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Massachusetts; Appropriations; CP; General Obligation; General Obligation Equivalent Security; Joint Criteria; Miscellaneous Tax; Non-School State Programs; Note; School State Program

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Massachusetts; Appropriations; CP; General Obligation; General Obligation Equivalent Security; Joint Criteria; Miscellaneous Tax; Non-School State Programs; Note; School State Program

Credit Profile

US\$600.0 mil GO bnds cons loan ser 2016 A due 03/01/2036

<i>Long Term Rating</i>	AA+/Negative	New
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US\$500.0 mil GO rfdg bnds ser 2016 A due 03/01/2036

<i>Long Term Rating</i>	AA+/Negative	New
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Rationale

Standard & Poor's Ratings Services has assigned its 'AA+' rating and negative outlook to the Commonwealth of Massachusetts \$600 million general obligation (GO) bonds consolidated loan of 2016 series A and \$500 million GO refunding bonds 2016 series A. Standard & Poor's has also affirmed its 'AA+' rating on the commonwealth's approximately \$20.4 billion of parity GO bonds outstanding, its 'AA' rating on commonwealth appropriation secured debt, and its 'A+' rating on the commonwealth's moral obligation debt. The outlook is negative.

Factors supporting the 'AA+' GO rating include what we view as Massachusetts':

- Strong historical budget performance, with timely monitoring of revenues and expenditures and swift action when needed to make adjustments, with a focus on structural solutions to budget balance;
- Strong financial, debt, and budget management policies, including annualized formal debt affordability statements, and multiyear capital investment and financial planning;
- Adequate budget stabilization fund (BSF) balance;
- High wealth and income levels; and
- Deep and diverse economy, which continues its steady recovery.

We understand that the consolidated loan of 2016 series A will be used to fund various capital purposes, and the GO refunding bonds 2016 series A are being issued to refund various issues outstanding.

Standard & Poor's believes the commonwealth's high debt burden and high unfunded pension and other postemployment benefit (OPEB) liabilities are offsetting considerations to the current rating. Although we view Massachusetts' total postretirement liabilities as relatively high, we believe the commonwealth has been actively managing these liabilities with a focus on cost control and reform in recent years.

Massachusetts' economy has recovered steadily, outpacing national and regional trends by most measures. Real state GDP rose 2.3% in calendar 2014, compared with 2.2% for the nation. The commonwealth's average annual

unemployment rate in 2014 was 5.8% compared with 6.2% for the nation. The preliminary state unemployment rate as of December 2015 has fallen to 4.7%, compared with 5.0% for the nation, the result, however, mostly of recent contraction in the labor force. Employment growth following the financial crisis was strong relative to other states and the commonwealth regained its pre-recession employment peak in 2013, according to the Bureau of Labor Statistics. However, IHS Global Insight Inc. forecasts slightly lower state employment growth in calendar years 2016, 2017, and 2018 at 1.7%, 1.0%, and 0.9%, respectively, in those years, compared with its forecast of 1.7%, 1.2%, and 1.1% for the U.S. in that time frame. In our view, Massachusetts' economic fundamentals and key anchors, which are centered on higher education, technology, and health care, should contribute to continued expansion. Income growth has also been strong relative to that of other states, with 2014 per capita personal income ranked second in the U.S. behind that of Connecticut, at 128% of the U.S. average.

We believe Massachusetts' budget has generally been structurally balanced in recent years with good reserves, although two rounds of midyear budget adjustments were needed in fiscal 2015, primarily prompted by higher-than-budgeted spending and some revenue shortfalls. The state currently believes that fiscal 2016 is in balance on a statutory basis after midyear budget adjustments, although it is projecting a small decline in overall operating fund reserves in fiscal 2016 to \$1.32 billion, or 3.2% of budgeted expenditures and other uses. The state has attributed the fiscal 2016 budget shortfall to legislative spending overrides of the governor's budget vetoes, a two-day state sales tax holiday, and a lower estimate of nontax revenues, partially mitigated by midyear executive budget adjustments. The governor has proposed a fiscal 2017 budget that further reduces the use of one-time revenues and makes a modest deposit to Massachusetts' rainy-day fund, although overall reserves would still be less than at fiscal year-end 2015 (see "Massachusetts Governor's Budget Proposal is Mildly Positive," published Feb. 4, 2016, on RatingsDirect).

Last year the state had budgeted originally a drawdown in its BSF, but with the help of two rounds of midfiscal 2015 budget adjustments, the commonwealth produced an operating surplus, of which \$124 million was deposited into the BSF. This was slightly more than the originally budgeted BSF drawdown, producing what we view as a nominal \$4 million increase. Combined operating fund balances at fiscal year-end 2015, including the BSF, were \$1.57 billion, or 4.0% of expenditures and other uses. State tax revenues have been at or slightly above budgeted levels in recent years; midyear shortfalls have largely been the result of above-budgeted spending or nontax revenues coming in below budget in our opinion.

The commonwealth drew down its BSF by \$308 million in fiscal 2014 to end with a total operating fund balance of 3.9% of expenditures, on a budgetary basis. The last peak of the BSF was in 2012, when it reached \$1.652 billion, or 4.9% of operating expenditures, and when total operating reserves, including the BSF, reached 5.9%.

On a generally accepted accounting principles (GAAP) basis, Massachusetts ended fiscal 2014 (the most recent audited year) with an available assigned and unassigned general fund balance of \$1.59 billion, plus a BSF balance of \$1.25 billion, for a combined balance that we view as strong at 8.3% of general fund expenditures, down somewhat from 10.1% the year before. Unaudited fiscal 2015 GAAP financial statements indicated a fiscal 2015 available general fund balance of \$1.49 billion, plus a BSF balance of \$1.25 billion, for a combined 7.5% of expenditures.

At fiscal year-end 2015 on an unaudited basis, we calculate GO debt of \$20.8 billion and total tax-supported debt of \$34.5 billion, for total tax-backed debt per capita of \$5,085. The commonwealth reports it had \$20.4 billion of GO debt

outstanding as of Jan. 31, 2016. By most measures, we believe Massachusetts' debt burden remains high compared with that of other states. Debt per capita was high, in our view, at \$5,121 at fiscal year-end 2014, the last audited year, and 8.7% of personal income. Planned debt issuance remains within the parameters of the commonwealth's debt affordability policy and bond cap. A capital and debt affordability committee includes seven voting members and eight nonvoting members from the legislature and is charged with formally reviewing the capital investment plan and providing an estimate of debt authorization for each year to stay within certain debt parameters. Massachusetts' current capital plan calls for \$2.125 billion of GO borrowing in fiscal 2016, a level amount from 2015. We view fiscal 2014 total tax-backed debt service of about 6% of general governmental spending as moderately high.

Other long-term liabilities are also large, in our opinion. We believe combined unfunded pension liabilities of \$34.2 billion as of Jan. 1, 2015, or \$4,928 per capita, were high, although the state continues to fully fund its actuarial annual required contribution (ARC), it is on a lagged statutory basis, and has not fully funded its ARC on an annual basis since fiscal 2011. A decline in the commonwealth's actuarial pension funded ratio as of the most recent Jan. 1, 2015, actuarial valuation date was in part due to a lowering of actuarial return assumptions and new experience data, which we believe shows conservative management of pension liabilities. According to unaudited 2015 financial statement notes, the commonwealth's pension liability will decline slightly with a break out of state-only net pension liabilities to \$24.9 billion. In our opinion, Massachusetts' unfunded OPEB is also moderately high at \$15.9 billion as of Jan. 1, 2015, net of \$610.0 million of actuarial assets in an OPEB trust fund, or \$2,357 per capita. Massachusetts intends to make future payments to the OPEB trust fund with 5% of excess capital gains tax distributed to the BSF (although this requirement was suspended in fiscal 2015), and a portion of tobacco settlement money that increases in 10% increments each year. In fiscal 2016, the incremental tobacco money increase to the OPEB trust was suspended and 30% of tobacco settlement money, or approximately \$73 million, is expected to be contributed to the OPEB trust fund, contingent on unexpended debt service appropriations.

The commonwealth estimates on a budgetary basis that its combined budgetary debt service, pension payments, and OPEB payments will be about 12% of budgeted expenditures in fiscal 2016.

Based on the analytic factors we evaluate for states, on a scale of '1.0' (strongest) to '4.0' (weakest), we have assigned a composite score of '1.9' to Massachusetts.

Although a score of '1.9' is indicative under our criteria of a rating of 'AA', we have notched up the rating to reflect the commonwealth's strong financial management practices, such as timely proactive midyear budget adjustments, and a recent move to more conservative pension investment return assumptions, that while temporarily lowering pension funded ratios, in our opinion position them better for the future.

Outlook

The negative outlook reflects a projected decline in financial reserves in fiscal 2016 from what we view was an adequate level at the end of fiscal 2015, despite a period of economic expansion and generally positive revenue trends, and which follows previous drawdowns that occurred in 2013 and 2014. The commonwealth also suspended scheduled transfers of excess capital gains tax revenue to the BSF in fiscal years 2015 and 2016, although the governor

has proposed partially resuming such transfer in fiscal 2017. We had viewed the policy of setting aside above trend capital gains tax during good times as a positive budget management tool that could mitigate potential future budget volatility. Reduction of reserves could contribute to a lower rating over the two-year outlook horizon if we feel that financial flexibility is impaired--especially in light of relatively high fixed costs related to debt and retirement funding. Should the commonwealth reverse the trend of reserve reductions, we could return the outlook to stable.

Governmental Framework

State finance law requires that the governor submit a balanced budget and the House and Senate each produce a balanced budget. The final general appropriation act must also be balanced. If a revenue shortfall is identified, the governor is required by section 9C of Chapter 29 to reduce agency appropriations or recommend a transfer from the BSF.

Massachusetts has autonomy to raise taxes and has adjusted its tax structure over time. Medicaid accounts for about 35% of total spending while direct local aid accounts for about 13% of budgeted 2016 spending. Funding levels for major program areas have been adjusted as needed. Massachusetts voters have approved revenue growth limitations, but these have not negatively affected operations or limited flexibility in our view. More significant measures to reduce or eliminate major tax sources have been on the ballot but not approved. An initiative to raise tax rates on those earning more than \$1 million by 4% of income has gathered enough signatures for the legislature to consider a referendum. We note that the state legislature can amend various voter-initiative measures before they take effect. The commonwealth is authorized to issue GO debt, special obligation debt, and federal grant anticipation notes. There is a statutory limit on debt outstanding and a statutory limitation on debt service appropriations set at 10%. These limitations have not impaired flexibility to manage capital and infrastructure requirements. There is no statutory priority for funding debt, but debt service payments are not subject to the warrant requirement applicable to other state spending, and we understand that the comptroller and other state officials have developed procedures to prioritize payments and debt service is given the highest priority among various payment obligations.

On a scale from '1.0' (strongest) to '4.0' (weakest), Standard & Poor's assigned a score of '1.5' to the commonwealth's governmental framework.

Financial Management

Financial management assessment: 'strong'

Standard & Poor's maintains a "strong" financial management assessment (FMA) score for Massachusetts. In our framework, an FMA of strong indicates that practices are strong, well embedded, and likely sustainable. Many of the commonwealth's management practices related to debt and financial management are embedded in statute.

Highlights include the following:

- Massachusetts uses internal resources and outside economic forecasting firms to develop a consensus revenue forecast. It has regularly performed monthly revenue estimates and quarterly budget reviews. Legislation approved in 2008 requires that revenue reports be submitted semi-monthly to the legislature.

- Five-year financial forecasting has been implemented. We understand that it will be updated annually and integrated into the budget process.
- A five-year capital improvement plan (CIP; administrative intent, not binding) is in place that coordinates every facet of debt issuance. Included in the CIP is a detailed debt affordability analysis that is also updated each year.
- The commonwealth has detailed and frequently reviewed investment policies managed through the office of the treasurer. Quarterly cash flow projections are prepared and submitted to the legislature.
- Massachusetts has a statutorily established BSF that prescribes a mechanism for funding, as well as funding levels, although the process has sometimes been changed from year to year.

There are statutory limits on debt issuance. For direct debt, there is a limit allowing the issue of up to 105% of the previous year's limit. There is also a limit on annual debt service of 10% of the then-current year's budget appropriation. In addition to the aforementioned statutory requirement, the governor's office adheres to an administrative bond cap (debt service capped at 8% of budgeted revenues), which sets the annual limit on debt issuance. The treasurer's office maintains debt management and swap policies that we view as comprehensive. An asset/liability management policy was introduced last fiscal year.

Massachusetts has a statutorily established BSF that prescribes a mechanism for funding, as well as funding levels. Statute requires the deposit of 100% of consolidated net surplus in any given year into BSF. The statute also provides that the BSF's maximum amount cannot exceed 15% of the current year's revenues. The commonwealth must use any excess above that for tax reduction. A change was made in 2010 to direct capital gains tax revenues in excess of \$1 billion to the fund, although this has been suspended in the last two years. Legislation approved in 2012 indexes the capital gains amount to growth in U.S. gross domestic product. The statute also directs 5% of the excess to the state retiree benefits trust fund and the pension liability fund. We believe this measure has the benefit of enhancing the fund while decreasing budget reliance on this cyclical revenue source. Nevertheless, the state diverted to the general fund in fiscal years 2015 and 2016 excess capital gains tax that would otherwise have gone to the BSF. Certain judgments and settlements must also be deposited to the fund, although this requirement was modified in fiscal 2015 to require that only settlements and judgments exceeding the average of such total for the preceding five fiscal years would be transferred to the BSF.

The commonwealth has detailed and frequently reviewed investment policies managed through the office of the treasurer. Quarterly cash flow projections are prepared and submitted to the legislature.

Budget management framework

Once the budget is approved, the Secretary of Administration and Finance (A&F) monitors expenditures on an ongoing basis, not less than quarterly, and receives regular monthly updates on revenue receipts. The administrative and finance secretary is required to formally update revenue projections and submit them to the legislature in October. If, at any time, projected revenues are expected to be insufficient to meet appropriations, the deficiency is certified by A&F and, pursuant to statute (section 9C of Chapter 29), the governor is required to reduce allotments or submit proposals to raise additional revenues or to make appropriations from the BSF to restore balance. Budget adjustments have historically been implemented regularly and on time and deficits are not carried forward into future fiscal years.

Massachusetts is a voter-initiative state. Although there have been voter initiatives that limit the overall growth in state tax revenue and a limit on the amount of bonds outstanding and debt service appropriations, these have not

substantially altered Massachusetts' ability to manage its budget or fund debt service. While more recent ballot initiatives to reduce or eliminate major tax sources of the state were not approved, the legislature can amend an initiative, and a recent initiative rolled back inflation indexing for a gas tax. As noted above, currently an initiative to add an extra 4.0% income tax to annual income of more than \$1 million a year has qualified enough signatures to be considered by the legislature for placement on a ballot.

The commonwealth provides a relatively high level of service in our opinion. Adjustments have been made to programs but reductions to areas such as education have been limited.

On a scale from '1.0' (strongest) to '4.0' (weakest), Standard & Poor's assigned a score of '1.0' to Massachusetts' financial management framework.

Economy

Massachusetts' labor market fared relatively well in 2014. According to IHS Global Insight, private-sector payroll gains averaged 1.6%, compared with 1.9% for the U.S. Unemployment rates have declined at a steady pace due to positive employment trends. The average annual unemployment rate for 2014 was 5.8%, which was below the 6.2% rate for the nation, while the preliminary state unemployment rate as of December 2015 had fallen to 4.7%, compared with 5.0% for the nation, although part of the state decline is attributable to a lower labor force. The U.S. Census Bureau population estimate for the state in 2015 is 6.794 million, a 0.6% increase over 2014, and a 6.1% increase over the past 10 years, compared with 8.8% for the nation. Population growth has outpaced the region since 2007 but continues to lag the nation and we expect this trend to continue. Massachusetts' age dependency ratio of nonworking age population to working age population was better than that of the nation at 55.5% in 2014, compared with 60.2% for the nation.

Massachusetts has always had high income levels. Per capita personal income increased to \$58,737 in 2014, or 128% of the national level--a ratio the commonwealth has held consistently for the past six years. We expect that income will remain well ahead of other states based on the nature of the jobs being created and the pace of expansion. IHS Global Insight projects state gross product to rise 1.9 % in 2016, 2.6% in 2017, 2.5% in 2018, and 2.2% in 2019, at rates slightly under, but comparable to, its forecast for the U.S. In 2014, gross state product per capita was 125% of the nation.

The economy has diversified over time and education and health services now make up the primary employment sectors, accounting for nearly 22% of total non-farm employment in 2014 according to the Bureau of Labor Statistics. This is followed by trade and transport (16%) and professional business services (15%). Cyclical sectors, such as manufacturing and construction, represent only 7% and 4% of employment, respectively. 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. In addition, its defense-related industries continue to perform well. Massachusetts ranks eighth out of the 50 states by value of federal defense and research contract awards. This

part of the economy could be affected by any federal fiscal consolidation in the future.

On a scale from '1.0' (strongest) to '4.0' (weakest), Standard & Poor's assigned a score of '1.8' to Massachusetts' economy.

Budgetary Performance

The state has established a formal BSF under statutory law that receives excess capital gains taxes over a threshold amount, indexed for inflation. A threshold of \$1 billion was in effect for fiscal years 2011, 2012, and 2013. For fiscal years after fiscal 2013, the threshold is subject to annual adjustment to reflect the average annual rate of growth in U. S. GDP over the preceding five years. Under statutory law, tax revenues collected from capital gains income during a fiscal year that exceed the threshold are required to be transferred to the BSF, with 5% of the amount so deposited then transferred to the State Retiree Benefits Trust Fund (for OPEB) and an additional 5% transferred to the commonwealth's pension liability fund. However, in fiscal years 2015 and 2016 capital gains taxes that would have otherwise flowed to the BSF were diverted to pay for general fund budget expenditures. The governor has proposed partially resuming a \$206 million deposit of capital gains in his fiscal 2017 budget proposal. The enacted 2016 budget assumes the fiscal 2016 capital gains collections threshold (suspended in fiscal 2016) to be approximately \$1.087 billion, with the excess diverted to the general fund instead of the BSF to be approximately \$300 million.

The governor's proposed budget for fiscal 2017 forecasts 4.3% revenue growth and a balanced budget, with minimal use of one-time revenues. Although it proposes a \$206 million deposit of excess capital gains tax to the BSF, this would be still \$150 million short of the original statutory formula for deposit of excess capital gains tax. Overall, we believe the proposed budget indicates positive revenue trends, although still budget worries remain in regard to growth in MassHealth spending and the slow build-up of the BSF during a period of positive revenue growth (see "Massachusetts Governor's Budget Proposal is Mildly Positive," published Feb. 4, 2016).

The BSF reached a peak of \$2.335 billion at fiscal year-end 2007, before being drawn down to \$670 million at fiscal year-end 2010 during the Great Recession. The commonwealth subsequently began using excess capital gains tax to build up the fund again to \$1.652 billion at fiscal year-end 2012. The BSF stood at \$1.252 billion at fiscal year-end 2015, or 3.2% of operating expenditures, following a \$124 million deposit after the end of the fiscal year from surplus operating revenues into the BSF, offset by budgeted fiscal 2015 BSF draws, for a net increase of \$4 million in the BSF. Total operating reserves at fiscal year-end 2015, including the BSF, were \$1.57 billion, or 4.0% of expenditures.

Following \$49 million of mid-fiscal 2016 budget allotment reductions by the governor, \$56 million of identified nontax revenue solutions, and \$48 million of tax revenues exceeding the revised benchmark through January, the commonwealth believes that its fiscal 2016 budget is near statutory budget balance. Massachusetts projects the BSF to increase by a slight \$6 million in fiscal 2016. However, after a projected decline in other fund balances, overall reserves would decline by \$251 million under current state projections, to \$1.32 billion at fiscal year-end 2016, or 3.2% of budgetary expenditures and other uses. However, the state typically has been left with unused appropriations of \$150 million-250 million at fiscal year-end that could boost results if the legislature follows its typical pattern of re-appropriating unused appropriations to the following fiscal year, which could leave balances flat in fiscal 2016.

We believe the commonwealth is somewhat exposed to cyclical swings in capital gains tax revenue, which Massachusetts projects will comprise about 6% of fiscal 2017 tax revenues. However, we also believe the commonwealth has a good history of making timely midyear budget adjustments when needed. Massachusetts calculates one-time budget items in the 2016 budget at \$629 million, or only 1.5% of projected expenditures, indicating in our view near structural balance, despite the projected small draw down in overall reserves.

We view Massachusetts' liquidity as strong, with the help of annual cash flow note borrowing. The commonwealth does not engage in inter-fund borrowing. Massachusetts currently projects to end fiscal 2016 with a general fund cash balance of \$2.36 billion, and estimates its month-end cash low point in fiscal 2016 will have been August 2015, with a \$551.4 million general fund cash balance. In fiscal 2015, the commonwealth issued \$1.2 billion in revenue anticipation notes, maturing in April, May, and June 2015. Cash flow notes must be repaid by the end of the fiscal year. Fiscal 2015 ended with a non-segregated general fund cash position of \$2.14 billion.

We view Massachusetts' revenue sources as diverse. Income tax was 58% of operating funds tax revenues in fiscal 2015 on a budgetary basis, and sales tax was 23%.

We believe the commonwealth's revenue forecasting is good. Massachusetts prepares quarterly revenue updates and uses a consensus revenue forecast for budgeting purposes. We believe that state budgeting has historically been done with an eye toward long-term structural balance. However, we believe that Massachusetts is a high service state, with expenditures that may be difficult at times to reduce. In particular, Medicaid plus health and human services spending accounts for 48% of the fiscal 2016 budget expenditures, while operating funds' debt service accounts for about 6%. Pension funding costs from operating funds in fiscal 2016 are estimated at \$1.97 billion, or 5%, while OPEB costs for current retirees are about another 1%.

On a scale from '1.0' (strongest) to '4.0' (weakest), Standard & Poor's assigned a score of '1.7' to Massachusetts' budgetary performance.

Debt And Liabilities

We calculate total GO bond proceeds outstanding at fiscal year-end June 30, 2014, the last audited year, at \$20.1 billion, and total tax-supported debt at \$33.1 billion, including debt issued by state authorities and supported by the statewide sales tax, as well as debt of state agencies supported by annual state contract assistance payments. At fiscal end 2015 on an unaudited basis, we calculate GO debt of \$20.8 billion and total tax supported debt of \$34.5 billion, for total tax-backed debt per capita of \$5,085. The commonwealth reports it had \$20.4 billion of GO debt outstanding as of January 31, 2016. By most measures, Massachusetts' debt burden remains high compared with that of other states. The variable-rate portfolio is currently 17% of total GO debt, and is actively managed by the commonwealth under formal debt policies. About \$1.2 billion, or 6% of state GO debt, consists of unhedged variable-rate bonds, with the remainder of the variable-rate debt's interest rates synthetically fixed through interest rate swaps. The state has a multi-year asset liability management program that could increase its exposure to unhedged variable-rate debt. However, there are no major plans in the near future to significantly expand its unhedged portfolio. In the past several years, the overall portfolio of variable-rate debt has diversified, and put risk has been significantly reduced in our

opinion. The state also has about \$660.5 million of direct placement debt, whose structure we do not believe creates an unusual risk to the state. Tax-backed debt per capita is high, in our view, at what we calculate as \$5,121 at fiscal year-end 2014 and 8.7% of personal income. We also calculate combined total tax-backed debt service to operating expenditures as high at 6% on a GAAP basis.

The current long-term, five-year CIP projects debt service to remain below the state's calculation of 8% of budgeted revenues through fiscal 2020. A state debt and capital affordability committee conducts an annual debt affordability study. The committee includes seven voting members and eight nonvoting members from the legislature and is charged with formally reviewing the CIP and providing an estimate of debt authorization for the year. The current CIP for fiscal 2016 calls for \$2.125 of bonding, a level amount from fiscal 2015, as part of a fiscal 2016 total capital budget of \$4.1 billion. Our debt calculation includes special tax bonds supported by statewide tax sources in the ratios we use to assess total tax-supported debt.

The most recent actuarial valuation of the combined pension indicates a decline in combined pension funded ratios as of Jan. 1, 2015, although in part caused by a lower rate of return assumption and a new experience study, which we consider a positive development. The aggregate funded ratio declined on an actuarial basis to 59.0% from 61.2% in 2014, but is now calculated at 61% using 2015 unaudited GAAP standards, but remains far below the 78.6%-funded ratio recorded in 2008. The unfunded actuarial liability was \$33.4 billion in fiscal 2014, or \$4,484 per capita, and 7.6% of income. However, the state's unaudited net pension liability for fiscal 2015 under new Governmental Accounting Standards Board 68 rules, which breaks out the state only portion of liabilities, was \$24.9 billion, or \$3,670 per capita, which we still consider high. Massachusetts attributes the relatively low funded ratio to recognition of prior-year investment losses and certain adjustments to actuarial assumptions, including mortality rates and lowering the investment return assumption to 7.75% in 2015 from 8.00%, which we view as more conservative. The funded ratio would have been 61.6% without the change to actuarial assumptions. However, the funded ratio remains below the average funded ratio for other U.S. states. On a market value basis the aggregate fund ratio was slightly higher at 61.7%.

The state has continued to fully fund its actuarial annual required pension contribution on a lagged budgetary basis, using valuation projections from earlier years, which has resulted in recent years in annual funding less than its actuarial annual required contribution level under GAAP. In fiscal 2014, the state contributed 80% of actuarial annual required contributions to its two main employees' retirement system, and the state reports this fell to 75% in fiscal 2015, in part due to the more conservative rate of return assumptions in the most recent valuation. The commonwealth projects that using its actuarial assumptions and statutory funding requirements, it would fully amortize its unfunded pension liability in approximately 20 years. The next actuarial report to be used for determining budgetary pension contributions will be completed this summer, to be used for the next three years of pension contributions starting in fiscal 2018.

Massachusetts had a \$15.9 billion unfunded actuarial accrued OPEB liability as of Jan. 1, 2015, which we consider sizable, but we note the decline from \$16.3 billion recorded in 2012 as various reform measures were phased in and OPEB trust fund deposits have been made. The commonwealth has dedicated tobacco settlement revenues toward its OPEB trust fund to provide a permanent funding source, which we consider a credit positive, although trust fund

deposits were made from other sources recently. The portion of tobacco settlement money dedicated to the OPEB trust fund is scheduled to increase in 10% increments each year, until it reaches 100%, although the incremental increase was suspended in fiscal 2016. In fiscal 2016, 30% of tobacco settlement money, or approximately \$73 million, is expected to be contributed to the OPEB trust fund. The trust had actuarial assets of \$610.0 million as of Jan. 1, 2015. In fiscal 2014, the state funded 49% of its actuarial annually required OPEB contribution.

On a scale from '1.0' (strongest) to '4.0' (weakest), Standard & Poor's assigned a score of '3.4' to Massachusetts' debt and liability profile.

Commonwealth of Massachusetts -- Financial Summary

(Mil. \$)	--Fiscal year ended June 30--				
	Unaudited	Audited			
		2015	2014	2013	2012
General fund (GF)					
Revenues	35,030	32,592	30,694	29,432	29,764
Expenditures	34,084	31,300	29,148	28,025	27,012
Other financing sources and uses	(1,037)	(1,689)	(1,661)	(1,112)	(1,535)
Net result	(92)	(398)	(114)	295	1,218
Total ending GF balance	2,743	2,835	3,233	3,347	3,053
As a % of expenditures and financing uses	7.5	8.2	9.9	10.7	10.0
Available GF balance (assigned+unassigned balances)	1,491	1,587	1,676	1,695	1,673
Budget stabilization fund (BSF) balance	1,253	1,248	1,557	1,652	1,379
Combined available GF and BSF balance as % of expenditures	7.5	8.2	9.9	10.7	10.0
Debt					
General obligation debt	20,802	20,149	19,575	19,257	18,820
Total tax-supported debt	34,549	34,497	32,440	32,020	30,177
Tax-supported debt per capita	5,085	5,121	4,847	4,818	4,568
Tax-supported debt as % of total personal income	N.A.	8.6	8.5	8.5	8.4

GAAP--Generally accepted accounting principles. N.A.--Not available.

Related Criteria And Research

Related Criteria

- USPF Criteria: Assigning Issue Credit Ratings Of Operating Entities, May 20, 2015
- Criteria: Use of CreditWatch And Outlooks, Sept. 14, 2009
- USPF Criteria: Debt Statement Analysis, Aug. 22, 2006
- USPF Criteria: Financial Management Assessment, June 27, 2006
- USPF Criteria: State Ratings Methodology, Jan. 3, 2011
- USPF Criteria: State Credit Enhancement Programs, Nov. 13, 2008
- USPF Criteria: Appropriation-Backed Obligations, June 13, 2007
- USPF Criteria: Rating Government Department Appropriation-Backed Debt In U.S. Public Finance, Nov. 7, 2007
- USPF Criteria: Bond Anticipation Note Rating Methodology, Aug. 31, 2011

- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- USPF Criteria: Commercial Paper, VRDO, And Self-Liquidity, July 3, 2007
- USPF Criteria: Limited-Tax GO Debt, Jan. 10, 2002
- USPF Criteria: Bank Liquidity Facilities, June 22, 2007
- USPF Criteria: Standby Bond Purchase Agreement Automatic Termination Events, April 11, 2008
- Criteria: Toll Road And Bridge Revenue Bonds In The U.S. And Canada, Feb. 25, 2014
- USPF Criteria: Methodology: Definitions And Related Analytic Practices For Covenant And Payment Provisions In U.S. Public Finance Revenue Obligations, Nov. 29, 2011
- USPF Criteria: Local Government GO Ratings Methodology And Assumptions, Sept. 12, 2013

Ratings Detail (As Of February 24, 2016)

Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts St Coll Bldg Auth		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A+/Stable	Affirmed
Brockton GO st qual rfdg bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Negative	Affirmed
Central Berkshire Regl Sch Dist GO bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
Fall River GO (AGM)		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Gateway Regl Sch Dist SCHSTPR		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A+/Stable	Affirmed
Gill-Montague Regl Sch Dist qualified GO bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
Greater Lowell Regl Voc Tech Sch Dist GO st qual sch		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Unenhanced Rating</i>	NR(SPUR)	
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Greenfield GO		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Hampshire Regl Sch Dist GO st qual rfdg bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
Haverhill GO st qual BANs dtd 12/01/2015 due 12/01/2016		
<i>Short Term Rating</i>	SP-1+	Affirmed
Hinsdale GO I - Non Sch St prog		
<i>Long Term Rating</i>	AA/Negative	Affirmed
Holyoke GO state qual rfdg bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed

Ratings Detail (As Of February 24, 2016) (cont.)		
Underlying Rating for Credit Program	A+ /Stable	Affirmed
Lawrence		
Short Term Rating	SP-1+	Affirmed
Lawrence		
Short Term Rating	SP-1+	Affirmed
Lawrence		
Short Term Rating	SP-1+	Affirmed
Lawrence		
Short Term Rating	SP-1+	Affirmed
Lawrence		
Short Term Rating	SP-1+	Affirmed
Lawrence GO st qual deficit fin BANs dtd 03/01/2016 due 03/01/2017		
Short Term Rating	SP-1+	Affirmed
Lawrence GO (Non Sch Prog)		
Long Term Rating	AA/Negative	Affirmed
Lawrence GO		
Long Term Rating	AA/Negative	Affirmed
Underlying Rating for Credit Program	A /Stable	Affirmed
Lowell GO		
Long Term Rating	AA/Negative	Affirmed
Unenhanced Rating	NR(SPUR)	
Underlying Rating for Credit Program	AA- /Stable	Affirmed
Lowell GO st qual mun purp loan bnds ser 2015 due 09/01/2035		
Long Term Rating	AA/Negative	Affirmed
Underlying Rating for Credit Program	AA- /Stable	Affirmed
Lowell GO (AGM)		
Unenhanced Rating	AA(SPUR)/Negative	Affirmed
Lowell NONSCHSTPR		
Long Term Rating	AA/Negative	Affirmed
Underlying Rating for Credit Program	AA- /Stable	Affirmed
Lynn GO		
Long Term Rating	AA/Negative	Affirmed
Underlying Rating for Credit Program	A+ /Stable	Affirmed
Lynn GO st qual sch bnds ser 2016 due 09/01/2038		
Long Term Rating	AA/Negative	Affirmed
Underlying Rating for Credit Program	A+ /Stable	Affirmed
Massachusetts tax exempt comm pap nts ser L due 01/27/2021		
Short Term Rating	A-1+	Affirmed
Massachusetts CP A		
Short Term Rating	A-1+	Affirmed

Ratings Detail (As Of February 24, 2016) (cont.)

Massachusetts CP B		
<i>Short Term Rating</i>	A-1+	Affirmed
Massachusetts GO VRDBs - C		
<i>Long Term Rating</i>	AA+/A-1+/Negative	Affirmed
Massachusetts GO VRDBs 2000A		
<i>Long Term Rating</i>	AA+/A-1/Negative	Affirmed
Massachusetts GO VRDBs 2000B		
<i>Long Term Rating</i>	AA+/A-1/Negative	Affirmed
Massachusetts GO VRDBs 2006A		
<i>Long Term Rating</i>	AA+/A-1+/Negative	Affirmed
Massachusetts GO (wrap of insured) (ASSURED GTY & AMBAC) (SEC MKT)		
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts GO (wrap of insured) (FGIC & BHAC) (SEC MKT)		
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts GO (AGM) (SEC MKT)		
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts GO (FGIC)		
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts GO (MBIA) (Assured Gty)		
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts St Coll Bldg Auth rfdg rev bnds ser 2016 A due 05/01/2049		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A+/Stable	Affirmed
Massachusetts St Coll Bldg Auth 2015A		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A+/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed

Ratings Detail (As Of February 24, 2016) (cont.)

Methuen GO st qual mun purp loan bnds ser 2015 due 09/01/2043		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Methuen GO State Qualified Sch Prj Loan CH 70B Bonds due 09/01/2034		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Mohawk Trail Regl Sch Dist st qual go sch bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
New Bedford GO st enhancement prog		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
New Bedford GO State Enhancement Prog		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Unenhanced Rating</i>	NR(SPUR)	
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
North Adams NONSCHSTPR		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A-/Negative	Affirmed
Pittsfield st qual GO mun purp loan bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A+/Stable	Affirmed
Revere GO (ASSURED GTY)		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Revere GO		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Revere GO		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Rockland Twn GO st qual mun purp ln bnds ser 2015		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Salem NONSCHSTPR		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Southern Worcester County Regional Vocational School District		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Springfield GO qual sch construction bnds (State Qualified) due 06/01/2027		
<i>Long Term Rating</i>	AA/Negative	Affirmed

Ratings Detail (As Of February 24, 2016) (cont.)

Springfield GO st qual rfdg bnds ser 2015		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Springfield GO St Qual Mun Purpose Loan of 2015 Bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Springfield GO St Qual Mun Purpose Loan of 2015 Bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Springfield NONSCHSTPR		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Springfield (Non-School State Prog) (AGM)		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Taunton mun purp st qual loan bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Taunton GO state qual bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
Taunton GO st qual mun purp ln bnds		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Taunton GO NONSCHSTPR		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	AA-/Stable	Affirmed
Winchendon st qual GO mun purp loan bnds ser 2015 dtd 11/16/2015 due 12/01/2032		
<i>Long Term Rating</i>	AA/Negative	Affirmed
<i>Underlying Rating for Credit Program</i>	A-/Stable	Affirmed
Central Berkshire Regl Sch Dist GO		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Chelsea non sch st		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Fall River Non Sch ST Prgm		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Lawrence non sch st prgm		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed
Lawrence GO		
<i>Unenhanced Rating</i>	AA(SPUR)/Negative	Affirmed

Ratings Detail (As Of February 24, 2016) (cont.)

Massachusetts GO

Unenhanced Rating AA+(SPUR)/Negative Affirmed

Massachusetts St Coll Bldg Auth State Enhancement

Underlying Rating for Credit Program A+/Stable Affirmed

Unenhanced Rating AA(SPUR)/Negative Affirmed

Ralph C. Mahar Regl Sch Dist GO

Unenhanced Rating AA(SPUR)/Negative Affirmed

Springfield Non Sch St Prgm

Unenhanced Rating AA(SPUR)/Negative Affirmed

Boston Hsg Auth, Massachusetts

Massachusetts

Boston Hsg Auth (Massachusetts) APPROP

Long Term Rating A+/Negative Affirmed

Massachusetts Bay Transp Auth, Massachusetts

Massachusetts

Massachusetts Bay Transp Auth (Massachusetts) var rate gen transp sys bnds 2000A-1 & A-2 ser dtd 03/09/2000 RMKTD dtd 09/30/2011 due 03/01/2030

Long Term Rating AA+/A-2/Negative Affirmed

Massachusetts Bay Transp Auth (Massachusetts) GO

Long Term Rating AA+/Negative Affirmed

Massachusetts Bay Transp Auth (Massachusetts) GOEQUIV

Long Term Rating AA+/A-1/Negative Affirmed

Massachusetts Bay Transp Auth (Massachusetts) GO (AGM)

Unenhanced Rating AA+(SPUR)/Negative Affirmed

Massachusetts Bay Transp Auth transp sys bnds (Massachusetts)

Unenhanced Rating AA+(SPUR)/Negative Affirmed

Massachusetts Bay Transp Auth (Massachusetts)

Unenhanced Rating AA+(SPUR)/Negative Affirmed

Massachusetts Dept of Transp, Massachusetts

Massachusetts

Massachusetts Dept of Transp (Massachusetts) GO

Long Term Rating AA+/A-1/Negative Affirmed

Unenhanced Rating NR(SPUR)

Massachusetts Dept of Transp (Massachusetts) GO

Long Term Rating AA+/Negative Affirmed

Massachusetts Dept of Transp (Massachusetts) GO VRDO 2010A-1

Long Term Rating AA+/A-1+/Negative Affirmed

Massachusetts Dept of Transp (Massachusetts) GO VRDO 2010A-2 A-7

Long Term Rating AA+/A-1/Negative Affirmed

Massachusetts Dept of Transp (Massachusetts) GO VRDO 2010B

Ratings Detail (As Of February 24, 2016) (cont.)		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Massachusetts Dept of Transp (Massachusetts) JOINTCRIT		
<i>Long Term Rating</i>	AAA/A-1	Affirmed
<i>Unenhanced Rating</i>	AA+(SPUR)/Negative	Affirmed
Massachusetts Dept of Transp (Massachusetts) VRDBs 2010A-7		
<i>Long Term Rating</i>	AA+/A-1+/Negative	Affirmed
Massachusetts Development Finance Agency, Massachusetts		
Massachusetts		
Massachusetts Dev Fin Agy (Massachusetts) GO		
<i>Long Term Rating</i>	AA+/Negative	Affirmed
Univ of Massachusetts Bldg Auth, Massachusetts		
Massachusetts		
University of Massachusetts Bldg Auth (Massachusetts) GO		
<i>Long Term Rating</i>	AA+/A-2/Negative	Affirmed
Univ of Massachusetts Bldg Auth (Massachusetts) GOEQUIV		
<i>Long Term Rating</i>	AA+/A-1+/Negative	Affirmed
Many issues are enhanced by bond insurance.		

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