Debt Impact Study

An Analysis of New York State's Debt Burden

OFFICE OF THE NEW YORK STATE COMPTROLLER

Thomas P. DiNapoli, State Comptroller

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Message from the Comptroller

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Across New York State, we hear calls for investment in essential public infrastructure. Debt is often a basic part of the financing picture, whether the focus is on school buildings, highways, water and sewer systems or other facilities. However, we need to use debt wisely. In order to avoid overpaying for capital assets and burdening future generations with excessive debt, New Yorkers must keep a careful eye on how much the State borrows, the purposes of such debt, and its affordability.

New York State's debt burden is among the highest in the nation. At $3,116, our per capita debt was three times the median for all states. Total State-Funded debt is projected to increase by $10.4 billion or 17 percent over the State's current five-year capital plan period. State-Funded debt service is projected to increase by 14.5 percent or more than $1 billion over that period. When debt service costs go up, it can be more difficult to fund important programs and balance the budget.

The Debt Reform Act of 2000 imposed statutory limits on the levels of debt outstanding and debt service. Current projections indicate the State's available borrowing capacity under the limit on debt outstanding will shrink to $58 million as of March 31, 2021. The Act added further restrictions to existing provisions in the New York State Constitution that prohibit the State from issuing debt without voter approval. Unfortunately, the State has used various mechanisms, including its public authorities, to circumvent both the constitutional and statutory restrictions on borrowing.

In response, I have proposed constitutional amendments that would impose a comprehensive debt cap linked to the level of personal income in the State, while prohibiting long-term debt except for capital purposes. The reform package would also ban "backdoor borrowing" that public authorities conduct on behalf of the State, and return control of State debt to the voters. To help ensure that such debt is used for the highest priority purposes, my proposal would also require including a comprehensive annual assessment of statewide capital needs and the creation of a new Capital Asset and Infrastructure Council to review planning and funding of long-term investments. These reforms would go a long way toward ensuring effective capital planning and affordable debt levels for New Yorkers today and for years to come.

Thomas P. DiNapoli
State Comptroller

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Executive Summary

High debt levels and imprudent use of borrowing have been recurring concerns in New York State since before the Civil War. In response, New York's voters and the Legislature have imposed constitutional and statutory restrictions on borrowing, including the Debt Reform Act of 2000, which defined certain debt as "State-Supported debt" and placed limits on the amount of total debt outstanding and annual debt service.

By the more comprehensive measure of State-Funded debt, New York's debt outstanding has increased 66 percent since the enactment of that law. While such debt has declined by an annual average of 1.3 percent since State Fiscal Year (SFY) 2011-12, it is projected to resume rising in coming years. In addition, certain borrowing that would have been subject to the statutory limits enacted in 2000 is now excluded from those limits. Just as the State has used public authorities for more than half a century to circumvent the constitutional restrictions on borrowing, it now has created new mechanisms to avoid statutory limits as well.

This report examines major issues related to New York State's debt, including a shrinking statutory capacity for new borrowing that may affect the State's ability to make essential capital investments in coming years. It outlines certain weaknesses of the Debt Reform Act of 2000, which leaves elements of the State's overall debt burden outside the statutory limits; and measures the annual cost of debt service, which can limit budgetary flexibility. It also outlines Comptroller DiNapoli's agenda of proposed reforms to prevent inappropriate and wasteful uses of debt, and to improve the State's capital planning processes. Key points of the report include:

- State-Funded debt outstanding fell by 3.5 percent over the three fiscal years ending March 31, 2017. However, it is projected to reach $63.7 billion at the end of the current fiscal year and to increase by $8 billion over the following four years.
- State-Funded debt service rose 49 percent over the past decade. Over the coming five years, those costs are projected to increase by an average of 4.4 percent annually, outpacing both personal income tax collections and total State receipts. Such growth in debt service reduces budgetary flexibility, potentially crowding out spending in other key areas and increasing pressure for additional revenues.
- The State will nearly exhaust its borrowing capacity under the Debt Reform Act over the coming four years, according to the latest projections by the Division of the Budget (DOB). Such capacity is projected to fall to $58 million as of March 31, 2021 based on current expectations of new borrowing, repayment of existing debt and growth in personal income in the State, which is used in the calculation of debt capacity. If personal income does not increase at projected levels, debt capacity could be further limited, creating new challenges for the State in meeting its capital investment needs.
- The largest share of State-Funded debt outstanding, 41.1 percent as of March 31, 2017, was for education purposes. The next highest proportion, 23.1 percent, was for transportation.

- New York State's debt burden is among the highest in the nation, based on several measures. At 5.1 percent, New York's debt to personal income ratio was second only to New Jersey among the 10 largest states and more than twice the national median. The State's per capita debt of $3,116 was three times the national median.
- As of March 31, 2017, $61.4 billion in State-Funded debt was outstanding, with $4.7 billion or 7.7 percent of that amount having been issued for non-capital purposes resulting in $1.4 billion in debt service in SFY 2017. This debt includes State-Supported debt issued for non-capital purposes before the prohibition enacted in the Debt Reform Act of 2000 and State-Funded debt obligations not counted in the definition of State-Supported debt. While the State has not added debt for non-capital purposes in more than a decade, the ongoing cost of this past borrowing stands as a warning against such use of debt in the future.
- The State's share of capital projects fund spending funded with current resources (pay-as-you-go or PAYGO) averaged 36.7 percent over the past five years, an increase from the preceding five-year period. However, the PAYGO share fell slightly in SFY 2016-17 and is projected to decline further over the coming five years.
- New York State's credit ratings are in the upper mid-range of the 50 states as determined by three major national rating agencies. Reducing the State's debt burden relative to other states could help improve its credit rating, thus reducing future borrowing costs.

Debt plays an essential role in financing infrastructure for important public purposes. However, a high debt burden can impose heavy costs on taxpayers and users of public facilities, and may impair the State's ability to support other key services.

To address such concerns, Comptroller DiNapoli has outlined a comprehensive plan to make the State's borrowing and capital planning practices more affordable, transparent and accountable. Among other steps, such reforms would:

- **Impose a debt cap using a comprehensive definition of State debt.** This proposal would limit all State-Funded debt to 5.0 percent of personal income within the State and amend the State Constitution to restrict the use of long-term debt to capital purposes.
- **Ban backdoor borrowing and return control of State debt to the voters.** A proposed constitutional amendment would ban public authorities' issuance of "backdoor borrowing" on behalf of the State and require such debt to be approved by the Legislature and the voters and to be issued by the State Comptroller with the legal protections and restrictions that apply to General Obligation debt. The proposal would also authorize multiple bond acts to be presented to the voters each year, further enhancing the public's voice in deciding on priorities for limited State resources.
- **Require a complete inventory of the State's infrastructure assets and a 20-year strategic plan to guide the existing five-year Capital Plans.** A Capital Asset and Infrastructure Council would be established to lead this work, including comprehensive annual assessment of statewide capital needs with priorities and recommendations for planning and funding of capital investments.

I. Defining and Measuring New York's Debt Burden

Article VII of the New York State Constitution prohibits issuance of debt "by or in behalf of the state" unless it has been approved by the voters and by the Legislature.[1] For more than half a century, State policy makers have chosen to meet needs for capital investment and other purposes using debt that circumvents the constitutional limits on the State's own borrowing authority.

In addition to those constitutional restrictions, the Legislature imposed certain statutory limitations on debt through the Debt Reform Act of 2000. Since passage of that law, nearly 95 percent of debt for State purposes has been issued by public authorities. This debt is known as "backdoor borrowing" because the State's authorities are generally not subject to the limitations of Article VII, including voter approval. The State is contractually or otherwise obligated under these arrangements to make payments to public authorities or other entities equal to the debt service payments made by the issuer – ranging from well-known agencies such as the Thruway Authority to little-known entities such as the Sales Tax Asset Receivable Corporation.

In this context, policy discussions regarding New York State's debt burden require a careful choice of terms. The Office of the State Comptroller uses the broadest measure of State borrowing – a concept known as **State-Funded debt** – to measure the State's debt burden.[2] This provides a more comprehensive picture than another measure often used, **State-Supported debt**.[3]

Both measures include most public authority debt issued on behalf of the State as well as the State's General Obligation bonds issued under the constitutional limitations mentioned above. In addition, State-Funded debt includes all debt in which the State is required to make payments used, directly or indirectly, as the sole resource for the payment of debt service, including debt issued for non-State purposes and non-capital purposes. State-Supported debt only includes debt in which the State is constitutionally

[1] This provision is in Article VII, Section 11, of the State Constitution. Sections 9 and 10 provide exceptions for certain short-term borrowing, and for debt to pay for responses to invasion and certain other emergencies, respectively.

[2] State-Funded debt includes debt supported by any financing arrangement whereby the State agrees to make payments which will be used, directly or indirectly, (1) for the payment of principal, interest, or related payments on indebtedness incurred or contracted by the State itself for any purpose, or (2) by any State agency, municipality, individual, public or private corporation or any other entity for State capital or operating purposes, or (3) to finance grants, loans or other assistance payments made or to be made by or on behalf of the State, for any purpose including non-State purposes. Among other provisions, the definition applies (i) whether or not the obligation of the State to make payments is subject to appropriation, or (ii) whether or not debt service is to be paid from a revenue stream transferred by the State to another party that is responsible for making such payments.

[3] As discussed elsewhere in this report, State-Supported debt is the measure that is defined by and subject to the limits of the Debt Reform Act of 2000. Section 67-b of the State Finance Law states the following: "'State-supported debt' shall mean any bonds or notes, including bonds or notes issued to fund reserve funds and costs of issuance, issued by the state or a state public corporation for which the state is constitutionally obligated to pay debt service or contractually obligated to pay debt service subject to an appropriation, except where the state has a contingent contractual obligation."

required to pay debt service or debt issued by public authorities in which the State is contractually required to provide appropriated payments to authorities that are used to directly pay debt service. Since enactment of the Debt Reform Act in 2000, State-Supported debt can only be issued to support capital works and purposes.

For example, in 2003, the Tobacco Settlement Financing Corporation (TSFC) was created to issue bonds to provide budget relief in the aftermath of the September 11, 2001 attacks in conjunction with a broader recovery plan. Bonds issued by TSFC are not considered State-Supported debt because of the statutory definition of such debt. The bonds were securitized by New York's share of revenues from the national settlement reached with major tobacco manufacturers. The State's settlement revenue was assigned to the TSFC, which was authorized to pledge the revenue to support its bonds. The State also created a contingent contractual obligation by providing an appropriation to pay debt service in the event tobacco revenues were insufficient to pay required debt service. While the revenues were directed to TSFC and away from the State Treasury, they constituted a use of State resources for debt repayment. Thus, the Office of the State Comptroller included tobacco bonds (the last of which were retired in June 2017) in the calculation of State-Funded debt to provide a more inclusive measure of the State's debt burden.

State-Funded debt includes General Obligation bonds and other State-Supported debt as defined by the Debt Reform Act of 2000, as well as the following obligations:

- Building Aid Revenue Bonds (BARBs) issued by the New York City Transitional Finance Authority (TFA) for education infrastructure within New York City.[4] The State authorized New York City to assign its State building aid to the TFA to secure bonds issued to finance a portion of the City's educational capital facilities program.
- Sales Tax Asset Receivable Corporation (STARC) bonds issued to refinance New York City's Municipal Assistance Corporation (MAC) debt from the 1975 fiscal crisis.
- State University of New York (SUNY) Dormitory Facilities Revenue Bonds issued by the Dormitory Authority of the State of New York (DASNY). This program, created as part of the State's 2013-14 budget, moved payment of debt service on new bonds supporting SUNY dormitories outside the budget, thereby escaping the limitations of the Debt Reform Act. DOB states that debt outstanding and debt service from bonds issued under the old lease-purchase program are still counted within the caps on State-Supported debt outstanding

[4] Part A-3 of Chapter 58 of the Laws of 2006 authorized New York City's Transitional Finance Authority (TFA) to issue bonds to finance educational capital projects within New York City backed by an assignment of all or a part of the City's annual payment of State Building Aid. The authorization limited debt outstanding under this arrangement to $9.4 billion. New York City recognizes the Building Aid Revenue Bonds (BARBs) as a debt in its financial statements because it accounts for all activities of the TFA, a blended component unit of the City; however, the debt is not a general obligation of the City and is exclusively dependent upon the appropriation of future State aid for repayment.

and debt service. However, debt service for these bonds is now paid off-budget and therefore no longer appropriated or paid from governmental funds.[5]

- Municipal Bond Bank Agency (MBBA) bonds issued to amortize prior year school aid claims;
- DASNY's Secured Hospital program bonds for which the State is paying debt service on behalf of certain hospitals based on a contingent contractual obligation;
- TSFC bonds as described above.

As of March 31, 2017, the State had $61.4 billion in State-Funded debt outstanding (see Figure 1), representing an increase of $8.9 billion or 17 percent from SFY 2007-08.[6] Voter-approved, General Obligation debt represented 4 percent of State-Funded debt outstanding at the end of SFY 2016-17, down from 6.1 percent ten years earlier. State-Supported debt issued by public authorities increased $6 billion or 14.5 percent over the period. Total State-Funded debt outstanding, as of March 31, 2017, includes $11.7 billion of debt which is not counted as State-Supported debt.

Figure 1

Change in State-Supported Debt and State-Funded Debt, 2008-2017

(in millions of dollars)

	March 31, 2008	March 31, 2017	Dollar Change	Percentage Change
General Obligation Debt	3,221	2,463	(758)	-23.5%
State-Supported Authority Debt	41,183	47,159	5,976	14.5%
Total State-Supported Debt	**44,404**	**49,622**	**5,218**	**11.8%**
TSFC - Tobacco Securitization	3,870	660	(3,210)	-82.9%
MBBA - Prior Year School Aid Claims	464	203	(261)	-56.3%
STARC - MAC Refinancing	2,407	1,885	(522)	-21.7%
New SUNY Dormitories	-	956	956	100.0%
Secured Hospital Debt	-	157	157	100.0%
TFA Building Aid Revenue Bonds (BARBs)	1,300	7,882	6,582	506.3%
Sub-total	*8,041*	*11,743*	*3,702*	*46.0%*
Total State-Funded Debt	**52,445**	**61,363**	**8,920**	**17.0%**

Source: New York State Office of the State Comptroller

Of the $61.4 billion in State-Funded debt outstanding as of March 31, 2017, $4.7 billion or 7.7 percent had been issued for non-capital purposes. Such debt includes, for

[5] These bonds are supported by dormitory fees collected by SUNY and assigned to DASNY, thus bypassing the State treasury and eliminating the State pledge of revenue attached to the old lease purchase program.

[6] Debt figures throughout this study, except where noted, are the original issue par amounts that remain outstanding and do not include adjustments for premiums, discounts, accretions or deferred losses. This figure includes the Sales Tax Asset Receivable Corporation (STARC), which is a government-created not-for-profit corporation and not a public authority.

example, bonds issued by the STARC used to retire existing deficit financing debt issued by New York City's Municipal Assistance Corporation. This allowed the State to provide budget relief to New York City by transferring the obligation to the State, as well as the TSFC debt described above.[7] None of this debt was approved by voters; the associated debt service was $1.4 billion in SFY 2016-17. While the State has not added debt for non-capital purposes in more than a decade, the ongoing cost of this past borrowing stands as a warning against such use of debt in the future.

The Debt Reform Act specifically restricted the use of State-Supported debt to capital purposes. However, it did not limit State-Supported debt to governmental purposes and the State has, in many instances, issued debt to support assets for non-governmental entities (including both non-profit organizations and for-profit private corporations). In addition, at least $7.6 billion in State-Funded debt has been issued for operating purposes since the Act was passed. A portion of this non-capital debt was issued in the aftermath of the September 11, 2001 attacks in conjunction with a broader recovery plan. The State has also used long-term borrowing rather than current resources for operating purposes outside of emergency conditions. As a matter of fiscal policy, debt should be limited to capital purposes. Despite recent declines, the levels of remaining debt issued for non-capital purposes and related debt service are reminders that borrowing for non-capital purposes results in shifting current costs far into the future.

The composition of State-Funded debt outstanding by purpose has changed since SFY 2007-08. Debt associated with education and transportation represented 49.7 percent of the total in SFY 2007-08, and increased to 64.2 percent of the total in SFY 2016-17.[8] Since SFY 2007-08, the largest share of growth in State-Funded debt has been associated with education ($12.5 billion or 98.1 percent). The increase was primarily attributable to TFA bonds ($6.6 billion). Debt associated with economic development and housing increased by $2 billion or 56 percent over the last 10 years.

Debt associated with transportation increased by $822 million or 6.1 percent over the last 10 years.[9] Despite the increase, transportation's share of total debt declined from 25.5 percent in SFY 2007-08 to 23.1 percent in SFY 2017-18.

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[7] In addition to those two examples, the Office of the State Comptroller has identified debt from the Urban Development Corporation to purchase Attica Correctional Facility, the New York Local Government Assistance Corporation (LGAC), and MBBA for prior year school aid claims as borrowing for non-capital purposes.

[8] Educational purposes include debt issued for SUNY and CUNY as well as bonds for primary education and TFA BARBs.

[9] Transportation as defined by the Division of the Budget includes the Department of Transportation, Metropolitan Transportation Authority and Department of Motor Vehicles. Note that just under $2 billion is planned for the Thruway Authority and an additional $200 million for the Department of Transportation through SFY 2021-22 from monetary settlement resources received since April 1, 2014. As of March 31, 2017, $921.5 million was disbursed to the Thruway Authority and $85.4 million to the Department of Transportation. Spending from settlement resources for transportation purposes are counted as "other" in the Capital Program and Financing Plan and are not included in this report.

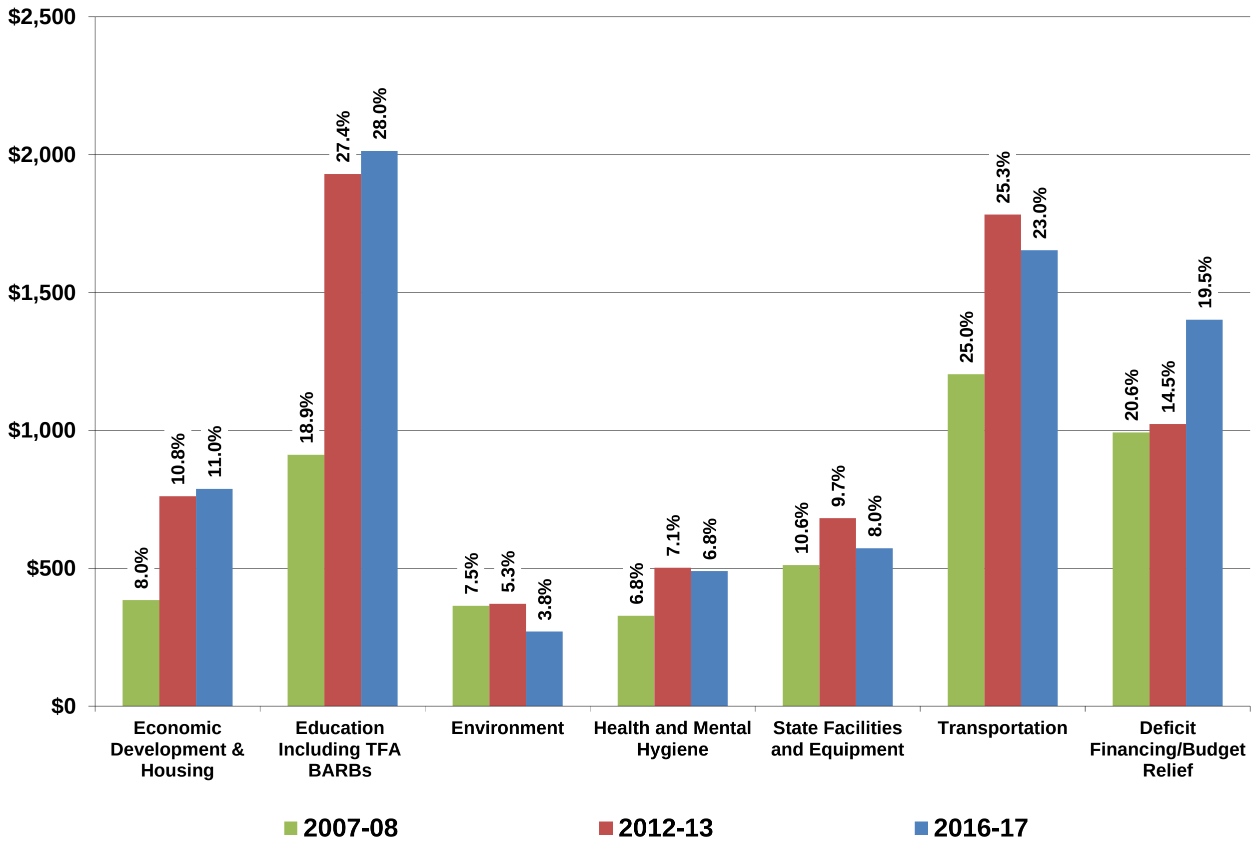
Even though it has declined more than any other category over the last 10 years, debt outstanding issued for budget relief and non-capital needs was still $4.7 billion, or 7.7 percent of the total in SFY 2016-17.[10]

With the increase in debt outstanding, annual debt service costs have increased correspondingly. State-Funded debt service increased by $2.5 billion, or 53 percent, between SFY 2007-08 and SFY 2016-17.[11] This represents average annual growth of 4.8 percent. However, this growth reflects over $25 billion in refunding and restructuring since SFY 2007-08, during which time the State took advantage of low interest rates by refinancing certain existing obligations. Figure 2 illustrates the growth in debt service by purpose as well as the percentage of total debt service each purpose represents.

Figure 2

State-Funded Debt Service by Purpose

(in millions of dollars and percentage of total)



Note: The 2016-17 figure for Deficit Financing/Budget Relief includes the release of reserves associated with payments based on the Master Settlement Agreement of 1998.

Source: New York State Office of the State Comptroller

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[10] Bonds issued by LGAC, and those issued by the Urban Development Corporation for both the sale of Attica Correctional Facility and the refinancing of Empire State Plaza (retired in SFY 2010-11), were issued before the effective date of the Debt Reform Act of 2000 and are not subject to its limitations.

[11] Debt service totals from SFY 2012-13 through SFY 2016-17 include significant amounts of prepayments that would normally be due in the following year. Due to the nature of DOB's reporting of debt service in the Capital Program and Financing Plan, it is not practical to adjust for prepayments in this presentation. An additional $127 million was used for debt service from the Debt Reduction Reserve Fund in SFY 2007-08 but is not counted in growth calculations.

Accounting for 44.2 percent of total growth, debt issued for education purposes, including new BARBs issued by New York City's TFA, is the largest driver of growth in State-Funded debt service since SFY 2007-08.[12] The second largest driver, making up 18.1 percent, represents bonds issued for transportation.

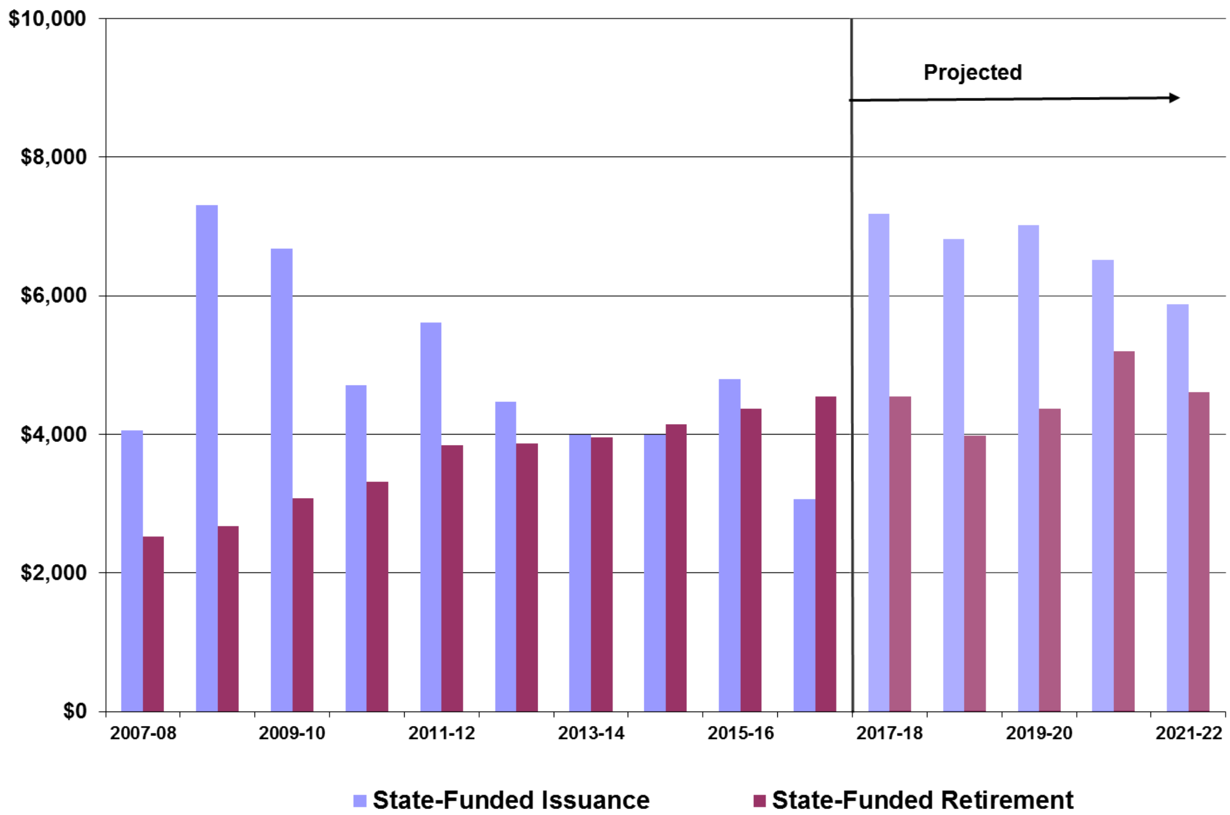
[12] These amounts do not reflect amounts paid from the Debt Reduction Reserve Fund.

II. Projected Growth in State Debt and Debt Service

DOB is required to update the Five-Year Capital Program and Financing Plan annually to reflect actions in the enacted budget.[13] After State-Funded debt retirements exceeded issuances in SFY 2016-17, new issuances are expected to rise sharply in coming years while retirements increase modestly, based on figures in the Plan and assumptions for other State-Funded debt programs. In total, the State plans to issue $33.4 billion in new debt, $10.7 billion more than projected retirements over the next five years.[14] Figure 3 indicates how projections for new State-Funded bond issuances through SFY 2021-22 compare to projected debt retirements.

Figure 3

Actual and Projected State-Funded Debt Issuance and Retirements
SFY 2007-08 through SFY 2021-22
(in millions of dollars)

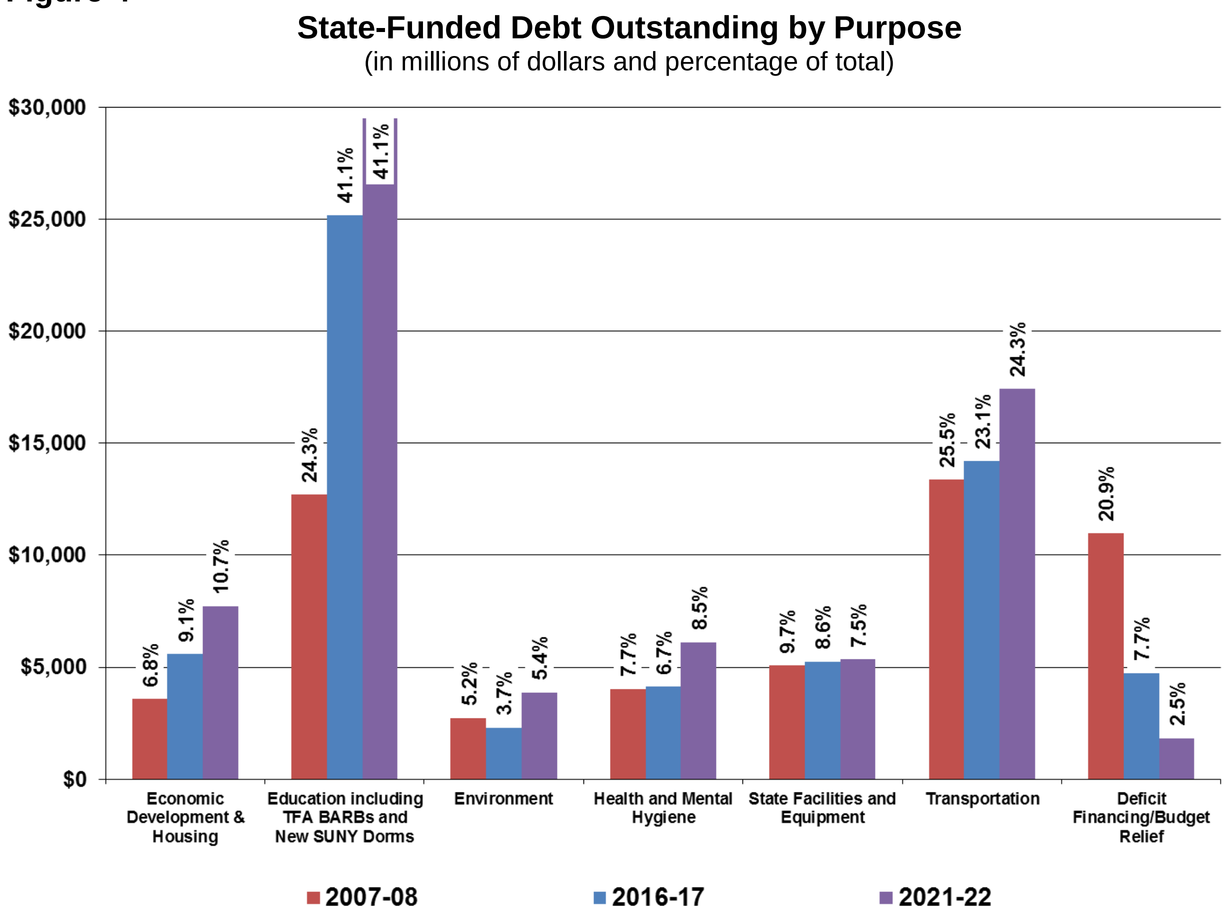


Sources: New York State Office of the State Comptroller, New York State Division of the Budget, New York City Office of Management and Budget and Dormitory Authority of the State of New York

[13] Section 23 of the State Finance Law.
[14] Issuance estimates for SUNY dormitories and TFA BARBs are not available beyond SFY 2020-21, which may result in understatement of projected State-Funded debt for the following year.

As a result of the projected debt issuances and retirements, the State is estimated to end SFY 2021-22 with $71.8 billion in outstanding State-Funded debt – representing an increase of 17 percent from the $61.4 billion outstanding at the end of SFY 2016-17. Figure 4 shows that the largest increase in projected debt outstanding is attributable to transportation, with 31 percent of the expected growth. Education-related debt is expected to increase $4.3 billion, representing 41.4 percent of the growth. Debt outstanding from BARBs is projected to decline to just over $8 billion in SFY 2021-22, although projected issuances of new debt are only available through SFY 2020-21. The remaining growth in the education category is primarily attributable to higher education.

Figure 4



Sources: New York State Office of the State Comptroller, New York State Division of the Budget, New York City Office of Management and Budget and Dormitory Authority of the State of New York

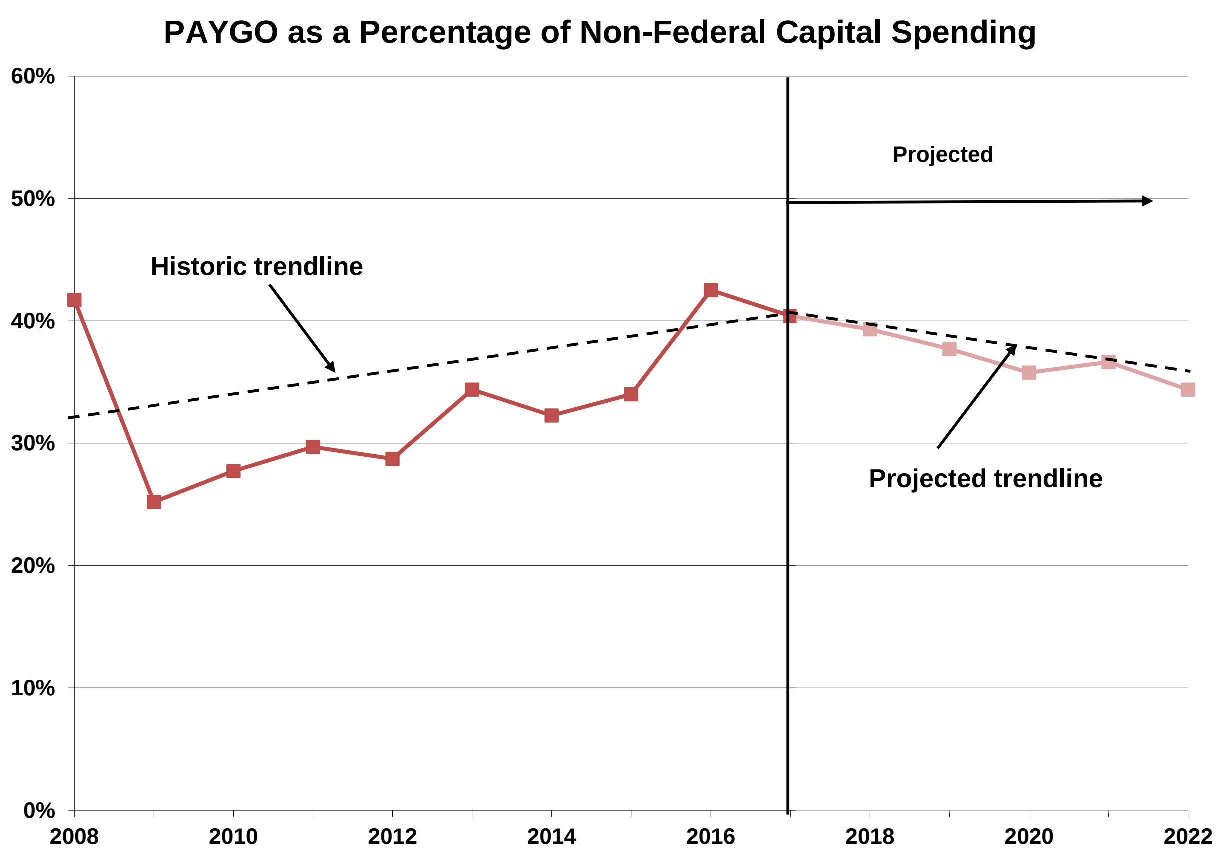
Annual State-Funded debt service is projected to exceed $8.2 billion by the end of SFY 2021-22. This represents average annual growth in State-Funded debt service of 2.8 percent from SFY 2017-18. In SFY 2007-08, State-Funded debt service was 4.2 percent of All Funds receipts. In SFY 2021-22, State-Funded debt service is expected to equal 4.7 percent of All Funds receipts.

Current State Resources – Pay-As-You-Go

The Capital Plan is financed by four sources of funds: (1) current cash resources of the State (PAYGO); (2) federal funds; (3) General Obligation bonds; and (4) public authority bonds issued on behalf of the State. The use of PAYGO to support the Capital Plan is critical to achieving a balanced approach in meeting the State's capital needs.

Using current revenues for capital projects reduces the need to issue debt, thus saving on debt service costs, and is viewed positively by credit rating agencies. Increasing the use of PAYGO conserves debt capacity and reduces the burden passed to future generations. Furthermore, debt capacity that results from increased use of PAYGO creates a buffer for future years when spending capacity may be limited due to a downturn in the economy or other circumstances.

Figure 5



Sources: New York State Office of the State Comptroller, New York State Division of the Budget

PAYGO's share of non-federal capital spending rose from an average of 30.6 percent in the first half of the past decade to 36.7 percent in the most recent five years. The Capital Plan projects such resources will average 36.8 percent over the next five years, falling to

34.4 percent in SFY 2021-22. If monetary settlement resources are adjusted out, PAYGO spending declines to an average of 30 percent of non-federal capital spending.

At times in the past, the State funded a significantly larger share of its capital plan with PAYGO spending. For example, during the second half of the 1980s the State used PAYGO financing for an average of 55 percent of the non-federally funded Capital Plan. If historical levels of PAYGO financing had been maintained, the State's debt outstanding and debt service levels would be lower today. Such increased PAYGO financing would have required reductions in spending for other purposes and/or increased revenue.

Monetary Settlements and Debt Management

Between April 2014 and March 31, 2017, the State received $9.9 billion in largely unrestricted and non-recurring funding from monetary settlements with 24 different entities.[15] While some of these funds have been used for operating purposes, the Capital Program and Financing Plan reflects the use of a portion of these funds in two ways. Settlement funds are used to directly support spending which might otherwise have been funded with bonding or not at all. This spending occurs primarily from the Dedicated Infrastructure Investment Fund (DIIF), a capital projects fund. In other instances, settlement funds may be used to preserve debt capacity. For example, settlement resources in the DIIF are planned to begin funding the $1 billion Jacob Javits Center renovation and expansion in SFY 2017-18. Such spending is expected to be repaid with proceeds from bonds issued in SFY 2019-20 and SFY 2020-21.[16]

Although settlement proceeds can be used to fund capital projects, preserve debt capacity and provide a temporary source of funding to improve the State's cash position, such use also creates risks that must be managed in future years. Given the temporary and unpredictable nature of settlement revenues and the statutory constraints on debt capacity, capital investments may not be sustainable at currently projected levels in the future. In addition, to the extent settlement funds are being used to provide temporary cash flow, balances must be managed closely and bond sales must occur in a timely fashion to meet Capital Plan projections and ensure projects are not delayed.

Debt Limitations, Projected Revenues and Economic Indicators

Revenue projections play a key role in debt management in New York. Under the Debt Reform Act of 2000, debt service for State-Supported bonds issued after April 1, 2000 is limited to 5 percent of All Governmental Funds receipts, recognizing the long-term commitment associated with debt. Once borrowing has been completed, debt service spending is not easily changed, unlike other categories of spending that can be reduced

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[15] More information on monetary settlements is available from the Office of the State Comptroller's *Report on the State Fiscal Year 2017-18 Enacted Budget Financial Plan and Capital Program and Financing Plan,* July 2017.

[16] Since the release of the SFY 2018 Enacted Capital Program and Financing Plan and the SFY 2018 Enacted Budget Financial Plan, the State has received additional monetary settlements of $350 million from BNP Paribas and $225 million from Habib Bank. The Division of the Budget has indicated that $39 million from this additional funding will be used to finance the State's court ordered obligation to CSX. The remaining $536 million has not yet been allocated.

administratively or legislatively. When debt service is increasing, other areas of desired spending may need to be limited or new revenues may need to be generated if existing revenues are not sufficient to meet all spending needs.

According to the SFY 2017-18 Mid-Year Update to the Enacted Budget Financial Plan, All Funds revenue is projected at $175.7 billion in SFY 2021-22, representing an increase of nearly $19.3 billion or 12.4 percent from SFY 2016-17, as illustrated in Figure 6. Average annual growth is projected at 2 percent for the next five years; actual growth has averaged 3.4 percent since 2007-08. Past revenue growth reflects factors including temporary resources such as billions of dollars in monetary settlements, federal stimulus funding, and various tax changes, among others.

Figure 6

Actual and Projected Revenues, Debt, Debt Service and Personal Income for New York State

(in millions of dollars)

Fiscal Year Ending		All Funds Receipts (1)	State-Funded Debt Outstanding	State-Funded Debt Service	Personal Income Tax Collections	DOB Personal Income	IHS Markit Personal Income
2008		115,423	52,445	4,825	36,564	908,163	908,163
2009		119,235	57,014	5,363	36,840	927,888	927,888
2010		126,748	60,522	5,919	34,571	905,801	905,801
2011		133,321	61,700	6,575	36,209	934,270	934,270
2012		132,745	63,328	6,835	38,767	991,352	991,352
2013		133,174	63,516	7,053	40,227	1,053,661	1,053,661
2014		137,713	63,575	7,523	42,961	1,072,125	1,072,125
2015		149,109	63,187	7,345	43,710	1,119,434	1,119,434
2016		153,265	63,012	6,865	47,055	1,161,414	1,161,414
2017		156,372	61,363	7,192	47,565	1,176,080	1,181,652
2018	(2)	162,172	63,723	6,934	48,632	1,225,515	1,214,260
2019	(2)	165,895	66,722	7,311	51,123	1,271,353	1,256,069
2020	(2)	169,560	69,430	8,056	53,168	1,327,889	1,309,937
2021	(2)	171,904	70,667	8,359	54,716	1,386,795	1,364,908
2022	(2)(3)	175,693	71,801	8,237	55,841	1,447,006	1,424,066
Average Annual Growth SFY 2007-08 through SFY 2016-17		**3.4%**	**1.8%**	**4.5%**	**3.0%**	**2.9%**	**3.0%**
Average Annual Growth SFY 2017-18 through SFY 2021-22		**2.0%**	**3.0%**	**4.4%**	**3.5%**	**4.2%**	**4.1%**

(1) Includes federal stimulus funds.
(2) Receipts, Debt Outstanding, Debt Service and Personal Income Tax projected from 2018. Other Indicators projected from 2017.
(3) PIT projection for SFY 2021-22 derived from PIT Revenue Bond Coverage Ratios reported in the SFY 2017-18 Capital Plan on page 59.
Sources: New York State Office of the State Comptroller, New York State Division of the Budget, IHS Markit

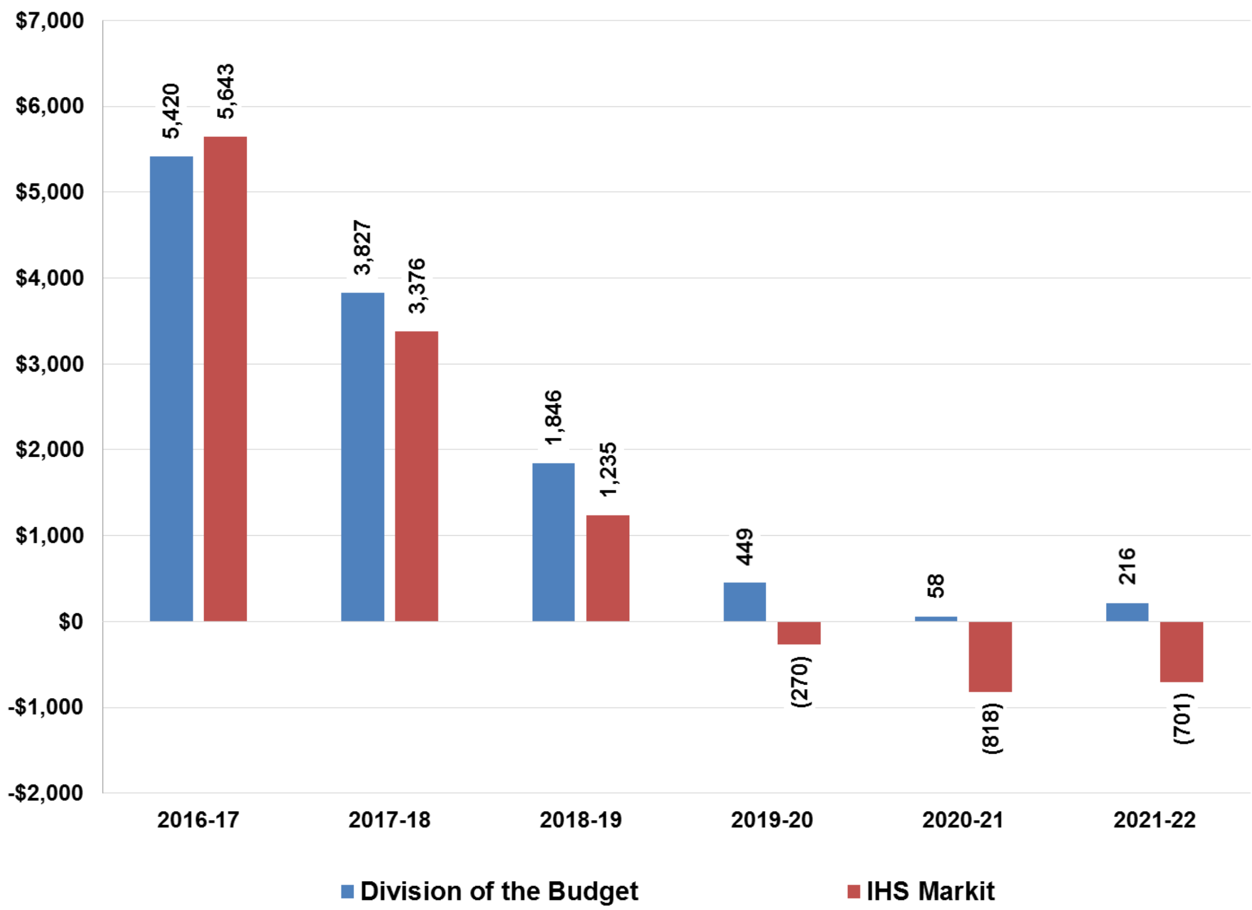
In addition to limiting State-Supported debt service, the Debt Reform Act limits State-Supported debt outstanding issued after April 1, 2000 to 4 percent of New York State personal income (which measures the total income received by all persons from all sources within New York State). Over the last ten years, personal income projections and actual results have fluctuated significantly.

Annually as of October 31, DOB determines whether the amount of State-Supported debt outstanding at the end of the preceding fiscal year is below the cap established in the Debt Reform Act. In each Financial Plan update throughout the year, DOB provides projections for personal income and reports on how projections affect capacity under the cap based on planned debt issuances and retirements through the Capital Plan period.

Figure 7 presents DOB's projection of statutory debt capacity from the Mid-Year Update to the Financial Plan for Fiscal Year 2018, as well as estimates based on IHS Markit's projections of personal income. In each case, the level of projected debt subject to the cap is the same. The projections of personal income from IHS Markit are lower than those from DOB, especially in the later years.

Figure 7

Statutory Debt Capacity
Comparison of Projections Using Different Personal Income Forecasts
(in millions of dollars)



As shown in Figure 7, if personal income growth is lower than projected, the State's remaining debt capacity would shrink. Acknowledging this risk, the FY 2018 Mid-Year Update states "Capital spending priorities and debt financing practices may be adjusted from time to time to preserve available debt capacity and stay within the statutory limits, as events warrant."[17]

[17] FY 2018 Mid-Year Update, November 2017, page 50.

III. Managing Debt Under the Debt Reform Act of 2000

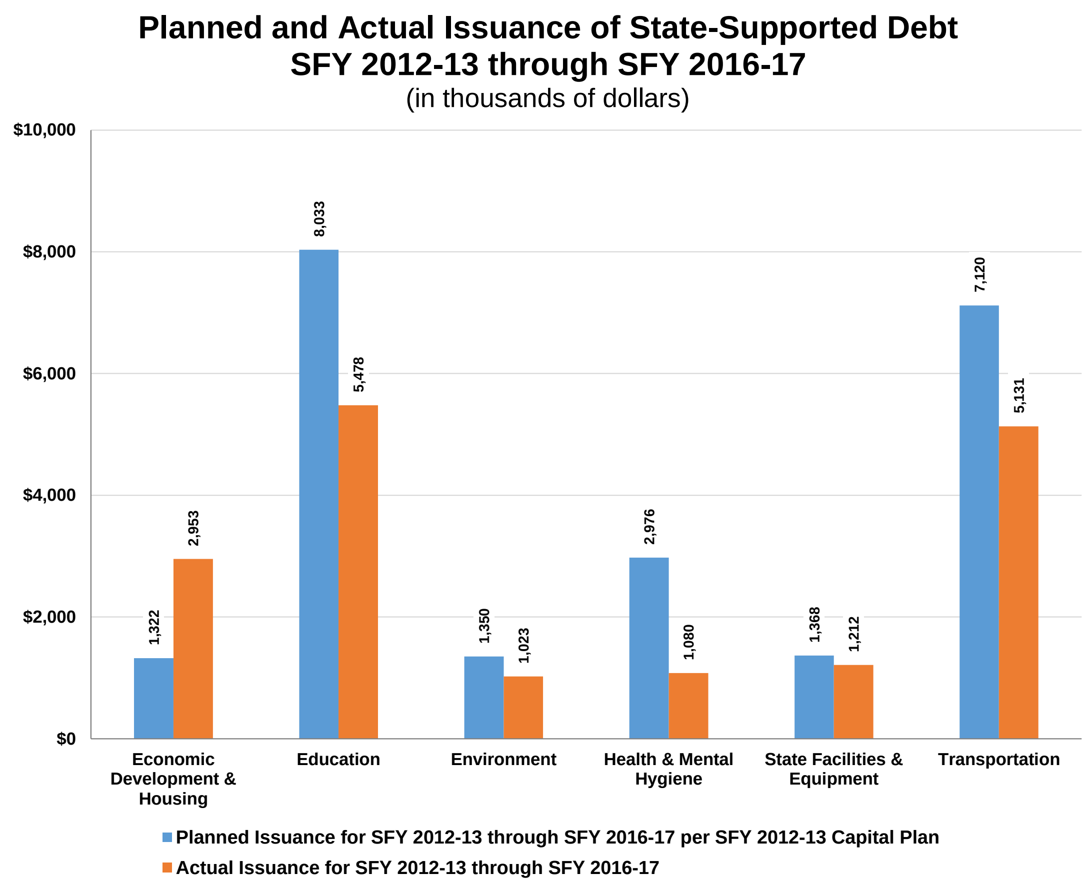
Debt Outstanding

State-Supported debt has declined every year since SFY 2011-12, with an average annual decline of 1.2 percent.[18] Debt outstanding at the end of SFY 2016-17 was $3.2 billion lower than at the end of SFY 2010-11. This decrease was driven by lower capital spending, changing the classification of debt issued for SUNY dormitories, and timing. State-Funded debt showed an average annual decline of 0.6 percent.

Debt Issuance

Figure 8 compares planned State-Supported debt issuance from the SFY 2012-13 Enacted Budget Capital Program and Financing Plan to actual issuance by program.

Figure 8



Source: Division of the Budget

[18]For this section, State-Supported debt trends are highlighted because of the caps in the Debt Reform Act of 2000. Comparisons to State-Funded debt will be made where appropriate. Specific figures are available at www.osc.state.ny.us/finance/cbr_annual.htm, Schedule 20a.

Borrowing in every program area was lower than originally planned, except economic development and housing, where the actual debt incurred of $3 billion was almost twice what was originally projected.

New issuances of State-Supported debt have generally declined in recent years (issuance increased slightly in SFY 2013-14), while capital spending has generally increased over the last five years, due to hard dollar capital funding sources.[19]

Debt Caps and the Debt Reform Act of 2000

As discussed earlier in this report, the Debt Reform Act of 2000 defined State-Supported debt and limited debt outstanding to 4 percent of State personal income and debt service to 5 percent of All Funds receipts. Available debt service capacity is significantly higher than available debt outstanding capacity. As with levels of debt issuance and retirement, projections of debt capacity can vary significantly over time.

According to the SFY 2017-18 Mid-Year Update, $5.4 billion in capacity for outstanding debt was available as of March 31, 2017, based on personal income of approximately $1.17 trillion.[20] In April 2012, DOB projected that almost $2.6 billion in debt capacity would be available by the end of SFY 2016-17, based on expectations at that time for new bond issuances, retirements and personal income. Actual available capacity as of March 31, 2017 was approximately $2.8 billion higher than initially projected in 2012, even though personal income was actually $67.6 billion lower than initially projected. The additional capacity came primarily from significantly lower debt issuance ($5.3 billion) as well as the transition of SUNY dormitory debt outside of State-Supported debt.

[19] In SFY 2016-17, capital spending by financing source includes $1.3 billion in the authority bond area that is initially funded with monetary settlement dollars from the General Fund. The Division of the Budget expects this will be reimbursed with bond proceeds over SFY 2017-18 ($800 million) and SFY 2018-19 ($500 million).

[20] This amount represents the difference between outstanding State-Supported debt issued after April 1, 2000 and four percent of personal income as reported by the Bureau of Economic Analysis. Outyear projections incorporate new issuances and retirements (as well as refunding to other programs) as well as the Division of the Budget's projections for personal income.

IV. Change in Debt Ratios and Comparisons to Other States

To compare New York with similar states and the nation as a whole, as well as to monitor and understand the State's debt burden, it is useful to review debt ratios and analyze changes over time. In this section, the following ratios are used to assess the burden of State-Funded debt: (1) debt outstanding as a percentage of personal income, as reported by the U.S. Bureau of Economic Analysis (BEA); (2) debt outstanding per capita; (3) debt service as a percentage of All Funds revenues; and (4) debt outstanding as a percentage of State gross domestic product (GDP), also reported by the BEA.

The debt-to-personal income ratio indicates the burden a state's debt places on the income tax base. Outside of federal funds, New York's personal income tax is the State's largest revenue source, representing approximately 30.4 percent of All Funds receipts and 50.2 percent of State Operating Funds receipts in SFY 2016-17.

The debt per capita measure allows the issuer to assess the debt burden for the average resident. Comparing debt outstanding to GDP is similar to comparing debt to personal income, except that GDP is a measure of all economic output within a state.

The level of debt service to All Funds revenue is one indicator of the amount of flexibility in a state's budget. Generally, debt service increases with debt levels, and is a fixed cost.

To correspond with the limits established in the Debt Reform Act and for purposes of comparison, the ratio of State-Funded debt service as a percentage of All Funds receipts is used to measure debt burden. While All Funds receipts is a reasonable basis of comparison, it includes federal funding as well as funding for capital spending. Portions of both capital funds and federal receipts are earmarked for specific purposes and cannot be used for debt service needs. If the ratio of State-Funded debt service to State Operating Funds receipts were used, New York's debt burden would appear higher.

New York's Debt Burden Compared to Other States

New York State's credit ratings are in the upper mid-range of the 50 states, as determined by all three major national ratings agencies (Standard & Poor's, Moody's and Fitch Ratings). Appendix A shows ratings for New York and other states by all three agencies.

Figure 9 provides a comparison to national and peer group medians and places New York's debt burden in context. The peer group comprises the 10 other states with the largest populations—California, Texas, Florida, Illinois, Pennsylvania, Ohio, Michigan, Georgia, North Carolina and New Jersey. In May 2017, Moody's published the *Medians – Total State Debt Remains Essentially Flat in 2017*, presenting the data upon which much of the following analysis related to state debt ratios is based. New York's State-Funded debt to personal income ratio, the State-Funded debt per capita ratio, the State-Funded debt service to All Funds revenues ratio and the State-Funded debt as a percentage of state GDP are all significantly above peer and national medians.[21] More specifically:

- New York's debt as a percentage of personal income, at 5.1 percent, was second only to New Jersey within its peer group and more than two times the national median of 2.5 percent.
- New York's debt per capita of $3,116 was again second to New Jersey within its peer group and three times the national median of $1,025.
- New York's debt as a percentage of state GDP is nearly twice the median of its peers and the national median.
- New York follows Illinois with the second highest debt service as a percentage of All Funds receipts in the peer group.

Figure 9

Peer Group Comparisons

(highest values italicized)

	2016 Debt ($000)	2016 Debt Per Capita ($)	2016 Debt as % of 2015 Personal Income	2016 Debt as % of 2015 State Gross Domestic Product	2016 Debt Service as % of Operating Receipts
California	***86,998,000***	2,217	4.1%	3.5%	4.3%
Texas	10,681,942	383	0.8%	0.7%	1.4%
Florida	19,814,300	961	2.2%	2.2%	2.6%
Pennsylvania	17,087,111	1,335	2.7%	2.4%	2.0%
Illinois	32,147,550	2,511	5.0%	4.2%	***5.7%***
Ohio	12,621,591	1,087	2.5%	2.1%	3.5%
Georgia	10,228,974	992	2.5%	2.0%	3.6%
North Carolina	6,681,880	659	1.6%	1.3%	2.0%
Michigan	6,839,600	689	1.6%	1.5%	1.5%
New Jersey	39,264,548	***4,390***	***7.3%***	***7.0%***	3.9%
Peer Median	**14,854,351**	**1,039**	**2.5%**	**2.3%**	**3.1%**
National Median	**4,701,762**	**1,025**	**2.5%**	**2.2%**	**4.3%**
New York - 2016-17	**61,363,434**	**3,116**	**5.1%**	**4.1%**	**4.6%**
NYS Ratio to Peer Median March 31, 2017	4.13	3.00	2.06	1.83	1.49
NYS Ratio to National Median March 31, 2017	13.05	3.04	2.05	1.87	1.06

* Debt Service and All Funds Revenue are from each state's Statement of Revenues, Expenditures, and Changes in Fund Balances contained within the state's 2016 Comprehensive Annual Financial Reports. Consequently, reported debt service does not include payments reported in proprietary funds that are supported by proprietary fund resources. New York's debt service includes SUNY and CUNY obligations from proprietary funds that are not self-supporting.

Sources:
Moody's Investors Service, *Medians – Total State Debt Remains Essentially Flat in 2017* , May 2017
U.S. Census Bureau
U.S. Bureau of Economic Analysis
IHS Markit, Inc.
New York State Division of the Budget SFY 2017-18 Enacted Budget Five Year Capital Program and Financing Plan and updates
Annual Comprehensive Financial Reports and/or Basic Financial Statements for all states.

[21] Moody's Investors Service also uses debt service as a percentage of operating fund revenues and pledged revenues to compare states. This report compares debt service with all governmental funds receipts as reported in each state's latest Comprehensive Annual Financial Report instead, because the Debt Reform Act limits debt service for State-Supported debt to 5 percent of All Funds receipts.

V. Projected Effects of Enacted Capital Plan on State Debt Ratios

The planned issuance of $33.4 billion in new debt combined with projected retirements of $22.7 billion over the next five years equates to an increase in State-Funded debt outstanding of approximately $10.4 billion. Figure 10 illustrates projected annual changes to the four debt ratios discussed in the preceding section of this report. State-Funded debt and debt service figures are based on the SFY 2017-18 Mid-Year Update as well as figures from New York City for TFA BARBs and from DASNY for the SUNY Dormitory Facilities Revenue Bond Program (both have forecasted issuances through 2021 only). All Funds revenue projections are from the SFY 2017-18 Mid-Year Update. Economic projections are from IHS Markit.

State-Funded debt per capita is projected to rise nearly 16.5 percent over the period. Ratios of such debt to All Funds revenues, personal income and State GDP are expected to remain relatively stable over the next five years. However, these indicators are highly affected by the economy and thus could change in unexpected ways.

Figure 10

Effect of Projected New Debt Issuances on Debt Ratios in New York

	SFY 2017	SFY 2018	SFY 2019	SFY 2020	SFY 2021	SFY 2022
Personal Income (IHS prior year - millions)	$1,181,652	$1,214,260	$1,256,069	$1,309,937	$1,364,908	$1,424,066
State-Funded Debt to Personal Income	**5.2%**	**5.2%**	**5.3%**	**5.3%**	**5.2%**	**5.0%**
Population (thousands)	19,745	19,746	19,749	19,757	19,767	19,779
State-Funded Debt Per Capita	**$3,116**	**$3,227**	**$3,378**	**$3,514**	**$3,575**	**$3,630**
State Gross Domestic Product (IHS Markit prior year - millions)	$1,487,998	$1,496,790	$1,525,273	$1,553,512	$1,579,009	$1,602,647
State-Funded Debt to Gross State Product	**4.1%**	**4.3%**	**4.4%**	**4.5%**	**4.5%**	**4.5%**
All Funds Revenues (millions)	$156,372	$162,172	$165,895	$169,560	$171,904	$175,693
State-Funded Debt Service to All Funds Revenues	**4.6%**	**4.3%**	**4.4%**	**4.8%**	**4.9%**	**4.7%**

Sources: Office of the State Comptroller. Division of the Budget, New York City Office of Management and Budget, IHS Markit

VI. Incomplete Reform: Debt Reform Act of 2000

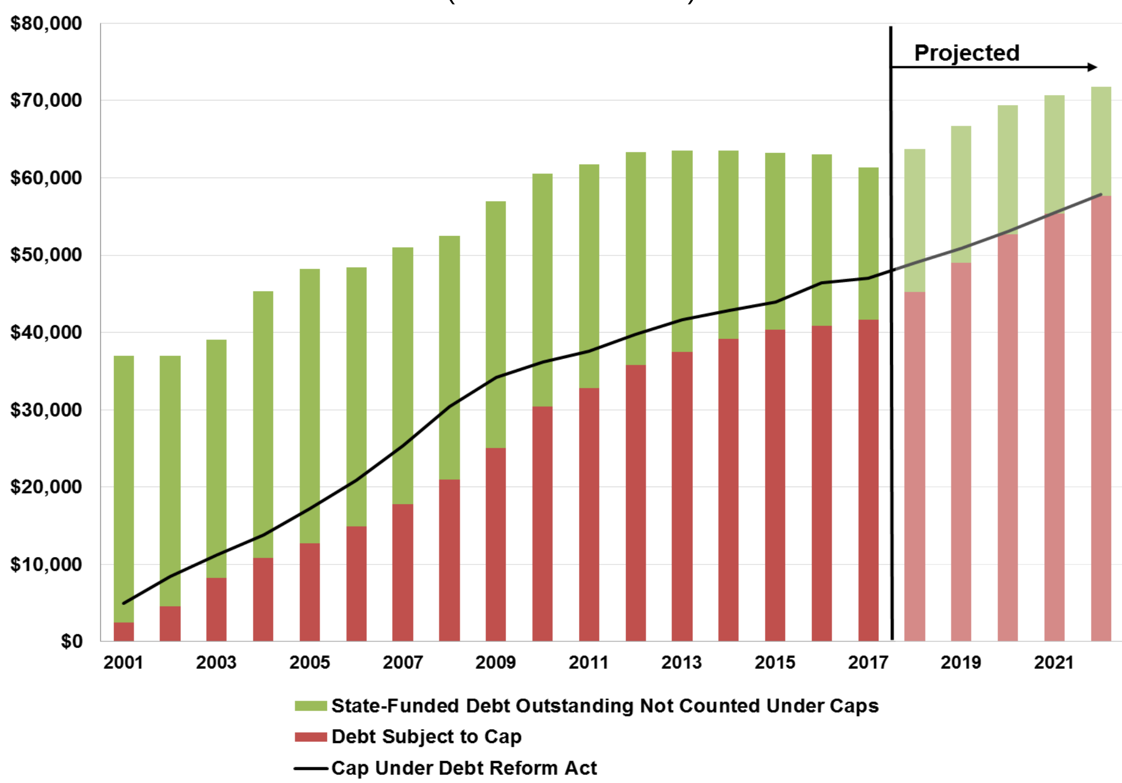
The Debt Reform Act of 2000 established a definition for State-Supported debt and imposed statutory limitations on debt, which were phased in beginning April 1, 2000. Unfortunately, the Act did little to promote fiscal discipline or ensure that future debt would be affordable. The legislation:

- Capped the level of debt outstanding – for debt issued after April 1, 2000 – at 4 percent of Personal Income. The cap became fully effective in SFY 2010-11.
- Capped debt service on new debt issued after April 1, 2000 at 5 percent of All Funds receipts. This cap was fully effective as of SFY 2013-14.
- Provided that State-Supported debt issued after April 1, 2000 can only be used for capital works or purposes, and cannot have a maturity longer than 30 years.

According to DOB, available capacity for State-supported debt outstanding is projected to decline to $58 million in SFY 2020-21, before increasing to $216 million by plan end.

Figure 11

Debt Outstanding Subject To and Excluded From the Debt Cap
(in millions of dollars)



Sources: New York State Office of the State Comptroller, New York State Division of the Budget, New York City Office of Management and Budget, Dormitory Authority of the State of New York
Note: Debt Subject to Cap and Cap Under Debt Reform Act are based on Division of the Budget estimates. State-Supported debt outstanding issued before April 1, 2000 is included in State-Funded Not Counted Under Caps.

Available debt capacity projections are based on planned issuance and retirement schedules as well as personal income projections, all as updated in the SFY 2017-18 Mid-Year Update. DOB is actively managing debt capacity through a number of actions, including the timing of debt issuance. Other such actions include steps to move debt outside the Debt Reform Act limits, such as continued refunding of debt associated with the old State-Supported SUNY Dormitory Facilities Lease Revenue program into the new State-Funded SUNY Dormitory Facility Revenue Bond Program.

Due to the more narrowly constructed definition of State-Supported debt in the Act, the borrowing counted under these statutory State-Supported debt caps does not include all borrowing funded with State resources. There are two broad categories of debt excluded from the caps. The Debt Reform Act excluded from its statutory caps all debt that was outstanding at the time of enactment. As of March 31, 2017, the debt still remaining in this category totaled just under $8 billion. Also, nearly $18 billion in new debt has been authorized to be issued since 2000 that was not subject to the caps, but which must be paid from State resources, and two other debt programs have been moved into the State-Funded category.[22] That new debt now totals $11.7 billion, for a total of $19.7 billion in debt not counted toward the cap.

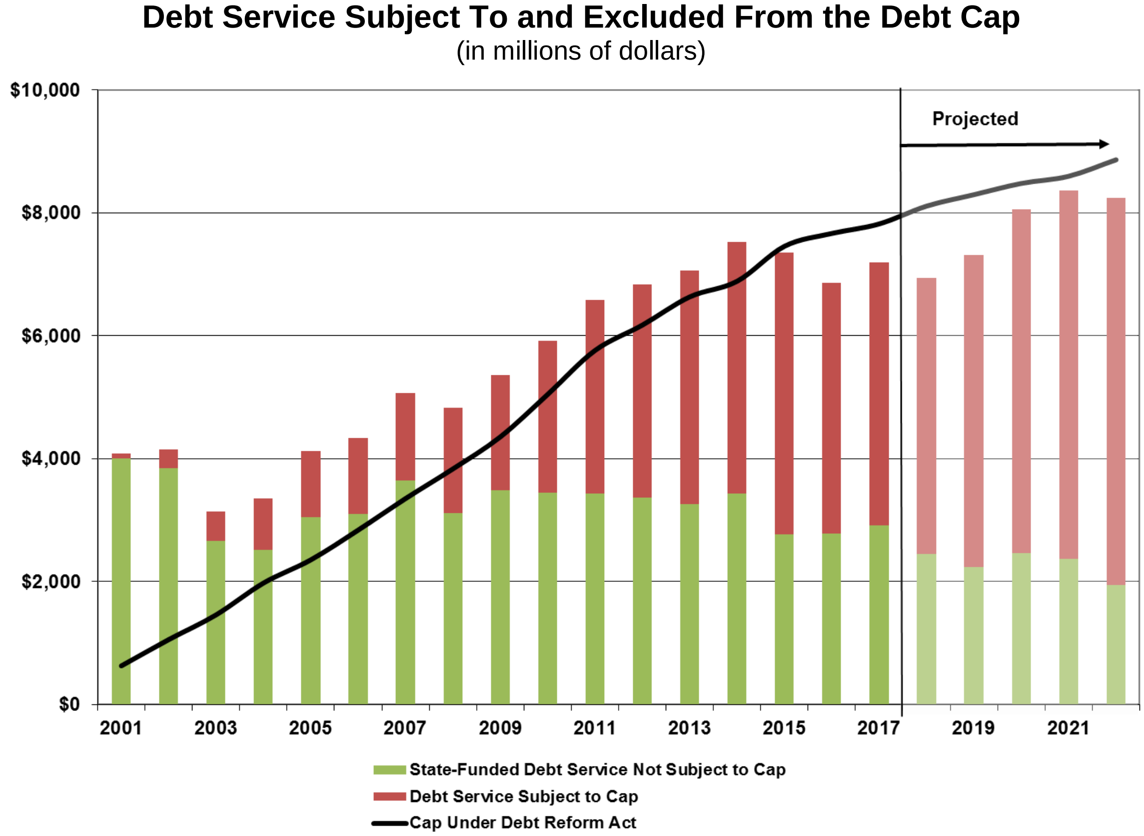
Certain of these new debt authorizations also circumvented the provision of the Act that limits the issuance of debt to capital purposes, including debt issued by the TSFC, the STARC and the MBBA. As a result, approximately $7.6 billion has been issued for non-capital purposes since 2000. As of March 31, 2017, 7.7 percent of the State's debt burden is attributable to non-capital purposes and budget relief.

To get a comprehensive picture of the State's obligations, it is necessary to consider all State-Funded debt. For example, the debt outstanding subject to the statutory debt cap in SFY 2016-17 totaled $41.6 billion; however, actual State-Funded debt totaled $61.4 billion, or $19.7 billion higher than the amount subject to the statutory cap and $14.3 billion higher than the cap itself (as there was approximately $5.4 billion in available debt capacity under the cap at that time). Approximately 32 percent of all State-Funded debt and 40.5 percent of associated debt service is not recognized under the statutory debt caps.

Figure 12 illustrates that the State has significant statutory capacity under the cap on State-Supported debt service. However, if all State-Funded debt were subject to this cap, the State would have exceeded the debt service cap since inception, just as it would have with the cap on debt outstanding. The State's debt service obligations are a concern as they are projected to require a growing share of the State's limited resources in coming years.

[22] This includes debt outstanding associated with the Secured Hospital Program for which the State has been called on to make payments, as well as debt associated with SUNY dormitories.

Figure 12



Sources: New York State Office of the State Comptroller, New York State Division of the Budget, New York City Office of Management and Budget

Note: Debt Service Subject to Cap and Cap Under Debt Reform Act are based on Division of the Budget estimates for SFYs 2017-22. See page 47 of the SFY 2017-18 Mid-Year Update to the Enacted Budget Financial Plan. State-Supported debt service on bonds issued before April 1, 2000 and not subject to the cap on debt service is included in State-Funded Debt Service Not Subject to Cap.

The Debt Reform Act's limitation of new debt issuances to capital purposes applies only to State-Supported debt. Repayment of existing obligations and the lack of issuances for non-capital purposes in more than ten years has resulted in a decline in non-capital debt outstanding from 20.9 percent of State-Supported debt in SFY 2007-08 to 7.7 percent in SFY 2016-17.[23]

[23] When the Debt Reform Act was enacted, the State had existing non-capital debt from the New York Local Government Assistance Corporation (LGAC), as well as debt issued by the Urban Development Corporation for both the sale of the Attica prison facility and the refinancing of the Empire State Plaza (retired in SFY 2010-11). Since the enactment of the Debt Reform Act, the State has had non-capital debt issued by the Tobacco Settlement Financing Corporation (TSFC – retired in SFY 2017-18), Sales Tax Asset Receivable Corporation (STARC) and the Municipal Bond Bank Agency (MBBA). A large portion of this non-capital debt was issued in the aftermath of the September 11, 2001 attacks in conjunction with a broader recovery plan.

VII. Unfinished Business: Advancing Debt Reform

The Comptroller's Strategy for Fiscal Reform includes statutory and constitutional provisions that would restore control to the voters for approving virtually all debt, eliminate backdoor borrowing, ensure debt remains within affordable limits by establishing a new cap that includes *all* debt funded entirely by State resources, and create an effective, transparent long-term capital planning process. The reforms would:

- **Impose a Cap on all State-Funded Debt.** Amend the State Constitution to limit all State-Funded debt to 5.0 percent of personal income, starting in SFY 2027-28 to allow appropriate time for planning purposes, and to prohibit the use of State-Funded debt for non-capital purposes. The cap and the restriction on the use of debt would help New York further rein in its debt load.

- **Ban Backdoor Borrowing.** Amend the Constitution to ban the issuance of State-Funded debt by State public authorities and other entities, to allow multiple General Obligation Bond acts to be considered by voters in the same year, and to require all State-Funded debt to be issued by the Comptroller, following voter approval. A limited amount of debt, equal to 0.5 percent of All Funds receipts, could be issued without voter approval annually, along with emergency debt to be issued only under extraordinary circumstances and within strict guidelines.

  This proposal also authorizes a new category of voter-approved revenue debt to be issued by the State Comptroller, subject to the same constitutional and statutory controls applied to General Obligation debt. These reforms would restore voter control over debt issued in New York and help the State regain control of its debt burden.

- **Create a New York State Capital Asset and Infrastructure Council.** Create a New York State Capital Asset and Infrastructure Council and require that it provide an inventory and monitor the status of all capital assets of the State and its public authorities, as well as, in its discretion, local authority and municipal corporation capital assets which receive a significant State investment.

- **Establish a Statewide Capital Needs Assessment.** Establish a Statewide Capital Needs Assessment and require a comprehensive 20 year long-term strategic plan to guide the five-year Capital Plan. An overall prioritization of the State's infrastructure needs is long overdue. Significant elements of the State's infrastructure are in need of repair and rehabilitation. These needs require a long-term and comprehensive approach to identifying asset condition across all areas, including transportation, education, environment and energy.

  This assessment and strategic plan would allow policy makers to prioritize those assets most in need of repair and most critical to the economy. This assessment would lead to a Five-Year Capital Plan adopted by the Legislature.

VIII. Conclusion

Debt plays an important role in financing the State's investment in essential public infrastructure by allowing costs to be spread over the many years that users will benefit from such investments. In recent years, historically low interest rates have added to the attraction of borrowing. If New York is to make the investments that are required for transportation, environmental, educational and other purposes, debt will be part of the overall financing strategy.

At a time when New York's needs for capital investment are increasing and statutory debt capacity is decreasing, effective management of debt and capital resources is especially important. Improving the State's financial condition for the long term will also require the State to lock in protections against inappropriate borrowing in the future. Such discipline will prove all the more important with a renewed focus on expanding and improving the State's infrastructure. The intention of this and previous Debt Impact Studies by the Office of the State Comptroller is to provide a more comprehensive picture of New York's debt burden as a basis for monitoring the State's use of borrowing and promoting consideration of needed reforms.

In light of the volatility of personal income and capital spending forecasting, the State's shrinking statutory debt capacity raises particular concern. The share of capital spending supported by current dollar, or pay-as-you-go, funding is well below the level of the 1980s. While PAYGO is projected to increase in the years ahead, history illustrates that such improvement is more easily projected than accomplished. New York's debt burden is projected to impose a rising cost on taxpayers and limits the State's financial flexibility.

New York State's credit ratings, which were upgraded by each of the three major rating agencies in 2014, are at the second-highest rating assigned by each agency. Upgrades to the highest ratings could reduce future borrowing costs. Debt service continues to consume a significant share of the State's revenue, and its projected growth could impede New York's ability to meet other spending priorities within a balanced Financial Plan. Even though the 2000 debt reform effort sought to ban the issuance of debt for non-capital purposes, at least $7.6 billion in bonds to fund operating expenses and obtain budget relief have been authorized outside of the debt limits and issued since the ban was imposed. In SFY 2016-17, the State paid $1.4 billion in debt service on these bonds.

The State should prioritize capital and infrastructure needs. Effective planning for the use of debt to make capital investments should provide a framework to ensure that the issuance of additional debt is affordable. Comprehensive reforms of the State's debt policy and capital planning practices are needed to ensure that New York can address its capital infrastructure needs over time, while keeping debt costs affordable and reducing the burden on future generations.

IX. Appendix

Bond Ratings

Standard and Poor's
June 20, 2017

AAA	***AA+***	***AA***	***AA-***	***A+***	***A-***	***BBB-***
Delaware	Alaska	Alabama	California	Connecticut	New Jersey	Illinois
Florida	Hawaii	Arizona	Kansas	Kentucky		
Georgia	Idaho	Arkansas	Louisiana			
Indiana	Minnesota	Colorado	Michigan			
Iowa	**New York**	Maine	Pennsylvania			
Maryland	North Dakota	Massachusetts	West Virginia			
Missouri	Ohio	Mississippi				
Nebraska	Oregon	Montana				
North Carolina	South Carolina	Nevada				
South Dakota	Vermont	New Hampshire				
Tennessee	Washington	New Mexico				
Texas	Wyoming	Oklahoma				
Utah		Rhode Island				
Virginia		Wisconsin				

Moody's
May 3, 2017

Aaa	***Aa1***	***Aa2***	***Aa3***	***A3***	***Baa2***
Delaware	Alabama	Kentucky	California	New Jersey	Illinois
Georgia	Arkansas	Alaska	Connecticut		
Indiana	Colorado	Arizona	Louisiana		
Iowa	Florida	Kansas	Pennsylvania		
Maryland	Hawaii	Maine			
Missouri	Idaho	Mississippi			
North Carolina	Massachusetts	Nevada			
South Carolina	Michigan	Oklahoma			
South Dakota	Minnesota	Rhode Island			
Tennessee	Montana	West Virginia			
Texas	New Hampshire	Wisconsin			
Utah	New Mexico				
Vermont	**New York**				
Virginia	North Dakota				
	Ohio				
	Oregon				
	Washington				

Fitch
July 24, 2017

AAA	***AA+***	***AA***	***AA-***	***A+***	***A***	***BBB***
Delaware	Alaska	Hawaii	California	Connecticut	New Jersey	Illinois
Florida	Alabama	Maine	Connecticut			
Georgia	Idaho	Michigan	Kentucky			
Indiana	Massachusetts	Mississippi	Louisiana			
Iowa	Montana	Oklahoma	Pennsylvania			
Maryland	Nevada	Rhode Island				
Minnesota	New Hampshire	West Virginia				
Missouri	**New York**	Wisconsin				
North Carolina	Ohio					
South Carolina	Oregon					
South Dakota	Washington					
Tennessee						
Texas						
Utah						
Vermont						
Virginia						

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