

CREDIT OPINION

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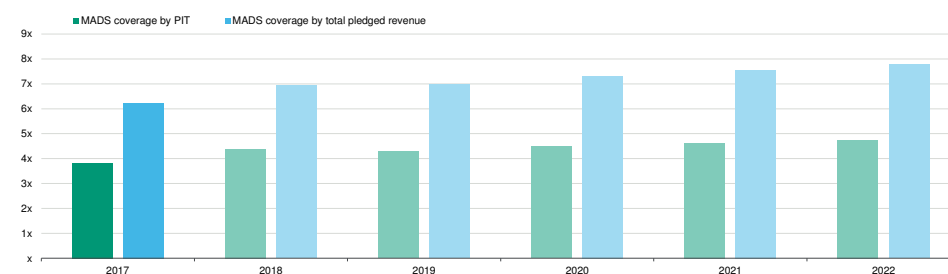
New York City Transitional Finance Auth., NY

Update to credit analysis of Future Tax Secured Revenue Bonds

Summary

The New York City Transitional Finance Authority's (TFA) Future Tax Secured Revenue Bonds benefit from high debt service coverage provided by the pledge of [City of New York](#) (Aa2 stable) personal income tax and sales tax revenues, a strong legal structure that insulates TFA from potential city fiscal stress, the open subordinate lien that permits future leverage of the pledged revenues, and [New York State's](#) (Aa1 stable) ability to repeal the statutes imposing the pledged revenues. Those factors combined allow both the senior lien (Aaa stable) and the subordinate lien (Aa1 stable) to be rated higher than the city's general obligation rating. There are \$787.8 million of senior lien bonds outstanding and \$33.3 billion of subordinate lien bonds.

Exhibit 1

MADS Coverage Will Strengthen Further Amid Healthy Forecast Revenue Growth


Data reflect fiscal years (July-June). Fiscals 2018-2022 are forecast. MADS reflects currently outstanding debt.
 Source: Transitional Finance Authority, Moody's Investors Service

Credit strengths

- » Strong legal and structural insulation from city fiscal stress
- » High debt service coverage provided by a broad stream of pledged revenues, New York City's personal income and sales taxes, and the healthy historical performance of those sources

Credit challenges

- » The state retains the right to alter or repeal the statutes imposing the taxes pledged to the bonds

- » The cyclical nature of the personal income tax, particularly as it relates to New York City's financial services industry, and more recent volatility in the sales tax
- » The indenture's open lien for subordinate bonds, which could reduce coverage, although issuance is subject to an additional bonds test requiring 3 times coverage of maximum annual debt service

Rating outlook

The rating outlook for TFA's Future Tax Secured Bonds is stable. Strong legal and structural payment mechanisms help to insulate the bonds from city and state fiscal stress, including short-term liquidity strain. Even through periods of economic weakness coverage of MADS remains strong, and while the TFA credit will continue to be used to finance New York City capital needs, we expect strong coverage to be maintained.

Factors that could lead to an upgrade

- » For the subordinate lien, a higher additional bonds test or other indenture provision increasing bondholder protections against possible dilution of coverage

Factors that could lead to a downgrade

- » Significant weakening of the pledged revenues that reduces currently high levels of coverage
- » Large additional bond issuances that materially dilute coverage

Key indicators

Exhibit 2

Transitional Finance Authority Future Tax Secured Bonds					
Credit Background					
Pledged Revenue	Personal income taxes and sales taxes				
Legal Structure					
Additional Bonds Test	3x MADS				
Open or Closed Lien	Open				
Debt Service Reserve Requirement	None				
MADS Coverage					
2017 MADS coverage	6.2x				
Trend Analysis					
	2013	2014	2015	2016	2017
Debt Outstanding (millions)	\$23,048	\$24,987	\$26,424	\$29,313	\$32,814
Pledged Revenue (millions)	\$15,365	\$15,999	\$17,379	\$18,081	\$18,097
Pledged Revenue % Change	11.0%	4.1%	8.6%	4.0%	0.1%
Annual Debt Service Coverage	9.1x	9.7x	8.6x	9.5x	8.8x

Source: Transitional Finance Authority, Moody's Investors Service

Profile

TFA was created by the state legislature in 1997 as a public benefit corporation of the state to provide a method of financing New York City's vital capital construction program but outside the constraints of the debt limit imposed on the city by the state constitution.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

Detailed credit considerations

Tax base and nature of pledge: broad pledge of citywide personal income and sales taxes

The pledged personal income and sales taxes reflect two diverse revenue streams that are firmly embedded in city and state tax policy. The city first levied an income tax in 1966. Since 1987 the city's income tax rate has consisted of a base rate and (starting in 1991) a surcharge that combined equal the total New York City income tax rate. Since 2010 the top base rate has been 3.4% on incomes greater than \$500,000, plus a 14% surcharge that brings the top rate to 3.876%. The base rate and the surcharge [periodically require reauthorization](#) by the state legislature. The pledged sales tax includes the 4.5% general sales tax and the 6.0% sales tax on parking.

Through statute, the State of New York has dedicated New York City's personal income and sales taxes to TFA and granted TFA the authority to pledge those revenues as security for debt service payments and for payments under agreements such as interest rate swaps. Pursuant to the indenture, TFA has assigned and pledged its revenues to the bond trustee and created a security interest in them for payment of its bonds, notes or other ancillary contracts.

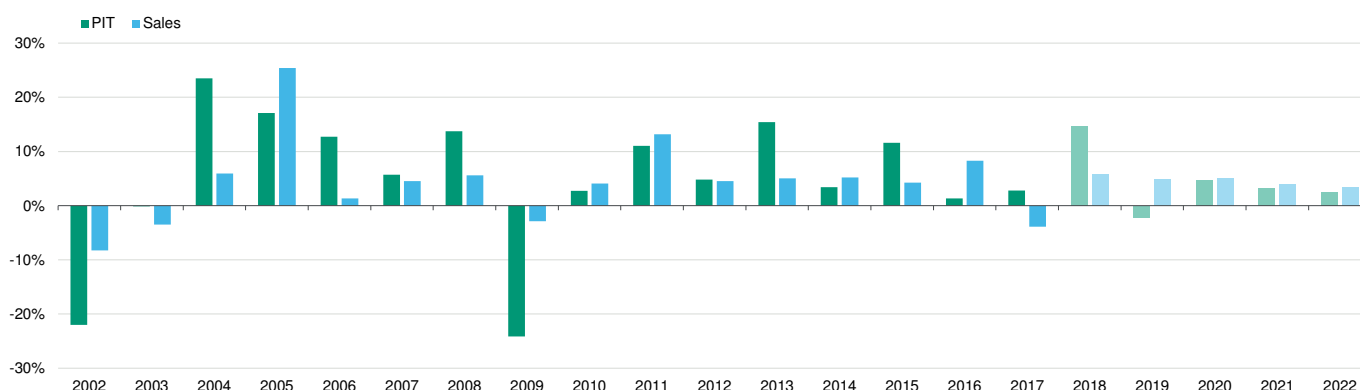
Debt service coverage and revenue metrics: coverage remains strong despite cyclicity of pledged taxes

The pledged revenues exhibit volatility during economic downturns. Demonstrating the sensitivity of the pledged revenues to economic cycles, in fiscal 2009 they declined by 16.5%, with personal income taxes sinking 24.1% and sales taxes dropping 2.9% (see Exhibit 3). The revenues are also subject to unexpected upswings. Reflecting the city's strong economy, one-time changes in taxpayer behavior driven by federal tax law, and one-time gains from the repatriation of certain hedge fund profits, fiscal 2018 income tax collections are estimated to increase by 14.6%. Sales taxes are estimated to increase by 5.8%, also driven up by [record high tourism](#) in the city. Total pledged revenues are estimated to increase 11.2%.

Exhibit 3

Pledged Revenues Highly Sensitive to Economic Downturns

Annual % Change in Pledged Revenue



Data reflect fiscal years (July-June). Fiscals 2018-2022 are forecast.

Source: Transitional Finance Authority

Even with periodic revenue volatility, the pledged revenues provide strong debt service coverage. Based on actual fiscal 2017 revenue, annual coverage was 8.8x and coverage of maximum annual debt service (MADS) is 6.2x. MADS based on outstanding debt is in fiscal 2019. The city's revenue forecasts are generally conservative, and MADS coverage reflecting expected revenue would increase steadily to 7.8x in fiscal 2022 (see Exhibit 1 on page 1). The city's financial plan reflects average annual issuance of \$4.2 billion of future tax secured debt for general city capital purposes.

Debt and legal covenants: legal separation and other strong bondholder protections allow ratings to pierce city GO

A key strength of TFA is its insulation from New York City bankruptcy risk. The state legislature established TFA as a separate and distinct legal entity from the city. Further, the state did not grant TFA itself the right to file for bankruptcy. While bondholders are protected from bankruptcy, city or state fiscal stress still could pose risks because both the city and the state retain the right to alter the statutory structure that secures TFA's bonds. The city has covenanted not to exercise those rights related to personal income taxes if debt service coverage would fall below 1.5 times MADS on outstanding bonds. Since creation of TFA, policy actions have both

increased and decreased the pledged revenues. Those actions have included the abolition of the city's income tax on commuters, and establishment of various sales tax exemptions.

TFA's original statutory authorization was \$7.5 billion. In 2000, it was increased by \$4.0 billion and following the 2001 World Trade Center attacks, that amount was increased to permit \$2.5 billion of subordinate "Recovery Bonds" used partly as deficit financing to bolster the city's general fund in fiscal 2003. Authorized issuance was increased again by an additional \$2.0 billion in 2006, to an aggregate of \$13.5 billion (the Recovery Bonds were excluded from that cap) for senior and subordinate lien bonds. In 2009, legislation was enacted that allows TFA to exceed the \$13.5 billion cap but counts debt over that amount, along with city general obligation debt, against the city's overall debt limit. As of March 31, 2018, the city had \$30.6 billion of debt capacity.

The TFA indenture limits senior lien debt to \$12 billion outstanding at any time, subject to a \$330 million limit on debt service payable in any quarter (as well as the additional bonds test described below). The subordinate lien is open, subject to a conservative additional bonds test that requires at least 3 times coverage of MADS on outstanding bonds. Additionally, the indenture requires that calculations of MADS reflect variable rate bonds bearing interest at their maximum rate.

The pledged taxes are collected by the New York State Department of Taxation and Finance and held by the state comptroller, who makes daily transfers to the trustee (net of refunds and the costs of collection). The trustee makes quarterly set-asides of amounts required for debt service due in the following quarter on the outstanding bonds, as well as TFA's operational costs (with the collection quarters beginning each August, November, February and May). Half of each quarterly set-aside is made beginning on the first day of the first month of each collection quarter and the second half is made beginning on the first day of the second month of each collection quarter. If sufficient amounts for debt service are not on deposit after those two months, the trustee continues to set aside funds in the third month, on a daily basis, until the deficiency is cured. Functionally, personal income tax revenues are expected to provide sufficient amounts for debt service; if they do not provide at least 1.5 times coverage of maximum annual debt service (MADS), sales tax revenues are available to pay debt service. Additionally, future tax secured bonds issued before November 2006 have a first lien on appropriations of state building aid to the city if necessary to meet debt service requirements.

DEBT STRUCTURE

There is little bondholder risk in TFA's debt structure. It has an extensive and closely-managed floating rate debt portfolio: 88.5% of outstanding future tax secured revenue bond are fixed rate and 11.5% floating rate (see Exhibits 4 and 5). Of its demand bonds, none of TFA's liquidity facilities include term-out provisions. Since TFA receives the pledged revenues on a gross basis, interest rate risk on the variable rate bonds is absorbed by the city after TFA's debt service set-asides. Index rate mode bonds do not have a put feature although some have refinancing risk at a step-up date.

TFA also has the statutory authority to have outstanding \$9.4 billion of building aid revenue bonds (BARBs) backed by state appropriations to the city of building aid to help finance the city's school facilities capital expenditures, additionally supported by the education aid intercept program of the state finance law's section 99-b (\$7.9 billion is currently outstanding). The pledged personal income and sales taxes do not secure the building aid bonds, which are rated Aa2 based on the state's appropriation.

Exhibit 4

Vast majority of TFA debt is issued through the subordinate lien (\$ millions)

Lien	Outstanding
Senior	\$787.8
Subordinate (ex. Recovery Bonds)	\$32,666.1
Recovery Bonds	\$682.1
Total	\$34,136.1
Building Aid Revenue Bonds	\$7,944.3

Debt service on Building Aid Revenue Bonds is paid with appropriations of state school building aid.

Source: Transitional Finance Authority

Exhibit 5

Closely managed floating rate portfolio poses minimal risks to bondholders (\$ millions)

	Fixed Rate	Demand Bonds	Index Rate	Auction Rate
Senior	\$16.3	\$599.8	\$171.7	\$0.0
Sub.	\$30,189.5	\$2,414.0	\$522.3	\$222.4

Source: Transitional Finance Authority

DEBT-RELATED DERIVATIVES

TFA is not a party to any debt-related derivatives.

PENSIONS AND OPEB

Pensions and OPEB are not a major factor in the methodology.

Management and governance

While TFA is a separate and distinct entity from the city, its board statutorily consists of five city officials. Nonetheless, its legal separation from the city and the strong bondholder protections of the flow of funds allow its ratings to be higher than the city's general credit.

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