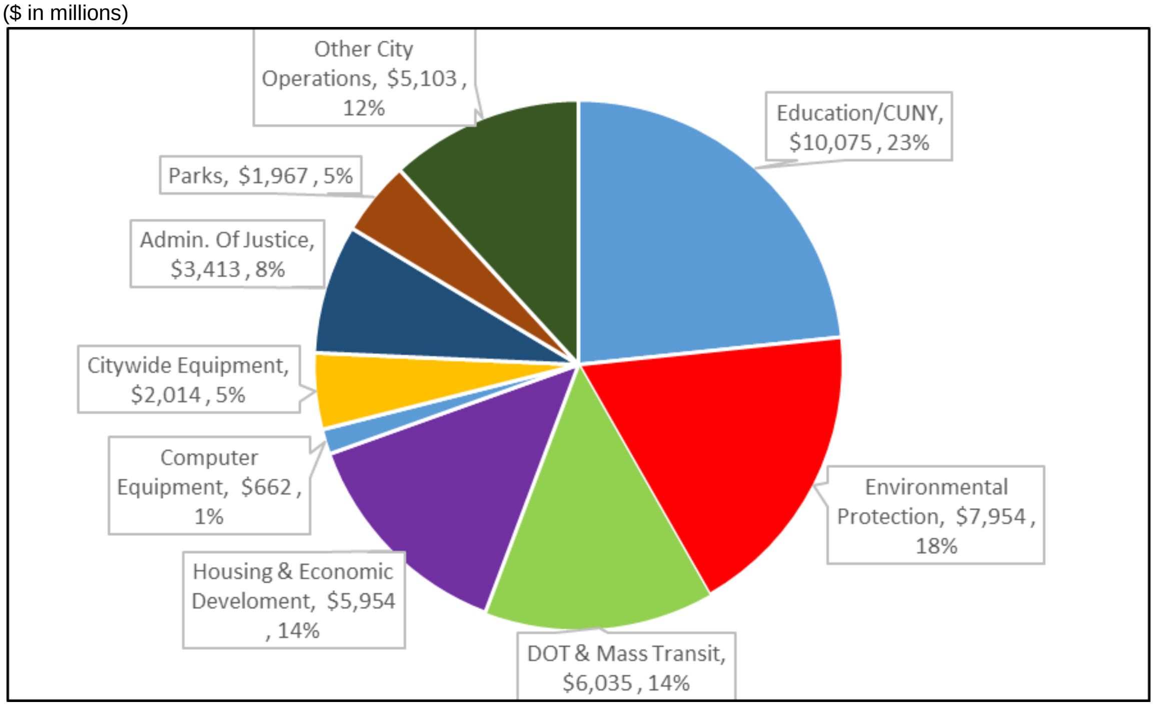
[15] New York City's FY 2014 debt per capita is used for comparison because the available data for the other sample cities are from either fiscal year or calendar year 2014.

[16] The FY 2015 Comptroller's Annual Financial Report discusses OPEB and Pensions in the "Notes to the Financial Statements" on page 77.

[17] Reserve for unattained commitments refers the amount of forecast commitments that do not occur.

***Chart 2*. FY 2016 Adopted Commitment Four-Year Plan, FYs 2016-2019, City Funds**

($ in millions)




SOURCE: NYC Office of Management and Budget, FY 2016 Adopted Capital Plan, September 2015.

The FY 2016 Adopted Capital Commitment Plan averages 9.61 billion in City-funded commitments over FYs 2016-2019. [18] This projected City-funded commitment average over FYs 2016-2019 is 46.9 percent higher than the FYs 2001 to 2015 average of $6.54 billion.

Historically, capital commitments have fluctuated widely year to year. 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 declined slightly to $5.83 billion in FY 2002, $5.39 billion in FY 2003 and $4.54 billion in FY 2004. The trend reversed in FY 2005 when City-funded commitments increased to $7.29 billion. Capital commitments continued to grow each year reaching a high of $9 billion in FY 2008. Capital commitments declined to $7.26 billion in FY 2009 before rising again to $9 billion in FY 2010 and dropping considerably to $5.4 billion in both FYs 2011 and 2012, before rising to $6.2 billion in FY 2013 and declining to $5.73 billion in FY 2014 while rising to $6.84 billion in FY 2015, as shown in Table 9. The FY 2016 Adopted Capital Commitment averages $9.61 billion in City-funded commitments over FYs 2016-2019.

[18] City-Funds commitments after reserve for unattained commitments of $4.76 billion.

*Table 9. City-Funded Capital Commitments from FY 2001 to FY 2019*

($ in millions)

| Fiscal Year | City-Funded Capital Commitments | Year-over-Year Percent Change | Four-Year Rolling Average | Year-over-Year Percent Change |
|---|---|---|---|---|
| 2001* | $6,094 | 63.8% | | |
| 2002* | 5,832 | (4.3%) | | |
| 2003* | 5,389 | (7.6%) | | |
| 2004* | 4,539 | (15.8%) | $5,464 | |
| 2005* | 7,288 | 60.6% | 5,762 | 5.5% |
| 2006* | 5,911 | (18.9%) | 5,782 | 0.3% |
| 2007* | 8,171 | 38.2% | 6,477 | 12.0% |
| 2008* | 9,008 | 10.2% | 7,595 | 17.2% |
| 2009* | 7,264 | (19.4%) | 7,589 | (0.1%) |
| 2010* | 9,014 | 24.1% | 8,364 | 10.2% |
| 2011* | 5,369 | (40.4%) | 7,664 | (8.4%) |
| 2012* | 5,458 | 1.7% | 6,776 | (11.6%) |
| 2013* | 6,196 | 13.5% | 6,509 | (3.9%) |
| 2014* | 5,725 | (7.6%) | 5,687 | (12.6%) |
| 2015** | 6,842 | 19.5% | 6,055 | 6.5% |
| 2016** | 9,753 | 42.5% | 7,129 | 17.7% |
| 2017** | 10,653 | 9.2% | 8,243 | 15.6% |
| 2018** | 9,188 | (13.8%) | 9,109 | 10.5% |
| 2019** | 8,828 | (3.9%) | 9,606 | 5.5% |

* FYs 2001 – 2014 are actuals. ** FY 2015 is a preliminary actual - FYs 2016 – 2019 are projections from the FY 2016 Adopted Commitment Plan.

The City-funded capital program relies almost exclusively on the issuance of bonds. The City's annual borrowing excluding NYW debt, grew from $1.08 billion in FY 1982 to $5.44 billion in FY 2015. The FY 2015 borrowing was the fifth highest annual borrowing in the City's history, with the highest annual borrowing of $7.75 billion occurring in FY 2009. OMB expects the City's borrowing to average $6.58 billion annually between FYs 2016 through 2019, with the peak estimated borrowing of $7.5 billion in FY 2019.[19]

The annual average growth rate of City debt service payments between FY 1982 and FY 2015 was 4.8 percent per year, growing from $1.22 billion in FY 1982 to $5.72 billion in FY 2015. According to OMB, over the next ten years, the City's debt service is expected to grow at an average rate of 4.6 percent to $9.0 billion by FY 2025, as illustrated in Chart 3. Projected growth during the first four-years of the Financial Plan period is 6.5 percent, which is above the projected average growth over the entire FYs 2015 – 2025 period.[20] However, this rate of growth

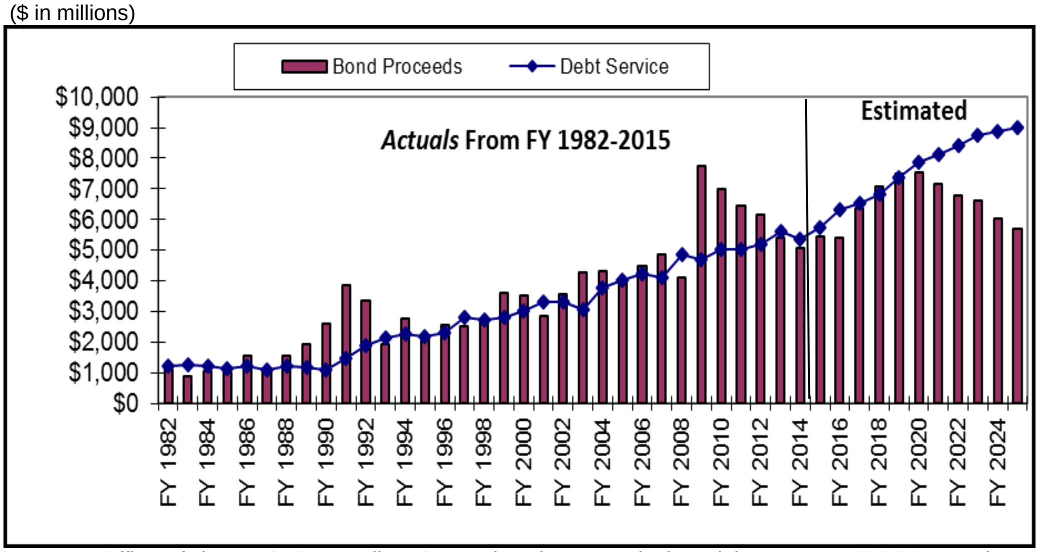
[19] This includes estimated bond proceeds for GO, TFA, and TFA BARB bonds. Without BARBs, estimated borrowing would be $6.24 billion per year. While City-funded commitments include DEP commitments, because it is a mayoral operating agency, borrowing for DEP capital projects are not included in the NYC Comptroller Office's analysis of the City's debt. Financing for DEP's capital program is done by the NYW financing entity.

[20] Figures as of the FY 2016 Adopted Budget and Financial Plan, June 2015, NYC OMB.

over the Financial Plan period will likely be lower as it does not take into account the likelihood of refunding actions, conservative variable rate demand bonds (VRDB) rates, and conservative long-term bond interest rates. Currently, these projections show an average annual growth of 2.2 percent per year in FYs 2020 – 2025, below the 33 year average growth rate of 4.8 percent. In contrast to the first four-years, this outyear growth is seemingly low and it is likely that debt service growth will be higher than the projected pace over this latter period.[21]

**Chart 3. Bond Proceeds and Debt Service, FYs 1982 – 2025**

($ in millions)




SOURCE: Office of the NYC Comptroller, Comprehensive Annual Financial Reports, 1982-2015. 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 FY 2016 Adopted Budget and Financial use for outyear forecasts.

## B. DEBT BURDEN

New York City's debt has expanded significantly since FY 1992. Debt per capita, which was $3,619 in FY 1992, has grown to $9,750 in FY 2015, an increase of 169 percent. [22] The cumulative growth in debt per capita over this period was 2.3 times the City's rate of inflation.[23] The debt per capita figure 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.

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

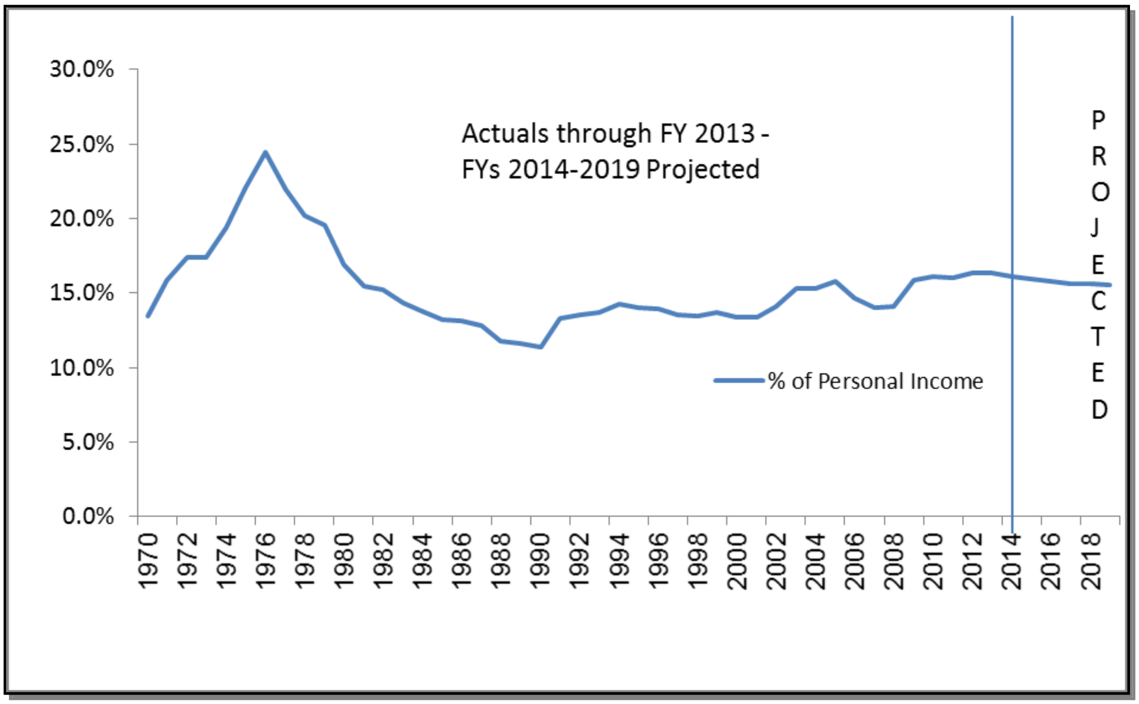
[22] Debt per capita is calculated by dividing gross NYC debt by total population as reported in the Comprehensive Annual Financial Report of the Comptroller for the Fiscal Year Ended June 30, 2015. Excludes bond premium and discount adjustments.

[23] FY 2015 debt per capita of $9,750 is used for section B's analysis; however, FY 2014's debt per capita figure of $9,665 is used when comparing other municipalities, due to data limitations.

### ***Historical Debt Outstanding as a Percent of Personal Income, FYs 1970 – 2019***

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 $2.95 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 the credit markets and the eventual involvement of 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.

***Chart 4.*** **NYC Gross Debt as a Percent of Personal Income, FYs 1970 – 2019**




SOURCES: Office of the NYC Comptroller, Comprehensive Annual Financial Reports for the Fiscal Years ended June 30, 1990, 1999, and 2015. The U.S. Bureau of Economic Analysis, personal income for counties and NYC OMB, Message of the Mayor, May 2015.

Chart 5 illustrates the historical trend of gross debt outstanding as a percentage of personal income from FYs 1970 to 2014. 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 11.4 percent in FY 1990. Through the 1990s, the ratio averaged 13.5 percent before spiking to 15.3 percent in FY 2003 in the aftermath of the September 11th attacks. Between FYs 2007 and 2013, the ratio averaged 15.6 percent. In FYs 2014 and 2015, however, this ratio is forecast to increase to 16.1 percent and 15.9 percent, respectively. Gross NYC debt outstanding increased 1.9 percent from FY 2014 to FY 2015 while the projected increase in personal income is 2.8 percent during the same time period. [24] Over FYs 2016-2019, the ratio remains relatively

[24] New York City's OMB, Message of the Mayor, May 2015, was used for NYC personal income growth rate from FY 2014 to FY 2015. Actual personal income data is available through FY 2013.

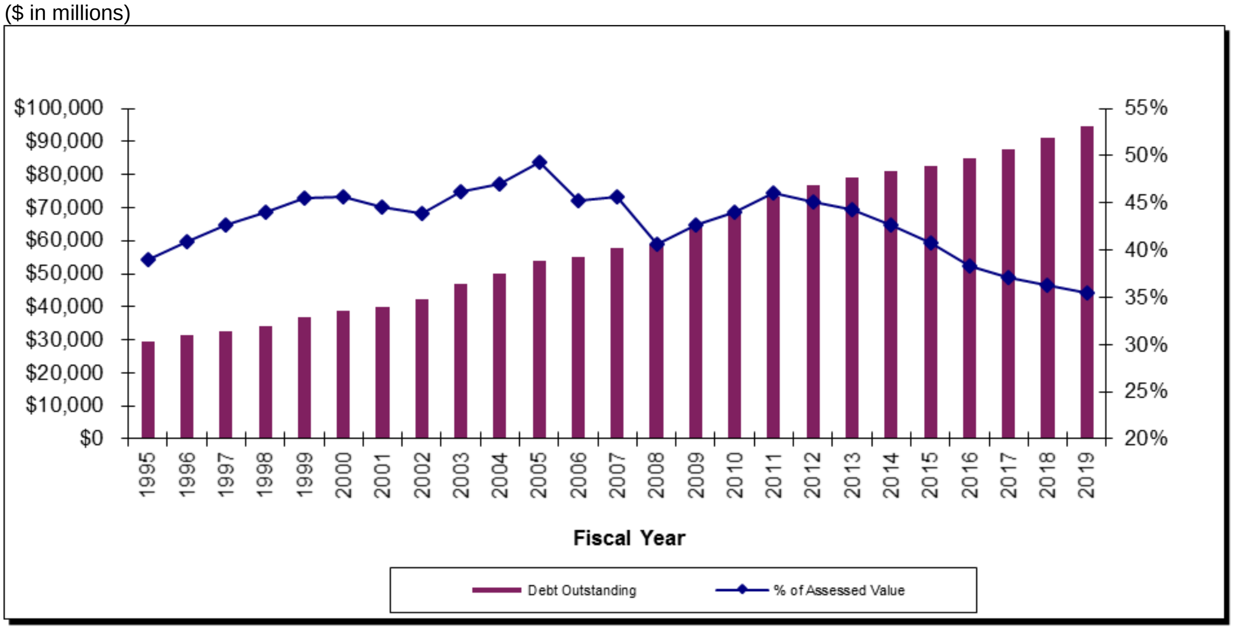
flat at 15.6 percent. The improvement in the ratio is the result of favorable projected personal income growth of 4.1 percent annually over the period compared with an estimated 3.5 percent annual growth in debt outstanding.

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

Over the period of FYs 1995-2015, the ratio of debt outstanding to the assessed value of taxable real property has averaged 44.1 percent. Encouragingly, due to the Comptroller's Office's projected robust growth of the assessed value of taxable real property, this ratio will decline to 35.5 percent by FY 2019. The estimated annual growth rate for assessed value is 7.2 percent from FYs 2015-2019 compared with a 3.5 percent annual growth rate in debt outstanding. The 35.5 percent ratio estimate is the lowest rate since FY 1995 as shown in Chart 5.

***Chart 5*. NYC Outstanding Debt as a Percentage of the Assessed Value of Taxable Real Property**

($ in millions)




SOURCE: Office of the NYC Comptroller, Comprehensive Annual Financial Reports and the **NYC** Department of Finance, FY 2015 Annual Property Tax Report.

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

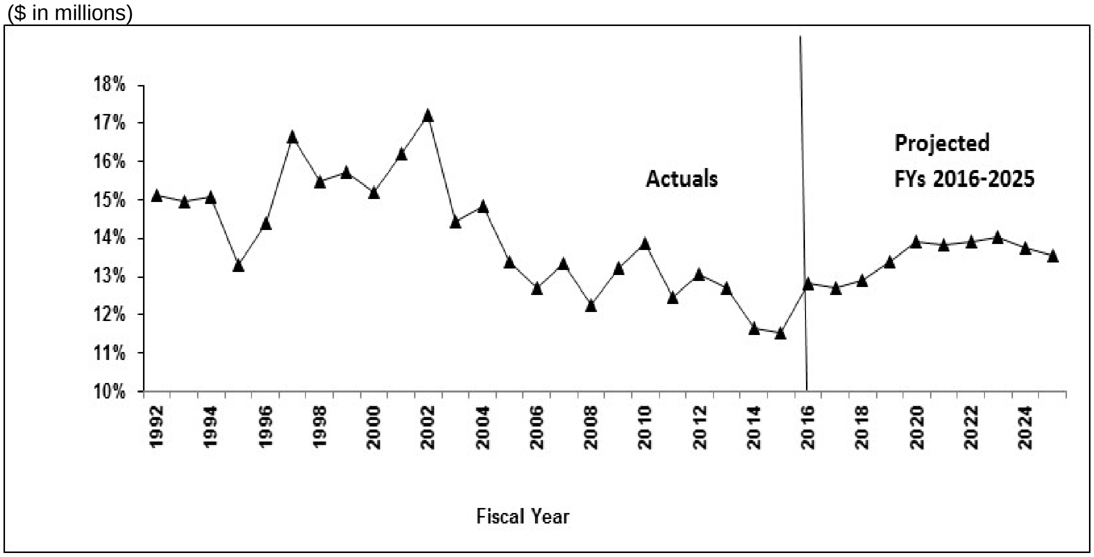
Another measure of debt affordability is annual debt service expressed as a percent of annual tax revenues. This measure shows the pressure that debt service exerts on a municipality's locally-generated revenues. Debt service exceeded 15 percent of tax revenues in 8 of the 11 years from FY 1992 to FY 2003.[25] By FY 2008, this ratio fell to 12.4 percent before

[25] 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.

dropping to its lowest level since 1992, at 11.5 percent in FY 2015, as shown in Chart 6. Debt service as a percentage of tax revenues is projected by the Comptroller's Office to reach a high of 13.9 percent in FY 2020 before declining to 13.5 percent by FY 2025.[26] As discussed earlier, this outyear ratio is reflective of the projected capital borrowing and debt service in FYs 2020 – 2025, both of which are likely understated.

***Chart 6*. NYC Debt Service as a Percent of Tax Revenues**

($ in millions)



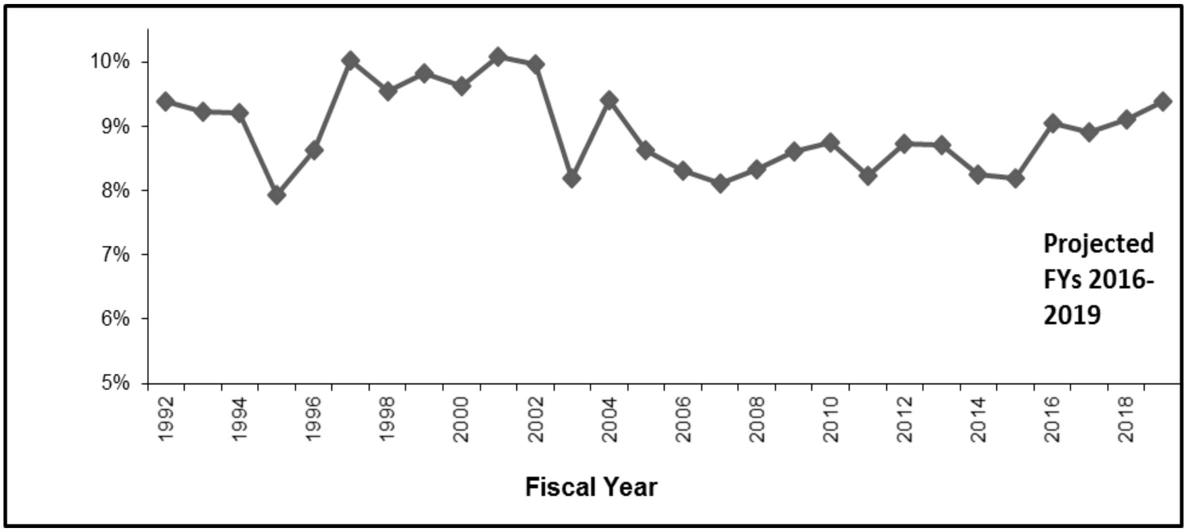

SOURCE: Office of the NYC Comptroller, Comprehensive Annual Financial Reports, FYs 1982 – 2015, and NYC Office of Management and Budget, FY 2016 Adopted Financial Plan, June 2015.

Debt service as a percent of total expenditures has ranged from 7.4 percent to 9.6 percent over the 24 year period as shown in Chart 7. The ratio was 8.9 percent in FY 1992, before rising to a high of 9.6 percent in FY 2001, and has now decreased to 7.7 percent in FY 2015. Over the entire period, FYs 1992-2015, the ratio has averaged 8.4 percent. The ratio is forecast to reach 8.9 percent in FY 2019 due to projected debt service growth exceeding the estimated growth in total expenditures.

[26] From the Office of the NYC Comptroller, Comprehensive Annual Financial Reports, 1982-2015, and NYC Office of Management and Budget, FY 2016 Adopted Financial Plan, June 2015 and adjusted for prepayments and includes TSASC. Three percent growth rate used for tax revenues beyond FY 2019.

*Chart 7.* **NYC Debt Service as a Percent of Total Expenditures**

($ in millions)




SOURCE: Office of the NYC Comptroller, Comprehensive Annual Financial Reports, FYs 1982 – 2015, and NYC Office of Management and Budget, FY 2016 Adopted Financial Plan, June 2015.

## C. COMPARISON WITH SELECTED MUNICIPALITIES

New York City is the largest City in the U.S. with 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. Using debt per capita data to compare debt burden among municipalities provides such an adjustment.

As shown in Table 10, in FY 2014, NYC's debt per capita was more than twice the average of a sample of eleven other large U.S. cities and 1.51 times the per capita debt of Chicago which had the next highest debt burden.[27]

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

*Table 10. Debt Per Capita for Selected Cities, 2014*

| City | Population | Direct and Overlapping Debt Outstanding ($ 000) | Debt Per Capita[a] |
|---|---|---|---|
| Boston | 645,966 | $1,322,337 | $2,047 |
| Seattle | 640,500 | 1,296,292 | 2,024 |
| San Jose | 1,001,000 | 3,604,213 | 3,601 |
| Dallas | 1,281,047 | 5,181,899 | 4,045 |
| Phoenix | 1,505,070 | 6,302,751 | 4,188 |
| Los Angeles | 3,904,657 | 17,188,859 | 4,402 |
| Philadelphia | 1,553,165 | 7,350,800 | 4,733 |
| Houston | 2,099,451 | 10,136,996 | 4,828 |
| San Francisco | 849,183 | 4,211,670 | 4,960 |
| San Antonio | 1,409,019 | 8,272,277 | 5,871 |
| Chicago | 2,695,598 | 17,228,906 | 6,391 |
| *Average of Sample Cities* | *1,598,605* | *$7,463,364* | *$4,669* |
| **New York City** | **8,405,837** | **$81,240,000** | **$9,665** |

[a] Table 10 above 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.

While gross NYC debt per capita is higher than all other cities in the sample, NYC's growth in debt per capita is lower than all but three sample cities. Gross NYC debt per capita grew by 96.3 percent from 2000 to 2014. This growth is below the average growth of 136.5 percent for the 11 sample cities as shown in Table 11.

*Table 11. Debt per Capita Comparisons for Selected Cities – 2000 and 2014*

| City | Debt per Capita in 2000 | Debt per Capita in 2014 | Percentage Change 2000 – 2014 |
|---|---|---|---|
| Seattle | $1,674 | $2,024 | 19.5% |
| Philadelphia | $3,241 | $4,733 | 46.0% |
| Boston | $1,376 | $2,047 | 48.8% |
| Phoenix | $2,041 | $4,188 | 105.2% |
| Houston | $2,187 | $4,828 | 120.8% |
| Chicago | $2,863 | $6,391 | 123.2% |
| Los Angeles | $1,464 | $4,402 | 200.7% |
| San Antonio | $1,929 | $5,871 | 204.4% |
| Dallas | $1,273 | $4,045 | 217.8% |
| San Jose | $943 | $3,601 | 281.8% |
| San Francisco | $1,139 | $4,960 | 335.4% |
| *Average of All Other Cities[a]* | *$1,974* | *$4,669* | *136.5%* |
| **National CPI (FY)** | **169.3** | **235.4** | **39.0%** |
| **New York City** | **$4,923** | **$9,665** | **96.3%** |

[a] From Table 10, a weighted average derived by the sum of total debt outstanding divided by the sum of total population**.**

NOTE: Table 11 above 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.

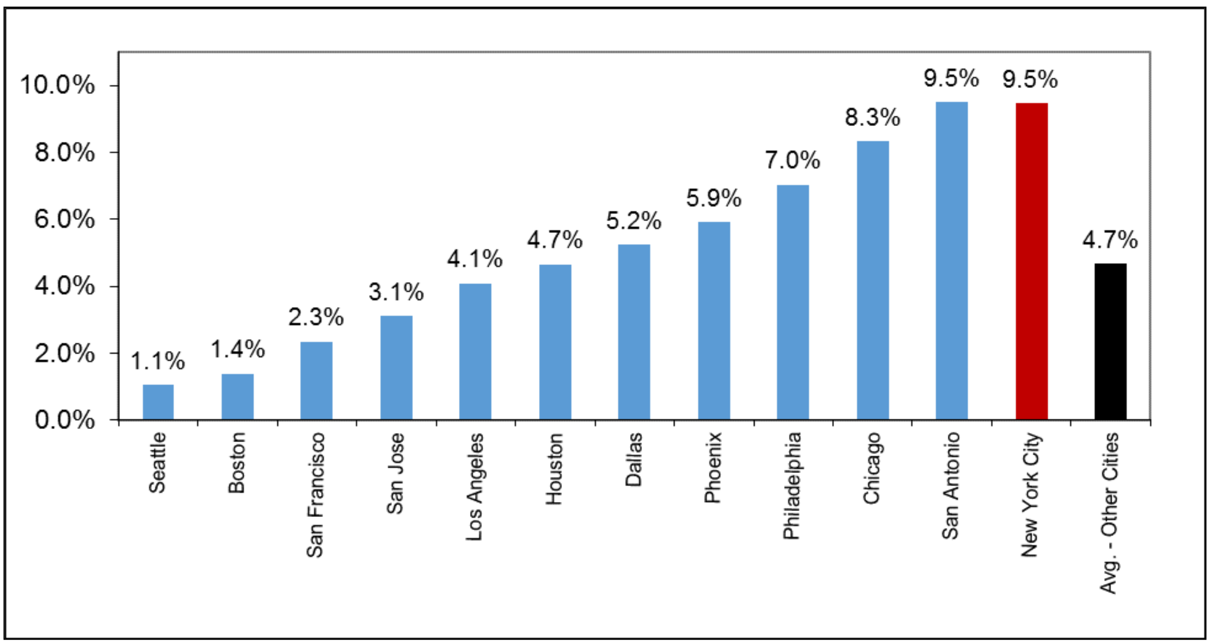
SOURCE: Office **of the** NYC Comptroller**,** Comprehensive Annual Financial Reports FYs 2000 and 2014 and/or official statements of various cities, FYs 2000 and FY 2014.

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 outstanding 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 major 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.

The rationale behind using personal income is that it is another relative measure of a locality's taxable base. The wealthier a community, the greater its capacity to pay taxes, and to sustain local government debt and operations.

Among the cities surveyed in this report, New York City ranks the highest in the debt to personal income measure and ranks second in the debt to property value measure. In addition, NYC is well above the averages of the sample cities and counties. As detailed in Chart 8, gross NYC debt as a percentage of full value of real property in FY 2014 was 9.47 percent, twice the sample city average of 4.7 percent. Only San Antonio exceeded New York City slightly at 9.51 percent and Chicago at 8.3 percent was ranked third among the cities in the survey.

***Chart 8.*** **Debt Outstanding as a Percent of the Full Value of Real Property, FY 2014**



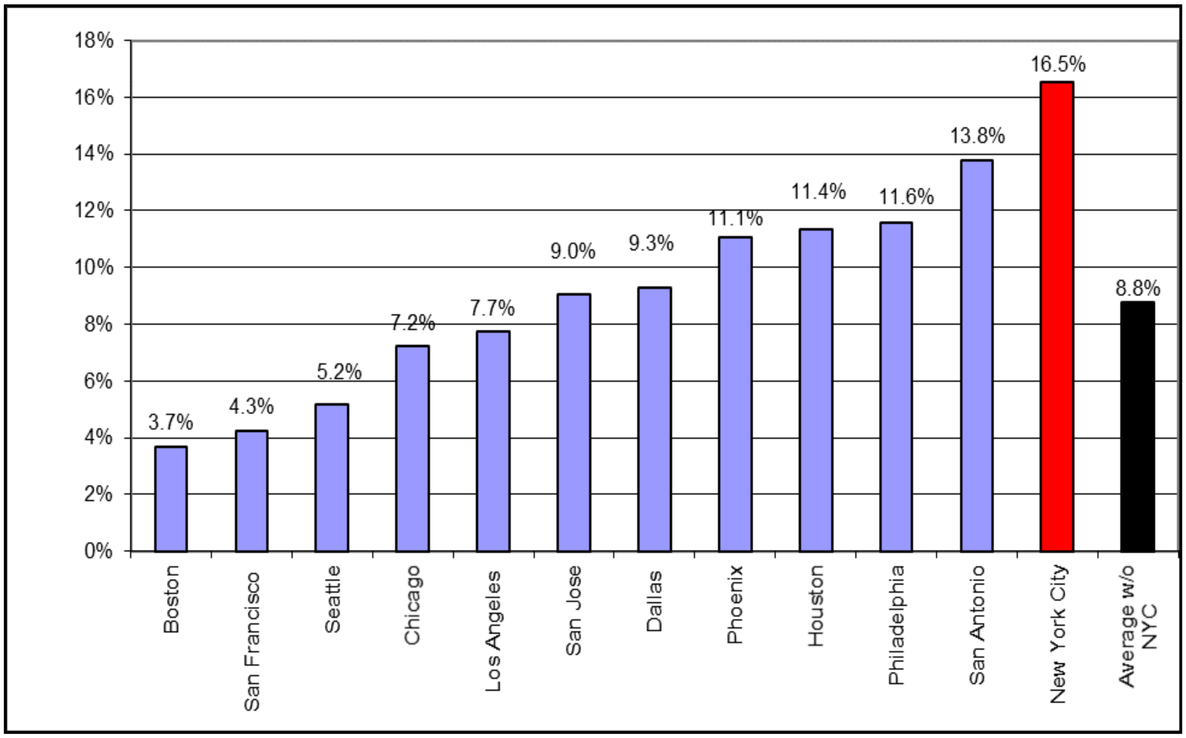

NOTE: **Debt per capita** is based on data extracted from each city's "Direct and Overlapping Debt Outstanding" exhibit included in that city's Comprehensive Annual Financial Report. While the individual exhibits are similar in format, there is no assurance that the components of the data published in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

SOURCE: Each city's Comprehensive Annual Financial Report for FY 2014.

Gross NYC debt per capita as a percentage of personal income per capita in FY 2013 was 16.5 percent, the highest among the sample cities as summarized in Chart 9. Gross NYC debt as a percentage of personal income is twice the 8.8 percent population-weighted average of the 11 sample cities. Cities in the survey with comparable ratios to New York City include San

Antonio at 13.8 percent, Philadelphia at 11.6 percent, Houston at 11.4 percent and Phoenix with 11.1 percent.

***Chart 9*. Debt Outstanding as a Percent of Personal Income, FY 2013 (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. 2013 Personal Income is the most recent personal income data available from the BEA.

SOURCE: FY 2013 Comprehensive Annual Financial Reports of Sample Counties and the U.S. Department of Commerce – Bureau of Economic Analysis (BEA).

# Glossary of Acronyms

| | |
|---|---|
| **BAB** | Build America Bonds |
| **BARB** | Building Aid Revenue Bond |
| **BEA** | Bureau of Economic Analysis |
| **CAFR** | Comprehensive Annual Financial Report |
| **CPI** | Consumer Price Index |
| **CUCF** | City University Construction Fund |
| **CUNY** | City University of New York |
| **DASNY** | Dormitory Authority of the State of New York |
| **DEP** | Department of Environmental Protection |
| **DOE** | Department of Education |
| **EXCEL** | Expanding our Children's Education and Learning |
| **FTS** | Future Tax Secured |
| **FY** | Fiscal Year |
| **GASB** | Governmental Accounting Standards Board |
| **GO** | General Obligation |
| **HHC** | Health and Hospitals Corporation |

| | |
|---|---|
| **HYIC** | Hudson Yards Infrastructure Corporation |
| **LGAC** | Local Government Assistance Corporation |
| **MAC** | Municipal Assistance Corporation |
| **MADS** | Maximum Annual Debt Service |
| **MTA** | Metropolitan Transportation Authority |
| **NY** | New York State |
| **NYC** | New York City |
| **NYW** | New York City Municipal Water Finance Authority |
| **OMB** | Office of Management and Budget |
| **OPEB** | Other Post-Employment Benefits Liabilities |
| **ORPTS** | Office of Real Property Tax Services |
| **PIT** | Personal Income Tax |
| **QSCB** | Qualified School Construction Bonds |
| **S&P** | Standard & Poor's |
| **STAR** | Sales Tax Asset Receivable Corporation |
| **TFA** | New York City Transitional Finance Authority |

| | |
|---|---|
| **TSASC** | Tobacco Settlement Asset Securitization Corporation |
| **TSR** | Tobacco Settlement Revenues |
| **TYCS** | Ten-Year Capital Strategy |
| **U.S.** | United States |
| **VRDB** | Variable Rate Demand Bond |
| **WTC** | World Trade Center |

NEW YORK CITY COMPTROLLER

**SCOTT M. STRINGER**

MUNICIPAL BUILDING • 1 CENTRE STREET, 5TH FLOOR • NEW YORK, NY 10007
PHONE (212) 669-3500 FAX (212) 669-8878
WWW.COMPTROLLER.NYC.GOV