MOODY'S
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New Issue

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Massachusetts (Commonwealth of)

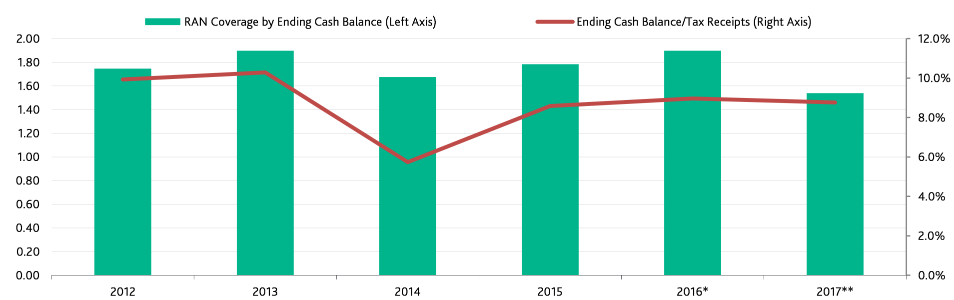
New Issue - Moody's assigns MIG 1 to $1.5B of Massachusetts GO revenue anticipation notes

Summary Rating Rationale

Moody's Investors Service has assigned MIG 1 ratings to $1.5 billion of Commonwealth of Massachusetts general obligation revenue anticipation notes, consisting of $500 million 2016 Series A, $500 million 2016 Series B, and $500 million 2016 Series C. The Series A notes mature April 24, 2017, the Series B notes mature May 22, 2017, and the Series C notes mature June 26, 2017. The notes are scheduled to price on August 24.

The MIG 1 ratings reflect the credit quality of the Commonwealth of Massachusetts (Aa1 stable) and its full faith and credit general obligation pledge to pay note principal and interest when due, the healthy cash margins projected to be available at each of the staggered note maturity dates, and substantial alternative liquidity that could be provided by the commonwealth's budget stabilization fund, subject to legislation appropriation, if necessary.

Exhibit 1
Massachusetts' Cash Balances Provide Solid Note Repayment Coverage



Source: Massachusetts Information Statement, August 8, 2016; Moody's Investors Service

Credit Strengths

» Healthy forecasted ending cash balances at each note maturity, well-developed cash management practices including quarterly cash flow forecasts, and ample alternative liquidity in the commonwealth's Budget Stabilization Fund, subject to appropriation

» Strong financial management practices, particularly a willingness to promptly identify and close budget gaps through expenditure reductions, revenue increases and overall prudent use of reserves

» Budget reserves that provide an adequate cushion to another downturn and the commonwealth's commitment to maintain them at healthy levels

» An economic base characterized by high wealth and high levels of educational attainment that has provided a degree of stability to the commonwealth's employment situation

Credit Challenges

» Funds for note repayment not segregated in advance of maturity dates

» State debt ratios that are among the nation's highest

» Large health-care and other social services costs that drive the budget and ongoing spending pressure related to the statewide transportation system

» Budgetary burden of growing pension contributions as the commonwealth seeks to address its large unfunded pension liabilities

Rating Outlook

The outlook for Massachusetts is stable, reflecting its satisfactory reserve levels and efforts to regain structural budget balance. The outlook also reflects our expectation that the commonwealth will continue to take proactive measures to close budget gaps if they emerge and continue its trend of strong financial management. Going forward, reliance on one-time budget solutions, tighter cash margins, unexpectedly severe economic deterioration, or a large increase in tax-supported debt could pressure the rating at its current level.

Factors that Could Lead to an Upgrade

» Not applicable

Factors that Could Lead to a Downgrade

» Material weakening in the state's cash-flow margins beyond current estimate

Key Indicators

Exhibit 2

Commonwealth of Massachusetts

	FY2012 Actual	FY2013 Actual	FY2014 Actual	FY2015 Actual	FY2016 Estimated	FY2017 Projected
Total RAN Borrowed	$ 1,200	$ 1,200	$ 800	$ 1,200	$ 1,200	$ 1,500
Pledged Tax Receipts	$ 21,115	$ 22,123	$ 23,370	$ 24,932	$ 25,423	$ 26,356
RAN Borrowing as a % of Tax Receipts	5.7%	5.4%	3.4%	4.8%	4.7%	5.7%
Ending Cash Balance	$ 2,097	$ 2,277	$ 1,341	$ 2,141	$ 2,278	$ 2,309
Ending Cash Balance/Tax Receipts	9.9%	10.3%	5.7%	8.6%	9.0%	8.8%
Total Revenues	$ 32,547	$ 33,779	$ 35,462	$ 38,237	$ 40,445	$ 41,339
Ending Cash Balance/Total Revenues	6.4%	6.7%	3.8%	5.6%	5.6%	5.6%
RAN Coverage by Ending Cash Balance	1.75	1.90	1.68	1.78	1.90	1.54

Source: Massachusetts Information Statement, August 8, 2016; Moody's Investors Service

Recent Developments

Recent developments are incorporated in the Detailed Rating Rationale.

Detailed Rating Considerations

Long Term Credit Quality: Strong GO Credit Profile

Massachusetts' general obligation rating (Aa1 stable) reflects its strong financial management practices and its demonstrated willingness to balance its budget when necessary through spending cuts, revenue increases and use of reserves; a large education and health-care sector that generates high wages and helps to bolster employment; state debt levels that are among the highest in the nation; and large unfunded pension liabilities.

Liquidity and Debt Service Coverage: Healthy Liquidity Bolsters Short-Term Credit Profile

Seasonal imbalances between receipt of Massachusetts' revenues and outflow of its expenditures drive its cash-flow borrowings. The commonwealth's largest revenue source, the personal income tax, is estimated to be 27.0% of fiscal 2017 tax revenue. It is received most heavily in the second half of the fiscal year, especially March, April and June due to tax return filings. Local aid payments are one of the largest single expenditure line items, estimated at 13.6% of % of the total fiscal 2017 expenditures. Starting in fiscal 2014 they are disbursed in equal monthly installments. In prior years, those payments were made quarterly in approximately equal amounts.

LIQUIDITY

Based on our analysis of the commonwealth's August 2016 cash-flow forecast, ending cash balances at each note maturity provide noteholders with a healthy cushion. At the April maturity of Series A, the projected cash balance is 8.7% of forecasted tax revenue and 5.6% of total revenue. For Series B, the projected cash balance is 7.7% of forecasted tax revenue and 4.9% of total revenue. For Series C, the projected cash balance is 8.8% of forecasted tax revenue and 5.6% of total revenue.

The commonwealth's rainy day fund, the Budget Stabilization Fund, is not included in the cash flow, although because the RANs are general obligations, we consider the fund a possible source of alternate liquidity, subject to legislative appropriation. The commonwealth had a healthy Stabilization Fund balance of $2.1 billion prior to 2009 that it was able to rely on during the last recession. The commonwealth was able to partially rebuild the Stabilization Fund in 2011 and 2012 -- to $1.65 billion -- but made several withdrawals in the fiscal years since then. Fiscal 2015 ending balance was $1.25 billion, or approximately 5% of tax revenue. An ending balance of $1.29 billion is projected for fiscal 2016, equal to 5.0% of estimated tax revenue.

Legal Covenants: Staggered Repayment Structure Provides Strong Cash Margins

The commonwealth's short-term borrowings are statutorily required to be repaid by the end of the fiscal year. The three staggered maturities of the notes (April 24, 2017; May 22, 2017; and June 26, 2017) is a key structural feature that provides strong cash margins for each separate series of notes. There are no advance set-asides prior to maturity, but the risk is mitigated by accuracy of past projections and quarterly cash flow updates.

DEBT STRUCTURE

Massachusetts has issued revenue anticipation notes (RANs) every year since fiscal 2009 and since fiscal 2010 they have typically been sized at $1.2 billion. Notably, the amount dropped to $800 million in fiscal 2014 due to a large surplus in fiscal 2013, as 2013 total tax collections were 4.8% greater than the prior year and $627 million greater than forecast. For the current issuance, the commonwealth is raising the note amount to $1.5 billion in order to right size the annual borrowing with recent growth in operating expenditures. The commonwealth is also looking to mitigate any additional revenue volatility with the additional borrowing amount, while taking advantage of lower borrowing rates. Prior to 2009, Massachusetts relied on commercial paper for its interim cash flow needs but has more recently used RANs for a lower cost of funds.

DEBT-RELATED DERIVATIVES

The commonwealth's variable rate and derivatives portfolio is closely managed, and its liquidity facilities and swap agreements contain provisions favorable to the commonwealth and offset its relatively low available cash balances. Liquidity facilities contain a mix of three- and five-year term-out provisions that, considering the strength of Massachusetts' market access, should provide ample time to refinance if necessary. Swap counterparties are well-diversified and do not reflect collateral posting requirements on the part of the commonwealth, although the mark-to-market value was a sizeable -$338.7 million as of July 31, 2016, which limits the commonwealth's ability to refinance the transactions those swaps are associated with. In our analysis, the commonwealth's liquidity (reflecting current cash as well as amounts in the stabilization fund) is sufficient to handle unforeseen circumstances related to its variable rate debt and swaps. The commonwealth plans to increase the amount of its unhedged floating rate debt portfolio over the next several years in an effort to better align asset and liability interest rate risks. The commonwealth also plans to implement additional risk management controls and oversight to manage the program as it ramps up.

PENSIONS AND OPEB

Based on the commonwealth's fiscal 2014 pension data, we have calculated that its adjusted net pension liability (ANPL) was $61.1 billion, or 128% of revenues. The 50-state median ANPL to revenues is 59%, and Massachusetts ranks eight highest in this ratio. Our adjustments to reported state pension data include an assumed 13-year duration of plan liabilities for plans not reporting on a GASB Statements 67/68 basis and a market-based discount rate to value the liabilities, rather than the long-term investment return used in reported figures.

Based on the fiscal 2014 actuarial valuation, Massachusetts' unfunded pension liability fell slightly to $26 billion. Massachusetts law requires that the schedule of pension contributions be updated every three years. With the fiscal 2015 budget, the governor and legislature agreed to shorten the state's pension amortization schedule and increase its pension contributions by 10% annually through fiscal 2017 and by 7% thereafter until the final amortization payment in fiscal 2036. While pension contributions rose to 4.7% of the state's budget in fiscal 2015, the agreement means that by fiscal 2018 Massachusetts will make its full actuarial required pension contribution and will ultimately reduce its ANPL. The new plan reverses a negative aspect of a pension reform enacted in 2012 that pushed the pension funding horizon to 2040. That reform also increased the retirement age for most state employees; eliminated early retirement subsidies; increased the period for calculating retirement benefits from an average of three years to five years; and eliminated double-dipping. It also prohibits the commonwealth from making less than the annual payment required by the new schedule if investment returns exceed expectations.

The commonwealth's other post-employment benefits (OPEB) accrued liability, assuming no pre-funding and a discount rate of 4.5%, was approximately $15.9 billion as of January 1, 2016. The liability falls to $9.5 billion assuming pre-funding and a discount rate of 7.75%. Massachusetts dedicates future tobacco settlement monies to its OPEB trust fund, phased-in starting in fiscal 2013. The combined ratio of Massachusetts' pension and OPEB actuarially required contributions to revenue is 16%, slightly higher than average for states. Those costs, combined with the state's high bonded debt costs, could limit the commonwealth's fiscal flexibility going forward. The prior pension reform and the increased contributions recently agreed to still result in high fixed costs but will help to reduce Massachusetts' long-term liabilities in the long run.

Management: Strong Institutionalized Management Practices

The commonwealth's financial best practices are generally very strong. Per statute, the Secretary of Administration and Finance is required to develop a consensus tax revenue forecast for the ensuing fiscal year with the house and senate committees of ways and means by January 15 of each year, before budget recommendations are developed. Subsequently, the secretary certifies the accuracy of the consensus revenue forecast two times per year and prepares new estimates if the estimate starts to diverge materially from actual collections.

The governor has executive authority to cut expenses without legislative approval resulting from a revenue shortfall. The commonwealth also conducts a debt affordability analysis and typically reports its audited financial results on a timely basis, though the fiscal 2015 audit was late due to an alleged reporting issue with the Massachusetts Bay Transportation Authority pension fund. Budget enactments have also been timely, and the commonwealth's financial flexibility is strong. There are no constitutional caps on revenue raising or spending increases. The commonwealth is subject to ballot initiatives, though per the state constitution, initiative petitions are subject to repeal or amendment by the legislature and initiative petitions that become statute can be amended like any other state law.

The commonwealth is required to deposit the entire year-end surplus and any tax revenue from excess capital gains into the Stabilization Fund, with 5% of the amount deposited then transferred to the State Retiree Benefits Trust Fund and 5% transferred to the commonwealth's Pension Liability Fund. The deposit of excess capital gains revenues into the Stabilization Fund was suspended in fiscal 2015 and fiscal 2016, and no deposit of excess capital gains is projected in fiscal 2017. The commonwealth is also required to deposit certain one-time settlements and judgments into the Stabilization Fund.

Legal Security

The notes are general obligations of the commonwealth to which its full faith and credit will be pledged for the payment of principal and interest when due.

Use of Proceeds

Proceeds of the notes will be used to bridge seasonal imbalances between revenue inflows and expenditure outflows.

Obligor Profile

The Commonwealth of Massachusetts has a population of 6.7 million people and a gross state product of approximately $420 billion. The state is economically well diversified and has very high wealth levels.

Methodology

The principal methodology used in this rating was Short-Term Cash Flow Notes published in April 2013. Please see the Ratings Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 3

Massachusetts (Commonwealth of)

Issue	Rating
General Obligation Revenue Anticipation Notes, 2016 Series A	MIG 1
Rating Type	Underlying ST
Sale Amount	$500,000,000
Expected Sale Date	08/16/2016
Rating Description	Note: Tax and/or Revenue Anticipation
General Obligation Revenue Anticipation Notes, 2016 Series B	MIG 1
Rating Type	Underlying ST
Sale Amount	$500,000,000
Expected Sale Date	08/16/2016
Rating Description	Note: Tax and/or Revenue Anticipation
General Obligation Revenue Anticipation Notes, 2016 Series C	MIG 1
Rating Type	Underlying ST
Sale Amount	$500,000,000
Expected Sale Date	08/16/2016
Rating Description	Note: Tax and/or Revenue Anticipation

Source: Moody's Investors Service

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