

RatingsDirect[®]

Summary: Massachusetts; Gas Tax

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Credit Profile				
US\$200.0 mil commonwealth transp fd rev bnds (Rail Enhancement & Accelerated Br Prog) ser 2019A due 06/01/2046				
Long Term Rating	AA+/Stable	New		
Massachusetts Spl Oblig Gas Tax				
Long Term Rating	AA+/Stable	Affirmed		

Rationale

S&P Global Ratings has assigned its 'AA+' rating on the Commonwealth of Massachusetts' \$200 million commonwealth transportation fund (CTF) revenue bonds (rail enhancement and accelerated bridge programs) 2019 series A, and affirmed its 'AA+' rating on \$2.77 billion parity bonds outstanding, as well as bonds secured by first-lien special obligation bonds \$2.77 billion parity bonds outstanding. The outlook is stable.

The CTF bonds are secured by pledged revenues that include motor fuel/gasoline taxes and motor vehicle registration fees levied statewide. The special obligation gas tax bonds are secured by a first lien on 6.86 cents of the state-levied gas tax.

The rating reflects the application of our "Priority-Lien Tax Revenue Debt" criteria (published Oct. 22, 2018), which factors in both the strength and stability of the pledged revenues, as well as the general credit quality of the commonwealth as issuing obligor. The priority-lien rating on the bonds is limited by our view of Massachusetts' creditworthiness (general obligation [GO] rating: AA/Stable) and is constrained from going higher unless there is an improvement in the state GO rating, despite very strong revenue coverage of debt service. In our view, the CTF bonds do not benefit from limited scope of operations or extraordinary expenditure flexibility of the obligated entity, while we believe pledged revenues could have exposure to operating risk of the state in a distress situation.

Our evaluation of the pledged revenue stream reflects the following factors:

- A very strong and diverse economy of 6.9 million people;
- Low revenue volatility, with historically stable pledged revenues;
- Very strong debt service coverage and liquidity, with 6.31x coverage of future maximum annual debt service (MADS), including combined debt service from prior-lien bonds, by fiscal 2018 pledged revenue, and 6.35x by preliminary 2019 pledged revenue. The state has previously projected that annual debt service coverage will remain at approximately 6x even after substantial anticipated additional bonding;
- Very strong bond covenants, including a very strong CTF additional bonds test (ABT) requiring 4x coverage of MADS by historical pledged revenues, a closed lien on prior-lien bonds, and a covenant not to allow changes in the rate of motor fuels tax or registry fees unless pledged revenues equal at least 4x MADS. In our view, strong debt service coverage mitigates the lack of a debt service reserve; and

• Our establishment of a one-notch upward limitation on the ratings from that of the GO rating on Massachusetts.

The majority of series 2019A bond proceeds will be used to contribute to the Massachusetts Bay Transportation Authority's (MBTA) extension of its Green, Orange, and Red mass transit lines, as well as fund the state's South Coast Rail program. We believe this bond issue represents an expansion of the commonwealth's use of CTF bonds for MBTA capital projects.

Revenue volatility: Low

We anticipate the pledged revenues to have low revenue volatility based on historical trends.

The major revenues supporting the bonds include a portion of motor fuels tax revenue, which accounted for 55.6% of total pledged funds (chapter 64A, chapter 64E, and chapter 64F receipts) in fiscal 2018, not including federal Build America bond (BAB) interest subsidies. The fuel tax rate was increased to 24 cents from 21 cents in 2013, with 6.86 cents of that amount pledged to the closed-prior lien special obligation gas tax bonds on a first-lien basis. Excess revenues not needed to cover debt service on the closed first-lien special obligation bonds flow to the CTF revenue bonds. Before 2013, the gas tax rate had not been increased since 2000, and still remains below the average gas tax rates charged in the Northeast region. Massachusetts collects gas taxes monthly from gasoline distributors.

The other key revenue supporting the program is motor vehicle registry fees (44.4% of total revenues in fiscal 2018, excluding BAB subsidies), which are collected daily by the Registry of Motor Vehicles and swept daily by the state treasury and credited to various fee accounts. Passenger vehicle registration fees rose to \$60 from \$50 in fiscal 2015, and to \$60 in fiscal 2017. Registry fees were also adjusted in fiscal 2009, which offset flat-to-declining revenue performance in previous years. We believe the commonwealth has a history of increasing both pledged gas tax and registration fees when necessary to meet Massachusetts' transportation capital program.

Combined total pledged revenues in fiscal 2018 were \$1.38 billion, not including BAB subsidies. This represented a 1.0% increase from the year before, following a 1.6% increase in 2017, a 0.7% increase in 2016, and a 5.7% increase in 2015 when registry fees were substantially raised. Preliminary 2019 pledged revenue rose 0.7% to \$1.39 billion, not including the BAB subsidy. Before fiscal 2014, revenue performance was relatively flat in our view, with small increases in most years and a decline of 1.1% in fiscal 2009 due to the recession, and an earlier 4.7% decline in 2006.

Coverage and liquidity: Very strong

Fiscal 2018 pledged revenue of \$1.39 billion covers combined first and second-lien future MADS of \$218.9 million in 2021 after this issue, by what we consider a very strong 6.31x, not including BAB subsidy revenues. MADS coverage on only prior-lien debt secured by only the 6.86-cent fuel tax is also very strong at 6.41x by fiscal 2018 revenue.

Currently, the commonwealth anticipates issuing an additional \$1.49 billion of parity CTF debt by the end of fiscal 2024 for both the rail and accelerated bridge program, including this issuance, raising \$1.85 billion in net bond proceeds including original issue premiums. Also anticipated over the next five fiscal years is issuance of federal grant anticipation notes (GANs) that have a junior lien on CTF revenues, including \$60 million of subordinate GANs that are being sold concurrently with this issue (\$70.7 million of proceeds including net premium).

We believe there could be additional bonding related to either bridge repair or mass transit, beyond the \$1.49 billion

described above, but that the very strong 4x ABT and the need to use surplus CTF funds for transportation operations provide significant protection against debt service coverage dilution from future debt issuance. In particular, \$30 million of a previous series 2017A bond issue went to fund certain MBTA (Green Line) capital improvements, while the majority of the proceeds of this series 2019A bond will be used to extend the MBTA Green, Red, and Orange Lines. The Green Line in particular has seen significant cost increase estimates in recent years over the original \$2 billion estimated project cost. We believe, the potential remains for the CTF to become a regular contributor to the MBTA's very significant capital plans as the MBTA continues to work on extending its Green, Orange, and Red mass transit lines.

Nevertheless, the commonwealth currently projects debt service coverage, including BAB subsidies, will remain strong, at least at 5.1x through 2049 (down from an over 6x minimum coverage projection made at the time of the last sale of bonds), based on current anticipated future debt issuance and no increase in the projected fiscal 2020 revenue of \$1.40 billion, which includes federal BAB interest subsidies and revenue calculated before deduction for prior-lien debt service.

The fuel tax and registration fees pledged to the bonds are deposited in a revenue account of the CTF, where it is subject to annual appropriation by the state before transfer to the bond debt service account. We believe appropriation risk is mitigated by trust agreement covenants that prevent the large amount of surplus pledged revenue available (projected at \$1.19 billion in fiscal 2020) from being used for other purposes until debt service is paid first. Since the first issuance of special obligation bonds in 1992, the legislature has never failed to make the required appropriations.

Economic fundamentals: Very strong

We view Massachusetts' economic fundamentals as very strong. We believe the commonwealth's economy remains deep and diverse, anchored by a Boston metropolitan statistical area that includes many higher education institutions and associated technology companies, although employment growth appears to have slowed down somewhat in 2019, after earlier growth that strongly outpaced national and regional trends by most measures.

The U.S. Census Bureau population estimate for Massachusetts in 2018 is 6.9 million, a 0.6% increase from 2017. Over the past 10 years, the commonwealth's population increased 6.7%, compared with 7.6% for the nation. Although below that of the nation, state population growth has outpaced the region since 2007 and we expect this trend to continue. The commonwealth's age dependency ratio of nonworking-age population to working-age population, at 56.3% in 2017, was better than that of the nation (61.8%).

IHS Markit reports private sector employment growth for the three months through August 2019 rose a good 1.4%, with the well-paying professional, scientific, and technical services sector showing nearly half of the growth. The commonwealth's average annual unemployment rate of 3.3% in 2018 was below that the national 3.9% rate. Commonwealth unemployment edged even lower at 2.9% in August, primarily due to a slight decline in the labor force. Overall, IHS Markit forecasts 1.0% employment growth in calendar 2019 and 0.9% in calendar 2020, compared with 1.4% and 1.1%, respectively, for the nation. Massachusetts has an above-average high-technology employment sector, which IHS Markit estimates at about 10% of state employment, compared with 6.5% for the country as a whole. The increasing role of services in the economy reflects growth in research laboratories, computer software, management consulting, other business services, and health care. Higher education anchors, a high level of federal

research funding, and venture capital give the commonwealth a leading edge in emerging industries, such as biotechnology, software, communications equipment, and surgical instruments.

Total commonwealth personal income rose a strong 4.3% in 2018, and state per capita income was 130% (second only to Connecticut), although down from 131% the year before. In our view, Massachusetts' economic fundamentals and key anchors, which center on higher education, technology, finance, and health care, should contribute to continued expansion.

IHS forecasts real gross state product to increase 2.3% in calendar 2019, 2.3% in calendar 2020, and 2.0% in calendar 2021, near its respective U.S. real GDP forecast of 2.5%, 1.8%, and 1.8% for the same years.

Linkage to commonwealth general creditworthiness

Because the commonwealth collects the pledged revenues, we view the rating on the CTF and special obligation revenue bonds as linked to Massachusetts' creditworthiness. Although the commonwealth constitution restricts transportation-related revenues to transportation-related purposes, these can be purposes other than specifically the repayment of debt. In our establishment of a one-notch upward limitation on the transportation revenue bond rating compared to the state GO rating, we included our view that the state provides critical public services into our analysis. While we consider that statutory and bond covenant restrictions on the use of CTF revenues as providing some uplift, in our view, the collection and distribution of pledge revenues by the commonwealth exposes the revenues to operating risk if there should be a distress situation. For this reason, under our priority-lien criteria, we consider the linkage between the priority-lien pledge and the commonwealth close.

For more information on our Massachusetts GO rating, please refer to our most recent GO rationale published Aug. 9, 2018, on RatingsDirect.

Outlook

The stable outlook reflects our stable outlook on the commonwealth. Should we raise or lower the commonwealth GO rating or revise the outlook, we could take a similar action on the CTF bond rating or outlook.

Although we do not anticipate it during our two-year outlook horizon, should there be very significant deterioration in CTF bond debt service coverage we could also lower our rating on the CTF bonds. While the rail enhancement program could require substantial new capital funding beyond current authorizations, we feel that the very strong current debt service coverage and very strong ABT should provide strong protection against future debt dilution. We also believe that Massachusetts' substantial and diverse economy will continue to support stability in pledged revenues over time.

Ratings Detail (As Of November 5, 2019)		
Massachusetts gas tax		
Long Term Rating	AA+/Stable	Affirmed
Massachusetts sr lien gas tax		
Unenhanced Rating	AA+(SPUR)/Stable	Affirmed

Ratings Detail (As Of November 5, 2019) (cont.)				
Massachusetts (Accelerated Bridge Pro	g) gax tax			
Long Term Rating	AA+/Stable	Affirmed		
Massachusetts (Accelerated Br Prog) GASTAX				
Long Term Rating	AA+/Stable	Affirmed		
Massachusetts (Rail Enhancement & Accelerated Bridge Progs)				
Long Term Rating	AA+/Stable	Affirmed		
Massachusetts (Rail Enhancement & Accelerated Bridge Progs) GASTAX				
Long Term Rating	AA+/Stable	Affirmed		
Many issues are enhanced by bond insuran	ce.			

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