MOODY'S
INVESTORS SERVICE

CREDIT OPINION
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New Issue

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New York (State of)

New Issue - Moody's assigns Aa2 to $1B of NYC TFA, NY Building Aid Revenue Bonds; outlook stable

Summary Rating Rationale

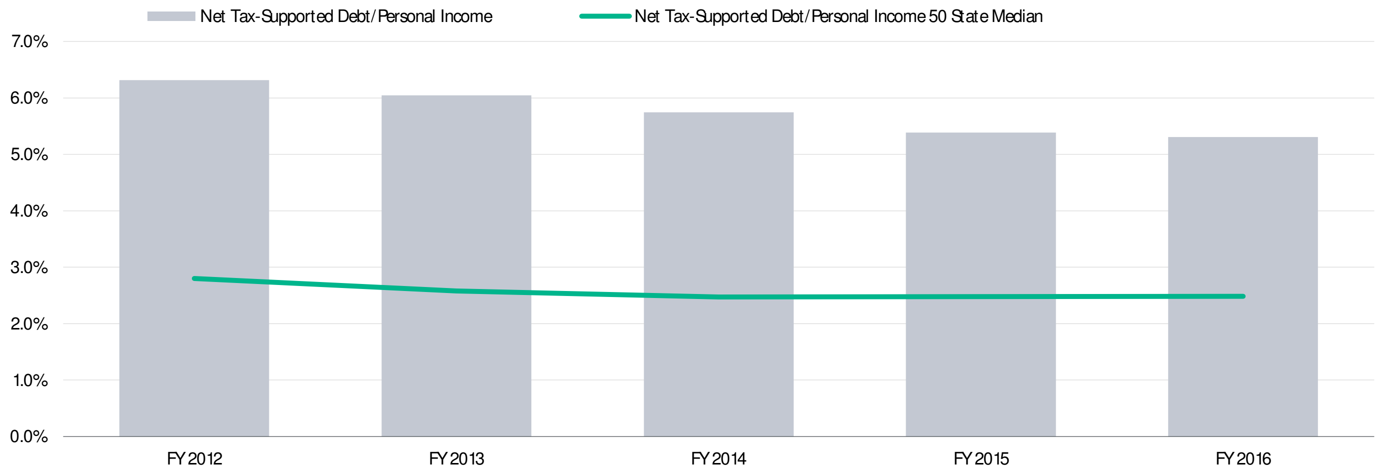
Moody's Investors Service has assigned a Aa2 rating to the New York City Transitional Finance Authority, NY's (TFA) $1 billion Building Aid Revenue Bonds, Fiscal 2018 Series S-1 ($945 million) and S-2 ($55 million). The bonds are scheduled to close July 20 after retail and institutional order periods. The outlook is stable.

The Aa2 rating on the TFA Building Aid Revenue Bonds (BARBs) is one notch below New York State's Aa1 general obligation rating and reflects the state's strong commitment to provide building aid payments to New York City (Aa2 stable). The rating also reflects the subject-to-appropriation nature of the state aid payments securing the bonds, the state's constitutional mandate to fund education aid, a statutory framework that assigns the city's state building aid to the TFA, and non-impairment provisions.

The state of New York's Aa1 general obligation rating reflects New York's fiscal governance that has produced timely budgets with moderate spending growth matched with the state's economic capacity, manageable projected budget gaps, the size and wealth of the state economy, and healthy liquidity. The rating also recognizes New York's expensive business environment, reliance on financial services and other NYC-based economic drivers, high state debt burden offset by below-average net pension liabilities, and a history of structural budget gaps requiring reliance on non-recurring resources to achieve budget balance.

Exhibit 1

New York's high state debt burden has trended down



Source: Moody's Investors Service; New York financial statements

Credit Strengths

- Long track record of state payments for New York City education aid
- State non-impairment commitment
- 1 times additional bonds test based on confirmed building aid received in every year
- Healthy coverage in early years, although coverage declines in outyears

Credit Challenges

- Confirmed building aid payments are subject to appropriation
- The city's education aid is subject to certain competing claims

Rating Outlook

The bonds carry New York State's stable outlook. The outlook reflects the state's adequate liquidity, adequate combined formal and informal reserves, and continued control of spending growth. The outlook also reflects our expectation that the state will close budget gaps largely with recurring solutions and contain its structural fiscal imbalance.

Factors that Could Lead to an Upgrade

- Stronger protections for the pledged revenues
- State rating upgrade

Factors that Could Lead to a Downgrade

- Significant decrease in debt service coverage
- Failure to appropriate education aid payments
- State rating downgrade, which could be triggered by growing structural budget gaps and reliance on non-recurring resources for recurring expenses

Key Indicators

Exhibit 2

New York	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	62,895,000	66,267,000	67,571,000	75,135,000	71,984,000
Balances as % of Operating Fund Revenues	-6.1%	-3.3%	-4.5%	-3.5%	-5.0%
Net Tax-Supported Debt (000s)	62,117,200	62,967,546	61,048,530	60,879,455	60,619,669
Net Tax-Supported Debt/Personal Income	6.3%	6.0%	5.7%	5.4%	5.3%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	2.5%
ANPL/Own-Source Govt Funds Revenue	27.0%	38.5%	44.0%	29.7%	N/A
ANPL/Own-Source Govt Funds Revenue Median	92.6%	90.8%	83.0%	84.9%	N/A
Total Non-Farm Employment Change (CY)	1.5%	1.5%	1.8%	1.8%	1.5%
Per Capita Income as a % of US (CY)	121.4%	122.5%	122.2%	122.0%	122.1%

Source: New York CAFRs; Moody's Investors Service; US Bureau of Economic Analysis

Recent Developments

Recent developments are incorporated in the Detailed Rating Considerations.

Detailed Rating Considerations

Economy

State employment growth rates lag the nation but have been fairly consistent and, since 2009, stronger than the average growth in the expansion of 2003-2008. In calendar year 2016, the state's job growth was about 1.5%, compared to 1.8% nationwide and has continued to lag only slightly in 2017 through May. The state's unemployment rate remained consistently below the US average during the recession, but has not fallen as rapidly during the economic recovery and has been about on par or higher than the US rate. In May 2017, the state's unemployment rate was 4.4% vs the national rate of 4.3%.

The performance of the financial industry is important to New York's credit profile because the state's finances are highly sensitive to income tax payments from the wealthy and to employment in the high-paid securities industry. While accounting for 7.7% of total employment in 2015, financial activities generated 20.2% of the state's total wages in that year, demonstrating the economic power of the sector. This feature of the state's revenue structure means that New York's total employment trends are not as fiscally meaningful as elsewhere. For example, the state's loss of over 57,000 financial activity jobs from peak to trough during the downturn affected the state finances disproportionately given the progressive tax structure and the high percentage of general fund receipts from income taxes (60% in fiscal 2016). Despite the state's better job performance during the recession, personal income declined more than in the US.

Jobs in the financial activities sector in New York were added at a 1.1% annual average pace from 2010 to 2016, just shy of the nation's 1.2% rate. However, the state has seen the sector stall through the first five months of 2017, while growth nationally exceeds 2% compared to the same period in 2016. The state continues to lag the nation in adding jobs in business and professional services and has lost manufacturing jobs during a period when they have grown nationally, but has a more rapidly growing information sector. The state's per capita personal income remains very strong at 122% of the US level in 2016.

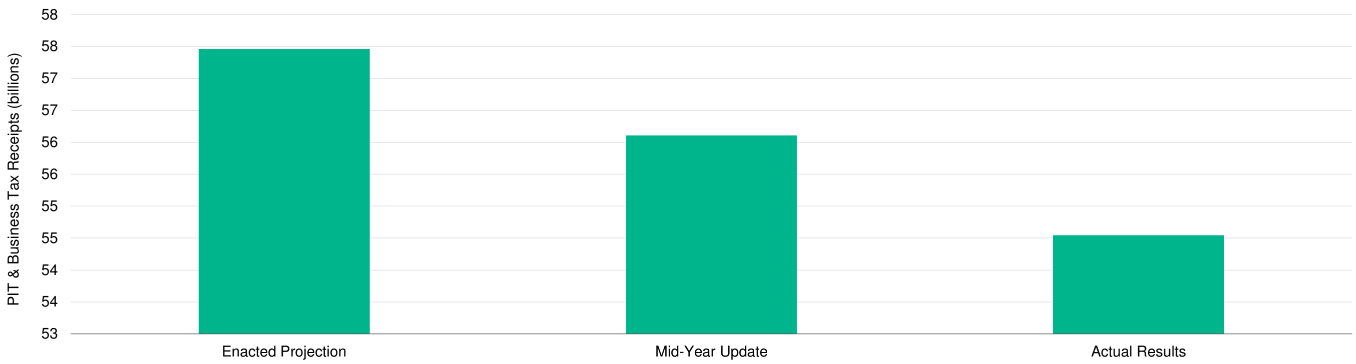
Finances and Liquidity

The fiscal 2018 budget increases state operating fund disbursements 2%, a benchmark that has guided recent budget management. State operating fund disbursements grow to $98.1 billion in fiscal 2018 from $96.2 billion in fiscal 2017, which ended March 31. General fund disbursements grow 4.6%, including transfers of certain funds from monetary settlements to other funds. State operating funds are a more inclusive measure of state spending than the general fund, which excludes debt service and certain other state funds.

State operating funds growth from fiscal 2018 through 2021 averages more than 4% per year absent the 2% annual spending growth. The general fund, a narrower view of state spending, grows much more rapidly at 6% (compounded) through 2021. A climate of considerable fiscal uncertainty accompanies the budget projections given the potential for substantial changes in federal programs stemming from federal budget negotiations, health care reform and tax reform which have not been incorporated in the financial plan. The state ended fiscal 2017 with a large cash balance of $7.7 billion, which could provide a buffer against negative developments, but many of the funds are earmarked for various capital projects and would have to be reprogrammed if needed to plug gaps in the operating budget.

The state's Division of Budget lowered projected tax receipts several times in fiscal 2017, largely due to weakness in personal income and business tax collections (see Exhibit 3). Cumulatively since the budget was enacted, general fund tax projections were lowered $2.3 billion for fiscal 2017 with the lower baseline affecting subsequent years of the financial plan. The impacts are partially mitigated in the short run by greater-than-expected monetary settlements with financial firms and agency underspending.

Exhibit 3
Actual fiscal 2017 PIT and business taxes fell short of projections



Source: NYS Division of Budget; Office of State Comptroller

Maintaining the 2% spending cap in future years will become more challenging as the budget will need to absorb growth in education and fringe benefits. While the state statutorily limits school aid growth (on a school fiscal year basis) to the growth in personal income, the limit has not in practice bound spending. Employee health insurance costs grow 7.4% in fiscal 2018 and employee pension costs grow 3.8%. The state already employs certain accounting methods to keep reported spending below 2%; for example, in fiscal 2018 a school property tax relief program was shifted from spending to revenue by transforming the program into a tax credit.

The state's fixed costs, consisting of pension contributions and OPEB contributions and debt service, totaled about 11% of the state's own-source governmental revenues in fiscal 2015, which is somewhat higher than the 50-state median of 8.5% and places the state's fixed costs at a rank of 20. As fixed costs rise, budgetary flexibility narrows.

LIQUIDITY

GAAP-based financial results show that the state continued to carry negative available balances (unassigned plus other available reserves) in fiscal 2016. Available balances at year end were negative $3.6 billion, not quite -4% of state operating revenues, a deterioration from the -$2.7 billion balance for fiscal 2015 and the approximately -$3 billion registered at the end of fiscal 2014. The negative available balances include the state's rainy day fund of $540 million and the tax stabilization reserve of $1.3 billion. The state's formal reserves are below average for similarly rated states, which we view as a credit weakness given the volatility of the state's revenue sources.

Debt and Pensions

DEBT STRUCTURE

New York's Moody's-defined net state tax-supported debt outstanding was $60.6 billion at the end of fiscal 2017. As a percentage of personal income, the state's debt fell to 5.3% of personal income in fiscal 2016 from 6.7% in fiscal 2011. Although the state ranked 7th highest in this measure in our 2017 debt medians report, it has drawn closer to the 50-state median of 2.5%. Our measure of the state's debt includes about $7.9 billion of TFA Building Aid Revenue Bonds backed by state aid payments. This amount is not counted in the state audited financial statements or by the state budget office in its computation of state debt outstanding.

Only about 5% of net debt is secured by the state's general obligation. The state constitution requires voter approval of general obligation debt. To meet its borrowing needs, the state issues most of its bonds via various public authorities, secured by dedicated revenues and legislative appropriations. Since their initial authorization in 2001, bonds backed by a dedication of personal income tax (PIT) receipts have been the primary vehicle for state borrowing and, with bonds backed by a dedication of sales tax, account for close to 60% of the state's state-supported outstanding debt.

Variable rate debt is limited by statute to up to 15% of the principal amount of outstanding state-supported debt. The state had $1.85 billion in variable rate debt outstanding as of March 31, 2017, or less than 3% of the state's net tax-supported debt. The state has no current plans to issue additional variable rate debt.

Statutorily defined state-supported debt issued after April 1, 2000 is limited by statute to 4% of state personal income, and debt service is limited to 5% of all funds receipts. The state estimates its remaining debt capacity for fiscal 2018 at $3.5 billion based on the more binding debt service/receipts cap. However, over the financial planning horizon, the debt outstanding/personal income cap becomes the more binding constraint, limiting additional debt capacity to a low of $82 million in fiscal 2021 before capacity rises slightly to $490 million the following year. The state projects its debt capacity conservatively, and very narrow margins forecast for previous years have not materialized.

DEBT-RELATED DERIVATIVES

Most of the state's variable rate debt is hedged with a swap portfolio of $1.7 billion as of April 2017 valued at a mark-to-market of $200 million against the state.

PENSIONS AND OPEB

New York has a well below-average leverage position with respect to its pension liabilities, a credit strength that helps offset the state's high bonded debt position. The state's fiscal 2016 net pension liability reported according to GASB Statement 67/68 rules was $2.3 billion, primarily reflecting the state's participation in the NYS Employees Retirement System and the Police and Fire Retirement System, but also including other smaller systems.

Our most recent state pension medians report, based on pension liabilities reported in fiscal 2015, shows that the state's adjusted net pension liability (ANPL) was $27.8 billion or 30% of own-source governmental fund revenues, well below the state median of 85%. Our methodology for adjusting reported pension data includes discounting liabilities using the Citigroup Pension Liability Index. Under current market conditions, this index is considerably lower than the state's discount rate, resulting in significantly higher liabilities under the adjusted method. Our ANPL calculation for New York removes payables included in pension reported assets. The payables stem from the state's amortization of pension contributions and inclusion in assets overstates investments assets on hand.

State statute allows the state and local governments to defer payment on a portion of annual pension contributions based on a formula that compares actuarial funding rates (as a percent of payroll) with an alternative schedule. Under certain circumstances, governments may defer payment of a portion of the actuarial rate and repay (or amortize) the borrowed portion over a 10-year period at interest rates determined by the state comptroller. The state has borrowed about $3.6 billion through fiscal 2017, which we view as deficit financing. It has paid about $1.5 billion in principal and interest payments to date. The state does not plan further amortizations over the financial plan period. Repayments add more than $400 million per year to the state's expected pension contributions through 2021 and smaller amounts subsequently. The state could resume delaying contributions if new developments lead to significant contribution rate increases.

Even with the amortization of pension contributions, the state's conservative approach to funding its pensions results in contributions (adjusted for amortization) that exceeded our “tread water” benchmark by about 20% in fiscal 2015. The benchmark identifies the contribution amount that would just cover interest on the beginning of year net pension liability and accrued benefits during the year (“service cost”). This amount would result in an unchanged unfunded actuarial accrued liability if all other actuarial assumptions, such as investment returns, are met.

The state implemented pension reforms for new employees hired starting on April 1, 2012 that raised the retirement age, increased employee contributions to their pension plan, and increased the number of years included in the calculation of final average salary, upon which pension benefits are based. State officials estimate that the state currently saves the equivalent of about 1% of payroll due to the new tiers, which will slowly increase with workforce turnover.

In its fiscal 2016 CAFR, the state reported unfunded Other Post-employment Benefit (OPEB) liabilities of $63.4 billion for the state and additional SUNY-related liabilities of $14.4 billion. The state funds its OPEB liabilities on a pay-as-you-go basis, contributing $1.51 billion in 2015 and $1.605 billion in fiscal 2016, including SUNY. In 2015, the state's OPEB contribution was about 1.6% of own-source governmental revenues, about twice the state median of 0.85%. The state had reduced its OPEB liabilities in 2010 by negotiating benefit changes, including greater retiree premium contributions and co-payments and implementing employer group waiver plan to receive federal drug coverage subsidies, but subsequently, new mortality tables have led the liabilities to increase due to longer expected life spans

Governance

The state follows a number of strong management practices, including multi-year financial planning and consensus revenue forecasting, although the consensus forecast is not binding. The state had a long record of late budget adoption but has adopted its budget on time or close to on-time for almost every year of the past decade. Some weaknesses in the state's financial management include the lack of robust reserves, given the state's reliance on a progressive personal income tax in the context of volatile capital gains income and very limited executive powers to address mid-year budget shortfalls.

Legal Security

In 2006, the TFA enabling act was amended pursuant to the School Financing Act to alter state support for New York City's educational capital plan. The amended law authorizes the issuance of building aid revenue bonds of up to $9.4 billion outstanding to finance educational facilities; $7.882 billion of this authorization is currently outstanding, not including this issuance which is a refunding of outstanding BARBs. Under the act, the city assigns to the TFA all of the state building aid payable to the city, under Section 3602.6 of the state education law.

Educational projects in New York City's education capital plan, including new construction, building additions, and rehabilitations, are eligible for state building aid. When a project goes into contract, the School Construction Authority submits it to the State Education Department (SED). The SED approval process establishes an "aidable cost" of the project and creates a 30-year amortization schedule. Once SED has approved the project, the state is statutorily required to provide a 30-year stream of building aid payments, subject to annual appropriation.

The stream of building aid payments is a function of both the aidable cost and the current funding ratio, and provides the security for the bonds. The SED determines the amount of confirmed building aid payable annually by applying a building aid ratio to the amount of aidable debt service for the year. The base building aid ratio has varied in past years and could vary in future years. For New York City schools, it averaged 51% from 2005 to 2010. The ratio has generally drifted down since from 52.7% in fiscal 2007 when the BARBs program started, and the city projects it will be 44.7% in fiscal 2018.

BARBS Subordinate to Pre-2007 Future Tax Secured Bonds

The TFA issues Future Tax-Secured Bonds backed by city personal income and sales taxes. Future Tax-Secured Bonds issued prior to Series 2007 S-1 have a senior claim on state building aid if tax revenues are insufficient to pay debt service. The risk of recourse to building aid to pay the senior claim is slim since the amount of pre-2007 bonds outstanding is a small portion (4%) of total tax-secured bonds outstanding and coverage of the tax-secured bonds by tax revenues is projected at 6.43 times in fiscal 2018.

State Non-Impairment Covenant Adds Bondholder Protection

The state has covenanted not to impair the rights of bondholders in any way. Although the state is able to vary the building aid ratio on a year-to-year basis, which alters the amount of confirmed building aid payable to the city, we believe that given the covenant the state is not likely to reduce its building aid payments below the amortization level initially calculated for each project, with the provision that the interest rate used in the calculation may be reset every 10 years.

Further supporting bondholder security is the fact that the state aid intercept provision of Section 99-B of the School Finance Law is available to these bonds. However, since the 99-B program provides for post-default payment, with the state comptroller withholding education aid in amounts required to pay debt service if necessary, it does not add to the credit rating assigned to this transaction.

Competing Claims to Building Aid

New York City's education aid is subject to certain competing claims, including those from holders of State of New York Municipal Bond Bank Agency Special School Purpose Revenue Bonds. These claims are minimal in amount. There are also contingent competing claims from the 99-B intercept post-default program, holders of New York City Education Construction Fund Revenue Bonds, and possible withholdings by the state if the city fails to provide certain educational services. Through a memorandum of understanding (MOU) between the city, the TFA, the State Education Department, and the New York State comptroller, the state comptroller has agreed to satisfy such competing claims from other school aid before state building aid. New York City has agreed to pay to the TFA any amounts of building aid that may be diverted for these claims.

1.0 Times Additional Bond Test Based on Historical Annual Confirmed Building Aid

The additional bonds test (ABT) requires 1.0 times coverage of outstanding state building aid appropriation bond debt service by confirmed building aid revenue in every year. This ABT does not rely on any future approval of New York City education capital projects or on the associated incremental building aid: it relies solely on approved projects for which the state has committed to provide a 30-year stream of building aid payments subject to annual appropriation.

Based on confirmed building aid through 2045 and debt service on outstanding Building Aid Revenue Bonds, and without factoring in savings expected from lower debt service on the current issuance of refunding bonds, debt service coverage falls from 1.9x times in 2018 to a minimum of 1.1 times in 2036, before rising again in later years. As New York City continues to add capital projects for education in the future, incremental associated building aid will be added, increasing coverage and providing more debt capacity.

MOU Establishes Flow of Building Aid

Each year the state annually appropriates money to New York City to pay for educational needs of the city's students. A portion of this aid constitutes the state building aid. Until 2006, the state did not distinguish between the payment of education aid and building aid, making one lump sum payment to the city. To secure the bonds and separate building aid from the rest of the education aid, the city, TFA, SED and the state comptroller entered into an MOU specifying procedures to determine the amount included in each general education aid payment that is attributable to state building aid. Prior to each general education aid payment, the TFA is required to calculate and certify to the SED, the comptroller and the state budget director the amount of the building aid payment included in each general education aid payment.

Additionally, a constitutional mandate to fund education supports the inclusion of appropriations for educational aid, including building aid, in the state's annual budget.

Use of Proceeds

The proceeds of the bond sale will be used to refund certain outstanding BARBs. The refunded bonds were initially issued to finance capital projects for the New York City school system.

Obligor Profile

New York State is the 3rd largest US state by population. Located in the Northeastern US, New York has a large and diverse economy with high per capita income at 121% of the US average and gross state product of $1.422 trillion.

Methodology

The principal methodology used in this rating was Lease, Appropriation, Moral Obligation and Comparable Debt of US State and Local Governments published in July 2016. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 4

New York (State of)

Issue	Rating
Building Aid Revenue Bonds Fiscal 2018 Series S-1	Aa2
Rating Type	Underlying LT
Sale Amount	$945,000,000
Expected Sale Date	07/20/2017
Rating Description	Annual Appropriation Obligation (Non Lease)
Building Aid Revenue Bonds Fiscal 2018 Series S-2	Aa2
Rating Type	Underlying LT
Sale Amount	$55,000,000
Expected Sale Date	07/20/2017
Rating Description	Annual Appropriation Obligation (Non Lease)

Source: Moody's Investors Service

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