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Summary:

Massachusetts; Appropriations; General Obligation; General Obligation Equivalent Security

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Credit Profile

US\$600.0 mil GO bnds, consolidated loan of 2019 ser G due 09/01/2049		
<i>Long Term Rating</i>	AA/Stable	New
US\$441.23 mil GO rfdg bnds (Federally Taxable) ser 2019 D due 09/01/2043		
<i>Long Term Rating</i>	AA/Stable	New
US\$189.64 mil GO rfdg bnds ser 2019 E due 12/01/2027		
<i>Long Term Rating</i>	AA/Stable	New
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AA' long-term rating to the Commonwealth of Massachusetts' \$441.23 million series 2019D federally taxable general obligation (GO) refunding bonds, \$189.64 million series 2019E GO refunding bonds, and \$600 million series 2019G GO bonds.

At the same time, S&P Global Ratings affirmed its 'AA' long-term rating on approximately \$23.6 billion of parity GO bonds outstanding, and its 'A' long-term rating on the Boston Housing Authority's series 2003 housing project bonds (West Broadway Homes IV project), supported by a commonwealth annually appropriated state-operating subsidy, subject to the terms of a trust agreement. In addition, S&P Global Ratings affirmed its 'A-1+' short-term rating on the state's GO-secured commercial paper.

The outlook on all long-term ratings is stable.

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

- Deep and diverse economy, which continues to outperform the nation on several economic indicators;
- High income levels, with per capita income at 130% of the nation in 2018, the second-highest among the states;
- Timely monitoring of revenues and expenditures and swift action when needed to make adjustments;
- Strong financial, debt, and budget management policies, including annualized formal debt affordability statements, and multiyear capital investment planning; and
- Good budget stabilization fund (BSF) balance, equal to an estimated 6.1% of expenditures and other uses at fiscal year-end 2019, and projected at 6.9% at fiscal year-end 2020.

Offsetting factors include high debt, pension, and other postemployment benefits (OPEB) liabilities. Combined debt, unfunded pension, and OPEBs to gross state product ranked sixth highest among all the states in fiscal 2017, according

to our pension commentary "U.S. State Pensions Struggle For Gains Amid Market Shifts And Demographic Headwinds" (published Oct. 30, 2018, on RatingsDirect).

In particular, the commonwealth has a low 60.7% combined pension funded ratio on a Governmental Accounting Standards Board (GASB) basis and has contributed less to its pension funds than the actuarial annual required contribution (ARC) in every fiscal year since 2011. However, Massachusetts has put in place a plan to increase annual pension contributions 8.9% to fully amortize unfunded pension liabilities by 2036. Furthermore, the \$892 million shortfall against the ARC in fiscal 2019, which we view as a structural deficit, was only about 1.9% of estimated budgetary operating expenditures. The commonwealth paid 75% of the ARC in fiscal 2019, about the same level as the 73% paid in fiscal 2018. The commonwealth has indicated that the percentage of the ARC to be contributed in fiscal 2020 will be inline with that of fiscal 2019.

Massachusetts' economy remains strong, in our view, although employment growth appears to have slowed down in 2019, after earlier growth that strongly outpaced national and regional trends by most measures. IHS Markit reports private-sector employment growth through May 2019 grew a good 1.9%, including a decline in May due to weakness in educational services and construction. Nevertheless, the unemployment rate remained steady at 3.0% in June, and the July preliminary rate was a low 2.9%. The commonwealth's average annual unemployment rate in 2018 was low at 3.3%, compared with 3.9% for the nation. Overall, IHS Markit forecasts 1.0% employment growth in both calendar years 2019 and 2020, compared with 1.4% and 1.3%, respectively, for the nation. Much of the recent growth has been in the professional, scientific, and technical services sector, which consists of higher-paying jobs, although perhaps contributing to rising home prices. Massachusetts has an above-average high-technology employment sector, which IHS estimates at about 10% of state employment, compared with 6.5% for the country as a whole. Total state personal income rose a strong 4.3% in 2018, and state per capita income was 130% (second only to Connecticut), although down from 131% the year before. IHS forecasts slightly lower state employment growth than the nation in the next few years at 0.9%, 1.0%, and 1.0% in calendar years 2019, 2020, and 2021, respectively, compared with 1.4%, 1.3%, and 1.0% for the nation for those respective years, partially because of the tight state labor market. In our view, Massachusetts' economic fundamentals and key anchors, which center on higher education, technology, finance, and health care, should contribute to continued expansion.

The commonwealth's operating revenues have come in better-than-budgeted over the past three years. Estimated fiscal 2019 tax revenue came in 4.7% better than budgeted, growing 7.0% over fiscal 2018 due, in part, to very strong growth in volatile corporate revenues, similar to what some other states have been experiencing in the wake of federal tax reform. The state estimates corporate tax collections grew about 22.4% in fiscal 2019, but has budgeted for a 13.7% corporate tax decline in fiscal 2020, contributing to its projection of only 1.4% overall tax collection growth in fiscal 2020, which the state believes should help smooth out long-term revenue growth forecasts. We believe this is reasonable given IHS' forecast of 3.7% state personal income growth in 2019 and 4.6% in 2020.

Fiscal 2019 growth followed strong fiscal 2018 tax collections, which increased 8.3% over fiscal 2017, much better than the 4.2% growth originally budgeted, excluding one-time tax settlements and judgments. The result of recent above budgeted growth has been a buildup of budget stabilization fund balances.

Massachusetts' enacted its fiscal 2020 budget about a month into the fiscal year, adopting an interim budget in the

meantime. The new 2020 budget assumes only 1.4% modest tax collection growth, and 0.7% growth in total budgeted revenues and other sources, compared with a budgeted increase in expenditures and other resources of 3.4%. This would leave a small operating surplus of \$235.9 million, or 0.5% of total budgeted expenditures and other uses. The final budget raised the revenue forecast by about \$600 million over the original state consensus. Highlights of the budget include a rise in kindergarten through grade 12 state funding by \$268 million to \$5.2 billion, with total direct local aid of \$6.4 billion, or 13.2% of total expenditures and other sources. The new budget also adds to efforts to fight the opioid epidemic, enhances the ability to collect online sales tax, and includes a drug-pricing measure that the state expects to slow growth in Medicaid costs. We calculate that state fixed costs for combined tax-supported debt service (including capital leases and contract assistance supported debt paid out of operating funds), pension contributions, and OPEB paid out of the budgetary basis operating funds would comprise about 12.8% of fiscal 2020 budget expenditures and other uses, while state paid Medicaid expenses would increase this portion to 30.0%.

Above budgeted growth has enabled the state to increase its BSF, after a period of little growth from 2014-2017. The state preliminary BSF balance totaled \$2.8 billion at fiscal year-end 2019, or 6.1% of expenditures and other uses, up from 4.5% at fiscal year-end 2018. The state has budgeted for an increase in the BSF to \$3.3 billion, or 6.9% of expenditures and other uses at fiscal year-end 2020, a level that we view as good. Total operating fund balances totaled \$3.8 billion at fiscal year-end 2019, or 8.3% of expenditures and other uses, and are budgeted to increase to \$4.1 billion at fiscal year-end 2020, or 8.5%, a level we view as strong.

We view the accumulation of budget reserves during good economic times as especially important from a credit perspective in that the state has historically shown some cyclicalities in its finances and we view its fixed costs as moderately high. The state drew down its BSF in fiscal years 2013 and 2014, even while revenues were increasing, and then essentially level-funded the BSF with small deposits until fiscal 2018, when revenues began to come in substantially above budget. We view the retention of BSF reserves, despite projected slow revenue growth in fiscal 2020 as a credit strength, but note that the state was able to budget this BSF increase while simultaneously increasing spending at a faster pace than budgeted revenue due to the unexpectedly strong revenue growth in fiscal 2019. Of interest is whether the state retains reserves during a period of economic expansion, particularly if the trend in expenditure growth is not sustainable by future years' matching revenue growth, or if the state reduces the BSF as it did in fiscal years 2013 and 2014.

Although revenue growth has been strong in recent years, the commonwealth earlier had to make midyear budget adjustments in each fiscal year from 2015-2017, particularly because of Medicaid spending pressures. At fiscal year-end 2017, the BSF was 3.1% of budgetary expenditure and other uses. Health care spending has since been mitigated, in part, by greater scrutiny of Medicaid eligibility, which caused Medicaid enrollment member months to decline 1.9% in fiscal 2018 and 1.8% in 2019 as adults moved to the commonwealth's Health Insurance Connector Authority.

Other potential long-term challenges include a state pension payment schedule that increases annual pension contributions by 8.9% compounded annually through 2036—a pace we believe that will likely exceed revenue growth. Although we recognize that Massachusetts has made budgeting its fixed costs a priority, we also view the growth in these areas as placing increased stress on the commonwealth's ability to maintain structural balance.

On a generally accepted accounting principles (GAAP) basis, Massachusetts ended fiscal 2018 (the most recent audited year) with an available assigned and unassigned general fund balance of \$1.51 billion, plus a BSF balance of \$2.0 billion. This led to a combined available balance plus BSF of \$3.52 billion, which we view as strong at 8.6% of general fund expenditures and transfers out, up from 5.9% at fiscal year-end 2017.

By most measures, we believe Massachusetts' debt burden remains high compared with that of other states, in part due to the commonwealth's support for local infrastructure. At audited fiscal year-end 2018, we calculate GO debt of \$23.1 billion and total tax-supported debt of \$38.8 billion, producing total tax-backed debt per capita of \$5,622, and 8.0% of 2018 personal income. Tax-backed debt includes GO debt, sales and gas tax supported debt, including MBTA and MSBA debt supported from state resources, capital leases, and general fund contract assistance supported debt that supports MassDOT. As of fiscal year-end June 30, 2019, the commonwealth had \$23.6 billion of GO debt outstanding. Planned debt issuance remains within the parameters of Massachusetts' debt affordability policy and bond cap. Massachusetts anticipates selling about \$2.4 billion of new money capital debt in fiscal 2019 (including the current new money sale), similar to issuance levels in each of the past two years. We calculate fiscal 2018 total tax-backed debt service at 7.0% of general governmental spending on a GAAP audited basis, a level we view as moderately high.

Other long-term liabilities are also large, in our opinion. We believe Massachusetts' share of the net pension liability for combined state pensions systems is high at \$37.7 billion as of the Jan. 1, 2018, valuation date on a GASB Statements Nos. 67 and 68 basis, or \$5,460 per capita, and 7.8% of 2018 personal income. The aggregate funded ratio improved slightly to 60.7% in 2018 from 59.5% the previous year, but the three-year average remained at 59%. Some of the reason net pension liabilities have not shown much improvement is that Massachusetts decided to lower its assumed actuarial return to a less aggressive 7.35% as of Jan. 1, 2018, which increased the total actuarial accrued liability by \$1.52 billion. The rate was previously reduced from 7.50% in 2016, and from 7.75% in 2015. The assumed rate of return will further decline to 7.25% as of Jan. 1, 2019, which the state estimates will increase actuarial accrued liability by \$1.0 billion. Massachusetts sets its annual pension contribution based on its own methodology under state statute; it has not fully funded its ARC since fiscal 2011, but expects to reach full ARC funding by 2024 under its plan to increase annual pension contributions 8.9% to fully amortize the unfunded liability by 2036.

In our opinion, Massachusetts' unfunded OPEB is also moderately high, although it has decreased significantly following recent deposits into an OPEB trust fund. The state's net OPEB liability on a GASB No. 74 basis decreased to \$14.9 billion as of a June 30, 2018, valuation date, or \$2,160 per capita, using a 3.95% discount rate. This represents a large decrease from a net OPEB position of \$19.8 billion in 2017, when the OPEB trust fund was smaller. The state's fiduciary OPEB net position was \$1.2 billion in 2018, up from \$996 million the year before. In 2018, the commonwealth originally budgeted to transfer 10% of tobacco settlement revenue into its OPEB trust fund, but subsequent legislation after the close of the fiscal year increased the percentage to 30%. The enacted fiscal 2019 budget reverted this back to 10%, or approximately \$23.7 million. In fiscal 2019, \$42.4 million of excess capital gains tax was also transferred into the OPEB trust fund.

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, which is consistent with a 'AA' indicative rating.

For more information on the Commonwealth of Massachusetts, see our analysis published April 18, 2019.

Outlook

The stable outlook reflects our view that Massachusetts' steady economic growth and proactive management will allow the commonwealth to continue to manage potential budgetary challenges, even if midyear budget shortfalls develop in future fiscal years. We believe the current increase in fiscal year-end 2019 reserves is the result of small budgeted additions to reserves and extra funds from stronger-than-budgeted revenues. Our stable outlook anticipates that the commonwealth will budget for close to breakeven operations during our two-year outlook horizon, and make midyear budget corrections should revenues weaken, as well as bank a portion of unexpected revenue windfalls in its BSF. At this point in the economic cycle and at the current rating level, we expect Massachusetts to modestly improve its BSF and maintain good balances to prepare for a potential recession.

Upside scenario

Should the commonwealth strengthen its pension funding discipline based on a prudent actuarial basis and retain material budget reserves during periods of economic growth as a matter of budgetary policy, with the aim of sustainably achieving what we view as strong reserve levels, we could raise the rating or revise the outlook.

Downside scenario

We could lower the rating if Massachusetts fails to maintain near-structural balance during periods of economic expansion. Such factors that could further pressure the rating include

Medicaid costs outpacing revenue growth; Reduced revenues in recessions due to income-tax cyclicality from above-average high-technology sector employment; The effect of federal tax reform on state and local tax deduction caps in high-tax states; and Increasing state fixed costs in excess of revenue growth that might lead to significant structural imbalance and rapidly diminishing reserves.

More specifically, these factors could stress the state's structural balance to the extent that Massachusetts fails to adhere to its plan to increase annual pension contributions by 8.9% per year to amortize unfunded pension liabilities or, if this proves insufficient, to keep GASB pension funded ratios from materially declining.

Ratings Detail (As Of August 23, 2019)

Massachusetts go bnds cons loan ser 2019F due 05/01/2029		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO rfdg bnds ser 2019 C due 05/01/2031		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO VRDB		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed

Ratings Detail (As Of August 23, 2019) (cont.)

Massachusetts GO VRDB		
<i>Long Term Rating</i>	AA/A-1+/Stable	Affirmed
Massachusetts GO VRDB		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Massachusetts GO (wrap of insured) (ASSURED GTY & AMBAC) (SEC MKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (wrap of insured) (FGIC & BHAC) (SEC MKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (AGM) (SEC MKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (BAM) (SECMKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (BAM) (SECMKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (BAM) (SECMKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (BAM) (SECMKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (BAM) (SEC MKT)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (FGIC)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO (MBIA) (Assured Gty)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Massachusetts GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed

Massachusetts GO

Ratings Detail (As Of August 23, 2019) (cont.)		
<i>Unenhanced Rating</i>	AA(SPUR)/Stable	Affirmed
The Commonwealth Of Massachusetts General Obligation Bonds Consolidated Loan of 2006 Series A		
<i>Long Term Rating</i>	AA/A-1/Stable	Affirmed
Boston Hsg Auth, Massachusetts		
Massachusetts		
Boston Hsg Auth (Massachusetts) APPROP		
<i>Long Term Rating</i>	A/Stable	Affirmed
Massachusetts Development Finance Agency, Massachusetts		
Massachusetts		
Massachusetts Dev Fin Agy (Massachusetts) GO		
<i>Long Term Rating</i>	AA/Stable	Affirmed
Univ of Massachusetts Bldg Auth, Massachusetts		
Massachusetts		
Univ of Massachusetts Bldg Auth (Massachusetts) GOEQUIV		
<i>Long Term Rating</i>	AA/A-1+/Stable	Affirmed

Many issues are enhanced by bond insurance.

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