

The Commonwealth of Massachusetts



The Commonwealth of Massachusetts Investor Presentation:

General Obligation Bonds Consolidated Loan of 2020, Series E

General Obligation Refunding Bonds 2020, Series D

General Obligation Refunding Bonds 2020, Series E (Federally Taxable)

Office of the State Treasurer Deborah B. Goldberg



Disclaimer

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Financing Overview and Additional Information

Issue*	\$500,000,000* General Obligation Bonds Consolidated Loan of 2020, Series E	\$417,655,000* General Obligation Refunding Bonds, 2020 Series D	\$444,090,000* General Obligation Refunding Bonds, 2020 Series E (Federally Taxable)
Tax Status	Tax-Exempt	Tax-Exempt	Federal: Taxable Commonwealth: Tax-Exempt
Use of Net Proceeds	New Money	Refunding	Refunding
Amortization*	2022-2050	2034-2042	2022-2034
Ratings (Moody's/S&P/Fitch)	Aa1 (Stable) / AA (Stable) / AA+ (Stable)		
Timing*	Taxable Indications of Interest and Tax-Exempt Retail Order Period: November 18, 2020 Taxable Launch and Tax-Exempt Pricing: November 19, 2020		
Closing*	December 3, 2020		
Preliminary Official Statement	https://emma.msrb.org/P21412468-P21097677-P21506815.pdf		
Detailed Update on the Commonwealth	<i>For a more detailed update on the Commonwealth, please view the Commonwealth's November 13th Investor Call Replay available via the following link: [TBD]</i>		
Additional Information	www.massbondholder.com		

* Preliminary, subject to change



Credit Factors

Economy	<ul style="list-style-type: none">• Large economy focused on important knowledge sectors that pay above average wages such as health care, technology and education• Deep and diverse economy that was strong going into the recession with low 2.9% average unemployment. The pandemic affected the state's economy, and the State had the nation's highest unemployment rate in June of 17.7% - preliminary unemployment in September was 9.6%• High income levels with per capita income at 132% of the nation in 2019, 2nd highest among states⁽¹⁾
Finances & Liquidity	<ul style="list-style-type: none">• Massachusetts' individual income taxes and sales taxes accounted for over 80% of total tax revenue in 2020. The State is still finalizing its fiscal 2021 budget. Through October, fiscal 2021 tax revenue is up 1.3% year-over-year with growth in both income and sales taxes• Strong budget stabilization fund balance at \$3.5 billion (preliminary and unaudited as of June 30, 2020) or 7.3% of 2019 expenditures. May draw on stabilization fund in fiscal 2021, but even with any draw, balance will remain healthy• The Commonwealth plans to issue \$1.2 billion in Revenue Anticipation Notes this fiscal year. The State also has a \$200 million commercial paper program, \$200 million note purchase agreement and a \$1.75 billion line of credit opened on May 11, 2020
Governance	<ul style="list-style-type: none">• Strong financial, debt and budget management policies including: (i) consensus revenue estimating; (ii) multiyear financial plans/forecast; (iii) annualized formal debt affordability statements and (iv) multiyear capital investment planning• Strong budget gap closing capacity – the Governor has authority to cut expenses for executive agencies without legislative authority if there is a revenue shortfall• Massachusetts' strong governance framework will remain a key credit factor as the state navigates future uncertainty
Debt and Pensions	<ul style="list-style-type: none">• There is an annual administrative limit on the amount of bond-funded capital expenditures, or “bond-cap” to keep the Commonwealth's debt within affordable levels (FY21-FY25 plan is \$2.46 billion)• Debt is elevated compared to other states in part because of the Commonwealth's practice of financing projects for local governments⁽¹⁾• As of the last valuation date January 1, 2019, the funded ratio of the pension system based on the actuarial value was 56.3%

The Commonwealth has a Highly Educated Workforce with High Incomes and is Home to Top Companies, Colleges, and Universities



- Large diverse economy focused on important knowledge sectors that pay above average wages such as health care, technology and education
- As of July 1, 2019, the population of the Commonwealth was 6.9 million
 - The Commonwealth's population has grown 5.8% from 2009 to 2019 compared to the national average of 7.0% and the New England average of 3.1%
- The availability of a skilled and well-educated workforce is an important resource
- The Commonwealth has the highest percentage of adults with a bachelor degree or higher among all the states in the nation at 44.5%
 - 91.8% of adults over the age of 25 have completed high school, above the national average of 88.3%
 - Massachusetts has spent nearly one-third more per pupil in primary and secondary education than the national average since 1994

Home to 34 Fortune 500 Companies



Home to 114 Colleges and Universities

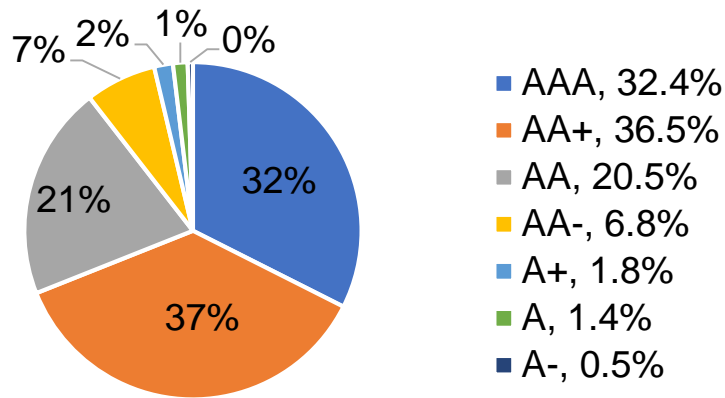




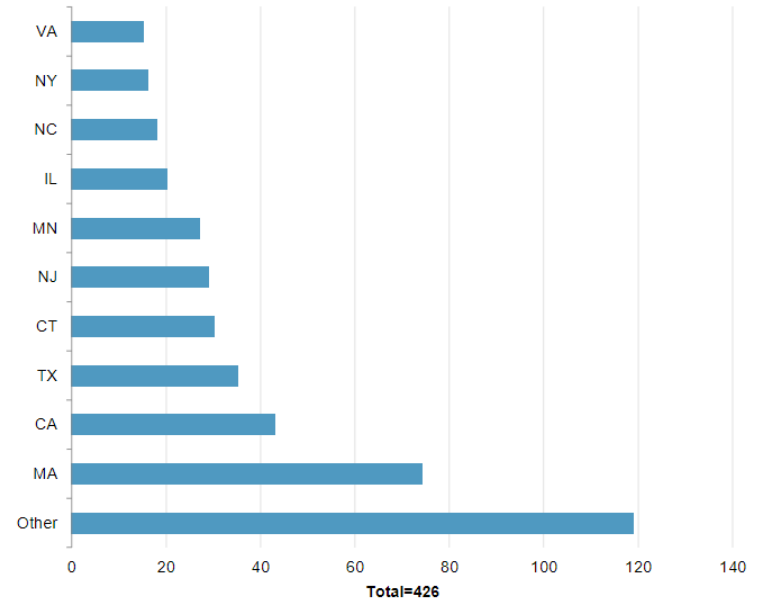
Municipality Credits in Massachusetts

Massachusetts has more AAA rated local governments than any other state

S&P MA Municipality Ratings^(1,2)



Distribution Of 'AAA' U.S. Municipalities Ratings
As of Jan. 2, 2020



- (1) There are 351 Towns and Cities in Massachusetts
- (2) These ratings are the opinion of S&P Global as of 2019

- 89% of S&P's 222 municipality ratings are AA to AAA

Source: S&P Global, 2019

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The Commonwealth Primarily Leverages Its GO Program

Program	Revenue Pledged	Description	Outstanding Par <i>(9/30/2020)</i>	Ratings*
General Obligation (GO) Bonds	Full Faith & Credit	Largest and most active debt program. Funds the Commonwealth's Capital Investment Plan	\$24.1 billion	Aa1 AA AA+ NR
Commonwealth Transportation Fund (CTF) Bonds	Primarily Motor Fuels (e.g., 24¢ Gas Tax) Registry Fees	Funds the Rail Enhancement Program and Accelerated Bridge Program	\$2.9 billion	Aa1 AA+ NR AAA
Federal Highway Grant Anticipation Notes (GANs)	Federal Highway Reimbursements, also backed by CTF, subject to a prior lien for Senior Obligations	Funds a portion of the Accelerated Bridge Program and prior transportation projects	\$662 million	Aa2 AAA NR NR
Special Obligation Bonds (Convention Center)	Hotel occupancy tax receipts, vehicle rental surcharge fees and a portion of sales tax receipts	Used to finance Boston's convention center	\$504.3 million	A1 A NR NR

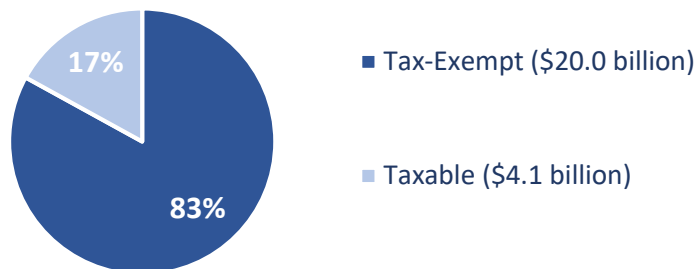
Source: The Commonwealth Information Statement dated October 28, 2020

* Moody's, S&P, Fitch, Kroll

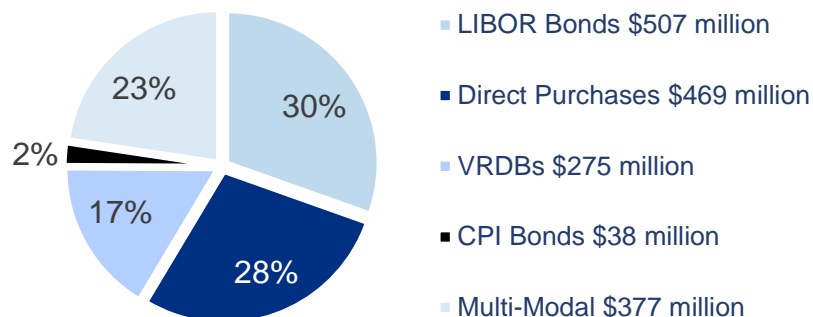


GO Debt Amortization is Conservative and Front Loaded

GO Debt by Tax Status⁽¹⁾



GO Variable Rate Debt: \$1.7BN (7.2%)^(2,3)

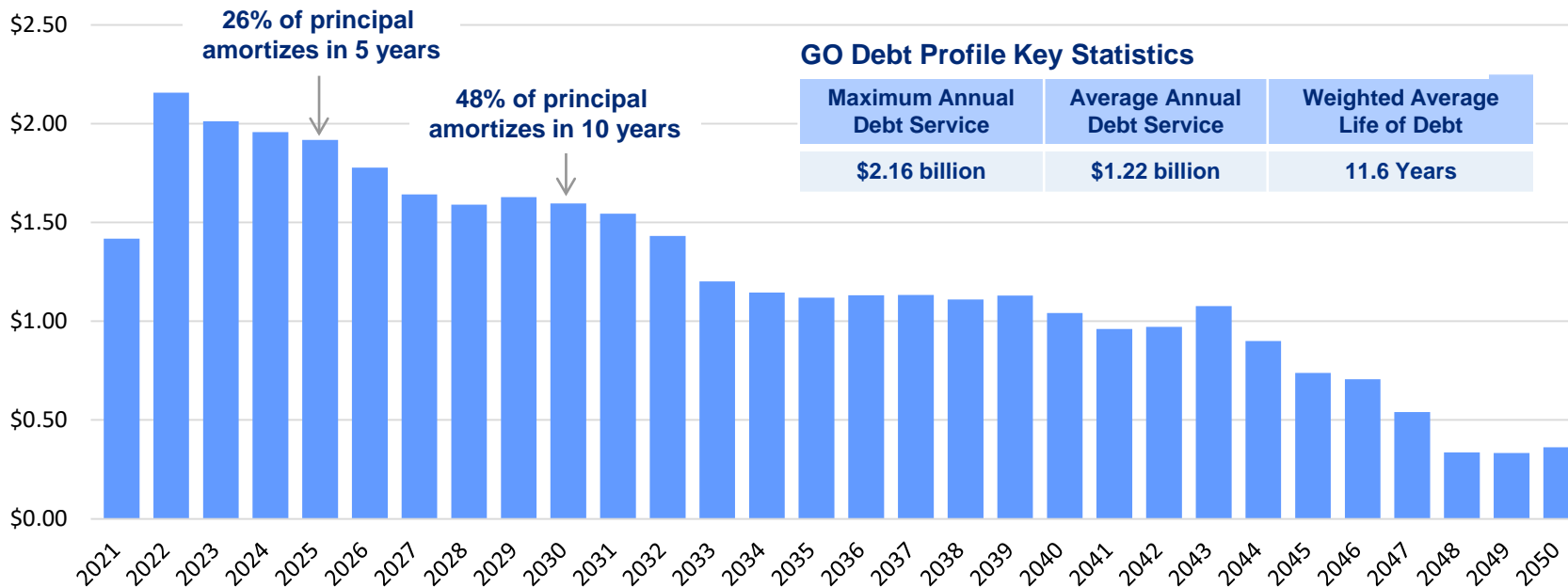


(1) As of September 30, 2020

(2) \$0.8 billion are synthetically fixed through interest rate swap agreements and \$0.9 billion are unhedged variable rate bonds

(3) As of September 30, 2020

The Commonwealth's GO Debt Service Profile (\$Billion by Fiscal Year as of September 30, 2020)



GO Debt Profile Key Statistics

Maximum Annual Debt Service	Average Annual Debt Service	Weighted Average Life of Debt
\$2.16 billion	\$1.22 billion	11.6 Years



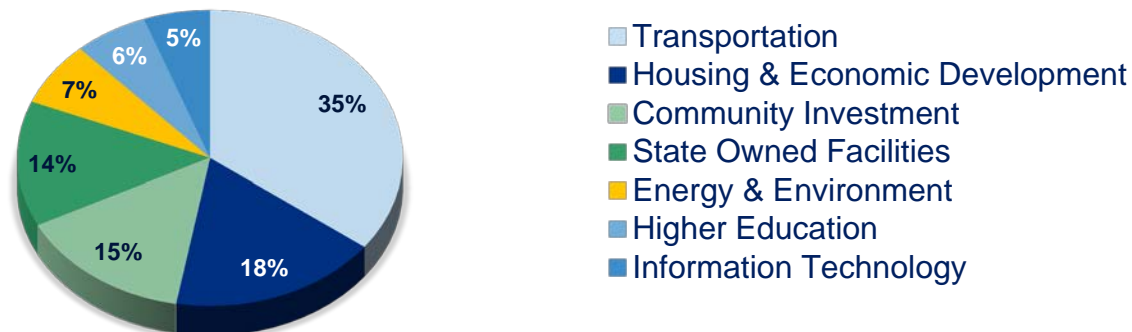
What You Invest in When Investing in Massachusetts Bonds

FY21 CIP Themes



- The Capital Investment Plan (CIP) supports capital investments in every region of the Commonwealth and across all areas of government
- The CIP provides long-term investments in transportation, state-owned facilities, health and human services, public safety, and information technology
- The CIP also includes significant funding to promote economic development, enhance workforce skills, expand affordable housing opportunities, care for critical environmental infrastructure, and support the Commonwealth's cities and towns
- The CIP leverages outside resources, collaborates across agencies and builds effective partnerships

FY21 CIP¹ Bond Cap \$2.458 Billion



¹ For more detail on the Capital Plan <https://budget.digital.mass.gov/capital/fy21/downloads/>



What You Invest in When Investing in Massachusetts Bonds

Transportation

- Maintain and improve the condition of Massachusetts' roads and bridges
- Improve reliability and modernization of MBTA subways, buses and commuter rail transit system
- Make the public transit system safer, more accessible and able to accommodate growth

Housing and Economic Development

- Provides municipalities with funding for projects promoting economic development through the MassWorks program
- Investment in local housing authorities across 234 communities funding preservation and redevelopment of units that benefit approximately 80,000 low-income people, of whom about 70% are elderly, disabled or have other special needs
- Develop affordable housing for the Commonwealth's workforce, seniors and veterans
- Provide grants to foster job growth and innovation in the life sciences industry
- Broadband Last Mile Infrastructure program which is successfully closing the broadband connectivity gap in western Massachusetts



Sunderland Bridge; Source: [https://en.wikipedia.org/wiki/Sunderland_Bridge_\(Massachusetts\)](https://en.wikipedia.org/wiki/Sunderland_Bridge_(Massachusetts))



MBTA Subway Red Line; Source: <https://www.railtech.com/infrastructure/2019/03/06/alstom-to-modernise-signalling-system-in-boston-metro/?gdr=accept>



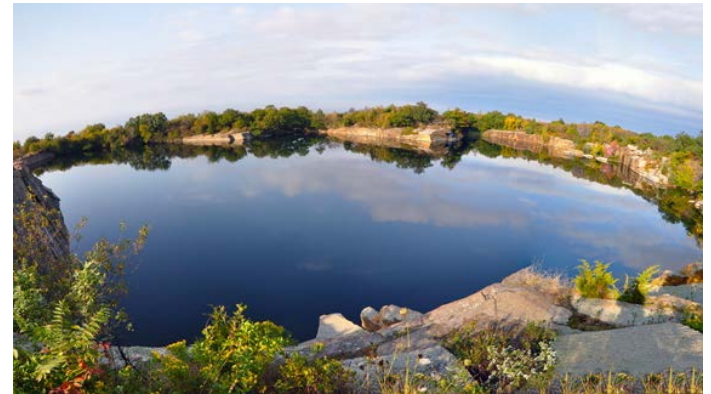
What You Invest in When Investing in Massachusetts Bonds

State Owned Facilities

- Renovations and replacements to modernize and improve operations at 100 active court facilities across the Commonwealth, including energy efficiency and climate resiliency
- Renovations and modernization to some of the Commonwealth's most vulnerable residents in facilities comprising more than 250 Commonwealth-owned buildings, including group homes, mental health hospitals, centers for individuals with developmental disabilities, and a public health laboratory
- Construction of a new state-of-the-art long-term facility for veterans at the Soldiers' Home

Environmental Infrastructure

- Investments to support climate change mitigation and adaptation programs, including municipal vulnerability preparedness grants, critical coastal infrastructure and resilience grants and dam and seawall funding
- Deferred maintenance of 450,000 acres of parks and forests, beaches, bike trails and other state-owned recreational assets
- Assist cities and towns in preserving their natural resources, including water quality, parks and open space, land use planning and funding for solid waste management and recycling



Halibut Point State Park; Source: <https://blog.mass.gov/blog/tourism/celebrate-national-park-and-recreation-month-at-dcr-parks-in-massachusetts/>



What You Invest in When Investing in Massachusetts Bonds

Community Investment

- Partnering with cities and towns to provide grants to support important local infrastructure including roads and bridges, parks, economic initiatives and environmental improvements

Higher Education

- Invest in the nation's leading education system throughout the Commonwealth
- Continued capital investments supporting students, workforce demands and campus priorities within the public higher education system which includes 15 community colleges, 9 state universities, and 5 UMass campuses

Information Technology

- Improve the ability to deliver government services while working remotely, modernizing and securing the Commonwealth's digital network and shifting critical business applications to cloud-based platforms
- Expand cybersecurity capabilities and institute event monitoring and communication processes to secure access to business systems and data



UMass Amherst; Source: <https://www.umass.edu/gateway/campus-gallery>



Preliminary Amortization

\$500,000,000* General Obligation Bonds Consolidated Loan of 2020 Series E

Maturity (11/01)*	Par Amount*
2022	\$20,000,000
2025	25,000,000
2026	25,000,000
2027	25,000,000
2028	25,000,000
2029	25,000,000
2030	25,000,000
2031	25,000,000
2032	25,000,000
2033	25,000,000
2043	30,000,000
2044	30,000,000
2045	30,000,000
2046	30,000,000
2047	30,000,000
2048	30,000,000
2049	35,000,000
2050	40,000,000

\$417,655,000* General Obligation Refunding Bonds 2020 Series D

Maturity (11/01)*	Par Amount*
2034	\$34,460,000
2035	45,555,000
2036	46,550,000
2037	47,215,000
2038	28,105,000
2039	29,370,000
2040	70,120,000
2041	85,060,000
2042	31,220,000

\$444,090,000* General Obligation Refunding Bonds 2020 Series E (Federally Taxable)

Maturity (11/01)*	Par Amount*
2022	\$75,760,000
2023	6,850,000
2024	6,885,000
2025	48,470,000
2026	41,245,000
2027	36,745,000
2028	61,920,000
2029	13,200,000
2030	25,025,000
2031	34,725,000
2032	24,435,000
2033	58,840,000
2034	9,990,000

* Preliminary, subject to change



Summary of Potential Bonds to be Refunded*

Tax-Exempt Refunding Candidates

Series	Maturity	Coupon	Par	CUSIP ⁽¹⁾
2012B	6/1/2027	3.000%	35,000,000	57582PF96
2012B	6/1/2042	4.000%	34,000,000	57582RG59
2012C	10/1/2027	4.000%	31,745,000	57582PG46
2012C	10/1/2028	3.000%	10,000,000	57582PG53
2012C	10/1/2029	3.000%	10,000,000	57582PG61
2012C	10/1/2030	3.000%	22,000,000	57582PG79
2012C	10/1/2031	3.000%	32,000,000	57582PG87
2012C	10/1/2032	3.250%	22,000,000	57582PG95
2012C	10/1/2033	3.250%	21,965,000	57582PH29
2012C	10/1/2034	3.250%	23,090,000	57582PH37
2012C	10/1/2035	3.375%	24,275,000	57582PH45
2012C	10/1/2036	3.500%	25,520,000	57582PH52
2012C	10/1/2037	3.500%	26,690,000	57582PH60
2012C	10/1/2038	3.600%	27,780,000	57582PH78
2012C	10/1/2039	3.625%	28,915,000	57582PH86
2012C	10/1/2040	3.625%	30,095,000	57582PH94
2012C	10/1/2041	3.625%	31,325,000	57582PJ27
2012C	10/1/2042	3.625%	32,600,000	57582PJ35
Total			\$469,000,000	

Taxable Refunding Candidates

Series	Maturity	Coupon	Par	CUSIP ⁽¹⁾
2001B	1/1/2021	Variable	48,250,000	NA
2011D	10/1/2025	3.000%	42,000,000	57582PB66
2011D	10/1/2028	4.000%	48,000,000	57582PB90
2013D	8/1/2033	3.750%	20,000,000	57582PN48
2013D	8/1/2033	4.000%	15,000,000	57582PN55
2014A	12/1/2034	5.000%	20,000,000	57582PU24
2014A	12/1/2035	5.000%	20,000,000	57582PU32
2014A	12/1/2036	5.000%	20,000,000	57582PU40
2014A	12/1/2037	5.000%	20,000,000	57582PU57
2014A	12/1/2040	5.000%	40,000,000	57582PU81
2014A	12/1/2041	5.000%	20,000,000	57582RYX8
2018A	2/1/2021	Variable	118,505,000	57582RSD9
Total			\$431,755,000	

(1) Registered trademark of American Bankers Association. No representation is made as to the accuracy of the CUSIP Numbers of the Refunded Candidates. CUSIP numbers are included solely for the convenience of the Holders of the Refunded Bonds.

* Preliminary, subject to change



Preliminary Financing Schedule and Additional Resources

Financing Schedule*

November / December 2020						
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	1	2	3	4	5



Tuesday, November 10: Post POS

Friday, November 13 at 2:00PM: Investor Call

Wednesday, November 18: Indications of Interest / Retail Order Period

Thursday, November 19: Taxable Launch and Tax-Exempt Pricing

Thursday, December 3: Closing of the Bonds

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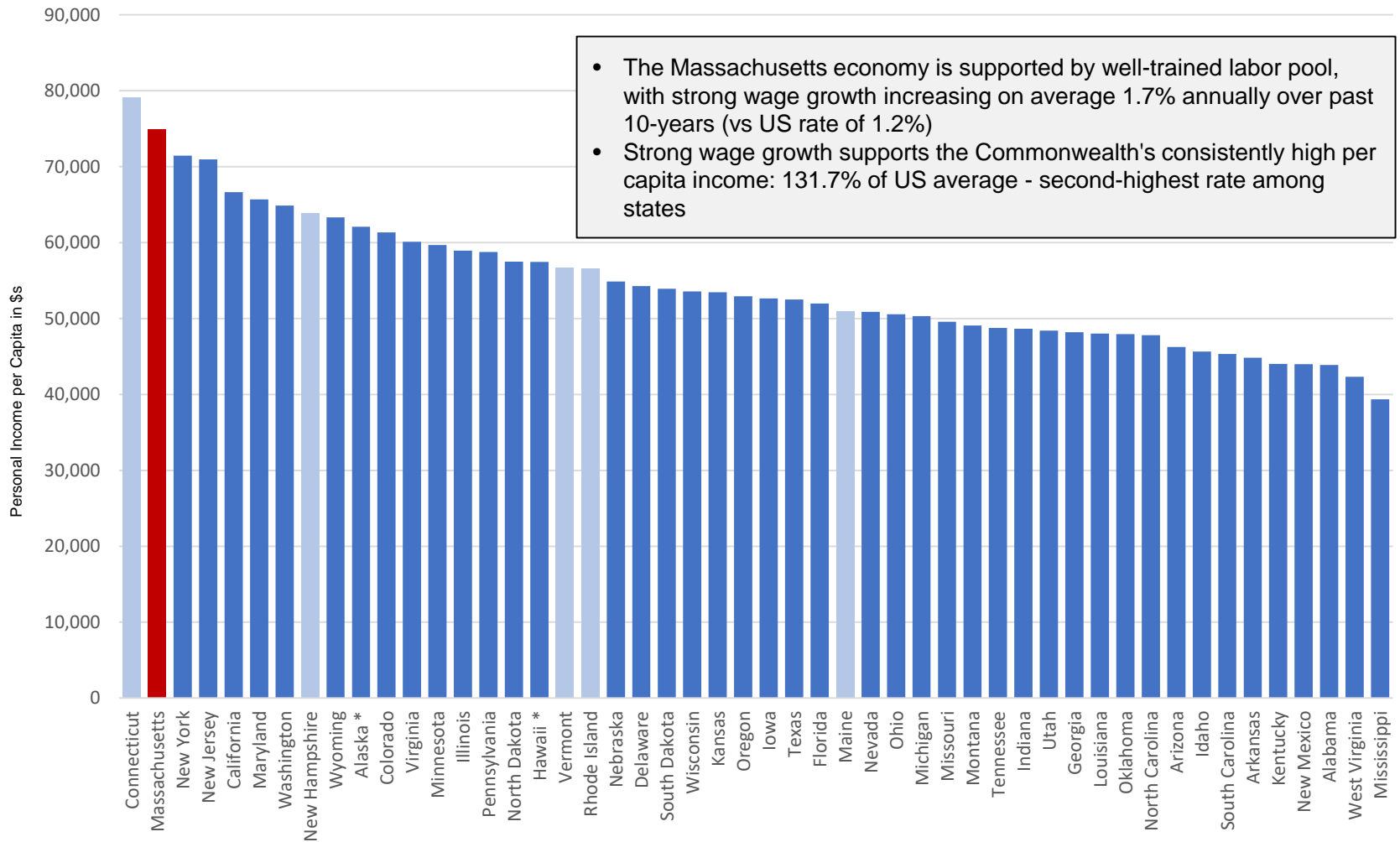
Additional Resources

- Information Statement as of October 28, 2020
 - <https://emma.msrb.org/MarketActivity/ContinuingDisclosureDetails/P21077039>
- Massachusetts Investor Website
 - <https://massbondholder.com>
- Department of Revenue
 - <https://www.mass.gov/service-details/dor-press-releases-and-reports>
- The Commonwealth of Massachusetts' November 13th Investor Call Replay
 - **TBD**

* Preliminary, subject to change

APPENDIX ADDITIONAL INFORMATION

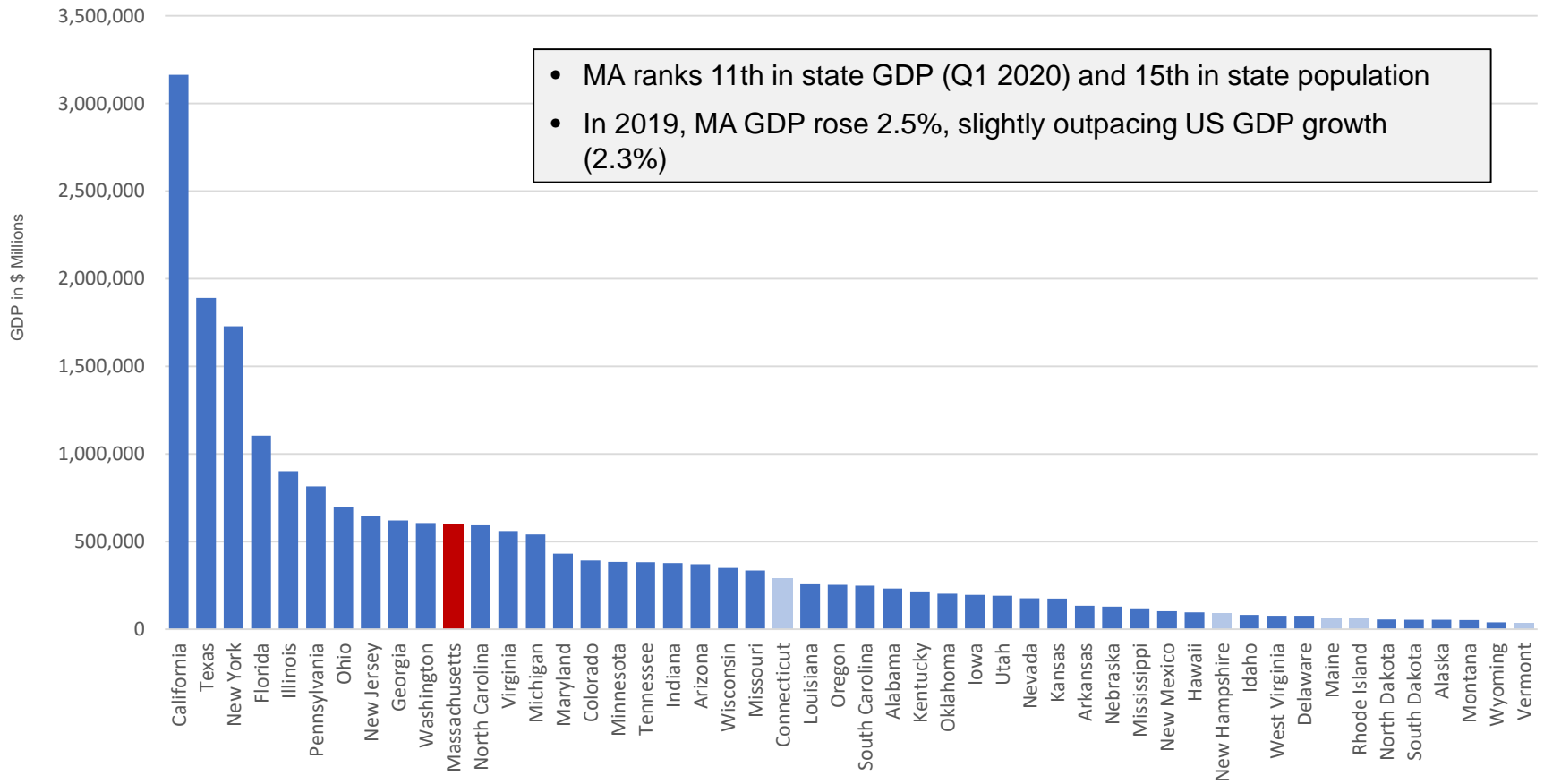
Personal Income per Capita by State (2019)



Source: U.S. Bureau of Economic Analysis



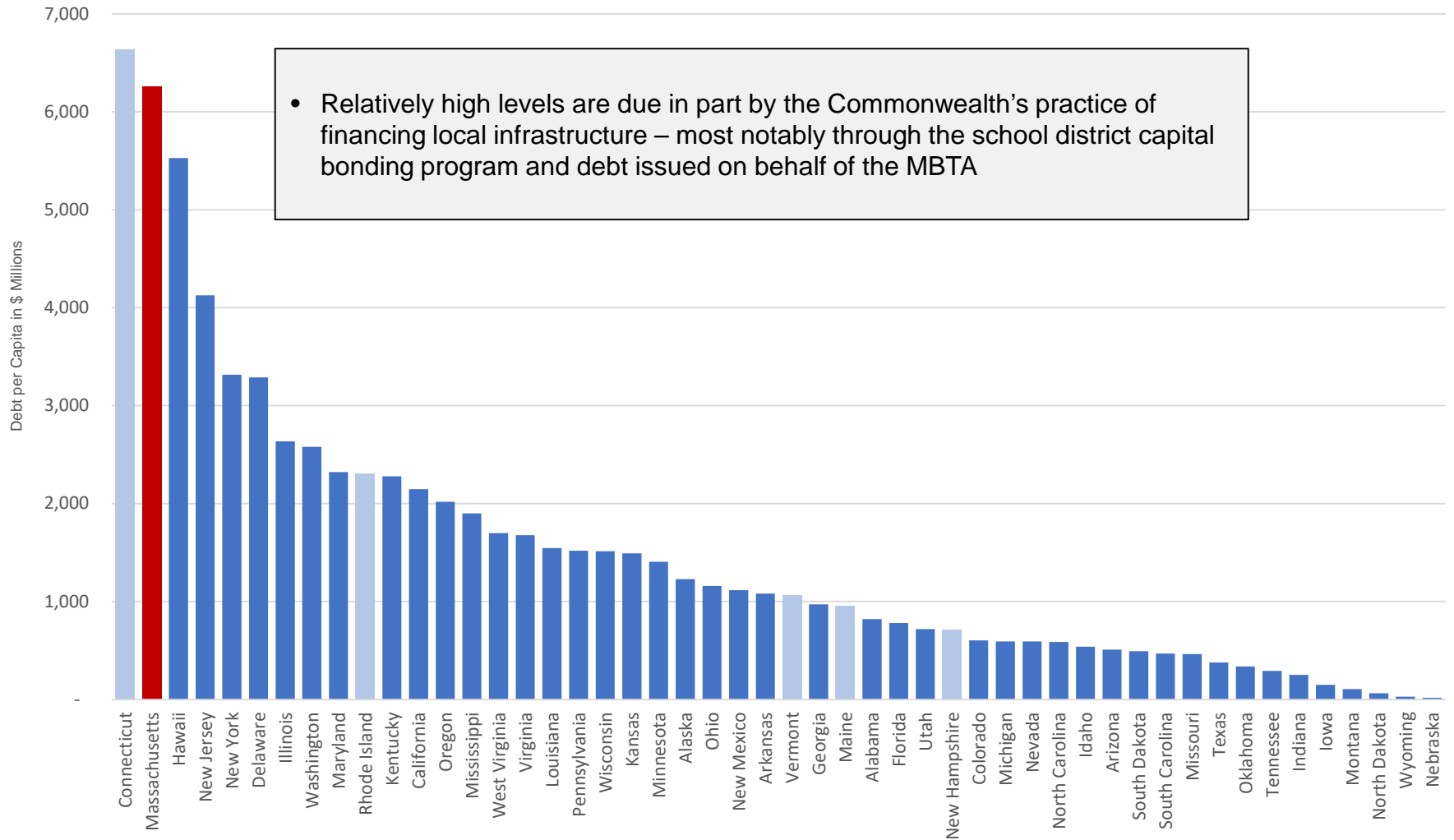
Q1 2020 State Gross Domestic Product (GDP)



Sources: U.S. Bureau of Economic Analysis; and Moody's Investor's Services



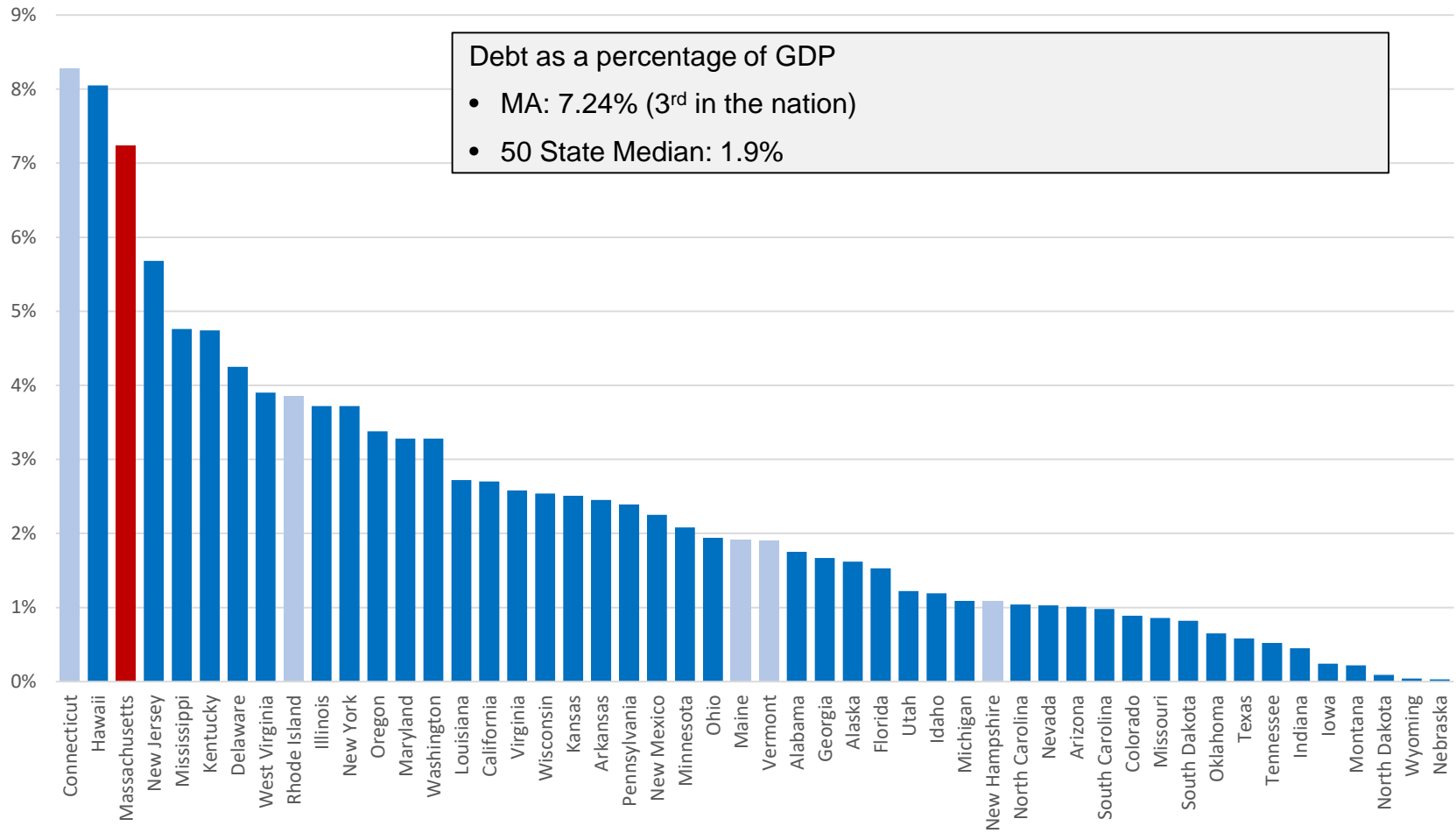
Debt Per Capita by State (2019)



Sources: U.S. Bureau of Economic Analysis; and Moody's Analytics



Debt as a Percentage of State GDP (2019)



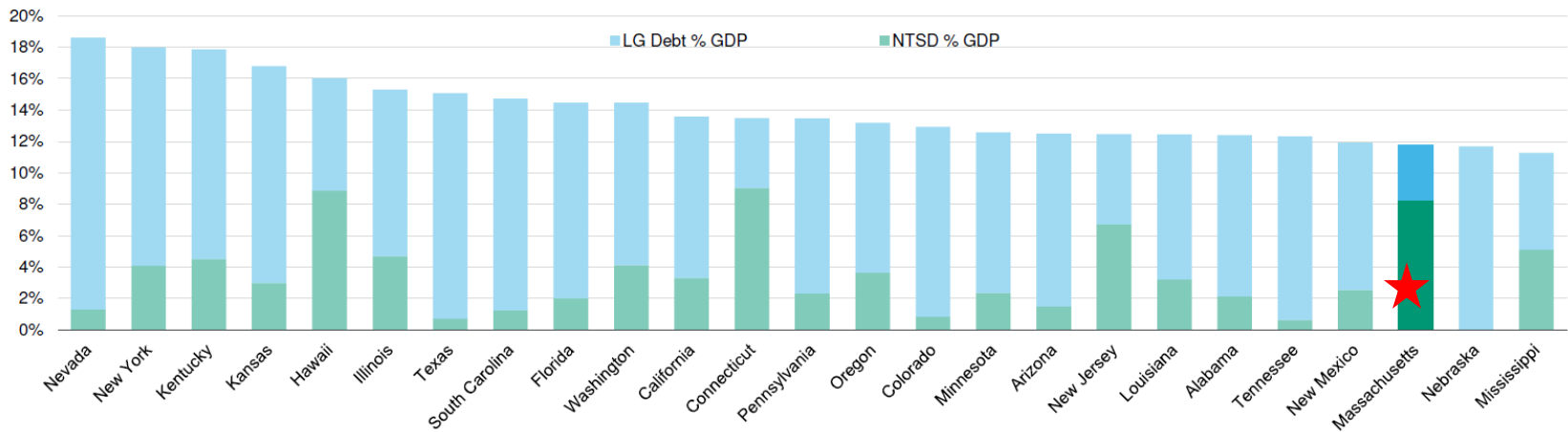
Sources: U.S. Bureau of Economic Analysis; and Moody's Analytics



- These figures reflect borrowing for school construction and mass transit that other states account for at the local level. When factoring in debt issued by local governments, Massachusetts' leverage is more moderate. State and local debt represents 11.8% of Massachusetts' GDP, ranking the Commonwealth 23rd and approximating the sector median of 11.2%

Massachusetts' total state and local government debt burden more in line with peers

State NTSD + local government debt as a % of GDP



*State NTSD debt data as of fiscal 2017 as reported by Moody's; Local Government debt data as of fiscal 2016 as reported by US Census; GDP data as of 2016
 Source: State NTSD data from Moody's Investors Service; Local Government debt data from US Census; GDP from US Bureau of Economic Analysis

Source: Moody's, May 10, 2018