MOODY'S INVESTORS SERVICE

New Issue: Moody's assigns MIG 1 to \$1.2B of Massachusetts GO revenue anticipation notes

Global Credit Research - 10 Sep 2015

MASSACHUSETTS (COMMONWEALTH OF) State Governments (including Puerto Rico and US Territories) MA

 Moody's Rating
 RATING

 ISSUE
 RATING

 General Obligation Revenue Anticipation Notes, 2015 Series A
 MIG 1

 Sale Amount
 \$400,000,000

 Expected Sale Date
 09/22/15

 Rating Description
 Note: Tax and/or Revenue Anticipation

General Obligation Revenue Anticipation Notes, 2015 Series BMIG 1Sale Amount\$400,000,000Expected Sale Date09/22/15Rating DescriptionNote: Tax and/or Revenue Anticipation

General Obligation Revenue Anticipation Notes, 2015 Series CMIG 1Sale Amount\$400,000,000Expected Sale Date09/22/15Rating DescriptionNote: Tax and/or Revenue Anticipation

Moody's Outlook STA

NEW YORK, September 10, 2015 --Moody's Investors Service has assigned MIG 1 ratings to \$1.2 billion of Commonwealth of Massachusetts general obligation revenue anticipation notes, consisting of \$400 million 2015 Series A, \$400 million 2015 Series B, and \$400 million 2015 Series C. The notes are scheduled to price on September 22. The Series A notes mature April 27, 2016, the Series B notes mature May 25, 2016, and the Series C notes mature June 22, 2016.

SUMMARY RATING RATIONALE

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.

OUTLOOK

The outlook for Massachusetts' long-term debt is stable, reflecting the commonwealth's strong budgetary reserves and efforts to regain structural budget balance. The outlook also reflects our expectation that the commonwealth will 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.

WHAT COULD MAKE THE RATING GO DOWN

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

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

CHALLENGES

-- Funds for note repayment are 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

RECENT DEVELOPMENTS

Recent developments are incorporated in the Detailed Rating Rationale.

DETAILED RATING RATIONALE

LONG-TERM CREDIT QUALITY

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.

CASH FLOW

Seasonal imbalances between receipt of Massachusetts' revenues and outflow of its expenditures drive its cashflow borrowings. The commonwealth's largest revenue source, the personal income tax (58% of estimate fiscal 2016 tax revenue), is received most heavily in the second half of the fiscal year (especially March, April and June). Local aid payments are one of the largest single expenditure line items (almost 14% of the total). Starting in fiscal 2014 they are disbursed in equal monthly installments. In prior years, those payments were made quarterly in approximately equal amounts. Massachusetts has issued revenue anticipation notes (RANs) every year since fiscal 2009 and since fiscal 2010 they have been sized at \$1.2 billion, though the amount dropped to \$800 million in fiscal 2014 due to a large surplus in fiscal 2013 (fiscal 2013 total tax collections were 4.8% greater than the prior year and \$627 million greater than forecast). 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.

Based on our analysis of the commonwealth's September 2015 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 6.7% of forecasted tax revenue and 4.3% of total revenue. For Series B, the projected cash balance is 5.3% of forecasted tax revenue and 3.5% of total revenue. For Series C, the projected cash balance is 9.4% of forecasted tax revenue and 6.1% 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. Preliminary estimates show the Stabilization Fund with a fiscal 2015 ending balance of \$1.25 billion balance, or 5% of tax revenue. An ending balance of \$1.18 billion is projected for fiscal 2016, equal to 4.6% of estimated tax revenue.

LEGAL COVENANTS

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 27, 2016; May 25, 2016; and June 22, 2016) 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.

MANAGEMENT

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 state devises multi-year financial plans and publishes a five-year forecast in its Long-Term Fiscal Policy Framework. 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 reports its audited financial results on a timely basis. 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. However, the deposit of excess capital gains revenues into the Stabilization Fund has been suspended for fiscal 2015 and fiscal 2016. The commonwealth is also required to deposit certain one-time settlements and judgments into the Stabilization Fund.

KEY STATISTICS

- -- Note maturities: April 27, 2016; May 25, 2016; June 22, 2016
- -- Note borrowing % of projected receipts, FY2016: 2.9%
- -- Projected cash balances: 6.1% of receipts in FY2016; 5.3% of receipts in FY2015
- -- Audited cash balance, FY2014: 3.6% of revenues

OBLIGOR PROFILE

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

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.

RATING METHODOLOGIES

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

REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the rating action on the support provider and in relation to each particular rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Please see www.moodys.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

Please see the ratings tab on the issuer/entity page on www.moodys.com for additional regulatory disclosures for each credit rating.

Analysts

John Lombardi Lead Analyst Public Finance Group Moody's Investors Service

Edward Hampton Additional Contact Public Finance Group Moody's Investors Service

Contacts

Journalists: (212) 553-0376 Research Clients: (212) 553-1653

Moody's Investors Service, Inc. 250 Greenwich Street New York, NY 10007 USA



© 2015 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND CREDIT RATINGS AND RESEARCH PUBLICATIONS PUBLISHED BY MOODY'S ("MOODY'S PUBLICATIONS") MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL, FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS FOR RETAIL INVESTORS TO CONSIDER MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS IN MAKING ANY INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's Publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY SUCH RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for appraisal and rating services rendered by it fees ranging from \$1,500 to approximately \$2,500,000. MCO and MIS also maintain policies and procedures to address

the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moodys.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

For Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail clients. It would be dangerous for "retail clients" to make any investment decision based on MOODY'S credit rating. If in doubt you should contact your financial or other professional adviser.

For Japan only: MOODY'S Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of MOODY'S Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJKK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000. MJKK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.