

**CREDIT OPINION**

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# Massachusetts (Commonwealth of)

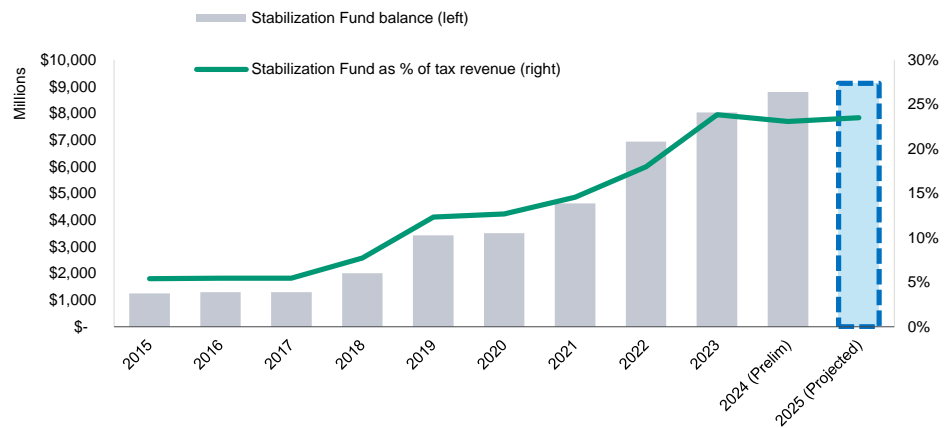
## Update to credit analysis

### Summary

The Aa1 issuer rating assigned to the [Commonwealth of Massachusetts](#) is supported by a robust economic base, with a highly educated workforce and strong personal income that helps meet the demands of a comparatively heavy long-term liability burden. The potential for revenue volatility from an economically sensitive tax system is mitigated by the Commonwealth Stabilization Fund, which is expected to remain at a record level this fiscal year (Exhibit 1) and by the ability to access alternate liquidity sources. Massachusetts' governance framework is strong, including sound financial and budgetary management practices that serve it well during economic downturns. General obligation bonds issued by Massachusetts are also rated Aa1 (the same as the issuer rating), based on a full faith and credit pledge.

Exhibit 1

### Stabilization Fund is projected to remain near record high levels



Source: Annual information statements; Commonwealth of Massachusetts

### Credit strengths

- » Large economy focused on important knowledge sectors that pay above-average wages, such as technology, healthcare and education
- » Strong financial management practices and a willingness to close budget gaps quickly through spending cuts, revenue increases and use of reserves
- » Growing rainy day reserve balance, which provides a healthy buffer in the event of an economic downturn

## Credit challenges

- » Combined debt and pension liabilities that are among the highest in the state sector relative to revenue, resulting in elevated fixed costs that limit fiscal flexibility
- » Demographic profile incorporating negative domestic migration and aging population
- » Above-average exposure to hurricane risk and sea level rise particularly affecting economically important coastal counties

## Rating outlook

Massachusetts' stable outlook reflects prospects that the commonwealth will continue its strong financial management, taking proactive measures to navigate challenges that would emerge in an unexpected economic downturn.

## Factors that could lead to an upgrade

- » Sustained growth of reserves and establishment of stronger constraints on their use
- » Moderated debt and pension burdens relative to peer states

## Factors that could lead to a downgrade

- » Protracted structural budget imbalance
- » Reserves or liquidity that fall below adequate levels
- » Growth in leverage fixed costs relative to own-source revenue

## Key indicators

Exhibit 2

	2021	2022	2023	State Medians (2022)
<b>Economy</b>				
Nominal GDP (\$billions)	645.4	691.5	733.9	288.7
Real GDP, annual growth	6.4%	2.1%	1.8%	1.7%
RPP-adjusted per capita income as % of US	121%	118.1%		96.6%
Nonfarm employment, annual growth	4%	4.0%	1.1%	4.3%
<b>Financial performance</b>				
Available balance as % of own-source revenue	24.2%	30.1%	31.4%	38.6%
Net unrestricted cash as % of own-source revenue	34.7%	40.4%	34.0%	73.4%
<b>Leverage</b>				
Total long-term liabilities as % of own-source revenue	378%	303.7%	247.4%	127.0%
Adjusted fixed costs as % of own-source revenue	16.5%	13.1%	13.6%	4.7%

Sources: US Bureau of Economic Analysis, US Bureau of Labor Statistics, audited financial statements, Moody's Ratings adjustments.

## Profile

The Commonwealth of Massachusetts is the 16th-largest state by population, with an estimated seven million residents as of the 2023 census. Its gross domestic product, at \$733.9 billion in 2023, ranks 12th among the states. Adjusted per capita income was 118% of the national average in 2022, the second highest in the country.

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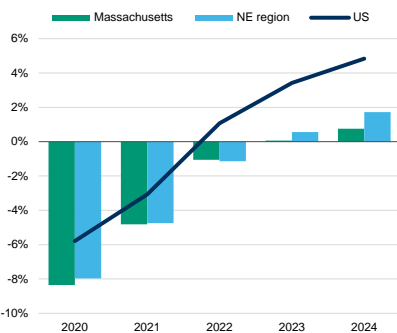
## Detailed credit considerations

### Economy

Job gains in the commonwealth have lagged the nation's through the period containing the pandemic and the ensuing recovery. Nonfarm employment (on a seasonally adjusted, average monthly basis) was up 0.8% through July of this year from 2019, compared with the nation's 1.7% growth during the same period. Massachusetts' increase was marginally weaker than a Northeastern average including New England and several other states (Exhibit 3).<sup>1</sup> Real GDP growth, however, outpaced the US (Exhibit 4). Strong labor force participation is a positive social factor, and unemployment has remained low, ranging between 2% and 4% for most of the past three years.

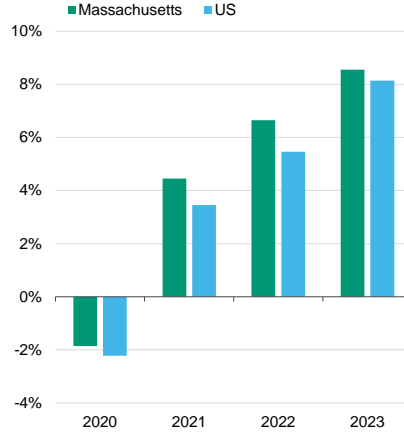
Massachusetts retains one of the highest per capita income levels of any state (Exhibit 5). Supporting the state's income and wealth are high-paying economic sectors – including scientific research and development and computer systems design – that benefit from evolving technologies and the state's large academic and research institutions such as [Harvard University](#) (Aaa, stable) as well as its highly educated workforce. As of 2022, the share of residents 25 and over with a bachelor's degree was 47%, higher than any other state.

Exhibit 3  
Employment growth has trailed the US



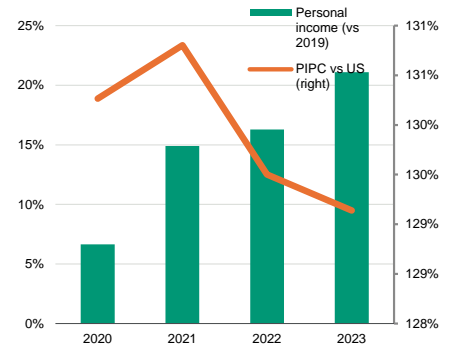
Change in nonfarm payroll employment since 2019; 2024 reflects average through July. NE region includes New England and some mid-Atlantic states.  
Source: US Bureau of Labor Statistics

Exhibit 4  
Real GDP growth has exceeded the nation's pace



Real GDP by year (in chained 2017 dollars); change versus 2019 base.  
Source: US Bureau of Economic Analysis

Exhibit 5  
Personal income per capita remains very strong



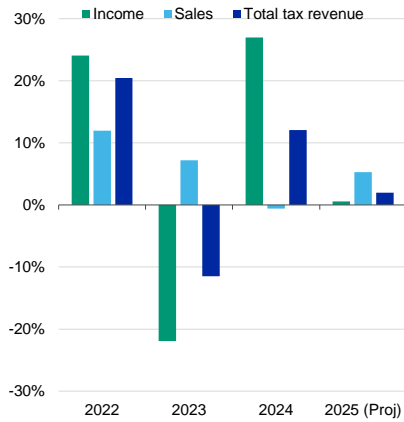
Source: US Bureau of Economic Analysis

Negative domestic migration trends, although offset by international immigration, have caused sluggish population growth in recent years.

### Financial performance

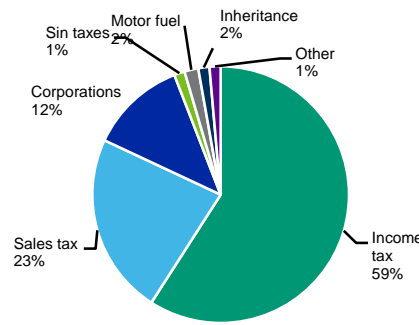
The state's enacted budget for fiscal 2025 (which began July 1) is based on projected tax revenue of \$41.6 billion, including a base revenue estimate of \$40.2 billion and \$1.3 billion to be derived from a 4% surtax on personal income exceeding \$1 million<sup>2</sup> as well as other tax policy measures including tax amnesty, tax enforcement and the recently enacted Affordable Homes Act. Budgeted operating fund total revenue growth will slow sharply from the double-digit pace recorded in fiscal 2024, with total tax revenue increasing only 2% (Exhibit 6). Given its high wealth levels and increased taxes on high incomes, the state will be vulnerable to stock market downturns or other conditions weighing on investment income and capital gains.

Exhibit 6  
**Tax revenue trends are stabilizing**  
 Tax revenue growth by fiscal year



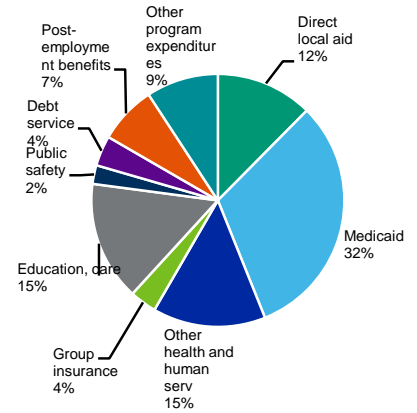
Fiscal 2024 is preliminary and 2025 is projected; budgeted operating funds, statutory basis.  
 Source: Commonwealth of Massachusetts Information Statement

Exhibit 7  
**Income and sales tax account for more than four-fifths of tax revenue**



Budgeted operating funds, statutory basis  
 Source: Commonwealth of Massachusetts Information Statement

Exhibit 8  
**Expenditures of budgeted operating funds**  
 Fiscal 2024 (preliminary)



Source: Commonwealth of Massachusetts Information Statement

**Liquidity**

As in other states, strengthening liquidity in recent years resulted from better-than-expected tax revenue trends after the pandemic-driven downturn. The state has built up its Stabilization Fund (or rainy day fund), as shown in Exhibit 1. In fiscal 2024, Massachusetts increased the fund's fiscal year-end allowable balance to 25.5% from 15% of total budgeted revenue for the year, with extra amounts allocated to a tax reduction fund. The fund also receives 90% of capital gains taxes above a certain level (\$1 billion, subject to annual inflation adjustment). At the end of fiscal 2024, the fund's balance was \$8.83 billion – 4.75 times the average balance from 2011 through 2020.

Increased liquidity should continue to preclude the need for external cash-flow borrowing, as it has since fiscal 2021. Outside of the stabilization fund, the commonwealth has other liquidity sources, currently including a \$500 million line of credit with no balance, which was opened at the beginning of the pandemic and expires in March 2026.

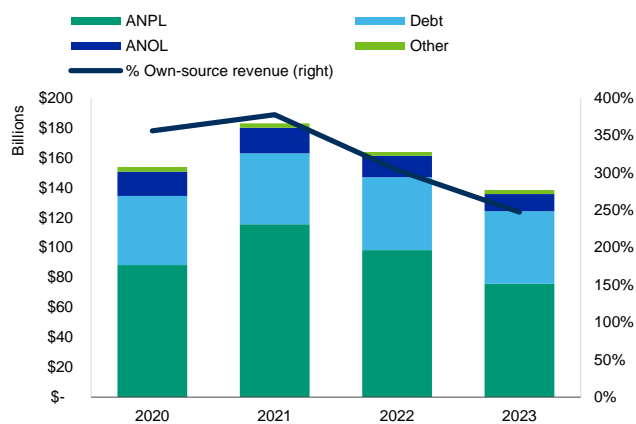
**Leverage**

Massachusetts' leverage incorporates unfunded retirement benefits and bonded debt that are both high as a share of revenue compared with other states. In [last year's ranking](#),<sup>3</sup> the state's leverage ratio (leverage divided by own-source revenue) was just over 300%, ranking sixth-highest among states and more than double the sector median (131%).

Even after a 23% decline during the fiscal 2023 reporting cycle, the state's adjusted net pension liability (ANPL) accounted for 55% of total leverage. In recent years, the ANPL has declined because of rising interest rates used to determine the present value of plan liabilities and also generally strong investment performance.

Exhibit 9

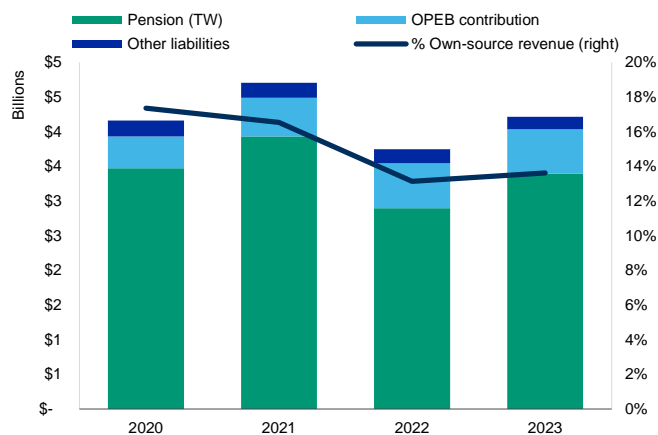
**Leverage remains high as a share of revenue, despite recent declines**



Source: Audited financial report data with Moody's Ratings adjustments

Exhibit 10

**Fixed costs including pension tread water payments are elevated**



Source: Audited financial report data with Moody's Ratings adjustments

**Legal security**

General obligation bonds carry the full faith and credit support of the Commonwealth of Massachusetts. However, state law limits annual tax revenue growth and does not exempt debt service payments from this limitation. Massachusetts also has several special tax bond programs which are limited obligations secured by specific revenue streams (Exhibit 11).

**Debt structure**

Although it decreased by 4% in fiscal 2023, net tax-supported debt is likely to remain elevated as the commonwealth keeps pace with planned capital investments. General obligation bonds account for about two-thirds of outstanding debt. The remainder includes revenue bonds issued for transportation and convention centers and sales tax debt for other underlying entities, the Massachusetts Bay Transportation Authority and the Massachusetts School Building Authority.

Exhibit 11

**Net tax-supported debt as of fiscal 2023**

Security	Fiscal 2023 outstanding (000s)	Pledge	Rating
<b>GO and GO related</b>			
GO	\$ 28,144,509	Commonwealth full faith and credit	Aa1/STA
Contract Assistance	\$ 3,230,422	Commonwealth full faith and credit	Aa1/STA
MBTA Prior Obligations	\$ 99,470	Commonwealth full faith and credit	Aa1/STA
Capital Leases	\$ 871,539		N/A
<b>Special Tax</b>			
MSBA sales tax (senior and subordinate)	\$ 5,915,372	Dedicated statewide sales tax	Aa2 RUR/Aa3 RUR/RUR (Possible upgrade)
Commonwealth Transportation Fund	\$ 3,917,772	Gas taxes and registry fees	Aa1/STA
GANs	\$ 499,170	Federal highway funds and sub- lien on gas taxes and registry fees	Aa2/STA
Convention Center	\$ 426,235	Hotel occupancy tax; rental car surcharge; sales tax and sightseeing surcharge	A1 RUR/RUR (Possible upgrade)
MBTA sales tax and assessment (senior and sub)	\$ 5,415,370	Dedicated statewide sales tax and/or dedicated statewide assessments	Aa2 RUR/Aa3RUR/RUR (Possible upgrade)
<b>Total net tax-supported debt</b>	<b>\$ 48,519,859</b>		

Sources: Massachusetts ACFR, MSBA and MBTA ACFRs, Moody's Ratings

**Pensions and OPEB**

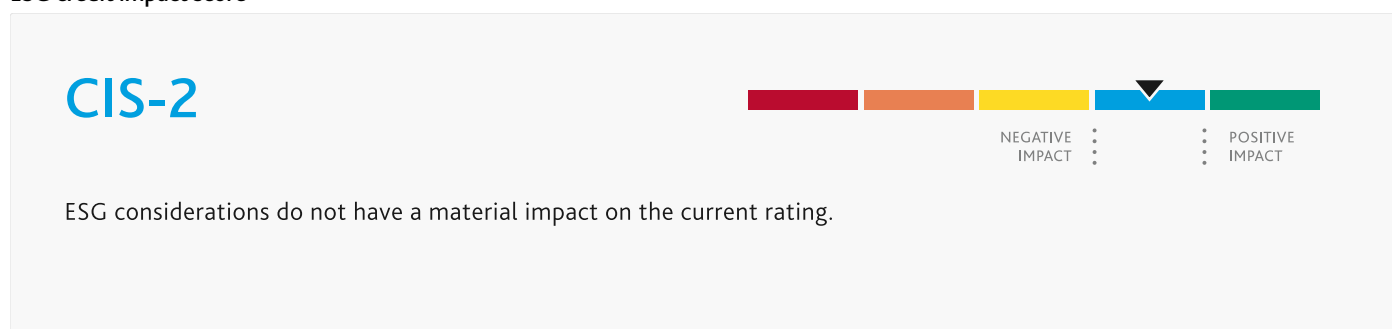
Elevated leverage is consistent with a practice of borrowing on behalf of several governmental entities, including transit and education and fully covering teacher pension liabilities. Massachusetts is responsible for K-12 teacher pensions in addition to state employees. If a similar practice of shouldering teacher plan contribution burdens is assumed for all states, then the Massachusetts ANPL-to-revenue statistic moves closer to the sector median.

The state's pension contributions in fiscal 2022 and 2023 exceeded the "tread water" amounts,<sup>4</sup> ending a period in which pension contributions fell below the tread water amounts. In 2022, the contribution exceeded the tread water level because of a \$250 million supplemental deposit from general revenue and \$126 million from capital gains taxes as required by statute.

**ESG considerations**

**Massachusetts (Commonwealth of)'s ESG credit impact score is CIS-2**

Exhibit 12  
ESG credit impact score



Source: Moody's Ratings

Massachusetts' ESG Credit Impact Score (**CIS-2**) reflects moderately negative exposure to climate risks, neutral-to-low exposure to social risks and a positive governance profile.

Exhibit 13  
ESG issuer profile scores



Source: Moody's Ratings

**Environmental**

Massachusetts' E issuer profile score (**E-3**) factors in exposure to physical climate risks, particularly hurricanes and resulting flooding. Other environmental risks have a neutral to low impact Massachusetts' credit profile. The commonwealth is far along in transitioning its energy generation to renewable sources, and its economy relies largely on industries that are neither carbon-intensive nor dependent on the commonwealth's natural capital. Hurricane risk affects 95% of state GDP, and about half of state GDP is vulnerable to flooding. The vast majority of the commonwealth's economic activity is concentrated along its coastline, particularly in the city of Boston (Aaa stable), which drives up the commonwealth's vulnerability to physical climate risks.

**Social**

Massachusetts' issuer profile score (**S-2**) incorporates a highly educated workforce, high income levels, and labor force participation significantly higher than the nation, offset by weak demographic metrics that include lagging population growth. The state's median

age, 39.6 years, exceeds the US median age, 38.2 years. The state's percentage of working age residents is 39%, approximating the rate of the US, but this portion of the population has been shrinking. The number of prime working age residents, or people 25 to 54 years old, declined by 0.8% between 2000 and 2020, compared with 1.1% growth in working age residents for the US in the period.

### Governance

Massachusetts' governance practices are generally very strong, reflected in a **G-1** issuer profile score. These practices include consensus revenue estimating and multiyear financial plans. Delayed budget adoption is common in Massachusetts. Budget delays typically result from a multilayered approval process that requires three separate budgets to be combined into one final document. Interim budgets are put in place to ensure continuing operations and payment of debt service.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moody's.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

## Rating methodology and scorecard factors

The [US States and Territories methodology](#) includes a scorecard, which summarizes the rating factors generally most important to state and territory credit profiles. Because the scorecard is a summary and may not include every consideration in the credit analysis for a specific issuer, a scorecard-indicated outcome may or may not map closely to the actual rating assigned. The Aa1 rating assigned differs from the Aaa scorecard-indicated rating because of long-term retirement liabilities that will remain comparatively large, despite beneficial factors in the last few years (primarily higher interest rates) that likely will prove temporary.

Exhibit 14

### US States and Territories scorecard Commonwealth of Massachusetts

	Measure	Weight	Score
<b>Economy</b>			
Resident Income (PCI Adjusted for RPP / US PCI)	118.1%	15%	Aaa
Economic Growth (5-year CAGR real GDP - 5-year CAGR US real GDP)	0.2%	15%	Aaa
<b>Financial performance</b>			
Financial performance	Aaa	20%	Aaa
<b>Governance/Institutional Framework</b>			
Governance/Institutional Framework	Aaa	20%	Aaa
<b>Leverage</b>			
Long-term liabilities ratio (adjusted long-term liabilities / own-source revenue)	247.4%	20%	A
Fixed-costs ratio (adjusted fixed costs / own-source revenue)	13.6%	10%	Aa
<b>Notching factors</b>			
Very limited and concentrated economy			
Scorecard-Indicated Outcome			Aaa
<b>Assigned rating</b>			Aa1

Sources: US Bureau of Economic Analysis, Massachusetts ACFRs, Moody's Ratings.

## Endnotes

- <sup>1</sup> The Northeastern composite is a simple average of nine states' nonfarm employment growth since 2019. The states consist of New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont) plus New Jersey, New York and Pennsylvania.
- <sup>2</sup> Starting in January 2023, the state levied a 4% surtax on net income exceeding \$1 million, after voters approved the tax in a ballot measure. The \$1 million threshold is annually adjusted for inflation.
- <sup>3</sup> The report published in 2023 used states' fiscal 2022 audits, which in turn use pension data with 2021 measurement dates.
- <sup>4</sup> The tread water indicator is the cost for a government to prevent its reported unfunded liabilities from growing, under its actuarial assumptions.



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