



THE COMMONWEALTH OF MASSACHUSETTS

\$540,000,000*
General Obligation Refunding Bonds
2024 Series B

Investor Presentation

January 17, 2024

*Preliminary, subject to change



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Transaction Summary*



The Commonwealth of Massachusetts (the "Commonwealth") General Obligation Refunding Bonds, 2024 Series B (the "Bonds")

Par Amount*	\$540,000,000
Use of Proceeds	Proceeds of the Bonds will be used to: (i) current refund the Refunded Bonds as set forth in the Preliminary Official Statement ("POS"); (ii) purchase the Purchased Bonds in accordance with the terms of the Invitation to Tender Bonds, dated January 17, 2024 (the "Invitation"), pursuant to which the Commonwealth is inviting holders of certain bonds to tender such bonds for purchase by the Commonwealth (the "Tender Offer"); and (iii) pay certain costs of issuance, including certain costs of the Tender Offer contemplated by the Invitation
Interest Payment Dates*	May 1 and November 1, commencing May 1, 2024
Optional Redemption*	Bonds maturing on or after November 1, 2034 will be callable at par beginning May 1, 2034
Ratings (F/M/S)	AA+ / Aa1 / AA+ (all Stable Outlooks)
Tax Status	Federal and Commonwealth of Massachusetts Tax-Exempt
Pricing Dates*	<u>Retail Order Period</u> : Tuesday, February 6, 2024 <u>Institutional Order Period</u> : Wednesday, February 7, 2024
Delivery Date*	Wednesday, February 14, 2024
Bookrunning Senior Manager	Jefferies LLC
Additional Information	<u>Investor Website</u> : www.massbondholder.com <u>Tender Offer</u> : www.globic.com/mass

Preliminary Amortization*

Maturity	Par
11/1/2029	\$14,500,000
11/1/2030	33,500,000
11/1/2031	41,000,000
11/1/2032	45,500,000
11/1/2033	31,500,000
11/1/2034	25,500,000
11/1/2035	25,000,000
11/1/2036	23,500,000
11/1/2037	24,000,000
11/1/2038	30,000,000
11/1/2039	36,000,000
11/1/2040	44,000,000
11/1/2041	31,000,000
11/1/2042	49,000,000
11/1/2043	39,000,000
11/1/2044	23,500,000
11/1/2045	23,500,000
Total	\$540,000,000

Massachusetts Credit Summary



Economy	<ul style="list-style-type: none">• Broad and diverse economy including significant strength in healthcare, technology and education sectors• Well-trained labor pool experiencing strong wage growth over the last 10 years• Statewide per capita income of \$84,945 is the second highest among all states and is 130% of the national per capita income in 2022
Finances & Liquidity	<ul style="list-style-type: none">• Massachusetts' individual income taxes and sales taxes accounted for approximately 80% of total tax revenue in FY 2023• From FY 2017 to October 2023, the Stabilization Fund balance increased 630% to \$8.2 billion (as of October 31, 2023)• The Commonwealth has access to a \$500 million line of credit through May 2026
Governance	<ul style="list-style-type: none">• Strong financial, debt and budget management policies include: (i) estimating consensus revenue; (ii) forecasting multi-year financial plans; (iii) issuing annualized formal debt affordability statements; and (iv) planning multi-year capital investments• Strong budget gap closing capacity – the Governor has the authority to cut expenses for executive agencies without legislative approval if there is a revenue shortfall• Ongoing economic and revenue monitoring throughout the Commonwealth
Long-term Liabilities	<ul style="list-style-type: none">• An annual administrative limit on the amount of bond-funded capital expenditures, or "bond cap," keeps the Commonwealth's debt within affordable levels (FY 2024 bond cap is \$2.905 billion)• Debt is elevated compared to other states in part because of the Commonwealth's practice of financing projects for highly-rated local governments• As of January 1, 2023, the funded ratio of the pension system based on the actuarial value was 63.5%• Under current law, the unfunded pension liability must be fully amortized by June 30, 2040; the current funding schedule fully amortizes the liability by June 30, 2037



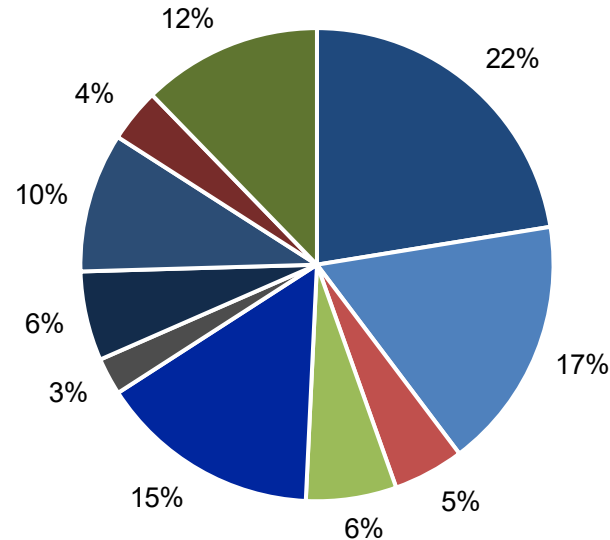
Massachusetts Industry Mix Compared to US

Key Takeaways

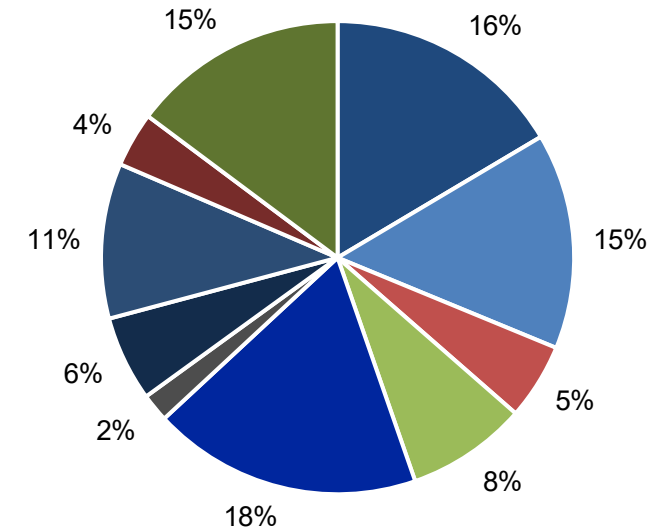
- Massachusetts' industry sector diversification is similar to that of the US with the top 5 sectors comprising approximately 76% of employment
- The Education and Health Services sector has consistently been the top sector in the Commonwealth; the clusters of colleges, universities, and teaching hospitals contribute to Massachusetts being a hub for technology and research
- The Professional & Business Services sector has been increasingly important in the Commonwealth, both as a share of employment and in terms of its contribution to state gross domestic product ("GDP")
- Several NAICS⁽¹⁾ service sectors (Education and Health Services, Professional Services, and Leisure and Hospitality) have grown to take the place of manufacturing in driving the Massachusetts economy

Employment Composition of Massachusetts and the United States as of October 2023

Massachusetts



United States



Industry Sector	MA	US
Educ. & Health Services	22%	16%
Prof. & Business Services	17%	15%
Trade, Transp., Utilities	15%	18%
Government	12%	15%
Leisure & Hospitality	10%	11%
Top 5 Total	76%	75%

- Education & Health Services
- Professional & Business Services
- Construction
- Manufacturing
- Trade, Transportation, & Utilities
- Information
- Financial Activities
- Leisure & Hospitality
- Other Services
- Government

(1) North American Industry Classification System
Source: U.S. Bureau of Labor Statistics; data for October 2023, as of January 5, 2024 (<https://www.bls.gov/sae/data/>)
Source: U.S. Bureau of Labor Statistics; data for October 2023, as of January 5, 2024 (<https://www.bls.gov/web/empsit/ceseeb1b.htm>)
Notes: Not seasonally adjusted

Education and Health Services Concentration

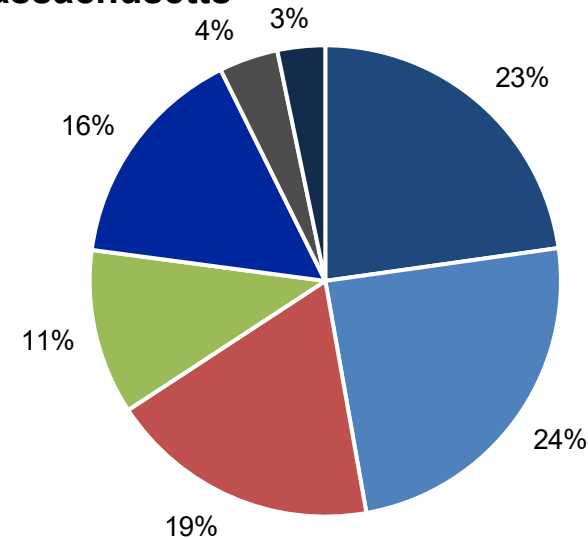


Key Takeaways

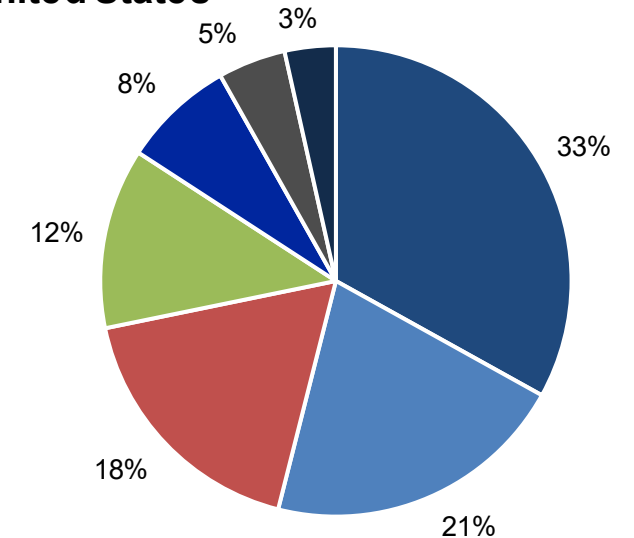
- As noted on the prior slide, the Education and Health Services sector comprises 22% of the Commonwealth's industry mix, which is a higher percentage than that of the US, which provides a number of credit positives for the Commonwealth
 - Massachusetts is home to several of the top teaching hospitals in the world
 - Massachusetts surpasses the rest of the country in Private Colleges, Universities, and Professional Schools at 16%, compared to 8% in the US
 - Strong educational presence creates foundation for future economic growth

Breakdown of Education and Health Services Sector by Industry as of October 2023

Massachusetts



United States



Education & Health Services	MA	US
Hospitals	24%	21%
Ambulatory Health Care Services	23%	33%
Social Assistance	19%	18%
Priv. Colleges, Universities, Prof. Schools	16%	8%
Nursing & Residential Care Facilities	11%	12%
Top 5 Total	93%	92%

- Ambulatory Health Care Services
- Hospitals
- Social Assistance
- Nursing & Residential Care Facilities
- Private Colleges, Universities, & Professional Schools
- Private Elementary & Secondary Schools
- Other Private Educational Services

Professional and Business Services Concentration

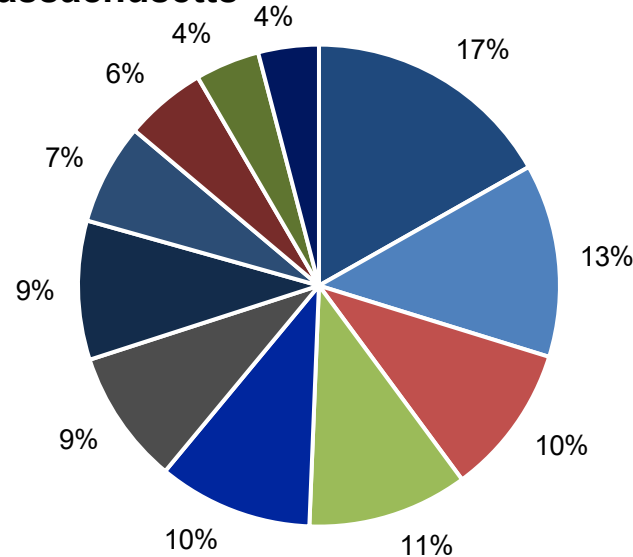


Key Takeaways

- The Professional and Business Services sector has been increasingly important in the Commonwealth, both as a share of employment and in terms of its contribution to Commonwealth GDP
- In Massachusetts, the leading subsectors in terms of employees are Scientific Research & Development Services and Computer Systems Design
- During the pandemic, the Professional & Business Services sector increased its prominence in the Commonwealth in terms of employment
- These subsectors benefit from the Commonwealth's well-established Higher Education and Healthcare sectors

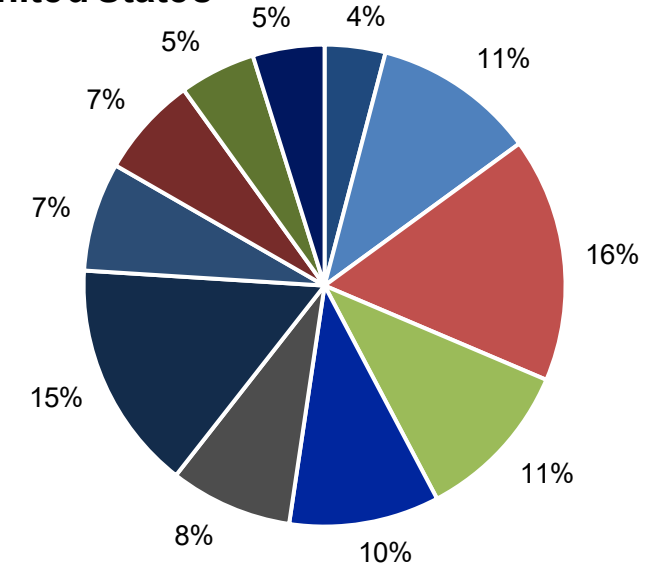
Breakdown of Professional and Business Services Sector by Industry as of October 2023

Massachusetts



Professional & Business Services	MA	US
Scientific R&D Services	17%	4%
Computer Systems Design	13%	11%
Mgmt. of Companies & Enterprises	11%	11%
Employment Services	10%	16%
Services to Buildings & Dwellings	10%	10%
Top 5 Total	61%	52%

United States



- Scientific Research & Development Services
- Computer Systems Design & Related Services
- Employment Services
- Management of Companies & Enterprises
- Services to Buildings & Dwellings
- Management, Scientific, & Technical Consulting Services
- Other Administrative & Support & Waste Management & Remediation Services
- Architectural, Engineering, & Related Services
- Other Professional, Scientific, & Technical Services
- Legal Services
- Accounting, Tax Preparation, Bookkeeping, & Payroll Services

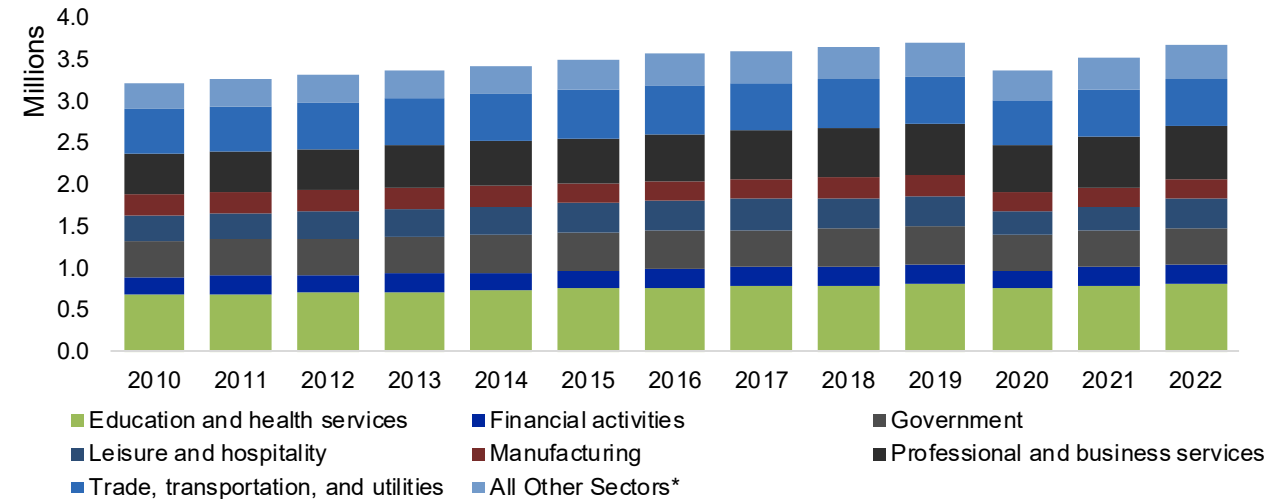
Strong, Diverse, and Resilient Economy



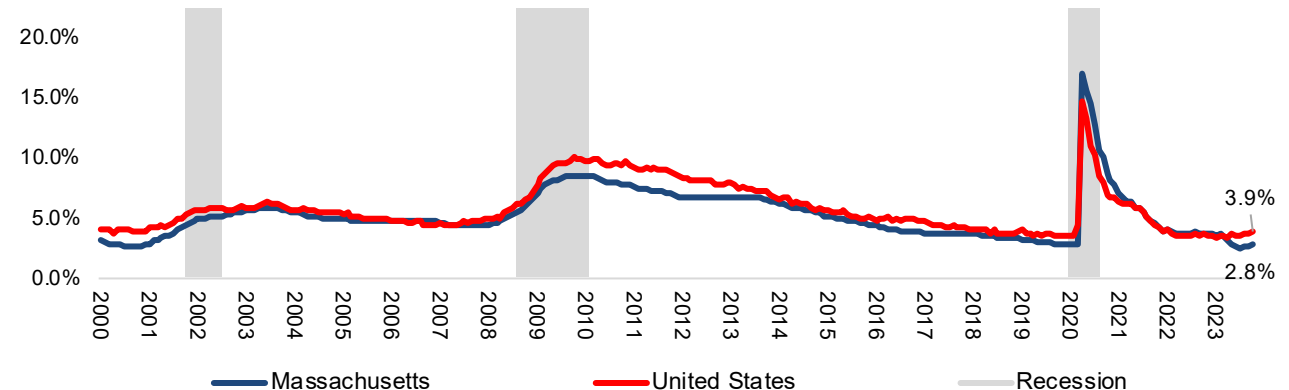
Key Takeaways

- The Massachusetts economy has generally performed better than the US economy, with the Commonwealth unemployment rate typically below the national rate – especially during and following the period of the Great Recession
- The Commonwealth's mix of knowledge-based industries and a well-educated workforce, with over 46% of all residents 25 years of age or older earning a bachelor's degree or higher, led to high levels of labor force participation and low levels of unemployment in the Commonwealth
- The early outbreak of COVID-19 in the northeastern part of the US, coupled with proactive social distancing efforts by the Commonwealth in the spring and summer of 2020, led to significant job losses
- Massachusetts' unemployment rate peaked at 17.1% in April 2020, while US unemployment peaked at 14.7% in the same month
 - Unemployment continued to fall in 2023 and stood at 2.8% in October for the Commonwealth and 3.9% for the US, surpassing pre-pandemic employment levels in the Commonwealth
- The higher paying industries of Construction and Professional & Business Services have both returned to well above their respective pre-pandemic employment levels
 - Construction has seen growth that outpaces that of the US overall
- From the onset of the pandemic in 2020 through 2022, Professional & Business Services saw the largest gains in employment, including growth in Scientific Research & Development Services

Annual Average Employment in Massachusetts, 2010-2022 by NAICS Supersector



Unemployment Rates in Massachusetts and the United States as of October 2023 (Seasonally Adjusted)



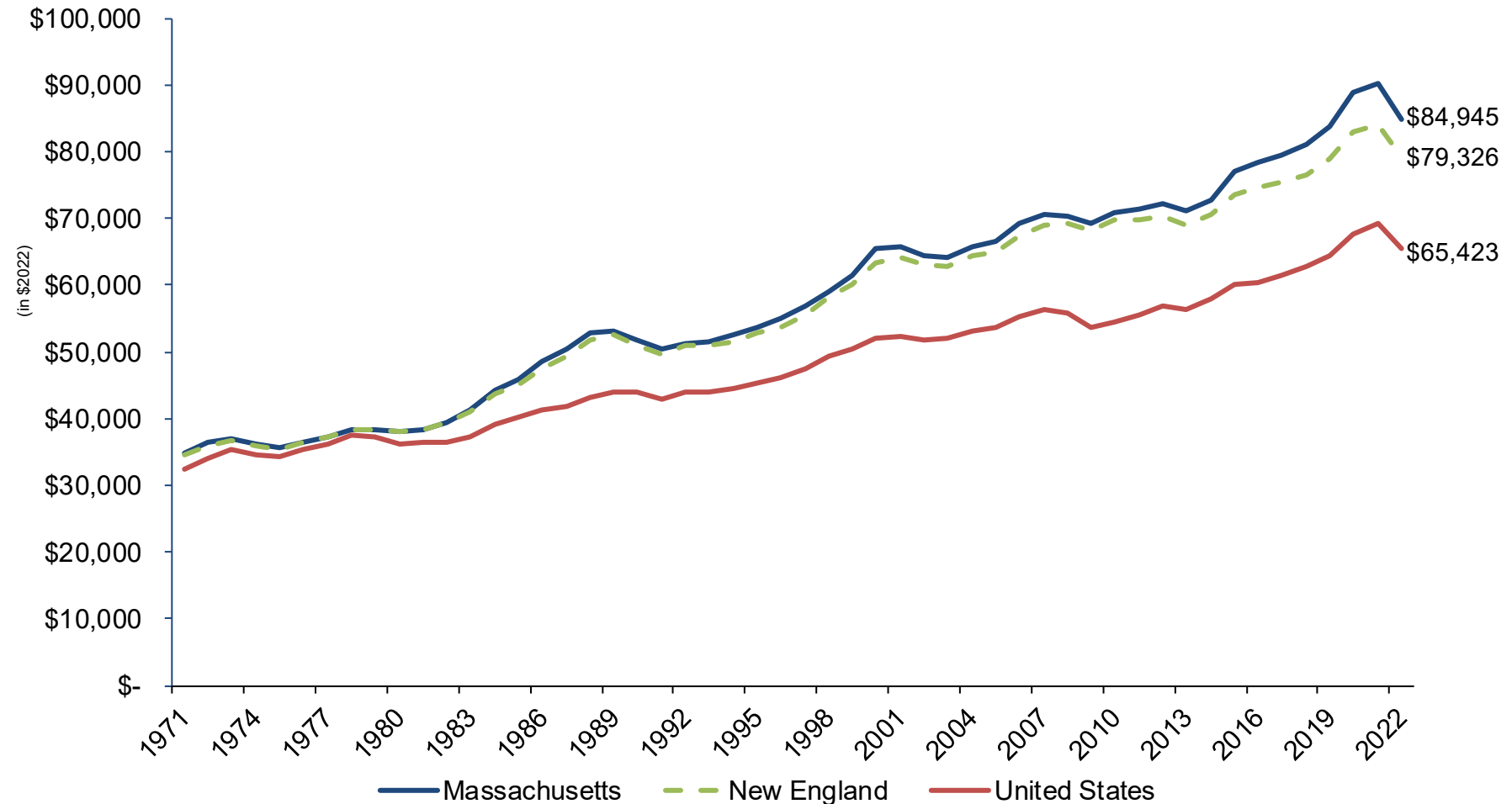
Consistent Per Capita Income Growth, Outpacing the Country



Key Takeaways

- Massachusetts has consistently been near the top of the nation in resident income and ranks as one of the wealthiest among the states based on mean household income and per capita income
- In 2022, the Commonwealth's real per capita personal income of \$84,945 was 130% of the US' real per capita personal income
- In 2022, the Commonwealth's real per capita personal income of \$84,945 was 107% of New England's real per capita personal income

Real Per Capita Personal Income in Massachusetts, New England, and the United States, 1971-2022



Commitment to Building the Stabilization Fund



Key Takeaways

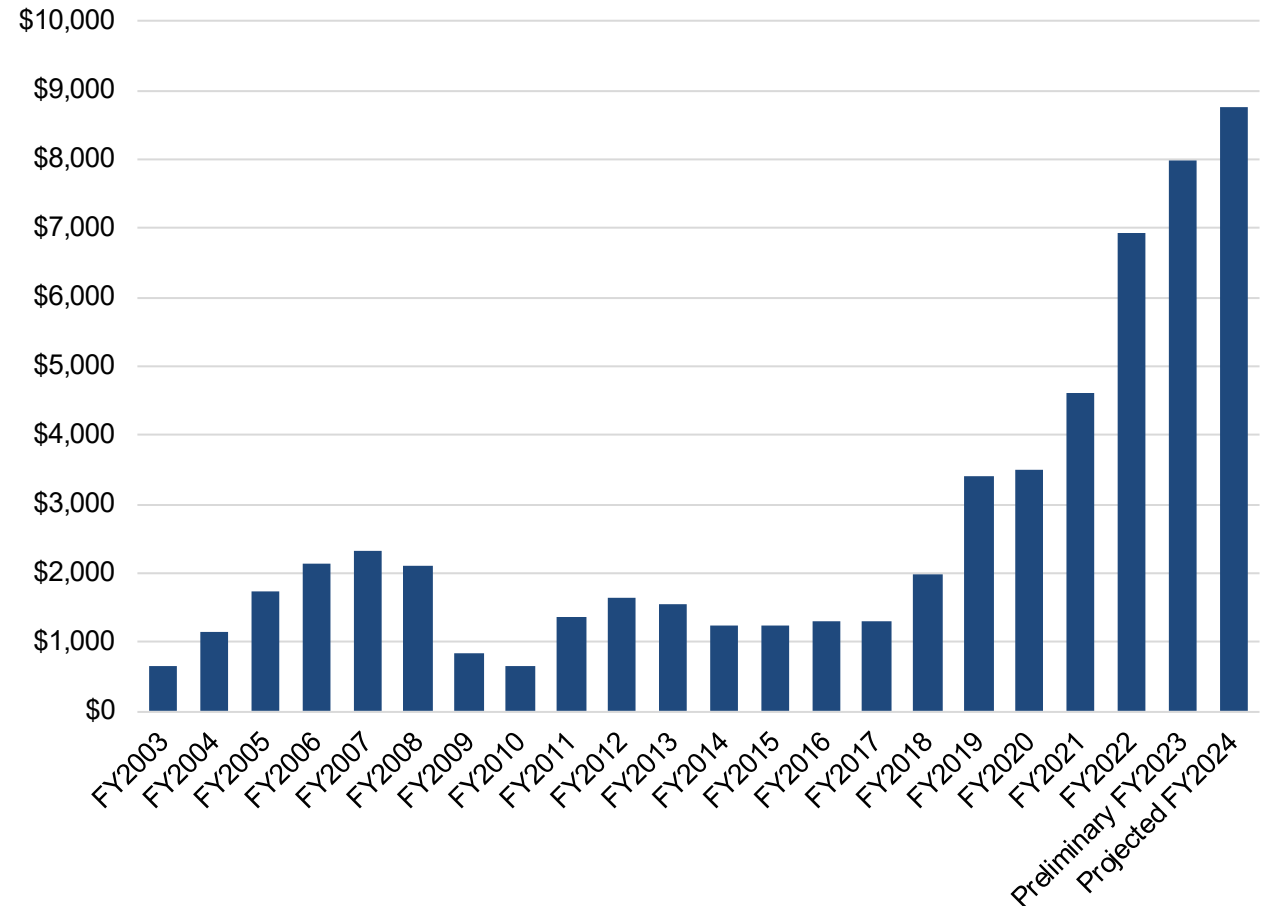
- From \$1.3 billion in FY 2017, the Stabilization Fund (“SF”) balance has increased by roughly 630% to \$8.2 billion⁽¹⁾ in October 2023; the SF balance is projected to be \$8.7 billion by the end of FY 2024
- The Commonwealth has demonstrated its commitment to rebuild its reserves as stipulated through its own fiscal policies
- Capital gains tax revenues exceeding a specific threshold are required to be transferred as follows - 90% to SF, 5% to State Retiree Benefits Trust Fund (“SRBTF”) (OPEB) and 5% to Pension Liability Fund (“Pension”)

Historical Transfers (\$ millions)

FY	SF
2023	\$750
2022	2,273
2021	1,098
2020 ⁽²⁾	--
2019	764



Massachusetts Stabilization Fund Balance (\$ millions)



(1) Source: <https://cdata.socrata.com/stories/s/eqrd-tdvi>
(2) Legislation enacted in 2020 retained all FY 2020 capital gains tax revenues in the General Fund due to COVID-19

Statutory Fiscal Discipline

Consensus Revenue Forecasting

- The Administration and Legislature must publicly collaborate on tax forecasting, with expert input (M.C.L. c. 29, s. 5B); the Commonwealth uses internal resources and outside economic forecasting firms to develop the consensus revenue forecast

Balanced Budget Requirement

- The Budget must be balanced at filing and enactment, and at the signing of any appropriation act (M.C.L. c. 29, s. 6E); the Legislature and the Governor approve a balanced budget each fiscal year
- The Administration must flag and address material revenue shortfalls within days of discovery (M.C.L. c. 29, s. 9C)

Statutory Buffers to Revenue Volatility

- Capital gains tax revenues collected that exceed a specific threshold are transferred – 90% to SF, 5% to OPEB and 5% to Pension Liability
- Legislature must expressly intervene if there is a need to redirect funds away from reserves (M.C.L. c. 29, s. 5G)

Cash Management

- Cash flow projections are prepared and submitted quarterly to the Legislature



Institutionalized Practices

Consistent and Disciplined Budgeting Approach

- Standardized approach to budgeting for essential and predictable costs
- Demonstrated commitment to strengthen pension and OPEB by consistently increasing funding

Created a Structural Surplus

- Aligned spending and revenue growth and eliminated reliance on non-recurring revenue sources
- Buffered the budget from volatility of capital gains and used surplus funds for tax relief instead of increasing spending to maintain structural balance

Prudent Capital Management

- Maintain statutory debt limit on debt issuance: for direct debt, the annual limit increases each year to 105% of the prior year's limit
- Established debt affordability policy sets limit on annual debt service of 8% of budgeted revenues and annual growth in bond cap to \$125 million
- Debt Affordability Committee provides an estimate of total amount of new Commonwealth debt that can be prudently issued for the next fiscal year
- Annually publish 5-year Capital Improvement Plan (includes annual capital budget)
- Track record of risk mitigation and actively managing the debt portfolio through various economic cycles

Conservatively Managed Debt Portfolio



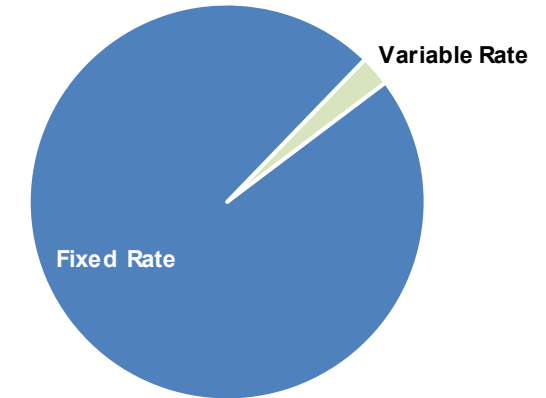
Key Takeaways

- As of October 31, 2023, total GO debt outstanding was \$26.8 billion:
 - \$26.2 billion or 97.5% was fixed rate
 - \$658.2 million or 2.5% was variable rate
- 42% of outstanding principal amortizes through FY 2034
- The Commonwealth has actively managed its debt profile by increasing the ratio of fixed rate debt as interest rates have decreased and actively utilizing refundings to manage debt service
- There are no interest rate swaps outstanding as of October 31, 2023



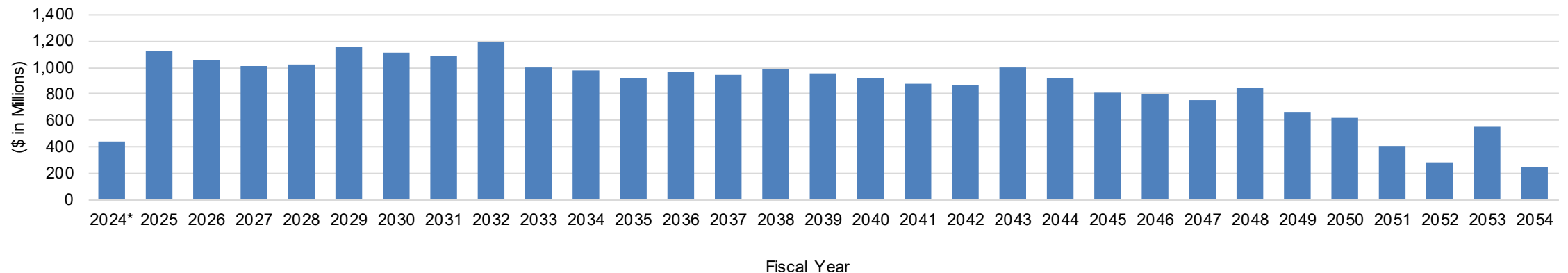
GO Debt Composition

97.5% of Debt in Fixed Rate Mode



GO Principal Amortization (as of October 31, 2023)

42% of Outstanding Principal Amortizes Through FY 2034



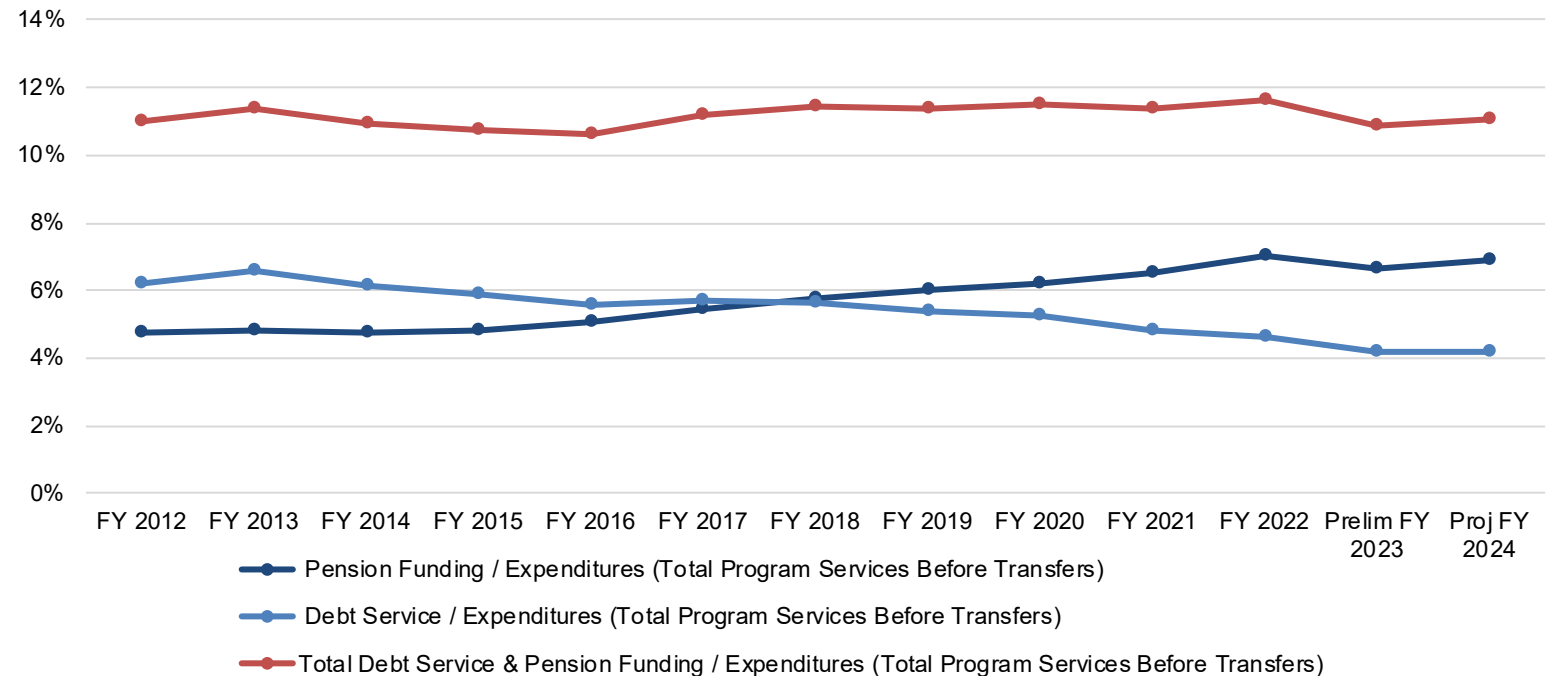
Long-Term Liabilities Have Been Manageable



Key Takeaways

- The Commonwealth is authorized to issue three types of direct debt:
 - General Obligation Debt
 - Special Obligation Debt
 - Federal Grant Anticipation Notes
- The Commonwealth's debt service represents 4.2% of total expenditures in FY 2023; this is a reduction from a high of 6.6% in FY 2013
- As debt service as a percent of expenditures decreased, pension funding as a percent of expenditures increased; combined, these long-term liabilities remained relatively flat
- Historical stability of aggregate long-term liabilities enhances budgetary predictability

Pension Funding and Debt Service as % of Expenditures (Total Program Services Before Transfers)



Proj FY 2024 Sources: Pension Funding – Commonwealth of Massachusetts Information Statement dated December 18, 2023, as supplemented January 8, 2024, table titled “Current Funding Schedule for Pension Obligations”; Debt Service and Expenditures – table titled “Budgeted Operating Funds – Statutory Basis”

FY 2019-2023 Sources: Pension Funding – Commonwealth of Massachusetts Information Statement dated December 18, 2023, as supplemented January 8, 2024, table titled “Annual Required Contributions and Other Pension Contributions”; Debt Service and Expenditures – table titled “Budgeted Operating Funds – Statutory Basis”

FY 2015-2018 Sources: Pension Funding – Commonwealth of Massachusetts Information Statement dated November 29, 2018, table titled “Annual Required Contributions and Other Pension Contributions”; Debt Service and Expenditure – table titled “Budgeted Operating Funds – Statutory Basis”

FY 2012-2014 Sources: Pension Funding – Commonwealth of Massachusetts Information Statement dated November 13, 2015, table titled “Annual Required Contributions and Other Pension Contributions”; Debt Service and Expenditure – table titled “Budgeted Operating Funds – Statutory Basis”

Transaction Timeline and Contacts



January 2024						
S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

February 2024						
S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29		

Financing Schedule*	
Date	Event
Wednesday, January 17 th	Mail POS and Invitation to Tender
Friday, February 2 nd	Expiration Date (Tender Offer)
Tuesday, February 6 th	Retail Order Period
Wednesday, February 7 th	Institutional Order Period
Wednesday, February 14 th	Closing

Representatives from the Commonwealth are available for one-on-one discussions

For additional information or to schedule a one-on-one call, please contact:

The Commonwealth of Massachusetts	
Sue Perez <i>Deputy Treasurer</i> Tel.: 617-367-9333 x816 sperez@tre.state.ma.us	Kathy Bramlage <i>Senior Debt Analyst / Portfolio Manager</i> Tel.: 617-367-9333 x494 kbramlage@tre.state.ma.us

For more information, please visit: www.buymassbonds.com
 For more information on the Tender Offer, please visit: www.globic.com/mass