S&P Global
Ratings

RatingsDirect®

Massachusetts Bay Transportation Authority; Sales Tax

Primary Credit Analyst:
David G Hitchcock, New York (1) 212-438-2022; david.hitchcock@spglobal.com

Secondary Contact:
Timothy W Little, New York (212) 438-7999; timothy.little@spglobal.com

Table Of Contents

Rationale

Outlook

Operations

Massachusetts Bay Transportation Authority; Sales Tax

Credit Profile		
US$300.0 mil Subordinate Sales Tax BANs ser 2017 due 12/01/2021		
Long Term Rating	AA/Stable	New
US$156.0 mil subordinated sales tax bnds ser 2017A-2 due 07/01/2046		
Long Term Rating	AA/Stable	New
US$118.0 mil subordinated sales tax bnds (sustainability bonds) ser 2017A-1 due 07/01/2046		
Long Term Rating	AA/Stable	New

Rationale

S&P Global Ratings has assigned its 'AA' rating to the Massachusetts Bay Transportation Authority's (MBTA) $274 million of subordinated sales tax bonds series 2017A consisting of subseries A-1 (sustainability bonds) and subseries A-2, and $300 million subordinated sales tax bond anticipation notes (BANs), series 2017 due Dec. 1, 2021. At the same time, S&P Global Ratings affirmed its 'AA' rating on the authority's $3.67 billion senior-lien sales tax bonds outstanding. The outlook on all bonds is stable.

The senior sales tax bonds are secured by a pledge of the greater amount of either a statewide sales tax defined as a 1% statewide sales tax, plus a gross pledge of $160 million of additional state sales tax per year that MBTA receives for operational funding; or an inflation-adjusted sales tax revenue base amount distributed by the Commonwealth of Massachusetts. The senior sales tax pledge is subordinate to $196.8 million of prior closed-lien general transportation bond obligations outstanding issued before 2000, to the extent that the MBTA does not certify that its general revenues can cover these prior-lien obligations in its annual budget from general revenues. In addition, pledged to the senior sales tax bonds are surplus assessments on 175 cities and towns, after payment of debt service on separate MBTA assessment bonds that have a first lien on those revenues.

The subordinate sales tax pledge consists of the same revenue pledged to the senior sales tax bonds, after payment of senior-lien sales tax bond debt service and senior-lien debt service reserve replenishments, if any.

Our senior and subordinate sales tax bond ratings are based on what we perceive to be the stronger pledge of either the state base revenue amount or pledged MBTA sales tax revenue. Currently, we view the pledge of state base revenue as of stronger credit quality. We do not make a rating distinction between the senior and subordinate bonds, as both liens will continue to have an open lien permitting additional debt issuance using the same additional bonds test (ABT) coverage multiple, and we expect debt service coverage to remain high and of similar magnitude in the near term. We believe the lack of a debt service reserve on the new subordinate bonds is mitigated by strong debt service coverage levels.

The 'AA' rating reflects the strength of the State of Massachusetts (AA/Stable GO rating) to provide pledged sales tax revenue, in that the state base revenue amount, which is currently higher than pledged sales tax revenue, is payable from total state sales taxes and is not subject to state appropriation. The potential dependence on state base revenue, in our view, creates an indirect link to state credit quality.

Other rating factors include:

- A large and diverse statewide economy of 6.8 million people generating the pledged sales tax;
- Strong 2.48x coverage of maximum annual debt service (MADS) on combined parity and prior-lien MADS by fiscal 2018 pledged state base revenue, assuming unhedged variable-rate debt carries about a 7% interest rate and the BANs are refunded by proposed future subordinate sales tax bonds, and strong 2.40x coverage by the most recent fiscal 2017 pledged sales tax revenue. Coverage of senior-lien MADS alone is slightly higher at 2.59x by the fiscal 2018 base revenue amount. The MBTA projects the lowest future annual debt service coverage on subordinate sales tax revenue bonds after these BANs are refunded into subordinate-lien bonds of 2.19x in 2022, using fiscal 2017 revenues and currently projected future debt issuance in 2019 and 2021;
- Nondiversion and nonimpairment covenants that prevent reduction of the pledged sales tax rate or diversion of pledged revenues, while pledged sales tax revenue is not subject to annual appropriation; and
- Pledged revenues that pay debt service on a gross basis before payment of MBTA operations, so that collection of pledged revenues is not dependent on the MBTA providing transportation services.

Offsetting factors include a currently modest exposure to unhedged variable-rate debt, which comprises about 9% of MBTA total debt ($426 million), as well as the potential for substantial additional bonding to meet MBTA's large capital needs, which we believe could lower coverage closer to the 1.5x ABT based on sales tax revenues. The current five-year capital improvement plan (CIP) is 14% higher than a year ago, and involves significantly more bonding, with about $1.3 billion of additional sales tax bonds projected to be sold over the next five years, although matched with significant scheduled debt paydown.

We understand that the series 2017 subordinate sales tax bond proceeds will be issued to provide new money for ongoing capital programs.

MBTA is currently operating under a state oversight board, following various operational issues in the winter of 2015. It estimates a fiscal 2018-2022 CIP of $7.4 billion, up 14% from its five-year CIP projection last year of $6.8 billion. This figure does not include complete funding of the authority's $2.3 billion green line rail extension, which will also receive funding from federal and local sources. The MBTA expects approximately $1.3 billion of its five-year CIP will be funded with revenue bonds, $1.2 billion from state rail enhancement bonds, $750 million from additional state assistance, and $3.9 billion from federal assistance, including federal loans. Although current debt service coverage is strong, we believe coverage could potentially drift downward again closer to the ABT, as occurred before the 2015 addition of the extra $160 million pledge to the bonds of state sales tax on a gross basis that is used for MBTA operations, in light of the large capital plan, and the potential for cost overruns or expanded borrowing.

Before a commonwealth enabling act in 2000, MBTA issued general revenue bonds backed by the commonwealth, and Massachusetts backfilled MBTA operating deficits after a time lag. Sales tax bonds issued since July 1, 2000, have been backed by a lien on the 1% statewide sales tax (which excludes sales tax on meals) plus the recent addition of $160 million per year of state sales tax, subordinate to the prior-lien bonds issued before 2000, with excess sales tax revenues funding subordinate debt service and MBTA general operations.

In addition, the commonwealth created a formula for a base amount of pledged sales tax revenue, should pledged sales tax revenue decline, or not increase as fast as inflation. This base amount was increased by an extra $160.0 million in fiscal 2015 to $970.6 million, and subsequently increases annually by the rate of the Boston CPI up to 3% per year, or lower to the extent that the rate the CPI increases is less than 3% but more than the rate of increase in sales tax (in which case the base amount increase is the rate of increase in sales tax). If neither the CPI nor the sales tax increase in a given year, the base amount is held flat for that year. The base amount has increased to $1.007 billion, to be due in fiscal 2018, compared with $756 million in 2008. The commonwealth collected pledged sales tax of $977 million in fiscal 2017, compared with $992 million under the 2017 base amount. MBTA also receives other commonwealth money and federal revenues that are not pledged to the sales tax bonds. We understand that both the pledged dedicated sales tax amount and the base amount do not need a legislative appropriation.

The senior-lien bonds will have a debt service reserve funded at one-half the lesser of sales tax bond MADS, 125% of average annual debt service, or 10% or the original par amount of the bonds, while the subordinate bonds will not have a debt service reserve. In view of prospects that coverage will remain high for both liens, we do not believe lack of a debt service reserve is a significant credit differentiator between the senior and subordinate bonds.

The 1% plus $160 million per year pledged sales tax is part of the commonwealth's overall 6.25% sales tax rate. State sales tax revenue declined in the last recession, with a cumulative decline of 7.9% in fiscal years 2008-2010. However, as Massachusetts' economy recovered, sales tax has since risen, increasing 5% in fiscal 2015. In the long term, however, sales tax has not increased as fast as Massachusetts' base revenue amount, including the commonwealth's extra $160 million per year of sales tax to both pledged sales tax and the base revenue amount in fiscal 2015.

Combined prior general transportation revenue bond and senior and subordinate sales tax bond MADS coverage is strong, in our opinion, at what we calculate as 2.20x by historical fiscal 2017 pledged actual sales tax revenues, and 2.48x by the 2018 certified base revenue amount, assuming an interest rate of about 7% on unhedged variable-rate debt. Coverage of senior bond MADS alone of $388 million will be 2.59x. Combined prior general transportation revenue, senior, and subordinate sales tax bond MADS after this sale will be $406 million in fiscal 2020, assuming no additional bonds are sold and assuming a 7% interest rate on unhedged variable-rate debt and a synthetic swap interest rate for debt hedged with interest rate swap agreements, and also assuming commercial paper (CP) and BANs are refunded with future long-term debt. It does not include federal interest subsidies on Build America bonds or debt service reserve interest earnings.

After this sale, MBTA will have $264.1 million of unhedged sales tax variable-rate demand obligations and $405.5 million of unhedged BANs and CP all secured by sales tax revenue, which will comprise about 14% of total sales tax-secured debt.

MBTA has three interest rate swap agreements associated with $180 million of variable-rate sales tax-secured bonds and sales tax-secured CP. The authority is not required to begin posting collateral for any of its swap agreements in the event of negative swap valuations until the sales tax rating on the MBTA falls below 'A'. Immediate swap termination events with notice do not go into effect unless the rating on the MBTA or Massachusetts falls below 'BBB-', although certain swap termination events with notice can occur if the sales tax rating falls below 'A-'. Any swap termination payments would be subordinate to payment of sales tax bond debt service. We believe that termination events are unlikely at current rating levels.

In March 2017, the MBTA entered into a $232.1 million senior sales tax bond direct placement with State Street Public Lending Corp. We have reviewed the direct placement and do not believe it poses a significant contingent risk; there are no events of default leading to a bond acceleration within 180 days.

The ABT is the same for both senior sales tax bonds and subordinate sales tax bonds, the only difference being that the definition of debt service for the subordinate sales tax bond ABT includes combined annual debt service of both senior and subordinated debt. This, in essence, requires all bonds to meet the subordinate ABT. The ABT requires either 1.0x coverage of combined prior general transportation bonds and combined senior and subordinate sales tax bond MADS by the base revenue amount, or 2.0x coverage by historical sales tax revenues, net of prior general transportation bond debt service; and 1.5x coverage of sales tax revenue bond debt service and all prior general transportation debt obligations on a combined basis by historical sales tax revenue.

MBTA expects to issue about $1.3 billion of additional sales tax debt over the next five years, up from $600 million of additional bonds that were expected in last year's five-year CIP. We believe potential exists for additional capital needs to bring the system up to a state of good repair and for potential cost escalations on rail line extensions that could raise future bonding needs.

(For more information on Massachusetts and its economy, please refer to the most recent state GO analysis published July 13, 2017, on RatingsDirect.)

Outlook

The stable outlook reflects our view of the ability of MBTA to issue future additional parity bonds under its ABT based on the size of state base revenue, which is larger than directly pledged sales taxes, and the credit quality of the state base revenue as reflected in the Massachusetts GO rating. Should we lower our GO rating or revise our outlook on the commonwealth, we could potentially lower our rating on the MBTA sales tax bonds. However, should we revise our outlook on Massachusetts to positive, or if we believe the creditworthiness of MBTA's direct sales tax pledge strengthens enough so that it is higher than the pledge of the state base amount, we could potentially revise our outlook on the senior and subordinate sales tax bonds to positive. Although future refundings on senior sales tax bonds into subordinate-lien debt could raise the debt service coverage differential between senior and subordinate debt, we would be unlikely to raise the senior-lien rating or revise the outlook alone, as the senior bonds will have the same ABT as the subordinate-lien bonds.

Our outlook also assumes consistently strong debt service coverage over our two-year outlook horizon, despite capital pressures. Significant additional debt leverage that lowered debt service coverage closer to the 1.5X sales tax coverage test portion of the ABT, or a debt structure that included a significant amount of variable-rate or short –term debt in a rising interest rate environment could also result in our lowering the rating or revising the outlook.

Operations

MBTA runs the oldest and fifth-largest transit system in the country, operating subway, bus, and commuter rail service throughout eastern Massachusetts. The authority is responsible for an estimated 1.3 million passenger trips each business day and operates more than 38 miles of rapid transit rail routes, and 26 miles of additional light rail. It owns more than 1,000 buses, which cover 763 miles of routes. The authority's commuter rail service operates more than 421 units of passenger rail equipment, providing service between Boston and 134 outlying rail stations. In addition, MBTA provides a broad range of other passenger services including commuter boats. Its territorial area has increased to 175 cities primarily in the greater Boston area, extending north to the New Hampshire border, west to the city of Worcester, and south into Providence, R.I., with a total service area population of about 4.8 million. MBTA has estimated about 55% of all trips to Boston are provided by public transportation.

The authority employs approximately 5,200 full-time and 600 part-time employees, most of which are represented by 29 labor unions, and is currently operating under a labor contract expiring June 30, 2018. In fiscal 2016, the last audited year, MBTA operating expenses less depreciation were $1.7 billion; this does not include debt service, which is deducted from sales tax before being credited to operating funds. Its unrestricted cash and temporary cash investment position was $272.5 million at fiscal year-end June 30, 2016. As for most transit systems, MBTA relies heavily on intergovernmental operating subsidies to pay for operations. In 2016, it received $1.3 billion from state sales taxes, state contract assistance, and local assessments.

MBTA was created in 1964. In 2015, following operational difficulties during the winter, the state formed a five-member financial control board to exercise most MBTA powers through at least 2018, which has recently been extended to 2020. The control board is mandated to make operational and fiscal improvement and is temporarily exempt from anti-privatization laws. The control board includes three members of the Massachusetts Department of Transportation (MassDOT), and had obligations relative to the MBTA that are vested in the MassDOT board.

Apart from powers exercised by the control board, MBTA has an 11-member governing board, appointed by the governor, which is the same board as for the MassDOT, although MBTA exists as a separate legal entity within the department. Members serve four-year terms. The enabling act does not provide for MBTA to be a debtor under the federal bankruptcy code.

Massachusetts Bay Transportation Authority Pledged Revenues

Fiscal year	Total statewide sales tax receipts ($000s)*	MBTA carve-out of total sales tax receipts ($000s)§	% increase (decrease)§	Base revenue amount (BRA) (floor) ($000s)§	Difference in BRA versus dedicated 1%
1996	2,252,083	450,417	5.4	N/A	N/A
1997	2,494,702	498,940	10.8	N/A	N/A
1998	2,572,560	514,512	3.1	N/A	N/A
1999	2,833,644	566,603	10.1	N/A	N/A
2000	3,108,430	621,433	9.7	N/A	N/A
2001	3,273,817	654,591	5.3	645,000	9,591
2002	3,193,947	638,789	-2.4	664,350	(25,561)
2003	3,196,009	639,202	0.1	684,281	(45,079)

Massachusetts Bay Transportation Authority Pledged Revenues (cont.)

Fiscal year	Total statewide sales tax receipts ($000s)*	MBTA carve-out of total sales tax receipts ($000s)§	% increase (decrease)§	Base revenue amount (BRA) (floor) ($000s)§	Difference in BRA versus dedicated 1%
2004	3,211,141	642,228	0.5	684,281	(42,053)
2005	3,330,838	666,167	3.7	704,809	(38,642)
2006	3,420,209	684,042	2.7	712,586	(28,544)
2007	3,458,885	691,777	1.1	733,963	(42,186)
2008	3,453,776	690,755	-0.1	755,982	(65,227)
2009	3,239,083	647,817	-6.2	767,057	(119,240)
2010	3,852,057	637,084	-1.7	767,057	(129,973)
2011	4,091,485	654,643	2.8	767,057	(112,414)
2012	4,190,558	670,494	2.4	779,092	(108,598)
2013	4,262,750	682,046	1.7	786,867	(104,821)
2014	4,546,992	727,519	6.7	799,295	(71,776)
2015	4,775,641	924,103	27.0§	970,637§	(54,942)
2016	4,990,760	958,523	3.7	986,274	(27,751)
2017	5,103,317	976,531	1.9	992,192	(15,661)
2018	N/A	N/A	N/A	1,006,807	N/A

*Total state sales tax rate was 5.00% until 2009, when it increased to 6.25%. §Pledged sales tax was equal to a 1% rate until 2015, when it was increased to 1% plus $160 million per year; 2015 increase without extra $160 million would have been 5.0%. The BRA floor amount is established by the state comptroller each year using a formula including CPI index. By law, the BRA formula cannot increase more than 3% annually, except it was also increased $160 million in 2015. N/A--Not applicable. Source: Massachusetts Department of Revenue.

Ratings Detail (As Of September 14, 2017)

Massachusetts Bay Transp Auth sr sales tax		
Long Term Rating	AA/Stable	Affirmed
Massachusetts Bay Transp Auth sr sales tax (AGM) (MBIA)		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed
Massachusetts Bay Transp Auth SALESTAX		
Long Term Rating	AA/A-1+/Stable	Affirmed
Massachusetts Bay Transp Auth sr sales tax		
Unenhanced Rating	AA(SPUR)/Stable	Affirmed

Many issues are enhanced by bond insurance.