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New Issue

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Commonwealth of Massachusetts

New Issue - Moody's Assigns Aa1 to Massachusetts' $818M GO Bonds 2017 Series E & F; Outlook Stable

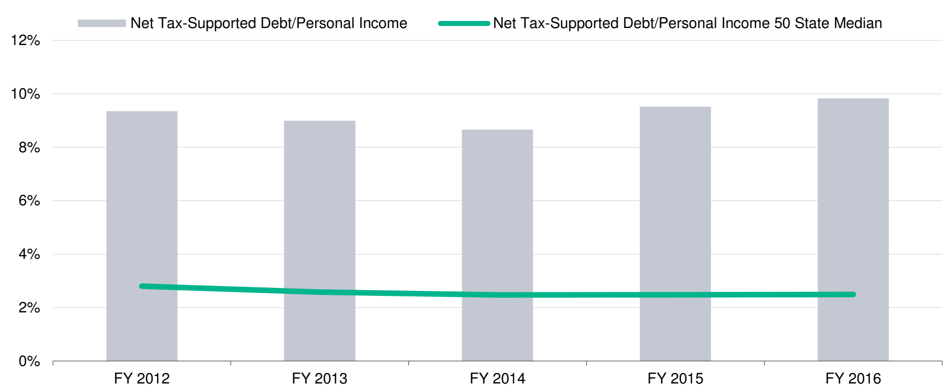
Summary Rating Rationale

Moody's Investors Service has assigned Aa1 ratings to the Commonwealth of Massachusetts' $300 million General Obligation Bonds, Consolidated Loan of 2017, Series E; $300 million General Obligation Bonds, Consolidated Loan of 2017 Series F; and $218.1 million General Obligation Refunding Bonds, 2017 Series E. The bonds are expected to sell on October 18. The outlook is stable.

The Aa1 ratings are based on the Commonwealth's full faith and credit pledge, reflecting its strong financial management practices and demonstrated willingness to balance its budget through spending cuts, revenue increases and use of reserves. The rating also reflects large education and health care sectors, which generate high wages and bolster employment, as well as state debt and pension liabilities that are among the highest in the nation.

Exhibit 1

Massachusetts' Debt Burden Continues to Significantly Exceed National Median



Source: Massachusetts FY12-FY16 CAFRs; Moody's Investors Service

Credit Strengths

- Strong financial management practices, particularly a willingness to promptly identify and close budget gaps through expenditure reductions, revenue increases and 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

- State debt ratios that are among the nation's highest and large adjusted net pension liabilities
- Spending pressure stemming from high health care and other social services costs and maintenance of 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

- Continued rebuilding of reserves and establishment of stronger constraints on their use
- Established trend of structural budget balance
- Reduced debt ratios relative to Moody's 50-state median

Factors that Could Lead to a Downgrade

- Protracted structural budget imbalance driven by deeper and/or prolonged economic downturn
- Depletion of Budget Stabilization Fund to inadequate levels
- Increased leveraging of the Commonwealth's resources to pay debt service or further erosion in pension funding ratios
- Narrowed cash flow that strains the Commonwealth's liquidity

Key Indicators

Exhibit 2

Massachusetts	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Operating Fund Revenues (000s)	27,886,200	29,133,206	30,863,081	32,946,934	33,414,744
Balances as % of Operating Fund Revenues	11.4%	10.1%	8.7%	7.7%	7.4%
Net Tax-Supported Debt (000s)	33,019,222	33,455,411	36,328,772	37,997,157	40,756,031
Net Tax-Supported Debt/Personal Income	9.3%	9.0%	8.7%	9.5%	9.8%
Net Tax-Supported Debt/Personal Income 50 State Median	2.8%	2.6%	2.5%	2.5%	2.5%
Debt/Own-Source Governmental Funds Revenue	103.3%	101.7%	104.8%	103.9%	107.9%
Debt/Own-Source Governmental Funds Revenue Median	37.4%	36.1%	35.8%	34.4%	32.7%
ANPL/Own-Source Govt Funds Revenue	231.7%	254.7%	206.3%	180.7%	201.5%
ANPL/Own-Source Govt Funds Revenue Median	94.2%	87.6%	81.8%	83.0%	82.2%
Total Non-Farm Employment Change (CY)	1.6%	1.7%	2.0%	2.0%	1.8%
Per Capita Income as a % of US (CY)	129.2%	128.5%	128.4%	130.1%	131.4%

Source: Massachusetts FY12-FY16 CAFRs; Moody's Investors Service

Detailed Rating Considerations

Economy: State's Economy Anchored by Healthcare and Technology Sectors

Massachusetts' economy continues to expand, with the state's GDP growing by 1.1% (seasonally adjusted) in the first quarter of 2017 – the 25th fastest growing state. The trend is expected to continue over the near term given the state's diverse employment base. Indeed, employment grew by 2.0% year-over-year in August 2017, exceeding the national rate of 1.5%. Massachusetts has also been among the states with the strongest labor force participation growth since the recession. The preliminary unemployment rate declined to 3.7% in August 2017 from 4.4% in July, remaining below the US rate of 4.5% for the same period.

The commonwealth continues to be aided by its large education and healthcare sectors, which constituted approximately 21.8% of employment as of August 2017. Healthcare is expected to remain a top contributor to the state's economy as research demand remains high at its key institutions. The state also has a large financial activities sector, with a significant mutual fund presence. Its technology sector is surging and will continue to spur growth. The state is characterized by high wealth and education levels, but with slow population and job growth over the longer run. Per capita personal income was $64,235 in 2016 – the second highest in the country. The state's population grew by an estimated 3.8% between 2010 and 2016, slower than the national rate of 4.5%.

Finances and Liquidity: Recent Modest Budget Shortfalls Corrected via Executive Action

The commonwealth closed fiscal 2017 with tax revenues exceeding the previous year's collections by 1.4%. The $25.6 billion figure fell below budgeted estimates, however, by $452 million or 1.7% through the end of the year, following a $175 million tax downgrade in October 2016. To offset a portion of the negative budget variances related to taxes as well as deficiencies, the state reduced expenditures and implemented revenue options in October 2016 of $294 million, followed by another $95 million in December. Further year-end adjustments on the spending and revenue side brought the budget back into balance, and the commonwealth is reporting it ended the year in substantial balance, which will preserve the current stabilization fund balance.

The fiscal 2018 budget was enacted in July 2017 and increases state spending by 1.7% over estimated fiscal 2017 spending, excluding the Medical Assistance Trust Fund and other certain transfers. The budget assumes tax revenues of $26.5 billion, 3.5% more than the revised fiscal 2017 year-end estimate, excluding certain large settlements. Total tax revenues in the first two months of fiscal year 2018 were $3.5 billion, a 1.9% increase over the same period the prior year.

LIQUIDITY

Massachusetts' liquidity is adequate following some actions to rebuild its Stabilization Fund balance after draws during the economic downturn. Future fund draws would reflect the Commonwealth's challenges in getting to structural balance and eliminating the use of one-time resources to balance its budget.

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 Commonwealth is also required to deposit certain one-time settlements and judgments into the Stabilization Fund. However, the deposit of excess capital gains revenues into the Stabilization Fund was suspended in fiscal 2015 and fiscal 2016, while there were no transfers in 2017 since collections did not exceed the threshold.

After drawing the Stabilization Fund balance during the economic downturn and then suspending deposits of excess capital gains into the fund more recently, the Commonwealth ended fiscal 2017 with a balance of $1.30 billion. The budget projects a deposit of $79 million in fiscal 2018, with the fund anticipated to grow to $1.38 billion by the end of the fiscal year.

Debt and Pensions: Elevated Debt Burden Partly Due To Borrowing on Behalf of Other Governments

The commonwealth has a high but well-managed debt burden, with $40.8 billion in total net tax-supported debt, comprised primarily of general obligation bonds (56%). Debt levels have been driven upwards in part by the Commonwealth's issuance of bonds to finance projects that in other states would be paid for at the local level since Massachusetts does not issue debt at the county level. Based on Moody's 2017 state debt medians report, the state's debt levels ranked second-highest among the 50 states on a per-capita basis, exceeded only by Connecticut (A1 stable). As of fiscal 2016, the Commonwealth's debt per capita was $5,983, 9.8% of its personal income, and 8.4% of its gross domestic product.

DEBT STRUCTURE

As of August 2017, Massachusetts has $3.6 billion of floating rate general obligation debt outstanding, or 8.8% of fiscal 2016 net tax supported debt, with $2.0 billion of this amount unhedged. Not included is $289 million of variable rate bonds issued by the University of Massachusetts Building Authority and the Massachusetts Bay Transportation Authority (Aa2 stable) that the commonwealth pledges its full faith and credit to pay, if necessary.

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. The mark-to-market value was a sizeable -$222.5 million as of August 31, 2017. This amount is net of a $400 million swap with Barclays Bank PLC (A1(cr), P-1(cr)) that was terminated on May 1, 2017. Swap counterparties are well-diversified and do not reflect collateral posting requirements on the part of the Commonwealth,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 continue 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.

PENSIONS AND OPEB

Based on the Commonwealth's fiscal 2016 pension data, we have calculated that its adjusted net pension liability (ANPL) was $65.2 billion, or 201.5% of revenues. The 50-state median ANPL to revenues is 82.2%, and Massachusetts ranks sixth highest in this ratio. The commonwealth participates in three pension plans, of which the most significant is the State Teachers Contributory Retirement System. Massachusetts is among the handful of states that take responsibility for directly funding teacher pensions. Moody's ANPL reflects certain adjustments made to improve comparability of reported pension liabilities.

The Commonwealth contributes more than the full amount of its actuarially determined contribution, about $1.9 billion in fiscal 2016. However, the state's contributions were 65.7% of our “tread water” benchmark, which is the payment covering the year's newly accrued service costs and interest on the NPL. 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. Pursuant to a new triennial schedule adopted in January 2017, pension transfers will increase by approximately 8.9% until the final amortization payment in fiscal 2036. 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 $16.3 billion as of January 1, 2016. The liability falls to $10.2 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 state's combined debt service, pension and OPEB contributions in fiscal 2016 were 20.0% of own-source governmental revenues, increasing to 23.1% if the state made it's tread water contribution. The high fixed costs are partly attributable to the Commonwealth's absorption of certain costs covered by local governments in most other states. High fixed costs reduce the share of discretionary spending and the budgetary flexibility. 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.

Governance: Strong Financial Best Practices Bolster Credit Profile

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 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.

Legal Security

The bonds are general obligations of the Commonwealth of Massachusetts, which has pledged its full faith and credit for the payment of principal and interest when due. We note, however, that state law limits annual tax revenue growth and does not exempt debt service payments from this limitation. Favorably, actual tax revenue growth remains below the limit.

Use of Proceeds

Proceeds of the bonds will be used to finance authorized capital projects and refund certain general obligation bonds.

Obligor Profile

The Commonwealth of Massachusetts has an estimated 2016 population of 6.8 million people and a gross state product of approximately $507.9 billion. The state is economically well diversified and has very high wealth levels.

Methodology

The principal methodology used in this rating was US States Rating Methodology published in April 2013. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 3

Massachusetts (Commonwealth of)

Issue	Rating
General Obligation Bonds Consolidated Loan of 2017, Series E	Aa1
Rating Type	Underlying LT
Sale Amount	$300,000,000
Expected Sale Date	10/18/2017
Rating Description	General Obligation
General Obligation Bonds Consolidated Loan of 2017, Series F	Aa1
Rating Type	Underlying LT
Sale Amount	$300,000,000
Expected Sale Date	10/18/2017
Rating Description	General Obligation
General Obligation Refunding Bonds, 2017 Series E	Aa1
Rating Type	Underlying LT
Sale Amount	$218,125,000
Expected Sale Date	10/18/2017
Rating Description	General Obligation

Source: Moody's Investors Service

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