

Commonwealth of Massachusetts – Transportation Fund

Issuer: Commonwealth of Massachusetts		
Assigned	Rating	Outlook
Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement Program) 2024 Series A	AAA	Stable
Commonwealth Transportation Fund Revenue Bonds (Rail Enhancement Program) 2024 Series B (Sustainability Bonds)	AAA	Stable
Commonwealth Transportation Fund Revenue Refunding Bonds 2024 Series A	AAA	Stable
Affirmed	Rating	Outlook
Commonwealth Transportation Fund Revenue Bonds	AAA	Stable

Methodology:

[U.S. Special Tax Revenue Bond Rating Methodology](#)

[ESG Global Rating Methodology](#)

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The Commonwealth enacted comprehensive transportation reform legislation in 2009 which was partly designed to segregate certain revenues towards capital investment in critical transportation infrastructure projects. The legislation also enabled the Commonwealth to pledge some or all of these revenues to payment of CTF Revenue Bonds. The segregated revenues, which consist primarily of a broad base of motor fuels taxes, driver's license fees, and vehicle registration fees, have a long history of observable efficient and effective collection, characterized by diversity in timing that smooths seasonality. Further, the Commonwealth has demonstrated willingness and ability to adjust pledged revenues as needed to finance expanded capital needs, and also to make adjustments to offset other factors that influence the underlying base of vehicle- and fuel-related transactions, such as lengthier registration periods.

CTF Revenue Bonds enjoy numerous legal protections that KBRA believes insulate the pledged revenues from budget operations of the Commonwealth. Among these protections are: Constitutional restrictions on the use of the revenues; covenants not to impair the rights or remedies of the Trustee; laws that prohibit the use of the pledged revenues for any purpose prior to payment of debt service; and restrictions on additional debt or changes to the pledged revenues unless maximum annual debt service coverage exceeds 4.0x.

For FY2024, pledged revenues totaled approximately \$1.35 billion, reflecting a 3.7% increase YoY and 97.1% of pre-pandemic (2019) levels. Nonetheless, debt service coverage declined slightly to a still-favorable at 5.51x. Assuming no material growth in pledged revenues and the planned issuance of \$915 million in CTF Revenue Bonds through 2030, the Commonwealth forecasts peak annual debt service of \$298.1 million in FY 2038¹, which based upon actual FY 2024 receipts, would be covered strongly at 4.53x.

As referenced above, the Commonwealth plans to issue \$915 million in par value CTF revenue bonds through 2030 to fund additional transportation capital projects. In January 2021, then-Governor Baker signed a new transportation bond act which authorizes about \$16.2 billion of total capital spending for the Commonwealth's transportation infrastructure needs. Major components of this authorization are \$5.1 billion for the Massachusetts Bay Transportation Authority (MBTA), \$5.4 billion for highway, rail and transit, and \$4.4 billion for federally aided highway projects. CTF Revenue

Rating Summary: The long-term rating on the Commonwealth of Massachusetts' (the "Commonwealth's") Transportation Fund Revenue Bonds ("CTF Revenue Bonds") reflects the broad and resilient nature of the pledged revenues, ample projected coverage of maximum annual debt service requirements, and the extensive legal protections that are collectively and effectively designed to insulate pledged revenues from Commonwealth budget operations. The rating is further supported by the breadth of the taxing base, strong underlying socioeconomic metrics, and the relative affordability of pledged taxes when compared to other New England states.

CTF Revenue Bonds are special limited obligations of the Commonwealth, payable solely from the Pledged Funds, which primarily consist of six (6) Motor Fuels Tax revenues and various License and Registration Fees collected throughout the Commonwealth. Proceeds from the new-money bonds will be used to fund costs of certain transportation projects of the Commonwealth, while proceeds of the refunding bonds will be used to refund certain outstanding CTF bonds. The Commonwealth has designated the Series B bonds as "Sustainability Bonds" based on the intended use of the proceeds to finance a portion of the costs of the South Coast Rail project, which will, among other things, provide rail service in areas that historically did not have access to fast and reliable public transit. The bonds will rank on parity with approximately \$3.873 billion of outstanding CTF Revenue Bonds as of June 30, 2024.

¹ Projected future issuance does not account for the coverage benefit of future potential refundings.



Bonds are expected to finance a portion of this overall plan as well, subject to the debt issuance restrictions of the 4.0x additional bonds test. The Transportation Bond bill stipulates that both CTF Revenue Bonds and general obligation bonds may be used for these programs, depending on the capital plan.

The Stable Outlook reflects KBRA’s expectation that pledged revenues will remain resilient and unlikely to decline significantly enough to impair coverage of debt service, even in very adverse economic conditions. Further, KBRA believes the Commonwealth has no meaningful incentive to divert or dilute the pledged revenues in ways that would be detrimental to bondholders.

Key Credit Considerations

The rating actions reflect the following key credit considerations:

Credit Positives

- Very broad and resilient nature of CTF pledged revenues which, to date, have generated more than 4x coverage of maximum annual debt service.
- Extensive legal protections that collectively and effectively insulate pledged revenues from Commonwealth budget operations.
- The Commonwealth’s diverse, wealthy, and growing economy.

Credit Challenges

- The motor fuels portion of pledged revenues (~52.7% of FY24 pledged revenues) is economically sensitive and vulnerable to declines during recessionary periods.
- Longer term, structural shifts in fuel consumption patterns possibly pressuring pledged revenues.

Rating Sensitivities

- Not applicable at AAA rating level +
- An unlikely scenario where there was a substantial and sustained decline in pledged revenues. -

Pledged Revenue Details

Motor Fuels Tax

Chapter 64A Receipts: 24 cents/gallon Gasoline Tax levied statewide.

Chapter 64E and Chapter 64F Receipts: 24 cents/gallon tax on special fuels and tax of 19.1% of average price/gallon of liquefied gas sold or used in the Commonwealth (Special Fuels Tax); 24 cents/gallon tax on each gallon of gasoline and special fuels acquired outside and used within the Commonwealth (Motor Carrier Tax).

Registry Fees

Chapter 90 Registry Fees: Motor vehicle registration fees, motor vehicle license fees, and miscellaneous fees relating to the operation and use of motor vehicles.

Key Ratios					
FYE June 30 (dollars thousands)					
	2020	2021	2022	2023	2024
Pledged Revenues and Coverage					
Gas Tax (Ch 64A) ¹	\$ 609,818	\$ 565,194	\$ 618,856	\$ 600,923	\$ 613,679
Sp. Fuels Tax (Ch 64E) / Motor Carrier Tax (Ch 64F)	96,477	96,298	102,299	99,158	97,775
Registry Fees (Ch 90)	561,867	622,770	598,987	601,343	638,541
Total	\$1,268,162	\$1,284,262	\$1,320,142	\$1,301,424	\$1,349,995
Annual Debt Service	184,361	189,083	198,504	227,807	245,193
Coverage	6.9x	6.8x	6.7x	5.7x	5.5x
Projected MADS w/Planned Future Issuance (FY 2038)					298,095
FY 2024 Pledged Revenue Coverage of Projected MADS					4.5x
Commonwealth Economic Data					
Population (2023)			7,001,399		
10-Yr Growth			3.6%		
Per Capita Income (2023)			\$87,212		
as a % of US			128%		
Real Gross State Product (2023)			\$615 billion		
10-Year Growth			26.3%		

¹ Pledged Gas Tax (Ch 64A) revenues represent 99.85% of the total



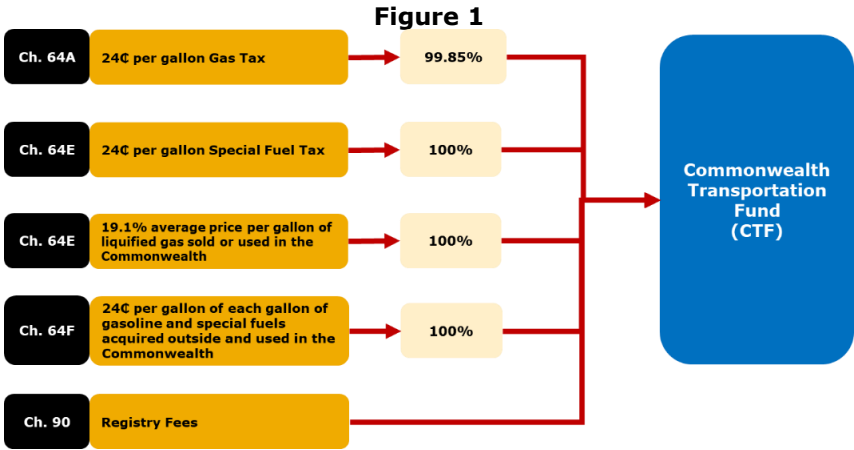
Rating Determinants (RD)	
1. Legal Framework	AAA
2. Nature of Special Tax Revenues	AAA
3. Economic Base and Demographics	AAA
4. Revenue Analysis	AAA
5. Coverage and Bond Structure	AAA

RD 1: Legal Framework

The legal and statutory framework, pursuant to which the bonds are issued, imposes strong protections that significantly limit bondholder risk. A principal benefit, in KBRA’s view, are the covenants imposed on the Commonwealth restricting it from diverting pledged revenues away from the Commonwealth Transportation Fund (“the CTF”) and/or applying pledged revenues as a transportation funding source prior to servicing CTF bonds. KBRA notes the strong revenue collection and deposit procedures with monthly deposit to the bond trustee as well as the Commonwealth’s covenant that it will not impair the rights of bondholders or lower registry fees or motor fuel tax rates unless it can demonstrate that pledged revenues will provide coverage of maximum annual debt service by at least 4x. KBRA also notes the strong protections against overleveraging pledged revenues imposed by the additional bonds test requiring gross revenues to equal at least 4x maximum annual debt service on existing and proposed additional debt. There is no requirement for a debt service reserve fund. The Massachusetts Constitution requires legislative appropriation of CTF funds, along with nearly all other state spending, for CTF bond debt service and all other transportation related purposes. In KBRA’s view, the importance of pledged revenues as a source of statewide transportation funding and the inability of the State to access these funds unless debt service on the CTF bonds is appropriated, significantly mitigates any risks related to non-appropriation. In KBRA’s view, these provisions obviate the need for a debt service reserve fund requirement.

Nature and Strength of Pledged Revenues

The bonds are secured by a gross lien pledge of revenues from several taxes and fees that are constitutionally dedicated for transportation related purposes. Figure 1 provides an outline of the taxes and fees that constitute pledged revenues. Information on pledged revenues is provided in greater detail within the following sections of this report. The taxes and fees are applied across the entirety of the Commonwealth capturing the economic activity of a substantial statewide economic base. While the taxes and fees extend only to transportation related services, KBRA views the breadth of the tax base as very broad given the essentiality of automobile use to the underlying statewide economy.



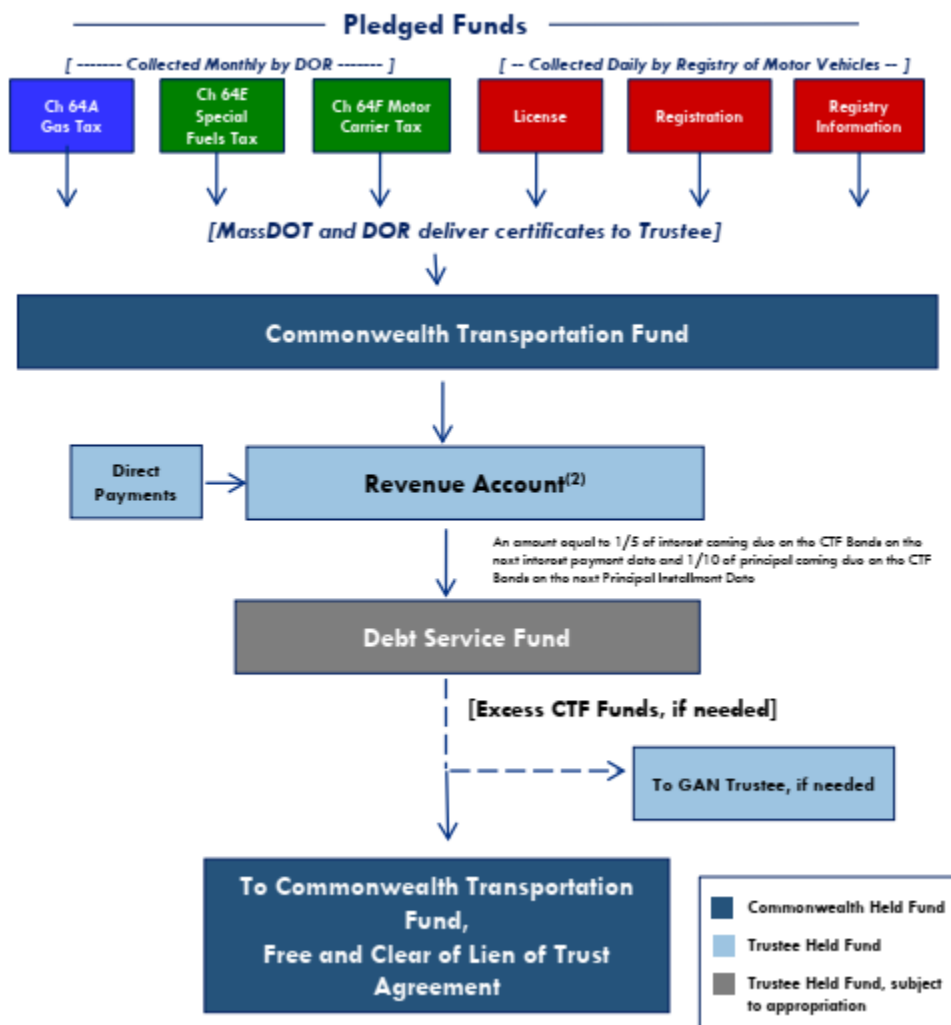
The pledged revenues are an essential source of funding for transportation related programs throughout the Commonwealth. Pursuant to the Massachusetts Constitution and state covenant, pledged revenues do not become available for state spending unless the appropriation for debt service for the current fiscal year has been made and the required monthly deposits to the CTF funds and accounts have also been made or provided for.

KBRA notes that the Commonwealth has granted a lien on pledged funds that is perfected by the filing of the trust agreement in the records of the Commonwealth Treasurer.

Flow of Funds & Timing of Deposits

Pledged revenues are collected by the Massachusetts Department of Revenue (“DOR”) and the Registry of Motor Vehicles (“MassDOT”). The strong collection procedures for pledged revenues are outlined in Figure 2. The DOR and MassDOT are required to deliver a certificate to the bond trustee within eight business days of the end of the month confirming the amount of pledged funds deposited within the past month. The state treasurer transfers pledged funds from the Commonwealth Transportation Fund into the revenue account, which is held by the trustee, within two business days of receiving the certificate from DOR and MassDOT.

Figure 2



Source: Official Statement dated September 6, 2024

KBRA views the revenue collection procedure as very strong and notes that the Commonwealth has made technological investments that simplify the payment of fees and taxes and enhance the Commonwealth’s ability to track and collect pledged revenues. KBRA understands that 99% of the dollar amount of motor fuels tax collections are remitted electronically.

The Commonwealth appropriates debt service as part of its annual budgeting process and, as noted, no funds may be transferred from the revenue account for any purpose, including debt service, until the appropriation has been made. The trustee is required to deposit monthly an amount equal to 1/5 interest due and 1/10 of the principal due on the next interest and or principal payment dates. For the Bonds, these dates are June 1 for principal and interest and December 1 for interest only. KBRA notes that the Commonwealth’s fiscal year begins on July 1 which, in KBRA’s view, provides a sufficient amount of time between the required budget appropriation date and principal and interest payments dates that further mitigates the risk of non-appropriation. Furthermore, budget delays are generally addressed by continuing resolutions carrying over prior years’ appropriations.

Bondholder Protections & Statutory Limitations

In addition to the legal provisions set forth in the trust indenture, KBRA notes the statutory provisions that help create the strong legal framework supporting the Bonds, several of which are specifically outlined as follows:

- Article 78 of the Articles of Amendment to the Massachusetts Constitution, as amended, requires that any fees, duties, excises or license taxes relating to the registration, operation or use of vehicles on public highways, or to fuels used for propelling such vehicles be expended only for the following purposes: (1) the cost of administration of laws providing for such revenue, (2) the making of refunds and adjustments relating to such revenue; (3) the payment of highway obligations; (4) the cost of construction, reconstruction, maintenance and repair of public highways, bridges and mass transportation lines; (5) the cost of enforcing state traffic laws; and (6) the cost of



other mass transportation purposes. Article 78 revenues may be expended by the Commonwealth and its counties, cities and towns for these purposes only in such manner as the Legislature may direct.

- The motor fuels tax imposed under Chapters 64A, 64E and 64F and the registry fees are classified as Article 78 revenues. The Pledged motor fuels tax receipts thus are available to be used only for such transportation-related purposes, including debt service on CTF bonds.
- The Commonwealth has agreed that any future amendments of the authorizing legislation, and other statutes that govern pledged funds, are subject to the covenant of the Commonwealth that it shall not take any action that would impair the rights and remedies of the owners of the Bonds. Specifically, the Commonwealth’s right to make such changes is restricted by the trust agreement in which the Commonwealth has covenanted not to impair, in any way, the rights and remedies of the owners of the bonds under the trust agreement.
- The Commonwealth has covenanted in the trust agreement that, so long as any bonds are outstanding and unless an appropriation has been made by the legislature which is sufficient to pay debt service on the bonds, the pledged funds shall not be applied to any other use.
- The trust agreement does permit the Commonwealth to lower the rates of the motor fuels tax or any registry fees or both, provided that the state treasurer delivers to the bond trustee a certificate demonstrating the amount of pledged funds received by the state treasurer during any 12 consecutive months of the 18-month period ending with the last full month immediately preceding the effective date of any such change, as adjusted, as set forth in such certificate, to reflect the proposed change in rates, to be at least equal to 400% of the maximum annual debt service requirement due in any fiscal year of the then outstanding bonds.

Additional Bonds Test

Additional bonds may be issued if the Commonwealth can demonstrate that gross pledged revenues for any 12 consecutive months during the most recent 18-month period was not less than 4x maximum annual debt service due in the current or any future fiscal year on the outstanding bonds and the bonds to be issued. As noted, KBRA views the additional bonds test as restrictive and as providing sufficient protection against overleveraging pledged revenues.

Bankruptcy Assessment

The United States Bankruptcy Code is not applicable to states. Because the Commonwealth is a state, it is thus not eligible for relief under the U.S. Bankruptcy Code.

RD 2: Nature of Special Tax Revenues

The pledged funds are derived from a broad and essential base which provides a strong source for repayment of the bonds. The pledged revenues consist of the proceeds of six motor fuels taxes and registry fees levied across the entire Commonwealth, which had a population of 7.0 million people in 2023.

Figure 3

Pledged Revenues by Source in FY 2024		
FYE June 30 (dollars thousands)		
	Receipts	% Total
Gas Tax (Ch. 64A)	\$ 613,679	45.5%
Special Fuels and Motor Carrier Taxes (Ch. 64E and 64F)	97,775	7.2%
Registry Fees (Ch. 90)	638,541	47.3%
Total	1,349,995	

Source: Commonwealth of Massachusetts

Motor Fuels Tax

Chapter 64A Receipts: 24 cents/gallon Gasoline Tax levied statewide. The Commonwealth has imposed a tax on the sale of motor fuels since 1928. The tax covers substantially all motor fuels consumed or imported in the Commonwealth.

Chapter 64E and Chapter 64F Receipts: 24 cents/gallon tax on special fuels and tax of 19.1% of average price/gallon of liquefied gas sold or used in the Commonwealth (Special Fuels Tax); 24 cents/gallon tax on each gallon of gasoline and special fuels acquired outside and used within the Commonwealth (Motor Carrier Tax).

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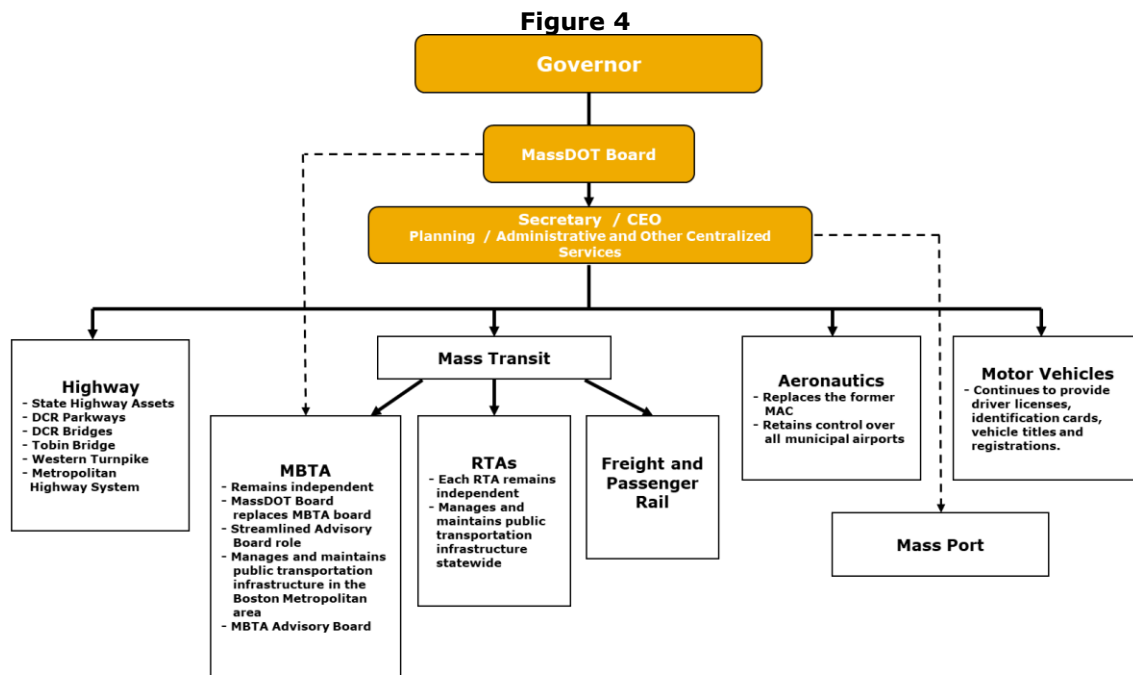
Direct Payments

Refundable tax credits received from US Treasury equal to the percentage of taxable interest the Commonwealth pays on its Build America Bonds (BABs) or Recovery Zone Economic Development Bonds (RZEDBs).

MassDOT

In June of 2009 the Commonwealth restructured its transportation system and created the Massachusetts Department of Transportation ("MassDOT"). MassDOT represents a merger of several state governmental entities including the Massachusetts Turnpike Authority, the Massachusetts Highway Department, the Registry of Motor Vehicles and the Executive Office of Transportation and Public Works. The Massachusetts Bay Transportation Authority ("MBTA") and the Regional Transit Authorities ("RTAs") located across the state remain independent but are subject to oversight by MassDOT.

MassDOT owns, operates and maintains the state highway system, including the Metropolitan Highway System and the I-90 Turnpike. It is responsible for planning and completing capital improvement projects on the state highway system while coordinating with the MBTA and RTAs on bus and rail operations. MassDOT is also responsible for funding the Registry of Motor Vehicles as well as the Aeronautics Division, which retains control over all Commonwealth municipal airports. MassDOT develops its annual operating and capital budget in consultation with the Governor and the Executive Office for Administration and Finance and the Secretary of Transportation.



Source: Commonwealth of Massachusetts

Statewide Transportation Funding Sources

The annual operating and capital budgets for transportation are developed by the Governor, the Legislator, MassDOT, the MassDOT Board of Directors, and the Metropolitan Planning Organizations and RTAs that are located across the state.

The Commonwealth's transportation system is funded from five primary sources including state taxes, motor vehicle fees, federal funds, toll revenues and bond proceeds. These funding sources are administered through the Commonwealth Transportation Fund and the Massachusetts Transportation Trust Fund ("MTTF"). The two funds segregate and account for all transportation related revenues and expenses made by the Commonwealth.

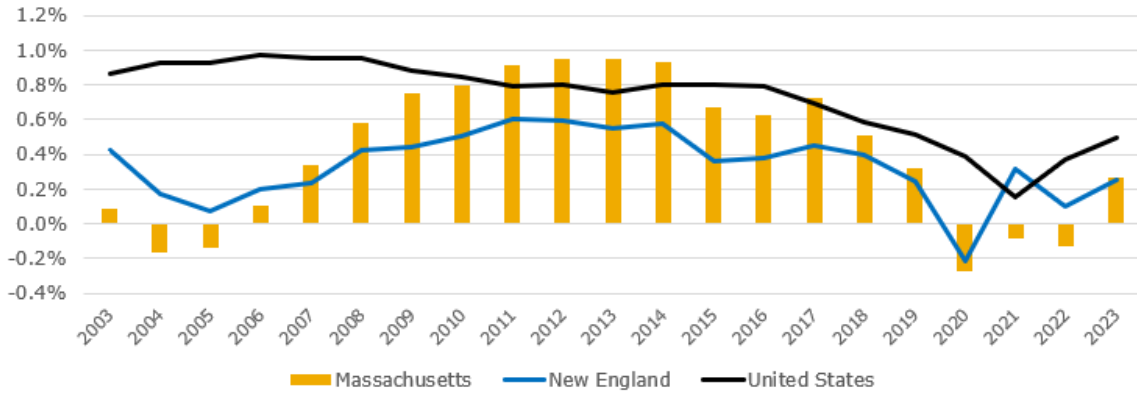
RD 3: Economic Base and Demographics

KBRA views the economic base of the Commonwealth as broad, wealthy, demonstrably resilient, and diverse. Many economic indicators are among the strongest in the U.S. and the New England Region². For example, Massachusetts' population of roughly 7.0 million, representing approximately 46% of New England, has exceeded the region's rate of

² New England Region is defined as Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

growth since 2013 (at a 0.36% compound annual growth rate (CAGR) since 2013 compared to the region at 0.29%). The Commonwealth also has a lower-than-average age dependency ratio, above average educational attainment, and much higher than average income and property wealth levels.

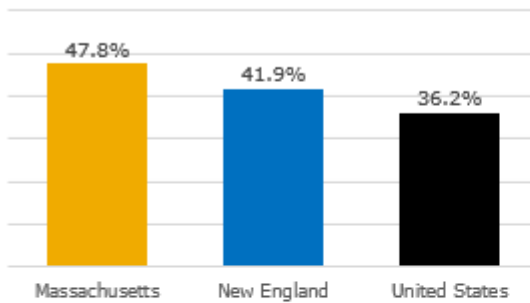
Figure 5
% Change in Population



	2003	2013	2023	% Δ 2013 to 2023	10-Year CAGR (2023)
Massachusetts	6,422,565	6,756,583	7,001,399	3.6%	0.36%
New England	14,182,454	14,731,535	15,159,777	2.9%	0.29%
United States	290,107,933	316,735,375	334,914,895	5.7%	0.56%

Source: U.S. Bureau of Economic Analysis

Figure 6
Bachelor Degree or Higher

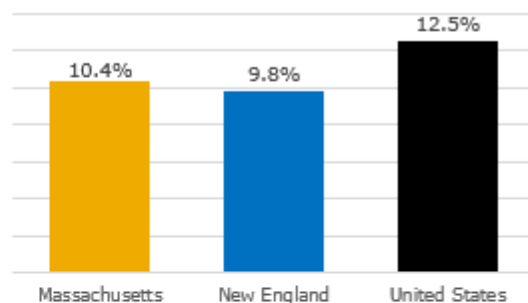


As of 2023

Point Δ 2010 to 2023

Massachusetts	8.8
New England	8.9
United States	8.0

Figure 7
Poverty Level



As of 2023

Point Δ 2010 to 2023

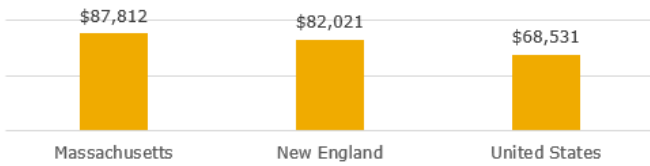
Massachusetts	-1.0
New England	-1.8
United States	-2.8

Source: U.S. Census, ACS 1-Year Estimates

Bachelor degree or higher defined as "% of population over 25 with Bachelor's degree or higher".

Poverty level defined as "portion of population living below the poverty line".

Figure 8
Personal Income Per Capita

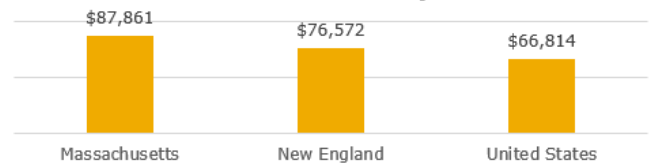


As of 2023

	% Δ 2013 to 2023	Comparison
Massachusetts	56.4%	-
New England	51.0%	107.1% of Region
United States	54.3%	128.1% of U.S.

Source: U.S. Bureau of Economic Analysis

Figure 9
Real GSP Per Capita



As of 2023

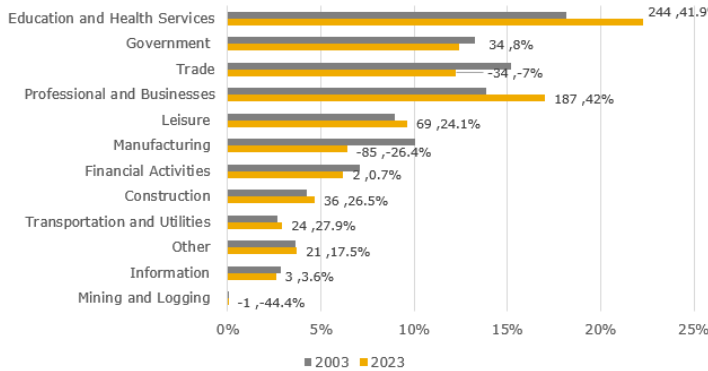
	% Δ 2013 to 2023	Comparison
Massachusetts	21.9%	-
New England	16.4%	114.7% of Region
United States	18.8%	131.5% of U.S.

Labor Market

The Commonwealth's employment opportunities are diverse. The education and health services sector, which makes up the Commonwealth's largest employment sector (at 18.1%), provides a pool of relatively stable, high-skill, and high-paying jobs. The professional and business services, trade, and government sectors make up the remaining majority of the Commonwealth's employment sectors.

Figure 10
Massachusetts
Employment by Sector

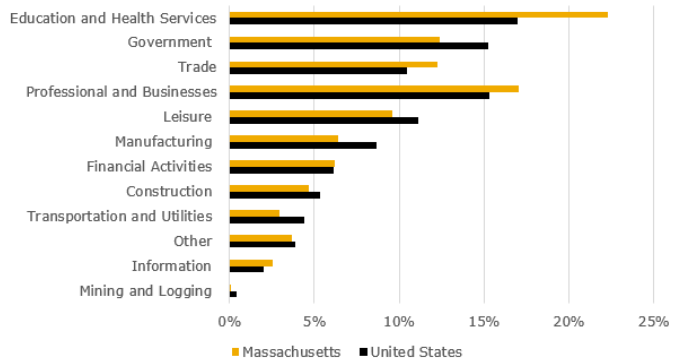
2003 vs. 2023



Source: U.S. Bureau of Labor Statistics
Not seasonally adjusted

Figure 11
Massachusetts vs. United States
Employment by Sector

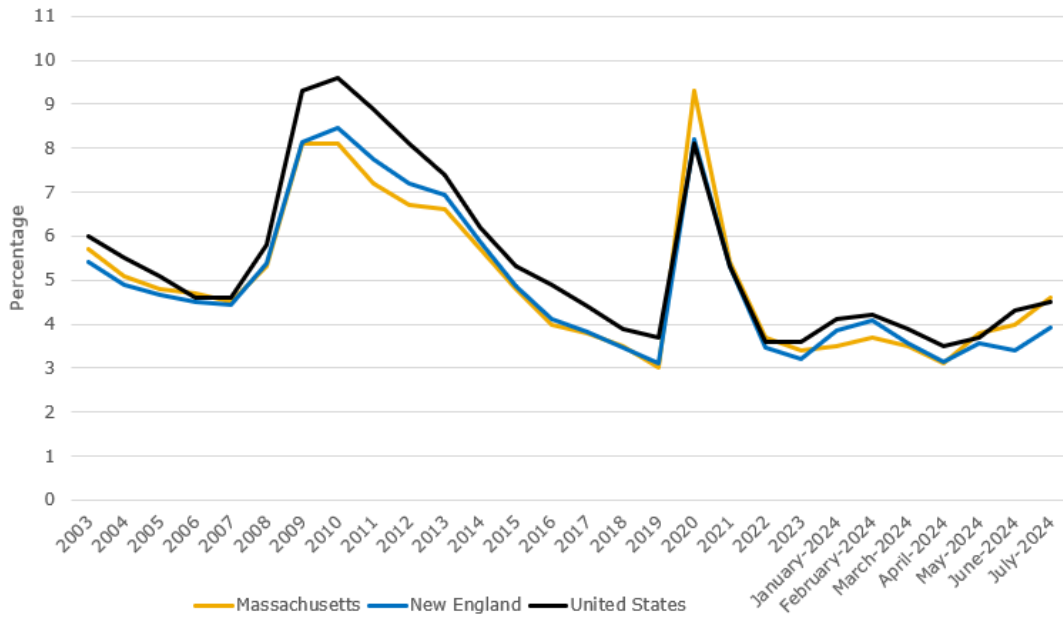
Year 2023



Unemployment rates in the Commonwealth were consistently lower than the region and the nation before the COVID-19 pandemic. After the State became subject to stay-at-home orders on March 24, 2020, the State's unemployment rate increased drastically from 3% in March to 16% in April, with the unemployment rate reaching its peak in June 2020 at 17.8%, surpassing the Great Recession peak. As of July 2024, the unemployment rate has declined to 4.6%, which is slightly higher than both the New England region (3.9%) and nation (4.5%).



Figure 12
Unemployment Rates



	Massachusetts	New England	United States
July-2024	4.6	3.9	4.5
Great Recession Peak	8.1	8.5	9.6
Point Δ Since Great Recession Peak	-3.5	-4.5	-5.1

Source: U.S Bureau of Labor Statistics
Not seasonally adjusted

Figure 13

Total Employment (Not Seasonally Adjusted) (In Thousands)						
	Massachusetts	% Δ	New England	% Δ	United States	% Δ
2003	3,223	-1.1%	7,100	-0.4%	137,736	0.9%
2004	3,227	0.1%	7,118	0.2%	139,252	1.1%
2005	3,223	-0.1%	7,164	0.6%	141,730	1.8%
2006	3,251	0.9%	7,260	1.3%	144,427	1.9%
2007	3,278	0.8%	7,311	0.7%	146,047	1.1%
2008	3,282	0.1%	7,297	-0.2%	145,362	-0.5%
2009	3,190	-2.8%	7,097	-2.7%	139,877	-3.8%
2010	3,199	0.3%	7,102	0.1%	139,064	-0.6%
2011	3,232	1.1%	7,154	0.7%	139,869	0.6%
2012	3,271	1.2%	7,192	0.5%	142,469	1.9%
2013	3,283	0.4%	7,204	0.2%	143,929	1.0%
2014	3,365	2.5%	7,348	2.0%	146,305	1.7%
2015	3,417	1.6%	7,437	1.2%	148,834	1.7%
2016	3,472	1.6%	7,532	1.3%	151,436	1.7%
2017	3,582	3.2%	7,726	2.6%	153,337	1.3%
2018	3,686	2.9%	7,861	1.7%	155,761	1.6%
2019	3,732	1.2%	7,931	0.9%	157,538	1.1%
2020	3,396	-9.0%	7,308	-7.8%	147,795	-6.2%
2021	3,530	4.0%	7,504	2.7%	152,581	3.2%
2022	3,606	2.2%	7,734	3.1%	158,291	3.7%
2023	3,625	0.5%	7,758	0.3%	161,037	1.7%
Δ 2013 to 2023		10.4%		7.7%		11.9%
Δ Since Trough		13.7%		9.3%		15.8%
July-2024	3,750	3.4%	7,977	2.8%	162,038	0.6%
10-Year CAGR (2023)		1.0%		0.7%		1.1%

Source: U.S Bureau of Labor Statistics

Bold = trough during the Great Recession (2008-2012)

RD 4: Revenue Analysis

Pledged revenues have largely stabilized following a pronounced decline in the wake of the COVID-19 pandemic. For FY2024, pledged revenues totaled approximately \$1.35 billion, reflecting a 3.7% increase YoY and 97.1% of pre-pandemic (2019) levels. Nonetheless, debt service coverage declined slightly to a still-favorable at 5.51x. Assuming no material growth in pledged revenues and the planned issuance of \$915 million CTF Revenue Bonds through 2030, the Commonwealth forecasts peak annual debt service of \$298.1 million in FY 2038³, which based upon actual FY 2024 receipts, would be covered strongly at 4.53x.

Figure 14

Trend in Pledged Revenues FYE June 30 (dollars thousands)								
Fiscal Year Ended	Pledged Motor Fuel Tax Receipts				Pledged Registry Fee Receipts Chapter 90 (b)	Δ YOY	Total Pledged Revenues (a+b)	Δ YOY
	Gas Tax Chapter 64A	Sp. Fuels and Motor Carrier Tax Chapters 64E and 64F	Total (a)	Δ YOY				
2005	599,736	84,382	684,118	0.2%	413,481	7.0%	1,097,599	2.7%
2006	589,591	80,785	670,376	-2.0%	375,670	-9.1%	1,046,046	-4.7%
2007	594,892	79,545	674,437	0.6%	388,496	3.4%	1,062,933	1.6%
2008	595,380	75,560	670,940	-0.5%	396,904	2.2%	1,067,844	0.5%
2009	578,691	73,462	652,153	-2.8%	403,780	1.7%	1,055,933	-1.1%
2010	576,676	76,369	653,045	0.1%	485,789	20.3%	1,138,834	7.9%
2011	580,031	79,152	659,183	0.9%	496,034	2.1%	1,155,217	1.4%
2012	581,148	79,028	660,176	0.2%	508,608	2.5%	1,168,784	1.2%
2013	570,477	79,302	649,779	-1.6%	522,199	2.7%	1,171,978	0.3%
2014	640,702	89,938	730,640	12.4%	533,194	2.1%	1,263,834	7.8%
2015	656,445	97,947	754,392	3.3%	581,686	9.1%	1,336,078	5.7%
2016	666,539	98,309	764,848	1.4%	580,426	-0.2%	1,345,274	0.7%
2017	670,093	97,762	767,855	0.4%	598,691	3.1%	1,366,546	1.6%
2018	667,866	99,654	767,520	0.0%	612,779	2.4%	1,380,299	1.0%
2019	672,866	100,923	773,790	0.8%	616,830	0.7%	1,390,620	0.7%
2020	609,818	96,477	706,295	-8.7%	561,867	-8.9%	1,268,162	-8.8%
2021	565,194	96,298	661,492	-6.3%	622,770	10.8%	1,284,262	1.3%
2022	618,856	102,299	721,155	9.0%	598,987	-3.8%	1,320,142	2.8%
2023	600,923	99,158	700,081	-2.9%	601,343	0.4%	1,301,424	-1.4%
2024	613,679	97,775	711,454	1.6%	638,541	6.2%	1,349,995	3.7%

Source: Historic figures from CTF Official Statements and Continuing Disclosure Statements.

Motor Fuels Tax

Motor fuel taxes are applied on a per gallon basis and, aside from adjustments in the tax rate, are sensitive to volatility in consumption. Consumption is driven in the long-term by economic growth and motor vehicle fuel efficiency standards whereas near term volatility is driven by energy prices and the business cycle. Nevertheless, a tax increase from 21 to 24 cents per gallon in 2013 (+14.3%) produced a substantial recurring increase in revenues despite the trend of declining consumption. KBRA views the Commonwealth's revenue raising action in 2013 as demonstrating its commitment toward maintaining pledged revenues to support CTF Revenue Bond debt service as well as its long-term transportation infrastructure investment program.

Motor fuels taxes in Massachusetts are low relative to other Northeast states and significantly below the national average, leaving room for potential increases. There is some seasonality in motor fuel tax receipts, but this poses little risk to bondholders given exceptionally strong debt service coverage and the required monthly debt service fund set-aside requirements specified in the Flow of Funds.

Motor fuel tax receipts rose 1.6% YoY in FY 2024 and remain 8.1% below the FY 2019 pre-pandemic level.

Registry Fees

Registry fee revenues are a function of the price of registry fees and the renewal intervals specified by the Commonwealth as well as the number vehicle registration transactions. Registry fees and receipts increased at a strong 4.3% CAGR in the decade through FY 2019. The Commonwealth implemented fee increases in 2009 and fee adjustments in 2014, which increased pledged revenues despite implementation of longer registration periods and longer license renewal periods over the past decade. Registry fee receipts increased 6.2% YoY in FY 2024, representing a new high-water mark and now representing 104% of pre-pandemic levels. KBRA understands that this growth is likely due to a

³ Projected future issuance does not account for the coverage benefit of any future potential refundings.

new law, An Act Relative to Work and Family Mobility, that took effect July 1, 2023, and allows Massachusetts residents to obtain a driver’s license regardless of immigration status.

RD 5: Coverage and Bond Structure

KBRA views pledged revenues as providing exceedingly strong coverage of CTF Revenue Bond debt service. Ample coverage reflect the breadth of the state-wide fuel taxes and vehicle registration fees and relatively modest annual debt service requirements on outstanding CTF Revenue Bonds. The additional bonds test requirement for prior year coverage of 4.00x prospective MADS, and the Commonwealth’s covenant not to lower motor fuel tax rates or registry fees unless it can demonstrate that pledged revenues will provide MADS coverage of at least 4.00x, provide strong protection against the overleveraging of pledged revenues.

Rising debt service requirements have resulted in modestly declining coverage, though levels overall remain sound given the strength of pledged revenues. The prior lien 1994 bonds were fully amortized in 2022 and this lien is closed.

Figure 15

Historic Debt Service Coverage			
FYE June 30 (dollars thousands)			
Fiscal Year	Pledged Revenues	Total Debt Service	Coverage
2015	1,336,078	101,922	13.11x
2016	1,345,274	106,707	12.61x
2017	1,366,546	124,825	10.95x
2018	1,380,299	149,968	9.20x
2019	1,390,619	176,189	7.89x
2020	1,268,162	184,361	6.88x
2021	1,284,262	189,083	6.79x
2022	1,320,142	198,504	6.65x
2023	1,301,424	227,807	5.71x
2024	1,349,995	245,193	5.51x

Source: Historic figures from CTF Official Statement and Continuing Disclosure. Projections from Massachusetts Department of Revenue and MassDOT.

As of June 30, 2024, the Commonwealth had \$3.873 billion in CTF Revenue Bonds outstanding. The Commonwealth’s capital plan projects the issuance of approximately \$915 million in additional parity debt to finance costs in support of various rail enhancement projects and/or other project authorized by Chapter 79, Chapter 383 or MassTRAC, or to fund remaining projects under the 2010 Accelerated Bridge Program.

ESG Management

KBRA typically analyzes Environmental, Social, and Governance (ESG) factors through the lens of how issuers plan for and manage relevant ESG risks and opportunities. More information on KBRA’s approach to ESG risk management in public finance ratings can be found [here](#). Over the medium-term, public finance issuers will likely need to prioritize ESG risk management and disclosure with the likelihood of expansions in ESG-related regulation and rising investor focus on ESG issues.

KBRA analyzes many sector- and issuer-specific ESG issues but our analysis is often anchored around three core topics: climate change, with particular focus on greenhouse gas emissions; stakeholder preferences; and cybersecurity. Under environmental, as the effects of climate change evolve and become more severe, issuers are increasingly facing an emerging array of challenges and potential opportunities that can influence financial assets, operations, and capital planning. Under social, the effects of stakeholder preferences on ESG issues can impact the demand for an issuer’s product and services, the strength of its global reputation and branding, its relationship with employees, consumers, regulators, and lawmakers, and, importantly, its cost of and access to capital. Under governance, as issuers continue to become more reliant on technology, cybersecurity planning and information management are necessary for most issuers, regardless of size and industry.

 **Environmental Factors**

Reliance on Oil Consumption: KBRA anticipates that the gasoline and diesel sales that underly about half of the pledged revenues will likely gradually decline in the coming decades due to the phase-in of alternative fuels and electric cars. Risk of a potentially declining revenue source, however, is balanced by the strong debt service coverage.

Sustainability Bonds Designation: The Commonwealth is issuing the Series B Bonds as “Sustainability Bonds” based on the intended use of the proceeds to finance the SCR Project that will provide public rail service and improve mobility in areas that historically did not have access to fast and reliable public transit. Additionally, by supporting an expansion of commuter rail service, this project is expected to reduce vehicle emissions on the road. The SCR Project will offer a reliable transit connection between southeastern Massachusetts and Boston.

The Commonwealth’s designation of the Series B Bonds as Sustainability Bonds reflects the intended use of the Series B Bond proceeds in a manner that is generally consistent with the Green Bond Principles (June 2021), Social Bond Principles (June 2023) and Sustainability Bond Guidelines (June 2021) established by the International Capital Market Association (the “ICMA”), based upon the expectation that the projects will increase public transit ridership and significantly reduce vehicle emissions.

 **Social Factors**

Public Engagement for Clean Energy and Climate Plan (CECP): Executive Office of Environmental Affairs (EEA) worked with stakeholders across the Commonwealth to ensure development of the Clean Energy and Climate Plan for 2025 and 2030 is an inclusive policy planning effort. Engagement included a public comment period on the Interim 2030 CECP from January 7 through March 22 of 2021. It followed up with public meetings on the approach to completing the CECP in October 2021 and public meetings on proposed interim emission reduction targets and carbon sequestration goals in April 2022. EEA has additionally been convening with the Global Warming Solutions Act Implementation Advisory Committee since 2012 on greenhouse gas reduction measures.

 **Governance Factors**

Cybersecurity: The Commonwealth’s Executive Office of Technology Services and Security (EOTSS) works to standardize the Commonwealth’s IT infrastructure by adopting and implementing a standard operating environment which is being employed to an increasing portion of the State workforce over time. EOTSS manages these enterprise programs for the Executive Branch under the direction of the EOTSS Secretary/Commonwealth CIO and the Assistant Secretary for Security and Operations.

EOTSS provides annual cybersecurity awareness training for Commonwealth employees and maintains an integrated security technology framework that includes multi-factor authentication for applications and users, enhanced cloud and mail security tools, and network monitoring, among other tools. It also provides a range of enterprise-wide services including operation of a Security Incident Response Team (SIRT) which is coordinated through EOTSS’ Security Operations Center. IT investments are guided by EOTSS’ IT Investment Advisory Board comprising security, IT and business operation executives from across state government.

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