

NEW MONEY ISSUE - BOOK-ENTRY-ONLY

In the opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, under existing law, and assuming continued compliance with various requirements of the Internal Revenue Code of 1986, as amended, interest on the Bonds will not be included in the gross income of holders of the Bonds for federal income tax purposes. In the opinion of Bond Counsel, interest on the Bonds, and any profit made on the sale thereof, are exempt from Massachusetts personal income taxes and the Bonds are exempt from Massachusetts personal property taxes. See “TAX EXEMPTION” herein.

THE COMMONWEALTH OF MASSACHUSETTS

\$100,000,000

**General Obligation Bonds
Consolidated Loan of 2020, Series A**

\$200,000,000

**General Obligation Bonds
Consolidated Loan of 2020, Series B**



\$385,000,000

**General Obligation Bonds
Consolidated Loan of 2020,
Series C**

Dated: Date of Delivery

Due: As shown on the inside cover hereof

The Commonwealth of Massachusetts General Obligation Bonds, Consolidated Loan of 2020, Series A (the “Series 2020A Bonds”), the General Obligation Bonds, Consolidated Loan of 2020, Series B (the “Series 2020B Bonds”) and the General Obligation Bonds, Consolidated Loan of 2020, Series C (the “Series 2020C Bonds” and together with the Series 2020A Bonds and Series 2020B Bonds, the “Bonds”) will be issued by means of a book-entry-only system evidencing ownership and transfer of the Bonds on the records of The Depository Trust Company, New York, New York (“DTC”), and its participants. Details of payment of the Bonds are more fully described in this Official Statement. The Bonds will bear interest from their date of delivery and interest will be payable on September 1, 2020 and semiannually thereafter on March 1 and September 1 and at maturity, calculated on the basis of a 360-day year of twelve 30-day months. The Series 2020B Bonds and the Series 2020C Bonds are subject to redemption prior to maturity as more fully described herein.

The Bonds will constitute general obligations of The Commonwealth of Massachusetts (the “Commonwealth”), and the full faith and credit of the Commonwealth will be pledged to the payment of the principal of and interest on the Bonds. However, for information regarding the statutory limit on state tax revenue growth, see “SECURITY FOR THE BONDS” (herein) and the Information Statement (described herein) under the heading “COMMONWEALTH REVENUES – LIMITATIONS ON TAX REVENUES.”

The Bonds are offered when, as and if issued and received by the original purchasers, and subject to the unqualified approving opinion as to legality of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Bond Counsel. Certain legal matters will be passed upon for the Commonwealth by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Disclosure Counsel. Acacia Financial Group, Inc. is acting as municipal advisor to the Commonwealth in connection with the issuance of the Bonds. Settlement of the issue is expected at DTC in New York, New York, on or about March 3, 2020.

February 19, 2020

THE COMMONWEALTH OF MASSACHUSETTS

\$100,000,000 General Obligation Bonds Consolidated Loan of 2020, Series A

Dated: Date of Delivery

Due: March 1, as shown below

<u>Maturity</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP Number*</u>
2022	\$10,000,000	5.00%	0.85%	57582RZV1
2023	10,000,000	5.00	0.85	57582RZW9
2028	40,000,000	5.00	1.05	57582RZX7
2029	40,000,000	5.00	1.13	57582RZY5

\$200,000,000 General Obligation Bonds Consolidated Loan of 2020, Series B

Dated: Date of Delivery

Due: March 1, as shown below

<u>Maturity</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP Number*</u>
2032	\$40,000,000	4.00%	1.470% ^C	57582RZZ2
2033	15,000,000	4.00	1.560 ^C	57582RA22
2034	40,000,000	2.00	2.110	57582RA30
2035	15,000,000	2.00	2.160	57582RA48
2039	15,000,000	2.50	2.250 ^C	57582RA55
2043	75,000,000	2.50	2.558	57582RA63

\$385,000,000 General Obligation Bonds Consolidated Loan of 2020, Series C

Dated: Date of Delivery

Due: March 1, as shown below

<u>Maturity</u>	<u>Amount</u>	<u>Interest Rate</u>	<u>Yield</u>	<u>CUSIP Number**</u>
2047	\$85,000,000	3.00%	2.41% ^C	57582RA71
2048	85,000,000	3.00	2.42 ^C	57582RA89
2049	110,000,000	3.00	2.43 ^C	57582RA97
2050	105,000,000	2.75	2.69 ^C	57582RB21

^C Priced at stated yield to the March 1, 2030 optional redemption date at a redemption price of 100%. See "THE BONDS – Redemption" herein.

* CUSIP is a registered trademark of the American Bankers Association. CUSIP data herein are provided by CUSIP Global Services, managed on behalf of the American Bankers Association by S&P Global Market Intelligence. The CUSIP numbers are included solely for the convenience of owners of the Bonds and the Commonwealth is not responsible for the selection or the correctness of the CUSIP numbers printed herein. CUSIP numbers assigned to securities may be changed during the term of such securities based on a number of factors, including, but not limited to, the refunding or defeasance of such securities or the use of secondary market financial products.

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No dealer, broker, salesperson or other person has been authorized by The Commonwealth of Massachusetts or the original purchasers of the Bonds to give any information or to make any representations, other than those contained in this Official Statement, and if given or made, such other information or representations must not be relied upon as having been authorized by either of the foregoing. This Official Statement does not constitute an offer to sell or a solicitation of any offer to buy, nor shall there be any sale of the Bonds offered hereby by any person in any jurisdiction in which it is unlawful for such person to make such offer, solicitation or sale. The information set forth herein or included by reference herein has been furnished by the Commonwealth and includes information obtained from other sources which are believed to be reliable, but is not guaranteed as to accuracy or completeness and is not to be construed as a representation by the original purchasers of the Bonds or, as to information from other sources, the Commonwealth. The information and expressions of opinion herein or included by reference herein are subject to change without notice and neither the delivery of this Official Statement nor any sale made hereunder shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth, or its agencies, authorities or political subdivisions, since the date hereof, except as expressly set forth herein.

THE COMMONWEALTH OF MASSACHUSETTS



CONSTITUTIONAL OFFICERS

Charles D. Baker Governor
Karyn E. Polito Lieutenant Governor
William F. Galvin Secretary of the Commonwealth
Maura T. Healey Attorney General
Deborah B. Goldberg Treasurer and Receiver-General
Suzanne M. Bump Auditor

LEGISLATIVE OFFICERS

Karen E. Spilka President of the Senate
Robert A. DeLeo Speaker of the House

OFFICIAL STATEMENT

THE COMMONWEALTH OF MASSACHUSETTS

\$100,000,000	\$200,000,000
General Obligation Bonds	General Obligation Bonds
Consolidated Loan of 2020, Series A	Consolidated Loan of 2020, Series B
\$385,000,000	
General Obligation Bonds	
Consolidated Loan of 2020, Series C	

INTRODUCTION

This Official Statement (including the cover page and Appendices A through E attached hereto) provides certain information in connection with the issuance by The Commonwealth of Massachusetts (the “Commonwealth”) of its \$100,000,000 aggregate principal amount of General Obligation Bonds, Consolidated Loan of 2020, Series A (the “Series 2020A Bonds”), \$200,000,000 aggregate principal amount of General Obligation Bonds, Consolidated Loan of 2020, Series B (the “Series 2020B Bonds”) and \$385,000,000 aggregate principal amount of General Obligation Bonds, Consolidated Loan of 2020, Series C (the “Series 2020C Bonds” and together with the Series 2020A Bonds and the Series 2020B Bonds, the “Bonds”). The Bonds will be general obligations of the Commonwealth, and the full faith and credit of the Commonwealth will be pledged to the payment of the principal of and interest on the Bonds. However, for information regarding the statutory limit on state tax revenue growth, see “SECURITY FOR THE BONDS” and the Information Statement (described below) under the heading “COMMONWEALTH REVENUES – LIMITATIONS ON TAX REVENUES.”

The Bonds are being issued to finance certain authorized capital projects of the Commonwealth. See “THE BONDS – Application of Proceeds of the Bonds.”

Purpose and Content of Official Statement

This Official Statement describes the terms and use of proceeds of, and security for, the Bonds. This introduction is subject in all respects to the additional information contained in this Official Statement, including Appendices A through E. All descriptions of documents contained herein are only summaries and are qualified in their entirety by reference to each such document.

Specific reference is made to the Commonwealth’s Information Statement dated January 29, 2020, as amended on February 11, 2020 (the “Information Statement”), which is attached hereto as Appendix A. The Information Statement has been filed with the Municipal Securities Rulemaking Board (the “MSRB”) through its Electronic Municipal Market Access (“EMMA”) system. Subsequent filings by the Commonwealth to the EMMA system, prior to the sale of the Bonds, of continuing disclosure documents identified as “other financial/operating data” are hereby deemed to be included by reference in the Information Statement. The Information Statement

contains certain fiscal, budgetary, financial and other general information concerning the Commonwealth. Exhibit A to the Information Statement contains certain economic information concerning the Commonwealth. Exhibit B to the Information Statement contains the financial statements of the Commonwealth for the fiscal year ended June 30, 2019, prepared on a statutory basis. Exhibit C to the Information Statement contains the financial statements of the Commonwealth for the fiscal year ended June 30, 2019, prepared on a GAAP basis. Specific reference is made to said Exhibits A, B and C, which are incorporated by reference and copies of which have been filed with EMMA. The financial statements are also available at the home page of the Comptroller of the Commonwealth located at <https://www.macomptroller.org> by clicking on the “Financial Reports” link. In addition, the financial statements are also posted on the Commonwealth’s investor website at www.massbondholder.com.

Appendix B attached hereto contains the proposed forms of legal opinion of Bond Counsel with respect to the Bonds. Appendix C attached hereto contains the proposed form of the Commonwealth’s continuing disclosure undertaking to be included in the form of the Bonds to facilitate compliance by the successful bidder(s) of the Bonds with the requirements of paragraph (b)(5) of Rule 15c2-12 of the Securities and Exchange Commission. Appendix D attached hereto contains the Official Notices of Sale with respect to the Bonds. Appendix E contains a form of issue price certificate.

THE BONDS

General

The Bonds will mature on the dates and in the aggregate principal amounts, and shall bear interest at the rates per annum (calculated on the basis of a 360-day year of twelve 30-day months), as set forth on the inside cover page of this Official Statement. The Bonds will be dated their date of delivery and will bear interest from such date. Interest on the Bonds will be payable semiannually on March 1 and September 1 of each year, and at maturity, commencing September 1, 2020, until the principal amount is paid. The record date for the Bonds will be the 15th day of the month immediately preceding each interest payment date. The Commonwealth will act as its own paying agent with respect to the Bonds. The Commonwealth reserves the right to appoint from time to time a paying agent or agents or bond registrar for the Bonds.

Book-Entry-Only System. The Bonds will be issued by means of a book-entry-only system, with one bond certificate for each maturity of each series immobilized at The Depository Trust Company, New York, New York (“DTC”). The certificates will not be available for distribution to the public and will evidence ownership of the Bonds in principal amounts of \$5,000 or integral multiples thereof. Transfers of ownership will be effected on the records of DTC and its participants pursuant to rules and procedures established by DTC and its participants. Interest and principal due on the Bonds will be paid in federal funds to DTC or its nominee as registered owner of the Bonds. As long as the book-entry-only system remains in effect, DTC or its nominee will be recognized as the owner of the Bonds for all purposes, including notices and voting. The Commonwealth will not be responsible or liable for maintaining, supervising or reviewing the records maintained by DTC, its participants or persons acting through such participants. See “BOOK-ENTRY-ONLY SYSTEM.”

Redemption

Optional Redemption.

The Series 2020A Bonds are not subject to redemption prior to maturity.

The Series 2020B Bonds and Series 2020C Bonds will be subject to redemption prior to their stated maturity dates on and after March 1, 2030 at the option of the Commonwealth from any monies legally available therefor, in whole or in part at any time, by lot, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Notice of Redemption. The Commonwealth shall give notice of redemption to the owners of the applicable Bonds not less than 30 days prior to the date fixed for redemption. So long as the book-entry-only system remains in effect for such Bonds, notices of redemption will be sent by the Commonwealth only to DTC or its nominee. Any failure on the part of DTC, any DTC participant or any nominee of a beneficial owner of any such Bond (having received notice from a DTC participant or otherwise) to notify the beneficial owner so affected, shall not affect the validity of the redemption.

The redemption notice may state that it is conditioned upon the deposit of moneys in an amount equal to the amount necessary to effect the redemption, in a separate account established by the Commonwealth for such purpose no later than the redemption date, or that the Commonwealth may rescind such notice at any time prior to the scheduled redemption date if the Treasurer and Receiver-General delivers a notice thereof to the registered owner of the Bonds. The redemption notice and optional redemption shall be of no effect if such moneys are not so deposited or if the notice is rescinded, and the failure of the Commonwealth to make funds available in whole or in part on or before the redemption date shall not constitute a default. Notice of redemption having been given as aforesaid, and the amount necessary to effect the redemption having been so deposited, the Bonds called for redemption shall become due and payable on the redemption date, and from and after such date, such Bonds shall cease to bear interest.

Selection for Redemption. In the event that less than all of any maturity of any series of Bonds is to be redeemed, and so long as the book-entry-only system remains in effect for such Bonds, the particular Bonds or portion of any such Bonds of a particular series and maturity to be redeemed will be selected by DTC by lot. If the book-entry-only system no longer remains in effect for the Bonds, selection for redemption of less than all of any one maturity within a series will be made by the Commonwealth by lot in such manner as in its discretion it shall deem appropriate and fair. For purposes of selection by lot within a maturity, each \$5,000 of principal amount of a Bond will be considered a separate Bond.

Application of Proceeds of the Bonds

The Bonds are being issued pursuant to the provisions of Section 49 of Chapter 29 of the Massachusetts General Laws and specific bond authorizations enacted by the Massachusetts Legislature. The net proceeds of the sale of the Bonds, including any premium received by the Commonwealth upon original delivery of the Bonds, will be applied by the Treasurer and Receiver-General of the Commonwealth (the "State Treasurer") to the various purposes for which the issuance of bonds has been authorized pursuant to such bond authorizations or to reimburse the Commonwealth's treasury for expenditures previously made pursuant to such laws. Any remaining

premium received by the Commonwealth upon original delivery of the Bonds and not applied to the various purposes for which bonds have been authorized will be applied to the costs of issuance thereof. The purposes for which the Bonds will be issued have been authorized by the Legislature under various bond authorizations.

The proceeds of the Bonds will be used to finance or reimburse the Commonwealth for a variety of capital expenditures which are included within the capital investment plan maintained by the Executive Office for Administration and Finance. The plan, which is an administrative guideline and is subject to amendment at any time, sets forth capital spending allocations for various purposes and establishes annual capital spending limits for the Commonwealth. See the Information Statement under the heading "COMMONWEALTH CAPITAL INVESTMENT PLAN."

SECURITY FOR THE BONDS

The Bonds will be general obligations of the Commonwealth to which its full faith and credit will be pledged for the payment of principal and interest when due. However, it should be noted that Chapter 62F of the Massachusetts General Laws imposes a state tax revenue growth limit and does not exclude principal and interest payments on Commonwealth debt obligations from the scope of the limit. This statute is subject to amendment or repeal by the Legislature. Currently, actual tax revenue growth is below the statutory limit. See the Information Statement under the heading "COMMONWEALTH REVENUES – LIMITATIONS ON TAX REVENUES."

The Commonwealth has waived its sovereign immunity and consented to be sued on contractual obligations, including the Bonds, and all claims with respect thereto. However, the property of the Commonwealth is not generally subject to attachment or levy to pay a judgment, and the satisfaction of any judgment generally requires a legislative appropriation. Enforcement of a claim for payment of principal or interest on the Bonds may also be subject to the provisions of federal or state statutes, if any, hereafter enacted extending the time for payment or imposing other constraints upon enforcement, insofar as the same may be constitutionally applied. The United States Bankruptcy Code is not applicable to the Commonwealth. Under Massachusetts law, the Bonds have all of the qualities and incidents of negotiable instruments under the Uniform Commercial Code. The Bonds are not subject to acceleration.

LITIGATION

No litigation is pending or, to the knowledge of the Attorney General, threatened against or affecting the Commonwealth seeking to restrain or enjoin the issuance, sale or delivery of the Bonds or in any way contesting or affecting the validity of the Bonds.

There are pending in courts within the Commonwealth various suits in which the Commonwealth is a defendant. In the opinion of the Attorney General, no litigation is pending or, to the Attorney General's knowledge, threatened which is likely to result, either individually or in the aggregate, in final judgments against the Commonwealth that would materially affect its financial condition. For a description of certain litigation affecting the Commonwealth, see the Information Statement under the heading "LEGAL MATTERS."

BOOK-ENTRY-ONLY SYSTEM

The Depository Trust Company, New York, New York, will act as securities depository for the Bonds. The Bonds will be issued as fully-registered securities registered in the name of Cede & Co. (DTC's partnership nominee) or such other name as may be requested by an authorized representative of DTC. One fully-registered Bond will be issued for each maturity of each series set forth on the inside cover page hereof, each in the aggregate principal amount of such maturity of such series, and will be deposited with DTC.

DTC, the world's largest securities depository, is a limited-purpose trust company organized under the New York Banking Law, a "banking organization" within the meaning of the New York Banking Law, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the New York Uniform Commercial Code and a "clearing agency" registered pursuant to the provisions of Section 17A of the Securities Exchange Act of 1934, as amended. DTC holds and provides asset servicing for over 3.5 million issues of U.S. and non-U.S. equity issues, corporate and municipal debt issues, and money market instruments (from over 100 countries) that DTC's participants ("Direct Participants") deposit with DTC. DTC also facilitates the post-trade settlement among Direct Participants of sales and other securities transactions in deposited securities, through electronic computerized book-entry transfers and pledges between Direct Participants' accounts. This eliminates the need for physical movement of securities certificates. Direct Participants include both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, clearing corporations and certain other organizations. DTC is a wholly-owned subsidiary of The Depository Trust & Clearing Corporation ("DTCC"). DTCC is the holding company for DTC, National Securities Clearing Corporation and Fixed Income Clearing Corporation, all of which are registered clearing agencies. DTCC is owned by the users of its regulated subsidiaries. Access to the DTC system is also available to others such as both U.S. and non-U.S. securities brokers and dealers, banks, trust companies, and clearing corporations that clear through or maintain a custodial relationship with a Direct Participant, either directly or indirectly ("Indirect Participants"). DTC has a Standard & Poor's rating of AA+. The DTC Rules applicable to its Participants are on file with the Securities and Exchange Commission. More information about DTC can be found at www.dtcc.com.

Purchases of Bonds under the DTC system must be made by or through Direct Participants, which will receive a credit for the Bonds on DTC's records. The ownership interest of each actual purchaser of each Bond ("Beneficial Owner") is in turn to be recorded on the Direct and Indirect Participants' records. Beneficial Owners will not receive written confirmation from DTC of their purchase. Beneficial Owners are, however, expected to receive written confirmations providing details of the transaction, as well as periodic statements of their holdings, from the Direct or Indirect Participant through which the Beneficial Owner entered into the transaction. Transfers of ownership interests in the Bonds are to be accomplished by entries made on the books of Direct and Indirect Participants acting on behalf of Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except in the event that use of the book-entry system for the Bonds is discontinued.

To facilitate subsequent transfers, all Bonds deposited by Direct Participants with DTC are registered in the name of DTC's partnership nominee, Cede & Co., or such other name as may be requested by an authorized representative of DTC. The deposit of the Bonds with DTC and their registration in the name of Cede & Co. or such other DTC nominee do not effect any change in beneficial ownership. DTC has no knowledge of the actual Beneficial Owners of the Bonds; DTC's records reflect only the identity of the Direct Participants to whose accounts such Bonds are

credited, which may or may not be the Beneficial Owners. The Direct and Indirect Participants will remain responsible for keeping account of their holdings on behalf of their customers.

Conveyance of notices and other communications by DTC to Direct Participants, by Direct Participants to Indirect Participants, and by Direct Participants and Indirect Participants to Beneficial Owners will be governed by arrangements among them, subject to any statutory or regulatory requirements as may be in effect from time to time. Beneficial Owners of Bonds may wish to take certain steps to augment the transmission to them of notices of significant events with respect to the Bonds, such as redemptions, defaults, and proposed amendments to the Bond documents. For example, Beneficial Owners of Bonds may wish to ascertain that the nominee holding the Bonds for their benefit has agreed to obtain and transmit notices to Beneficial Owners.

Redemption notices shall be sent to DTC. If less than all of the Bonds within a series and maturity are being redeemed, DTC's practice is to determine by lot the amount of the interest of each Direct Participant in such issue to be redeemed.

Neither DTC nor Cede & Co. (nor any other DTC nominee) will consent or vote with respect to the Bonds unless authorized by a Direct Participant in accordance with DTC's MMI Procedures. Under its usual procedures, DTC mails an Omnibus Proxy to the Commonwealth as soon as possible after the record date. The Omnibus Proxy assigns Cede & Co.'s consenting or voting rights to those Direct Participants to whose accounts the Bonds are credited on the record date (identified in a listing attached to the Omnibus Proxy).

THE COMMONWEALTH WILL NOT HAVE ANY RESPONSIBILITY OR OBLIGATION TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS WITH RESPECT TO THE ACCURACY OF ANY RECORDS MAINTAINED BY DTC OR BY ANY DIRECT OR INDIRECT PARTICIPANT, THE PAYMENT OF OR THE PROVIDING OF NOTICE TO THE DIRECT PARTICIPANTS, THE INDIRECT PARTICIPANTS OR THE BENEFICIAL OWNERS OR WITH RESPECT TO ANY OTHER ACTION TAKEN BY DTC AS BOND OWNER.

The principal of and interest and premium, if any, on the Bonds will be paid to Cede & Co., or such other nominee as may be requested by an authorized representative of DTC, as registered owner of the Bonds. DTC's practice is to credit Direct Participants' accounts upon DTC's receipt of funds and corresponding detail information from the Commonwealth, on the payable date in accordance with their respective holdings shown on DTC's records. Payments by Participants to Beneficial Owners will be governed by standing instructions and customary practices, as is the case with municipal securities held for the accounts of customers in bearer form or registered in "street name," and will be the responsibility of such Participant and not of DTC or the Commonwealth, subject to any statutory or regulatory requirements as may be in effect from time to time. Payment of the principal of and interest and premium, if any, to Cede & Co. (or such other nominee as may be requested by an authorized representative of DTC) is the responsibility of the Commonwealth, disbursement of such payments to Direct Participants will be the responsibility of DTC, and disbursement of such payments to the Beneficial Owners will be the responsibility of Direct and Indirect Participants.

The Commonwealth cannot give any assurances that Direct Participants or others will distribute payments of principal of and interest on the Bonds paid to DTC or its nominee, as the registered owner, to the Beneficial Owners, or that they will do so on a timely basis or that DTC will serve and act in a manner described in this document.

Beneficial Owners of the Bonds will not receive or have the right to receive physical delivery of such Bonds and will not be or be considered to be the registered owners thereof. So long as Cede & Co. is the registered owner of the Bonds, as nominee of DTC, references herein to the holders or registered owners of the Bonds shall mean Cede & Co. and shall not mean the Beneficial Owners of the Bonds, except as otherwise expressly provided herein.

DTC may discontinue providing its services as depository with respect to the Bonds at any time by giving reasonable notice to the Commonwealth. Under such circumstances, in the event that a successor depository is not obtained, Bonds will be delivered and registered as designated by the Beneficial Owners. The Beneficial Owner, upon registration of Bonds held in the Beneficial Owner's name, will become the Bondowner. Bond certificates are required to be printed and delivered.

The Commonwealth may decide to discontinue use of the system of book-entry-only transfers through DTC (or a successor securities depository). In such event, Bond certificates will be printed, delivered and registered as designated by the Beneficial Owners.

THE INFORMATION IN THIS SECTION CONCERNING DTC AND DTC'S BOOK-ENTRY-ONLY SYSTEM HAS BEEN OBTAINED FROM SOURCES THAT THE COMMONWEALTH BELIEVES TO BE RELIABLE, BUT THE COMMONWEALTH TAKES NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

RATINGS

The Bonds have been assigned long-term ratings of "AA+" (stable outlook), "Aa1" (stable outlook) and "AA" (stable outlook) by Fitch Ratings, Moody's Investors Service, Inc. and S&P Global Ratings, respectively.

Such ratings reflect only the respective views of such organizations, and an explanation of the significance of such ratings may be obtained from the rating agency furnishing the same. There is no assurance that a rating will continue for any given period of time or that a rating will not be revised or withdrawn entirely by any or all of such rating agencies, if, in its or their judgment, circumstances so warrant. Any downward revision or withdrawal of a rating could have an adverse effect on the market prices of the Bonds.

COMPETITIVE SALE OF BONDS

After competitive electronic bidding on February 19, 2020, the Series 2020A Bonds were awarded by the Commonwealth to J.P. Morgan Securities, Inc., as purchaser. The purchaser of the Series 2020A Bonds has supplied the information as to the public reoffering yields of the Series 2020A Bonds set forth on the inside cover hereof. If all of the Series 2020A Bonds were resold to the public at such yields, the purchaser of the Series 2020A Bonds has informed the Commonwealth that its total compensation is expected to be approximately 0.022% of the aggregate principal amount of the Series 2020A Bonds. The purchaser of the Series 2020A Bonds may change the public offering yields from time to time.

After competitive, electronic bidding on February 19, 2020, the Series 2020B Bonds were awarded by the Commonwealth to BofA Securities, Inc., as purchaser. The purchaser of the Series 2020B Bonds has supplied the information as to the public reoffering yields of the Series 2020B Bonds set forth on the inside cover hereof. If all of the Series 2020B Bonds were resold to the public at such yields, the purchaser of the Series 2020B Bonds has informed the Commonwealth

that its total compensation is expected to be approximately 0.5528% of the aggregate principal amount of the Series 2020B Bonds. The purchaser of the Series 2020A Bonds may change the public offering yields from time to time.

After competitive, electronic bidding on February 19, 2020, the Series 2020C Bonds were awarded by the Commonwealth to BofA Securities, Inc., as purchaser. The purchaser of the Series 2020C Bonds has supplied the information as to the public reoffering yields of the Series 2020C Bonds set forth on the inside cover hereof. If all of the Series 2020C Bonds were resold to the public at such yields, the purchaser of the Series 2020C Bonds has informed the Commonwealth that its total compensation is expected to be approximately 0.510786% of the aggregate principal amount of the Series 2020C Bonds. The purchaser of the Series 2020A Bonds may change the public offering yields from time to time.

Certain of the purchasers have entered into distribution agreements with other broker-dealers (that have not been designated by the Commonwealth as purchasers). Such agreements generally provide that the relevant purchaser will share a portion of its underwriting compensation or selling concession with such broker-dealers.

The purchasers and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. Certain of the purchasers and their respective affiliates have, from time to time, performed, and may in the future perform, various investment banking services for the Commonwealth for which they received or will receive customary fees and expenses.

TAX EXEMPTION

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel to the Commonwealth (“Bond Counsel”) is of the opinion that, under existing law, interest on the Bonds will not be included in the gross income of holders of the Bonds for federal income tax purposes. This opinion is expressly conditioned upon continued compliance with certain requirements imposed by the Internal Revenue Code of 1986, as amended (the “Code”), which must be satisfied subsequent to the date of issuance of the Bonds in order to ensure that interest on the Bonds is and continues to be excludable from the gross income of holders of the Bonds. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of holders of the Bonds retroactive to the date of issuance of the Bonds. In particular, and without limitation, these requirements include restrictions on the use, expenditure and investment of Bond proceeds and the payment of rebate, or penalties in lieu of rebate, to the United States, subject to certain exceptions. The Commonwealth has provided covenants and certificates as to continued compliance with such requirements.

In the opinion of Bond Counsel, under existing law, interest on the Bonds will not constitute a preference item under Section 57(a)(5) of the Code for purposes of computation of the alternative minimum tax imposed on certain individuals under Section 55 of the Code. Bond Counsel has not opined as to any other matters of federal tax law relating to the Bonds. However, prospective purchasers should be aware that certain collateral consequences may result under federal tax law for certain holders of the Bonds, including but not limited to the requirement that recipients of certain Social Security and railroad retirement benefits take into account receipts or accruals of interest on the Bonds in determining gross income. The nature and extent of these other tax consequences depends on the particular tax status of the holder and the holder’s other items of income or deduction. Holders should consult their own tax advisors with respect to such matters.

Interest paid on tax-exempt obligations such as the Bonds is generally required to be reported by payors to the IRS and to recipients in the same manner as interest on taxable obligations. In addition, such interest may be subject to “backup withholding” if the Bond holder fails to provide the information required on IRS Form W-9, Request for Taxpayer Identification Number and Certification, or the IRS has specifically identified the Bond holder as being subject to backup withholding because of prior underreporting. Neither the information reporting requirement nor the backup withholding requirement affects the excludability of interest on the Bonds from gross income for federal tax purposes.

In the opinion of Bond Counsel, under existing law, interest on the Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. Bond Counsel has not opined as to other Massachusetts tax consequences arising with respect to the Bonds. Prospective purchasers should be aware, however, that the Bonds are included in the measure of Massachusetts estate and inheritance taxes, and the Bonds and the interest thereon are included in the measure of Massachusetts corporate excise and franchise taxes. Bond Counsel has not opined as to the taxability of the Bonds, their transfer and the income therefrom, including any profit made on the sale thereof, under the laws of any state other than Massachusetts.

For federal and Massachusetts income tax purposes, interest includes original issue discount, which with respect to a Bond is equal to the excess, if any, of the stated redemption price at maturity of such Bond over the initial offering price thereof to the public, excluding underwriters and other intermediaries, at which price a substantial amount of all such Bonds with the same maturity was sold. Original issue discount accrues based on a constant yield method over the term of a Bond. Holders should consult their own tax advisers with respect to the computations of original issue discount during the period in which any such Bond is held.

An amount equal to the excess, if any, of the purchase price of a Bond over the principal amount payable at maturity constitutes amortizable bond premium for federal and Massachusetts tax purposes. The required amortization of such premium during the term of a bond will result in reduction of the holder’s tax basis on such Bond. Such amortization also will result in reduction of the amount of the stated interest on the Bond taken into account as interest for tax purposes. Holders of Bonds purchased at a premium should consult their own tax advisers with respect to the determination and treatment of such premium for federal income tax purposes and with respect to the state or local tax consequences of owning such Bonds.

Bond Counsel has not undertaken to advise in the future whether any events after the date of issuance of the Bonds, including legislation, court decisions, or administrative actions, whether at the federal or state level, may affect the tax exempt status of interest on the Bonds or the tax consequences of ownership of the Bonds. No assurance can be given that future legislation, if enacted into law, will not contain provisions which could directly or indirectly reduce or eliminate the benefit of the exclusion of the interest on the Bonds from gross income for federal income tax purposes or any state tax benefit. Tax reform proposals and deficit reduction measures, including but not limited to proposals to reduce the benefit of the interest exclusion from income for certain holders of tax-exempt bonds, including bonds issued prior to the proposed effective date of the applicable legislation, and other proposals to limit federal tax expenditures, have been and are expected to be under ongoing consideration by the United States Congress. These proposed changes could affect the market value or marketability of the Bonds, and, if enacted into law, could also affect the tax treatment of all or a portion of the interest on the Bonds for some or all holders. Holders should consult their own tax advisors with respect to any of the foregoing tax consequences.

OPINIONS OF COUNSEL

The unqualified approving opinions as to the legality of the Bonds will be rendered by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Bond Counsel to the Commonwealth. The proposed forms of the opinion of Bond Counsel relating to the Bonds are attached hereto as Appendix B. Certain legal matters will also be passed upon by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, as Disclosure Counsel to the Commonwealth.

CONTINUING DISCLOSURE

In order to assist the successful bidder(s) in complying with paragraph (b)(5) of Rule 15c2-12, the Commonwealth will undertake in the Bonds to provide annual reports and notices of certain events. A description of this undertaking is set forth in Appendix C attached hereto.

For information concerning the Commonwealth's compliance with its undertakings under Rule 15c2-12 and the availability of certain other financial information from the Commonwealth, see the Information Statement under the heading "CONTINUING DISCLOSURE."

MUNICIPAL ADVISOR

Acacia Financial Group, Inc. ("Acacia") has acted as independent financial advisor to the Commonwealth with respect to the Bonds. Acacia is not obligated to undertake, and has not undertaken, either to make an independent verification of or to assume responsibility for, the accuracy, completeness, or fairness of the information contained in this Official Statement and the appendices hereto. Acacia is an independent financial advisory firm and is not engaged in the business of underwriting, trading or distributing securities.

MISCELLANEOUS

Any provisions of the constitution of the Commonwealth, of all general and special laws and of other documents set forth or referred to in this Official Statement are only summarized, and such summaries do not purport to be complete statements of any of such provisions. Only the actual text of such provisions can be relied upon for completeness and accuracy.

This Official Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as "may," "will," "should," "intends," "expects," "believes," "anticipates," "estimates" and others.

All estimates and assumptions in this Official Statement have been made on the best information available and are believed to be reliable, but no representations whatsoever are made that such estimates and assumptions are correct. So far as any statements in this Official Statement involve any matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact. The various tables may not add due to rounding of figures.

The Commonwealth has prepared the prospective financial information set forth in this Official Statement in connection with its budgeting and appropriations processes. This prospective financial information was not prepared with a view toward complying with the guidelines established by the American Institute of Certified Public Accountants with respect to prospective financial information, but, in the view of the Commonwealth, was prepared on a reasonable basis, reflects the best currently available estimates and judgments, and presents, to the best knowledge and belief of the offices of the Commonwealth identified in this Official Statement as the sources of such information, the currently expected course of action and the currently expected future budgeted revenues and expenditures of the Commonwealth. However, this information is not fact and should not be relied upon as being necessarily indicative of future results, and readers of this Official Statement are cautioned not to place undue reliance on the prospective financial information.

Neither the Commonwealth's independent auditors, nor any other independent accountants, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

The information, estimates and assumptions and expressions of opinion in this Official Statement are subject to change without notice. Neither the delivery of this Official Statement nor any sale made pursuant to this Official Statement shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth or its agencies, authorities or political subdivisions since the date of this Official Statement, except as expressly stated.

AVAILABILITY OF OTHER INFORMATION

Questions regarding this Official Statement or requests for additional financial information concerning the Commonwealth should be directed to Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General, One Center Plaza, Suite 430, Boston, Massachusetts 02108, telephone (617) 367-3900, x. 816, or Mark Attia, Assistant Secretary, Executive Office for Administration and Finance, State House, Room 373, Boston, Massachusetts 02133, telephone (617) 727-2040. Questions regarding legal matters relating to this Official Statement and the Bonds should be directed to Poonam Patidar, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, Massachusetts 02111, telephone (617) 348-3038.

THE COMMONWEALTH OF MASSACHUSETTS

By //s// Deborah B. Goldberg
Deborah B. Goldberg
Treasurer and Receiver-General

By //s// Michael J. Heffernan
Michael J. Heffernan
Secretary of Administration and Finance

February 19, 2020

**THE
COMMONWEALTH
OF
MASSACHUSETTS**



INFORMATION STATEMENT

Dated January 29, 2020, as amended February 11, 2020

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THE COMMONWEALTH OF MASSACHUSETTS



CONSTITUTIONAL OFFICERS

Charles D. BakerGovernor
Karyn E. Polito Lieutenant Governor
William F. Galvin..... Secretary of the Commonwealth
Maura Healey Attorney General
Deborah B. Goldberg..... Treasurer and Receiver-General
Suzanne M. Bump Auditor

LEGISLATIVE OFFICERS

Karen E. Spilka President of the Senate
Robert A. DeLeo..... Speaker of the House

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The Information Statement dated January 29, 2020 (the “January 2020 Information Statement”) has been amended to incorporate the following information that is included in the Comprehensive Annual Financial Report for the year ended June 30, 2019, which was published on February 10, 2020. All preliminary fiscal 2019 numbers included in the January 2020 Information Statement are now final. Except for the information listed below, the January 2020 Information Statement has not been updated or supplemented. The following tables and information have been updated: (a) the last sentence of the section entitled “THE GOVERNMENT - Independent Authorities and Agencies”; (b) the tables and information provided under the heading “SELECTED FINANCIAL DATA – GAAP Basis”; (c) the following tables under the heading “PENSION AND OPEB FUNDING” (i) “- GASB 67 Information for the Massachusetts Teachers' Retirement System - Schedule of Changes in the Net Pension Liability and Related Ratios”, (ii) “- GASB 68 Information for the Massachusetts Teachers' Retirement System - Pension Expense and Deferred Outflows/Inflows of Resources”, (iii) “- GASB 67 Information for the State Employees' Retirement System - Schedule of Changes in the Net Pension Liability and Related Ratios”, (iv) “- GASB 68 Information for the State Employees' Retirement System - Pension Expense and Deferred Outflows/Inflows of Resources”, (v) “- GASB 74 Information for the State Retirees' Benefit Trust Schedule of Changes in Net OPEB Liability and Related Ratios”, and (vi) “- GASB 75 Information for the State Retirees' Benefit Trust - Schedule of Changes in Net OPEB Liability and Related Ratios”; and (d) the table under the heading “LONG TERM LIABILITIES – Long Term Operating Lease and Capital Leases”. In addition, Exhibit C to the January 2020 Information Statement has been replaced in its entirety with Exhibit C attached hereto.

THE COMMONWEALTH OF MASSACHUSETTS
INFORMATION STATEMENT

January 29, 2020, as amended February 11, 2020

This Information Statement, together with its Exhibits (included by reference as described below), is furnished by The Commonwealth of Massachusetts (the Commonwealth). It contains certain fiscal, financial and economic information concerning the Commonwealth and its ability to meet its financial obligations. This Information Statement contains information only through its date, or as otherwise provided for herein, and should be read in its entirety.

The ability of the Commonwealth to meet its obligations will be affected by future social, environmental and economic conditions, among other things, as well as by legislative policies and the financial condition of the Commonwealth. Many of these conditions are not within the control of the Commonwealth.

Exhibit A to this Information Statement is the Statement of Economic Information as of October 10, 2019. Exhibit A sets forth certain economic, demographic and statistical information concerning the Commonwealth.

Exhibits B and C, respectively, are the Commonwealth's Statutory Basis Financial Report for the year ended June 30, 2019 and the Commonwealth's Comprehensive Annual Financial Report (reported in accordance with generally accepted accounting principles (GAAP)) for the year ended June 30, 2019.

Specific reference is made to Exhibits A, B and C, copies of which are attached hereto and have also been filed with the Municipal Securities Rulemaking Board (MSRB) through its Electronic Municipal Market Access System (EMMA). The financial statements are also available at the home page of the Comptroller of the Commonwealth located at <http://www.macomptroller.org> by clicking on “Financial Reports” on the Comptroller's homepage.

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THE GOVERNMENT

The government of the Commonwealth is divided into three branches: the Executive, the bicameral Legislature and the Judiciary.

Executive Branch

Governor. The Governor is the chief executive officer of the Commonwealth. Other elected members of the executive branch are the Lieutenant Governor (elected with the Governor), the Treasurer and Receiver-General (State Treasurer), the Secretary of the Commonwealth (State Secretary), the Attorney General and the State Auditor. All are elected to four-year terms. The terms of the current office holders began in January, 2019.

The Executive Council, also referred to as the “Governor’s Council,” consists of eight members who are elected to two-year terms in even-numbered years. The Executive Council is responsible for the confirmation of certain gubernatorial appointments, particularly judges, and must approve all warrants prepared by the Comptroller for payment by the State Treasurer.

Also within the Executive Branch are certain independent offices, each of which performs a defined function, such as the Board of Library Commissioners, the Office of Campaign and Political Finance, the Office of the Comptroller, the Office of the Inspector General and the State Ethics Commission.

Governor’s Cabinet. The Governor’s Cabinet, which assists the Governor in administration and policy making, comprises the secretaries who head the eight Executive Offices, which are the Executive Office for Administration and Finance, the Executive Office of Health and Human Services, the Executive Office of Public Safety and Security, the Executive Office of Housing and Economic Development, the Executive Office of Labor and Workforce Development, the Executive Office of Energy and Environmental Affairs, the Executive Office of Education, and the Executive Office of Technology Services and Security. In addition, the Secretary of Transportation, who is the chief executive of the Massachusetts Department of Transportation (MassDOT) and chairs MassDOT’s board of directors, is a member of the Governor’s Cabinet. (MassDOT has a legal existence separate from the Commonwealth but houses several departments of state government.) Cabinet secretaries and executive department chiefs, including the Secretary of Transportation, serve at the pleasure of the Governor. Most other agencies are grouped under one of the eight Executive Offices for administrative purposes.

The Governor’s chief fiscal officer is the Secretary of Administration and Finance. The activities of the Executive Office for Administration and Finance fall within five broad categories: (i) administrative and fiscal supervision, including supervision of the implementation of the Commonwealth’s operating budget and capital investment plan, and monitoring of all agency expenditures during the fiscal year; (ii) enforcement of the Commonwealth’s tax laws and collection of tax revenues through the Department of Revenue; (iii) human resource management, including administration of the state personnel system, civil service system and employee benefit programs, and negotiation of collective bargaining agreements with certain of the Commonwealth’s public employee unions; (iv) capital facilities management, including coordinating and overseeing the construction, management and leasing of all state facilities; and (v) administration of general services, including procurement management services. The Secretary of Administration and Finance serves on numerous state boards and commissions.

State Treasurer. The State Treasurer has four primary statutory responsibilities: (i) oversight of the collection of all state revenues by state agencies, including tax revenues remitted by the Department of Revenue (other than small amounts of funds held by certain agencies); (ii) the management of both short-term and long-term investment of Commonwealth funds (other than the state employee and teacher pension funds), including all cash receipts; (iii) the disbursement of Commonwealth moneys and oversight of reconciliation of the state’s accounts; and (iv) the issuance of most debt obligations of the Commonwealth, including notes, commercial paper and long-term bonds.

In addition to these responsibilities, the State Treasurer chairs the Massachusetts Lottery Commission, the State Retirement Board, the Pension Reserves Investment Management Board, the Massachusetts Clean Water Trust, and the Massachusetts School Building Authority, and appoints the members of the Alcoholic Beverages Control Commission. The State Treasurer also serves as a member of numerous other state boards and commissions.

State Auditor. The State Auditor is charged with improving the efficiency of state government by auditing the administration and expenditure of public funds and reporting the findings to the public. The State Auditor reviews the activities and operations of approximately 200 state entities and potentially thousands of private contractors doing business with the Commonwealth. See “COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS.”

Attorney General. The Attorney General represents the Commonwealth in all legal proceedings in both the state and federal courts, including defending the Commonwealth in actions in which a state law or executive action is challenged. The Attorney General also brings actions to enforce environmental and consumer protection statutes, among others, and represents consumer interests in public utility rate-setting proceedings and in proceedings before the Division of Insurance and other administrative bodies. The Attorney General works in conjunction with the general counsel of the various state agencies and executive departments to coordinate and monitor all pending litigation.

State Secretary. The Secretary of the Commonwealth is responsible for collection and storage of public records and archives, securities regulation, state elections, administration of state lobbying laws, and the registration of and reporting by corporations.

State Comptroller. Accounting policies and practices, publication of official financial reports, and oversight of fiscal management functions are the responsibility of the Comptroller. The Comptroller also administers the Commonwealth’s annual state single audit and manages the state accounting system. The Comptroller serves as a member of the Massachusetts Lottery Commission, the Inspector General Council, the Records Conservation Board, and the State Retiree Benefits Trust. The Comptroller is appointed by the Governor for a term coterminous with the Governor’s and may be removed by the Governor only for cause. The annual financial reports of the Commonwealth, single audit reports, and any rules and regulations promulgated by the Comptroller must be reviewed by an advisory board. This board is chaired by the Secretary of Administration and Finance and includes the State Treasurer, the Attorney General, the State Auditor, the Court Administrator of the Trial Court, and two persons with relevant experience appointed by the Governor for three-year terms.

The Commonwealth’s annual reports include financial statements on the statutory basis of accounting (the Statutory Basis Financial Report, or SBFR) and financial statements on a GAAP basis (the Comprehensive Annual Financial Report, or CAFR). The Statutory Basis Financial Report for the year ended June 30, 2019, attached hereto as Exhibit B, was reviewed, and the Comprehensive Annual Financial Report for the year ended June 30, 2019, attached hereto as Exhibit C, was audited, by KPMG LLP, as stated in its reports appearing therein. KPMG LLP has not been engaged to perform, and has not performed, since the respective dates of its reports included herein, any procedures on the financial statements addressed in such reports, nor has it performed any procedures relating to the official statement of which this Information Statement is a part. See “COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS.”

Legislative Branch

The Legislature (formally called the General Court) is the bicameral legislative body of the Commonwealth, consisting of a Senate of 40 members and a House of Representatives of 160 members. Members of both the Senate and the House are elected to two-year terms in even-numbered years. The Legislature meets every year. The joint rules of the House and Senate require all formal business to be concluded by the end of July in even-numbered years and by the third Wednesday in November in odd-numbered years.

All enacted bills are presented to the Governor for approval or veto. The Legislature may override the Governor’s veto of any bill by a two-thirds roll-call vote of each house. The Governor also has the power to return a bill to the chamber of the Legislature in which it originated with a recommendation that certain amendments be made; such a bill is then before the Legislature and is subject to amendment or re-enactment by each branch, at which point the Governor has no further right to return the bill a second time with a recommendation to amend but may still veto the bill. The House of Representatives must originate any bill that imposes a tax. Once a tax bill is originated by the House and forwarded to the Senate for consideration, the Senate may amend it. Any member of the House of Representatives or the Senate also may propose an amendment to the state constitution. Any such proposed amendment must receive a majority of approving votes from members of the House of Representatives

and the Senate jointly assembled in a constitutional convention in two successive biennial legislative sessions before being submitted to the voters for approval.

Judicial Branch

The judicial branch of state government is composed of the Supreme Judicial Court, the Appeals Court and the Trial Court. The Supreme Judicial Court has original jurisdiction over certain cases and hears appeals from both the Appeals Court, which is an intermediate appellate court, and in some cases, directly from the Trial Court. The Supreme Judicial Court is authorized to render advisory opinions on certain questions of law to the Governor, the Legislature and the Governor's Council. Judges of the Supreme Judicial Court, the Appeals Court and the Trial Court are appointed by the Governor, with the advice and consent of the Governor's Council, to serve until the mandatory retirement age of 70 years.

Independent Authorities and Agencies

The Legislature has established a number of independent authorities and agencies within the Commonwealth, the budgets of which are not included in the Commonwealth's annual budget. The Governmental Accounting Standards Board (GASB) Statements No. 14 and No. 34, as amended by Statement No. 61, *The Financial Reporting Entity: Omnibus - an amendment of GASB Statements No. 14 and No. 34*, articulate standards for determining significant financial or operational relationships between the primary government and its independent entities. In fiscal 2019, the Commonwealth had significant operational or financial relationships, or both, as defined by GASB Statements No. 14 and No. 34, as amended by Statement No. 61, with 41 of these authorities. A discussion of these entities and the relationship to the Commonwealth is included in footnotes 1 and 14 to the fiscal 2019 Basic Financial Statements in the CAFR, attached hereto as Exhibit C.

Local Government

The Commonwealth has 351 incorporated cities and towns that exercise the functions of local government, which include public safety, fire protection and public construction. Cities and towns or regional school districts established by them also provide elementary and secondary education. Cities are governed by several variations of the mayor-and-council or manager-and-council form. Most towns place executive power in a board of three or five selectmen elected to one- or three-year terms and retain legislative powers in the voters themselves, who assemble in periodic open or representative town meetings. Various local and regional districts exist for schools, water and wastewater administration, and certain other governmental functions.

Municipal revenues consist of taxes on real and personal property, distributions from the Commonwealth under a variety of programs and formulas, local receipts (including motor vehicle excise taxes, local option taxes, fines, licenses and permits, charges for utility and other services, and investment income) and appropriations from other available funds (including general and dedicated reserve funds). See "COMMONWEALTH EXPENDITURES – Local Aid."

The cities and towns of the Commonwealth are also organized into 14 counties, but county government has been abolished in nine of those counties. The county governments that remain are responsible principally for the operation of courthouses and registries of deeds. Where county government has been abolished, the functions, duties and responsibilities of the government have been transferred to the Commonwealth, including all employees, assets, valid liabilities and debts.

Initiative Petitions

Under the Massachusetts constitution, legislation may be enacted in the Commonwealth pursuant to a voter initiative process. Initiative petitions which have been certified by the Attorney General as to proper form and as to which the requisite number of voter signatures has been collected are submitted to the Legislature for consideration. If the Legislature fails to enact the measure into law as submitted, the petitioner may place the initiative on the ballot for the next statewide general election by collecting additional voter signatures. If approved by a majority of the voters at the general election, the petition becomes law 30 days after the date of the election. Initiative petitions so approved by the voters do not constitute constitutional amendments and may be subsequently amended or repealed by the Legislature. Initiative petitions may not make appropriations.

Constitutional amendments also may be initiated by citizens, but they follow a longer adoption process, which includes gaining at least 25% of the votes of the House of Representatives and Senate jointly assembled in constitutional convention in two successive biennial legislative sessions before being decided by the voters.

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COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS

Operating Fund Structure

The Commonwealth's operating fund structure satisfies the requirements of state finance law and is in accordance with GAAP, as defined by GASB. The General Fund and other funds that are appropriated in the annual state budget receive most of the non-bond and non-federal grant revenues of the Commonwealth. These funds are referred to in this Information Statement as the "budgeted operating funds" of the Commonwealth. Budgeted operating funds are created and repealed from time to time through the enactment of legislation, and existing funds may become inactive when no appropriations are made from them. Budgeted operating funds do not include the capital projects funds of the Commonwealth, into which the proceeds of Commonwealth bonds are deposited. See "Capital Investment Process and Controls" below.

Two of the budgeted operating funds account for most of the Commonwealth's appropriated spending: the General Fund and the Commonwealth Transportation Fund (formerly the Highway Fund), from which approximately 98.5% of the budgeted operating fund outflows in fiscal 2019 were made. The remaining approximately 1.5% of budgeted operating fund outflows occurred in other operating funds: the Commonwealth Stabilization Fund, the Intragovernmental Service Fund, the Inland Fisheries and Game Fund, the Marine Recreational Fisheries Development Fund, the Underground Storage Tank Petroleum Product Cleanup Fund, the Public Safety Training Fund, the Local Capital Projects Fund, the Gaming Local Aid Fund, the Education Fund, the Local Aid Stabilization Fund, the Gaming Economic Development Fund, the Community College Fund and the Marijuana Regulation Fund. A number of budgeted funds were authorized by law but had no activity in fiscal 2019.

At the end of a fiscal year, undesignated balances in the budgeted operating funds, unless excluded by law, are used to calculate the consolidated net surplus. Under state finance law, balances in the Stabilization Fund, the Tax Reduction Fund, the Inland Fisheries and Game Fund, the Marine Recreational Fisheries Fund, the Public Safety Training Fund and the Local Aid Stabilization Fund are excluded from the consolidated net surplus calculation. According to state finance law, deficits in any funds included in the consolidated net surplus calculation are eliminated by transfers from other consolidated net surplus funds that have surplus balances, and any undesignated or unreserved balances remaining in the consolidated net surplus funds are transferred to the Commonwealth Stabilization Fund.

Overview of Operating Budget Process

Generally, funds for the Commonwealth's programs and services must be appropriated by the Legislature. The process of preparing a budget begins with the executive branch early in the fiscal year preceding the fiscal year for which the budget will take effect. The legislative budgetary process begins in late January (or, in the case of a newly elected Governor, not later than early March) with the Governor's budget submission to the Legislature for the fiscal year commencing in the ensuing July. The Massachusetts constitution requires that the Governor recommend to the Legislature a budget which contains a statement of all proposed expenditures of the Commonwealth for the upcoming fiscal year, including those already authorized by law, and of all taxes, revenues, loans and other means by which such expenditures are to be defrayed. State finance law requires the Legislature and the Governor to approve a balanced budget for each fiscal year, and the Governor may approve no supplemental appropriation bills that would result in an unbalanced budget. However, this is a statutory requirement that may be superseded by an appropriation act.

The House Committee on Ways and Means considers the Governor's budget recommendations and, with revisions, proposes a budget to the full House of Representatives. Once approved by the House, the budget is considered by the Senate Committee on Ways and Means, which in turn proposes a budget, with revisions, to be considered by the full Senate. In recent years, the legislative budget review process has included joint hearings by the Ways and Means Committees of the Senate and the House. After Senate action, a legislative conference committee develops a joint budget recommendation for consideration by both houses of the Legislature, which upon adoption is sent to the Governor. Under the Massachusetts constitution, the Governor may veto the budget in whole or disapprove or reduce specific line items (line item veto). The Legislature may override the Governor's veto or specific line-item vetoes by a two-thirds roll-call vote of both the House and Senate. The annual budget legislation, as finally enacted, is known as the general appropriations act.

In years in which the general appropriations act is not approved by the Legislature and the Governor before the beginning of the applicable fiscal year, the Legislature and the Governor generally approve a temporary budget under which funds for the Commonwealth's programs and services are appropriated based upon the level of appropriations from the prior fiscal year budget, adjusted for any known changes in the level of spending during the first month or months of the current fiscal year.

State finance law requires the Commonwealth to monitor revenues and expenditures during a fiscal year. For example, the Comptroller publishes a quarterly report of planned and actual revenues. See "COMMONWEALTH REVENUES – Tax Revenue Forecasting." Department heads are required to notify the Secretary of Administration and Finance and the House and Senate Committees on Ways and Means of any anticipated decrease in estimated revenues for their departments from the federal government or other sources or if it appears that any appropriation will be insufficient to meet all expenditures required in the fiscal year by any law, rule, regulation or order not subject to administrative control. The Secretary of Administration and Finance must notify the Governor and the House and Senate Committees on Ways and Means whenever the Secretary determines that revenues will be insufficient to meet authorized expenditures. The Secretary of Administration and Finance is then required to compute projected deficiencies and, under Section 9C of Chapter 29 of the General Laws, the Governor is required to reduce allotments, to the extent lawfully permitted to do so, or submit proposals to the Legislature to raise additional revenues or to make appropriations from the Stabilization Fund to cover such deficiencies. The Supreme Judicial Court has ruled that, under current law, the Governor's authority to reduce allotments of appropriated funds extends only to appropriations of funds to state agencies under the Governor's control.

Cash and Budgetary Controls

The Commonwealth has in place controls designed to ensure that (i) sufficient cash is available to meet the Commonwealth's obligations, (ii) state expenditures are consistent with periodic allotments of annual appropriations, and (iii) moneys are expended consistently with statutory and public purposes. Two independently elected Executive Branch officials, the State Treasurer and the State Auditor, conduct the cash management and audit functions, respectively. Regarding periodic allotments, at the beginning of each fiscal year the Executive Office for Administration and Finance schedules the rate at which agencies will have access to funds included in their appropriation through a published periodic allotment calendar. Under state finance law, monthly appropriation allotments are ordinarily one-twelfth of the annual amount, but the Executive Office for Administration and Finance may provide for greater or lesser monthly allotments in appropriate cases. This calendar is reviewed regularly, and depending on the fiscal climate, the Executive Office for Administration and Finance may choose to adjust the allotment schedule in order to tighten spending controls. In some cases agencies may request an ad hoc allotment in order to gain access to funds faster than the existing periodic allotment schedule would allow (*e.g.*, exceptional cases where unique payment concerns must be considered); such requests are carefully reviewed by the Executive Office for Administration and Finance before they are approved. The Comptroller conducts the expenditure control function.

Capital Investment Process and Controls

Capital expenditures are primarily financed with debt proceeds and federal reimbursements. Authorization for capital spending requires approval by the Legislature, and the issuance of debt must be approved by a two-thirds roll-call vote of each house of the Legislature. The state constitution requires the Governor to recommend the terms of the authorized debt. The State Treasurer issues authorized debt at the request of the Governor, and the Governor, through the Secretary of Administration and Finance, controls the amount of capital expenditures through the allotment of funds pursuant to such authorizations. The Executive Office for Administration and Finance establishes a capital investment plan on or before July 1 each year pursuant to state law. The capital investment plan is an administrative guideline and is subject to amendment from time to time. See "COMMONWEALTH CAPITAL INVESTMENT PLAN."

The Comptroller has established various funds to account for financial activity related to the acquisition or construction of capital assets. In addition, accounting procedures and financial controls have been instituted to limit agency capital spending to the levels approved by the Governor. Capital spending is tracked against the capital investment plan on both a cash and encumbrance accounting basis on the state's accounting system, and federal reimbursements are budgeted and monitored against anticipated receipts.

Cash Management Practices of State Treasurer

The State Treasurer is responsible for ensuring that all Commonwealth financial obligations are met on a timely basis. The Massachusetts constitution requires that all payments by the Commonwealth (other than debt service) be made pursuant to a warrant approved by the Governor's Council. The Comptroller prepares certificates which, with the advice and consent of the Governor's Council and approval of the Governor, become the warrant to the State Treasurer. Once the warrant is approved, the State Treasurer's office disburses the money. Debt service is specifically exempted by the state constitution from the warrant requirement, but requires an appropriation to be paid.

The Cash Management Division of the State Treasurer's office utilizes approximately 900 operating accounts to track cash collections and disbursements for the Commonwealth. The Division relies primarily upon electronic receipt and disbursement systems.

The State Treasurer, in conjunction with the Executive Office for Administration and Finance, is required to submit quarterly cash flow projections for the then current fiscal year to the House and Senate Committees on Ways and Means on or before the last day of August, November, February and May. The projections must include estimated sources and uses of cash, together with the assumptions from which such estimates were derived and identification of any cash flow gaps. See "FISCAL 2020 AND FISCAL 2021 – Cash Flow." The State Treasurer's office, in conjunction with the Executive Office for Administration and Finance, is also required to develop quarterly and annual cash management plans to address any gap identified by the cash flow projections and variance reports. The State Treasurer's office oversees the issuance of short-term debt to meet cash flow needs, including the issuance of commercial paper and revenue anticipation notes. See "LONG-TERM LIABILITIES – General Obligation Debt."

Cash that is not needed for immediate funding needs is invested in the Massachusetts Municipal Depository Trust. The State Treasurer serves as trustee of the Trust and has sole authority pertaining to rules, regulations and operations of the Trust. The Trust has two investment options: a short-term liquidity vehicle or "cash portfolio" structured similarly to a money market fund and a short-term bond fund. For additional detail on the Massachusetts Municipal Depository Trust, see "FISCAL 2020 AND FISCAL 2021 – Cash Flow."

Fiscal Control, Accounting and Reporting Practices of the Comptroller

The Comptroller is responsible for oversight of fiscal management functions, establishment of accounting policies and practices, and publication of official financial reports. The Comptroller maintains the Massachusetts Management Accounting and Reporting System (MMARS), the centralized state accounting system that is used by all state agencies and departments for processing of all financial transactions. The University of Massachusetts, the state universities and the community colleges process only some transactions on MMARS, and the independent state authorities do not use the system. MMARS provides a ledger-based system of revenue and expenditure accounts enabling the Comptroller to control obligations and expenditures effectively and to ensure that appropriations are not exceeded during the course of the fiscal year. The Commonwealth's statewide accounting system also has various modules for receivables, payables, capital assets and other processes management.

Expenditure Controls. The Comptroller requires that the amount of all obligations under purchase orders, contracts and other commitments for the expenditures of moneys be recorded as encumbrances. Once encumbered, these amounts are not available to support additional spending commitments. As a result of these encumbrances, spending agencies can use MMARS to determine at any given time the amount of their appropriations available for future commitments.

The Comptroller is responsible for compiling expenditure requests into the certificates for approval by the Governor's Council. The Council approves an estimated warrant giving the Treasurer authority to issue payments up to the amount on the warrant, as long as those payments are otherwise determined by the Comptroller to comply with state finance law. In preparing these certificates, which become the warrant, the Comptroller's office has systems in place to ensure that the necessary moneys for payment have been both appropriated by the Legislature and allotted by the Governor in each account and sub-account. By law, certain obligations may be placed upon the warrant even if the supporting appropriation or allotment is insufficient. These obligations include Medicaid payments, which are mandated by federal law.

Although state finance law generally does not create priorities among types of payments to be made by the Commonwealth in the event of a cash shortfall, the Comptroller has developed procedures, in consultation with the State Treasurer and the Executive Office for Administration and Finance, for prioritizing payments based upon state finance law and sound fiscal management practices.

Internal Controls. The Comptroller establishes internal control policies and procedures in accordance with state finance law. Agencies are required to adhere to such policies and procedures. All unaccounted-for variances, losses, shortages or thefts of funds or property must be reported to the State Auditor, who is authorized to investigate and recommend corrective action.

Statutory Basis of Accounting. In accordance with state law, the Commonwealth adopts its budget and maintains financial information on a statutory basis of accounting. Under the statutory basis, tax and departmental revenues are accounted for on a modified cash basis by reconciling revenue to actual cash receipts confirmed by the State Treasurer. Certain limited revenue accruals are also recognized, including receivables from federal reimbursements with respect to paid expenditures. Expenditures are measured on a modified cash basis, including actual cash disbursements and encumbrances for goods or services received prior to the end of a fiscal year.

For certain programs, such as Medicaid, expenditures are recognized under the statutory basis of accounting only to the extent of disbursements supported by current-year appropriations. Some prior year services billed after the start of a fiscal year have been paid from the new fiscal year's appropriation, in an amount determined by the specific timing of billings and the amount of prior year funds that remained after June 30 to pay the prior year's accrued billings, though this practice may vary from year to year.

GAAP Basis of Accounting. The Comptroller also prepares Commonwealth financial statements on a GAAP basis. In addition to the primary government, certain independent authorities and agencies of the Commonwealth are included as component units within the Commonwealth's reporting entity.

GAAP employs an economic resources management focus and a current financial resources management focus as two bases for accounting and reporting. Under the economic resources management focus (also called the "government-wide perspective") revenues and expenses (different from expenditures) are presented similarly to private-sector entities. Revenues are recorded when earned and expenses are recorded when a liability is incurred, regardless of the timing of cash flows. Grants and similar items are recognized as revenues as soon as all eligibility requirements imposed by the provider have been met. Capital assets, including infrastructure assets net of depreciation, and the long-term portion of all liabilities are reported on the statement of net position.

Under the current financial resources management focus of GAAP (also called the "fund perspective" or "modified accrual" basis), the primary emphasis is to demonstrate inter-period equity. Revenues are reported in the period in which they become both measurable and available. Revenues are considered available when they are expected to be collected within the current period or soon enough thereafter to be used to pay liabilities of the current period.

Significant revenues susceptible to accrual include income, sales and use, corporation and other taxes, federal revenues (including both grants and reimbursements) and reimbursements for the use of materials and services. Tax accruals, which include the estimated amounts due to the Commonwealth on previous filings, over- and under-withholdings, estimated payments on income earned and tax refunds and abatements payable, are all recorded as adjustments to statutory basis tax revenues.

Major expenditure accruals are recorded for the cost of Medicaid claims that have been incurred but not paid, claims and judgments and workers' compensation claims incurred but not reported and contract assistance and amounts due to municipalities and state authorities. See Exhibit C – Comprehensive Annual Financial Report for the year ended June 30, 2019; Page 3 and Notes to the Basic Financial Statements.

Audit Practices of State Auditor

The State Auditor is mandated under state law to conduct an audit at least once every three years of the accounts of all departments, offices, commissions, institutions and activities of the Commonwealth. This audit encompasses hundreds of state entities, including the court system and independent authorities. The State Auditor also has the authority to audit federally aided programs and vendors and their subcontractors under contract with the Commonwealth as well as to conduct special audit projects. Further, the State Auditor upon a ratified majority vote by the board of selectmen or school committee, may, in the Auditor's discretion, audit the accounts, programs, activities and other public functions of a town, district, regional school district, city or county. The State Auditor conducts both compliance and performance audits in accordance with generally accepted government auditing standards issued by the Comptroller General of the United States.

Within the State Auditor's office is the Division of Local Mandates, which evaluates proposed and actual legislation to determine the financial impact on the Commonwealth's cities and towns. In accordance with state law, the Commonwealth is required to reimburse cities and towns for any costs incurred through mandated programs established after the passage of Proposition 2½, the statewide tax limitation enacted by the voters in 1980, unless expressly exempted from those provisions, and the State Auditor's financial analysis is used to establish the amount of reimbursement due to the Commonwealth's cities and towns. See "COMMONWEALTH EXPENDITURES – Local Aid; *Property Tax Limits.*"

Also within the State Auditor's office is the Bureau of Special Investigations, which is charged with the responsibility of investigating fraud within public assistance programs.

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COMMONWEALTH REVENUES

This section contains a description of the major categories of Commonwealth revenues. See “COMMONWEALTH EXPENDITURES” for a description of the major categories of Commonwealth expenditures. All percentages and amounts for fiscal 2020 are projected.

In order to fund its programs and services, the Commonwealth collects a variety of taxes and receives revenues from other non-tax sources, including the federal government and various fees, fines, court revenues, assessments, reimbursements, interest earnings and transfers from its non-budgeted funds, which are deposited in the General Fund, the Commonwealth Transportation Fund (formerly the Highway Fund) and other budgeted operating funds. Revenues deposited in such funds are referred to as budgeted operating revenues in this Information Statement. In fiscal 2019, on a statutory basis, approximately 57.4% of the Commonwealth’s budgeted operating revenues and other financing sources were derived from state taxes. In addition, the federal government provided approximately 24.3% of such revenues, with the remaining 18.3% provided from departmental revenues and transfers from non-budgeted funds.

The Commonwealth’s executive and legislative branches establish the Commonwealth’s budget using the statutory basis of accounting, which differs from a GAAP basis. See “SELECTED FINANCIAL DATA – Statutory Basis Distribution of Budgetary Revenues and Expenditures” and “- GAAP Basis.”

State Taxes

The major components of state taxes are the income tax, which accounted for approximately 56.6% of total budgeted tax revenues in fiscal 2019, the sales and use tax, which accounted for approximately 22.7% of total budgeted tax revenues in fiscal 2019, and the corporations and other business and excise taxes (including taxes on insurance companies and financial institutions), which accounted for approximately 11.3% of total budgeted tax revenues in fiscal 2019. Other tax and excise sources accounted for the remaining 9.4% of total budgeted tax revenues in fiscal 2019.

The Governor annually files a “tax expenditure budget” that provides a list, description and revenue estimates of various tax credits, deductions and exemptions that represent departures from the basic provisions of the state tax code. See “Tax Credits and Other Incentives” below.

On December 22, 2017, President Trump signed into law Public Law 115-97, making major changes to the federal Internal Revenue Code, most of which were effective in the 2018 tax year, including extensive changes to federal personal income taxes, corporate income taxes, and estate taxes, and the deductibility of various taxes and interest costs. Because the Commonwealth’s tax system interacts with the federal system, the changes to the federal Internal Revenue Code have flow-through effects on the Commonwealth’s tax system and revenues. Legislation adjusting the Commonwealth’s income tax laws and corporation tax laws in response to the new forms of income that are recognized and new federal tax expenditures that are created under Public Law 115-97 was enacted on October 23, 2018.

Income Tax. The Commonwealth assesses personal income taxes at flat rates, according to classes of income, after specified deductions and exemptions. A rate of 5.3% was applied to most types of income from January 1, 2002 to January 1, 2012. Under current law, the state personal income tax rate on most classes of taxable income is scheduled to be reduced gradually to 5.0%, contingent upon “baseline” state tax revenue growth (*i.e.*, revenue growth after factoring out the impact of tax law and administrative processing changes). In order to trigger a reduction, fiscal year-over-fiscal year growth in baseline revenues must increase by at least 2.5 percentage points more than the rate of inflation, as measured by the consumer price index for all urban consumers in Boston. Inflation-adjusted baseline revenues must also demonstrate positive growth for consecutive three-month periods, beginning with August and ending in November, in comparison with the same three-month periods in the prior calendar year. If these triggers are met, the personal income tax rate on most classes of taxable income is reduced by 0.05% on the following January 1. Once reduced to 5.0%, current law does not provide for any further decreases or increases without further legislative action. As a result of satisfying these statutory triggers, the state income tax rate on most classes of taxable income was reduced gradually from 5.3% to 5.0%, as shown in the following table.

State Personal Income Tax Rate

<u>Effective Date (January 1)</u>	<u>Tax Rate</u>
2002	5.30%
2012	5.25
2014	5.20
2015	5.15
2016	5.10
2019	5.05
2020	5.00

Current law requires that in the tax year following that in which the personal income tax rate is reduced to 5.0%, the state charitable deduction, which was in effect for tax year 2001 but subsequently suspended, will be restored. With the personal income tax rate being reduced to 5.0% effective on January 1, 2020, the state charitable deduction will be reinstated effective January 1, 2021.

The Department of Revenue estimates that the revenue loss impact of the rate reduction from 5.05% to 5.0% will be approximately \$88 million for fiscal 2020 and approximately \$185 million for fiscal 2021. The estimated revenue loss impact of the state charitable deduction is approximately \$64 million for fiscal 2021 and \$300 million on a full fiscal year basis.

The following table shows the Department of Revenue’s estimated impacts on income tax revenue of the state income tax rate reductions described above in fiscal years 2013 through 2021, inclusive.

Revenue Loss Impact of Income Tax Rate Reductions (millions)

<u>Decrease from:</u>	<u>Fiscal 2013</u>	<u>Fiscal 2014</u>	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Fiscal 2020 (1)</u>	<u>Fiscal 2021 (1)</u>
5.3% to 5.25%	\$114	\$119	\$124	\$130	\$136	\$142	\$148	\$155	\$162
5.25% to 5.20%	-	65	133	138	145	151	158	165	173
5.20% to 5.15%	-	-	70	145	152	158	165	173	181
5.15% to 5.10%	-	-	-	74	152	159	166	173	181
5.10% to 5.05%	-	-	-	-	-	-	84	175	183
5.05% to 5.0%	-	-	-	-	-	-	-	88	185

Source: Department of Revenue.

(1) Income tax revenue impacts in fiscal 2020 and 2021 are projected.

Capital Gains Component of the Income Tax. The tax rate on gains from the sale of capital assets held for one year or less and from the sale of collectibles is 12%. The tax rate on gains from the sale of capital assets owned more than one year is currently 5.00% (effective January 1, 2020), and is equal to the state personal income tax rate. Current state finance law provides for tax revenues collected from capital gains income during a fiscal year that exceed a specified threshold to be transferred to the Commonwealth’s Stabilization Fund, with 5% of the amount so deposited then transferred to the State Retiree Benefits Trust Fund and an additional 5% transferred to the Commonwealth’s Pension Liability Fund. The specified threshold is certified annually by the Department of Revenue each December for the ensuing fiscal year as part of the consensus revenue process. However, the requirement to transfer capital gains tax collections may be modified or superseded by individual appropriation acts. For a discussion of the specified threshold and the capital gains taxes deposited to the Stabilization Fund, see “SELECTED FINANCIAL DATA – Stabilization Fund.”

Sales and Use Tax. The sales tax rate imposed on retail sales of certain tangible property (including retail sales of meals) transacted in the Commonwealth and a corresponding use tax rate on the storage, use or other consumption of like tangible properties brought into the Commonwealth is 6.25%. Food, clothing, prescribed medicine, materials and produce used in food production, machinery, materials, tools and fuel used in certain

industries and property subject to other excises (except for cigarettes and recreational marijuana) are exempt from sales taxation. The sales and use tax is also applied to sales of electricity, gas and steam for certain nonresidential use and to nonresidential and a portion of residential use of telecommunications services.

Certain sales tax receipts are required to be credited to the Convention Center Fund. The Convention Center Fund is not included in the calculation of revenues for budgeted operating funds. See “LONG-TERM LIABILITIES – Special Obligation Debt; *Convention Center Fund*.”

A portion of the Commonwealth’s receipts from the sales tax (other than the tax on meals) is dedicated through non-budgeted special revenue funds to the Massachusetts Bay Transportation Authority (MBTA) and the Massachusetts School Building Authority (MSBA). The amount dedicated to the MSBA is the amount raised by a 1% sales tax (not including meals). The amount dedicated to the MBTA is the greater of (i) the amount raised by the 1% sales tax (not including meals), plus \$160 million and (ii) an income-adjusted floor. The income-adjusted floor grows each year by the allowable base revenue growth (the lesser of sales tax growth or inflation, but not greater than 3% and not less than 0%), and was certified as \$1.06 billion for fiscal 2020.

The Commonwealth’s receipts from the sales tax on account of motor vehicle sales (net of amounts required to be credited to the Convention Center Fund or dedicated to the MBTA or MSBA) are dedicated to the Commonwealth Transportation Fund.

Legislation approved by the Governor in June, 2018 established an annual two-day sales and meals tax holiday in August of each year, commencing August, 2019. The fiscal 2020 budget repealed the meals tax holiday.

In June, 2018, the Supreme Court of the United States issued a ruling in *South Dakota v. Wayfair* that effectively removes earlier constraints on states seeking to require out-of-state sellers to collect and remit sales tax. However, because the Commonwealth had previously established collect-and-remittance agreements covering the majority of sales by out-of-state sellers to Massachusetts residents, and has proactively asserted the obligation to collect sales taxes from out-of-state sellers with economic scale in Massachusetts, the incremental impact of *South Dakota v. Wayfair* on Commonwealth tax revenues has been limited. The revenue projections for budgeting purposes, as described under the heading “Tax Revenue Forecasting” below, include both existing and incremental collections on internet sales as a component of overall sales tax revenue.

Provisions included in the fiscal 2020 budget require online marketplace facilitators to collect and remit Massachusetts sales and use tax on behalf of vendors who sell their goods on the marketplace, provided the marketplace’s sales within the Commonwealth exceed the threshold of \$100,000. These provisions also subject remote sellers to the registration, collection and remittance requirements of the sales and use tax if the remote seller’s sales within the Commonwealth exceed the threshold of \$100,000.

Business Corporations Tax. Business corporations doing business in the Commonwealth, other than banks and other financial institutions, insurance companies, railroads and safe deposit companies, are subject to an excise that has a property measure and an income measure. The value of Massachusetts tangible property (not taxed locally) or net worth allocated to the Commonwealth is taxed at \$2.60 per \$1,000 of value. The net income assigned to Massachusetts, which is based on net income for federal taxes, is taxed at 8.0%. The minimum tax is \$456.

In general, corporations apportion their income to Massachusetts based on the proportion of payroll, property and sales within the Commonwealth, with sales being double-weighted. This general rule does not apply to manufacturing companies or to mutual fund service corporations. The net income of such entities is apportioned only by the percentage of their Massachusetts sales.

Financial Institutions Tax. Financial institutions (which include commercial and savings banks) are subject to an excise tax. The net income assigned to Massachusetts is taxed at 9.0%. In general, financial institutions apportion their income to Massachusetts based on the proportion of receipts, payroll and property within the Commonwealth.

Insurance Taxes. Life insurance companies are subject to a 2% tax on gross premiums. Property and casualty insurance companies are subject to a 2.28% tax on gross premiums. Domestic property and casualty insurance companies also pay a 1% tax on gross investment income.

Other Taxes. Other tax revenues are derived by the Commonwealth from excise taxes on motor fuels, cigarettes and other tobacco products, alcoholic beverages, deeds, and hotel/motel room occupancy, as well as taxes on estates, among other tax sources. On November 8, 2016, voters approved an initiative petition that, among other things, imposes an excise tax, in addition to the regular sales tax, on retail sales of recreational marijuana and marijuana products, which that petition legalized. Legislation approved by the Governor on December 30, 2016 delayed the effective date of the new tax from January 1, 2018 to July 1, 2018. Legislation approved by the Governor on July 28, 2017 increased the maximum combined state and local tax rate on recreational marijuana from 12% to 20%.

On December 28, 2018, the Governor approved legislation imposing state and local excise taxes on the short-term rentals of property for more than 14 days in a calendar year. The legislation became effective July 1, 2019 and applies to rental contracts entered into on or after January 1, 2019.

On November 27, 2019, the Governor approved legislation imposing an excise of 75% on the wholesale price of all electronic nicotine delivery systems and restricting the sale of all flavored tobacco products and flavored tobaccos product enhancers, including flavored vaping products, to licensed smoking bars for on-site consumption. The legislation also restricts the sale of vaping products with nicotine content greater than 35 grams per milliliter to retail tobacco stores and licensed smoking bars. The restriction on the sale of flavored vaping products became effective immediately. Other provisions of the legislation, including the prohibition on flavored tobacco products and flavored tobacco product enhancers, will take effect on June 1, 2020. The Department of Revenue estimates the net revenue loss impact of this legislation will be approximately \$1.5 million in fiscal 2020 and \$94.9 million in fiscal 2021.

Tax Credits and Other Incentives. Massachusetts law provides for a variety of tax credits that may be applied against corporate excise or personal income taxes due, as applicable under relevant law. These credits are designed as benefits for specified economic activities as a means to encourage such business in the state. Certain of these credits, to the extent not used to reduce a current tax liability, may be carried forward, transferred or refunded, as specified in the applicable statute. In addition, certain statutory provisions may also provide an exemption from sales and use taxes for qualifying expenditures, or other specified tax benefits.

The Governor annually publishes a “tax expenditure budget” that provides a list, description and revenue estimate of various tax credits, deductions and exemptions that represent departures from the basic provisions of the state tax code. A summary of the tax expenditure budget published on January 22, 2020 appears below.

Fiscal 2021 Tax Expenditure Budget Summary (in millions)

<u>Tax Type</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Fiscal 2020</u>	<u>Fiscal 2021</u>
Personal Income Tax	\$7,273.4	\$8,155.6	\$8,894.9	\$9,322.1	\$9,749.1
Corporate and Other Business Excise	2,002.2	2,017.4	2,083.7	2,144.4	2,196.3
Sales and Use Tax	<u>4,719.6</u>	<u>4,994.2</u>	<u>5,177.1</u>	<u>5,307.6</u>	<u>5,456.4</u>
Total	\$13,995.2	\$15,167.2	\$16,155.7	\$16,774.1	\$17,401.8

Source: Department of Revenue.

Under legislation approved June 15, 2018, in support of the life sciences industry, up to \$30 million per year in tax incentives is available to certified life sciences companies over a 10-year period, commencing January 1, 2019 and ending on December 31, 2028, for an aggregate amount of \$300 million. The Department of Revenue estimates that this program, which previously had an annual cap of \$25 million, resulted in revenue reductions of \$12.9 million in fiscal 2015, \$11.2 million in fiscal 2016, \$14.1 million in fiscal 2017, \$16.5 million in fiscal 2018, and \$17.0 million in fiscal 2019. The Massachusetts Life Sciences Center board has approved \$20 million in tax incentives that are expected to be utilized in fiscal 2020.

Tax Revenue Forecasting

Under state law, on or before October 15 of each year, the Secretary of Administration and Finance is required to submit to the Governor and to the House and Senate Committees on Ways and Means estimates of revenues available to meet appropriations and other needs in the current fiscal year and the following fiscal year.

On or before January 15 of each year (January 31 in the first year of a new Governor), the Secretary is required to develop jointly with the House and Senate Committees on Ways and Means a consensus tax revenue forecast for the following fiscal year. State finance law requires that the consensus tax revenue forecasts be net of the amounts necessary to fully fund the pension system according to the applicable funding schedule, and to fulfill statutory commitments to the MBTA and the MSBA. These amounts are to be transferred without further appropriation from the General Fund. See “Sales and Use Tax,” above and “PENSION AND OPEB FUNDING.”

An additional component of the consensus revenue process is the requirement that the consensus tax revenue forecast joint resolution include a benchmark for the estimated growth rate of Massachusetts potential gross state product (PGSP). Health care cost control legislation requires that the Secretary and the House and Senate Committees on Ways and Means include a PGSP growth benchmark for the ensuing calendar year. PGSP is a measure of the “full employment” output of the Commonwealth’s economy. The PGSP growth benchmark is used by the Massachusetts Health Policy Commission to establish the Commonwealth’s health care cost growth benchmark. See “COMMONWEALTH EXPENDITURES – Medicaid and the Health Connector; *Health Care Cost Containment.*”

The following table compares actual budgeted tax revenues to consensus tax revenue forecasts for fiscal 2015 to 2019. Figures for fiscal 2020 and fiscal 2021 are projected. The figures include sales tax receipts dedicated to the MBTA and the MSBA and amounts transferred to the state pension system. Commencing with fiscal 2015, tax-related settlements or judgments exceeding \$10 million are counted separately from the consensus revenue estimate in the General Appropriations Act.

	Tax Revenue Forecasting (in millions)						
	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Projected Fiscal 2020</u>	<u>Projected Fiscal 2021</u>
Consensus forecast (1)	\$24,337	\$25,479	\$26,860	\$27,072	\$27,594	\$29,299 (4)	\$31,151 (7)
GAA assumption of tax-related settlements and judgments exceeding \$10 million	204	100	125	125	25	50	
Total taxes per enacted budget (2)	\$24,591	\$25,711	\$26,356	\$26,629	\$28,417 (3)	\$30,149 (5)	
October revision (1)	-	-	26,056	-	-	-	
January revision (1)	24,325	25,751	-	26,661	28,592 (3)	30,289 (6)	
Actual budgeted operating tax revenues (2)	\$24,932	\$25,425	\$25,662	\$27,787	\$29,740		
Actual revenues as a percentage of consensus forecast	102.4%	99.8%	95.5%	102.6%	107.8%		
Actual revenues as a percentage of total taxes per enacted budget	101.4%	98.9%	97.4%	104.3%	104.7%		

SOURCE: Executive Office for Administration and Finance; actual budgeted operating tax revenues, Office of the Comptroller.

- (1) Excluding tax-related settlements exceeding \$10 million each.
- (2) Including tax-related settlements exceeding \$10 million each.
- (3) Including an estimated \$63 million from marijuana sales and excise taxes.
- (4) Does not include any revenue from marijuana sales or excise taxes.
- (5) Including \$593.5 million of upward adjustments assumed in the final fiscal 2020 budget due to actual fiscal 2019 results, plus \$206.7 million of additional adjustments, including an estimated \$132.5 million from marijuana sales and excise taxes, \$41.7 million of sales and use marketplace taxes, \$27.5 million of taxes on short-term property rentals and \$5.0 million due to a reduction in life sciences tax incentives.
- (6) Including an estimated \$132.5 million from marijuana sales and excise taxes.
- (7) Including an estimated \$145.7 million from marijuana sales and excise taxes.

On December 31, 2018, a fiscal 2020 consensus tax revenue estimate of \$29.299 billion was agreed upon by the Secretary and the chairs of the House and Senate Committees on Ways and Means. The fiscal 2020 consensus

tax revenue estimate represented revenue growth of 2.7% from the revised fiscal 2019 estimate of \$28.529 billion. The fiscal 2020 consensus tax revenue estimate did not include any revenue from marijuana sales or excise taxes. The consensus tax revenue estimate for fiscal 2020 assumed that another income tax trigger would go into effect on January 1, 2020, lowering the state personal income tax rate on most classes of taxable income to 5.00% from 5.05%. On July 31, 2019, the Governor approved the fiscal 2020 budget, which assumed tax revenues of \$30.099 billion, excluding tax-related settlements exceeding \$10 million each. The tax revenue estimate of \$30.099 billion reflected in the fiscal 2020 budget adjusted the original consensus tax revenue estimate upward to reflect actual fiscal 2019 results and additional taxes, including \$132.5 million of marijuana sales and excise taxes.

On January 13, 2020, the Secretary of Administration and Finance certified a revised fiscal 2020 tax revenue estimate of \$30.289 billion, including an estimated \$132.5 million from marijuana sales and excise taxes.

Also on January 13, 2020, a fiscal 2021 consensus tax revenue estimate of \$31.151 billion was agreed upon by the Secretary and the chairs of the House and Senate Committees on Ways and Means. The fiscal 2021 consensus tax revenue estimate represents revenue growth of 2.8% from the revised fiscal 2020 estimate of \$30.289 billion. The \$31.151 billion figure for fiscal 2021 includes transfers of \$3.115 billion for pension funding, \$1.136 billion in dedicated sales tax receipts for the MBTA, \$976 million in dedicated sales tax receipts for the MSBA, and \$25 million for the Workforce Training Fund. The total amount of off-budget transfers was \$5.252 billion. Accordingly, after taking into account these off-budget allocations the Secretary and Committee chairs agreed that \$25.621 billion would be the maximum amount of tax revenue available for the fiscal 2021 budget. The fiscal 2021 consensus tax revenue estimate includes revenue from marijuana sales and excise taxes.

The Secretary of Administration and Finance and the chairs of the House and Senate Committees on Ways and Means also agreed upon a PGSP estimate of 3.6% for calendar year 2020, which is identical to the PGSP figure that was adopted for calendar years 2016 through 2019. The PGSP growth benchmark is to be used by the Health Policy Commission to establish the Commonwealth's health care cost growth benchmark for calendar year 2020. See "COMMONWEALTH EXPENDITURES – Medicaid and the Health Connector; *Health Care Cost Containment*."

Fiscal 2018 through Fiscal 2020 Tax Revenues

Fiscal 2018. Tax revenues for fiscal 2018 (including tax revenues allocated to pensions, the MBTA, the MSBA and the Workforce Training Fund, but excluding other non-budgeted tax revenues) totaled approximately \$27.787 billion, including \$11.0 million in one-time tax-related settlements and judgments, exceeding \$10 million each, an increase of approximately \$2.126 billion, or 8.3%, over fiscal 2017.

The following table shows the tax collections for fiscal 2018 and the change from tax collections in the prior year, both in dollars and as a percentage. The table also notes the amount of tax collections during the fiscal year that are dedicated to the MBTA and the MSBA.

Fiscal 2018 Tax Collections (in millions)

<u>Month</u>	<u>Tax Collections</u>	<u>Change from Prior Year</u>	<u>Percentage Change</u>	<u>MBTA Portion</u>	<u>MSBA Portion</u>	<u>Tax Collections: Net of MBTA and MSBA</u>
July	\$1,797.1	\$91.7	5.4%	\$83.5	\$70.2	\$1,643.4
August	1,711.9	(25.2)	(1.4)	82.8	69.4	1,559.7
September	2,845.4	88.5	3.2	85.4	69.6	2,690.3
October	1,826.6	34.4	1.9	84.1	70.8	1,671.8
November	1,735.8	245.4	16.5	81.7	68.3	1,585.9
December	3,007.5	517.9	20.8	86.0	70.2	2,851.3
January	2,967.6	247.5	9.1	96.0	82.6	2,789.0
February	1,269.1	96.7	8.2	77.2	63.9	1,127.9
March	2,241.2	(48.9)	(2.1)	78.5	63.1	2,099.7
April	3,304.2	449.8	15.8	80.9	67.5	3,155.8
May	1,942.1	21.0	1.1	86.0	72.7	1,783.4
June	3,138.8	406.7	14.9	86.0	79.6	2,973.2
Total (1)	<u>\$27,787.2</u>	<u>\$2,125.5</u>	<u>8.3%</u>	<u>\$1,007.9</u>	<u>\$847.9</u>	<u>\$25,931.3</u>

SOURCE: Executive Office for Administration and Finance.
 (1) Totals may not add due to rounding.

The tax revenue increase of approximately \$2.126 billion from fiscal 2017 to fiscal 2018 is attributable, in large part, to an increase of approximately \$761.9 million, or 6.4%, in withholding collections, an increase of approximately \$764.8 million, or 32.2%, in income tax estimated payments, an increase of approximately \$205.4 million, or 10.6%, in income tax payments with bills and returns, an increase of approximately \$217.9 million, or 8.5%, in corporate and business tax collections, an increase of approximately \$242.7 million, or 3.9%, in sales and use tax collections, and a net increase of approximately \$109.1 million, or 4.9%, in all other taxes, which were partly offset by an increase of approximately \$175.9 million, or 11.0%, in income tax cash refunds. Fiscal 2018 collections from one-time tax related settlements and judgments exceeding \$10 million each totaled \$11.0 million. Excluding these payments, fiscal 2018 tax collections were approximately \$1.115 billion above the benchmark associated with the revised fiscal 2018 tax revenue estimate of \$26.661 billion.

A provision in the fiscal 2018 budget required that the Comptroller record in fiscal 2018 on the statutory basis of accounting certain sales tax revenues received in July, 2018, that under Massachusetts General Law and the Comptroller’s revenue recognition policy would normally be recorded as fiscal 2019 revenue. The result of this provision was that 13 months of such sales tax revenue would be recorded in fiscal 2018. This requirement was repealed. See “COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS – Fiscal Control, Accounting and Reporting Practices of the Comptroller; *Statutory Basis of Accounting*.”

Fiscal 2019. The fiscal 2019 General Appropriations Act was based on estimated tax collections of \$28.392 billion, including revenues dedicated to the MBTA, the MSBA and the Workforce Training Fund, excluding large tax-related settlements and judgments. On December 31, 2018, the Secretary of Administration and Finance revised the tax revenue projection of \$28.329 billion (not including the \$63 million for the estimated revenues from marijuana sales and excise taxes) upward by \$200 million to \$28.529 billion based on then current year-to-date revenues and economic data. Including the \$63 million for the estimated revenues from marijuana sales and excise taxes, the revised fiscal 2019 benchmark estimate is \$28.592 billion.

The following table shows the tax collections for fiscal 2019 and the change from tax collections in the same period in the prior year, both in dollars and as a percentage. The table also notes the amount of tax collections during the fiscal year that are dedicated to the MBTA and the MSBA.

Fiscal 2019 Tax Collections (in millions)

<u>Month</u>	<u>Tax Collections</u>	<u>Change from Prior Year</u>	<u>Percentage Change</u>	<u>MBTA Portion</u>	<u>MSBA Portion</u>	<u>Tax Collections: Net of MBTA and MSBA</u>
July	\$1,913.8	\$116.7	6.5%	\$86.5	\$73.2	\$1,754.1
August	1,842.3	130.4	7.6	88.0	74.7	1,679.6
September	3,262.6	417.2	14.7	84.9	71.6	3,106.0
October	1,913.5	86.9	4.8	87.5	74.2	1,751.7
November	1,856.5	120.7	7.0	87.5	74.2	1,694.8
December	2,571.3	(436.1)	(14.5)	87.5	74.2	2,409.5
January	2,787.4	(180.2)	(6.1)	99.7	86.3	2,601.4
February	1,420.0	150.9	11.9	79.8	66.5	1,273.7
March	2,667.5	426.3	19.0	78.0	64.7	2,524.8
April	4,322.6	1,018.4	30.8	88.5	75.2	4,158.9
May	1,999.7	57.6	3.0	90.3	77.0	1,832.4
June	3,184.5	45.7	1.5	94.8	81.5	3,008.1
Total (1)	\$29,741.5	\$1,954.3	7.0%	\$1,053.2	\$893.2	\$27,795.1

SOURCE: Executive Office for Administration and Finance.

(1) Totals may not add due to rounding.

The net tax revenue increase of approximately \$1.954 billion from fiscal 2018 to fiscal 2019 is attributable, in large part, to an increase of approximately \$476.7 million, or 3.7%, in withholding collections, an increase of approximately \$95.2 million, or 44.3%, in income tax payments with bills and returns, a decrease of approximately \$115.1 million, or 6.5%, in income tax cash refunds, an increase of approximately \$574.6 million, or 20.7%, in corporate and business tax collections, an increase of approximately \$344.5 million, or 5.3%, in sales and use tax collections, and a net increase of approximately \$165.5 million, or 7.1%, in all other taxes, offset by a decrease of approximately \$673.3 million, or 21.4%, in income tax estimated payments. Excluding one-time tax related settlements and judgments exceeding \$10 million each, which totaled \$48.8 million, fiscal 2019 tax collections were approximately \$29.693 billion, \$1.1 billion above the revised fiscal 2019 tax revenue estimate of \$28.592 billion.

Fiscal 2020. The fiscal 2020 budget is based on estimated tax collections of \$30.099 billion, including revenues dedicated to the MBTA, the MSBA and the Workforce Training Fund. The estimate includes revenues from marijuana sales and excise taxes, estimated to be \$132.5 million, and excludes tax-related settlements and judgments exceeding \$10 million, which are assumed to be \$50 million. The estimate was revised upward by \$190 million from \$30.099 billion to \$30.289 billion on January 13, 2020.

The following table shows the tax collections for the first six months of fiscal 2020 and the change from tax collections in the same period in the prior year, both in dollars and as a percentage. The table also notes the amount of tax collections during the fiscal year that are dedicated to the MBTA and the MSBA.

Fiscal 2020 Tax Collections (in millions)

<u>Month</u>	<u>Tax Collections</u>	<u>Change from Prior Year</u>	<u>Percentage Change</u>	<u>MBTA Portion</u>	<u>MSBA Portion</u>	<u>Tax Collections: Net of MBTA and MSBA</u>
July	\$2,026.0	\$112.2	5.9%	\$91.3	\$77.9	\$1,856.8
August	1,985.9	143.7	7.8	91.8	78.4	1,815.7
September	3,202.4	(60.2)	(1.8)	88.4	75.1	3,038.8
October	2,027.0	113.5	5.9	92.0	78.7	1,856.3
November	2,093.0	236.5	12.7	91.6	78.2	1,923.2
December	2,612.0	40.6	1.6	91.6	78.3	2,442.1
Total (1)	\$13,946.3	\$586.4	4.4%	\$546.6	\$466.6	\$12,933.0

SOURCE: Executive Office for Administration and Finance.

(1) Totals may not add due to rounding.

The year-to-date tax revenue increase of approximately \$586.4 million through December 31, 2019 from the same period in fiscal 2019 is attributable, in large part, to an increase of approximately \$228.0 million, or 3.5%, in withholding collections, an increase of approximately \$53.5 million, or 6.1%, in income tax estimated payments, an increase of approximately \$4.9 million, or 1.4%, in income tax payments with bills and returns, a decrease of approximately \$25.9 million, or 9.1%, in income tax cash refunds, an increase of approximately \$183.9 million, or

5.4%, in sales and use tax collections, an increase of approximately \$5.5 million, or 0.4%, in corporate and business tax collections, and a net increase of approximately \$84.7 million, or 6.4%, in all other taxes. Excluding one-time tax related settlements and judgments exceeding \$10 million each, which totaled \$12.5 million, fiscal 2020 year-to-date tax collections were approximately \$13.934 billion, \$233 million above the year-to-date benchmark associated with the fiscal 2020 tax revenue estimate of \$30.099 billion.

Federal and Other Non-Tax Revenues

Federal revenues are collected through reimbursements for the federal share of entitlement programs such as Medicaid and through block grants for programs such as Transitional Assistance to Needy Families (TANF). The amount of federal reimbursements to be received is determined by state expenditures for these programs. The Commonwealth receives reimbursement for approximately 50% of its spending for Medicaid programs. Block grant funding for TANF is received quarterly and is contingent upon a maintenance-of-effort spending level determined annually by the federal government. Budgeted fund federal reimbursements were \$11.772 billion in fiscal 2019 and are projected to be \$11.745 billion in fiscal 2020.

Departmental and other non-tax revenues are derived from a large number of sources, including but not limited to fees and assessments for services, licenses, and reimbursements. For fiscal 2019, budgeted fund departmental and other non-tax revenues were \$5.250 billion. The largest budgeted departmental revenues, assessments and miscellaneous revenues in fiscal 2019 included \$1.432 billion in drug rebates, recoveries and other fees, \$843 million in reimbursements from cities, towns and non-state entities for retiree benefits, \$617 million for Registry of Motor Vehicles fees, fines and assessments, and \$251 million from filing, registration and other fees paid to the Secretary of State's office. Budgeted fund departmental and other non-tax revenues are projected to be \$4.996 billion in fiscal 2020.

Lottery Revenues. For the budgeted operating funds, inter-fund transfers include transfers of net operating revenues from the State Lottery and Gaming Fund and the Arts Lottery Fund and reimbursements for the budgeted costs of the State Lottery Commission, which accounted for transfers from the Lottery of \$1.086 billion, \$1.092 billion, \$1.136 billion, \$1.097 billion and \$1.206 billion in fiscal 2015 through 2019, respectively.

The following table shows Lottery revenues and profits for the first five months of fiscal 2020.

Fiscal 2020 Monthly Lottery Revenues and Profits (in thousands)

<u>Month</u>	<u>Revenues</u>	<u>Prizes</u>	<u>Subtotal Operating Expenses</u>	<u>Operating Revenues</u>	<u>Administrative Expenses</u>	<u>Net Profit before Distributions</u>
July	\$379,508	\$275,033	\$21,897	\$82,578	\$2,470	\$80,108
August	498,491	370,346	28,656	99,490	7,798	91,692
September	402,454	303,498	23,187	75,768	7,370	68,398
October	415,277	299,268	23,771	92,238	7,047	85,191
November	528,653	385,153	30,159	113,341	5,171	108,170
Total	\$2,224,384	\$1,633,298	\$127,670	\$463,416	\$29,856	\$433,560
YTD prize accrual(1)	-	11,132	-	(11,132)	-	(11,132)
Adj Totals(1)	\$2,224,384	\$1,644,430	\$127,670	\$452,284	\$29,856	\$422,428

Source: State Lottery Commission; Monthly values from the State Lottery Commission Statement of Operations.

(1) Preliminary and subject to change.

A five-year history of Lottery revenues and profits is shown in the following table as well as current projections for fiscal 2020.

Lottery Revenues and Profits
(in thousands)

<u>Fiscal Year</u>	<u>Revenues</u>	<u>Net Operating Revenues</u>	<u>Net Profits</u>
2020 (1)	\$5,279,820	\$1,075,024	\$ 967,022
2019	5,508,564	1,206,850	1,104,220
2018	5,291,951	1,097,398	997,057
2017	5,097,765	1,136,203	1,039,697
2016	5,233,931	1,092,130	989,411
2015	5,014,535	1,086,469	985,879

Source: State Lottery Commission

(1) Fiscal 2020 figures are projected. These numbers are under review and may be adjusted. Minor adjustments to Lottery revenues are reported several times a year based upon trends.

Tobacco Settlement. In November, 1998, the Commonwealth joined with other states in a master settlement agreement that resolved the Commonwealth’s and other states’ litigation against the cigarette industry. Under the agreement, cigarette companies have agreed to make both annual payments (in perpetuity) and five initial payments (for calendar 1999 to 2003, inclusive) to the settling states. Each payment amount is subject to applicable adjustments, reductions and offsets, including upward adjustments for inflation and downward adjustments for decreased domestic cigarette sales volume.

The Commonwealth’s allocable share of the base amounts payable under the master settlement agreement is approximately 4.04%, which equals more than \$8.962 billion through fiscal 2024, subject to adjustments, reductions and offsets. However, since fiscal 2006 certain amounts have been withheld from each year’s payments by tobacco manufacturers who claim that because of certain developments they are entitled to reduce such payments under the master settlement agreement. Those withheld amounts ranged from \$21 million to \$35 million to the Commonwealth in the period from 2006 through 2012, inclusive. A smaller amount has been withheld for 2013 through 2016, inclusive. The Commonwealth believes it is due the full amount and is pursuing its claim to unreduced payments. See “LEGAL MATTERS – Other Revenues.” The Commonwealth was also awarded \$414.3 million from a separate Strategic Contribution Fund established under the master settlement agreement to reward certain states’ particular contributions to the national tobacco litigation effort. This additional amount, also subject to a number of adjustments, reductions and offsets, was payable in equal annual installments during the years 2008 through 2017, inclusive. Massachusetts received its final Strategic Contribution Fund payment in April, 2017.

From fiscal 2003 through fiscal 2012, all payments received by the Commonwealth pursuant to the master settlement agreement were deposited in the General Fund. Since fiscal 2012, state law has stipulated that a portion of annual tobacco settlement revenues be deposited into the State Retiree Benefits Trust Fund. See “PENSION AND OPEB FUNDING – Other Post-Employment Benefit Obligations (OPEB).”

The following table sets forth the tobacco settlement amounts received by the Commonwealth to date.

Payments Received Pursuant to the Tobacco Master Settlement Agreement (in millions) (1)

<u>Fiscal Year</u>	<u>Initial Payments</u>	<u>Annual Payments</u>	<u>Total Payments</u>
2000	\$186.6 (2)	\$139.6	\$326.2(2)
2001	78.2	164.2	242.4
2002	82.8	221.7	304.5
2003	86.4	213.6	300.0
2004	-	253.6	253.6
2005	-	257.4	257.4
2006	-	236.3	236.3
2007	-	247.3	247.3
2008	-	288.5	288.5
2009	-	315.2	315.2
2010	-	263.7	263.7
2011	-	248.7	248.7
2012	-	253.6	253.6
2013	-	253.5	253.5
2014	-	282.1	282.1
2015	-	245.8	245.8
2016	-	257.6	257.6
2017	-	254.5	254.5
2018	-	243.3	243.3
2019	-	236.6	236.6
Total	<u>\$434.0</u>	<u>\$4,876.8</u>	<u>\$5,310.8</u>

SOURCE: Office of the Comptroller.

(1) Amounts are approximate. Totals may not add due to rounding.

(2) Payments received for both 1999 and 2000.

Settlements and Judgments. State finance law provides that any one-time settlement or judgment exceeding \$10 million is to be deposited in the Stabilization Fund to the extent that the total of all such one-time settlements and judgments in a fiscal year exceeds the average of such totals for the five preceding fiscal years. The amount of such one-time settlements and judgments totaled approximately \$226.1 million in fiscal 2015, \$155.3 million in fiscal 2016, \$111.6 million in fiscal 2017, \$36.6 million in fiscal 2018 and \$48.8 million in fiscal 2019. The threshold applicable in fiscal 2020 is \$115.7 million (average of fiscal 2015 through fiscal 2019).

On January 6, 2020, the Commissioner of Revenue and the Attorney General certified that the Commonwealth had received \$12.5 million in one-time settlement and judgment payments exceeding \$10 million each (all of which were tax-related) during the first six months of fiscal 2020.

Gaming. On November 22, 2011, the Governor approved legislation that authorized the licensing of up to three regional resort casinos (one per region) and one slot facility (up to 1,250 slots) in the Commonwealth. The legislation established an appointed, independent state Gaming Commission to oversee the implementation of the law and the regulation of the resultant gaming facilities. The legislation also provided that licensing fees collected by the Gaming Commission are to be applied to a variety of one-time state and local purposes, and gaming tax revenues received by the Commonwealth are to be applied to various funds as set forth in the legislation. The legislation stipulates that initial licensing fees, which are set by the Gaming Commission, must be at least \$85 million per casino (Category 1 license) and \$25 million for the slot facility (Category 2 license). According to the Gaming Commission, aggregate state tax revenues from gaming licenses are expected to total approximately \$300 million per year once the facilities are operational.

The Gaming Commission has awarded Category 1 gaming licenses in two of the three regions and one Category 2 slots facility license. The facility in Springfield (Region B) opened on August 24, 2018 and the facility in Everett (Region A) opened on June 23, 2019. The Category 2 slot facility opened in Plainville on June 24, 2015.

The Commonwealth collected gaming tax revenues from the Category 2 slot facility of \$63.4 million in fiscal 2017, \$68.0 million in fiscal 2018 and \$67.5 million in fiscal 2019 and from Category 2 Race Horse Assessments of \$14.2 million in fiscal 2017, \$15.2 million in fiscal 2018 and \$15.2 million in fiscal 2019. The Commonwealth began collecting gaming tax revenues from the Category 1 facilities in August 2019, collecting an aggregate of \$62.3 million in fiscal 2019. Fiscal 2020 collections to date are set forth below.

Fiscal 2020 Monthly Gaming Revenues (in thousands) (1)

<u>Month</u>	<u>Category 1 Gross Gaming Revenue (2)</u>	<u>Category 1 Total Collected State Taxes (3)</u>	<u>Category 2 Slot Gross Gaming Revenue (2)</u>	<u>Category 2 Total Collected State Taxes (4)</u>	<u>Category 2 Race Horse Assessments (5)</u>	<u>Statewide Gross Gaming Revenue (6)</u>	<u>Statewide Budgetary Taxes & Race Horse Assessments (6)</u>
July	\$ 68,973	\$ 17,243	\$ 12,535	\$ 5,014	\$ 1,128	\$ 81,508	\$ 23,385
August	73,452	18,362	12,080	4,832	1,087	85,532	24,281
September	69,211	17,302	11,543	4,617	1,038	80,754	22,957
October	67,005	16,751	11,246	4,498	1,012	78,251	22,261
November	67,244	16,811	10,978	4,391	988	71,635	22,190
Total (6)	\$345,885	\$ 86,469	\$ 58,382	\$ 23,352	\$ 5,253	\$ 397,680	\$ 115,074

Source: Massachusetts Gaming Commission, Revenue Reports through November 2019.

- (1) Preliminary and subject to change.
- (2) "Gross gaming revenue" is the total of all sums actually received from gaming operations, less the total of all sums paid out as winnings.
- (3) Each Category 1 licensee pays a tax of 25% of gross gaming revenues.
- (4) The Category 2 licensee pays a tax of 40% of gross gaming revenues.
- (5) The Category 2 licensee pays an assessment of 9% of gross gaming revenue.
- (6) Totals may not sum due to rounding.

On April 28, 2016, the Gaming Commission voted to deny an application for a Category 1 license in Region C. On June 6, 2018, the unsuccessful applicant in Region C sent a letter to the Gaming Commission requesting that the Gaming Commission reconsider its unsuccessful application. The Gaming Commission acknowledged the applicant's letter at its July 26, 2018 meeting and subsequently requested public comments on the issues raised therein. The comment period concluded on November 30, 2018. The Gaming Commission has since reviewed additional matters related to Region C and is considering next steps.

In March, 2016, the Mashpee Wampanoag tribe announced that it would commence construction of a tribal resort casino in the third region (Region C), based upon the assumed power of the U. S. Secretary of the Interior to take land into trust for the tribe. On July 28, 2016, in the case of *Littlefield v. the U. S. Department of the Interior*, the U. S. District Court held that the Secretary of the Interior lacked the authority to take land into trust for the Mashpee Wampanoag tribe and remanded the matter back to the Secretary of the Interior for further proceedings consistent with the opinion as well as the declaratory judgment entered. The Mashpee Wampanoag filed a motion to intervene, which was granted. In December, 2016, the Mashpee Wampanoag filed a notice of appeal to the U. S. Court of Appeals for the First Circuit. On September 7, 2018, the Department of the Interior issued a revised land-in-trust decision concluding that the Mashpee Wampanoag did not meet the statutory requirements to have land taken into trust. The Mashpee Wampanoag filed an appeal of this decision in the U.S. District Court for the District of Columbia; they have asked the First Circuit Court of Appeals to extend the stay in the appeal currently pending before the First Circuit. Additionally, in January 2019, Representative Keating introduced a bill in the U.S. House of Representatives (H.R. 312) titled the "Mashpee Wampanoag Tribe Reservation Reaffirmation Act." The bill would reaffirm the Tribe's trust land, ratify and confirm the Secretary's actions in taking the land into trust, preclude filing of further matters, and dismiss pending federal litigation concerning this matter. The bill passed in the U.S. House on May 15, 2019 (275-146). The bill was received in the U.S. Senate and placed on the Legislative Calendar on May 20, 2019. No further activity has been reported. The Gaming Commission will continue to monitor this matter.

Various municipalities have filed suit contesting certain aspects of the Gaming Commission's issuance of the Region A Category 1 license. Certain of these claims have been dismissed, either voluntarily or by order of the Massachusetts Superior Court. The Gaming Commission currently is defending the remaining intervenor claim filed by Mohegan Sun. That claim was argued before the Massachusetts Supreme Judicial Court in November, 2016. On March 10, 2017, the Supreme Judicial Court issued a decision affirming Mohegan Sun's intervenor claim and remanding the case to the Superior Court for further proceedings. Briefing on Mohegan Sun's intervenor claim was completed in January, 2018. Since the completion of the briefing on Mohegan Sun's intervenor claim, Mohegan Sun has filed a motion to amend its complaint. The Gaming Commission opposed this motion and, on July 16, 2018, the Superior Court allowed Mohegan Sun's motion in part and denied it in part, thus granting Mohegan Sun the right to

add additional information to its existing complaint. The parties do not have a schedule for further motions, briefing or arguments in the amended Mohegan Sun intervenor claim.

On November 14, 2016, the Gaming Commission was sued for tortious interference with respect to the plaintiff's agreement to sell property to the licensee for the Region A Category 1 facility; the plaintiff is requesting damages as determined at trial. On May 14, 2018, the Superior Court granted the Gaming Commission's motion to dismiss on two of three claims then remaining. The Gaming Commission is proceeding with its defense of the remaining claim. On July 5, 2018, the Gaming Commission filed a third party complaint against the Region A Category 1 licensee for unjust enrichment and indemnification relating to the remaining claim against the Gaming Commission. The Region A licensee filed a motion to dismiss the complaint. On January 2, 2020, the court issued a decision effectively denying the motion to dismiss. As a result, the Region A licensee remains a party to the case.

Limitations on Tax Revenues

Chapter 62F of the General Laws establishes a state tax revenue growth limit for each fiscal year equal to the average positive rate of growth in total wages and salaries in the Commonwealth, as reported by the federal government, during the three calendar years immediately preceding the end of such fiscal year. The growth limit is used to calculate "allowable state tax revenue" for each fiscal year. Chapter 62F also requires that allowable state tax revenues be reduced by the aggregate amount received by local governmental units from any newly authorized or increased local option taxes or excises. Any excess in state tax revenue collections for a given fiscal year over the prescribed limit, as determined by the State Auditor, is to be applied as a credit against the then-current personal income tax liability of all taxpayers in the Commonwealth in proportion to the personal income tax liability of all taxpayers in the Commonwealth for the immediately preceding tax year. The law does not exclude principal and interest payments on Commonwealth debt obligations from the scope of its tax limit. However, the preamble contained in Chapter 62F provides that "although not specifically required by anything contained in this chapter, it is assumed that from allowable state tax revenues as defined herein the Commonwealth will give priority attention to the funding of state financial assistance to local governmental units, obligations under the state governmental pension systems and payment of principal and interest on debt and other obligations of the Commonwealth."

The following table sets forth the Commonwealth's net state tax revenues and allowable state tax revenues, as defined in Chapter 62F, for fiscal 2015 through fiscal 2019.

	<u>Net State Tax Revenues</u>	<u>Allowable State Tax Revenues</u>	<u>Net State Tax Revenues (under Allowable State Tax Revenues)</u>
2019	\$30,202,588,989	\$33,977,261,799	(\$3,744,652,810)
2018	28,178,560,547	32,531,393,763	(4,352,833,216)
2017	26,044,206,400	31,095,184,910	(5,050,978,510)
2016	25,801,807,368	29,477,204,724	(3,675,397,356)
2015	25,239,065,862	28,071,638,151	(2,832,572,289)

SOURCES: State Auditor's Office.

COMMONWEALTH EXPENDITURES

This section contains a description of the major categories of Commonwealth expenditures. All percentages and amounts for fiscal 2020 are projected.

Local Aid

Commonwealth Financial Support for Local Governments. The Commonwealth makes substantial payments to its cities, towns and regional school districts (local aid) to mitigate the impact of local property tax limits on local programs and services. See “Property Tax Limits” below. Local aid payments to cities, towns and regional school districts take the form of both direct and indirect assistance. Direct local aid consists of general revenue sharing funds and specific program funds sent directly to local governments and regional school districts. The Commonwealth’s budget for fiscal 2020 provides \$6.680 billion of state-funded direct and indirect local aid to municipalities.

A large portion of general revenue sharing funds is earmarked for public education and is distributed through a formula designed to ensure that each district reaches at least a minimum level of “foundation” spending per public education pupil. The fiscal 2020 budget includes state funding for so-called “Chapter 70” public education aid of \$5.176 billion. This level of funding brings all school districts to the foundation level, ensures that all local educational authorities receive an increase of funding of at least \$30 per pupil, and is an increase of \$268.4 million over fiscal 2019. Legislation known as the Student Opportunity Act was signed into law by the Governor on November 26, 2019. The law redefines the education funding formula across a seven-year timeframe, beginning in fiscal 2021. In fiscal 2021, investments related to the Student Opportunity Act include \$303.5 million in additional funding in Chapter 70 public education aid to cities and towns, for a total investment of \$5.480 billion, representing an increase of \$1.1 billion or 25% in annual Chapter 70 public education aid since fiscal 2015.

The other major component of direct local aid is unrestricted general governmental aid, which provides unrestricted funds for municipal use. The fiscal 2020 budget provides for \$1.129 billion in unrestricted general government aid, which was allocated to provide a 2.7% increase over fiscal 2019 levels to all municipalities.

Property Tax Limits. In November, 1980, voters in the Commonwealth approved a statewide tax limitation initiative petition, commonly known as Proposition 2½, to constrain levels of property taxation and to limit the charges and fees imposed on cities and towns by certain governmental entities, including county governments. Proposition 2½ is not a provision of the state constitution and accordingly is subject to amendment or repeal by the Legislature. Proposition 2½, as amended to date, limits the property taxes that may be levied by any city or town in any fiscal year to the lesser of (i) 2.5% of the full and fair cash valuation of the real estate and personal property therein or (ii) 2.5% over the previous year’s levy limit plus any growth in the tax base from certain new construction and parcel subdivisions. The law contains certain voter override provisions and, in addition, permits debt service on specific bonds and notes and expenditures for identified capital projects to be excluded from the limits by a majority vote at a general or special municipal election. Between fiscal 1981 and fiscal 2019, the aggregate property tax levy across all cities and towns grew from \$3.347 billion to \$17.332 billion, a compound annual growth rate of 4.42%.

Medicaid and the Health Connector

Many of the Commonwealth’s healthcare programs and expenditures are governed by the federal Affordable Care Act (ACA), to which strong opposition has been expressed by President Trump, the Secretary of the U. S. Department of Health and Human Services, and certain members of Congress, and which has been and continues to be the subject of certain legal challenges. In December, 2017, Congress eliminated the financial penalty under the ACA’s individual shared responsibility provision, otherwise known as the individual mandate. In December, 2019, Congress enacted legislation that both deferred the commencement and accelerated the full implementation of reductions in federal reimbursement for hospitals that treat a disproportionate number of Medicaid recipients. To date, such actions have not had or are not expected to have a material adverse impact on the Commonwealth and its health care programs; however, additional measures are being considered which, if enacted into law, could have a material adverse impact on the Commonwealth. While it is not possible to predict with any certainty whether or when any other provisions of the ACA may be, in whole or in part, modified, repealed, or withdrawn, any such actions could have a material adverse effect on the Commonwealth’s healthcare programs and

expenditures. Accordingly, the following discussion should be read with the understanding that significant additional changes could occur in the near future and beyond with respect to many of the programs discussed.

MassHealth. The Commonwealth’s Medicaid program, called MassHealth, provides health care to 1.8 million low-income children and families, low-income adults, disabled individuals and low-income elders. The program, administered by the Office of Medicaid within the Executive Office of Health and Human Services, receives federal reimbursement on most of its expenditures. On February 9, 2018, the Children’s Health Insurance Program (CHIP) was reauthorized through federal fiscal 2027. For Massachusetts, the CHIP matching rate of 88% for federal fiscal 2019, was reduced to 76.5% for federal fiscal 2020, and is expected to be further reduced to 65% for federal fiscal 2021 and beyond. Under the ACA, beginning January 1, 2014, MassHealth began receiving enhanced federal reimbursement for spending on the new adult group (generally, childless adults with incomes under 133% of the federal poverty limit). The federal reimbursement rate for this group was 93% in calendar year 2019, decreasing to 90% for calendar 2020 and beyond.

The fiscal 2020 budget as approved on July 31, 2019, and as amended on December 13, 2019, includes \$17.3 billion in funding for non-administrative spending for the MassHealth program. The \$17.3 billion includes \$16.6 billion in programmatic spending, including costs related to the settlement of a claim against the Commonwealth. See “LEGAL MATTERS – Programs and Services; *Hutchinson et al. v. Patrick et al.*” The \$17.3 billion also includes approximately \$693 million to support supplemental payments to providers. Fiscal 2020 estimated programmatic spending as of January, 2020 is \$16.7 billion, which exceeds the fiscal 2020 budget by \$89 million net.

Budgeted Operating Funds Medicaid Expenditures and Enrollment (in millions)

	<u>Fiscal 2015 (1)</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018 (2)</u>	<u>Fiscal 2019</u>	<u>Projected Fiscal 2020</u>
Medicaid program expenses	\$13,681.9	\$14,851.0	\$15,251.7	\$15,744.5	\$16,520.5	\$16,670.4
Medicaid administrative expenses	\$87.3	\$93.0	\$97.3	\$98.3	\$103.4	\$109.8
Total expenditures (3)	\$13,769.2	\$14,944.0	\$15,349.0	\$15,842.8	\$16,623.9	\$16,780.2
Annual percentage growth in total expenditures	14.9%	8.5%	2.7%	3.2%	4.9%	0.9%
Enrollment (in average member months) (4)	1,907,366	1,861,298	1,892,365	1,856,134	1,803,431	1,817,252
Annual percentage growth in enrollment	19.8%	(2.4%)	1.7%	(1.9%)	(2.8%)	0.7%

SOURCE: Fiscal 2015-2019 (excluding Medicaid administrative expense and enrollment), Office of the Comptroller; fiscal 2015-2019 (Medicaid administrative expense and enrollment only) and fiscal 2020, Executive Office of Health and Human Services.

(1) Fiscal 2015 figures include spending and enrollment coverage for a full year of ACA implementation; enrollment figures include the temporary Medicaid coverage population through February 23, 2015.

(2) Account restructuring in fiscal 2018 budget shifted spending for the Choices program (\$214 million in fiscal 2017) from MassHealth to Elder Affairs.

(3) Total expenditures exclude supplemental payments to providers.

(4) Enrollment in prior fiscal years changes due to the effects of redeterminations, retroactive eligibility, application verification, and eligibility appeals.

Commonwealth Health Insurance Connector Authority. State health care reform legislation enacted in 2006 created the Commonwealth Health Insurance Connector Authority (Health Connector). The Health Connector is governed by a board, of which the Secretary of Health and Human Services is the chairperson and the Secretary of Administration and Finance is also a member, each *ex officio*. Most of the funding to support the Health Connector and its programs is paid from the Commonwealth Care Trust Fund (CCTF), which is supported by dedicated revenue sources. The Health Connector is also responsible for policy development relative to the Affordability Schedule and Minimum Credible Coverage rules and public education and outreach, including the ACA-required Navigator program.

The Health Connector administers the Commonwealth's Health Insurance Marketplace under the ACA. As the Commonwealth's Marketplace, the Health Connector offers qualified health plans to individuals and small businesses. Individuals with incomes under 400% of the federal poverty level (FPL) are eligible for federal tax credits, and certain small businesses shopping through the Marketplace can access federal small business health care tax credits for up to two years. Individuals with incomes between 133% and 300% FPL, as well as certain Aliens with Special Status (AWSS) with incomes between 0% and 300% FPL, have access to additional state and federal subsidies through a program called ConnectorCare. The state provides additional state subsidies via ConnectorCare to ensure that the premiums and point-of-service cost sharing for certain low-income members, after factoring in federal subsidies, are similar to what was available through the Commonwealth Care program.

Total Health Connector gross spending in fiscal 2019 from the CCTF was \$339.4 million, an increase of \$32.1 million from fiscal 2018 gross spending of \$307.3 million. Fiscal 2019 spending for the Health Connector, net of federal revenue, was \$206.5 million, an increase of \$14.2 million compared to \$192.3 million in fiscal 2018.

The fiscal 2020 budget for the Health Connector reflects \$369.3 million in gross spending from the CCTF. Net of federal revenue, fiscal 2020 expenditures are estimated to be \$227.6 million, an increase of \$21.1 million compared to fiscal 2019. The fiscal 2020 budget for the Health Connector is expected to be fully funded from dedicated revenues in the CCTF.

Federal 1115 MassHealth Demonstration Waiver. Section 1115 of the Social Security Act gives the U. S. Secretary of Health and Human Services authority to waive provisions of major health and welfare programs, including certain Medicaid requirements, and to allow a state to use federal Medicaid funds in ways that are not otherwise allowed under federal rules. The Commonwealth's 1115 waiver was renewed on November 4, 2016. The renewal consisted of an amendment to the current 1115 waiver, which was effective through June 30, 2017, as well as a five-year waiver extension. This waiver extension is authorized from July 1, 2017 through June 30, 2022. The waiver extension is a \$52.4 billion agreement that supports a restructuring of the MassHealth program and is expected to bring in significant federal investment to support health care delivery system reforms. The agreement also extends eligibility and benefit provisions authorized under the waiver, such as coverage for diversionary behavioral health benefits and for individuals with HIV. The waiver extension includes more than \$29 billion in revenue to the Commonwealth through federal financial participation. Additionally, the waiver extension expands services for substance use disorder treatment.

The 1115 waiver extension also preserves and maintains the stability of the Safety Net Care Pool (SNCP) for the full five years of the waiver period with an \$8 billion authorization. This authorization includes a \$1.8 billion investment of new Delivery System Reform Incentive Program (DSRIP) funding that will support MassHealth's payment reform objectives. The SNCP renews authority for the Health Safety Net program, which makes payments to hospitals and community health centers for providing certain health care services to their low-income patients who are not eligible for health insurance or cannot afford it. Under the new SNCP, supplemental payments for safety net hospitals have been restructured and linked to delivery system reform participation. The number of hospitals eligible for these payments increased from seven in the previous waiver to 14 in the waiver extension. In addition, the SNCP expands authority for federal match to include cost-sharing affordability subsidies and enrollment gap coverage for Health Connector enrollees up to 300% FPL. Lastly, the SNCP establishes non-state public hospital payments and incentive programs for Cambridge Health Alliance, tied to delivery system reform performance.

Health Care Cost Containment. The Center for Health Information and Analysis (CHIA) is an independent state agency, funded through an industry assessment, to monitor the Massachusetts health care system through data collection and research and to release reliable information and meaningful analysis to a wide variety of audiences.

The Health Policy Commission (HPC) is an independent agency within, but not subject to the control of, the Executive Office for Administration and Finance. The HPC's mission is to advance a more transparent, accountable, and innovative health care system through independent policy leadership and investment programs, to achieve better health and better care at a lower cost across the Commonwealth. Beginning in fiscal 2017, the HPC is funded through an annual assessment on the health care industry, similar to CHIA's assessment.

As required by statute, the health care cost growth benchmark has been equal to PGSP, or 3.6%, for calendar 2014 to 2017. Each year, the HPC, in collaboration with CHIA, releases a report on the Commonwealth's performance under the benchmark. The 2018 Cost Trends Report provides that total health care expenditures per capita in the Commonwealth grew from 2016 to 2017 by 1.6%, compared to 3.0% growth from 2015 to 2016. Pursuant to statute, the benchmark in calendar 2019 was set at PGSP minus a half of a percent, or 3.1%.

By statute, the health care cost growth benchmark for calendar 2018 through 2022 is equal to the growth rate of PGSP minus 0.5%, and for calendar 2023 and thereafter, will be equal to the growth rate of PGSP. However, the HPC and the Legislature have some ability to change those growth targets.

Other Health and Human Services

Other Health and Human Services - Budgeted Operating Funds (in millions)

<u>Expenditure Category</u>	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Projected Fiscal 2020</u>
Office of Health Services						
Department of Mental Health	\$682.4	\$712.5	\$739.2	\$749.1	\$831.7	\$902.2
Department of Public Health	518.7	525.2	553.8	586.4	589.5	723.4
Sub Total	\$1,201.2	\$1,237.7	\$1,293.0	\$1,335.5	\$1,421.2	\$1,625.6
Office of Children, Youth, and Family Services						
Department of Children and Families	\$876.4	\$920.0	\$958.9	\$974.2	\$1,006.8	\$1,056.6
Department of Transitional Assistance	660.9	630.2	608.1	593.7	614.9	673.9
Department of Youth Services	168.3	169.2	171.7	169.1	168.9	180.5
Office for Refugees and Immigrants	1.1	1.1	1.3	1.1	1.4	1.2
Sub Total	\$1,706.7	\$1,720.5	\$1,740.0	\$1,738.1	\$1,792.0	\$1,912.2
Office of Disabilities and Community Services						
Department of Developmental Services	\$1,678.9	\$1,735.4	\$1,813.5	\$1,858.3	\$1,939.5	\$2,105.4
Other (1)	129.9	79.5	86.0	82.0	97.3	96.7
Sub Total	\$1,808.8	\$1,814.9	\$1,899.5	\$1,940.4	\$2,036.8	\$2,202.1
Executive Office of Elder Affairs (2)	\$291.7	\$312.0	\$308.2	\$527.4	\$546.6	\$572.9
Executive Office of Health and Human Services (3)	278.1	283.5	295.2	323.7	344.6	336.5
Department of Veterans' Services (4)	14.4	64.4	65.5	65.3	69.1	77.0
Sub Total	\$584.2	\$659.9	668.9	\$916.4	\$960.3	\$986.4
Budgeted Expenditures and Other Uses	\$5,300.8	\$5,433.0	\$5,601.4	\$5,930.5	\$6,210.3	\$6,726.3

SOURCES: Fiscal 2015-2019 Office of the Comptroller; fiscal 2020, Executive Office for Administration and Finance.

- (1) Includes Massachusetts Rehabilitation Commission, Massachusetts Commission for the Blind, Massachusetts Commission for the Deaf and Hard of Hearing, and, prior to fiscal 2016, the Chelsea Soldiers' Home, and the Holyoke Soldiers' Home.
- (2) Account restructuring in fiscal 2018 budget shifted spending for the Choices program from MassHealth to Elder Affairs.
- (3) Includes Medicaid program administration.
- (4) The fiscal 2015 budget transferred the Chelsea Soldiers' Home and the Holyoke Soldiers' Home from the Office of Disabilities and Community Services to Veterans' Services. Fiscal 2016 and later years include the Chelsea Soldiers' Home and the Holyoke Soldiers' Home. Beginning in fiscal 2014, Veterans' Services spending does not include veterans' annuities spending, which is captured under local aid spending.

Office of Health Services. The Office of Health Services encompasses programs and services from the Department of Public Health and the Department of Mental Health. Its goal is to promote healthy people, families, communities and environments through coordinated care. The departments work in unison to determine that individuals and families can live and work in their communities self-sufficiently and safely. The following are a few examples of programs and services provided by this office: substance abuse programs, immunization services, early intervention programs, environmental health services, youth violence programs, supportive housing and residential services for the mentally ill of all ages, and emergency and acute hospital services.

Office of Children, Youth and Family Services. The Office of Children, Youth and Family Services works to provide services to children and their families through a variety of programs and services. The programs and services are offered through the Department of Children and Families, the Department of Youth Services, the Department of Transitional Assistance and the Office of Refugees and Immigrants. The collaborative goal of this

office is to work to ensure that individuals, children and families are provided with public assistance needed as well as access to programs that will allow for them to be safe and self-sufficient.

The Department of Children and Families (DCF) is charged with protecting children from abuse and neglect, and in partnership with families and communities, ensuring that children are able to grow and thrive in a safe and nurturing environment. DCF serves approximately 46,000 children at any given time, primarily children through age 18, and youth ages 18-22 who are transitioning from DCF custody to independent living. DCF is currently undergoing an agency improvement initiative to implement new programmatic policies, review agency management structure, and strengthen workforce capacity.

Through the Department of Transitional Assistance (DTA), the Commonwealth funds three major programs of public assistance for eligible state residents: Transitional Aid to Families with Dependent Children (TAFDC); Emergency Aid to the Elderly, Disabled and Children; and the State Supplemental Program (SSP) for individuals enrolled in the federal Supplemental Security Income program. In addition, DTA is responsible for administering the entirely federally funded Supplemental Nutrition Assistance Program, as well as other smaller programs that assist DTA clients with completing their education, gaining career skills and finding employment.

Disabilities and Community Services. Programs and services provided by the Massachusetts Rehabilitation Commission, the Massachusetts Commission for the Deaf and Hard of Hearing, the Massachusetts Commission for the Blind and the Department of Developmental Services assist some of the most disadvantaged residents of the Commonwealth. These agencies provide assistance to this population and create public awareness in the citizens of the Commonwealth, as well as promote inter-agency collaboration which attend to the needs of the community, disabled and multi-disabled population. This holistic approach is designed to ensure that those of all ages with disabilities are able to lead functionally equivalent lives despite limitations that they may face.

Executive Office of Elder Affairs. The Executive Office of Elder Affairs provides a variety of services and programs to eligible seniors and their families. The office administers supportive and congregate housing programs, regulates assisted living residences, and provides home care and caregiver support services and nutrition programs. Eligibility for services is based largely on age, income, and disability status. The Executive Office of Elder Affairs also administers a state-supported prescription drug program for seniors.

Department of Veterans' Services. The Department of Veterans' Services provides a variety of services, programs and benefits to eligible veterans and their families. The Department of Veterans' Services provides outreach services to help eligible veterans enroll in a variety of programs, administers supportive housing and homeless services, and provides approximately 26,000 veterans, veterans' spouses and parents with annuity and benefit payments. The Department also oversees the Chelsea Soldiers' Home and the Holyoke Soldiers' Home, state-owned facilities providing long-term health care and domiciliary services to veterans.

Education

Executive Office of Education. The Executive Office of Education includes the Department of Early Education and Care, the Department of Elementary and Secondary Education (previously the Department of Education), and the Department of Higher Education (previously the Board of Higher Education). The Secretary of Education serves on the board of each department as well as the board of the University of Massachusetts. The office is committed to advancing actions and initiatives that will improve achievement for all students, close persistent achievement gaps, and creating a 21st century public education system that prepares students for higher education, work and life in a world economy and global society.

Department of Early Education and Care. The Department of Early Education and Care (EEC) is the agency responsible for all early education and care services and funding in the Commonwealth, including licensing and oversight of and technical assistance to programs for infants, toddlers, preschoolers, and school age children during out-of-school time; group homes; foster care and adoption placement agencies; and residential schools for children with special needs. EEC also oversees community-based family engagement networks that provide literacy and other developmental activities for children and parents in libraries and adult education centers. EEC licenses approximately 9,000 child care programs, residential facilities, and foster care/adoption placement agencies that have the capacity to serve an estimated 230,000 children. EEC supports an average of 55,000 children from low-

income or at-risk families to attend family or group child care programs, including referrals from the Commonwealth's Department of Children and Families and Department of Transitional Assistance.

Department of Elementary and Secondary Education. The Department of Elementary and Secondary Education (DESE) serves the student population from kindergarten through 12th grade by providing support for students, educators, schools and districts and by providing state leadership for elementary, secondary, vocational-technical, and adult basic education. There are 406 operating school districts in the Commonwealth, serving over 950,000 students. DESE is governed by the Board of Elementary and Secondary Education, which includes 11 members. The Board of Elementary and Secondary Education nominates, and the Secretary of Education appoints, a Commissioner of Elementary and Secondary Education, who is responsible for carrying out the policies established by the Board.

Department of Higher Education. The Commonwealth's system of higher education includes the five-campus University of Massachusetts, nine state universities and 15 community colleges. The higher education system is coordinated by the Department of Higher Education, which is governed by the Board of Higher Education. Each institution of higher education is governed by a separate board of trustees; the University of Massachusetts has one board that governs its five campuses. The Board of Higher Education appoints, subject to the approval of the Secretary of Education, a Commissioner of Higher Education, who is responsible for carrying out the policies established by the board at the Department of Higher Education.

The operating revenues of each institution consist primarily of state appropriations and of student fees that are set by the board of trustees of each institution. Tuition levels are set by the Board of Higher Education for the state universities and community colleges, while the University of Massachusetts board of trustees has the authority to set and retain tuition for its campuses. The Massachusetts College of Art and Design and the Massachusetts Maritime Academy also have authority to retain tuition from all students. The other institutions have authority to retain tuition received from out-of-state students and tuitions from self-supporting programs, such as colleges of continuing education and evening schools. Otherwise, each institution is required to remit tuition revenue to the State Treasurer.

The board of trustees of each institution submits annually audited financial statements to the Comptroller and the Board of Higher Education. The Department of Higher Education prepares annual operating budget requests on behalf of all institutions, which are submitted to the Executive Office of Education and subsequently to the Executive Office for Administration and Finance and to the House and Senate Committees on Ways and Means. The Legislature appropriates funds for the higher education system in the Commonwealth's annual operating budget in various line items for each institution.

Public Safety

Eleven state agencies fall under the umbrella of the Executive Office of Public Safety and Security. The largest is the Department of Correction, which operates 16 correctional facilities and centers across the Commonwealth. Other public safety agencies include the State Police, the Parole Board, the Department of Fire Services, the Military Division, the Office of the Chief Medical Examiner, and five other public safety related agencies.

Energy and Environmental Affairs

The Executive Office of Energy and Environmental Affairs is responsible for policy development, environmental law enforcement services, and oversight of agencies and programs. Six state agencies and numerous boards fall under the umbrella of the Executive Office of Energy and Environmental Affairs. The largest is the Department of Conservation and Recreation, which operates public parkland, recreational facilities, watersheds and forests across the Commonwealth. Other environmental agencies include the Department of Agricultural Resources, responsible for the state's agricultural and food safety programs, the Department of Environmental Protection, responsible for clean air, water, recycling and environmental remediation programs, and the Department of Fish and Game, responsible for the management and protection of endangered species, fisheries and habitat. Additional agencies include the Department of Public Utilities, responsible for oversight of electric, gas, water and

transportation utilities, and the Department of Energy Resources, responsible for energy planning, management and oversight.

Debt Service

Debt service expenditures relate to general obligation bonds and notes, special obligation bonds and federal grant anticipation notes issued by the Commonwealth. See “LONG-TERM LIABILITIES.”

Employee Benefits

Group Insurance. The Group Insurance Commission (GIC) provides health insurance benefits to more than 425,000 people, including state and participating municipalities’ employees, retirees, their spouses and dependents, and certain retired municipal teachers, their spouses and dependents. State employee contributions are currently based on date of hire; employees hired on or before June 30, 2003 contribute 20% of total premium costs, and employees hired after June 30, 2003 contribute 25% of premium costs. Similarly, state retirees contribute either 10%, 15% or 20%, depending on their retirement date. The GIC also provides health insurance benefits for the employees and retirees of participating municipalities; the municipalities reimburse the state for their enrollees’ premium costs. The contribution ratio(s) for municipal enrollees is set through a collective bargaining process within each community. As of July 1, 2019, the GIC provides health insurance to employees and retirees of 54 municipal entities: 11 cities, 27 towns, and 16 other governmental entities, including regional school districts, union and non-union educational collaboratives, charter schools, and regional planning councils.

Fiscal 2020 GIC appropriations total \$1.733 billion, approximately \$572 million of which is offset by municipal revenue and \$221 million of which is offset by non-state agency revenue to reimburse the state for providing health insurance benefits to the participating governmental units, including municipalities. In addition, the fiscal 2020 budget authorizes transfers of up to \$450 million to the State Retiree Benefits Trust Fund for the purpose of making expenditures for current state retirees and their dependents.

In keeping with the GIC’s commitment to cost containment, the GIC approved a package of benefit changes to be effective in fiscal 2020 that moved the focus of tiering from individuals to group-based systems. This was designed to encourage greater use of providers in lower-cost high quality groups. Additionally, the GIC reduced copayments for some ambulatory outpatient procedures performed at free standing facilities to lower the utilization of higher-cost services. The aggregate fiscal 2020 premium rates for GIC state and municipal members increased 3.3% over the aggregate premium rates in effect in fiscal 2019.

Pensions. The Commonwealth is responsible for the payment of pension benefits for Commonwealth employees and for teachers of the cities, towns and regional school districts throughout the state. See “PENSION AND OPEB FUNDING.”

Other Post-Employment Benefit Obligations (OPEB). The Commonwealth is required under state law to provide certain health care and life insurance benefits for retired employees of the Commonwealth and certain other governmental agencies. See “PENSION AND OPEB FUNDING – Other Post-Employment Benefit Obligations (OPEB).”

The fiscal 2020 budget is consistent with the requirements of Government Accounting Standards Board (GASB) Statements No. 45 and No. 75, that spending for current retirees be accounted for separately, and that deposits towards the Commonwealth’s non-pension retiree liability be made into an irrevocable trust.

Other Program Expenditures

The remaining expenditures on other programs and services for state government include constitutional officers, the judiciary and district attorneys, sheriffs, the Executive Office for Administration and Finance, the Executive Office for Housing and Economic Development, the Executive Office of Labor and Workforce Development, the Executive Office of Technology Services and Security, and various other programs.

SELECTED FINANCIAL DATA

The table below in this section presents combined revenues and expenditures in the budgeted operating funds. The measurement of revenues for the budgeted operating funds is on a statutory basis and differs from governmental revenues on a GAAP basis. See “Statutory Basis Distribution of Budgetary Revenues and Expenditures” and “GAAP Basis” below.

Statutory Basis Distribution of Budgetary Revenues and Expenditures

The revenues and expenditures of the budgeted operating funds presented in the following table are derived from the Commonwealth’s Statutory Basis Financial Reports (SBFR) for fiscal 2015 through 2019. Projections for fiscal 2020 have been prepared by the Executive Office for Administration and Finance.

The following table sets forth the Commonwealth’s budgeted operating funds revenues and expenditures for fiscal 2015 through fiscal 2019, and projected revenues and expenditures for fiscal 2020. Projected revenues and expenditures for fiscal 2020 are based on the fiscal 2020 budget. See “FISCAL 2020 AND FISCAL 2021 – Fiscal 2020.”

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Budgeted Operating Funds – Statutory Basis (in millions) (1)

	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Projected Fiscal 2020</u>
<u>Beginning Fund Balances</u>						
Reserved or Designated	\$190.0	\$226.0	\$126.0	\$117.4	\$371.5	\$521.3
Stabilization Fund	1,248.4	1,252.4	1,291.5	1,300.7	2,001.3	3,424.4
Undesignated	<u>12.1</u>	<u>92.3</u>	<u>64.5</u>	<u>29.7</u>	<u>13.9</u>	<u>13.5</u>
Total	<u>\$1,450.5</u>	<u>\$1,570.7</u>	<u>1,482.0</u>	<u>\$1,447.8</u>	<u>\$2,386.7</u>	<u>\$3,959.2</u>
<u>Revenues and Other Sources</u>						
Alcoholic Beverages	80.8	83.4	85.4	85.8	87.1	87.9
Banks	51.9	23.5	(0.1)	17.4	19.5	20.3
Cigarettes	510.3	505.6	490.3	471.2	439.8	421.1
Corporations	2,172.1	2,312.0	2,196.7	2,392.2	2,927.2	2,524.9
Deeds	238.3	281.9	297.2	284.5	318.3	330.4
Income	14,448.7	14,393.7	14,683.7	16,239.6	17,109.3	17,485.5
Inheritance and Estate	340.9	399.4	336.6	473.0	601.3	591.3
Insurance	391.4	429.6	421.9	430.9	470.6	496.7
Marijuana Excise	-	-	-	-	13.9	83.8
Motor Fuel	756.1	766.6	769.4	769.1	775.5	779.3
Public Utilities (2)	3.4	(1.6)	(0.1)	(0.7)	-	-
Room Occupancy	150.7	162.2	156.7	158.7	168.8	208.5
Sales:						
Regular	3,986.6	4,156.9	4,226.1	4,433.2	4,688.3	5,035.7
Meals	998.8	1,063.8	1,132.5	1,154.4	1,216.0	1,281.5
Motor Vehicles	<u>789.1</u>	<u>833.9</u>	<u>852.5</u>	<u>866.3</u>	<u>894.0</u>	<u>928.0</u>
Sub-Total-Sales	5,774.4	6,054.6	6,211.1	6,453.9	6,798.3	7,245.2
Miscellaneous	12.8	13.6	12.9	11.5	10.5	14.2
Settlements and Judgments (3)	-	-	-	-	-	50
Total Tax Revenues	<u>\$24,932.2</u>	<u>\$25,424.5</u>	<u>\$25,661.7</u>	<u>\$27,787.2</u>	<u>\$29,740.1</u>	<u>\$30,339.2</u>
MBTA Transfer (4)	(970.6)	(986.2)	(992.2)	(1,007.9)	(1,053.2)	(1,114.2)
MSBA Transfer	(764.1)	(798.5)	(816.8)	(847.9)	(893.2)	(954.2)
Workforce Training Fund Transfer (5)	(23.6)	(22.8)	(24.4)	(24.7)	(25.1)	(24.5)
Total Budgeted Operating Tax Revenues	<u>\$23,173.8</u>	<u>\$23,616.9</u>	<u>\$23,828.3</u>	<u>\$25,906.7</u>	<u>\$27,768.6</u>	<u>\$28,246.3</u>
Federal Reimbursements	9,480.4	10,642.7	10,857.8	11,376.9	11,771.9	11,744.5
Departmental and Other Revenues	3,852.8	4,257.2	4,382.1	4,742.2	4,831.7	4,996.0
Inter-fund Transfers from Non-budgeted Funds and other sources (6)	<u>1,729.5</u>	<u>1,848.7</u>	<u>2,099.1</u>	<u>1,793.4</u>	<u>2,010.3</u>	<u>1,992.6</u>
Budgeted Revenues and Other Sources	<u>\$38,236.5</u>	<u>\$40,365.5</u>	<u>\$41,167.3</u>	<u>\$43,819.2</u>	<u>\$46,382.5</u>	<u>\$46,979.4</u>
Inter-fund Transfers	<u>735.4</u>	<u>472.9</u>	<u>617.4</u>	<u>1,217.0</u>	<u>1,993.3</u>	<u>1,423.3</u>
Total Budgeted Revenues and Other Sources	<u>\$38,971.9</u>	<u>\$40,838.4</u>	<u>\$41,784.7</u>	<u>\$45,036.2</u>	<u>\$48,375.8</u>	<u>\$48,402.7</u>
<u>Expenditures and Uses</u>						
Direct Local Aid	5,420.4	5,567.7	5,703.0	5,885.5	6,074.7	6,386.5
Medicaid	13,655.2	14,851.0	15,251.7	15,744.5	16,520.5	16,670.4
Other Health and Human Services	5,300.8	5,433.0	5,601.4	5,930.0	6,210.3	6,726.3
Group Insurance	1,665.1	1,629.7	1,662.5	1,634.0	1,644.2	1,733.7
Department of Elementary and Secondary Education	514.9	539.3	523.2	552.3	604.9	705.5
Higher Education	1,161.6	1,194.3	1,168.3	1,173.4	1,283.7	1,320.7
Department of Early Education and Care	537.7	547.6	540.0	564.3	607.5	711.0
Public Safety	1,040.7	1,065.6	1,059.6	1,102.0	1,168.1	1,312.9
Energy and Environmental Affairs	225.0	221.4	222.1	229.6	255.1	310.1
Debt Service (7)	2,190.4	2,174.3	2,284.7	2,323.4	2,327.1	2,533.4
Post -Employment Benefits (8)	2,213.4	2,503.4	2,659.7	2,891.5	3,110.2	3,314.8
Other Program Expenditures	<u>3,113.1</u>	<u>3,240.7</u>	<u>3,235.0</u>	<u>3,316.0</u>	<u>3,562.5</u>	<u>3,838.9</u>
Total - Programs and Services before transfers to Non-budgeted funds	<u>\$37,038.3</u>	<u>\$38,968.0</u>	<u>\$39,911.2</u>	<u>\$41,346.5</u>	<u>\$43,368.9</u>	<u>\$45,564.3</u>

	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Projected Fiscal 2020</u>
<u>Inter-fund Transfers to Non-budgeted Funds</u>						
Commonwealth Care Trust Fund	-	-	-	-	45.8	-
Medical Assistance Trust Fund	71.0	665.6	403.4	579.9	363.1	505.8
Massachusetts Transportation Trust Fund	588.6	566.8	484.7	634.7	643.2	611.3
Other	<u>418.4</u>	<u>253.8</u>	<u>402.3</u>	<u>319.2</u>	<u>389.0</u>	<u>244.9</u>
Total Inter-Fund Transfers to Non-Budgeted Funds	<u>\$1,078.0</u>	<u>\$1,486.2</u>	<u>\$1,290.4</u>	<u>\$1,533.8</u>	<u>\$1,441.1</u>	<u>\$1,362.0</u>
Budgeted Expenditures and Other Uses						
Inter-fund Transfers	735.4	472.9	617.4	1,217.0	1,993.3	1,423.3
Total Budgeted Expenditures and Other Uses	<u>\$38,851.7</u>	<u>\$40,927.1</u>	<u>\$41,819.0</u>	<u>\$44,097.3</u>	<u>\$46,803.3</u>	<u>\$48,349.6</u>
Excess (Deficiency) of Revenues and Other Sources Over Expenditures and Other Uses						
	<u>\$120.2</u>	<u>(\$88.7)</u>	<u>(\$34.3)</u>	<u>\$938.9</u>	<u>\$1,572.5</u>	<u>\$53.1</u>
<u>Ending Fund Balances</u>						
Reserved or Designated (9)	226.0	126.0	117.4	371.5	521.3	119.2
Stabilization Fund	1,252.4	1,291.5	1,300.7	2,001.3	3,424.4	3,990.2
Undesignated	<u>92.3</u>	<u>64.5</u>	<u>29.7</u>	<u>13.9</u>	<u>13.5</u>	<u>10.7</u>
Total	<u>\$1,570.7</u>	<u>\$1,482.0</u>	<u>\$1,447.8</u>	<u>\$2,386.7</u>	<u>\$3,959.2</u>	<u>\$4,120.0</u>

SOURCES: Fiscal 2015-2019, Office of the Comptroller; projected fiscal 2020, Executive Office for Administration and Finance.

- (1) Totals may not add due to rounding.
- (2) Prior to January 1, 2014, public utility corporations were subject to an excise tax of 6.5% on net income. Legislation enacted in 2013 repealed the separate excise tax for utility corporations, which are now subject to the corporate excise imposed on business corporations.
- (3) For fiscal 2015 through 2019, tax and non-tax revenue from judgments and settlements in excess of \$10 million is included in specific tax and non-tax revenue categories. See "COMMONWEALTH REVENUES – Federal and Other Non-Tax Revenues; *Settlements and Judgments*."
- (4) Beginning in fiscal 2015, the annual amount of sales tax receipts statutorily credited to the MBTA was increased by \$160 million. See "COMMONWEALTH REVENUES AND EXPENDITURES – State Taxes; *Sales and Use Tax*."
- (5) The Workforce Training Fund is not subject to annual appropriation, and employer contributions are deposited directly in the Workforce Training Fund after their collection.
- (6) Inter-fund Transfers from Non-budgeted Funds and Other Sources include profits from the State Lottery, abandoned property proceeds and other inter-fund transfers.
- (7) Fiscal 2016 budgeted Debt Service excluded \$113 million in payments made from a non-budgeted fund that was made from budgeted funds in other years.
- (8) Post-Employment Benefits include all budgeted pension transfers and transfers to the State Retiree Benefits Trust Fund (SRBTF). See "PENSION AND OPEB FUNDING – Other Post-Employment Benefit Obligations (OPEB)."
- (9) Consists largely of appropriations authorized to be expended in the following year.

Stabilization Fund

The Stabilization Fund is established by state finance law as a reserve of surplus revenues to be used for the purposes of covering revenue shortfalls, covering state or local losses of federal funds or for any event which threatens the health, safety or welfare of the people or the fiscal stability of the Commonwealth or any of its political subdivisions. The fund is sometimes referred to as the state's "rainy day fund," serving as a source of financial support for the state budget in times of slow revenue growth or revenue declines and as the primary source of protection against having to make drastic cuts in state services in periods of economic downturns.

Required Deposits and Allowable Stabilization Fund Balance. From fiscal 2005 through fiscal 2013, state finance law provided that (i) 0.5% of current year net tax revenues be deposited into the Stabilization Fund at fiscal year-end, (ii) 0.5% of current-year net tax revenues be made available for the next fiscal year and (iii) any remaining amount of the year-end statutorily defined surplus be transferred to the Stabilization Fund. Since fiscal 2014, state finance law has required that the entire year-end statutorily defined surplus be transferred to the Stabilization Fund. Since fiscal 2011, state finance law has required that tax revenue from capital gains exceeding \$1 billion in a fiscal year (adjusted annually, beginning in fiscal 2014, to reflect the average annual rate of growth in U. S. gross domestic

product over the preceding five years) be deposited into the Stabilization Fund, with 5% of such amount then transferred to the State Retiree Benefits Trust Fund and, beginning in fiscal 2013, with an additional 5% of such amount then transferred to the Commonwealth's Pension Liability Fund. However, all of these requirements may be modified or superseded by individual appropriation acts. In fiscal years 2015 and 2016, the Commonwealth temporarily suspended the requirement to transfer capital gains tax collections above the threshold to the Stabilization Fund, with all capital gains tax collections remaining in the General Fund.

Each quarter, the Department of Revenue certifies the amount of tax revenues estimated to have been collected during the preceding quarter from capital gains income and, once the threshold has been exceeded, the excess is transferred to the Commonwealth Stabilization Fund. The final certification of capital gains tax revenues is done in November following the end of the fiscal year, but no adjustment is made to the Stabilization Fund transfers if the final amount of capital gains taxes certified differs from the amount certified in the preceding July.

State finance law requires the Comptroller to transfer 75% of the growth in unclaimed property net revenue relative to the prior year to the Stabilization Fund.

Gaming legislation enacted in 2011 also requires 10% of gaming tax revenues from Category 1 licensees to be transferred from the Gaming Revenue Fund to the Stabilization Fund, provided that such amount may be reduced by half to fund certain deficiencies in funds distributed to cities and towns. See "COMMONWEALTH REVENUES – Gaming."

The allowable Stabilization Fund balance at fiscal year-end is 15% of total budgeted revenues for that year. If the Stabilization Fund balance exceeds the allowable limit, the excess amounts are to be transferred to the Tax Reduction Fund.

The following table shows the sources and uses of the Stabilization Fund during fiscal 2015 through fiscal 2019.

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Stabilization Fund Sources and Uses (in thousands)

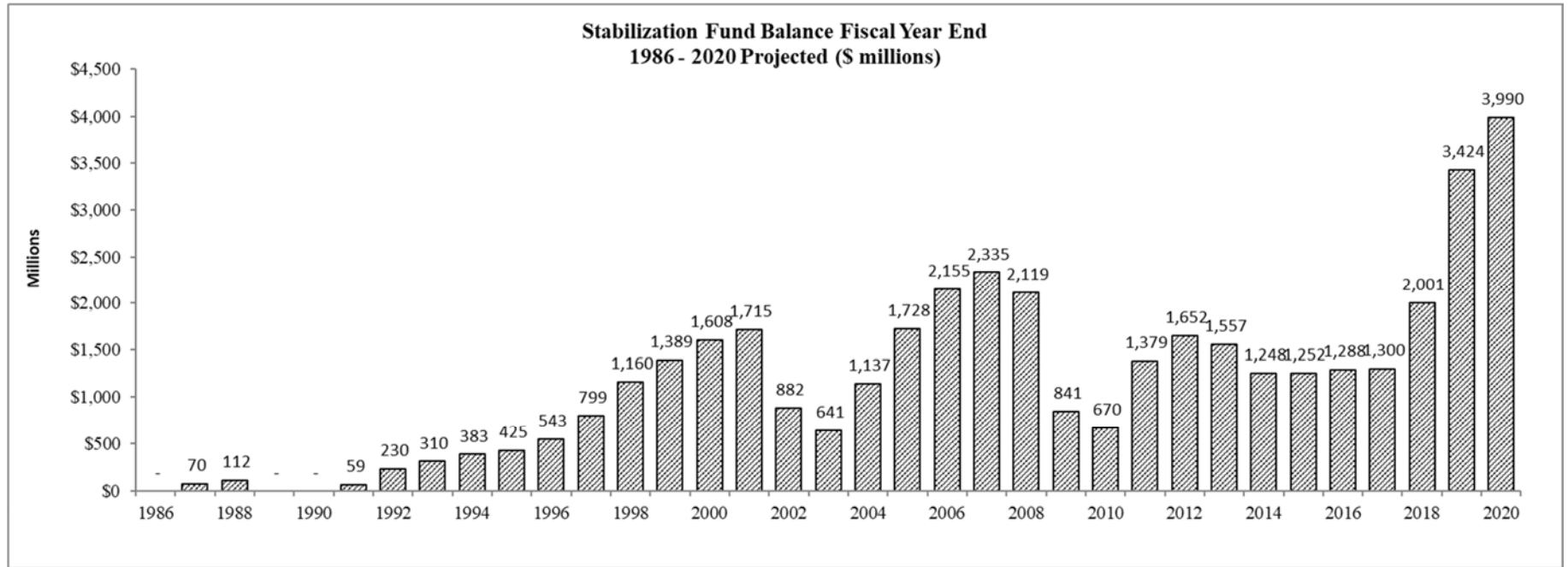
	Fiscal 2015	Fiscal 2016	Fiscal 2017	Fiscal 2018	Fiscal 2019
Beginning Fund Balances	\$1,248,435	\$1,252,429	\$1,291,514	\$1,300,678	\$2,001,299
Revenues and Other Sources					
Deposit of the remaining consolidated net surplus	123,507	-	-	209,287	592,722
Deposits from growth in abandoned property receipts (1)	-	27,100	-	13,450	3,673
Deposits from gaming tax revenues	20,000 (2)	-	-	-	9,781 (3)
Capital gains tax transfers in excess of threshold (4)	-	-	-	513,908	848,399
Deposits due to judgments and settlements in excess of \$10 million	-	-	-	-	-
Lottery transfer taxes	647	744	377	272	429
Investment income	4,646	11,241	8,787	15,094	52,913
Excess permissible tax revenue	-	-	-	-	-
Total Revenues and Other Sources	<u>148,800</u>	<u>39,085</u>	<u>9,164</u>	<u>752,011</u>	<u>1,507,917</u>
 Total Expenditures and Other Uses	 <u>144,806</u>	 <u>-</u>	 <u>-</u>	 <u>51,390 (5)</u>	 <u>84,840 (5)</u>
 Excess (Deficiency) of Revenues and Other Sources Over Expenditures and Other Uses	 <u>3,994</u>	 <u>39,085</u>	 <u>9,164</u>	 <u>700,621</u>	 <u>1,423,077</u>
 Ending Fund Balances	 <u>\$1,252,429</u>	 <u>\$1,291,514</u>	 <u>\$1,300,678</u>	 <u>\$2,001,299</u>	 <u>\$3,424,376</u>
 Allowable Stabilization Fund Balance	 <u>\$5,735,471</u>	 <u>\$6,047,764</u>	 <u>\$6,175,099</u>	 <u>\$6,572,883</u>	 <u>\$6,957,381</u>

SOURCE: Office of the Comptroller.

- (1) Represents transfer equal to 75% of the growth in abandoned property receipts from the prior fiscal year.
- (2) Represents repayment of Massachusetts Gaming Commission start-up funds.
- (3) Represents transfers of gaming tax revenue (\$6,231) and gaming fines (\$3,550).
- (4) Threshold adjusted annually for U.S. gross domestic product growth. Legislative enactments in 2015 retained all fiscal 2015 and fiscal 2016 capital gains tax revenues in the General Fund. The fiscal 2017 specified threshold was \$1.278 billion; however, capital gains tax collections for fiscal 2017 did not exceed this amount. The fiscal 2018 and fiscal 2019 specified thresholds were \$1.169 billion and \$1.212 billion, respectively. The Department of Revenue has certified that the capital gains tax collections threshold for fiscal 2020 is approximately \$1.260 billion and fiscal 2021 is approximately \$1.312 billion.
- (5) Represents transfers of 5% capital gains tax revenue to the State Pension Fund and OPEB Trust Fund per statute.

The following chart shows the Stabilization Fund balance from fiscal 1986 through fiscal 2019 (actual), and fiscal 2020 (estimated).

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SOURCE: Fiscal 1986-fiscal 2019, Office of the Comptroller; fiscal 2020 (estimated), Executive Office for Administration and Finance.

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GAAP Basis

The Commonwealth's GAAP financial statements for the year ended June 30, 2019, attached as Exhibit C, are prepared in accordance with reporting standards first established by GASB Statements 34 and 35, as amended. See "COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS - Fiscal Control, Accounting and Reporting Practices of the Comptroller." The GAAP financial statements are presented on both a "fund perspective" (or short-term accrual) basis and a "government-wide perspective" basis, which includes debt, capital assets and accrual activity on a comprehensive statement of net position, similar to a balance sheet. All capital assets, including road and bridge infrastructure and all long-term liabilities, including outstanding debt and commitments of long-term assistance to municipalities and authorities, are part of the government-wide statements. The Commonwealth's statement of revenues, expenditures and changes in fund balances are presented as a statement of activities, similar to an income statement.

The table below presents the transition from the Commonwealth's statutory basis budgetary fund balance to the "fund perspective" balance, as depicted in the fund financial statements, and then to the Commonwealth's "government-wide" financial position. Differences between statutory and the "fund perspective" GAAP basis can be summarized in five major adjustments. Those adjustments are for Medicaid (as well as the somewhat related liability for uncompensated care), taxes, projected amounts due to the Commonwealth in the next fiscal year under the master tobacco settlement agreement, claims and judgments, and amounts due to authorities. As evidenced in the trend line of fund balance (deficit) over time, however, these adjustments connect the GAAP basis measurement when viewed using a fund perspective under GAAP and the statutory basis measurement. While the difference in fund balances may vary in a given fiscal year, both balances generally trend in the same direction. To convert to a full accrual basis, further major adjustments are made for the net book value of the Commonwealth's capital assets, inclusive of infrastructure, the realizable value of long-term deferred revenues (largely from tax payment plans) and the amount of the Commonwealth's outstanding long-term debt, the Commonwealth's unfunded pension and OPEB liabilities, and other liabilities.

Governmental Funds-Statutory to GAAP-Fund Perspective and to Governmental Net Position

(in millions)

Governmental Funds-Statutory Basis, June 30, 2019	
Budgeted Fund Balance	\$3,959.2
Non-budgeted special revenue fund balance	2,457.5
Capital Projects Fund Balance	<u>(216.4)</u>
Governmental Fund Balance-Statutory Basis, June 30, 2019	\$6,200.3
Plus: Expendable Trust and similar fund statutory balances that are considered governmental funds for GAAP reporting purposes	651.7
Less: Massachusetts Department of Transportation Funds	<u>(1,438.3)</u>
Adjusted Statutory Governmental Fund Balance	\$5,413.7
Short term accruals, net of allowances and deferrals for increases/(decreases):	
Taxes, net of refunds and abatements	2,176.6
Tobacco settlement agreement receivable	133.1
Medicaid	(71.5)
Assessments and other receivables	231.8
Amounts due to authorities and municipalities, net	(428.6)
Claims, judgments and other risks	(13.2)
Amounts due to healthcare providers and insurers	(37.3)
Workers' compensation and group insurance	(192.1)
Other accruals, net	<u>292.8</u>
Net increase to governmental funds balances	\$2,091.6
Massachusetts School Building Authority fund balance	<u>1,606.0</u>
Total changes to governmental funds	\$3,697.6
Governmental fund balance (fund perspective)	9,111.3
Plus: Capital assets including infrastructure, net of accumulated depreciation	4,807.5
Deferred revenue, net of other eliminations	334.5
Long-term receivables	28.0
Long term accruals:	
Net pension liability	(38,065.0)
Net deferred (inflows)/outflows related to pensions	5,684.7
Net OPEB liability	(12,989.1)
Net deferred (inflows)/outflows of resources related to OPEB	(3,516.0)
Environmental remediation liability	(517.4)
Massachusetts School Building Authority debt and school construction payables	(6,975.1)
Long term debt, unamortized premiums and deferred losses on debt refundings	(30,625.6)
Compensated absences	(616.3)
Capital leases	(19.8)
Accrued interest on bonds	(444.0)
Other long-term liabilities	<u>(278.1)</u>
Total governmental net position/(deficit) (government-wide perspective)	<u>(\$74,080.4)</u>

SOURCE: Office of the Comptroller

The deficit of \$74.080 billion in governmental activities net position can be largely attributed to three factors: first, the Commonwealth's net (or unfunded) pension liability, which, starting in fiscal 2015, has been placed on the Commonwealth's books in accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. This Statement required, among other things, the Commonwealth to include the long-term net pension liability on the Government-wide Statement of Net Position. As of June 30, 2019 the Commonwealth reported a net pension liability of approximately \$38.065 billion. Second, in accordance with GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, the Commonwealth is required to include its net other postemployment (OPEB) liability on the Government-wide Statement of Net Position. As of June 30, 2019, the Commonwealth reported a net OPEB liability of approximately \$12.989 billion. Third, also contributing to the deficit was the Commonwealth's policy decision to finance the construction of assets owned by other governmental entities, particularly Commonwealth roads and bridges, which as a result of transportation reform completed during fiscal 2010 shifted these assets from the books of the Commonwealth to MassDOT, a component unit of the Commonwealth. At the end of fiscal 2019, MassDOT held \$25.417 billion in road, bridge and other transportation-related assets (excluding assets of the MBTA), net of related depreciation, the vast majority of which were formerly held by the Commonwealth. Those assets were financed by the Commonwealth, and the debt remains a long-term obligation of the Commonwealth. In addition, the Commonwealth has a net liability of \$6.975 billion in debt and grant obligations for the school building assistance program that finances construction of schools for the Commonwealth's cities and towns.

Change in Statement of Net Position

	(in thousands)		
	Governmental <u>Activities</u>	Business Type <u>Activities</u>	Government <u>Wide</u>
Total net position/(deficit):			
Fiscal 2018	(\$74,154,488)	\$5,049,952	(\$69,104,536)
Fiscal 2019	(74,080,352)	5,649,478	(68,430,874)
Change in net position/(deficit)	<u>\$74,136</u>	<u>\$599,526</u>	<u>\$673,662</u>

SOURCE: Office of the Comptroller

As of June 30, 2019, approximately \$1.997 billion in restricted net position was set aside for unemployment benefits and approximately \$975 million was restricted for debt retirement.

Revenues – GAAP Basis. The measurement of revenues for the budgeted operating funds on a statutory basis differs from governmental revenues on a GAAP basis in that certain revenues that are not included on a statutory basis are included on a GAAP basis, including revenue accruals for Medicaid and taxes. In addition, internal transfers are eliminated under GAAP on a government-wide perspective. The following table shows the distribution of major sources of revenue in fiscal 2019.

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Comparison of Fiscal 2019 Governmental Revenues (in millions)

	<u>Governmental Funds</u>	<u>GAAP Basis – Governmental</u>	
	<u>Statutory Basis</u>	<u>Fund Perspective</u>	<u>Government-wide Perspective</u>
Taxes	\$30,200	\$30,618	\$30,610
Federal Revenue	15,399	16,328	16,320
Departmental and Miscellaneous Revenue	<u>22,375</u>	<u>22,830</u>	<u>12,926</u>
Total	<u>\$67,973</u>	<u>\$69,776</u>	<u>\$59,856</u>

SOURCE: Office of the Comptroller

The following table provides financial results on a GAAP fund perspective basis for all governmental funds of the Commonwealth for fiscal 2015 through fiscal 2019.

Governmental Fund Operations – GAAP Basis – Fund Perspective (in millions)

	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>
Beginning fund balances	\$4,619.4	\$5,305.2	\$5,273.3	\$5,596.9	\$6,838.4
Revenues and Financing Sources	60,658.6	67,749.6	68,437.1	68,990.3	69,775.9
Expenditures and Financing Uses	59,972.8	67,781.5	68,113.5	67,749.0	67,503.0
Excess/(deficit)	<u>685.8</u>	<u>(31.9)</u>	<u>323.6</u>	<u>1,241.3</u>	<u>2,272.9</u>
Ending fund balances—GAAP fund perspective	<u>\$5,305.2</u>	<u>\$5,273.3</u>	<u>\$5,596.9</u>	<u>\$6,838.2</u>	<u>\$9,111.3</u>

SOURCE: Office of the Comptroller.

Financial Reports. The Commonwealth issues annual financial reports, including a report on the statutory basis of accounting (which is reviewed, but not audited) and GAAP basis audited financial statements. These financial statements are issued as two separate reports, the Statutory Basis Financial Report (SBFR) and the Comprehensive Annual Financial Report (CAFR). The SBFR is usually published by the Comptroller on or before October 31 and the CAFR is usually published by the Comptroller by the second Wednesday in January.

The SBFR for the year ended June 30, 2019 and the CAFR for the year ended June 30, 2019 are attached hereto as Exhibits B and C, respectively. Copies of these financial reports are also available at the address provided under “CONTINUING DISCLOSURE.” The SBFR for fiscal 1997 through fiscal 2019 and the CAFR for fiscal 1995 through fiscal 2019 are also available on the web site of the Comptroller of the Commonwealth at <https://www.macomptroller.org/financial-reports>.

For each year beginning in fiscal 1990, the Commonwealth CAFRs, from which certain information contained in this Information Statement has been derived, have been awarded the Certificate of Achievement for Excellence in Financial Reporting by the Government Finance Officers Association of the United States and Canada (GFOA). The Certificate of Achievement is the highest form of recognition for excellence in state and local government financial reporting. Fiscal 2018 marked the 29th consecutive year that the Commonwealth has received this award. The fiscal 2019 CAFR has been submitted to the GFOA for review.

The Comptroller retains an independent certified public accounting firm to audit the Commonwealth’s financial statements and issue certain other reports required by the Uniform Guidance. As part of the Uniform Guidance, the independent auditors render a report on all programs involving federal funding for compliance with

federal and state laws and regulations and assess the adequacy of internal control systems. For fiscal 1990 through 2019 the independent auditors' opinions on the CAFR were unqualified or unmodified, indicating that the Commonwealth's financial statements presented fairly, in all material respects, the financial position of the Commonwealth, in accordance with generally accepted accounting principles.

Discussion of Financial Condition

As the annual operating budget of the Commonwealth is adopted in accordance with the statutory basis of accounting, public and governmental discourse on the financial affairs of the Commonwealth has traditionally followed the statutory basis. Consequently, the financial information set forth in this document follows the statutory basis, except where otherwise noted. Since fiscal 1990, the Commonwealth has prepared separate financial reports on the statutory basis (reviewed) and on a GAAP basis (audited). See "COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS – Fiscal Control, Accounting and Reporting Practices of the Comptroller; *Financial Reports*." Without limiting the generality of the references to the SBFR for the year ended June 30, 2019 and the CAFR for the year ended June 30, 2019, attention is called in particular to the portion of the CAFR under the heading "Management's Discussion and Analysis."

Auditors' Report on Fiscal 2019 CAFR

The basic financial statements included in the CAFR of the Commonwealth for the year ended June 30, 2019 were audited by KPMG LLP (KPMG). The KPMG audit report dated February 10, 2020 on the general purpose financial statements included in the CAFR for the year ended June 30, 2019 contained an unmodified opinion. A copy of the audit report of KPMG dated February 10, 2020 has been filed with EMMA and is included within Exhibit C to this Information Statement. KPMG has not been engaged to perform, and has not performed, since the respective dates of its reports included herein, any procedures on the financial statements addressed in such reports, nor has said independent auditor performed any procedures relating to any official statement of which this Information Statement may be a part.

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FISCAL 2020 AND FISCAL 2021

Fiscal 2020

On December 31, 2018, a fiscal 2020 consensus tax revenue estimate of \$29.299 billion was agreed upon by the Secretary of Administration and Finance and the chairs of the House and Senate Committees on Ways and Means.

The fiscal 2020 consensus tax revenue estimate reflects a forecast of 2.7% in tax revenue growth over projected fiscal 2019 tax revenues (as revised). The consensus revenue estimate for fiscal 2020 assumes that the state personal income tax rate will decrease from 5.05% to 5.00% on January 1, 2020, in accordance with the statutory mechanism. After accounting for statutorily required transfers for pensions, the MBTA, the MSBA and the Workforce Training Fund, the Secretary and Committee chairs agreed that \$24.219 billion would be the maximum amount of tax revenue available for the fiscal 2020 budget.

On January 23, 2019, the Governor filed his fiscal 2020 budget recommendation, providing for a total of \$42.7 billion in state spending. Excluding \$481.3 million in projected transfers to the Medical Assistance Trust Fund. The budget as filed represented an increase of 1.5% over projected fiscal 2019 spending and anticipated a deposit of \$297 million to the Stabilization Fund in fiscal 2020.

The House and Senate did not complete the reconciliation of their separate budget proposals prior to the end of June, 2019 and, accordingly, an interim budget of \$5 billion for the first month of fiscal 2020 was approved by the Governor on June 28, 2019. The interim budget was superseded by the fiscal 2020 budget when it was approved by the Governor on July 31, 2019.

The fiscal 2020 budget, as approved by the Governor on July 31, 2019, provides for approximately \$43.3 billion, excluding transfers to the Medical Assistance Trust Fund, the pension liabilities trust fund, and other interfund transfers. The fiscal 2020 budget is based on estimated tax collections of \$30.099 billion, including revenues dedicated to the MBTA, the MSBA and the Workforce Training Fund. The estimate includes revenues from marijuana sales and excise taxes, estimated to be \$132.5 million, and excludes tax-related settlements and judgments exceeding \$10 million, which are assumed to be \$50 million. See "COMMONWEALTH REVENUES – Tax Revenue Forecasting." The fiscal 2020 budget is approximately 3.3% greater than fiscal 2019 estimated spending levels at the time of the Governor's approval. The fiscal 2020 budget projects a net increase of \$476 million to the Stabilization Fund.

On December 13, 2019, the Governor approved a supplemental appropriations bill for fiscal 2019, which authorized \$542 million in direct appropriations, with a net state cost of \$346 million.

On January 3, 2020, the Governor filed a bill consisting of \$74.2 million in supplemental appropriations for fiscal 2020, with a net state cost of \$68.1 million. Major spending items included \$18 million for the MBTA, \$16.3 million to fund a ratified collective bargaining agreement, \$12.3 million for Safety Net Provider Hospitals, \$10 million for a fund for school improvement, and \$17.6 million for other smaller costs.

On January 13, 2020, the Secretary of Administration and Finance revised the tax revenue projection for fiscal 2020 of \$30.099 billion upward by \$190 million to \$30.289 billion. See "COMMONWEALTH REVENUES – Tax Revenue Forecasting."

Current estimates indicate that the variance between revenues and spending in fiscal 2020 is less than 1%. The Executive Office for Administration and Finance will continue to monitor revenues and spending and implement measures as necessary to ensure that the Commonwealth's budget for fiscal 2020 will achieve statutory balance. See the "Fiscal 2020" column of the table entitled "Budgeted Operating Funds – Statutory Basis" in "SELECTED FINANCIAL DATA – Statutory Basis Distribution of Budgetary Revenues and Expenditures."

Fiscal 2021

On January 13, 2020, a fiscal 2021 consensus tax revenue estimate of \$31.151 billion was agreed upon by the Secretary of Administration and Finance and the chairs of the House and Senate Committees on Ways and Means. This estimate reflects a projection of 2.8% tax revenue growth over the revised projected fiscal 2020 tax revenue figure of \$30.289 billion. The consensus revenue estimate for fiscal 2021 incorporates the statutory reduction of the Part B individual income tax rate to 5.0% effective January 1, 2020, and the reinstatement of the charitable deduction effective January 1, 2021.

On January 15, 2020, the Secretary of Administration and Finance filed the triennial funding schedule for the Commonwealth's employee retirement obligations with the House and Senate Committees on Ways and Means, which provides for a fiscal 2021 transfer amount of \$3.115 billion, an increase of \$274 million or 9.63% over the fiscal 2020 transfer amount. See "PENSION AND OPEB FUNDING – Funding Schedule."

After accounting for statutorily required transfers for pensions, and to the MBTA, the MSBA and the Workforce Training Fund, the Secretary and Committee chairs agreed that \$25.621 billion would be the maximum amount of tax revenue available for the fiscal 2021 budget. See "COMMONWEALTH REVENUES – Tax Revenue Forecasting."

On January 22, 2020, the Governor filed his fiscal 2021 budget recommendation, providing for a total of \$44.6 billion in state spending, excluding \$430.7 million in projected transfers to the Medical Assistance Trust Fund. The budget as filed represented an increase of 2.3% over projected fiscal 2020 spending and anticipated a deposit of \$310 million to the Commonwealth Stabilization Fund in fiscal 2021.

The Governor's budget recommendation has been filed with the Legislature for consideration in accordance with the Commonwealth's annual budgeting process. The House of Representatives generally approves its version of the budget in April, and the Senate generally approves its version in May. The differences between the two versions are then reconciled by a legislative conference committee during the month of June, so that a final version can be enacted by the Legislature and sent to the Governor for his approval prior to the start of the new fiscal year on July 1. It is not unusual for the budget process to extend slightly into the next fiscal year, with final enactment of the budget occurring in early or mid-July. Interim budgets are typically enacted to provide funding after the end of the fiscal year until the full budget can be enacted and approved by the Governor.

Cash Flow

The State Treasurer is responsible for cash management and ensuring that all Commonwealth financial obligations are met on a timely basis. See "COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS – Cash Management Practices of State Treasurer." The Commonwealth does not engage in inter-fund borrowing, but pools its non-segregated (primarily non-Stabilization Fund) cash. Cash flow management incorporates the periodic use of short-term borrowing to meet cash flow needs for both capital and operating expenditures. All revenue anticipation notes, including those issued as commercial paper, must be repaid by the end of the fiscal year. The state currently has liquidity support for a \$400 million commercial paper program for general obligation notes. The Commonwealth has utilized the commercial paper program for additional liquidity, as necessary, since 2002.

The Commonwealth estimates fiscal 2020 is projected to end with a non-segregated cash balance of approximately \$3.411 billion.

The fiscal 2019 and fiscal 2020 cash flow statements released on January 13, 2020 are summarized in the tables below. Quarterly cash flow statements, as submitted by the State Treasurer to the House and Senate Committees on Ways and Means, are posted on the Cash Management page of the State Treasurer's website at <https://www.mass.gov/lists/quarterly-cash-flow-letters>.

Commonwealth cash deposits are held in insured or collateralized bank accounts and with the Massachusetts Municipal Depository Trust (MMDT), the Commonwealth's investment pool for governmental entities. MMDT consists of two portfolios, professionally managed by Federated Investors Inc., the Cash Portfolio and the Short-Term Bond Fund. Cash Portfolio investments are carried at amortized cost, which approximates fair

value. Short-Term Bond Fund investments are carried at fair value. General operating cash is invested in the Cash Portfolio, and moneys in the Stabilization Fund, which are not used by the Commonwealth for liquidity, are invested in both the Cash Portfolio and the Short-Term Bond Fund.

The Cash Portfolio invests in a diversified portfolio of high-quality U. S. dollar-denominated money market instruments (eligible under GASB Statement No. 79) of domestic and foreign issuers, United States government securities and repurchase agreements. As of December 31, 2019, the Cash Portfolio holdings were made up of Asset Backed Commercial Paper (31.9%), Certificates of Deposit (29.1%), Financial Company Commercial Paper (9.8%), Non-Financial Company Commercial Paper (0.7%), Non-Negotiable Time Deposit (6.3%), Other Asset Backed Securities (1.1%), Tender Option Bond (.6%), U.S. Government Agency Repurchase Agreement (11.0%), US Treasury Repurchase Agreement (9.4%), Variable Rate Demand Note (0.1%). As of December 31, 2019, the Cash Portfolio's monthly weighted average life was 65 days, and the monthly weighted average maturity was 30 days. The three objectives for the Cash Portfolio are safety, liquidity and yield. The Cash Portfolio maintains a stable net asset value of one dollar and is marked to market daily.

The Short Term Bond Fund invests in a diversified portfolio of investment grade debt securities. As of December 31, 2019, the Short Term Bond Fund holdings were made up of U. S. Treasury Securities (60.5%), Financial Institutions – Banking (5.2%), FNMA MBS (2.1%), FHLMC MBS (1.9%), Commercial MBS (1.4%), Technology (3.1%), Utility – Electric (2.9%), Consumer Non-Cyclical Pharmaceuticals (2.3%), Consumer Non-Cyclical Food/Beverage (1.9%), Auto Receivables (2.1%), and Other (16.6%). The Short-Term Bond Fund seeks to obtain the highest possible level of current income consistent with preservation of capital and liquidity. The portfolio is required to maintain an average credit rating of A-. The duration of the portfolio is managed to within +/- one-half year duration of the benchmark. The benchmark for the Short-Term Bond Fund is the Barclays Capital 1-to-5-year Government/Credit Index, which includes all medium and larger issues of United States government, investment-grade corporate and investment-grade international dollar-denominated bonds.

For cash flow needs for fiscal 2020, the State Treasurer issued \$1.4 billion in revenue anticipation notes (RANs) in October, 2019. As in previous years, the notes will be repaid in April, May and June, 2020.

In June, 2019, the Governor announced the five-year capital investment plan for fiscal 2020 through fiscal 2024. The plan projects \$4.698 billion of spending in fiscal 2020 on capital projects, including \$2.430 billion of bond cap spending, \$895.4 million of spending from other sources including special obligation bonds, anticipated savings or revenues generated by the projects, and other non-Commonwealth sources such as contributions from municipalities, and \$1.372 billion of spending supported by federal reimbursements and grants.

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The following table provides General Fund ending cash balances by month for fiscal 2016 through fiscal 2020 (projected).

Month-End General Fund Cash Balances (in millions)

	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Fiscal 2020</u> (1)
July	\$1,380.2	\$1,885.9	\$1,307.3	\$2,269.5	\$3,613.7
August	551.4	2,414.1	2,304.1	3,143.8	2,794.3
September	1,951.6	2,670.8	2,328.6	4,125.0	3,706.0
October	1,421.0	2,437.6	2,147.2	3,645.3	4,558.2
November	787.7	2,146.4	1,841.5	2,592.1	3,929.1
December	1,029.8	1,766.5	1,897.8	2,816.3	3,461.7
January	1,487.5	1,835.7	2,582.3	3,276.0	3,054.5
February	862.0	1,432.7	2,165.8	2,593.5	2,193.6
March	1,280.0	1,332.0	1,775.8	2,913.6	2,157.0
April	2,044.2	2,074.6	2,897.4	4,603.0	3,582.9
May	2,276.6	1,647.1	2,666.2	4,239.6	2,450.0
June	2,397.8	2,058.0	3,607.9	4,497.4	3,411.1

SOURCE: Office of the Treasurer and Receiver-General.

(1) Fiscal 2020 ending balances for November through June of fiscal 2020 are estimated.

The tables on the following pages provide cash flow detail for fiscal 2019 and fiscal 2020.

Overview of Fiscal 2019 Non-Segregated Operating Cash Flow (in millions) (1)

	<u>Jul-18</u>	<u>Aug-18</u>	<u>Sep -18</u>	<u>Oct-18</u>	<u>Nov -18</u>	<u>Dec-18</u>	<u>Jan-19</u>	<u>Feb-19</u>	<u>Mar-19</u>	<u>Apr-19</u>	<u>May-19</u>	<u>Jun-19</u>	<u>Total FY 2019</u>
Opening Non-Segregated Operating Cash Balance	\$3,607.9	\$2,269.5	\$3,143.8	\$4,125.0	\$3,645.3	\$2,592.1	\$2,816.3	\$3,276.0	\$2,593.5	\$2,913.6	\$4,603.0	\$4,239.6	\$3,607.9
Operating Activities:													
Budgetary Funds:													
<i>Transfer from/(to) Stabilization Fund</i>	(513.9)	0.0	0.0	0.0	(209.3)	0.0	0.0	0.0	0.0	0.0	0.0	(636.4)	(1,359.6)
Total Budgetary Revenue/Inflows	2,759.1	3,216.6	4,748.7	3,346.5	2,777.7	4,428.9	4,161.0	3,090.4	4,290.5	6,130.0	3,605.4	4,541.5	47,096.3
Total Budgetary Expenditures/Outflows	3,393.4	4,302.9	3,238.2	3,465.4	3,629.5	3,395.9	3,293.3	3,627.5	3,634.3	3,645.6	3,634.4	2,706.9	41,967.2
Net Budgetary Funds	(634.4)	(1,086.3)	1,510.5	(118.9)	(851.8)	1,032.9	867.8	(537.1)	656.2	2,484.5	(29.0)	1,834.6	5,129.0
Non Budgetary Funds (Non Budgetary, Higher Ed and Trust Funds):													
Total Non Budgetary Revenue/Inflows	683.7	1,719.7	889.1	905.7	1,050.3	799.5	844.7	1,073.9	770.2	833.8	1,432.7	345.1	11,348.3
Total Non Budgetary Expenditures/Outflows	1,240.2	1,187.5	1,540.8	1,246.9	1,275.2	1,557.7	1,305.7	1,222.2	1,155.7	1,025.7	1,307.8	1,484.2	15,549.5
Net Non Budgetary Funds	(556.6)	532.2	(651.7)	(341.2)	(224.9)	(758.2)	(460.9)	(148.3)	(385.5)	(192.0)	125.0	(1,139.1)	(4,201.2)
Net Undesignated Revenue/Inflows and Expenditures/Outflows	7.7	37.9	10.8	15.6	14.5	13.4	15.7	14.0	14.0	15.7	16.0	26.5	201.7
Net Operating Activities	(\$1,183.2)	(\$516.3)	\$869.6	(\$444.5)	(\$1,062.2)	\$288.1	\$422.6	(\$671.4)	\$284.7	\$2,308.2	111.9	722.0	1,129.5
Federal Grants:													
Total Federal Grants Revenue/Inflows	156.8	169.4	160.6	158.8	241.1	189.4	205.9	208.1	271.5	164.2	277.0	223.1	2,425.9
Total Federal Grants Expenditures/Outflows	208.8	212.0	125.7	176.8	219.0	225.2	201.7	232.8	212.5	210.6	226.6	218.5	2,470.2
Net Federal Grants	(\$52.0)	(\$42.7)	\$34.9	(\$18.1)	\$22.1	(\$35.7)	\$4.2	(\$24.7)	\$59.1	(\$46.5)	50.4	4.5	(44.4)
Capital Funds:													
Total Capital Revenue/Inflows	243.1	328.2	291.1	246.4	314.0	229.6	324.6	176.2	164.9	170.7	222.4	333.6	3,044.7
Total Capital Expenditures/Outflows	346.2	394.9	214.4	263.6	327.1	257.8	291.7	162.6	188.6	229.9	233.5	286.0	3,196.2
Net Capital Funds	(\$103.2)	(\$66.7)	\$76.7	(\$17.2)	(\$13.1)	(\$28.2)	\$32.9	\$13.6	(\$23.6)	(\$59.2)	(11.1)	47.6	(151.5)
Financing Activities:													
Cash Flow Financing Activities Inflows:													
<i>Commercial Paper</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Revenue Anticipation Notes (RANS)</i>	0.0	1,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,500.0
Total Cash Flow Financing Activities Inflows	0.0	1,500.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,500.0
Cash Flow Financing Activities Outflows:													
<i>Commercial Paper – (Principal + Interest)</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>RANS – (Principal + Interest)</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	513.2	514.7	516.2	1,544.1
Total Cash Flow Financing Activities Outflows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	513.2	514.7	516.2	1,544.1
Net Financing Activities	\$0.0	\$1,500.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	(\$513.2)	(\$514.7)	(\$516.2)	(\$44.1)
Ending Non-Segregated Operating Cash Balance	\$2,269.5	\$3,143.8	\$4,125.0	\$3,645.3	\$2,592.1	\$2,816.3	\$3,276.0	\$2,593.5	\$2,913.6	\$4,603.0	4,239.6	4,497.4	4,497.4

SOURCE: Office of the Treasurer and Receiver-General.

(1) Totals may not add due to rounding.

Overview of Fiscal 2020 Non-Segregated Operating Cash Flow (in millions) (1)

	<u>Jul-19</u>	<u>Aug-19</u>	<u>Sep -19</u>	<u>Oct-19</u>	<u>Nov -19(2)</u>	<u>Dec-19(2)</u>	<u>Jan-20(2)</u>	<u>Feb-20(2)</u>	<u>Mar-20(2)</u>	<u>Apr-20(2)</u>	<u>May-20(2)</u>	<u>Jun-20(2)</u>	<u>Total FY 2020(2)</u>
Opening Non-Segregated Operating Cash Balance	4,497.4	3,613.7	2,794.3	3,706.0	4,558.2	3,929.1	3,461.7	3,054.5	2,193.6	2,157.0	3,582.9	2,450.0	4,497.4
Operating Activities:													
Budgetary Funds:													
<i>Transfer from/(to) Stabilization Fund</i>	0.0	(212.0)	0.0	0.0	0.0	0.0	(592.7)	0.0	0.0	0.0	0.0	0.0	(804.7)
Total Budgetary Revenue/Inflows	3,219.2	3,144.8	4,600.3	3,489.5	3,360.3	4,153.3	3,888.7	3,432.7	4,263.3	6,253.5	3,719.6	4,813.5	48,338.8
Total Budgetary Expenditures/Outflows	3,772.9	3,847.3	3,236.9	3,726.4	3,808.2	3,713.6	3,924.4	3,894.8	3,850.1	3,973.8	3,774.5	2,972.1	44,495.0
Net Budgetary Funds	(553.7)	(702.5)	1,363.4	(236.8)	(447.9)	439.7	(35.7)	(462.2)	413.3	2,279.7	(54.9)	1,841.4	3,843.8
Non Budgetary Funds (Non Budgetary, Higher Ed and Trust Funds):													
Total Non Budgetary Revenue/Inflows	1,009.9	1,338.3	1,063.0	936.0	998.9	765.9	844.2	692.3	724.6	748.5	982.3	870.2	10,974.1
Total Non Budgetary Expenditures/Outflows	1,265.6	1,469.3	1,592.2	1,173.6	1,225.9	1,536.3	1,240.0	1,204.4	1,233.9	1,190.4	1,568.8	1,315.9	16,016.4
Net Non Budgetary Funds	(255.7)	(131.0)	(529.2)	(237.6)	(227.0)	(770.5)	(395.8)	(512.2)	(509.3)	(442.0)	(586.5)	(445.7)	(5,042.3)
Net Undesignated Revenue/Inflows and Expenditures/Outflows	8.2	131.1	14.9	37.9	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	272.2
Net Operating Activities	(801.1)	(702.4)	849.2	(436.5)	(664.9)	(320.8)	(421.5)	(964.3)	(86.0)	1,847.7	(631.4)	1,405.7	(926.3)
Federal Grants:													
Total Federal Grants Revenue/Inflows	177.4	159.0	171.0	222.4	230.0	195.0	185.0	195.0	190.0	200.0	185.0	220.0	2,329.8
Total Federal Grants Expenditures/Outflows	215.2	195.3	153.3	225.1	216.7	221.6	189.2	177.6	193.0	188.1	204.6	195.4	2,375.0
Net Federal Grants	(37.8)	(36.3)	17.7	(2.6)	13.3	(26.6)	(4.2)	17.5	(2.9)	11.9	(19.6)	24.6	(45.2)
Capital Funds:													
Total Capital Revenue/Inflows	304.8	294.7	287.6	191.1	380.5	218.9	330.5	296.0	313.2	301.2	325.0	370.1	3,613.5
Total Capital Expenditures/Outflows	349.6	375.2	242.8	299.9	358.0	338.9	312.0	210.0	260.8	225.2	295.7	429.1	3,697.3
Net Capital Funds	(44.8)	(80.5)	44.8	(108.8)	22.5	(119.9)	18.5	86.0	52.4	75.9	29.3	(59.0)	(83.7)
Financing Activities:													
Cash Flow Financing Activities Inflows:													
<i>Commercial Paper</i>	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Revenue Anticipation Notes (RANS)</i>	0.0	0.0	0.0	1,400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,400.0
Total Cash Flow Financing Activities Inflows	0.0	0.0	0.0	1,400.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1,400.0
Cash Flow Financing Activities Outflows:													
<i>Commercial Paper – (Principal + Interest)</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>RANS – (Principal + Interest)</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	509.7	511.2	410.2	1,431.1
Total Cash Flow Financing Activities Outflows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	509.7	511.2	410.2	1,431.1
Net Financing Activities	0.0	(0.0)	0.0	1,400.0	0.0	0.0	0.0	0.0	0.0	(509.7)	(511.2)	(410.2)	(31.1)
Ending Non-Segregated Operating Cash Balance	3,613.7	2,794.3	3,706.0	4,558.2	3,929.1	3,461.7	3,054.5	2,193.6	2,157.0	3,582.9	2,450.0	3,411.1	3,411.1

SOURCE: Office of the Treasurer and Receiver-General.

(1) Totals may not add due to rounding.

(2) Figures are estimated.

STATE WORKFORCE

The following table sets forth information regarding the Commonwealth's full-time equivalent (FTE) workforce as of the end of the last five fiscal years.

State Workforce (1)					
	<u>June 2015</u>	<u>June 2016 (2)</u>	<u>June 2017</u>	<u>June 2018</u>	<u>June 2019</u>
Executive Office	75	75	74	77	84
Executive Departments					
Administration and Finance	2,979	2,593	2,274	2,214	2,191
Energy and Environmental Affairs	1,907	1,773	1,736	1,725	1,784
Health and Human Services	20,088	19,560	19,849	20,162	20,362
Board of Library Commissioners	11	-	-	-	-
Housing and Economic Development	699	673	640	748	752
Labor and Workforce Development	234	236	231	234	237
Executive Office of Education	582	569	507	523	561
Public Safety and Security	8,620	8,373	7,994	8,042	8,064
Elder Affairs	36	-	-	-	-
Technology Services and Security	-	-	333	354	395
Federal Grant, Trust and Capital Funded (3)	<u>9,472</u>	<u>8,847</u>	<u>8,139</u>	<u>8,133</u>	<u>8,070</u>
Subtotal under Governor's Authority	<u>44,703</u>	<u>42,699</u>	<u>41,777</u>	<u>42,212</u>	<u>42,500</u>
Judiciary	7,264	7,263	7,208	7,229	7,164
Higher Education	24,783	25,212	25,283	24,887	25,229
Other (4)	<u>11,010</u>	<u>11,040</u>	<u>11,092</u>	<u>11,048</u>	<u>11,227</u>
Total	<u>87,760</u>	<u>86,213</u>	<u>85,360</u>	<u>85,376</u>	<u>86,120</u>

SOURCE: Office of the Comptroller.

(1) This table has been revised from prior presentations to conform to the presentation in the Statutory Basis Financial Reports.

(2) Figures for June, 2016 and thereafter include the Board of Library Commissioners in Other and Elder Affairs in Health and Human Services.

(3) The Massachusetts Department of Transportation is included in Federal Grant, Trust, and Capital Funded.

(4) Other includes members of the Legislature and their staff, constitutional officers, other independently elected officials and other independent state agencies.

Unions and Labor Negotiations

Under Massachusetts law, all employees of the Commonwealth, with the exception of managerial and confidential employees and employees of the Legislature, have the right to bargain collectively with the Commonwealth through certified employee organizations recognized as exclusive bargaining representatives for appropriate bargaining units. The Human Resources Division of the Executive Office for Administration and Finance conducts the collective bargaining negotiations with all employees of the Commonwealth (except those noted below). Such negotiations may cover wages, hours and other terms and conditions of employment, but may not include the levels of pension and group insurance benefits. All labor agreements negotiated by the Human Resources Division are subject to approval by the Secretary of Administration and Finance and, once approved, are forwarded to the Legislature for funding approval. Labor contracts are often funded by supplemental appropriations or advance-funded through reserve accounts.

MassDOT, the Trial Court, the Lottery Commission, the Alcohol Beverage Control Commission, state sheriffs, the Registries of Deeds under the control of the Secretary of the Commonwealth, state universities and community colleges through the Board of Higher Education, the Personal Care Attendant Workforce Council and the Department of Early Education and Care (EEC) (for bargaining with family child care providers) negotiate directly with their respective employee representatives, but wage increases and other economic provisions contained in such agreements are subject to the review of the Governor and to funding approval by the Legislature. Also, if the Governor does not recommend the requested appropriation to fund contractual increases, he may refer the contracts back to the parties for further negotiation.

The University of Massachusetts submits 22 of its collective bargaining agreements for approval under the process described above, but also uses some of its retained revenue to fund other collective bargaining agreements.

Approximately 35,740 executive branch full-time-equivalent state employees are organized in 13 bargaining units, the employees of the Commonwealth's colleges and universities are organized in 47 bargaining units, and the employees of the judicial branch, MassDOT, the Lottery Commission, the Registries of Deeds, the state sheriffs, Personal Care Attendants at MassHealth, and family child care providers at the Department of Early Education and Care are organized in 67 bargaining units. Public employees of the Commonwealth do not have a legal right to strike or otherwise withhold services.

The following is a description of certain terms of the most recent agreements with the collective bargaining units within the responsibility of the Human Resources Division.

1. The contract with the National Association of Government Employees (NAGE), representing Units 1, 3 and 6, runs from July 1, 2017 through June 30, 2020, and provides salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2017, 2% in 2018, and 2% in 2019, effective July 1 of each year. The total estimated incremental cost of the contract is \$65.7 million.

2. The contract with the American Federation of State, County and Municipal Employees, representing Unit 2, runs from July 1, 2017 through June 30, 2020, and provides a salary increase of 1% in July, 2017 (2% if fiscal 2018 revenues exceed \$27.072 billion). The agreement also provides semi-annual increases of 1% in January and July of calendar 2019 and 2020, respectively (equal to an annualized increase of 2% in the years of 2019 and 2020). The total estimated incremental cost of the contract is \$36.8 million.

3. The contract with the Massachusetts Correction Officers Federated Union, representing Unit 4, runs from July 1, 2018 through June 30, 2021 and provides salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2018, 2% in 2019, and 2% in 2020, effective July 1 of each year. The total estimated incremental cost of the contract is \$33.8 million.

4. The contract with the New England Police Benevolent Association (NEPBA), representing Unit 4A, runs from July 1, 2017 through June 30, 2020, and provides for salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2017, 2% in 2018, and 2% in 2019, effective July 1 of each year. The total estimated incremental cost of the contract is \$0.9 million.

5. The contract with the Coalition of Public Safety, representing Unit 5, runs from July 1, 2018 through June 30, 2021, and provides salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2018, 2% in 2019, and 2% in 2020, effective July 1 of each year. The total estimated incremental cost of the contract is \$1.7 million.

6. The contract with the State Police Association of Massachusetts (SPAM), representing Unit 5A, ran from January 1, 2015 through December 31, 2017. Funding for a new contract with SPAM running from January 1, 2018 through December 31, 2020, providing for salary increases of 2% in 2018, 2% in 2019 and 1.95% in 2020, effective the first full pay period in January of each year, has been duly submitted to the Legislature for approval. The total estimated incremental cost of the contract is \$26.3 million.

7. The contract with the Massachusetts Nurses Association, representing Unit 7, runs from January 1, 2018 through December 31, 2020, and provides salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2017, 2% in 2018, and 2% in 2019, effective July 1 of each year. The total estimated incremental cost of the contract is \$20.3 million.

8. The contract with the Service Employees International Union, representing Units 8 and 10, ran from January 1, 2017 through December 31, 2019, and provided a salary increases of 1% in January 2017 (2% if fiscal 2018 revenues exceeded \$27.072 billion) and 2% in January 2018 and 2019. The total estimated incremental cost of the contract was \$74.1 million. This contract has expired and negotiations are ongoing.

9. The contract with the Massachusetts Organization of State Engineers and Scientists (MOSES), representing Unit 9, runs from July 1, 2017 through June 30, 2020, and provides salary increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2017, 2% in 2018, and 2% in 2019, effective July 1 of each year. The total estimated incremental cost of the contract is \$9.9 million.

10. The contract with the International Association of Fire Fighters, representing Unit 11, runs from January 1, 2018 through December 31, 2020, and provides annual increases of 1% (2% if fiscal 2018 revenues exceed \$27.072 billion) in 2018, 2% in 2019, and 2% in 2020, effective January 1 of each year. The total estimated incremental cost of the contract is \$0.3 million.

The following table sets forth information regarding the 13 bargaining units that are within the responsibility of the Human Resources Division.

Human Resources Division Bargaining Units (1)

Contract Unit	Bargaining Union	Type of Employee	FTEs	Contract Expiration Dates
1, 3, 6	National Association of Government Employees	Clerical, Skilled Trades, Administrative Professionals	9,718	6/30/20
2	Alliance/American Federation of State, County & Municipal Employees and Service Employees International Union	Institutional services	7,960	6/30/20
4	Massachusetts Correction Officers Federated Union	Corrections	3,487	6/30/21
4A	New England Police Benevolent Association	Corrections	79	6/30/20
5	Coalition of Public Safety	Law enforcement	209	6/30/21
5A	State Police Association of Massachusetts	State Police	2,198	12/31/17 (2)
7	Massachusetts Nurses Association	Health professionals	1,571	12/31/20
8, 10	Alliance/Service Employees International Union	Social workers, Secondary Education	8,613	12/31/19(3)
9	Massachusetts Organization of State Engineers and Scientists	Engineers/scientists	1,842	6/30/20
11	International Association of Fire Fighters	Fire fighters	63	12/31/20
Total			35,740	

SOURCE: Executive Office for Administration and Finance.

- (1) Numbers represent full-time equivalent filled positions (FTEs) in the standard workforce as of July 6, 2019 whose positions are established in accounts funded by all sources (the annual operating budget, capital projects funds, direct federal grants and expendable trusts and other non-appropriated funds).
- (2) This contract has expired. Funding for a new contract has been submitted to the Legislature for approval.
- (3) This contract has expired and negotiations are ongoing.

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PENSION AND OPEB FUNDING

Retirement Systems

Almost all non-federal public employees in the Commonwealth participate in defined-benefit pension plans administered pursuant to state law by 104 public retirement systems. The Commonwealth is responsible for the payment of pension benefits for Commonwealth employees (members of the state employees' retirement system) and for teachers of the cities, towns and regional school districts throughout the state (including members of the Massachusetts teachers' retirement system and teachers in the Boston public schools, who are members of the Boston Retirement System but whose pensions are also the responsibility of the Commonwealth). The Commonwealth is also responsible for cost-of-living adjustments (COLAs) granted by local systems from 1981 to 1996.

The members of the retirement system do not participate in the Social Security System. Employees of certain independent authorities and agencies, such as the Massachusetts Water Resources Authority, and of counties, cities and towns (other than teachers) are covered by 102 separate retirement systems and the Commonwealth is not responsible for making contributions towards the funding of these retirement systems. Pension benefits for state employees are administered by the State Retirement Board, and pension benefits for teachers are administered by the Massachusetts Teachers' Retirement Board. Investment of the assets of the state employees' and Massachusetts teachers' retirement systems is managed by the Pension Reserves Investment Management (PRIM) Board. In the case of all other retirement systems, the retirement board for the respective system administers pension benefits and manages investment of assets. Retirement board members are required to complete 18 hours of training and to file annual statements of financial interest with the Public Employee Retirement Administration Commission (PERAC). Many such retirement boards invest their assets with the PRIM Board, and the PRIM Board may take over the assets of local retirement systems that are less than 65% funded and have failed to come within 2% of the PRIM Board's performance over the previous 10-year period. With a very small number of exceptions, the members of these state and local retirement systems do not participate in the Social Security System.

The Massachusetts State Employees' Retirement System (MSERS) and the Massachusetts Teachers' Retirement System (MTRS) are the two largest plans of the public contributory retirement systems operated in the Commonwealth. Membership in MSERS and MTRS as of January 1, 2019, the date of the most recent combined valuation, is as follows:

Retirement Systems Membership

	<u>MSERS</u>	<u>MTRS</u>
Retirees and beneficiaries currently receiving benefits	64,758	67,110
Terminated employees entitled to benefits but not yet receiving them	<u>4,119</u>	<u>N/A</u>
Subtotal	68,877	67,110
Current Members	<u>87,969</u>	<u>94,103</u>
Total	156,846	161,213

SOURCE: Public Employee Retirement Administration Commission

The MSERS is a cost sharing, multiple-employer defined-benefit public employee retirement system. The MTRS is a defined-benefit public employee retirement system managed by the Commonwealth on behalf of municipal teachers and municipal teacher retirees. The Commonwealth is a non-employer contributor and is responsible for all contributions and future benefits of the MTRS. Members become vested after 10 years of creditable service. For members who joined the system prior to April 2, 2012 superannuation retirement allowance may be received upon the completion of 20 years of service or upon reaching the age of 55 with 10 years of service. Normal retirement for those employees who were system members before April 2, 2012 occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most members who joined the system after April 1, 2012 cannot retire prior to age 60.

The Commonwealth's retirement systems' funding policies have been statutorily established. The Legislature has the authority to amend these policies. The annuity portion of the MSERS and the MTRS retirement allowance is funded by employees, who contribute a percentage of their regular compensation. Costs of administering the plan are funded out of plan assets. The policies provide for uniform benefit and contribution requirements for all contributory public employee retirement systems. These requirements generally provide for superannuation retirement allowance benefits up to a maximum of 80% of a member's highest three-year average annual rate of regular compensation. For employees hired after April 1, 2012, retirement allowances are calculated on the basis of the last five years or any five consecutive years, whichever is greater in terms of compensation. Benefit payments are based upon a member's age, length of creditable service and group creditable service, and group classification.

Boston teachers are not included in the membership data shown above for the MTRS. Legislation approved in May, 2010 changed the methodology for the Commonwealth's funding of pension benefits paid to Boston teachers. Prior to this change, the Commonwealth reimbursed the City of Boston for pension benefits paid to Boston teachers as certified by the Boston Retirement System (BRS). Those costs were funded one fiscal year in arrears. The cost of pension benefits of the other participants of the BRS is the responsibility of the City of Boston. The BRS is a cost-sharing multiple-employer pension system that is not administered by the Commonwealth and is not part of the reporting entity of the Commonwealth for accounting purposes. The 2010 legislation clarified that the Commonwealth is responsible for all employer contributions and future benefit requirements for Boston teachers that are members of the BRS. The Commonwealth's actuarially determined contribution (or ADC, defined as a target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice) to the BRS for fiscal 2020 has been determined to be \$157.0 million.

Subject to legislative approval, annual increases in cost-of-living allowances are provided in an amount equal to the lesser of 3% or the previous year's percentage increase in the United States consumer price index on the first \$13,000 of benefits for members of the MSERS and MTRS. The Legislature approved the 3% increase in cost-of-living allowances for fiscal 2020. The Commonwealth pension funding schedule (discussed below) assumes that annual increases of 3% will be approved for its retirees.

The MSERS and the MTRS, in conjunction with the Commonwealth, have evaluated whether certain of the statutes or practices governing the systems may have been in conflict with the exclusive benefit rule of Section 401(a)(2) of the Internal Revenue Code or other federal tax law requirements relating to operation of tax-exempt pension plans. The activities reviewed include (i) the statutorily directed funding of the budget for PERAC solely from the investment income accounts of MSERS and MTRS, (ii) the statutorily directed contributions made from the MSERS account in the PRIT Fund to a separate optional retirement plan available to certain employees of the Commonwealth's higher education system, (iii) the statutorily mandated reimbursements paid by the MSERS to local retirement systems for local cost-of-living allowances for certain participants of those systems, (iv) the deposit of reimbursement revenues received from local retirement systems to the Commonwealth's General Fund rather than to the MTRS and MSERS accounts in the PRIT Fund, and (v) the deposit of federal grant fringe payments to the General Fund rather than to the MTRS and MSERS accounts in the PRIT Fund. The Commonwealth, PERAC, MSERS and the MTRS each engaged outside tax counsel to review these activities. On March 28, 2017, the Governor approved legislation to address prospectively certain aspects of the issues described above. Additional corrective legislation was approved as part of the Commonwealth's General Appropriations Act for fiscal 2018, approved on July 17, 2017. The Executive Office for Administration and Finance submitted to the Internal Revenue Service for its consideration a request for a closing agreement in which the Commonwealth describes the activities listed above, explains the corrective actions already taken by legislation, and requests an affirmation that these activities do not adversely affect the tax qualification of the MSERS and MTRS in light of the corrections already made.

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Employee Contributions

The MSERS and MTRS are partially funded by employee contributions of regular compensation. The following tables indicate current employee contribution rates (figures are approximate):

Employee Contribution Rates			
<u>MTRS (1)</u>			
<u>Hire Date</u>	<u>% of Compensation (1)</u>	<u>Active Members</u>	<u>% of Total Active</u>
Pre-1975	5%	70	0.1%
1975-1983	7	351	0.4
1984-June 30, 1996	8	5,446	5.8
July 1, 1996-Present	9	15,149	16.1
July 1, 2001-Present	11	<u>73,087</u>	<u>77.6</u>
Totals		<u>94,103</u>	<u>100.0%</u>

SOURCE: Public Employee Retirement Administration Commission. Membership data from Teachers' Retirement System January 1, 2019 Actuarial Valuation.

(1) Employees hired after January 1, 1979 (except those contributing 11%) contribute an additional 2% of any regular compensation in excess of \$30,000 annually. Legislation enacted in fiscal 2000 established an alternative superannuation retirement benefit program for teachers hired on or after July 1, 2001 (and others who opt in) with an 11% contribution requirement for a minimum of five years. The contribution rate for most employees hired after April 1, 2012 will be reduced to 8% after 30 years of creditable service.

<u>MSERS (1)</u>			
<u>Hire Date</u>	<u>% of Compensation (1)</u>	<u>Active Members</u>	<u>% of Total Active</u>
Pre-1975	5%	318	0.4%
1975-1983	7	2,504	2.8
1984-June 30, 1996	8	14,484	16.5
July 1, 1996-Present	9	69,833	79.4
State Police 1996-Present	12	<u>830</u>	<u>0.9</u>
Totals		<u>87,969</u>	<u>100.0%</u>

SOURCE: Public Employee Retirement Administration Commission. Membership data from State Retirement Board January 1, 2019 Actuarial Valuation.

(1) Employees hired after January 1, 1979 contribute an additional 2% of any regular compensation in excess of \$30,000 annually. The contribution rate for most employees hired after April 1, 2012 will be reduced to 6% after 30 years of creditable service.

Funding Schedule

The retirement systems were originally established as “pay-as-you-go” systems, meaning that amounts were appropriated each year to pay current benefits, and no provision was made to fund currently the future liabilities already incurred. In fiscal 1988, the Commonwealth began to address the unfunded liabilities of the two state systems by making appropriations to pension reserves. Under current law such unfunded liability is required to be amortized to zero by June 30, 2040. The law also requires that the Secretary of Administration and Finance file a proposed funding schedule with the legislature every three years identifying the appropriations or transfers required to amortize the unfunded liability to zero, to meet the normal cost of all future benefits for which the Commonwealth is obligated and to meet any other component of the Commonwealth’s pension liability. Previously designated amounts can be adjusted based on a new funding schedule so long as the adjustments represent an increase in the scheduled amounts for those years. The law requires the funding schedule submitted by the Secretary to be based on actuarial valuation reports and requires the Secretary to provide the actuarial, economic and demographic assumptions upon which the reports are based. The funding schedule is filed with the House Committee on Ways and Means and is deemed approved if no action is taken by the committee within 45 days.

The most recent funding schedule for payments into the Commonwealth’s Pension Liability Fund was filed by the Secretary of Administration and Finance on January 15, 2020. The assumptions underlying the funding schedule include valuation of assets and liabilities as of January 1, 2019, an annual rate of return on assets of 7.25%, and appropriation increases of 9.63% per year through fiscal 2035 with a final amortization payment in fiscal 2036 (four years before the statutory requirement). The funding schedule also fully amortizes by fiscal 2027 the liabilities attributable to the employee retirement incentive program approved by the Governor on May 4, 2015.

Current Funding Schedule for Pension Obligations (in thousands)

<u>Fiscal Year</u>	<u>Payments</u>	<u>Fiscal Year</u>	<u>Payments</u>
2020	\$ 2,841,525	2029	\$ 6,500,043
2021	3,115,164	2030	7,125,997
2022	3,415,154	2031	7,812,230
2023	3,744,033	2032	8,564,548
2024	4,104,584	2033	9,389,314
2025	4,499,855	2034	10,293,505
2026	4,933,191	2035	11,284,770
2027	5,408,258	2036	12,364,051
2028	5,929,073	2037	1,554,984

SOURCE: Executive Office for Administration and Finance

Actuarial Valuations

The most recent valuation report for the Commonwealth's total pension obligation, which is dated October 17, 2019, is available at: <https://www.mass.gov/doc/commonwealth-valuation-report-2019-0/download>. In this report, the unfunded actuarial accrued liability for the Commonwealth's total pension obligation as of January 1, 2019, based on the plan provisions in effect at the time and on member data and asset information as of December 31, 2018, was approximately \$43.989 billion, including approximately \$15.459 billion for MSERS, \$26.010 billion for MTRS, \$2.391 billion for Boston teachers that are members of the BRS, and \$130.0 million for cost-of-living increases reimbursable to local systems. This valuation estimates the total actuarial accrued liability as of January 1, 2019 to be approximately \$100.651 billion (comprising \$42.595 billion for MSERS, \$53.864 billion for MTRS, \$4.061 billion for Boston teachers and \$130.0 million for cost-of-living increases reimbursable to local systems).

Differences each year between the actual experience of the plan and the experience projected by the actuarial assumptions are reflected by adjustments to the unfunded actuarial accrued liability. An experience difference which increases the unfunded actuarial accrued liability is an actuarial loss and one which decreases the unfunded actuarial accrued liability is an actuarial gain.

Total assets were valued on an actuarial basis at approximately \$56.661 billion based on a five-year average valuation method, which equaled 102.8% of the December 31, 2018 total asset market value. During 2018 there was an overall actuarial loss of \$280 million. There was a non-investment related gain on actuarial liability of approximately \$165 million. There was a loss of approximately \$445 million on the actuarial value of assets.

The January 1, 2019 valuation report used a 7.25% investment return assumption, reduced from the 7.35% assumption used in the January 1, 2018 valuation. The investment return assumption had previously decreased several times, from 8.25% as of January 1, 2012 to 7.35% as of January 1, 2018. The change in the investment return assumption from 7.35% to 7.25% increased the total actuarial accrued liability by \$1.0 billion.

For the January 1, 2015 valuation, a fully generational mortality assumption was adopted that reflected expected future mortality improvements (increasing life expectancy). This assumption was adopted based on a review of retiree mortality in 2012, 2013 and 2014. PERAC performed an updated analysis of retiree mortality in 2015 and 2016 and, based on this review, the generational mortality assumption was adjusted in the January 1, 2017 valuation. PERAC maintained this assumption in the January 1, 2018 valuation for most retired members. There was a small adjustment to the mortality assumption for disability retirees of MSERS that increased the actuarial liability by \$9.0 million. PERAC used the same mortality assumption in the January 1, 2019 valuation that was used in the January 1, 2018 valuation.

PERAC issued detailed experience analyses in 2014 for MSERS and MTRS. These experience studies encompassed the years 2006-2011 and reviewed salary increases and rates of retirement, disability, turnover and mortality. As detailed above, PERAC performed an analysis of mortality for retirees of MSERS and MTRS in 2015 and 2017. PERAC intends to perform an analysis of mortality for retirees of MSERS and MTRS in 2020 for use in the January 1, 2020 actuarial valuation.

The Actuarial Cost Method which is used to determine pension liabilities in the Commonwealth's valuations is known as the Entry Age Normal Cost Method. Under this method, the Normal Cost for each active member on the valuation date is determined as the level percent of salary, which, if paid annually from the date the

employee first became a retirement system member, would fully fund by retirement, death, disability or termination, the projected benefits which the member is expected to receive. The actuarial accrued liability for each member is determined as the present value as of the valuation date of all projected benefits which the member is expected to receive, minus the present value of future annual Normal Cost payments expected to be made to the fund. Since only active members have a Normal Cost, the actuarial accrued liability for inactive members, retirees and survivors is simply equal to the present value of all projected benefits. The unfunded actuarial accrued liability is the actuarial accrued liability less current assets.

The Normal Cost for a member will remain a level percent of salary for each year of membership, except for changes in provisions of the plan or the actuarial assumptions employed in projection of benefits and present value determinations. The Normal Cost for the entire system will also be changed by the addition of new members or the retirement, death, disability, or termination of members. The actuarial accrued liability for a member will increase each year to reflect the additional accrual of Normal Cost. It will also change if the plan provisions or actuarial assumptions change.

The actuarial value of assets is determined in accordance with the deferred recognition method, under which 20% of the gains or losses occurring in the prior year are recognized, 40% of those occurring two years prior are recognized, etc., so that 100% of gains and losses occurring five years ago are recognized. This has the effect of smoothing the short-term volatility of market values over a five-year period. The actuarial value of assets is adjusted, if necessary, in order to remain between 90% and 110% of market value. (In valuations prior to 1998, plan assets were determined at market value.) The actuarial value of assets as of January 1, 2019 was 102.8% of the market value. This figure was 94.6% as of January 1, 2018.

The following table shows, with respect to the Commonwealth's aggregate pension obligations, a 10-year comparison of the actuarial value of assets to the market values, the ratio of the actuarial value to market value, and the funded ratio based on actuarial value compared to the funded ratio based on the market value of assets:

Ten Year Comparison of Actuarial and Market Values of Pension Assets (in millions)

Valuation Date (Jan. 1)	Actuarial Value of Assets (1)	Market Value of Assets	% of Actuarial Value to Market Value	Funded Ratio (Actuarial Value)	Funded Ratio (Market Value)
2019	\$56,661	\$55,100	102.8%	56.3%	54.7%
2018	54,918	58,038	94.6	57.0	60.3
2017	51,952	51,107	101.7	56.7	55.8
2016	49,535	48,943	101.2	56.7	56.0
2015	48,106	50,290	95.7	59.0	61.7
2014	45,894	48,351	94.9	61.2	64.5
2013	43,517	43,760	99.4	60.6	60.9
2012	43,942	39,947	110.0	65.1	59.1
2011	45,631	41,482	110.0	71.1	64.6
2010	41,589	37,809	110.0	67.5	61.4

SOURCE: Public Employee Retirement Administration Commission.

(1) Based on five-year average smoothing methodology.

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The following tables show, for each of the MSERS and the MTRS and for Commonwealth obligations in the aggregate (including Boston teachers and cost-of-living allowances as well as MSERS and MTRS), the historical funded status for the most recent ten years, based on actuarial values and market values of assets:

Historical Pension Funding Progress for the Last Ten Fiscal Years - Actuarial Value
(in thousands, except for percentages)

	<u>Actuarial Value of Plan Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded Actuarial Accrued Liability (UAAL)</u>	<u>Funded Ratio</u>	<u>Annual Covered Payroll</u>	<u>UAAL as % of Covered Payroll</u>
MSERS						
Actuarial Valuation as of Jan. 1						
2019	\$27,136,639	\$42,595,224	\$15,458,585	63.7%	\$6,354,473	243.3%
2018	26,248,250	40,456,611	14,208,361	64.9	6,155,194	230.8
2017	24,773,042	38,316,719	13,543,677	64.7	5,927,012	228.6
2016	23,465,963	36,966,278	13,500,315	63.5	5,792,288	233.1
2015	22,720,160	33,679,150	10,958,990	67.5	5,591,911	196.0
2014	21,581,133	30,679,600	9,098,467	70.3	5,344,510	170.2
2013	20,317,389	29,385,442	9,068,053	69.1	5,183,195	175.0
2012	20,507,604	27,784,731	7,277,127	73.8	4,922,388	185.7
2011	21,244,900	26,242,776	4,997,876	81.0	4,808,250	103.9
2010	19,019,062	24,862,421	5,843,359	76.5	4,711,563	124.0
MTRS						
Actuarial Valuation as of Jan. 1						
2019	\$27,854,444	\$53,864,141	\$26,009,697	51.7%	\$7,074,960	367.6%
2018	27,057,700	51,653,285	24,595,585	52.4	6,829,012	360.2
2017	25,638,136	49,193,503	23,555,367	52.1	6,583,871	357.8
2016	24,593,787	46,562,807	21,969,020	52.8	6,388,732	343.9
2015	23,946,759	44,115,769	20,169,010	54.3	6,204,274	325.1
2014	22,940,196	40,741,695	17,801,499	56.3	5,962,650	298.6
2013	21,787,470	39,135,218	17,347,748	55.7	5,783,294	300.0
2012	22,141,475	36,483,027	14,341,552	60.7	5,655,353	253.6
2011	23,117,952	34,890,991	11,773,039	66.3	5,558,311	211.8
2010	21,262,462	33,738,966	12,476,504	63.0	5,509,698	226.4
Aggregate Commonwealth Pension Obligations (1)						
Actuarial Valuation as of Jan. 1						
2019	\$56,661,376	\$100,650,744	\$43,989,368	56.3%	\$13,994,455	314.3%
2018	54,918,125	96,316,894	41,398,769	57.0	13,531,845	305.9
2017	51,952,206	91,573,998	39,621,792	56.7	13,059,709	303.4
2016	49,535,323	87,401,722	37,866,399	56.7	12,702,727	298.1
2015	48,105,862	81,535,003	33,429,141	59.0	12,302,162	271.7
2014	45,894,034	74,936,994	29,042,960	61.2	11,793,788	246.3
2013	43,517,498	71,865,832	28,348,334	60.6	11,408,407	248.5
2012	43,941,682	67,546,587	23,604,905	65.1	11,011,466	214.4
2011	45,630,507	64,219,135	18,588,628	71.1	10,811,975	171.9
2010	41,589,706	61,575,676	19,985,970	67.5	10,655,881	187.6

SOURCE: Public Employee Retirement Administration Commission.

(1) Aggregate Commonwealth pension obligations include obligations with respect to MSERS, MTRS, Boston teachers, and local cost-of-living adjustments from 1981 to 1996.

Historical Pension Funding Progress for the Last Ten Fiscal Years - Market Value
(in thousands, except for percentages)

	<u>Market Value of Plan Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded Actuarial Accrued Liability (UAAL)</u>	<u>Funded Ratio</u>	<u>Annual Covered Payroll</u>	<u>UAAL as % of Covered Payroll</u>
<u>MSERS</u>						
Actuarial Valuation as of Jan. 1						
2019	\$26,384,598	\$42,595,224	\$16,210,626	61.9%	\$6,354,473	255.1%
2018	27,735,916	40,456,611	12,720,695	68.6	6,155,194	206.7
2017	24,366,420	38,316,719	13,950,299	63.6	5,927,012	235.4
2016	23,176,451	36,966,278	13,789,827	62.7	5,792,288	238.1
2015	23,739,487	33,679,150	9,939,663	70.5	5,591,911	177.8
2014	22,721,053	30,679,600	7,958,547	74.1	5,344,510	148.9
2013	20,405,004	29,385,442	8,980,438	69.4	5,183,195	173.3
2012	18,643,313	27,784,731	9,141,418	67.1	4,922,388	147.8
2011	19,313,545	26,242,776	6,929,231	73.6	4,808,250	144.1
2010	17,290,056	24,862,421	7,572,365	69.5	4,711,563	160.7
<u>MTRS</u>						
Actuarial Valuation as of Jan. 1						
2019	\$27,090,335	\$53,864,141	\$26,773,806	50.3%	\$7,074,960	378.4%
2018	28,597,562	51,653,285	23,055,723	55.4	6,829,012	337.6
2017	25,225,451	49,193,503	23,968,052	51.3	6,583,871	364.0
2016	24,308,553	46,562,807	22,254,254	52.2	6,388,732	348.3
2015	25,046,692	44,115,769	19,069,077	56.8	6,204,274	307.4
2014	24,183,391	40,741,695	16,558,304	59.4	5,962,650	277.7
2013	21,934,211	39,135,218	17,201,007	56.0	5,783,294	297.4
2012	20,128,614	36,483,027	16,354,413	55.2	5,655,353	289.2
2011	21,016,320	34,890,991	13,874,671	60.2	5,558,311	249.6
2010	19,329,511	33,738,966	14,409,455	57.3	5,509,698	261.5
<u>Aggregate Commonwealth Pension Obligations (1)</u>						
Actuarial Valuation as of Jan. 1						
2019	\$55,099,732	\$100,650,744	\$45,551,012	54.7%	\$13,994,455	325.5%
2018	58,037,680	96,316,894	38,279,214	60.3	13,531,845	282.9
2017	51,107,139	91,573,998	40,466,859	55.8	13,059,709	309.9
2016	48,943,080	87,401,722	38,458,642	56.0	12,702,727	302.8
2015	50,289,770	81,535,003	31,245,233	61.7	12,302,162	254.0
2014	48,350,920	74,936,994	26,586,074	64.5	11,793,788	225.4
2013	43,760,381	71,865,832	28,105,451	60.9	11,408,407	246.4
2012	39,946,984	67,546,587	27,599,603	59.1	11,011,466	250.6
2011	41,482,279	64,219,135	22,736,856	64.6	10,811,975	210.3
2010	37,808,823	61,575,676	23,766,853	61.4	10,655,881	223.0

SOURCE: Public Employee Retirement Administration Commission.

(1) Aggregate Commonwealth pension obligations include obligations with respect to MSERS, MTRS, Boston teachers, and local cost-of-living adjustments from 1981-1996.

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Annual Required Contributions

The following table sets forth the annual required contribution (ARC) by the Commonwealth for each of the fiscal years indicated and the actual contributions made. For fiscal 2014 and prior valuations, the ARC was developed under Governmental Accounting Standards Board (GASB) Statement No. 27 for accounting purposes. The ARC is no longer applicable with the implementation of GASB 67/68, as described below, but is shown for comparison. As noted above, the Commonwealth also develops a revised funding schedule by statute at least every three years, and the Commonwealth made the full contribution required, under the then-current funding schedule, for each year displayed in the table.

Annual Required Contributions and Other Pension Contributions (in thousands, except for percentages)

	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>
Annual required contribution (ARC) (1)	\$2,600,000	\$3,060,000	\$3,292,000	\$3,500,000	\$3,800,000
Contributions made (2)	<u>\$2,001,093</u>	<u>\$2,198,093</u>	<u>\$2,394,000</u>	<u>\$2,608,000</u>	<u>\$2,841,525</u>
% of ARC funded for the fiscal year	77%	72%	73%	75%	75%

SOURCE: Public Employee Retirement Administration Commission.

- (1) The ARC is developed assuming amortization of the unfunded actuarial liability on a 4% annual increasing basis through fiscal 2040. This is the minimum allowable funding schedule for local systems under state pension law. The ARC calculation for fiscal 2016 does not include costs associated with the ERIP because such costs had not yet been identified at the time the calculation was made.
- (2) The amounts shown for contributions made in fiscal 2016 and fiscal 2017 include the costs associated with the early retirement incentive program (ERIP).

The decrease from fiscal 2016 to fiscal 2017 shown above in the percentage of the ARC funded reflects the assumptions and plan changes described in the January 1, 2016 valuation report that increased plan liabilities. Similarly, assumption changes made in the 2018 and 2019 valuations affect the percentage of the ARC funded in fiscal 2019 and fiscal 2020; if there had been no assumption changes in the 2019 valuation, the percentage of the ARC funded would have been 76%. This percentage is generally expected to increase each fiscal year until contributions exceeds the ARC, although changes to actuarial assumptions and actuarial gains or losses could affect such results.

The standards currently applicable to the accounting and financial reporting of the Commonwealth's pension obligations are GASB Statement No. 67 and GASB Statement No. 68. GASB Statement No. 67, *Financial Reporting for Pension Plans*, which was effective for the Commonwealth's fiscal 2014 CAFR, establishes new standards for defined benefit pension plan accounting and reporting. GASB 67 also requires an analysis to determine the sensitivity of the NPL to changes in the discount rate, if it were calculated one percentage point lower or higher. Such sensitivity analysis is in Note 9C to Basic Financial Statements to the fiscal 2019 CAFR. See Exhibit C – Comprehensive Annual Financial Report for the year ended June 30, 2019. GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, which was effective for the Commonwealth's fiscal 2015 CAFR, requires changes to governments' reporting of and inclusion of pension assets and liabilities in their annual CAFRs. GASB 68 requires governments to report in their statements of net position (or balance sheet) a net pension liability, defined as the difference between the total pension liability (the present value of projected benefit payments to employees based on their past service) and the assets (mostly investments reported at fair value) set aside in a trust and restricted to paying benefits to current employees, retirees, and their beneficiaries. The GASB 68 requires recognition in the financial statements of pension expense. The rate used to discount projected benefit payments to their present value is based on a single rate that reflects (a) the long-term expected rate of return on plan investments as long as the plan net position is projected under specified conditions to be sufficient to pay pensions of current employees and retirees and the pension plan assets are expected to be invested using a strategy to achieve that return and (b) a yield or index rate on tax-exempt 20-year AA-or-higher rated municipal bonds to the extent that the conditions for use of the long-term expected rate of return are not met.

The tables that follow show certain pension-related information for both the MTRS and the MSERS as required by GASB 67 and GASB 68 and as shown in the Commonwealth's fiscal 2019 CAFR. The MTRS and MSERS tables subtitled "Schedule of Changes in the Net Pension Liability and Related Ratios" show the beginning and ending liabilities and assets for the MTRS and MSERS, as well as both systems' unfunded pension liability, or

net pension liability (NPL), with the NPL being the amount that the Commonwealth records on its Statement of Net Position as its unfunded pension liability. The table also shows the components of the change in the NPL between the beginning (July 1) and end (June 30) for fiscal years 2015 through 2019.

The tables subtitled “Pension Expense and Deferred Outflows/Inflows of Resources” shows pension expenses that, under GASB 68, are recognized in the fiscal 2019 CAFR. Additional information regarding the inflows and outflows that under GASB 68 are recognized either in the fiscal 2019 CAFR or are deferred and projected to be recognized in the CAFRs for future fiscal years can be found in Note 9C to Basic Financial Statements to the fiscal 2019 CAFR. See Exhibit C – Comprehensive Annual Financial Report for the year ended June 30, 2019.

The methodology required by GASB 68 to calculate the Commonwealth’s NPL and other pension-related measures (as reflected in the tables below) is in several respects different from the methodology used by PERAC in calculating the Commonwealth’s unfunded pension liability in its annual actuarial valuation. The most important difference between the two methodologies is that GASB 68 requires the value of pension plan assets be recorded at market value as of June 30 of each fiscal year, meaning that investment gains and losses are recognized immediately, while the actuarial value of assets used by PERAC in calculating the Commonwealth’s unfunded liability is measured using a five-year smoothing methodology, meaning that investment gains and losses are amortized over five years. GASB 68 also requires governments to defer certain amounts to the extent that actual experience differs from the assumptions used to calculate pension liabilities, actual investment returns differ from projected earnings, or assumption changes result in changes in pension liabilities. Therefore, the NPL information set out in the tables below based on GASB 68 requirements is not strictly comparable to the unfunded liability and other pension-related information in PERAC’s annual actuarial valuations.

Under GASB 68, in order to provide adequate time for pension plans to distribute pension-related information to pension plan participants (which include state authorities, local school collaboratives and municipal governments) for use in their annual CAFRs, governments are permitted to use the prior year’s NPL and other pension-related measures in the current year’s CAFR. In conformance with GASB 68, the Commonwealth determined that for the fiscal 2019 CAFR it would use the pension valuation information as of June 30, 2018. The Commonwealth will use the June 30, 2019 pension information in its fiscal 2020 CAFR.

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GASB 67 Information for the Massachusetts Teachers' Retirement System
Schedule of Changes in the Net Pension Liability and Related Ratios

Fiscal Years 2018 through 2015
(in thousands, except for percentages)

	<u>Fiscal 2019</u>	<u>Fiscal 2018</u>	<u>Fiscal 2017</u>	<u>Fiscal 2016</u>	<u>Fiscal 2015</u>
Total pension liability (as of July 1)	\$52,503,000	\$50,024,000	\$47,300,000	\$45,918,711	\$41,435,000
Service cost	949,262	901,234	891,760	843,800	768,032
Interest	3,762,191	3,633,027	3,505,761	3,402,525	3,166,728
Differences between expected and actual experience	50,910	92,317	47,046	(74,025)	153,000
Changes of assumptions (1), (2), (3), (4), (5)	577,000	845,000	1,176,000	-	3,080,000
Benefit payments, including refunds of member contributions	<u>(3,092,363)</u>	<u>(2,992,578)</u>	<u>(2,896,567)</u>	<u>(2,791,011)</u>	<u>(2,684,049)</u>
Net change in total pension liability	<u>2,248,000</u>	<u>2,479,000</u>	<u>2,724,000</u>	<u>1,381,289</u>	<u>4,483,711</u>
Total pension liability (as of June 30)	<u>\$54,751,000</u>	<u>\$52,503,000</u>	<u>\$50,024,000</u>	<u>\$47,300,000</u>	<u>\$45,918,711</u>
Plan fiduciary net position (as of July 1)	\$28,791,711	\$27,138,609	\$24,942,072	\$25,429,068	\$25,538,646
Contributions:					
Non-employer - Commonwealth	1,443,710	1,314,783	1,235,515	1,124,583	1,021,930
Plan members	782,431	755,688	730,212	699,422	669,941
Other additions	<u>234,532</u>	<u>231,734</u>	<u>223,746</u>	<u>202,796</u>	<u>190,925</u>
Total contributions	2,460,673	2,302,205	2,189,473	2,026,801	1,882,796
Net investment income	1,584,770	2,542,576	3,100,352	441,363	845,503
Benefit payments, including refunds of plan member contributions	<u>(3,092,363)</u>	<u>(2,992,578)</u>	<u>(2,896,567)</u>	<u>(2,791,011)</u>	<u>(2,684,049)</u>
Administrative expense	(18,324)	(19,528)	(24,053)	(24,220)	(23,444)
Other changes	<u>(189,487)</u>	<u>(179,573)</u>	<u>(172,668)</u>	<u>(139,929)</u>	<u>(130,384)</u>
Net change in plan fiduciary net position	<u>745,269</u>	<u>1,653,102</u>	<u>2,196,537</u>	<u>(486,996)</u>	<u>(109,578)</u>
Plan fiduciary net position (as of June 30)	<u>\$29,536,980</u>	<u>\$28,791,711</u>	<u>\$27,138,609</u>	<u>\$24,942,072</u>	<u>\$25,429,068</u>
Plan net pension liability/(asset) (as of June 30)	<u>\$25,214,020</u>	<u>\$23,711,289</u>	<u>\$22,885,391</u>	<u>\$22,357,928</u>	<u>\$20,489,643</u>
Plan fiduciary net position as a percentage of the total pension liability	53.9%	54.8%	54.3%	52.7%	55.4%
Covered employee payroll (6)	<u>\$7,074,960</u>	<u>\$6,829,012</u>	<u>\$6,583,871</u>	<u>\$6,388,732</u>	<u>\$6,204,274</u>
Net pension liability/(asset) as a percentage of covered employee payroll	356.4%	347.2%	347.6%	350.0%	330.3%

SOURCE: Office of the Comptroller

- (1) The changes in assumptions in fiscal 2015 were due to (i) a decrease in the investment rate of return (discount rate) from 8.0% to 7.75% in the January 1, 2015 actuarial valuation and (ii) improved future mortality.
- (2) The changes in assumptions in fiscal 2017 were due to improved future mortality.
- (3) Subsequent to the issuance of the fiscal 2015 CAFR, the Commonwealth further reduced its discount rate to 7.50% from 7.75%. Consequently, the Commonwealth has adjusted certain information as previously reported in the fiscal 2015 CAFR. This change resulted in an increase of approximately \$1.190 billion which affected the net pension liability as of and for the fiscal year ended June 30, 2015.
- (4) The changes in assumptions in fiscal 2018 were due to a decrease in the discount rate to 7.35% from 7.50%.
- (5) The changes in assumptions in fiscal 2019 were due to a decrease in the discount rate to 7.25% from 7.35%.
- (6) Reflects compensation in the January 1 actuarial valuation for each fiscal year.

GASB 68 Information for the Massachusetts Teachers' Retirement System

Pension Expense and Deferred Outflows/Inflows of Resources

(in thousands)

Pension Expense for Fiscal 2019 (1)

Service cost	\$901,234
Interest	3,633,027
Employee contributions	(755,688)
Projected earnings on plan investments	(1,944,400)
Recognized portion of difference between expected and actual experience	35,461
Recognized portion of difference in projected and actual earnings on investments	(276,886)
Recognized portion of plan benefit changes	-
Recognized portion of assumption changes	842,681
Transfers and reimbursements from other systems	(75,734)
Member make up, redeposit and payments from rollovers	(17,856)
Other reimbursements	(6,846)
Administrative expense	19,528
Other changes (net)	<u>48,275</u>
Pension expense	<u>\$2,402,796</u>

(1) In conformance with GASB 68, pension valuation information as of June 30, 2018 is used in the fiscal 2019 CAFR. Pension valuation information as of June 30, 2019 will be used in the fiscal 2020 CAFR.

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GASB 67 Information for the State Employees' Retirement System
Schedule of Changes in the Net Pension Liability and Related Ratios

Fiscal Year 2019 through 2015

(in thousands, except for percentages)

	<u>Fiscal 2019</u>	<u>Fiscal 2018</u>	<u>Fiscal 2017</u>	<u>Fiscal 2016</u>	<u>Fiscal 2015</u>
Total pension liability (as of July 1)	\$41,225,000	\$39,107,000	\$37,760,000	\$35,425,414	\$31,355,000
Service cost	897,600	856,200	855,440	813,975	700,012
Interest	2,965,890	2,852,239	2,813,374	2,638,929	2,411,551
Changes in benefit terms (1)	-	-	10,000	400,000	230,302
Differences between expected and actual experience	303,066	102,008	(428,232)	589,009	275,000
Changes of assumptions (2), (3), (4), (5), (6)	434,000	622,000	304,000	-	2,330,000
Benefit payments, including refunds of member contributions	<u>(2,427,556)</u>	<u>(2,314,447)</u>	<u>(2,207,582)</u>	<u>(2,107,327)</u>	<u>(1,876,451)</u>
Net change in total pension liability	<u>2,173,000</u>	<u>2,118,000</u>	<u>1,347,000</u>	<u>2,334,586</u>	<u>4,070,414</u>
Total pension liability (as of June 30)	<u>\$43,398,000</u>	<u>\$41,225,000</u>	<u>\$39,107,000</u>	<u>\$37,760,000</u>	<u>\$35,425,414</u>
Plan fiduciary net position (as of July 1)	\$27,995,021	\$26,282,232	\$23,971,156	\$24,042,585	\$23,930,895
Contributions:					
Employers – Commonwealth and MassDOT	919,545	840,990	716,266	660,818	601,931
Non-employer contributions – Commonwealth	37,359	35,184	28,455	21,830	18,040
Employers and non-employers – other	10,191	9,564	7,999	16,642	15,808
ERIP funding contribution - Commonwealth	28,724	28,724	29,093	29,093	-
Plan members	632,730	600,705	604,772	591,948	549,493
Other additions	<u>104,765</u>	<u>118,124</u>	<u>232,548</u>	<u>397,077</u>	<u>92,503</u>
Total contributions	<u>1,733,314</u>	<u>1,633,291</u>	<u>1,619,133</u>	<u>1,717,408</u>	<u>1,277,775</u>
Net investment income	1,543,398	2,460,748	2,987,632	422,938	800,886
Benefit payments, including refunds of plan member contributions	<u>(2,427,556)</u>	<u>(2,314,447)</u>	<u>(2,207,582)</u>	<u>(2,107,327)</u>	<u>(1,876,451)</u>
Administrative expense	(15,853)	(16,369)	(30,030)	(20,624)	(15,966)
Other changes	<u>(64,528)</u>	<u>(50,434)</u>	<u>(58,077)</u>	<u>(83,824)</u>	<u>(74,554)</u>
Net change in plan fiduciary net position	<u>768,775</u>	<u>1,712,789</u>	<u>2,311,076</u>	<u>(71,429)</u>	<u>111,690</u>
Plan fiduciary net position (as of June 30)	<u>\$28,763,796</u>	<u>\$27,995,021</u>	<u>\$26,282,232</u>	<u>\$23,971,156</u>	<u>\$24,042,585</u>
Plan net pension liability/(asset) (as of June 30)	<u>\$14,634,204</u>	<u>\$13,229,979</u>	<u>\$12,284,768</u>	<u>\$13,788,844</u>	<u>\$11,382,829</u>
Plan fiduciary net position as a percentage of the total pension liability	66.3%	67.9%	67.2%	63.5%	67.9%
Covered employee payroll (7)	<u>\$6,354,473</u>	<u>\$6,155,194</u>	<u>\$5,927,012</u>	<u>\$5,792,288</u>	<u>\$5,591,911</u>
Net pension liability/(asset) as a percentage of covered employee payroll	230.3%	214.9%	216.4%	238.1%	203.6%

SOURCE: Office of the Comptroller

- (1) Fiscal 2015 change in benefit terms reflects costs associated with the retirement incentive program approved in May, 2015. Fiscal 2016 change in benefit terms reflect costs related to Optional Retirement Plan members transferring to the State Employees' Retirement System pursuant to Chapter 176 of the Acts of 2011. Fiscal 2017 change in benefit terms reflect retirement incentive program for certain employees of the highway division of the Massachusetts Department of Transportation.
- (2) The changes in assumptions in fiscal 2015 were due to (1) a decrease in the investment rate of return (discount rate) from 8.0% to 7.75% in the January 1, 2015 actuarial valuation and (2) improved future mortality.

- (3) Subsequent to the issuance of the fiscal 2015 CAFR, the Commonwealth further reduced its discount rate to 7.50% from 7.75%. Consequently, the Commonwealth has adjusted certain information as previously reported in the fiscal 2015 CAFR. This change resulted in an increase of approximately \$933 million which affected the net pension liability as of and for the fiscal year ended June 30, 2015.
- (4) The changes in assumptions in fiscal 2017 were due to improved future mortality.
- (5) The changes in assumptions in fiscal 2018 were due to (i) a decrease in the discount rate to 7.35% from 7.50% in the January 1, 2018 actuarial valuation and (ii) a change in the mortality assumption for disabled members.
- (6) The changes in assumptions in fiscal 2019 were due to a decrease in the discount rate to 7.25% from 7.35%.
- (7) Reflects compensation in the January 1 actuarial valuation for each fiscal year.

**GASB 68 Information for the State Employees' Retirement System
Pension Expense and Deferred Outflows/Inflows of Resources**

(in thousands)

Pension Expense for Fiscal 2019 (1)

Service cost	\$856,200
Interest	2,852,239
Employee contributions	(600,705)
Projected earnings on plan investments	(1,883,541)
Recognized portion of difference between expected and actual experience	99,021
Recognized portion of difference in projected and actual earnings on investments	(270,154)
Recognized portion of assumption change	615,837
Change in benefit terms	-
Transfers and reimbursements from other systems	(41,747)
Member make up, redeposit and payments from rollovers	(24,802)
COLA reimbursements	(19,500)
Other reimbursements	(32,075)
Administrative expense	16,369
Other expenses that do not reduce the total pension liability	<u>50,433</u>
Pension expense	<u>\$1,617,575</u>

- (1) In conformance with GASB 68, pension valuation information as of June 30, 2018 is used in the fiscal 2019 CAFR. Pension valuation information as of June 30, 2019 will be used in the fiscal 2020 CAFR.

Prospective Funded Status of the Pension System

The following tables project the funded status of the MSERS', the MTRS', the Boston teachers', and the Commonwealth's aggregate pension liabilities through fiscal 2024. Actuarial results reflect assumptions outlined in the January 1, 2019 actuarial valuation report, except that the fiscal 2020 assets are as of December 31, 2019. The 2019 actuarial valuation reflects a 7.25% investment return assumption. All projections are estimates and will vary based on actual investment returns and plan experience. The projections shown in the table assume that all assumptions will be realized exactly. The actuarially determined contributions reflect the funding schedule filed by the Secretary of Administration and Finance on January 15, 2020. Under the funding schedule, appropriations increase by 9.63% per year until fiscal 2035, with an increase of 9.56% in fiscal 2036. The allocations to individual retirement systems for fiscal 2020 reflect the amounts identified in a memorandum dated May 9, 2019 from the Executive Director of PERAC to the Secretary of Administration and Finance. The allocations to individual retirement systems for fiscal 2021 and beyond are estimated. Actuarial figures other than the actuarially determined contribution reflect January 1 estimates of the fiscal year shown.

The actuarial value of assets on January 1, 2019 was 102.8% of the market value of assets. The actuarial value of assets on January 1, 2020 was 94.9% of the market value of assets. The actuarial value of assets on January 1, 2021 is assumed to be 96.8% of the market value of assets. The actuarial value of assets on January 1, 2022 is assumed to be 98.5% of the market value of assets. The actuarial value of assets on January 1, 2023 is assumed to be 98.6% of the market value of assets. The actuarial value of assets on January 1, 2024 is assumed to be 100.0% of the

market value of assets. The actuarial value of assets is projected using the past history of PRIT Fund cash flows to estimate future cash flows.

The actuarial liability is projected from January 1, 2019 to January 1, 2020 using standard methodology. Projections beyond January 1, 2020 reflect the same percentage increase. Past projections used slightly decreasing percentage increases to reflect the impact of pension reform legislation enacted in 2011, as well as employee contribution increases as a percentage of pay.

The projected actuarially determined contribution (ADC) for MSERS, MTRS and Boston teachers for fiscal 2021 and beyond are estimates. The actual fiscal 2021 ADC for MSERS, MTRS and Boston teachers is yet to be determined.

For the purpose of calculating the actuarially determined contribution as a percentage of total budgeted operating funds expenditures, the Executive Office for Administration and Finance used the 4.5% compound annual growth rate of budgeted revenues from fiscal 2010 to estimated fiscal 2020. This does not represent an official forecast of the growth in Total Budgeted Expenditures and Other Uses by the Executive Office for Administration and Finance.

Prospective Funded Status of the Pension System (in millions, except for percentages) (1)

<u>Fiscal Year</u>	<u>Actuarially Determined Contribution (ADC)</u>	<u>Actuarial Value of Assets</u>	<u>Actuarial Accrued Liability</u>	<u>Unfunded Actuarial Liability</u>	<u>Funded Ratio (2)</u>	<u>ADC as a % of Total Budgeted Operating Funds Expenditures</u>
<u>MSERS (3)</u>						
2019	\$993	\$27,136	\$42,595	\$15,459	63.7%	2.1%
2020	1,084	28,335	44,219	15,884	64.1	2.2
2021	1,189	30,073	45,988	15,915	65.4	2.3
2022	1,304	31,895	47,828	15,933	66.7	2.4
2023	1,429	33,318	49,741	16,423	67.0	2.6
2024	1,567	35,303	51,731	16,428	68.2	2.7
<u>MTRS (3)</u>						
2019	\$1,423	\$27,854	\$53,864	\$26,010	51.7%	3.0%
2020	1,558	29,077	55,638	26,561	52.3	3.2
2021	1,708	30,797	57,474	26,677	53.6	3.3
2022	1,873	32,590	59,371	26,781	54.9	3.5
2023	2,053	33,966	61,330	27,364	55.4	3.7
2024	2,251	35,910	63,354	27,444	56.7	3.9
<u>Boston Teachers (3)</u>						
2019	\$143	\$1,670	\$4,061	\$2,391	41.1%	0.3%
2020	157	1,744	4,175	2,431	41.8	0.3
2021	172	1,849	4,300	2,451	43.0	0.3
2022	189	1,958	4,429	2,471	44.2	0.4
2023	207	2,041	4,562	2,521	44.7	0.4
2024	227	2,159	4,699	2,540	45.9	0.4
<u>Aggregate Commonwealth Pension Obligations (4)</u>						
2019	\$2,608	\$56,661	\$100,650	\$43,989	56.3%	5.6%
2020	2,842	59,156	104,151	44,995	56.8	5.8
2021	3,115	62,719	107,872	45,153	58.1	6.1
2022	3,415	66,443	111,728	45,285	59.5	6.4
2023	3,744	69,325	115,725	46,400	59.9	6.7
2024	4,105	73,372	119,868	46,496	61.2	7.0

SOURCE: Executive Office for Administration and Finance and Public Employee Retirement Administration Commission.

- (1) Actuarial results reflect figures and assumption outlined in the January 1, 2019 Commonwealth Actuarial Valuation Report, except that fiscal 2020 assets are as of December 31, 2019. The assumed investment rate of return is 7.25%.
- (2) The Funded Ratio is equal to the Actuarial Value of Assets divided by the Actuarial Accrued Liability.
- (3) Fiscal 2021 and beyond are estimates; actual fiscal 2021 ADC for SRS, MTRS and Boston Teachers is yet to be determined.

- (4) Aggregate Commonwealth pension obligations include obligations with respect to MSERS, MTRS, Boston teachers, and local cost-of-living adjustments.

PRIT Fund Investments

The mission of the PRIM Board is to manage the PRIT Fund so as to ensure that pension assets are well invested so that current and future benefit obligations are adequately funded in a cost-effective manner. The PRIM Board therefore seeks to maximize the total return on investment, within acceptable levels of risk and cost for an approximately 60% funded public pension fund. Under current law and projections, by the year 2040 the PRIT Fund is expected to have grown, through annual payments in accordance with a legislatively approved funding schedule and through the total investment return of the fund, to an amount sufficient to meet the then existing pension obligations of the Commonwealth.

The PRIM Board recognizes that over the long-term, asset allocation is the single greatest contributor of return and risk to the PRIT Fund. The asset allocation plan adopted by the Board embodies its decisions about what proportions of the PRIT Fund are to be invested in global equity and fixed income securities, alternative investments such as real estate, private equity and portfolio completion strategies, and, where appropriate, the various sub-asset classes of each category. At reasonable intervals of not more than three to five years, the Board conducts a comprehensive review of its asset allocation plan and its underlying assumptions, including the Commonwealth’s current and projected pension assets and liabilities, long-term capital markets rate of return assumptions, and the Board’s risk tolerances. The comprehensive review identifies a reasonable time horizon and investment strategy for matching assets and liabilities, a fund-level total return target, and an optimal allocation among available asset classes and sub-asset classes. The Board examines the asset allocation plan annually and makes adjustments to the plan as may be appropriate given the PRIT Fund’s long-term nature and objectives. The target rate of return is 7.25%, which matches the expected long-term rate of return on assets to be assumed by PERAC as of the January 1, 2019 Actuarial Valuation Report. The PRIM Board does not determine this target rate of return, but this target rate of return is a key input into the PRIM Board’s asset allocation decisions.

The actual asset allocation mix invariably deviates from the PRIT Fund’s allocation targets due to market movement, cash flows, and manager performance. Material deviations from the asset allocation targets can alter the expected return and risk of the PRIT Fund. The following table sets forth the actual PRIT Fund asset allocation for each of the most recent five fiscal years, as well as the current target ranges. The actual allocation figures are as of June 30 for each of the years indicated. The target ranges are those contained in the asset allocation plan, which was most recently approved on February 26, 2019.

PRIT Fund Asset Allocation

	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>Target Ranges</u>
Global Equity	42.7%	42.2%	45.7%	41.9%	43.2%	34.0 – 44.0%
Core Fixed Income	13.7	13.9	12.0	12.8	13.6	12.0 – 18.0
Value-Added Fixed Income	8.3	8.4	8.1	8.0	7.9	5.0 – 11.0
Private Equity	11.3	11.1	10.6	10.8	11.3	10.0 – 16.0
Real Estate	10.0	10.4	9.1	9.0	9.4	7.0 – 13.0
Timber/Natural Resources	3.8	3.3	3.7	3.4	3.9	1.0 – 7.0
Portfolio Completion Strategies	9.3	9.8	9.5	13.4	10.0	8.0 – 14.0

SOURCE: Pension Reserves Investment Management Board.

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The following table sets forth the actual investment rates of return for the assets in the PRIT Fund for the last 10 fiscal years:

PRIT Fund Rates of Return (Gross of Fees)

<u>Fiscal Year</u>	<u>Rate of Return</u>	<u>Fiscal Year</u>	<u>Rate of Return</u>
2019	6.12%	2014	17.53%
2018	9.97	2013	12.69
2017	13.20	2012	(0.08)
2016	2.29	2011	22.30
2015	3.86	2010	12.82
	3yr average		9.72%
	5yr average		7.01%
	10yr average		9.87%

SOURCE: Pension Reserves Investment Management Board.

Other Post-Employment Benefit Obligations (OPEB)

In addition to providing pension benefits, the Commonwealth is statutorily required to provide certain health care and life insurance benefits (“other post-employment benefits” or “OPEB”) for retired employees of the Commonwealth, as well as retired employees of housing authorities, redevelopment authorities and certain other governmental agencies (offline agencies). Substantially all of the Commonwealth’s employees may become eligible for these benefits if they reach retirement age and eligibility while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefit costs. The Commonwealth is reimbursed for the cost of benefits to retirees of the eligible authorities and non-state agencies. (Although, as noted above, the Commonwealth is required to pay pensions to retired municipal teachers, the Commonwealth has no OPEB obligations with respect to retired municipal teachers.)

The GIC manages the Commonwealth’s OPEB for all state and certain agency employees and retirees. The GIC has representation on the Board of Trustees of the State Retiree Benefits Trust (SRBT). The SRBT is set up to pay for former state employees’ OPEB benefits and to invest state and certain municipalities funds that have been set aside to pay for OPEB benefits and the cost to administer those funds and can only be dissolved when all such health care and other non-pension benefits, current and future, have been paid or defeased.

The Commonwealth also oversees the management and administration of the Massachusetts Turnpike Authority Retiree Benefits Trust, which is restricted for OPEB benefits of the retirees of the former Massachusetts Turnpike Authority.

Employer and employee contribution rates are set by statute. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2019, Commonwealth participants contributed 10% to 25% of premium costs, depending on the date of hire and whether the participant is active, retiree or survivor status. See “COMMONWEALTH EXPENDITURES – Employee Benefits; *Group Insurance*.” According to the most recent actuarial valuation as of June 30, 2019, the GIC had 158,078 state enrollees as of January 1, 2019. As of that date, the Commonwealth was responsible for the OPEB liability of 129,046 of those enrollees.

In June, 2015 the GASB issued two new standards that change the accounting and financial reporting for the Commonwealth’s OPEB obligations, GASB Statement No. 74, *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans*, which was effective for fiscal 2017 and GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which was effective for fiscal 2018. Under GASB 74, OPEB plans are required to discount retiree health care liabilities, based on a blend of 30-year municipal bond rates and the expected return for assets in the trust, “blended,” or weighted, by the funding level of the OPEB trust relative to OPEB liabilities. In fiscal 2019, the rate of return for assets in the OPEB trust was assumed to be 7.25%, consistent with the rate used for the Commonwealth’s pension trust, while the relevant municipal bond rate was 3.51%, resulting in a 3.69% blended discount rate, weighted towards the lower municipal bond rate due to the

relatively low funding level of the OPEB trust in relation to the Commonwealth's OPEB liability. GASB 75 requires governments to report in their statements of net position (or balance sheet) a net OPEB liability, defined as the difference between the total OPEB liability (the present value of projected benefit payments to retirees for certain health care benefits based on past service) and the assets (mostly investments reported at fair value) set aside in a trust and restricted to paying benefits to retirees or their beneficiaries. The new standard also requires recognition in the statement of activities of net OPEB expense. The rate used to discount projected benefit payments to their present value is based on a single rate that reflects (a) the long-term expected rate of return on plan investments as long as the plan net position is projected under specified conditions to be sufficient to make projected benefit payments and the OPEB plan assets are expected to be invested using a strategy to achieve that return and (b) a yield or index rate on tax-exempt 20-year AA-or-higher rated general obligation municipal bonds to the extent that the conditions for use of the long-term expected rate of return are not met. This statement is similar to the requirements of GASB 68, *Accounting and Financial Reporting for Pensions*, which was first implemented in the fiscal 2015 CAFR.

The GASB 74 actuarial valuation for fiscal year ended June 30, 2019, which was issued on January 23, 2020, is available at: <http://www.macomptroller.info/comptroller/docs/reports-audits/opeb/GASB-74-Report-June-30-2019.pdf>. According to the report, the Commonwealth's unfunded OPEB liability, assuming no pre-funding and using a discount rate of 3.69%, was approximately \$12.224 billion as of June 30, 2019.

The independent actuarial report covers only the Commonwealth's OPEB obligations for Commonwealth employees and their survivors. Municipalities and authorities of the Commonwealth, even if their health care coverage is administered by the Group Insurance Commission, perform their own valuations, as the Commonwealth acts only as an agent for the entities that participate in the GIC with respect to providing OPEB health insurance benefits and does not assume the risk or financial burden of their health care costs.

The State Retiree Benefits Trust Fund was created to consolidate the state's retiree funding efforts and better project future liabilities, and beginning in fiscal 2008, expenses for current state retirees' healthcare were paid from the fund. Also in fiscal 2008, the fund benefited from a one-time transfer of approximately \$329 million from the Health Care Security Trust. The fiscal 2012 budget included a requirement that, beginning in fiscal 2013, 10% of the annual tobacco settlement payments be transferred to the State Retiree Benefits Trust Fund, with the amount deposited to the State Retiree Benefits Trust Fund to increase by 10% increments annually thereafter until 100% of all payments would be transferred to that Fund, subject to such requirement being subsequently modified or waived by the Legislature. In fiscal 2016, 2017, 2018 and 2019, the required transfer was modified to 30%, 10%, 30% and 30%, respectively, of annual tobacco settlement payments. Commencing with fiscal 2014, the budget also included a provision that funded a portion of the scheduled transfer to the State Retiree Benefits Trust Fund from certain unspent appropriations, to the extent that they were available, with any balance to be made up through a transfer of tobacco settlement payments. State finance law also provides for annual deposits in to the State Retiree Benefits Trust Fund in the amount of 5% of any capital gains tax revenues transferred to the Stabilization Fund in excess of the statutory capital gains threshold.

The following table shows transfers to the State Retiree Benefits Trust Fund since fiscal 2013.

State Retiree Benefits Trust Fund
(in millions)

<u>Fiscal Year</u>	<u>Unexpended Appropriations</u>	<u>Tobacco Settlement Proceeds</u>	<u>Capital Gains Tax Revenue</u>
2013	-	\$23.5	\$23.1
2014	\$56.4	15.0	2.3
2015 ⁽¹⁾	44.0	29.7	-
2016 ⁽²⁾	77.3	-	-
2017 ⁽³⁾	25.4	-	-
2018	53.1	19.8	26.0
2019	38.9	32.1	42.4

SOURCE: Office of the Comptroller

(1) Requirement to deposit 5% of capital gains tax revenues was suspended by Legislature for fiscal 2015.

(2) The fiscal 2016 budget also included a provision that any shortfall in the scheduled amount be paid from a transfer of fiscal 2016 tax revenues exceeding \$100 million generated by a tax amnesty program that was also authorized in the fiscal 2016 budget, prior to transferring tobacco settlement proceeds. The requirement to deposit 5% of capital gains tax revenues was suspended by Legislature for fiscal 2016.

(3) Capital gains tax revenues did not exceed statutory capital gains threshold in fiscal 2017, therefore no deposit was made.

The plan net position as of June 30, 2019 was approximately \$1.368 billion.

State Retiree Benefits Trust
(in thousands, except for percentages)

<u>Actuarial Valuation as of June 30 (1):</u>	<u>Plan Net Position</u>	<u>Total OPEB Liability</u>	<u>Net (Unfunded) OPEB Liability</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>Net OPEB liability as % of Covered Payroll</u>
2019	\$1,368,548	\$13,592,288	\$12,223,740	10.1%	\$6,354,473	192.4%
2018	1,187,569	16,096,773	14,909,204	7.4	6,155,914	242.2
2017	996,407	18,480,936	17,484,529	5.4	5,927,012	295.0

<u>Actuarial Valuation as of January 1 (2):</u>	<u>Actuarial Value of Plan Assets</u>	<u>Actuarial Liability</u>	<u>Accrued Unfunded Liability (UAAL)</u>	<u>Actuarial Ratio Covered</u>	<u>Funded Payroll</u>	<u>Annual Covered Payroll as % of UAAL</u>
2017	\$817,400	\$20,263,500	\$19,446,100	4.0%	\$5,927,012	328.1%
2016	760,400	17,082,900	16,322,500	4.5	5,792,288	281.8
2015	610,000	16,502,800	15,892,800	3.7	5,591,911	284.2
2014	511,200	15,670,200	15,159,000	3.3	5,344,500	283.6
2013	406,700	15,784,100	15,377,400	2.6	5,183,195	296.7
2012	360,500	16,559,400	16,298,900	2.2	4,922,388	331.1
2011	350,500	16,568,600	16,218,100	2.1	4,808,250	337.3
2010	309,800	15,166,300	14,856,500	2.0	4,711,563	315.3
2009	273,500	15,305,100	15,031,600	1.8	4,712,655	319.0
2008	-	9,812,000	9,812,000	0.0	4,574,233	214.5

SOURCE: Office of the Comptroller

(1) Amounts are as of June 30 and prepared in accordance with GASB Statement No. 74, effective as of fiscal 2017.

(2) Amounts are as of January 1 and prepared in accordance with GASB Statement No. 43, which was replaced by GASB Statement No. 74.

The following table shows the beginning and ending liabilities and assets for the State Retirees' Benefits Trust, as well as unfunded OPEB liability, or net OPEB liability (NOL), with the NOL being the amount that the Commonwealth records on its Statement of Net Position as its unfunded OPEB liability, as required by GASB Statements No. 74 and No. 75, and as shown in the CAFR for fiscal 2018. See Exhibit C – Comprehensive Annual Financial Report for the year ended June 30, 2019. The table also shows the components of the change in the NOL between the beginning (July 1) and end (June 30) for fiscal years 2017 to 2019.

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GASB 74 Information for the State Retirees' Benefit Trust
Schedule of Changes in Net OPEB Liability and Related Ratios

Fiscal Years 2019 through 2017
(in thousands, except for percentages)

	<u>Fiscal 2019</u>	<u>Fiscal 2018</u>	<u>Fiscal 2017</u>
Total OPEB liability (as of July 1)	\$16,096,773	\$18,480,936	\$19,821,600
Service cost	671,661	792,100	950,800
Interest	652,922	691,600	591,900
Differences between expected and actual experience	778,421	218,900	(48,600)
Changes of assumptions (1), (2), (3)	(4,125,306)	(3,643,000)	(2,393,700)
Benefit payments, including refunds of member contributions	<u>(482,183)</u>	<u>(443,763)</u>	<u>(441,064)</u>
Net change in total OPEB liability	<u>(2,504,485)</u>	<u>(2,384,163)</u>	<u>(1,340,664)</u>
Total OPEB liability, June 30	<u>\$13,592,288</u>	<u>\$16,096,773</u>	<u>\$18,480,936</u>
Plan fiduciary net position, July 1	\$1,187,569	\$996,407	\$866,043
Contributions:			
Employer	594,916	542,896	465,449
Other additions	<u>188</u>	<u>133</u>	<u>784</u>
Total contributions	<u>595,104</u>	<u>543,029</u>	<u>466,233</u>
Net investment income	<u>68,229</u>	<u>93,308</u>	<u>105,822</u>
Benefit payments, including refunds of plan member contributions	(482,183)	(443,763)	(441,064)
Administrative expense	(171)	(150)	(127)
Other changes	-	<u>(1,262)</u>	<u>(500)</u>
Net change in plan fiduciary net position	<u>180,979</u>	<u>191,162</u>	<u>130,364</u>
Plan fiduciary net position, June 30	<u>\$1,368,648</u>	<u>\$1,187,569</u>	<u>\$996,407</u>
Plan net OPEB liability - June 30	<u>\$12,223,740</u>	<u>\$14,909,204</u>	<u>\$17,484,529</u>
Plan fiduciary net position as a percentage of the total OPEB liability	10.1%	7.4%	5.4%
Covered payroll (as of actuarial valuation date)	<u>\$6,354,473</u>	<u>\$6,155,194</u>	<u>\$5,927,012</u>
Net OPEB liability as a percentage of covered employee payroll	192.4%	242.2%	295.0%

SOURCE: Office of the Comptroller

- (1) The change in assumptions in fiscal 2017 was due to an increase in the investment rate of return (discount rate) from 2.80% to 3.63%.
- (2) The change in assumptions in fiscal 2018 was due to (i) a change in base OPEB rates for medical services and prescriptions, (ii) a decrease in the healthcare trend rate from 8.5% to 8.0%, (iii) a change in mortality for disabled members and (iv) an increase of the discount rate from 3.63% to 3.95%.
- (3) The change in assumptions in fiscal 2019 was due to (1) a change in base OPEB rates for medical services and prescriptions, (ii) a decrease in the healthcare trend rate from 8.0% to 7.5%, (iii) a change in medical plan election rates, (iv) a change in future retirees' plan participation rates and (v) a decrease in the discount rate from 3.95% to 3.69%

The following table shows OPEB expenses that are recognized in the fiscal 2019 CAFR pursuant to GASB 75. Under GASB 75, in order to provide adequate time for OPEB plans to distribute OPEB-related information to plan participants (which include state authorities) for use in their annual CAFRs, governments are permitted to use the prior year's NOL and other OPEB-related measures in the current year CAFR. In conformance with GASB 75, OPEB valuation information as of June 30, 2018 is used in the fiscal 2019 CAFR. OPEB valuation information as of June 30, 2019 will be used in the fiscal 2020 CAFR. Additional information regarding the inflows and outflows that under GASB 75 are recognized either in the fiscal 2019 CAFR or are deferred and projected to be recognized in the CAFRs for future fiscal years is in Note 10D to Basic Financial Statements to the fiscal 2019 CAFR. See Exhibit C – Comprehensive Annual Financial Report for the year ended June 30, 2019.

GASB 75 Information for the State Retirees' Benefit Trust
Schedule of Changes in Net OPEB Liability and Related Ratios
(in thousands)

OPEB Expense for Fiscal 2019 (1)

Service cost	\$792,135
Interest on the total OPEB liability	691,630
Projected earnings on plan investments	(76,768)
Recognized portion of difference between expected and actual experience	29,408
Recognized portion of difference in projected and actual earnings on investments	(11,307)
Recognized portion of assumption change	(1,042,625)
Administrative expense	150
Other changes, net	<u>1,129</u>
OPEB Expense	<u>\$383,752</u>

SOURCE: Office of the Comptroller

(1) In conformance with GASB 75, OPEB valuation information as of June 30, 2018 is used in the fiscal 2019 CAFR. OPEB valuation information as of June 30, 2019 will be used in the fiscal 2020 CAFR.

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COMMONWEALTH CAPITAL INVESTMENT PLAN

The Executive Office for Administration and Finance annually updates its five-year capital investment plan on a rolling basis. The five-year plan coordinates capital expenditures by state agencies and authorities that are funded primarily by Commonwealth debt and federal reimbursements. The capital investment plan for fiscal 2020 through fiscal 2024 provides resources for various Commonwealth facilities and programs.

The Executive Office for Administration and Finance also sets an annual administrative limit on the amount of bond-funded capital expenditures. The purpose of the administrative limit, known as the “bond cap,” is to keep Commonwealth debt within affordable levels. In June, 2019, the Governor announced the five-year capital investment plan for fiscal 2020 through fiscal 2024 and an administrative bond cap of \$2.43 billion. This increase represents a 3.8% increase over the fiscal 2019 administrative bond cap.

Actual capital spending is subject to variance from budget due to the nature of capital projects and the programs comprising the plan. In addition, the debt affordability analysis and the assumptions and methodology that inform the analysis are subject to periodic review and are updated annually. These and other factors are expected to affect the later years of the current five-year plan.

Fiscal 2020 Capital Budget

The following table shows the allocation of administrative bond cap spending by agency and the allocation of total capital spending from all sources of funding for fiscal 2020.

Fiscal 2020 Capital Budget (in millions)

Agency	Bond Cap	Project-Financed	Federal Funds	Other Funds	Total
Administration and Finance	\$36.7	\$10.0	-	\$31.1	\$77.8
Capital Asset Management	517.7	19.2	\$3.3	21.6	561.8
Education	19.0	-	-	17.7	36.7
Energy and Environmental Affairs	231.4	-	54.5	109.1	395.0
Housing and Community Development	237.5	-	12.0	22.7	272.2
Housing and Economic Development	210.4	-	16.5	36.9	263.8
Technology Services and Security	125.2	6.6	128.2	36.0	296.0
Public Safety	22.0	5.2	0.8	0.2	28.1
MassDOT	<u>1,030.0</u>	-	<u>1,156.9</u>	<u>579.1</u>	<u>2,766.0</u>
Total (1)	\$2,430.0	\$41.1	\$1,372.2	\$854.3	\$4,697.6

SOURCE: Executive Office for Administration as of June 6, 2019.

(1) Totals may not add due to rounding.

Climate Change Risk Mitigation

The State Hazard Mitigation and Climate Adaptation Plan resulting from Executive Order No. 569: Establishing an Integrated Climate Change Strategy for the Commonwealth (Executive Order), issued by Governor Baker on September 16, 2016, provided a basis for the Commonwealth’s efforts to prioritize climate adaptation capital projects included in the fiscal 2020 capital budget. The Executive Order directs the Executive Office of Energy and Environmental Affairs (EOEEA) and the Executive Office of Public Safety and Security (EOPSS) to publish a statewide climate adaptation plan that includes strategies designed to enhance climate adaptation, build resilience and mitigate climate change, and which incorporates information from vulnerability assessments undertaken by the Executive Offices and their agencies for critical assets and programs and by the cities and towns in the Commonwealth.

Pursuant to the Executive Order, the Commonwealth established the Municipal Vulnerability Preparedness (MVP) grant program in 2017 to provide support for cities and towns in Massachusetts to begin the process of planning and adapting for resiliency. Under the MVP planning program, the Commonwealth awards funding to communities to complete vulnerability assessments and develop resiliency project implementation plans. Communities that complete the MVP planning program become designated as an MVP community and are eligible for follow-up MVP Action grant funding to implement the actions identified in their resiliency plans.

In fulfillment of the Executive Order, the Commonwealth adopted the State Hazard Mitigation and Climate Adaptation Plan on September 17, 2018. The plan integrates climate change impacts and adaptation strategies with hazard mitigation planning. The plan also complies with current federal requirements for state hazard mitigation plans and maintains the Commonwealth’s eligibility for federal disaster recovery and hazard mitigation funding under the Stafford Act.

Sources of Capital Investment

The different sources of funding for the capital program, as reflected in the Fiscal 2020 Capital Budget table, include:

- Administrative Bond Cap: Commonwealth general obligation borrowing to support the regular capital program. The administrative bond cap is reviewed and subject to revision annually.
- Project Financed: General obligation bonds, the debt service for which is supported by savings or revenue related to the project; for example, energy efficiency improvements to Commonwealth facilities, the capital costs for which are expected to be reimbursed through operating savings as a result of reduced energy consumption.
- Federal Funds: Federal reimbursements for capital expenditures.
- Other Funds:
 - Accelerated Bridge Program (ABP)* – Commonwealth special obligation bonds secured by revenues credited to the Commonwealth Transportation Fund (CTF) or federal grant anticipation notes secured by federal highway reimbursements issued to fund capital improvements to structurally deficient bridges through the ABP.
 - Rail Enhancement Program (REP)* – Commonwealth special obligation bonds to be secured by revenues credited to the CTF to finance certain transit infrastructure projects through the REP, previously referred to as Special Obligation Transit Bonds.
 - Pay-As-You-Go* – Funding from current revenue for capital projects, including toll revenue.
 - Third Party Contributions* – made by third parties to capital projects being carried out by the Commonwealth, including the I-Cubed program, contributions from campuses for higher education projects, matching funds from cities and towns, and capital projects funded by assessments.

Historical Capital Investment

The Commonwealth aggregates its capital expenditures into seven major categories based primarily on the agencies responsible for spending and carrying out capital projects: information technology, infrastructure and facilities, environment, housing, public safety, transportation and other. The following table sets forth capital spending in fiscal 2015 through fiscal 2019 according to these categories.

Commonwealth Historical Capital Spending (in millions) (1)

Investment Category:	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>
Information technology	\$207	\$169	\$154	\$185	\$174
Infrastructure/facilities	449	526	510	417	441
Environment	221	238	202	217	210
Housing	188	185	213	242	253
Public safety	26	18	17	18	19
Transportation	2,041	2,081	1,895	1,889	1,869
Other	<u>242</u>	<u>215</u>	<u>269</u>	<u>280</u>	<u>294</u>
Total	<u>\$3,374</u>	<u>\$3,432</u>	<u>\$3,260</u>	<u>\$3,248</u>	<u>\$3,260</u>

SOURCE: Office of the Comptroller.

(1) Includes all spending funded by capital appropriations, including General Obligation, Special Obligation, project financed, and federal reimbursement spending.

Debt Affordability Policy

The Executive Office for Administration and Finance established a debt affordability policy for the Commonwealth in fiscal 2009. Pursuant to the policy, the Executive Office for Administration and Finance has set an annual borrowing limit at a level designed to keep debt service on the Commonwealth's direct debt within 8% of budgeted revenues. The policy also limits future annual growth in the bond cap for the regular capital program to not more than \$125 million. For a discussion on the established statutory debt limit on direct debt, see "LONG-TERM LIABILITIES – General Authority to Borrow – *Statutory Limit on Direct Debt.*"

For the purposes of the debt affordability analysis, debt service includes programs expected to be funded both within and outside of the bond cap, including principal and interest payments on all general obligation debt, special obligation bonds secured by a specified portion of the motor fuels excise tax, special obligation bonds issued to fund the Accelerated Bridge Program and the Rail Enhancement Program, general obligation contract assistance payment obligations, and budgetary contract assistant payment obligations on certain capital lease financings.

Budgeted revenue includes all Commonwealth taxes and other revenues available to pay Commonwealth operating expenses, including debt service, pensions and other budgetary obligations. It does not include off-budget revenues dedicated to the MBTA, the MSBA and the Massachusetts Convention Center Authority (MCCA). This inclusive definition ensures that while some programs are expected to be funded outside of the bond cap, the related debt service costs of the programs should be fully accounted for under the debt affordability policy in setting the bond cap at appropriate limits.

Capital Debt Affordability Committee

The Capital Debt Affordability Committee was established by legislation in 2012 for the purposes of reviewing on a continuing basis the amount and condition of the Commonwealth's tax-supported debt, as well as the debt of certain state authorities. The Committee is responsible for providing an estimate of the total amount of new Commonwealth debt that can prudently be authorized for the next fiscal year, taking into account certain criteria, to the Governor and Legislature on or before December 15 of each year. The Committee develops illustrative models to evaluate certain assumptions and considerations in accordance with statutory provisions designed to inform its recommendations. The Committee's estimates are advisory and not binding on the Governor or the Legislature. The Legislature is responsible for authorizing Commonwealth debt. The Governor determines the total amount of capital spending for each fiscal year and the amount of new Commonwealth debt that he considers advisable to finance

such spending. The Committee consists of seven voting members, including the Secretary of Administration and Finance (who chairs the Committee), the State Treasurer, the Comptroller, the Secretary of Transportation, one appointee of the Governor and two appointees of the State Treasurer. The Committee also includes non-voting, legislative leaders, including the House and Senate chairs and the ranking minority members of the Committees on Bonding, Capital Expenditures and State Assets, and the Committees on Ways and Means.

On December 13, 2019, the Capital Debt Affordability Committee submitted to the Governor and the Legislature the Committee's advisory estimate of the total amount of new Commonwealth debt that prudently may be authorized for fiscal 2021. The Committee determined that \$2.53 billion of general obligation debt may prudently be issued by the Commonwealth for fiscal 2021. This amount represents an increase of 4.12%, or \$100 million, in the bond cap over fiscal 2020.

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LONG-TERM LIABILITIES

General Authority to Borrow

Under its constitution, the Commonwealth may borrow money (a) for defense or in anticipation of receipts from taxes or other sources, any such loan to be paid out of the revenue of the year in which the loan is made, or (b) by a two-thirds vote of the members of each house of the Legislature present and voting thereon. The constitution further provides that borrowed money shall not be expended for any other purpose than that for which it was borrowed or for the reduction or discharge of the principal of the loan. In addition, the Commonwealth may give, loan or pledge its credit by a two-thirds vote of the members of each house of the Legislature present and voting thereon, but such credit may not in any manner be given or loaned to or in aid of any individual, or of any private association, or of any corporation which is privately owned or managed.

The Commonwealth has waived its sovereign immunity and consented to be sued on contractual obligations, which includes bonds and notes issued by it and all claims with respect thereto. However, the property of the Commonwealth is not subject to attachment or levy to pay a judgment, and the satisfaction of any judgment generally requires legislative appropriation. Enforcement of a claim for payment of principal of or interest on bonds and notes of the Commonwealth may also be subject to the provisions of federal or Commonwealth statutes, if any, hereafter enacted extending the time for payment or imposing other constraints upon enforcement, insofar as the same may be constitutionally applied. The United States Bankruptcy Code is not applicable to states.

Commonwealth Debt. The State Treasurer is statutorily responsible for the borrowing needs of the Commonwealth, including short-term cash flow needs and long-term borrowing needs for the capital budget. Borrowing is accomplished through the sale of short-term notes and long-term bonds. The Commonwealth is authorized to issue three types of direct debt – general obligation debt, special obligation debt and federal grant anticipation notes. General obligation debt is secured by a pledge of the full faith and credit of the Commonwealth. See “General Obligation Debt” below. Special obligation debt may be secured either with a pledge of receipts credited to the Commonwealth Transportation Fund (formerly the Highway Fund) or with a pledge of receipts credited to the Convention Center Fund. See “Special Obligation Debt” below. Federal grant anticipation notes are secured by a pledge of federal highway construction reimbursements. See “Federal Grant Anticipation Notes” below.

Other Long-Term Liabilities. The Commonwealth is also authorized to pledge its credit in aid of and provide contractual support for certain independent authorities and political subdivisions within the Commonwealth. These Commonwealth liabilities are classified as general obligation contract assistance liabilities or contingent liabilities. In addition, the Commonwealth is authorized to pledge its credit in support of scheduled, periodic payments to be made by the Commonwealth under interest rate swaps and other hedging agreements related to bonds or notes of the Commonwealth.

General obligation contract assistance liabilities arise from statutory requirements for (i) payments by the Commonwealth to the Massachusetts Clean Water Trust, MassDOT and the Massachusetts Development Finance Agency that are used by such entities to pay a portion of the debt service on certain of their outstanding bonds and (ii) payments from the Social Innovation Financing Trust Fund on “pay for success” contracts, as described below. Such liabilities constitute a pledge of the Commonwealth’s credit for which a two-thirds vote of the Legislature is required. See “General Obligation Contract Assistance Liabilities” below.

Contingent liabilities relate to debt obligations of certain independent authorities and agencies of the Commonwealth that are expected to be paid without Commonwealth assistance, but for which the Commonwealth has some kind of liability if expected payment sources do not materialize. These liabilities consist of guaranties and similar obligations with respect to which the Commonwealth’s credit has been or may be pledged, as in the case of certain debt obligations of the MBTA (pre-2000), the Woods Hole, Martha’s Vineyard and Nantucket Steamship Authority, and the higher education building authorities. The Commonwealth has certain statutorily contemplated payment obligations with respect to which the Commonwealth’s credit has not been pledged, as in the case of the Commonwealth’s obligation to fund debt service, solely from moneys otherwise appropriated for the affected institution, owed by certain community colleges and state universities on bonds issued by the former Massachusetts Health and Educational Facilities Authority (now the Massachusetts Development Finance Agency) and the Massachusetts State College Building Authority. See “Contingent Liabilities” below.

Statutory Limit on Direct Debt. Since December, 1989, state finance law has included a limit on the amount of outstanding “direct” bonds of the Commonwealth. For fiscal 2012, the debt limit was \$18.944 billion under the statute in place during fiscal 2012. In August, 2012, state finance law was amended, effective January 1, 2013, to specify that the debt limit be calculated for fiscal years starting in fiscal 2013 using a fiscal 2012 base value of \$17.070 billion and increasing the limit for each subsequent fiscal year to 105% of the previous fiscal year’s limit. Based on this calculation, the statutory limit on “direct” bonds during fiscal 2020 is \$25.220 billion. Prior to June 10, 2013, this limit was calculated using a statutory definition that differed from GAAP in that the principal amount of outstanding bonds included the amount of any premium and was measured net of any discount, costs of issuance and other financing costs (“net proceeds”). On June 10, 2013, state finance law was amended, effective January 1, 2013, to change the statutory definition of outstanding debt from net proceeds to principal outstanding, a change that brings the outstanding debt definition in conformance with GAAP.

The debt limit law provides that bonds to be refunded from the proceeds of Commonwealth refunding bonds are to be excluded from outstanding “direct” bonds upon the issuance of the refunding bonds. Pursuant to special legislation enacted over the years, certain outstanding Commonwealth debt obligations are not counted in computing the amount of bonds subject to the limit, including Commonwealth refunding/restructuring bonds issued in September and October, 1991, federal grant anticipation notes, bonds issued to pay operating notes issued by the MBTA or to reimburse the Commonwealth for advances to the MBTA, bonds payable from the Central Artery and Statewide Road and Bridge Infrastructure Fund, bonds issued to finance the MSBA and bonds issued to finance the Commonwealth’s Accelerated Bridge Program. On August 10, 2016, the Governor approved legislation that exempts from the statutory debt limit bonds that are issued to finance the Commonwealth’s rail enhancement program.

The outstanding Commonwealth debt, the amounts of such outstanding debt excluded from the statutory debt limit, the net amounts of such outstanding Commonwealth debt subject to the statutory debt limit and the statutory debt limit as of the end of each of the last five fiscal years are shown in the following table on a statutory basis.

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Calculation of the Debt Limit
(in thousands)

	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>	<u>Fiscal 2020 (4)</u>
Total principal balance	\$25,079,591	\$26,445,665	\$27,360,819	\$27,739,221	\$28,043,710
Less: principal of direct debt excluded from the statutory debt limit:					
Special obligation debt (1)	(768,365)	(703,690)	(657,340)	(608,565)	(608,565)
Accelerated bridge program	(1,535,890)	(1,642,730)	(1,680,555)	(1,665,205)	(1,680,205)
Rail enhancement program (2)	-	(644,540)	(1,131,105)	(1,104,610)	(1,289,610)
Federal grant anticipation notes (1)	(657,040)	(738,010)	(748,445)	(684,745)	(738,245)
Assumed county debt	-	-	-	-	-
MBTA forward funding	(207)	(207)	(207)	(207)	(207)
Transportation Infrastructure Fund	(1,150,296)	(1,109,740)	(1,036,935)	(1,013,492)	(946,583)
School Building Assistance (SBA)	(652,197)	(632,348)	(598,985)	(574,902)	(496,936)
Outstanding direct debt, principal (3)	<u>\$20,315,596</u>	<u>\$20,974,400</u>	<u>\$21,507,247</u>	<u>\$22,087,495</u>	<u>\$22,283,359</u>
Statutory Debt Limit	<u>\$20,748,692</u>	<u>\$21,786,126</u>	<u>\$22,875,433</u>	<u>\$24,019,204</u>	<u>\$25,220,164</u>

SOURCE: Office of the Comptroller.

- (1) Includes federal grant anticipation notes issued as crossover refunding bonds. The refunding escrows funded by these bonds and related premiums are used to pay interest on the refunding bonds until the refunded bonds are callable and then to redeem the refunded bonds. Interest on the refunded bonds prior to redemption continues to be paid from pledged revenues as before.
- (2) Exempt from the statutory debt limit, effective August 10, 2016.
- (3) Includes accretion of capital appreciation bonds.
- (4) As of November 30, 2019.

General Obligation Debt

As of November 30, 2019, the Commonwealth had approximately \$23.7 billion in general obligation bonds outstanding, of which \$21.6 billion, or approximately 91% was fixed rate debt and \$2.1 billion, or 9%, was variable rate debt. The Commonwealth's outstanding general obligation variable rate debt consists of several variable rate structures. These structures include floating rate notes in various interest rate modes, direct purchase agreements in various interest rate modes, multi-modal bonds currently in the Term Mode, and variable rate demand bonds. Variable rate demand bonds, which account for \$483.0 million of outstanding general obligation debt as of November 30, 2019, are supported by liquidity facilities that require the bonds to be tendered by a specified date if the facility is not replaced or the bonds are not otherwise refinanced. See "Liquidity Facilities." For the purpose of reporting general obligation debt outstanding and variable rate debt outstanding, future compounded interest on the Commonwealth's variable rate College Opportunity Bonds, as discussed in greater detail below, is included as debt outstanding. Additionally, any outstanding commercial paper, bond anticipation notes, or revenue anticipation notes, as more fully described below, are not reported in general obligation debt outstanding calculations.

Of all Commonwealth variable rate debt outstanding, the interest rates on \$997.3 million, or approximately 4% of total general obligation debt, have been synthetically fixed by means of floating-to-fixed interest rate swap agreements. These agreements are used as hedges to mitigate the risk associated with variable rate bonds.

Under state finance law, scheduled, periodic payments to be made by the Commonwealth pursuant to swap agreements in existence on August 1, 2008 or entered into after such date constitute general obligations of the Commonwealth to which its full faith and credit are pledged. The remaining variable rate debt of \$1.1 billion or approximately 5% of the total outstanding general obligation debt, is unhedged and, accordingly, floats with interest rates re-set on a periodic basis.

The Commonwealth implemented a multi-year asset/liability management strategy. The intent of the asset/liability strategy is to better balance the Commonwealth's interest rate exposure between its cash assets and

debt liabilities by increasing the portion of its outstanding debt issued as unhedged, floating rate bonds. The Commonwealth monitors and evaluates this balance.

As of November 30, 2019, the Commonwealth had outstanding approximately \$154.1 million (\$81.1 million principal and including a discount equal to \$73.0 million) of variable rate “U. Plan” College Opportunity Bonds, sold in conjunction with a college savings program administered by the Massachusetts Educational Financing Authority (MEFA), which bear deferred interest at a rate equal to the percentage change in the consumer price index plus 2%, together with current interest at the rate of 0.5%. This debt is held directly by MEFA and has no secondary market.

The Commonwealth is authorized to issue short-term general obligation debt as revenue anticipation notes or bond anticipation notes. Fixed-rate revenue anticipation notes (RANs) are issued by the State Treasurer annually in anticipation of revenue receipts for the same fiscal year. Revenue anticipation notes must be repaid no later than the close of the fiscal year in which they are issued. Bond anticipation notes may be issued by the State Treasurer in anticipation of the issuance of bonds, including, in some circumstances special obligation bonds. See “Special Obligation Debt” below. As of November 30, 2019, the Commonwealth had approximately \$1.4 billion of RANs outstanding. In addition, as of November 30, 2019, the Commonwealth had liquidity support for a \$200 million commercial paper program which is available for cash flow purposes. The Commonwealth has also entered into a Note Purchase Agreement which permits the issuance of up to \$200 million of either RANs or bond anticipation notes. As of November 30, 2019, there was no commercial paper or notes outstanding.

Special Obligation Debt

Commonwealth Transportation Fund. Section 20 of Chapter 29 of the General Laws, as amended, authorizes the Commonwealth to issue special obligation bonds secured by all or a portion of revenues accounted to the Commonwealth Transportation Fund (formerly the Highway Fund). Revenues which are accounted to the Commonwealth Transportation Fund are primarily derived from taxes and fees relating to the operation or use of motor vehicles in the Commonwealth, including the motor fuels excise tax and registry of motor vehicles fees. In addition, a portion of the Commonwealth’s receipts from the sales tax is dedicated to the Commonwealth Transportation Fund (see “COMMONWEALTH REVENUES – State Taxes; *Sales and Use Tax*”), as is the underground storage tank petroleum cleanup fee to the extent it exceeds \$30 million, and state finance law currently provides for a series of substantial transfers from the General Fund to the Commonwealth Transportation Fund through fiscal 2020; none of the sales tax receipts or General Fund transfers has been pledged to secure Commonwealth special obligation bonds.

Between 1992 and 2005, the Commonwealth issued special obligation bonds secured by a lien on a specified portion of the motor fuels excise tax. As of November 30, 2019, the Commonwealth had outstanding approximately \$80.9 million of such special obligation bonds secured by a pledge of 6.86¢ of the 24¢ motor fuels excise tax. In December, 2010, the trust agreement securing such bonds was closed to further issuance of additional debt, with the exception of refunding bonds.

The Commonwealth is also authorized to issue approximately \$1.876 billion of special obligation bonds secured by a pledge of all or a portion of revenues accounted to the Commonwealth Transportation Fund (CTF Bonds) to fund a portion of the Accelerated Bridge Program (ABP). Additionally, in April, 2014, the Commonwealth was authorized to issue up to \$6.7 billion in general obligation debt, special obligation debt, or a combination of both, for the purpose of funding capital expenditures of MassDOT, for the benefit of the MBTA and for other Rail Enhancement Program (REP) projects. As of November 30, 2019, the Commonwealth had outstanding approximately \$3.0 billion of CTF Bonds, which are secured by a pledge of registry fees and a specified portion of the motor fuels excise tax, \$1.7 billion of which have been issued in support of the ABP and \$1.3 billion of which have been issued in support of the REP.

In July, 2019, the Governor submitted a new transportation bond bill to the Legislature that requested \$18 billion in additional capital authorization to improve the Commonwealth’s transportation infrastructure. The proposed bill includes additional authorizations of \$1.25 billion of additional federal highway grant anticipation notes for highway purposes and \$12.220 billion of bonds to be issued as either general obligation bonds or special obligation bonds under the Special Obligation Act for the MBTA and other rail enhancement purposes. The bill also permits all or any portion of the federal highway grant anticipation note authorization to be issued as special obligation bonds. The bill is pending in the Legislature and is subject to change during the legislative process. It is

not known at this time when a final bill will be enacted into law or what the final actual authorizations will be, if any.

Convention Center Fund. Chapter 152 of the Acts of 1997, as amended, authorized \$694.4 million of special obligation bonds to be issued for the purposes of building a new convention center in Boston (\$609.4 million), the Springfield Civic Center (\$66 million), and the Worcester Convention Center (\$19 million). The bonds are payable from moneys credited to the Convention Center Fund created by such legislation, which include certain hotel tax receipts from hotels in Boston, Cambridge, Springfield and Worcester, a surcharge on car rentals in Boston, a parking surcharge at all three facilities, a surcharge on sightseeing tours and cruises in Boston and sales tax receipts from certain hotels and other retail establishments in Boston, Cambridge and Springfield. The legislation requires a capital reserve fund to be maintained at a level equal to maximum annual debt service and provides that if the fund falls below its required balance, the 2.75% convention center financing fee in Boston is to be increased (though the overall hotel tax in Boston, including the fee, cannot exceed 14%). In June, 2004, the Commonwealth issued \$686.7 million of special obligation bonds secured solely by the pledge of receipts of tax revenues within the special districts surrounding the centers and other special revenues connected to such facilities, and in June, 2005, the Commonwealth issued \$527.6 million of special obligation refunding bonds, which advance refunded, in part, the 2004 issue. As of November 30, 2019, there are no Series 2004 Bonds outstanding and approximately \$527.6 million of the Series 2005 Bonds is outstanding.

On July 29, 2014, the Governor approved legislation authorizing the Commonwealth to issue an additional \$1.1 billion in special obligation bonds to finance an expansion of the convention center in Boston, to finance costs of issuance and fund a debt service reserve fund. Such bonds would be secured by and payable from the Convention Center Fund, with the State Treasurer and Secretary of Administration and Finance having the authority to pledge additional state hotel/motel room occupancy excises to the new bonds. In October, 2019, legislation was filed seeking authorization for a revised expansion plan for the convention center. As filed, the legislation does not authorize the issuance of additional special obligation bonds to finance a revised expansion plan for the convention center. If approved, the legislation will supersede the prior authorization signed into law in July, 2014.

Federal Grant Anticipation Notes

The Commonwealth is also authorized to issue \$1.1 billion of grant anticipation notes (GANs) secured by future federal funds to fund a portion of the ABP. Such notes are secured by a back-up pledge of net amounts in the Commonwealth Transportation Fund after application of such amounts in accordance with the trust agreement securing the CTF Bonds and previously issued bonds secured by motor fuels excise taxes. The Commonwealth expects to pay interest on the notes supporting the ABP from state appropriations. As of November 30, 2019, \$738.2 million of GANs was outstanding.

Build America Bonds

The Commonwealth has issued bonds in the form of Build America Bonds (BABs) and as Recovery Zone Economic Development Bonds (RZEDBs). BABs and RZEDBs were authorized under the federal American Recovery and Reinvestment Act of 2009 (ARRA). Pursuant to ARRA, the Commonwealth is entitled to receive cash subsidy payments from the federal government equal to 35% of the debt service payable on the BABs and 45% of the debt service payable on the RZEDBs, provided, in both cases, that the Commonwealth makes certain required filings in accordance with applicable federal rules. Such interest subsidy payments are treated under federal law as overpayments of tax and, accordingly, are subject to offset against certain amounts that may be owed by the Commonwealth to the federal government or its agencies. In federal fiscal year 2016, such payments were subject to a sequestration reduction of 6.8%, with the Bipartisan Budget Act of 2015, approved by the President on November 2, 2015, extending the sequestration provisions through federal fiscal year 2025. For federal fiscal years 2017 and 2018, such payments were subject to a 6.9% and 6.6%, respectively, reduction, and for federal fiscal year 2019 there will be a 6.2% reduction. Such interest subsidy payments could become subject to a much larger sequestration reduction, and potentially be eliminated altogether, under the Statutory Pay-As-You-Go (PAYGO) Act of 2010, which is designed to limit federal deficit spending. Since the enactment of the PAYGO Act, the U. S. Congress has consistently acted to prevent its implementation, but there can be no assurance that it will continue to do so.

Beginning in fiscal 2012, federal interest subsidy payments received by the Commonwealth are required to be deposited in a Build America Bonds Subsidy Trust Fund and used, without further legislative appropriation, to pay debt service on the related BABs and RZEDBs. The Commonwealth is obligated to make payments of principal and interest on the BABs and RZEDBs whether or not it receives interest subsidy payments. As of November 30, 2019, \$2.1 billion of the Commonwealth's outstanding general obligation debt was comprised of BABs, \$419.8 million of the outstanding CTF Bonds consisted of BABs, \$156.4 million of the outstanding CTF Bonds consisted of RZEDBs and \$52.8 million of the outstanding GANs consisted of BABs.

The following table shows long-term debt of the Commonwealth issued and retired from fiscal 2015 through fiscal 2019, exclusive of unamortized bond premiums.

General and Special Obligation Long-Term Debt Issuance and Repayment Analysis (in thousands) (1)

	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>
Beginning Balance as of July 1	\$22,419,852	\$23,826,301	\$25,079,591	\$26,445,665	\$27,360,819
Debt Issued	<u>2,918,817</u>	<u>2,766,419</u>	<u>2,877,265</u>	<u>2,391,763</u>	<u>1,814,564</u>
Subtotal	<u>25,338,669</u>	<u>26,592,720</u>	<u>27,956,856</u>	<u>28,837,428</u>	<u>29,175,383</u>
Debt retired or defeased, exclusive of refunded debt	(1,486,243)	(1,446,444)	(1,389,581)	(1,389,419)	(1,295,322)
Refunding debt issued, net of refunded debt (3)	<u>(26,125)</u>	<u>(66,685)</u>	<u>(121,610)</u>	<u>(87,190)</u>	<u>(140,840)</u>
Ending Balance June 30 (2)	<u>\$23,826,301</u>	<u>\$25,079,591</u>	<u>\$26,445,665</u>	<u>\$27,360,819</u>	<u>\$27,739,221</u>

SOURCE: Office of the Comptroller.

- (1) Including accretion of capital appreciation bonds.
- (2) Includes federal grant anticipation notes issued as crossover refunding bonds. The refunding escrows funded by these bonds and related premiums are used to pay interest on the refunding bonds until the refunded bonds are callable and then to redeem the refunded bonds. Interest on the refunded bonds prior to redemption continues to be paid from pledged revenues as before.
- (3) Amounts may be negative due to defeasances of debt of authorities from the issuance of Commonwealth debt as afforded under General Laws.

The following table sets forth the amounts of Commonwealth long-term general obligation debt, special obligation debt and federal grant anticipation notes outstanding, exclusive of unamortized bond premiums, as of the end of the last five fiscal years.

Outstanding Long Term Commonwealth Debt (in thousands)

	<u>Fiscal 2015</u>	<u>Fiscal 2016</u>	<u>Fiscal 2017</u>	<u>Fiscal 2018</u>	<u>Fiscal 2019</u>
General Obligation Debt	\$20,801,956	\$21,668,296	\$22,716,695	\$23,143,374	\$23,676,096
Special Obligation Debt	2,324,490	2,754,255	2,990,960	3,469,000	3,378,380
Federal Grant Anticipation Notes	<u>699,855</u>	<u>657,040</u>	<u>738,010</u>	<u>748,445</u>	<u>684,745</u>
TOTAL	<u>\$23,826,301</u>	<u>\$25,079,591</u>	<u>\$26,445,665</u>	<u>\$27,360,819</u>	<u>\$27,739,221</u>

SOURCE: Office of the Comptroller.

Debt Service Requirements

The following table sets forth, as of November 30, 2019, the annual fiscal year debt service requirements on outstanding Commonwealth general obligation bonds, special obligation bonds and federal GANs. For variable-rate bonds with respect to which the Commonwealth is a fixed-rate payor under an associated interest rate swap agreement, the debt service schedule assumes payment of the fixed rate due under such agreement. For other variable-rate bonds, the schedule assumes a 5% interest rate.

Debt Service Requirements on Commonwealth Bonds as of November 30, 2019 through Maturity (in thousands)

Period Ending	<u>General Obligation Bonds</u>						<u>Federal Highway Grant Anticipation Notes</u>				
	Principal	Gross Interest	CABs	Build America Bond Subsidies	Net Interest	Debt Service	Principal	Gross Interest	Build America Bond Subsidies	Net Interest	Debt Service
6/30/2020	\$ 436,105	\$ 572,662	\$ -	(\$20,594)	\$ 552,068	\$ 988,173	\$ 51,615	\$ 35,243	(\$ 782)	\$ 34,461	\$ 86,076
6/30/2021	1,330,333	1,014,402	4,265	(35,014)	979,388	2,313,987	78,485	33,866	(577)	33,289	111,774
6/30/2022	1,214,860	952,910	4,436	(32,698)	920,211	2,139,508	82,375	29,977	(357)	29,620	111,995
6/30/2023	1,078,048	897,888	4,532	(31,412)	866,476	1,949,057	86,470	25,880	(122)	25,758	112,228
6/30/2024	1,095,460	844,136	4,606	(31,412)	812,724	1,912,789	89,510	21,965	-	21,965	111,475
6/30/2025	1,106,512	792,397	4,948	(31,177)	761,220	1,872,680	93,985	17,490	-	17,490	111,475
6/30/2026	1,015,944	743,044	5,026	(30,776)	712,268	1,733,238	122,185	12,790	-	12,790	134,975
6/30/2027	903,415	696,986	5,288	(30,203)	666,783	1,575,487	133,620	6,681	-	6,681	140,301
6/30/2028	851,234	655,204	5,594	(28,953)	626,251	1,483,079	-	-	-	-	-
6/30/2029	929,141	616,352	5,228	(26,687)	589,665	1,524,034	-	-	-	-	-
6/30/2030	977,305	573,915	4,961	(22,892)	551,023	1,533,289	-	-	-	-	-
6/30/2031	971,463	522,911	4,759	(16,808)	506,104	1,482,325	-	-	-	-	-
6/30/2032	854,691	483,732	4,653	(14,776)	468,956	1,328,300	-	-	-	-	-
6/30/2033	714,630	448,900	3,833	(12,440)	436,460	1,154,923	-	-	-	-	-
6/30/2034	664,003	417,618	3,185	(11,068)	406,550	1,073,738	-	-	-	-	-
6/30/2035	691,018	389,083	2,648	(9,647)	379,435	1,073,101	-	-	-	-	-
6/30/2036	723,496	358,972	2,027	(8,177)	350,795	1,076,318	-	-	-	-	-
6/30/2037	757,685	326,162	1,505	(6,654)	319,508	1,078,699	-	-	-	-	-
6/30/2038	743,434	292,217	963	(5,077)	287,139	1,031,536	-	-	-	-	-
6/30/2039	800,985	258,908	449	(3,445)	255,463	1,056,896	-	-	-	-	-
6/30/2040	741,983	225,278	121	(1,609)	223,669	965,773	-	-	-	-	-
6/30/2041	705,090	194,494	-	-	194,494	899,584	-	-	-	-	-
6/30/2042	767,820	165,274	-	-	165,274	933,094	-	-	-	-	-
6/30/2043	806,745	131,782	-	-	131,782	938,527	-	-	-	-	-
6/30/2044	727,850	103,642	-	-	103,642	831,492	-	-	-	-	-
6/30/2045	584,985	78,810	-	-	78,810	663,795	-	-	-	-	-
6/30/2046	580,820	53,543	-	-	53,543	634,363	-	-	-	-	-
6/30/2047	347,500	30,733	-	-	30,733	378,233	-	-	-	-	-
6/30/2048	161,500	18,100	-	-	18,100	179,600	-	-	-	-	-
6/30/2049	120,000	11,230	-	-	11,230	131,230	-	-	-	-	-
6/30/2050	250,000	3,625	-	-	3,625	253,625	-	-	-	-	-
Totals (1)	\$23,654,056	\$12,874,908	\$73,029	(\$411,520)	\$12,463,388	\$36,190,473	\$738,245	\$183,891	(\$1,838)	\$182,054	\$920,299

SOURCE: Office of the Comptroller.
 (1) Totals may not add due to rounding.

**Special Obligation Revenue Bonds
(Convention Center)**

**Special Obligation Revenue Bonds
(CTF- Accelerated Bridge Program)**

Period Ending	Principal	Interest	Debt Service	Principal	Gross Interest	Build America Bond Subsidies	Net Interest	Debt Service
6/30/2020	\$ 23,380	\$ 14,421	\$ 37,801	\$ 16,855	\$ 82,127	(\$12,314)	\$ 69,813	\$ 86,668
6/30/2021	24,610	27,673	52,283	18,220	81,639	(12,314)	69,324	87,544
6/30/2022	25,970	26,380	52,350	21,760	80,728	(12,314)	68,413	90,173
6/30/2023	27,440	24,952	52,392	30,245	79,672	(12,314)	67,357	97,602
6/30/2024	28,990	23,443	52,433	39,870	78,171	(12,314)	65,857	105,727
6/30/2025	30,625	21,848	52,473	51,720	76,180	(11,937)	64,243	115,963
6/30/2026	32,360	20,164	52,524	54,340	73,556	(11,529)	62,026	116,366
6/30/2027	34,190	18,384	52,574	56,420	70,697	(11,065)	59,632	116,052
6/30/2028	36,125	16,504	52,629	51,520	67,720	(10,575)	57,144	108,664
6/30/2029	38,170	14,517	52,687	54,670	65,026	(10,058)	54,968	109,638
6/30/2030	40,330	12,418	52,748	54,600	62,393	(9,512)	52,881	107,481
6/30/2031	42,610	10,199	52,809	60,350	59,618	(8,935)	50,682	111,032
6/30/2032	45,020	7,856	52,876	63,445	56,375	(8,316)	48,059	111,504
6/30/2033	47,565	5,380	52,945	66,715	52,964	(7,661)	45,302	112,017
6/30/2034	50,250	2,764	53,014	70,000	49,548	(6,970)	42,578	112,578
6/30/2035	-	-	-	70,055	46,030	(6,239)	39,792	109,847
6/30/2036	-	-	-	73,595	42,506	(5,466)	37,039	110,634
6/30/2037	-	-	-	81,615	38,798	(4,650)	34,148	115,763
6/30/2038	-	-	-	81,180	34,729	(3,718)	31,011	112,191
6/30/2039	-	-	-	85,455	30,676	(2,546)	28,130	113,585
6/30/2040	-	-	-	89,835	26,284	(1,308)	24,975	114,810
6/30/2041	-	-	-	94,505	21,651	-	21,651	116,156
6/30/2042	-	-	-	99,385	17,661	-	17,661	117,046
6/30/2043	-	-	-	103,165	13,662	-	13,662	116,827
6/30/2044	-	-	-	114,415	8,885	-	8,885	123,300
6/30/2045	-	-	-	14,600	3,224	-	3,224	17,824
6/30/2046	-	-	-	61,670	2,554	-	2,554	64,224
Totals (1)	\$527,635	\$246,903	\$774,538	\$1,680,205	\$1,323,071	(\$182,057)	\$1,141,013	\$2,821,218

SOURCE: Office of the Comptroller.
(1) Totals may not add due to rounding.

Special Obligation Revenue Bonds
(Gas Tax)

Special Obligation Revenue Bonds
(CTF – Rail Enhancement Program)

Period Ending	Principal	Interest	Debt Service	Principal	Interest	Debt Service
6/30/2020	\$ 25,640	\$ 4,182	\$ 29,822	\$ 29,045	\$ 56,333	\$ 85,378
6/30/2021	26,905	2,916	29,821	29,910	59,314	89,224
6/30/2022	28,385	1,436	29,821	28,760	57,836	86,596
6/30/2023	-	-	-	26,610	56,479	83,089
6/30/2024	-	-	-	19,785	55,177	74,962
6/30/2025	-	-	-	10,810	54,246	65,056
6/30/2026	-	-	-	11,295	53,718	65,013
6/30/2027	-	-	-	12,565	53,166	65,731
6/30/2028	-	-	-	21,010	52,538	73,548
6/30/2029	-	-	-	21,495	51,536	73,031
6/30/2030	-	-	-	25,205	50,461	75,666
6/30/2031	-	-	-	23,265	49,358	72,623
6/30/2032	-	-	-	24,500	48,194	72,694
6/30/2033	-	-	-	25,785	46,969	72,754
6/30/2034	-	-	-	27,120	45,680	72,800
6/30/2035	-	-	-	31,850	44,324	76,174
6/30/2036	-	-	-	33,145	42,917	76,062
6/30/2037	-	-	-	30,390	41,260	71,650
6/30/2038	-	-	-	36,300	39,740	76,040
6/30/2039	-	-	-	37,740	37,933	75,673
6/30/2040	-	-	-	39,485	36,049	75,534
6/30/2041	-	-	-	41,255	34,078	75,333
6/30/2042	-	-	-	42,330	32,115	74,445
6/30/2043	-	-	-	44,480	30,186	74,666
6/30/2044	-	-	-	45,040	28,154	73,194
6/30/2045	-	-	-	152,270	26,145	178,415
6/30/2046	-	-	-	112,165	19,603	131,768
6/30/2047	-	-	-	97,245	14,900	112,145
6/30/2048	-	-	-	101,955	10,188	112,143
6/30/2049	-	-	-	106,800	5,340	112,140
Totals (1)	\$80,930	\$8,533	\$89,463	\$1,289,610	\$1,233,937	\$2,523,547

SOURCE: Office of the Comptroller.
(1) Totals may not add due to rounding.

Interest Rate Swaps

The Commonwealth has entered into interest rate swap agreements for the sole purpose of hedging changes in the interest rates on a portion of its outstanding variable rate bonds, predicated on the assumption that the interest on such bonds, combined with the cost of the associated interest rate swaps, would produce lower aggregate interest costs than fixed-rate bonds. As of November 30, 2019, approximately \$1.1 billion of the Commonwealth's outstanding variable-rate debt was synthetically fixed via floating-to-fixed interest rate swap hedge agreements. Included in this figure is \$54.0 million in synthetically fixed debt associated with special obligation issues as shown in the table below.

Under the terms of these floating-to-fixed rate hedge agreements, the counterparties to the swaps are obligated to pay the Commonwealth an amount equal or approximately equal to the variable-rate payment on the related bonds or a payment based on a market index, and the Commonwealth is obligated to pay the counterparties a stipulated fixed rate. The floating rate received by the Commonwealth from swap counterparties is used to offset the variable rate paid to bondholders. Only the net difference in interest payments is actually exchanged with the counterparty. The net payments made or received on these agreements are reported as part of interest expense in the Commonwealth's basic financial statements. In all cases, the Commonwealth remains responsible for making interest payments to the variable-rate bondholders.

The intended effect of these agreements is essentially to fix the Commonwealth's interest rate obligations with respect to its variable-rate bonds in order to hedge or mitigate the Commonwealth's exposure to changes in interest rates on these bonds. For example, during a period when interest rates rise, the Commonwealth would receive higher payments from swap counterparties that would be used to offset higher payments to bondholders of the outstanding variable rate bonds. During a period when interest rates decline, the reduction in interest payments to bondholders would offset the higher payments made to swap counterparties. In both scenarios, the net obligation of the Commonwealth is essentially fixed through the life of the swap and bonds providing the Commonwealth with long term budget certainty. All of the Commonwealth's interest rate swaps were floating-to-fixed rate agreements and, as of June 30, 2019, were deemed effective hedges, as provided for in GASB Statement No. 53.

The bonds and related swap agreements have final maturities ranging from 2020 to 2033. The total notional value of approximately \$1.1 billion effectively matches the par amount of the related variable-rate bonds. Under the swap agreements, the Commonwealth pays the relevant counterparties fixed rates ranging from 3.875% to 5.059% and receives variable-rate payments equal to or approximately equal to the amount of variable rate payments the Commonwealth pays on the related variable-rate refunding bonds or a payment based on a market index.

All of the Commonwealth's counterparties are required to post collateral in certain circumstances. The Commonwealth is not required to post collateral under any of its existing swap agreements.

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The following table describes the interest rate swap agreements, all of which are floating-to-fixed rate hedges that the Commonwealth has entered into in connection with certain of its outstanding variable rate bond issues as of November 30, 2019.

Associated Bond Issue	Outstanding Notional Amount (thousands)	Bond Floating Rate	Swap Fixed Rate Paid (Range)	Swap Variable Rate Received	Effective Date	Termination Date	Fair value as of 11/30/2019	Counterparty
<i>General Obligation Bonds:</i>								
Series 2001B & C Refunding	\$ 195,840	VRDB	4.150%	Cost of Funds	2/20/2001	1/1/2021	(\$3,917,495)	Morgan Stanley Capital Services
Series 2018A Refunding	118,505	SIFMA	3.875%-3.903%	SIFMA	3/15/2005	2/1/2023	(9,265,838)	Wells Fargo Bank
Series 2006C (refunding)	38,095	CPI	3.85%	CPI-based formula	1/1/2007	11/1/2020	(455,748)	Wells Fargo Bank
Series 2007A (refunding)	26,250	LIBOR	3.936%	67% 3-Month LIBOR + 0.46%	10/8/2008	11/1/2020	(602,142)	Wells Fargo Bank
Series 2007A (refunding)	348,380	LIBOR	4.083%	67% 3-Month LIBOR + 0.55%	10/8/2008	11/1/2025	(34,867,893)	Bank of NY Mellon
Series 2016B & C	<u>268,345</u>	VRDB	4.515%	67% 3-Month LIBOR	4/2/2009	6/15/2033	<u>(68,735,317)</u>	Barclays Bank PLC
Subtotal	<u>\$ 994,415</u>						<u>(\$117,844,433)</u>	
<i>Special Obligation Dedicated Tax Revenue Bonds</i>								
Series 2005A (Gas Tax)	<u>54,025</u>	CPI	4.937%-5.059%	CPI	1/12/2005	6/1/2022	<u>(1,727,426)</u>	Merrill Lynch Capital Services
Subtotal	<u>\$ 54,025</u>						<u>(\$1,727,426)</u>	
Total	<u>\$1,049,440</u>						<u>(\$119,571,859)</u>	

SOURCE: Office of the Treasurer and Receiver General.

Liquidity Facilities

Some of the Commonwealth's outstanding variable rate debt consists of variable rate demand bonds whose interest rates re-set daily or weekly through a remarketing process. Because these bonds offer a "put" or tender feature, they are supported by standby bond purchase agreements with commercial banks which require the applicable bank to purchase any bonds that are tendered and not successfully remarketed. The following table describes the liquidity facilities that the Commonwealth had with respect to such bonds as of November 30, 2019.

<u>Variable Rate Bonds</u>	<u>Outstanding Principal Amount (in thousands)</u>	<u>Liquidity Provider</u>	<u>Termination Date</u>
2000 Series A	\$200,000	Citibank	10/12/2021
2000 Series B	75,590	TD Bank	4/19/2023
2001 Series C (Refunding)	97,920	Barclays Bank	1/1/2021
2006 Series A	109,445	Barclays Bank	8/3/2020

SOURCE: Office of the Treasurer and Receiver General.

The Commonwealth also has liquidity support for two series of commercial paper totaling \$200 million. Additionally, in lieu of issuing commercial paper, the Commonwealth has capacity under a note purchase agreement to issue general obligation bonds or general anticipation notes up to \$200 million. As of November 30, 2019, no commercial paper was outstanding and no bonds or notes were issued under the note purchase agreement.

<u>Series</u>	<u>Available Principal Amount (in thousands)</u>	<u>Liquidity Provider</u>	<u>Termination Date</u>
Commercial Paper - Series I (tax-exempt) and Series K (taxable)(1)	\$200,000	TD Bank	4/18/2023
Note Purchase Agreement	\$200,000	RBC Capital Markets, LLC	2/8/2024

SOURCE: Office of the Treasurer and Receiver General.

(1) One or both of Series I and Series K may be outstanding as long as the total amount outstanding does not exceed \$200 million.

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Direct Purchase Agreements

Certain of the Commonwealth's variable rate bonds have been directly purchased by commercial banking institutions. The following table lists those series of variable rate bonds subject to direct purchase agreements as of November 30, 2019.

<u>Direct Purchase Bonds</u>	<u>Outstanding Principal Amount (in thousands)</u>	<u>Mandatory Tender Date</u>
2001 Series B (Refunding) ⁽¹⁾	\$ 97,920	1/01/2021
2016 Series B	100,000	4/01/2021
2016 Series C	200,000	4/01/2021
2018 Series A (Refunding) ⁽¹⁾	120,365	2/01/2021

SOURCE: Office of the Treasurer and Receiver General.

(1) Dates provided represent hard maturities rather than mandatory tenders.

General Obligation Contract Assistance Liabilities

Massachusetts Department of Transportation, as successor to the Massachusetts Turnpike Authority. On February 19, 1999, the Commonwealth and the Massachusetts Turnpike Authority entered into a contract which provides for the Commonwealth to make annual operating assistance payments to MassDOT, as successor to the Turnpike Authority, which are capped at \$25 million annually and extend until June 30, 2050, which is the end of the 40th fiscal year following the transfer of certain facilities associated with the Commonwealth's Central Artery/Ted Williams Tunnel Project to MassDOT. On June 30, 2009, the Commonwealth and the Turnpike Authority entered into a contract for financial assistance which provides for the payment by the Commonwealth to MassDOT, as successor to the Turnpike Authority, of \$100 million per fiscal year, commencing July 1, 2009 until June 30, 2039. Payments under both contracts constitute a general obligation pledge of the Commonwealth for which the full faith and credit of the Commonwealth are pledged.

Massachusetts Clean Water Trust. The Massachusetts Clean Water Trust (the Trust) manages the Commonwealth's state revolving fund program under the federal Clean Water Act and the federal Safe Drinking Water Act. The Trust is authorized to apply for and accept federal grants and associated Commonwealth matching grants to capitalize the revolving funds and to issue debt obligations to make loans to local governmental units and others to finance eligible water pollution abatement and drinking water projects. Under state law, loans made by the Trust are required to provide for subsidies or other financial assistance to reduce the debt service expense on the loans. Currently, most new loans made by the Trust bear interest at 2%. Other loans made by the Trust may bear interest at lower rates, including a zero rate of interest, and a portion of the principal of certain loans has also been subsidized by the Trust. To provide for a portion of the subsidy on most of its loans, the Trust receives contract assistance payments from the Commonwealth. Under the Trust's enabling act, the aggregate annual contract assistance payment for the Trust's programs may not exceed \$138 million. The Commonwealth's agreement to provide contract assistance constitutes a general obligation of the Commonwealth for which its full faith and credit are pledged, and the Commonwealth's contract assistance payments are pledged as security for repayment of the Trust's debt obligations. As of November 30, 2019, the Trust had approximately \$2.5 billion of bonds outstanding. Approximately 5.72% of the Trust's aggregate debt service is covered by Commonwealth contract assistance. Prior to August, 2014, the Trust was known as the Massachusetts Water Pollution Abatement Trust.

Massachusetts Development Finance Agency. Under the infrastructure investment incentive act (sections 5 to 12 of Chapter 293 of the Acts of 2006, as amended to date), known as "I-Cubed," up to \$600 million of public infrastructure improvements to support significant new private developments may be financed by bonds issued by the Massachusetts Development Finance Agency (MassDevelopment) that are secured by and payable from contract assistance from the Commonwealth. The obligation of the Commonwealth to pay contract assistance is a general obligation of the Commonwealth. Until a related new private development is completed and occupied, the developer's property is assessed by the municipality in which the development is located in amounts equal to the debt service cost on the bonds and is applied to reimburse the Commonwealth for such cost. After each phase of the

private development is completed and occupied, the municipality is required to reimburse the Commonwealth for any portion of the debt service cost on the bonds that is not covered by new state tax revenues generated from the related private development. The municipality's reimbursement obligation is secured by a general obligation pledge of the municipality, a local aid intercept and a reserve fund which must be funded in an amount equal to or greater than two years of debt service on the bonds. The obligation of the municipality ends when the Commonwealth has collected revenues sufficient to pay principal and interest payments to date, or in some cases to the next redemption date, plus all remaining principal payments due. Pursuant to this program, MassDevelopment has issued I-Cubed bonds to finance and refinance infrastructure projects associated with the Fan Pier development in Boston, the Assembly Row project in Somerville, the Chestnut Hill Square project in Newton, the Boston Landing project in Boston, the Van Ness project in Boston, the University Station project in Westwood, the North Point project in Cambridge and the Hub on Causeway project in Boston. As of November 30, 2019, total "I-Cubed" bonds were outstanding in the amount of approximately \$182.2 million.

Legislation approved by the Governor on August 8, 2008 included an authorization to finance up to \$43 million of the costs of a parkway at the former South Weymouth naval air base to support the development of the former base. Similar to the I-Cubed program financing model, the bonds issued by MassDevelopment to finance the parkway are secured by and payable from a general obligation pledge of contract assistance from the Commonwealth. As of November 30, 2019, approximately \$23.4 million of such bonds were outstanding.

Social Innovation Financing Trust Fund. Legislation approved in 2012 established a Social Innovation Financing Trust Fund for the purpose of funding contracts to improve outcomes and lower costs for contracted government services, referred to as "pay for success contracts." The legislation authorized the Secretary of Administration and Finance to enter into pay for success contracts in which a substantial portion of Commonwealth payments, from amounts appropriated by the Legislature to the Trust Fund, would be conditioned on the achievement of specified performance outcomes. The Commonwealth's obligation to make such payments is a general obligation for which the Commonwealth's full faith and credit are pledged. The first such contract was entered into in January, 2014 (and amended in November, 2016), to help young men leaving the juvenile justice system or on probation avoid re-offending. The contract obligates the Commonwealth to make up to \$28 million in success payments, in the aggregate, through fiscal 2020. The Commonwealth entered into a second such contract in December, 2014, to address chronic individual homelessness through permanent stable, supportive housing. The contract obligates the Commonwealth to make up to \$6 million in success payments, in the aggregate, through fiscal 2021. The Commonwealth entered into a third such contract in June, 2016, to assist individuals in Adult Basic Education (ABE) or English for Speakers of Other Languages (ESOL) programs transition to employment, higher wage jobs, and higher education. The contract obligates the Commonwealth to make up to \$15 million in success payments, in the aggregate, through fiscal 2023. The Commonwealth entered into a fourth such contract in July, 2018 to support unemployed or underemployed veterans with post-traumatic stress disorder in attaining competitive and compatible employment. The contract obligates the Commonwealth to make up to \$1.5 million in success payments, in the aggregate, through fiscal 2023.

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The following table sets forth the Commonwealth's general obligation contract assistance requirements for all of fiscal 2019 and each fiscal year thereafter pursuant to contracts with the Massachusetts Clean Water Trust, MassDOT (as successor to the Turnpike Authority), and MassDevelopment (including the I-Cubed Program and the South Weymouth naval air base contract assistance requirements) and contracts associated with the Social Innovation Financing Trust Fund.

General Obligation Contract Assistance Requirements
(in thousands)

<u>Fiscal Year</u>	<u>Massachusetts Clean Water Trust</u>	<u>Massachusetts Department of Transportation</u>	<u>Massachusetts Development Finance Agency</u>	<u>Social Innovation Financing Trust Fund (3)</u>	<u>Total</u>
2019	\$73,384	\$125,000	\$9,838	\$9,100	\$217,322
2020	63,384	125,000	12,072	23,650	224,106
2021	36,435	125,000	12,838	5,335	179,608
2022	26,796	125,000	12,835	800	165,431
2023	26,862	125,000	12,832	50	164,744
2024	18,489	125,000	12,834	-	156,323
2025	14,217	125,000	12,837	-	152,054
2026	11,739	125,000	12,830	-	149,569
2027 through 2050	<u>67,680 (1)</u>	<u>1,900,000 (2)</u>	<u>247,188</u>	<u>-</u>	247,188
Total (4)	<u>\$338,986</u>	<u>\$2,900,000</u>	<u>\$346,105</u>	<u>\$38,935</u>	<u>\$3,624,026</u>

SOURCES: Massachusetts Clean Water Trust column – Office of the Treasurer and Receiver-General; MassDOT, MassDevelopment and Social Innovation Financing Trust Fund columns - Executive Office for Administration and Finance.

- (1) Current contract assistance payments end in fiscal 2049.
- (2) Represents \$25 million per year for fiscal years 2027 to 2050, inclusive, and \$100 million per year for fiscal years 2027 to 2039, inclusive.
- (3) Projected payment schedule. The actual amount and timing of payments will be based on the achievement of specified performance outcomes. These projected payments may differ from annual appropriated amounts due to the availability of unexpended funds remaining in the Social Innovation Financing Trust Fund from prior years.
- (4) Totals may not add due to rounding.

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Long-Term Operating Leases and Capital Leases

In addition to Commonwealth-owned buildings and facilities, the Commonwealth leases additional space from private parties. In certain circumstances, the Commonwealth has acquired certain types of capital assets under long-term capital leases; typically, these arrangements relate to computer and telecommunications equipment and to motor vehicles. Minimum future rental expenditure commitments of the Commonwealth under operating leases and long-term principal and interest obligations related to leases in effect as of June 30, 2019 are set forth in the table below.

Long-Term Leases (in thousands)

<u>Fiscal Year</u>	<u>Leases (1)</u>
2020	\$241,129
2021	148,852
2022	126,491
2023	109,802
2024	92,456
2025	70,271
2026	50,692
2027	44,440
2028	38,207
2029 through 2050	<u>209,198</u>
Total	<u>\$1,131,538</u>

SOURCES: Office of the Comptroller

(1) Includes operating and capital leases. Leases with the institutions of higher education that are supported by tuition and fees are not included.

Contingent Liabilities

Massachusetts Bay Transportation Authority. The MBTA issues its own bonds and notes. Prior to July 1, 2000, the Commonwealth supported MBTA bonds, notes and other obligations through guaranties of the debt service on its bonds and notes, contract assistance generally equal to 90% of the debt service on outstanding MBTA bonds and payment of the MBTA's net cost of service (current expenses, including debt service, minus current income). Beginning July 1, 2000, the Commonwealth's annual obligation to support the MBTA for operating costs and debt service is limited to a portion of the revenues raised by the Commonwealth's sales tax, but the Commonwealth remains contingently liable for the payment of MBTA bonds and notes issued prior to July 1, 2000 and for MBTA payment obligations related to leases, reimbursement obligations, interest exchange agreements and other financing obligations entered into prior to July 1, 2000. The Commonwealth's obligation to pay such prior bonds is a general obligation for which its full faith and credit have been pledged. As of November 30, 2019, the MBTA had approximately \$160.7 million of such prior bonds outstanding. Such bonds are currently scheduled to mature annually through fiscal 2030.

Massachusetts Development Finance Agency. Under legislation approved in 2010 and amended in 2011, MassDevelopment is authorized to issue bonds for the benefit of nonprofit community hospitals and nonprofit community health centers. Such bonds are to be secured by capital reserve funds funded at the time of bond issuance in an amount equal to the maximum annual debt service on the bonds. The legislation provides that MassDevelopment is to notify the Governor if any such capital reserve fund needs to be replenished, and that the Legislature is to appropriate the amount necessary to restore the fund to its required level. The legislation contains no limit on the amount of such bonds that may be issued. Any project to be financed by such bonds must be approved by the Secretary of Health and Human Services, and any loan to a community hospital or community health center (and the issuance and terms of the related bonds) must be approved by the Secretary of Administration and Finance. If any such institution defaults on a loan, any moneys in the custody of the Commonwealth that are payable to the institution may be withheld by the Commonwealth and used to pay debt service or to replenish the applicable capital reserve fund. If, following a Commonwealth transfer to replenish a capital reserve fund, the applicable institution fails to reimburse the Commonwealth within six months, the Commonwealth may withhold funds payable to the institution, and all contracts issued by the Group Insurance Commission, the Commonwealth Health Insurance Connector Authority and MassHealth to a third party for the purposes of providing health care insurance paid for by the Commonwealth are to provide that the third party is to withhold payments to the institution

and transfer the withheld amounts to the Commonwealth. No bonds have ever been issued pursuant to this legislation.

Woods Hole, Martha’s Vineyard and Nantucket Steamship Authority. The Steamship Authority operates passenger and vehicle ferries to Martha’s Vineyard and Nantucket. The Steamship Authority issues its own bonds and notes. Commonwealth support of the bonds and notes of the Steamship Authority includes a Commonwealth guaranty pursuant to statutory provisions requiring the Commonwealth to provide the Steamship Authority with funds sufficient to meet the principal of and interest on their bonds and notes as they mature to the extent that funds sufficient for this purpose are not otherwise available to the Steamship Authority and the Commonwealth’s payment, under applicable statutory provisions, of the net cost of service of the Steamship Authority (current expenses, including debt service, minus current income). The Steamship Authority is currently self-supporting, requiring no net cost of service or contract assistance payments. As of November 30, 2019, the Steamship Authority had approximately \$73.4 million of bonds outstanding. The Commonwealth’s obligations to the Steamship Authority are general obligations for which its full faith and credit have been pledged.

University of Massachusetts Building Authority. This authority, created to assist the University of Massachusetts, is permitted by its enabling act to have outstanding up to \$200 million in Commonwealth-guaranteed debt. The Commonwealth’s guaranty of principal and interest is a general obligation of the Commonwealth for which its full faith and credit are pledged. In addition to such guaranty, certain revenues of the Building Authority, including dormitory rental income and student fees, are pledged to pay the Building Authority’s bonds. As of June 30, 2019, the Building Authority had approximately \$111.1 million of Commonwealth-guaranteed debt outstanding.

Authorized and Unissued Debt

General obligation bonds of the Commonwealth are authorized to correspond with capital appropriations. See “COMMONWEALTH BUDGET AND FINANCIAL MANAGEMENT CONTROLS – Capital Investment Process and Controls.” Over the last decade, the Commonwealth has typically had a large amount of authorized and unissued debt. However, the Commonwealth’s actual expenditures for capital projects in a given year relate more to the capital needs which the Commonwealth determines it can afford to finance in such year than to the total amount of authorized and unissued debt. The table below presents authorized and unissued debt at year end:

Authorized and Unissued Debt (in thousands)

<u>Fiscal Year</u>	<u>Authorized and Unissued Debt</u>
2015	\$29,071,339
2016	26,145,997
2017	22,716,302
2018	20,860,482
2019	28,417,839

SOURCE: Office of the Comptroller.

Authorized and unissued debt is measured in accordance with the statutory basis of accounting, which is different from GAAP. Only the net proceeds of bonds issued (exclusive of underwriters’ discount, costs of issuance and other financing costs) are deducted from the amount of authorized and unissued debt. Therefore, the change in authorized and unissued debt at the end of any fiscal year is not intended to correlate to the change in the principal amount of debt outstanding as measured and reported in conformity with GAAP.

The Legislature has enacted various bond authorizations to fund the Commonwealth’s capital investment plan. See “COMMONWEALTH CAPITAL INVESTMENT PLAN.” Capital spending and subsequent debt issuance is constrained by the debt affordability policy and the statutory debt limit, and will be published annually in the five-year capital investment plan.

LEGAL MATTERS

There are pending in state and federal courts within the Commonwealth and in the Supreme Court of the United States various suits in which the Commonwealth is a party. In the opinion of the Attorney General, no litigation is pending or, to her knowledge, threatened which is likely to result, either individually or in the aggregate, in final judgments against the Commonwealth that would affect materially its financial condition.

Programs and Services

From time to time actions are brought against the Commonwealth by the recipients of governmental services, particularly recipients of human services benefits, seeking expanded levels of services and benefits and by the providers of such services challenging the Commonwealth's reimbursement rates and methodologies. To the extent that such actions result in judgments requiring the Commonwealth to provide expanded services or benefits or pay increased rates, additional operating and capital expenditures might be needed to implement such judgments.

Rosie D., et al. v. The Governor, United States Court of Appeals, First Circuit. In a memorandum of decision dated January 26, 2006, the federal District Court in Massachusetts ruled in favor of a class of Medicaid-recipient children that the Commonwealth failed to provide to children with serious emotional disturbances the home- and community-based mental health services required under the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) provisions of the Medicaid Act. In February 2007, the Court adopted the defendants' proposed remedial plan, with some modifications, and, in July 2007, entered judgment in accordance with that plan, as modified. The Court's remedial order obliges MassHealth to take the following steps, largely at the Commonwealth's expense: (1) require pediatric providers to offer standardized behavioral health pediatric screenings; (2) require behavioral health specialists to utilize a standardized behavioral health assessment tool; (3) seek federal approval for certain new or enhanced behavioral health services; (4) implement the enhanced behavioral health services; and (5) develop information technology systems as needed to support data collection to evaluate compliance. The Commonwealth did not appeal from that judgment; instead, MassHealth has implemented all required program changes.

At a hearing on September 27, 2018, the District Court entertained motions from the parties regarding: the status of the Commonwealth's compliance with the judgment; the possible termination of court monitoring and reporting provisions; the legal significance, if any, of certain voluntary "disengagement criteria"; and the modification of the judgment to include monitoring of outpatient therapy. On February 7, 2019, the Court denied in part and granted in part the defendants' motion regarding substantial compliance and to terminate court monitoring. The Court found MassHealth to be in substantial compliance with the EPSDT notification and screening requirements, and terminated monitoring with respect to those requirements of the judgment. The Court denied defendants' motion to terminate monitoring as to any other aspect of the judgment, however, based on the Court's determination that the waitlists for one of the enhanced behavioral health services implemented under the judgment violated the terms of the judgment and the Medicaid Act's "reasonable promptness" requirement. The Court did not decide the merits of the defendants' asserted substantial compliance with other provisions of the judgment. On March 12, 2019, defendants filed a notice of appeal. On March 13, 2019, the Court denied the plaintiffs' pending motions regarding disengagement criteria and modification of the judgment to include outpatient therapy, without prejudice. That same day, the federal judge who had presided over this case since its inception transferred the case to Judge Richard Stearns. On June 17, 2019, the plaintiffs filed a motion asking to extend court monitoring. Defendants opposed this motion. On July 1, 2019, the Court ordered the extension of the court monitor's appointment under her present terms and conditions, unless and until the Court of Appeals orders differently. On July 31, 2019, the Commonwealth defendants filed a notice of appeal of the order extending court monitoring. On October 8, 2019, the First Circuit Court of Appeals consolidated the defendants' appeals for purposes of briefing and oral argument. On November 14, 2019, the defendants filed a consolidated opening appellate brief. Plaintiffs' brief was filed on December 16, 2019. The Court of Appeals anticipates that this case will be ready for argument or submission in the March 2020 session. There are no District Court status reports scheduled at this time. MassHealth estimates that its implementation of program changes in compliance with the District Court's remedial orders, if not overturned on appeal, will continue to increase its costs, including administrative costs, prospectively by over \$20 million annually.

Hutchinson et al v. Patrick et al, United States District Court, Massachusetts. This is a class action, commenced in 2007, brought by two organizations and five individuals with brain injuries who are residents of various nursing facilities. Plaintiffs claim that they and a class of between 2,000 and 4,000 brain-injured individuals are entitled to, among other things, placement in community settings. Plaintiffs asserted claims under the Americans with Disabilities Act, the Rehabilitation Act and the Medicaid Act; they sought declaratory and injunctive relief. After the Court certified a class in October 2007, the parties engaged in an intensive period of settlement negotiations. In May, 2008, the parties entered into a settlement agreement which was subsequently amended in July, 2013 (Agreement). Under the terms of the six-year Agreement, the defendants will use the Massachusetts Money Follows the Person Demonstration Project and various waiver programs to provide community residential and non-residential supports in an integrated setting to Massachusetts Medicaid-eligible persons with an acquired brain injury who are in nursing and long-term rehabilitation facilities (Class Members in Facilities). Year six of the Agreement ended on June 30, 2019. Pursuant to the terms of the Agreement, the defendants added 1,083 waiver slots for Class Members in Facilities over the Agreement's six-year term. The cost of implementing these programs was originally projected to be approximately \$386 million, phased in over six years, with approximately half of that amount expected to be reimbursed by the federal government. In fiscal 2020, the estimated annualized cost to maintain slots added under the Agreement is approximately \$128 million (gross) or \$64 million (net) state cost.

Chanice Lee, also on behalf of similarly situated individuals v. Commissioner of the Department of Early Education and Care, et al., Suffolk Superior Court. On December 9, 2019, the Department of Early Education and Care (EEC) received notice of a putative class action lawsuit challenging the denial to plaintiff of an income-eligible child care subsidy because plaintiff owed co-payment fees to a previous child care provider. Plaintiff claims that the fee scale devised by EEC, upon which her co-payments were based, and the disqualification from receipt of the subsidy are unlawful under state and federal law governing child care subsidies. Plaintiff seeks: (i) certification as a class action; (ii) a declaration that EEC's fee scale is unlawful, in part because it was not promulgated as a regulation, as required by law; (iii) a declaration that EEC may not deny income-eligible subsidies to families based on outstanding fees; and (iv) an order requiring EEC to promulgate a new fee scale after public notice and comment.

EEC is under a federal mandate from the Child Care Development Block Grant (CCDBG) Act of 2014 to ensure that parent fee copayments for child care services are affordable. EEC was deemed compliant with CCDBG by the federal office of Administration of Children and Families (ACF) through approval of the EEC's State Plan in 2018. CCDBG sets a benchmark, but not a requirement, of affordability for parent fees at 7% of a parent's income. EEC's current parent fee chart establishes parent fees ranging from 0% to 16% of a parent's income, with the potential for a higher percentage if multiple children in a household are enrolled.

A state statute, M.G.L. c. 15D, § 2(e), mandates a sliding fee scale and periodic revision of the rate structure in accordance with M.G.L. c. 30A regulation-promulgation procedures. In connection with promulgating revisions to its Financial Assistance regulations, EEC had established a schedule for revising its parent fee chart, which included a requirement that EEC would revise its parent fee chart within six months of promulgation of the revised Financial Assistance regulations. The regulations were promulgated by the Secretary of State on February 22, 2019, setting the six-month deadline at August 22, 2019. To date, EEC has not revised the parent fee chart and is still completing a cost analyses to determine the impact of any such revisions. A reduction in the percentage of gross income parents are required to pay in fees could shift to EEC a considerable portion of the child care costs that parents currently are required to pay. In fiscal 2019, statewide parent fees totaled approximately \$71.8 million. If parent co-pays were capped at 7% of gross income, the CCDBG benchmark, the net cost to EEC could range from \$22 to \$32 million annually, depending on policy decisions relating to factors such as sibling discounts.

The Attorney General's Office is still in the process of analyzing the complaint and at this time the Commonwealth cannot predict the timing, outcome or, should the plaintiff prevail, the budgetary impact of this litigation.

Federal Audits and Regulatory Reviews

In re: Centers for Medicare and Medicaid Services regulations (Uncompensated Care Pool/Health Safety Net Trust Fund). The federal Health Care Financing Administration (now the Centers for Medicare and Medicaid Services (CMS)) asserted in June, 2000 that the portion of the Medicaid program funded by the Commonwealth's Health Safety Net Trust Fund (formerly the Uncompensated Care Pool) might violate federal regulations regarding permissible taxes on health care providers. The Commonwealth believes that the Commonwealth's assessment on acute care hospitals and surcharge payers, respectively, which fund the Uncompensated Care Pool and its successor, the Health Safety Net Trust Fund, are within the federal law pertaining to health care-related taxes, but nevertheless sought federal waivers for the assessments as instructed by CMS. In 2017, a change in state law was made to the hospital assessment making a federal waiver for the hospital assessment unnecessary. Under federal regulations, if the Commonwealth were ultimately determined to have imposed an impermissible health care-related tax, the federal government could seek retroactive repayment of federal Medicaid reimbursements. The Commonwealth collected an estimated \$6.234 billion in acute hospital assessments between 1990 and the end of Health Safety Net fiscal year 2017, and an estimated \$3.188 billion in surcharge payments between 1998 and the end of Health Safety Net fiscal year 2019.

In re: Centers for Medicare and Medicaid Services: Disallowance Number MA/2018/001/MAP (1115(a) Demonstration Claiming Authority for Primary Care Payment Reform Initiative). On November 20, 2018, CMS issued to the Commonwealth a notice of disallowance in the amount of \$70.9 million in federal financial participation (FFP) for expenditures between March 31, 2014 and December 31, 2016 related to MassHealth's Primary Care Payment Reform Initiative (PCPRI). PCPRI was a payment model that bundled services payments to discourage billing based on fee for services, rewarded providers for achieving quality goals by providing certain quality incentive payments, and rewarded providers by sharing savings and losses with them. In its disallowance letter, CMS asserts that EOHHS lacked explicit authority under its 1115 Demonstration Project to make payments that deviated from those that were described (or could be approved) under the Medicaid State Plan because PCPRI was not mentioned by name in the 1115 Demonstration Project, because there was no specific expenditure authority to support these payments, and because CMS never approved the PCPRI addendum to the Primary Care Clinician (PCC) Plan contract. EOHHS maintains that it has authority under the 1115 Demonstration Project to make enhanced primary care clinician payments consistent with the PCPRI program and that no additional authority was necessary to make the payments. MassHealth contends that it sent CMS the PCPRI addendum to the PCC Plan contract in March 2014 but that CMS failed to act on it, either by approving or denying the addendum. EOHHS responded to the disallowance letter by requesting reconsideration, which CMS denied on March 15, 2019. EOHHS submitted a Notice of Appeal to the federal Health and Human Services Departmental Appeals Board on May 13, 2019. The parties are currently engaging in discovery. EOHHS' brief is due on January 27, 2020.

Taxes

Brownfields Tax Credits Claims. A brownfields tax credit for environmental response actions was established under the provisions of General Laws chapter 62, § 6(j) and chapter 63, § 38Q. Under the statutes, a business corporation, individual taxpayer, or non-profit organization which remediates certain contaminated properties may be eligible for a credit for costs incurred in the remediation of such property. The Department of Revenue carefully examines and sometimes declines preliminary approval of applications from various taxpayers for brownfields tax credits in amounts that often exceed \$1 million. More than five years ago, the Department denied tax credit applications by three Massachusetts institutions of higher education for work those institutions performed to remediate an environmentally contaminated site. (Because not-for-profits do not typically pay corporate excise taxes against which such a credit may be applied, legislation enacted in 2006 made it possible, for the first time, for taxpayers granted such a credit to "sell" that credit to individuals or corporations who do incur tax liability, so that the buyer can make use of the credit.) The sole issue in the case of *Northeastern University, et al. v. Commissioner of Revenue*, filed in August, 2014, was whether the plaintiff nonprofit institutions of higher education could receive a brownfields tax credit for site remediation achieved prior to the taxable year commencing on or after June 24, 2006 (i.e., the effective date of the legislative amendment). The plaintiffs prevailed and the judgment in their favor became final in May, 2018 when the Supreme Judicial Court denied further appellate review. The Department is continuing to review a plaintiff's application to confirm that all other application criteria are met, and if so, will issue tax certificates worth up to \$6.6 million. There is currently one brownfields tax credit case docketed at the Appellate Tax Board, but the potential revenue loss on that case is less than \$1 million. With respect to claims filed

with the Department of Revenue but not yet docketed at the Appellate Tax Board, currently the Department estimates a total of \$108.7 million worth of potential revenue loss, with three of the individual credit amount claims exceeding \$10 million each. One of these pending but not yet docketed matters presents, in part, the issue from the *Northeastern University* case described above, and the potential revenue loss with respect to that issue is estimated to be approximately \$2.8 million.

Film Credits Claims. Under the provisions of General Laws chapter 63, § 38X, personal income tax and corporate excise tax credits and sales tax exemptions are available to qualifying taxpayers in the motion picture industry (commonly referred to as Film Credits). The Department of Revenue carefully examines and sometimes declines preliminary approval of applications from various taxpayers for Film Credits, against taxable income, in amounts that often exceed \$1 million. Currently the Department of Revenue estimates a total potential revenue loss of approximately \$78.3 million, with three of the individual credit amount claims exceeding \$10 million.

Other Revenues

Commonwealth of Massachusetts v. Philip Morris Inc., RJ Reynolds Tobacco Company, Lorillard Tobacco Company, et al., Supreme Judicial Court, Middlesex Superior Court (a/k/a the Tobacco Master Settlement Agreement, Nonparticipating Manufacturer (NPM) Adjustment Disputes)

These matters arise under the Tobacco Master Settlement Agreement (MSA), entered into in 1998, that settled litigation and claims by Massachusetts and 51 other states or dependencies (collectively, the States) against the major tobacco manufacturers. Under the MSA, yearly payments made by the Original Participating Manufacturers (OPMs) and Subsequent Participating Manufacturers (collectively, the Participating Manufacturers or PMs) are subject to a number of adjustments. One such adjustment is the Non-Participating Manufacturer (NPM) Adjustment, which can be triggered if the PMs suffer a specified market share loss as compared to their market share during the base year 1997. Under the MSA, a nationally recognized economic firm selected jointly by the States and the PMs must make a determination that “the disadvantages experienced” by the PMs as a result of complying with the MSA were “a significant factor contributing to the Market Share Loss” for a given year. Even if such a determination is made, the States can still avoid the NPM Adjustment if it is determined that the States “diligently enforced” their individual NPM Escrow Statutes.

The PMs seek to reduce, by the approximate amount set forth in the chart below, the MSA payments they made to the States for sales in the respective years listed below. A determination has been made that the PMs suffered a market share loss in each of these years (except for 2018, for which a determination has not yet been made) and that the disadvantages experienced by the PMs as a result of complying with the MSA were a significant factor contributing to such market share loss. The PMs notified the States of their intent to arbitrate the issue of whether each State diligently enforced its NPM Escrow Statute in each of the NPM Adjustment Years from 2005 through 2008, inclusive, following the conclusion of the 2003 NPM Adjustment Arbitration proceedings. The PMs have not yet notified the States of their intent to arbitrate the issue of whether each State diligently enforced its NPM Escrow Statute in each of the NPM Adjustment Years from 2009 through 2018. If the Commonwealth does not prevail, future MSA payments to Massachusetts would be reduced by an amount to be determined, which amounts would be, for the applicable NPM Adjustment Year, between the Minimum Potential Commonwealth Reduction set forth below, plus interest, up to but not exceeding the full amount of the Commonwealth’s MSA payment for sales in the applicable year, depending upon the outcome of similar NPM proceedings against other States.

NPM Adjustment Year	Payment Reduction Sought	Minimum Potential Commonwealth Reduction
2005	\$753,000,000	\$30,000,000
2006	704,000,000	7,000,000
2007	791,000,000	8,800,000
2008	888,000,000	900,000
2009	859,000,000	1,300,000
2010	873,000,000	500,000
2011	728,000,000	500,000
2012	797,000,000	300,000
2013	823,000,000	300,000 (5)
2014	838,000,000	300,000 (5)
2015	910,000,000 (1)	300,000 (5)
2016	900,000,000 (2)	300,000 (5)
2017	896,000,000 (3)	300,000 (5)
2018	896,000,000 (4)	300,000 (5)

- (1) Subject to revision until a final calculation in March, 2020.
- (2) Subject to revision until a final calculation in March, 2021.
- (3) Subject to revision until a final calculation in March, 2022.
- (4) Subject to revision until a final calculation in March, 2023.
- (5) Since 2013, the Commonwealth’s minimum potential reduction has been set as a constant \$300,000 for reporting purposes as it is now impossible to predict, calculate, or even approximate potential reductions due to a variety of factors, including a number of settlements with varying structures in multiple states. In addition to not knowing how many States in a given NPM year may be found to be “non-diligent,” it is also unclear how an arbitration panel would calculate a non-diligent State’s share of the NPM Adjustment. Therefore, the \$300,000 amount is used to represent, at least conceptually, the minimal potential reduction the Commonwealth may incur if it is found to be non-diligent in a given NPM year.

Environment

In re Massachusetts Military Reservation (pre-litigation). The Commonwealth, through the Executive Office of Energy and Environmental Affairs, the Department of Environmental Protection and the Attorney General’s office, were engaged in discussions with federal Natural Resource Trustees, including the United States Army and Air Force, the Department of the Interior and the National Oceanic and Atmospheric Administration, and private contractors regarding natural resource damages at the Massachusetts Military Reservation on Cape Cod. Federal Trustees and private contractors claim that the Commonwealth and others are liable for natural resource damages due to widespread contamination primarily from past military activities at the Reservation and are responsible for response actions and related clean-up activities. The assessment process for natural resource damages is set out in federal regulations and has not been completed. While no recent comprehensive estimate of natural resource damages and response actions is available, it is expected that the damages and response actions may cost at least tens of millions of dollars. In 2013, the state and federal trustees reopened preliminary discussions per a Trustee Council resolution on a potential settlement framework.

Other

McHugh et al v. Commonwealth et al., Appeals Court. Four Massachusetts Department of Environmental Protection (DEP) contract employees filed a purported class action suit against the Commonwealth, DEP, and DEP’s Commissioner, alleging that Commonwealth entities (including but not limited to DEP) have been hiring and employing contract employees as long-term replacements for full-time state employees and not providing them employment benefits. Plaintiffs purported to bring suit on behalf of approximately 3,330 to 7,600 similarly situated individuals. In November, 2018, Suffolk Superior Court granted the state defendants’ motion to dismiss, but

plaintiffs promptly filed a notice of appeal. Similar claims have also been asserted in the Superior Court on behalf of a group of contractors, allegedly exceeding 80 in number, employed by entities within the Health and Human Services secretariat. *Draper v. Commonwealth of Massachusetts, et al.*, civil action no. 1884CV02627. In both cases, the Commonwealth maintains it is immune from suit under the various employment and benefits-related laws cited by the plaintiffs and the plaintiffs have otherwise failed to assert viable claims. In early February, 2019, the *McHugh* plaintiffs filed an Application for Direct Appellate Review with the Supreme Judicial Court, which was denied. The *McHugh* plaintiffs filed their principal brief and record appendix with the Appeals Court on April 2, 2019. The Commonwealth filed its brief on July 1, 2019, and then plaintiffs-appellants filed their reply brief on July 15, 2019. Oral argument was scheduled for January 14, 2020.

Drug Testing Laboratory Disputes. In 2012 and 2013, charges were brought against two chemists, working in two separate Commonwealth drug testing laboratories in Boston and Amherst, alleging malfeasance by such chemists in the handling and testing of laboratory samples and/or the adulteration or theft of seized drugs used as evidence in criminal cases. As a result of the subsequent convictions of these two chemists, and following judicial review, more than 21,000 criminal cases potentially affected by altered drug evidence from the Boston laboratory were vacated or dismissed, with only a few hundred potentially affected criminal cases remaining open for re-prosecution. Pursuant to a court order, indigent defendants in the cases that remain who wish to pursue vacatur or a new trial will be assigned counsel, at state expense. The number of criminal cases potentially affected by altered drug evidence from the Amherst laboratory has not yet been established, but is expected to exceed 10,000. To date, more than 8,000 convictions have been vacated and dismissed with prejudice. In actions relating to the Amherst laboratory, a court found that, in addition to the chemist's malfeasance, two former prosecutors "tampered with the fair administration of justice" and perpetrated "a fraud upon the court" by deliberately concealing documents relevant to the chemist's actions, with implications for many more drug tests conducted by the Amherst laboratory. Notwithstanding the Court also finding that, with the exception of the identified chemist's work, the Amherst laboratory was "free from any deficiency in analytical procedure, was kept in an orderly fashion, and that work flowed through the lab smoothly," the Supreme Judicial Court (SJC) expanded the Commonwealth's potential liability, ordering, in relevant part, that all convictions based on evidence tested at the Amherst laboratory on or after January 1, 2009, must be vacated and dismissed, regardless of the chemist who signed the drug certificate, as well as all methamphetamine convictions where the drugs were tested at the Amherst laboratory during the convicted chemist's tenure (2004-2013). See *Committee for Public Counsel Services, et al. v. Attorney General of Massachusetts, et al.*, SJC-12471 (Oct. 11, 2018). Although the lists of criminal cases affected by this matter have been impounded by the Court, it is estimated that as many as 12,000 cases, and perhaps more, may be affected and, therefore, may be a source of potential liability.

There are a number of ongoing civil actions, in both state and federal court, relating to the rights of those criminal defendants potentially affected by the malfeasance of the two chemists and the attorney misconduct described above, and more are expected. See, e.g., *Penate v. Kaczmarek et al.*, United States District Court for the District of Massachusetts, in which the plaintiff alleges civil rights violations under 42 U.S.C. § 1983 and seeks approximately \$5.7 million in compensatory and punitive damages, interest, costs, and attorneys' fees. In *Penate*, the District Court dismissed claims against three Department of Public Health (DPH) defendants and two attorneys in January, 2019, but denied motions to dismiss filed by two former DPH employees and a now-inactive attorney. The now-inactive attorney's interlocutory appeal in the First Circuit Court of Appeals was rejected on June 26, 2019. One of the DPH employees whose motion to dismiss was denied also pursued an interlocutory appeal in the Court of Appeals; on December 13, 2019, the appeals court reversed the district court's denial of the one DPH employee's motion to dismiss, and all claims against him have now been dismissed with prejudice. At this time, the District Court proceedings are not stayed. The potential claims of other criminal defendants against the Commonwealth and other officials are likely to range from: restitution for the fees and costs imposed on and incurred by the criminal defendants, including for uncompensated labor; erroneous conviction; negligence of the Commonwealth in supervising the laboratories and their employees; and potential civil rights violations under federal law.

To date, plaintiffs have sought, and may in the future seek, compensatory as well as punitive damages, interest, costs, and attorneys' fees. In addition, in *Nelson v. Colorado*, 137 S. Ct. 1239 (2017), the United States Supreme Court declared that when a criminal conviction is invalidated by a reviewing court and no retrial will occur, a state is obliged to refund fees, court costs, and any restitution exacted from a defendant upon, and as a consequence of, the conviction. Based on this Supreme Court decision, a purported class action has been filed on behalf of the criminal defendants, whose convictions were vacated as the result of the potentially tainted drug tests

in the two laboratories, seeking “refund of all Case-Related Payments, payment for all Uncompensated Labor, and return of all Forfeited Property.” *Foster, et al. v. Commonwealth, et al.*, Docket No. 1:18-cv-10354-IT, United States District Court for the District of Massachusetts. In *Foster*, the District Court has stayed the proceedings on several occasions; most recently, until May 12, 2020, to allow the parties to continue to work towards a negotiated settlement that may include resolution of the plaintiffs’ newly-filed (yet overlapping in terms of claims) state court complaint (*Foster et al. v. Commonwealth*, No. 1984CV03373 (Suffolk Super. Ct.) (filed Oct. 29, 2019)). The parties have agreed that 10 categories of case-related payments are refundable to the extent payments in those categories were made upon, and as a consequence of, now-vacated laboratory-related convictions.

Additionally, in two similar state court cases, the Supreme Judicial Court, following *Nelson*, held that defendants have due process rights to refunds of fees, fines, and restitution paid by a defendant as a consequence of a later invalidated conviction when it is determined the case will not or cannot be retried. See *Commonwealth v. Martinez*, SJC-12479; see also *Commonwealth v. Green*, SJC-12480. The SJC deferred further rulings in the cases to allow time for a global remedy to be crafted and for a settlement to be reached by the parties in the *Foster* matter. The SJC did, however, caution that “[n]othing bars this court from exercising [its] superintendence authority before that date [when any *Foster* case global settlement is reached] if deemed necessary to preserve the fair administration of justice.” In a more recent appeal, *Commonwealth v. Jermaine K. Watt*, No. SJC-12689, the plaintiff’s conviction was vacated as a result of the Amherst chemist’s misconduct, and the plaintiff was seeking the return of monthly inmate account administration and maintenance fees, among other fees. The Superior Court denied Mr. Watt’s motion for fees and he appealed. The SJC overturned the Superior Court’s decision with respect to a drug analysis fee but upheld the decision for all other fees Mr. Watt was seeking as those fees were not being charged as a direct result of his vacated case.

Given the tens of thousands of criminal cases potentially affected by misconduct at the two laboratories (in the *Foster* case, plaintiffs claim a class of approximately 40,000 individuals whose convictions were vacated and cases dismissed with prejudice), there likely will be continuing significant, but as yet undetermined, costs to the Commonwealth in remedying the alleged malfeasance, including: vendor costs for information gathering and administration of exaction refunds; costs to investigate and defend the civil complaints alleging state liability in both state and federal courts, as described above; and the costs of settlements and judgments arising from the potential civil actions described above. Net appropriations (minus cuts and reversions) from fiscal 2013 to the present (based on the fiscal 2020 budget, as approved by the Governor on July 31, 2019) to rectify the consequences of the drug testing lab-related misconduct total approximately \$24.7 million, including a \$1.9 million appropriation for fiscal 2019 and a \$1.1 million appropriation for fiscal 2020. Based on the court decisions to date and depending on the outcomes of the additional cases filed to date and cases that may be filed in the future, the Commonwealth could be required to budget for millions of dollars’ worth of refundable exactions, settlements, and administrative expenses.

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CONTINUING DISCLOSURE

The Commonwealth prepares its Statutory Basis Financial Report and its Comprehensive Annual Financial Report with respect to each fiscal year ending June 30. The Statutory Basis Financial Report usually becomes available on or around October 31 of the following fiscal year and the Comprehensive Annual Financial Report becomes available in January of the following fiscal year. Copies of such reports and other financial reports of the Comptroller referenced in this document may be obtained by requesting the same in writing from the Office of the Comptroller, One Ashburton Place, 9th Floor, Boston, Massachusetts 02108. The financial statements are also available at the Comptroller's web site located at <http://www.macomptroller.org> by clicking on "Financial Reports" on the Comptroller's homepage.

The Department of the State Auditor audits all agencies, departments and authorities of the Commonwealth at least every three years. Copies of audit reports may be obtained from the State Auditor, State House, Room 229, Boston, Massachusetts 02133.

On behalf of the Commonwealth, the State Treasurer will provide to the MSRB, through EMMA, no later than 270 days after the end of each fiscal year of the Commonwealth, certain financial information and operating data relating to such fiscal year, as provided in Rule 15c2-12, as amended, adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, together with audited financial statements of the Commonwealth for such fiscal year. Except as noted below, the Commonwealth has not failed in the last five years to comply with its continuing disclosure undertakings with respect to any of its debt.

The Commonwealth failed to file event notices in June 2017 when the S&P Global Ratings rating on certain insured special obligation bonds payable from the Convention Center Fund was lowered from AA- to A and in December, 2017 when the insurer asked that the rating on such bonds be withdrawn. The Commonwealth has filed notices of all such rating changes with respect to the bonds that are currently outstanding.

Pursuant to its continuing disclosure undertakings with respect to its general obligation bonds, the Commonwealth filed fiscal 2014 annual financial information on March 27, 2015; however, there was a failure to link the filing to certain CUSIP numbers for Commonwealth general obligation bonds issued from October 29, 2014 through December 31, 2014. In addition, certain annual financial information and audited financial statements of the Commonwealth were not properly linked to certain Commonwealth contract assistance bonds and certain CTF Bonds. Corrective filings have since been posted to EMMA.

In the course of substituting liquidity facilities in connection with certain Commonwealth general obligation variable rate demand bonds, supplements to the respective official statements for such bonds were posted in a timely manner to EMMA setting forth detailed information regarding the substituted liquidity facilities; however, separate event notices were not posted at the time. Event notices of the liquidity substitutions have since been posted.

In the course of reviewing its event notice filings, the Commonwealth discovered that bond call notices were not posted in a timely manner to EMMA in connection with certain advance refunding transactions and that a notice of defeasance was not timely posted to EMMA until approximately three and a half months after the defeasance occurred. The Commonwealth has posted such notices with respect to all Commonwealth bonds that have been advance refunded, where the funds to redeem or pay the bonds remain held in escrow.

The State Treasurer also regularly files information with EMMA beyond the documents required by the Commonwealth's continuing disclosure undertakings, including updated Information Statements. In addition, information of interest to investors may be posted on the Commonwealth's investor website at www.massbondholder.com, on twitter at twitter.com/BuyMassBonds and on the Commonwealth's "Mass. Investor Disclosure" mobile app.

MISCELLANEOUS

Any provisions of the constitution of the Commonwealth, of general and special laws and of other documents set forth or referred to in this Information Statement are only summarized, and such summaries do not purport to be complete statements of any of such provisions. Only the actual text of such provisions can be relied upon for completeness and accuracy.

This Information Statement contains certain forward-looking statements that are subject to a variety of risks and uncertainties that could cause actual results to differ from the projected results, including without limitation general economic and business conditions, conditions in the financial markets, the financial condition of the Commonwealth and various state agencies and authorities, receipt of federal grants, changes in federal programs that could increase or transfer financial or other obligations to the Commonwealth, litigation, arbitration, force majeure events and various other factors that are beyond the control of the Commonwealth and its various agencies and authorities. Because of the inability to predict all factors that may affect future decisions, actions, events or financial circumstances, what actually happens may be different from what is set forth in such forward-looking statements. Forward-looking statements are indicated by use of such words as “may,” “will,” “should,” “intends,” “expects,” “believes,” “anticipates,” “estimates” and others.

All estimates and assumptions in this Information Statement have been made on the best information available and are believed to be reliable, but no representations whatsoever are made that such estimates and assumptions are correct. So far as any statements in this Information Statement involve any matters of opinion, whether or not expressly so stated, they are intended merely as such and not as representations of fact. The various tables may not add due to rounding of figures.

Neither the Commonwealth’s independent auditors, nor any other independent accountants, have compiled, examined, or performed any procedures with respect to the prospective financial information contained herein, nor have they expressed any opinion or any other form of assurance on such information or its achievability, and assume no responsibility for, and disclaim any association with, the prospective financial information.

The information, estimates and assumptions and expressions of opinion in this Information Statement are subject to change without notice. Neither the delivery of this Information Statement nor any sale made pursuant to any official statement of which this Information Statement is a part shall, under any circumstances, create any implication that there has been no change in the affairs of the Commonwealth or its agencies, authorities or political subdivisions since the date of this Information Statement, except as expressly stated.

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AVAILABILITY OF OTHER FINANCIAL INFORMATION

Questions regarding this Information Statement or requests for additional information concerning the Commonwealth should be directed to Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General, One Center Plaza, Suite 430, Boston, Massachusetts 02108, telephone (617) 367-3900, or to Mark Attia, Assistant Secretary, Executive Office for Administration and Finance, State House, Room 373, Boston, Massachusetts 02133, telephone (617) 727-2040. Questions regarding legal matters relating to this Information Statement should be directed to Poonam Patidar, Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., One Financial Center, Boston, Massachusetts 02111, telephone (617) 348-3038.

THE COMMONWEALTH OF MASSACHUSETTS

By /s/ Deborah B. Goldberg
Deborah B. Goldberg
Treasurer and Receiver-General

By /s/ Michael J. Heffernan
Michael J. Heffernan
Secretary of Administration and Finance

January 29, 2020, as amended on February 11, 2020

Exhibits to the Information Statement are incorporated by reference and have been posted on EMMA.

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PROPOSED FORM OF OPINION OF BOND COUNSEL

Upon delivery of the Bonds described below, Bond Counsel proposes to deliver opinions in substantially the following form:



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

[Dated Closing Date]

Honorable Deborah B. Goldberg
Treasurer and Receiver-General
State House, Room 227
Boston, MA 02133

We have acted as bond counsel to The Commonwealth of Massachusetts (the “Commonwealth”) in connection with the issuance by the Commonwealth of its \$100,000,000 General Obligation Bonds, Consolidated Loan of 2020, Series A, dated the date of delivery (the “Bonds”). In such capacity, we have examined such law and such certified proceedings and other documents as we have deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion that, under existing law:

(a) The Bonds are valid and binding general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Bonds. It should be noted, however, that Chapter 62F of the Massachusetts General Laws establishes a state tax revenue growth limit and does not exclude principal and interest payments on Commonwealth debt obligations from the scope of the limit.

(b) Interest on the Bonds, including any accrued original issue discount, will not be included in the gross income of the holders of the Bonds for federal income tax purposes. This opinion is rendered subject to the condition that the Commonwealth comply with certain requirements of the Internal Revenue Code of 1986, as amended, which must be satisfied subsequent to the issuance of the Bonds in order that interest thereon is and continues to be excluded from gross income for federal income tax purposes. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of holders of the Bonds retroactive to the date of issuance of the Bonds. Interest on the Bonds will not constitute a preference item for purposes of computation of the alternative minimum tax imposed on certain individuals. We express no opinion as to other federal tax consequences resulting from holding the Bonds.

(c) Interest on the Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion as to other Massachusetts tax consequences arising with respect to the Bonds nor as to the taxability of the Bonds, their transfer and the income therefrom, including any profit made on the sale thereof, under the laws of any state other than Massachusetts.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

[Dated Closing Date]

Honorable Deborah B. Goldberg
Treasurer and Receiver-General
State House, Room 227
Boston, MA 02133

We have acted as bond counsel to The Commonwealth of Massachusetts (the “Commonwealth”) in connection with the issuance by the Commonwealth of its \$200,000,000 General Obligation Bonds, Consolidated Loan of 2020, Series B, dated the date of delivery (the “Bonds”). In such capacity, we have examined such law and such certified proceedings and other documents as we have deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion that, under existing law:

(a) The Bonds are valid and binding general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Bonds. It should be noted, however, that Chapter 62F of the Massachusetts General Laws establishes a state tax revenue growth limit and does not exclude principal and interest payments on Commonwealth debt obligations from the scope of the limit.

(b) Interest on the Bonds, including any accrued original issue discount, will not be included in the gross income of the holders of the Bonds for federal income tax purposes. This opinion is rendered subject to the condition that the Commonwealth comply with certain requirements of the Internal Revenue Code of 1986, as amended, which must be satisfied subsequent to the issuance of the Bonds in order that interest thereon is and continues to be excluded from gross income for federal income tax purposes. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of holders of the Bonds retroactive to the date of issuance of the Bonds. Interest on the Bonds will not constitute a preference item for purposes of computation of the alternative minimum tax imposed on certain individuals. We express no opinion as to other federal tax consequences resulting from holding the Bonds.

(c) Interest on the Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion as to other Massachusetts tax consequences arising with respect to the Bonds nor as to the taxability of the Bonds, their transfer and the income therefrom, including any profit made on the sale thereof, under the laws of any state other than Massachusetts.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.



One Financial Center
Boston, MA 02111
617 542 6000
mintz.com

[Dated Closing Date]

Honorable Deborah B. Goldberg
Treasurer and Receiver-General
State House, Room 227
Boston, MA 02133

We have acted as bond counsel to The Commonwealth of Massachusetts (the “Commonwealth”) in connection with the issuance by the Commonwealth of its \$385,000,000 General Obligation Bonds, Consolidated Loan of 2020, Series C, dated the date of delivery (the “Bonds”). In such capacity, we have examined such law and such certified proceedings and other documents as we have deemed necessary to render this opinion.

As to questions of fact material to our opinion, we have relied upon the certified proceedings and other certifications of public officials and others furnished to us without undertaking to verify the same by independent investigation.

Based upon the foregoing, we are of the opinion that, under existing law:

(a) The Bonds are valid and binding general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Bonds. It should be noted, however, that Chapter 62F of the Massachusetts General Laws establishes a state tax revenue growth limit and does not exclude principal and interest payments on Commonwealth debt obligations from the scope of the limit.

(b) Interest on the Bonds, including any accrued original issue discount, will not be included in the gross income of the holders of the Bonds for federal income tax purposes. This opinion is rendered subject to the condition that the Commonwealth comply with certain requirements of the Internal Revenue Code of 1986, as amended, which must be satisfied subsequent to the issuance of the Bonds in order that interest thereon is and continues to be excluded from gross income for federal income tax purposes. Failure to comply with certain of such requirements could cause interest on the Bonds to be included in the gross income of holders of the Bonds retroactive to the date of issuance of the Bonds. Interest on the Bonds will not constitute a preference item for purposes of computation of the alternative minimum tax imposed on certain individuals. We express no opinion as to other federal tax consequences resulting from holding the Bonds.

(c) Interest on the Bonds and any profit made on the sale thereof are exempt from Massachusetts personal income taxes, and the Bonds are exempt from Massachusetts personal property taxes. We express no opinion as to other Massachusetts tax consequences arising with respect to the Bonds nor as to the taxability of the Bonds, their transfer and the income therefrom, including any profit made on the sale thereof, under the laws of any state other than Massachusetts.

This opinion is given as of the date hereof, and we assume no obligation to revise or supplement this opinion to reflect any facts or circumstances that may hereafter come to our attention or any changes in law that may hereafter occur.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

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FORM OF CONTINUING DISCLOSURE UNDERTAKING

[to be included in bond form]

The Commonwealth of Massachusetts

\$100,000,000
 General Obligation Bonds
 Consolidated Loan of 2020, Series A

\$200,000,000
 General Obligation Bonds
 Consolidated Loan of 2020, Series B

\$385,000,000
 General Obligation Bonds
 Consolidated Loan of 2020, Series C

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby undertakes for the benefit of the owners of the Bonds to provide the Municipal Securities Rulemaking Board (the "MSRB") through its Electronic Municipal Market Access ("EMMA") system pursuant to the requirements of Rule 15c2-12 of the Securities and Exchange Commission (the "Rule"), no later than 270 days after the end of each fiscal year of the Commonwealth, commencing with the fiscal year ending June 30, 2020, (i) the annual financial information described below relating to such fiscal year, together with audited financial statements of the Commonwealth for such fiscal year if audited financial statements are then available; provided, however, that if audited financial statements of the Commonwealth are not then available, such audited financial statements shall be delivered to EMMA when they become available (but in no event later than 350 days after the end of such fiscal year) or (ii) notice of the Commonwealth's failure, if any, to provide any such information. The annual financial information to be provided as aforesaid shall include financial information and operating data, in each case updated through the last day of such fiscal year unless otherwise noted, relating to the following information contained in the Commonwealth's Information Statement dated January 29, 2020, as amended on February 11, 2020 (the "Information Statement"), and substantially in the same level of detail as is found in the referenced section of the Information Statement. The Information Statement has been filed with EMMA.

Financial Information and Operating Data Category	Reference to Information Statement for Level of Detail
1. Summary presentation on statutory accounting and five-year comparative basis of selected budgeted operating funds operations, revenues and expenditures, concluding with prior fiscal year, plus estimates for current fiscal year.	"SELECTED FINANCIAL DATA – Statutory Basis Distribution of Budgetary Revenues and Expenditures"
2. Summary presentation on GAAP and five-year comparative basis of governmental funds operations, concluding with prior fiscal year	"SELECTED FINANCIAL DATA – GAAP Basis"
3. Summary presentation on a five-year comparative basis of lottery revenues and profits	"COMMONWEALTH REVENUES – Federal and Other Non-Tax Revenues; <i>Lottery Revenues</i> "
4. Summary presentation of payments received pursuant to the tobacco master settlement agreement	"COMMONWEALTH REVENUES – Federal and Other Non-Tax Revenues; <i>Tobacco Settlement</i> "

Financial Information and Operating Data Category	Reference to Information Statement for Level of Detail
5. So long as Commonwealth statutes impose limits on tax revenues, information as to compliance therewith in the prior fiscal year	“COMMONWEALTH REVENUES – Limitations on Tax Revenues”
6. Summary description of the retirement systems for which the Commonwealth is responsible, including membership and contribution rates	“PENSION AND OPEB FUNDING – Retirement Systems” and “PENSION AND OPEB FUNDING – Employee Contributions.”
7. Summary presentation of the then-current, statutorily imposed funding schedule for future Commonwealth pension liabilities, if any	“PENSION AND OPEB FUNDING – Funding Schedule.”
8. Summary presentation on a ten-year comparative basis of actuarial valuations of pension fund assets, liabilities and funding progress	“PENSION AND OPEB FUNDING – Actuarial Valuations.”
9. Summary presentation on a five-year comparative basis of pension contributions made and the cost impact of a minimal traditional schedule	“PENSION AND OPEB FUNDING – Annual Required Contributions.”
10. Summary presentation on a five-year comparative basis of PRIT Fund asset allocation and investment returns	“PENSION AND OPEB FUNDING – PRIT Fund Investments.”
11. Summary presentation of actuarial valuations of OPEB assets, liabilities and funding progress	“PENSION AND OPEB FUNDING – Other Post-Employment Benefit Obligations (OPEB).”
12. If and to the extent otherwise updated in the prior fiscal year, summary presentation of the size of the state workforce	“STATE WORKFORCE”
13. Five-year summary presentation of actual capital project expenditures	“COMMONWEALTH CAPITAL INVESTMENT PLAN”
14. Statement of general and special obligation long-term debt issuance and repayment analysis on a five-year comparative basis through the end of the prior fiscal year	“LONG-TERM LIABILITIES – General and Special Obligation Long-Term Debt Issuance and Repayment Analysis”
15. Statement of outstanding Commonwealth debt on a five-year comparative basis through the end of the prior fiscal year	“LONG-TERM LIABILITIES – Outstanding Long Term Commonwealth Debt”
16. Annual fiscal year debt service requirements for Commonwealth general obligation and special obligation bonds, beginning with the current fiscal year	“LONG-TERM LIABILITIES – Debt Service Requirements”

Financial Information and Operating Data Category	Reference to Information Statement for Level of Detail
17. Annual fiscal year contract assistance requirements for Commonwealth general obligation contract assistance, beginning with the current fiscal year	“LONG-TERM LIABILITIES – General Obligation Contract Assistance Liabilities”
18. Annual fiscal year long-term leasing liabilities for Commonwealth, beginning with the current fiscal year	“LONG-TERM LIABILITIES – Long-Term Operating Leases and Capital Leases”
19. Five-year summary presentation of authorized but unissued general obligation debt	“LONG-TERM LIABILITIES – Authorized And Unissued Debt”
20. So long as Commonwealth statutes impose a limit on the amount of outstanding “direct” bonds, information as to compliance therewith as of the end of the prior fiscal year	“LONG-TERM LIABILITIES – General Authority to Borrow; <i>Statutory Limit on Direct Debt</i> ”
21. Summary presentation of the then-current, Commonwealth interest rate swap agreements	“LONG-TERM LIABILITIES – Interest Rate Swaps”
22. Summary presentation of the then-current, Commonwealth liquidity facilities	“LONG-TERM LIABILITIES – Liquidity Facilities”

Any or all of the items listed above may be included by reference to other documents, including official statements pertaining to debt issued by the Commonwealth, which have been submitted to EMMA. The Commonwealth’s annual financial statements for each fiscal year shall consist of (i) combined financial statements prepared in accordance with a basis of accounting that demonstrates compliance with the Massachusetts General Laws and other applicable state finance laws, if any, in effect from time to time and (ii) general purpose financial statements prepared in accordance with generally accepted accounting principles in effect from time to time and shall be audited by a firm of certified public accountants appointed by the Commonwealth.

On behalf of the Commonwealth, the Treasurer and Receiver-General of the Commonwealth hereby further undertakes for the benefit of the owners of the Bonds to provide in a timely manner, not in excess of ten business days after occurrence of the event, to EMMA notice of any of the following events with respect to the Bonds (numbered in accordance with the provisions of the Rule):

- (i) principal and interest payment delinquencies;
- (ii) non-payment related defaults, if material;
- (iii) unscheduled draws on debt service reserves reflecting financial difficulties;⁽¹⁾
- (iv) unscheduled draws on credit enhancements reflecting financial difficulties;
- (v) substitution of credit or liquidity providers, or their failure to perform;
- (vi) adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the Bonds, or other material events affecting the tax status of the Bonds;

⁽¹⁾ Not applicable to the Bonds, since there is no debt service reserve fund securing the Bonds.

- (vii) modifications to the rights of security holders, if material;
- (viii) bond calls, if material, and tender offers;
- (ix) defeasances;
- (x) release, substitution or sale of property securing repayment of the Bonds, if material;⁽²⁾
- (xi) rating changes;
- (xii) bankruptcy, insolvency, receivership or similar event of the Commonwealth;⁽³⁾
- (xiii) the consummation of a merger, consolidation, or acquisition or the sale of all or substantially all of the assets of the Commonwealth, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material;
- (xiv) appointment of a successor or additional trustee or the change of name of a trustee, if material;⁽⁴⁾
- (xv) incurrence of a financial obligation of the Commonwealth, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a financial obligation⁽⁵⁾ of the Commonwealth, any of which affect security holders, if material; and
- (xvi) default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a financial obligation⁽⁵⁾ of the Commonwealth, any of which reflect financial difficulties.

Nothing herein shall preclude the Commonwealth from disseminating any information in addition to that required hereunder. If the Commonwealth disseminates any such additional information, nothing herein shall obligate the Commonwealth to update such information or include it in any future materials disseminated.

To the extent permitted by law, the foregoing provisions of this Bond related to the above-described undertakings to provide information shall be enforceable against the Commonwealth in accordance with the terms thereof by any owner of a Bond, including any beneficial owner acting as a third-party beneficiary (upon proof of its status as a beneficial owner reasonably satisfactory to the Treasurer and Receiver-General). To the extent permitted by law, any such owner shall have the right, for the equal benefit and protection of all owners of Bonds, by mandamus or other suit or proceeding at law or in equity, to enforce its rights against the Commonwealth and to compel the Commonwealth and any of its officers, agents or employees to perform and carry out their duties under the foregoing provisions as aforesaid, provided; however, that the sole remedy in connection with such undertakings shall be limited to an action to compel specific performance of the obligations of the Commonwealth in connection with such undertakings and shall not include any rights to

⁽²⁾ Not applicable to the Bonds, since there is no property securing repayment of the Bonds that could be released, substituted or sold.

⁽³⁾ As noted in the Rule, this event is considered to occur when any of the following occur: (i) the appointment of a receiver, fiscal agent or similar officer for the Commonwealth in a proceeding under the U.S. Bankruptcy Code or in any proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the Commonwealth, or if such jurisdiction has been assumed by leaving the existing governing body and officials in possession but subject to the supervision and orders of a court or governmental authority, or (ii) the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the Commonwealth.

⁽⁴⁾ Not applicable to the Bonds.

⁽⁵⁾ As noted in the Rule, the term “financial obligation” means (i) a debt obligation, (ii) a derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation or (iii) a guaranty of an instrument described in (i) or (ii). The term does not include municipal securities as to which a final official statement has been provided to the MSRB consistent with the Rule.

monetary damages. The Commonwealth's obligations in respect of such undertakings shall terminate if no Bonds remain outstanding (without regard to an economic defeasance) or if the provisions of the Rule concerning continuing disclosure are no longer effective, whichever occurs first. The provisions of this Bond relating to such undertakings may be amended by the Treasurer and Receiver-General of the Commonwealth, without the consent of, or notice to, any owners of the Bonds, (a) to comply with or conform to the provisions of the Rule or any amendments thereto or authoritative interpretations thereof by the Securities and Exchange Commission or its staff (whether required or optional), (b) to add a dissemination agent for the information required to be provided by such undertakings and to make any necessary or desirable provisions with respect thereto, (c) to add to the covenants of the Commonwealth for the benefit of the owners of Bonds, (d) to modify the contents, presentation and format of the annual financial information from time to time as a result of a change in circumstances that arises from a change in legal requirements, or (e) to otherwise modify the undertakings in a manner consistent with the provisions of state legislation establishing a state information depository or otherwise responding to the requirements of the Rule concerning continuing disclosure; provided, however, that in the case of any amendment pursuant to clause (d) or (e), (i) the undertaking, as amended, would have complied with the requirements of the Rule at the time of the offering of the Bonds, after taking into account any amendments or authoritative interpretations of the Rule, as well as any change in circumstances, and (ii) the amendment does not materially impair the interests of the owners of the Bonds, as determined either by a party unaffiliated with the Commonwealth (such as Commonwealth disclosure counsel or Commonwealth bond counsel) or by the vote or consent of owners of a majority in outstanding principal amount of the Bonds affected thereby at or prior to the time of such amendment.

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OFFICIAL NOTICE OF SALE

THE COMMONWEALTH OF MASSACHUSETTS



\$100,000,000*
General Obligation Bonds
Consolidated Loan of 2020, Series A

February 11, 2020

NOTICE IS HEREBY GIVEN that electronic bids will be received by Deborah B. Goldberg, Treasurer and Receiver-General of The Commonwealth of Massachusetts (the “State Treasurer”), for the purchase of General Obligation Bonds, Consolidated Loan of 2020, Series A (the “Series 2020A Bonds”), of The Commonwealth of Massachusetts (the “Commonwealth”) to be sold in an aggregate principal amount of \$100,000,000*. Bids for the purchase of the Series 2020A Bonds will be submitted via Parity. No other method of submitting bids will be accepted. The bids will be received via Parity up to the time described below under the captions “Time” and “Procedures for Electronic Bidding.”

The Series 2020A Bonds will constitute general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Series 2020A Bonds. The Preliminary Official Statement referred to below contains certain information regarding statutory limits on state tax revenue growth and should be read in conjunction herewith.

Time. Bids will be received by the Commonwealth via Parity at 10:00 a.m. (Boston, Massachusetts time) on February 19, 2020 (subject to the provisions described below under the caption “Procedures for Electronic Bidding”) or at such later date and/or other time as shall be established by the State Treasurer and communicated on Thomson Municipal Market Monitor News (www.tm3.com) (“TM3”), as described herein under the caption “Change of Bid Date or Time.” If no legal bid or bids are received for the Series 2020A Bonds on February 19, 2020, an alternative date and time may be designated by the State Treasurer and communicated on TM3.

Details of the Series 2020A Bonds. The Series 2020A Bonds will be dated and bear interest, calculated on the basis of 30-day months and a 360-day year, from the date of delivery, at the rate per annum per maturity specified by the successful bidder, payable semiannually on March 1 and September 1 in each year and at maturity, beginning September 1, 2020. The Series 2020A Bonds shall mature on the dates shown below, subject to change as set forth in this Official Notice of Sale, in the principal amounts specified by the successful bidder:

<u>Maturity Date</u> *	<u>Principal Amounts</u> *
March 1, 2022	\$10,000,000
March 1, 2023	10,000,000
March 1, 2028	40,000,000
March 1, 2029	40,000,000

The Series 2020A Bonds will be issued as serial bonds in accordance with the bid submitted by the successful bidder (see “Bidding Parameters” below).

The Series 2020A Bonds will be delivered as registered bonds and issued by means of a book-entry-only system evidencing ownership therein, in principal amounts of \$5,000 or integral multiples thereof, and transfer thereof on the records of The Depository Trust Company (“DTC”) and its participants. The book-entry-only system is more fully described in the Preliminary Official Statement.

* Preliminary, subject to change.

Redemption.*

The Series 2020A Bonds are not subject to redemption prior maturity.

Adjustments to Principal Amount.

Changes Prior to Bidding. The preliminary aggregate principal amount of the Series 2020A Bonds and the preliminary annual principal amounts as set forth in this Official Notice of Sale (the “Preliminary Aggregate Principal Amount” and the “Preliminary Annual Principal Amounts,” respectively; collectively, the “Preliminary Amounts”) may be revised before the receipt of electronic bids for the purchase of the Series 2020A Bonds. Any such revisions (the “Revised Aggregate Principal Amount” and the “Revised Annual Principal Amounts,” respectively; collectively, the “Revised Amounts”) will be ANNOUNCED on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on ANY ANNOUNCED DATE FOR RECEIPT OF BIDS. In the event that no such revisions are made, the Preliminary Amounts will constitute the Revised Amounts. Bidders shall submit bids BASED ON THE REVISED AMOUNTS.

Changes to the Winning Bid. After selecting the winning bid, the Commonwealth will determine the final aggregate principal amount of the Series 2020A Bonds and each final annual principal amount (the “Final Aggregate Principal Amount” and the “Final Annual Principal Amounts,” respectively; collectively, the “Final Amounts”). In determining the Final Amounts, the Commonwealth will not reduce or increase the Revised Aggregate Principal Amount by more than 10% of such amount. THE SUCCESSFUL BIDDER MAY NOT WITHDRAW ITS BID OR CHANGE THE INTEREST RATES BID OR THE INITIAL REOFFERING PRICES (AS HEREIN DEFINED) AS A RESULT OF ANY CHANGES MADE TO THE REVISED AMOUNTS WITHIN THESE LIMITS.

The dollar amount bid by the successful bidder will be adjusted to reflect any adjustments in the aggregate principal amount of the Series 2020A Bonds. Such adjusted bid price will reflect changes in the dollar amount of the underwriter’s discount and original issue discount/premium, if any, but will not change the selling compensation per \$1,000 of par amount of the Series 2020A Bonds from the selling compensation that would have been received based on the purchase price in the winning bid and the initial reoffering prices. The interest rate specified by the successful bidder for each maturity as the initial reoffering prices will not change. The Final Amounts and the adjusted bid price will be communicated to the successful bidder by 10:00 a.m. (Boston, Massachusetts time) on the business day following the sale.

Bidding Parameters. Bids must be for all of the Series 2020A Bonds offered and must offer to pay an aggregate price for all maturities of not less than 100% of the aggregate principal amount of the Series 2020A Bonds.

Bids may provide for all the Series 2020A Bonds to be issued as serial bonds only.

Bids must state a single fixed interest rate for the Series 2020A Bonds of each maturity. The rate of interest stated for any given maturity shall be in a multiple of one-twentieth or one-eighth of one percent per annum. No maturity may have an interest rate of more than 5.00%.

Bids may not include any conditions not otherwise expressly provided for herein.

Procedures for Electronic Bidding. A prospective electronic bidder must register electronically to bid for the Series 2020A Bonds via Parity pursuant to this Official Notice of Sale. By submitting its bid for the Series 2020A Bonds, a prospective bidder represents and warrants to the Commonwealth that such bidder’s bid for the purchase of the Series 2020A Bonds is submitted for and on behalf of such prospective bidder by an officer or agent who is duly authorized to bind the prospective bidder to a legal, valid and enforceable contract for the purchase of the Series 2020A Bonds.

Each prospective electronic bidder shall be solely responsible to register to bid via Parity. Each qualified prospective electronic bidder shall be solely responsible to make necessary arrangements to access Parity for the purpose of submitting its bid in a timely manner and in compliance with the requirements of this Official Notice of Sale. Neither the Commonwealth nor Parity shall have any duty or obligation to undertake such registration to bid for

* Preliminary, subject to change.

any prospective bidder or to provide or assure such access to any qualified prospective bidder, and neither the Commonwealth nor Parity shall be responsible for a bidder's failure to register to bid or for proper operation of, or have any liability for any delays or interruptions of, or any damages caused by Parity. The Commonwealth is using Parity as a communication mechanism, and not as the Commonwealth's agent, to conduct the electronic bidding for the Series 2020A Bonds. The Commonwealth is not bound by any advice and determination of Parity to the effect that any particular bid complies with the terms of this Official Notice of Sale. All costs and expenses incurred by prospective bidders in connection with their registration and submission of bids via Parity are the sole responsibility of the bidders, and the Commonwealth is not responsible, directly or indirectly, for any such costs or expenses. To the extent that any instructions or directions set forth in Parity conflict with this Official Notice of Sale, the terms of this Official Notice of Sale shall control. If a prospective bidder encounters any difficulty in registering to bid or submitting, modifying or withdrawing a bid for the Series 2020A Bonds, such bidder should telephone Parity's new issues desk at (212) 849-5021 and notify the Commonwealth's municipal advisor, Acacia Financial Group, Inc. ("Acacia"), by telephone at (856) 234-2266.

Electronic bids must be submitted for the purchase of the Series 2020A Bonds (all or none) via Parity by 10:00 a.m. (Boston, Massachusetts time) on February 19, 2020. Bids submitted after such time will not be deemed received via Parity for the purposes of this bidding process. Bids will be communicated electronically to the Commonwealth at 10:00 a.m. (Boston, Massachusetts time), on February 19, 2020. Prior to that time, an eligible prospective bidder may (i) input the proposed terms of its bid via Parity, (ii) modify the proposed terms of its bid, in which event the proposed terms as last modified will (unless the bid is withdrawn as described herein) constitute its bid for the Series 2020A Bonds, or (iii) withdraw its proposed bid. Once the bids are communicated electronically via Parity to the Commonwealth, each bid will constitute an irrevocable offer to purchase the Series 2020A Bonds on the terms therein provided. For purposes of the electronic bidding process, the time as maintained on Parity shall constitute the official time. For information purposes only, bidders are requested to state in their bids the true interest cost to the Commonwealth, as described under "Basis of Award" set forth below, represented by the rate or rates of interest and the bid price specified in their respective bids.

Basis of Award. The Series 2020A Bonds will be awarded to the bidder offering to purchase all of the Series 2020A Bonds at the lowest true interest cost (TIC) to the Commonwealth. The TIC (expressed as an annual interest rate) will be determined as being twice that factor or discount rate, compounded semiannually, which, when applied against each semiannual debt service payment (interest, or principal and interest, as due) for the Series 2020A Bonds, will cause the sum of such discounted semiannual payments to be equal to the total purchase price. The TIC shall be calculated from the expected settlement date of the Series 2020A Bonds (March 3, 2020). If this procedure produces a tie, the Series 2020A Bonds will be awarded and sold to bidders at the discretion of the Commonwealth.

The Commonwealth reserves the right to reject any or all proposals and to waive any irregularity or informality with respect to any proposal. Any award by the State Treasurer to a successful bidder is subject to the approval of the Governor.

Official Statement. The Preliminary Official Statement dated February 11, 2020 and the information contained therein have been deemed final by the Commonwealth as of its date within the meaning of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12") with permitted omissions, but are subject to change without notice and to completion or amendment in the Official Statement in final form (the "Final Official Statement"). The Preliminary Official Statement may be viewed and downloaded from the Commonwealth's website: www.massbondholder.com. In addition, the Preliminary Official Statement will be available via the Electronic Municipal Market Access (EMMA) system established by the Municipal Securities Rulemaking Board at www.emma.msrb.org.

The Commonwealth will make available to the successful bidder, within seven (7) business days of the date of sale but no later than two (2) business days prior to settlement, a reasonable number of copies of the Final Official Statement for delivery (at the expense of the successful bidder) to each potential investor requesting a copy of the Final Official Statement and to each person to whom such bidder and members of its bidding group initially sell the Series 2020A Bonds, provided that the successful bidder cooperates in providing the information required to complete the Final Official Statement. The successful bidder shall comply with the requirements of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board, including an obligation, if any, to update the Final Official Statement.

Reoffering Price Certification. The successful bidder shall assist the Commonwealth in establishing the issue price of the Series 2020A Bonds and shall execute and deliver to the Commonwealth at Closing an "issue price"

certificate setting forth the reasonably expected initial offering price to the public of the Series 2020A Bonds, together with the supporting pricing wires or equivalent communications, substantially in the form attached to the Preliminary Official Statement as Appendix E, with such modifications as may be appropriate or necessary, in the reasonable judgment of the successful bidder, the Commonwealth and Bond Counsel. All actions to be taken by the Commonwealth under this Official Notice of Sale to establish the issue price of the Series 2020A Bonds may be taken on behalf of the Commonwealth by the Commonwealth's municipal advisor identified herein and any notice or report to be provided to the Commonwealth may be provided to the Commonwealth's municipal advisor. The Commonwealth intends that the provisions of Treasury Regulation Section 1.148-1(f)(3)(i) (defining "competitive sale" for purposes of establishing the issue price of the Series 2020A Bonds) will apply to the initial sale of the Series 2020A Bonds (the "competitive sale requirements") because (i) the Commonwealth shall disseminate this Official Notice of Sale to potential underwriters in a manner that is reasonably designed to reach potential underwriters; (ii) all bidders shall have an equal opportunity to bid; (iii) the Commonwealth expects to receive bids from at least three underwriters of municipal bonds who have established industry reputations for underwriting new issuances of municipal bonds; and (iv) the Commonwealth anticipates awarding the sale of the Series 2020A Bonds to the bidder who submits a firm offer to purchase the Series 2020A Bonds at the highest price (or lowest interest cost), as set forth in this Official Notice of Sale. Any bid submitted pursuant to this Official Notice of Sale shall be considered a firm offer for the purchase of the Series 2020A Bonds, as specified in the bid, and the bidder certifies that it is an underwriter with an established industry reputation for underwriting municipal bonds.

In the event that the competitive sale requirements are not satisfied, the Commonwealth will reject all bids and cancel the sale. Bidders should prepare their bids on the assumption that the issue price of the Series 2020A Bonds will be the reasonably expected initial offering price to the public.

Continuing Disclosure. To assist bidders in complying with paragraph (b)(5) of Rule 15c2-12, the Commonwealth will undertake in the Series 2020A Bonds to provide annual reports and notices of certain events. A description of this undertaking is set forth in Appendix C of the Preliminary Official Statement and will also be set forth in the Final Official Statement.

Expenses. Each bid will be deemed to be an all-in bid. The successful bidder will be under no obligation to pay the Commonwealth's issuance costs. The Commonwealth will not pay any expenses of the successful bidder in connection with the purchase of the Series 2020A Bonds.

Settlement. The Series 2020A Bonds will be delivered on March 3, 2020, in New York, New York, at DTC against payment of the purchase price therefor. The successful bidder must make payment of the purchase price of Series 2020A Bonds by 10:00 a.m. (Boston, Massachusetts time) on March 3, 2020 in immediately available funds in Boston, Massachusetts.

There will also be furnished the usual closing papers, including (a) a certificate signed by the Attorney General of the Commonwealth stating that no litigation of any kind is now pending or, to her knowledge, threatened seeking to restrain or enjoin the issuance or delivery of the Series 2020A Bonds or the levy or collection of a material portion of the taxes or other revenues of the Commonwealth, or in any manner questioning the proceedings or authority under which the Series 2020A Bonds are issued, or affecting the validity of the Series 2020A Bonds, or contesting in any way the completeness, accuracy or fairness of the Preliminary Official Statement or Final Official Statement or contesting the title to the office of any official signing the Series 2020A Bonds or the Final Official Statement; and (b) a certificate signed by the State Treasurer and the Secretary of Administration and Finance to the effect that, except for the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement and any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the information in the Preliminary Official Statement and Final Official Statement under the heading "BOOK-ENTRY-ONLY SYSTEM," "RATINGS," and in Appendix B and Appendix E, to the best of their respective knowledge and belief, the Preliminary Official Statement, as of the date of sale of the Series 2020A Bonds, and the Final Official Statement, both as of the date of sale and the date of settlement of the Series 2020A Bonds, did not contain any untrue statement of a material fact and did not omit to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

Legal Opinions. The approving opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, in substantially the form set forth in the Preliminary Official Statement with respect to the Series 2020A Bonds, will be furnished to the successful bidder. The Preliminary Official Statement contains a discussion of the effect of the Internal Revenue Code of 1986, as amended, on the exclusion from gross income of interest on the bonds

and a discussion of Bond Counsel's opinion insofar as it concerns such exclusion. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, will also be furnished to the successful bidder to the effect that (i) the information contained in the Preliminary Official Statement and the Final Official Statement under the headings "THE BONDS," "SECURITY FOR THE BONDS" and in Appendix B, insofar as such information constitutes summaries of certain provisions of the Series 2020A Bonds and applicable Massachusetts law, presents a fair summary of such provisions and that the statements in the Preliminary Official Statement and the Final Official Statement under the caption "Tax Exemption" and in the summary tax opinion contained on the cover of the Preliminary Official Statement and the Final Official Statement, insofar as such statements purport to summarize certain provisions of the Internal Revenue Code of 1986 or purport to summarize such counsel's opinion regarding the Series 2020A Bonds, are correct in all material respects, and (ii) in the course of such counsel's participation in the preparation of the Preliminary Official Statement and the Final Official Statement, no facts came to such counsel's attention that have caused it to conclude that the Preliminary Official Statement, as of its date, or the Final Official Statement, as of the date of sale or the date of settlement of the Series 2020A Bonds (except for the financial and statistical data included therein, the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement, any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the stabilization clause, if any, and the information in the Preliminary Official Statement and the Final Official Statement under the headings "BOOK-ENTRY-ONLY SYSTEM," "RATINGS," and "COMPETITIVE SALE OF BONDS" and in any other document specifically referenced therein, including any Appendix other than Appendix B, as to which no opinion need be expressed) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Disclosure Counsel, will also be furnished to the successful bidder to the effect that in the course of such counsel's participation in the preparation of the Commonwealth Information Statement (as defined in the Preliminary Official Statement), and as it may have been further supplemented as of the date of sale of the Series 2020A Bonds, no facts came to such counsel's attention that have caused it to conclude that the Commonwealth Information Statement as of January 29, 2020, or, as it may have been supplemented as of the date of sale of the Series 2020A Bonds, as of said date of sale or as of the date of settlement of the Series 2020A Bonds (except for the financial and statistical data included therein and the information contained in the Exhibits thereto, as to which no opinion need be expressed), contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

CUSIP Numbers. CUSIP numbers will be applied for by Acacia, as municipal advisor to the Commonwealth, with respect to the Series 2020A Bonds. The Commonwealth will assume no obligation for the assignment or printing of such numbers on the Series 2020A Bonds or for the correctness of such numbers. Neither failure to print such numbers on any Series 2020A Bond nor any error with respect thereto shall constitute cause for a failure or refusal by the successful bidder to accept delivery of and make payment for the Series 2020A Bonds. The CUSIP Service Bureau charge for the assignment of CUSIP numbers on the Series 2020A Bonds shall be paid for by the successful bidder.

Right to Modify or Amend Official Notice of Sale. The Commonwealth reserves the right to modify or amend this Official Notice of Sale prior to the bid date. If any modifications occur, supplemental information with respect to the Series 2020A Bonds will be communicated by posting on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on any announced date for receipt of bids, and bidders shall bid upon the Series 2020A Bonds based upon the terms thereof set forth in this Official Notice of Sale, as so modified by such supplemental information.

Change of Bid Date or Time. The Commonwealth reserves the right to change the date and/or time established for the receipt of bids. Any such change will be announced by posting on TM3 no later than 8:30 a.m. (Boston, Massachusetts time) on the announced bid date. If any date and/or time fixed for the receipt of bids and the sale of the Series 2020A Bonds is changed, an alternative sale date and time will be announced at least one business day prior to such alternative sale date. On any such alternative sale date and time, any bidder may submit bids electronically as described above for the purchase of the Series 2020A Bonds in conformity in all respects with the provision of this Official Notice of Sale, except for the date and/or time of sale and except for any changes announced by posting on TM3 at the time the sale date and/or time are announced.

Minority/Women Business Enterprises. It is the policy of the Commonwealth that appropriate consideration be given to firms who (a) are minority business enterprises and women's business enterprises and (b) have significant local ownership or presence. The State Treasurer requests and strongly urges bidders to make a good-

faith effort to meet this goal by including such firms in their management group or syndicate and/or in the provision of legal services or other advisory services.

Additional Information. Further information concerning the Commonwealth and the Series 2020A Bonds is contained in the Preliminary Official Statement dated February 11, 2020, to which prospective bidders are directed, and to which this Official Notice of Sale is attached. The Preliminary Official Statement is provided for informational purposes only and is not a part of this Official Notice of Sale. Copies of the Preliminary Official Statement and this Official Notice of Sale may be viewed and downloaded at the Commonwealth's website: www.massbondholder.com and at the EMMA website, www.emma.msrb.org. Additional information may be obtained from Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General (617-367-3900, ext. 816).

The Commonwealth of Massachusetts

/s/ Deborah B. Goldberg
Treasurer and Receiver-General

OFFICIAL NOTICE OF SALE

THE COMMONWEALTH OF MASSACHUSETTS



\$200,000,000*
General Obligation Bonds
Consolidated Loan of 2020, Series B

February 11, 2020

NOTICE IS HEREBY GIVEN that electronic bids will be received by Deborah B. Goldberg, Treasurer and Receiver-General of The Commonwealth of Massachusetts (the "State Treasurer"), for the purchase of General Obligation Bonds, Consolidated Loan of 2020, Series B (the "Series 2020B Bonds"), of The Commonwealth of Massachusetts (the "Commonwealth") to be sold in an aggregate principal amount of \$200,000,000*. Bids for the purchase of the Series 2020B Bonds will be submitted via Parity. No other method of submitting bids will be accepted. The bids will be received via Parity up to the time described below under the captions "Time" and "Procedures for Electronic Bidding."

The Series 2020B Bonds will constitute general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Series 2020B Bonds. The Preliminary Official Statement referred to below contains certain information regarding statutory limits on state tax revenue growth and should be read in conjunction herewith.

Time. Bids will be received by the Commonwealth via Parity at 10:30 a.m. (Boston, Massachusetts time) on February 19, 2020 (subject to the provisions described below under the caption "Procedures for Electronic Bidding") or at such later date and/or other time as shall be established by the State Treasurer and communicated on Thomson Municipal Market Monitor News (www.tm3.com) ("TM3"), as described herein under the caption "Change of Bid Date or Time." If no legal bid or bids are received for the Series 2020B Bonds on February 19, 2020, an alternative date and time may be designated by the State Treasurer and communicated on TM3.

Details of the Series 2020B Bonds. The Series 2020B Bonds will be dated and bear interest, calculated on the basis of 30-day months and a 360-day year, from the date of delivery, at the rate per annum per maturity specified by the successful bidder, payable semiannually on March 1 and September 1 in each year and at maturity, beginning September 1, 2020. The Series 2020B Bonds shall mature or come due through mandatory sinking fund redemptions on the dates shown below, subject to change as set forth in this Official Notice of Sale, in the principal amounts specified by the successful bidder:

Table with 4 columns: Maturity Date*, Principal Amounts*, Maturity Date*, Principal Amounts*. Rows include dates from March 1, 2032 to March 1, 2034 and corresponding principal amounts.

The Series 2020B Bonds will be issued as serial bonds or as a combination of serial bonds and term bonds in accordance with the bid submitted by the successful bidder (see "Bidding Parameters" below).

The Series 2020B Bonds will be delivered as registered bonds and issued by means of a book-entry-only system evidencing ownership therein, in principal amounts of \$5,000 or integral multiples thereof, and transfer thereof on the records of The Depository Trust Company ("DTC") and its participants. The book-entry-only system is more fully described in the Preliminary Official Statement.

* Preliminary, subject to change.

Redemption.*

Optional Redemption.

The Series 2020B Bonds will be subject to redemption prior to their stated maturity dates on and after March 1, 2030 at the option of the Commonwealth from any monies legally available therefor, in whole or in part at any time, by lot, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Adjustments to Principal Amount.

Changes Prior to Bidding. The preliminary aggregate principal amount of the Series 2020B Bonds and the preliminary annual principal amounts as set forth in this Official Notice of Sale (the “Preliminary Aggregate Principal Amount” and the “Preliminary Annual Principal Amounts,” respectively; collectively, the “Preliminary Amounts”) may be revised before the receipt of electronic bids for the purchase of the Series 2020B Bonds. Any such revisions (the “Revised Aggregate Principal Amount” and the “Revised Annual Principal Amounts,” respectively; collectively, the “Revised Amounts”) will be ANNOUNCED on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on ANY ANNOUNCED DATE FOR RECEIPT OF BIDS. In the event that no such revisions are made, the Preliminary Amounts will constitute the Revised Amounts. Bidders shall submit bids BASED ON THE REVISED AMOUNTS.

Changes to the Winning Bid. After selecting the winning bid, the Commonwealth will determine the final aggregate principal amount of the Series 2020B Bonds and each final annual principal amount (the “Final Aggregate Principal Amount” and the “Final Annual Principal Amounts,” respectively; collectively, the “Final Amounts”). In determining the Final Amounts, the Commonwealth will not reduce or increase the Revised Aggregate Principal Amount by more than 10% of such amount. THE SUCCESSFUL BIDDER MAY NOT WITHDRAW ITS BID OR CHANGE THE INTEREST RATES BID OR THE INITIAL REOFFERING PRICES (AS HEREIN DEFINED) AS A RESULT OF ANY CHANGES MADE TO THE REVISED AMOUNTS WITHIN THESE LIMITS.

The dollar amount bid by the successful bidder will be adjusted to reflect any adjustments in the aggregate principal amount of the Series 2020B Bonds. Such adjusted bid price will reflect changes in the dollar amount of the underwriter’s discount and original issue discount/premium, if any, but will not change the selling compensation per \$1,000 of par amount of the Series 2020B Bonds from the selling compensation that would have been received based on the purchase price in the winning bid and the initial reoffering prices. The interest rate specified by the successful bidder for each maturity as the initial reoffering prices will not change. The Final Amounts and the adjusted bid price will be communicated to the successful bidder by 10:30 a.m. (Boston, Massachusetts time) on the business day following the sale.

Bidding Parameters. Bids must be for all of the Series 2020B Bonds offered and must offer to pay an aggregate price for all maturities of not less than 100% of the aggregate principal amount of the Series 2020B Bonds.

Bids may provide for all the Series 2020B Bonds to be issued as serial bonds only, or may designate consecutive annual principal amounts (bearing interest at the same rate) to be combined into no more than two term bonds. Series 2020B Bonds issued as term bonds shall be subject to mandatory sinking fund redemption commencing on March 1 of the first year in which maturities have been combined to form such term bond and continuing on March 1 in each year thereafter until the stated maturity date of such term bond.

Bids must state a single fixed interest rate for the Series 2020B Bonds of each maturity. The rate of interest stated for any given maturity shall be in a multiple of one-twentieth or one-eighth of one percent per annum. No maturity may have an interest rate of more than 5.00%.

Bids may not include any conditions not otherwise expressly provided for herein.

Procedures for Electronic Bidding. A prospective electronic bidder must register electronically to bid for the Series 2020B Bonds via Parity pursuant to this Official Notice of Sale. By submitting its bid for the Series 2020B Bonds, a prospective bidder represents and warrants to the Commonwealth that such bidder’s bid for the purchase of

* Preliminary, subject to change.

the Series 2020B Bonds is submitted for and on behalf of such prospective bidder by an officer or agent who is duly authorized to bind the prospective bidder to a legal, valid and enforceable contract for the purchase of the Series 2020B Bonds.

Each prospective electronic bidder shall be solely responsible to register to bid via Parity. Each qualified prospective electronic bidder shall be solely responsible to make necessary arrangements to access Parity for the purpose of submitting its bid in a timely manner and in compliance with the requirements of this Official Notice of Sale. Neither the Commonwealth nor Parity shall have any duty or obligation to undertake such registration to bid for any prospective bidder or to provide or assure such access to any qualified prospective bidder, and neither the Commonwealth nor Parity shall be responsible for a bidder's failure to register to bid or for proper operation of, or have any liability for any delays or interruptions of, or any damages caused by Parity. The Commonwealth is using Parity as a communication mechanism, and not as the Commonwealth's agent, to conduct the electronic bidding for the Series 2020B Bonds. The Commonwealth is not bound by any advice and determination of Parity to the effect that any particular bid complies with the terms of this Official Notice of Sale. All costs and expenses incurred by prospective bidders in connection with their registration and submission of bids via Parity are the sole responsibility of the bidders, and the Commonwealth is not responsible, directly or indirectly, for any such costs or expenses. To the extent that any instructions or directions set forth in Parity conflict with this Official Notice of Sale, the terms of this Official Notice of Sale shall control. If a prospective bidder encounters any difficulty in registering to bid or submitting, modifying or withdrawing a bid for the Series 2020B Bonds, such bidder should telephone Parity's new issues desk at (212) 849-5021 and notify the Commonwealth's municipal advisor, Acacia Financial Group, Inc. ("Acacia"), by telephone at (856) 234-2266.

Electronic bids must be submitted for the purchase of the Series 2020B Bonds (all or none) via Parity by 10:30 a.m. (Boston, Massachusetts time) on February 19, 2020. Bids submitted after such time will not be deemed received via Parity for the purposes of this bidding process. Bids will be communicated electronically to the Commonwealth at 10:30 a.m. (Boston, Massachusetts time), on February 19, 2020. Prior to that time, an eligible prospective bidder may (i) input the proposed terms of its bid via Parity, (ii) modify the proposed terms of its bid, in which event the proposed terms as last modified will (unless the bid is withdrawn as described herein) constitute its bid for the Series 2020B Bonds, or (iii) withdraw its proposed bid. Once the bids are communicated electronically via Parity to the Commonwealth, each bid will constitute an irrevocable offer to purchase the Series 2020B Bonds on the terms therein provided. For purposes of the electronic bidding process, the time as maintained on Parity shall constitute the official time. For information purposes only, bidders are requested to state in their bids the true interest cost to the Commonwealth, as described under "Basis of Award" set forth below, represented by the rate or rates of interest and the bid price specified in their respective bids.

Basis of Award. The Series 2020B Bonds will be awarded to the bidder offering to purchase all of the Series 2020B Bonds at the lowest true interest cost (TIC) to the Commonwealth. The TIC (expressed as an annual interest rate) will be determined as being twice that factor or discount rate, compounded semiannually, which, when applied against each semiannual debt service payment (interest, or principal and interest, as due) for the Series 2020B Bonds, will cause the sum of such discounted semiannual payments to be equal to the total purchase price. The TIC shall be calculated from the expected settlement date of the Series 2020B Bonds (March 3, 2020). If this procedure produces a tie, the Series 2020B Bonds will be awarded and sold to bidders at the discretion of the Commonwealth.

The Commonwealth reserves the right to reject any or all proposals and to waive any irregularity or informality with respect to any proposal. Any award by the State Treasurer to a successful bidder is subject to the approval of the Governor.

Official Statement. The Preliminary Official Statement dated February 11, 2020 and the information contained therein have been deemed final by the Commonwealth as of its date within the meaning of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12") with permitted omissions, but are subject to change without notice and to completion or amendment in the Official Statement in final form (the "Final Official Statement"). The Preliminary Official Statement may be viewed and downloaded from the Commonwealth's website: www.massbondholder.com. In addition, the Preliminary Official Statement will be available via the Electronic Municipal Market Access (EMMA) system established by the Municipal Securities Rulemaking Board at www.emma.msrb.org.

The Commonwealth will make available to the successful bidder, within seven (7) business days of the date of sale but no later than two (2) business days prior to settlement, a reasonable number of copies of the Final Official

Statement for delivery (at the expense of the successful bidder) to each potential investor requesting a copy of the Final Official Statement and to each person to whom such bidder and members of its bidding group initially sell the Series 2020B Bonds, provided that the successful bidder cooperates in providing the information required to complete the Final Official Statement. The successful bidder shall comply with the requirements of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board, including an obligation, if any, to update the Final Official Statement.

Reoffering Price Certification. The successful bidder shall assist the Commonwealth in establishing the issue price of the Series 2020B Bonds and shall execute and deliver to the Commonwealth at Closing an “issue price” certificate setting forth the reasonably expected initial offering price to the public of the Series 2020B Bonds, together with the supporting pricing wires or equivalent communications, substantially in the form attached to the Preliminary Official Statement as Appendix E, with such modifications as may be appropriate or necessary, in the reasonable judgment of the successful bidder, the Commonwealth and Bond Counsel. All actions to be taken by the Commonwealth under this Official Notice of Sale to establish the issue price of the Series 2020B Bonds may be taken on behalf of the Commonwealth by the Commonwealth’s municipal advisor identified herein and any notice or report to be provided to the Commonwealth may be provided to the Commonwealth’s municipal advisor. The Commonwealth intends that the provisions of Treasury Regulation Section 1.148-1(f)(3)(i) (defining “competitive sale” for purposes of establishing the issue price of the Series 2020B Bonds) will apply to the initial sale of the Series 2020B Bonds (the “competitive sale requirements”) because (i) the Commonwealth shall disseminate this Official Notice of Sale to potential underwriters in a manner that is reasonably designed to reach potential underwriters; (ii) all bidders shall have an equal opportunity to bid; (iii) the Commonwealth expects to receive bids from at least three underwriters of municipal bonds who have established industry reputations for underwriting new issuances of municipal bonds; and (iv) the Commonwealth anticipates awarding the sale of the Series 2020B Bonds to the bidder who submits a firm offer to purchase the Series 2020B Bonds at the highest price (or lowest interest cost), as set forth in this Official Notice of Sale. Any bid submitted pursuant to this Official Notice of Sale shall be considered a firm offer for the purchase of the Series 2020B Bonds, as specified in the bid, and the bidder certifies that it is an underwriter with an established industry reputation for underwriting municipal bonds.

In the event that the competitive sale requirements are not satisfied, the Commonwealth will reject all bids and cancel the sale. Bidders should prepare their bids on the assumption that the issue price of the Series 2020B Bonds will be the reasonably expected initial offering price to the public.

Continuing Disclosure. To assist bidders in complying with paragraph (b)(5) of Rule 15c2-12, the Commonwealth will undertake in the Series 2020B Bonds to provide annual reports and notices of certain events. A description of this undertaking is set forth in Appendix C of the Preliminary Official Statement and will also be set forth in the Final Official Statement.

Expenses. Each bid will be deemed to be an all-in bid. The successful bidder will be under no obligation to pay the Commonwealth’s issuance costs. The Commonwealth will not pay any expenses of the successful bidder in connection with the purchase of the Series 2020B Bonds.

Settlement. The Series 2020B Bonds will be delivered on March 3, 2020, in New York, New York, at DTC against payment of the purchase price therefor. The successful bidder must make payment of the purchase price of Bonds by 10:00 a.m. (Boston, Massachusetts time) on March 3, 2020 in immediately available funds in Boston, Massachusetts.

There will also be furnished the usual closing papers, including (a) a certificate signed by the Attorney General of the Commonwealth stating that no litigation of any kind is now pending or, to her knowledge, threatened seeking to restrain or enjoin the issuance or delivery of the Series 2020B Bonds or the levy or collection of a material portion of the taxes or other revenues of the Commonwealth, or in any manner questioning the proceedings or authority under which the Series 2020B Bonds are issued, or affecting the validity of the Series 2020B Bonds, or contesting in any way the completeness, accuracy or fairness of the Preliminary Official Statement or Final Official Statement or contesting the title to the office of any official signing the Series 2020B Bonds or the Final Official Statement; and (b) a certificate signed by the State Treasurer and the Secretary of Administration and Finance to the effect that, except for the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement and any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the information in the Preliminary Official Statement and Final Official Statement under the heading “BOOK-ENTRY-ONLY SYSTEM,” “RATINGS,” and in Appendix B and Appendix E, to the best of their respective knowledge and belief, the Preliminary Official Statement, as of the date of sale of the Series 2020B Bonds, and the Final Official Statement,

both as of the date of sale and the date of settlement of the Series 2020B Bonds, did not contain any untrue statement of a material fact and did not omit to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

Legal Opinions. The approving opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, in substantially the form set forth in the Preliminary Official Statement with respect to the Series 2020B Bonds, will be furnished to the successful bidder. The Preliminary Official Statement contains a discussion of the effect of the Internal Revenue Code of 1986, as amended, on the exclusion from gross income of interest on the bonds and a discussion of Bond Counsel's opinion insofar as it concerns such exclusion. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, will also be furnished to the successful bidder to the effect that (i) the information contained in the Preliminary Official Statement and the Final Official Statement under the headings "THE BONDS," "SECURITY FOR THE BONDS" and in Appendix B, insofar as such information constitutes summaries of certain provisions of the Series 2020B Bonds and applicable Massachusetts law, presents a fair summary of such provisions and that the statements in the Preliminary Official Statement and the Final Official Statement under the caption "Tax Exemption" and in the summary tax opinion contained on the cover of the Preliminary Official Statement and the Final Official Statement, insofar as such statements purport to summarize certain provisions of the Internal Revenue Code of 1986 or purport to summarize such counsel's opinion regarding the Series 2020B Bonds, are correct in all material respects, and (ii) in the course of such counsel's participation in the preparation of the Preliminary Official Statement and the Final Official Statement, no facts came to such counsel's attention that have caused it to conclude that the Preliminary Official Statement, as of its date, or the Final Official Statement, as of the date of sale or the date of settlement of the Series 2020B Bonds (except for the financial and statistical data included therein, the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement, any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the stabilization clause, if any, and the information in the Preliminary Official Statement and the Final Official Statement under the headings "BOOK-ENTRY-ONLY SYSTEM," "RATINGS," and "COMPETITIVE SALE OF BONDS" and in any other document specifically referenced therein, including any Appendix other than Appendix B, as to which no opinion need be expressed) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Disclosure Counsel, will also be furnished to the successful bidder to the effect that in the course of such counsel's participation in the preparation of the Commonwealth Information Statement (as defined in the Preliminary Official Statement), and as it may have been further supplemented as of the date of sale of the Series 2020B Bonds, no facts came to such counsel's attention that have caused it to conclude that the Commonwealth Information Statement as of January 29, 2020, or, as it may have been supplemented as of the date of sale of the Series 2020B Bonds, as of said date of sale or as of the date of settlement of the Series 2020B Bonds (except for the financial and statistical data included therein and the information contained in the Exhibits thereto, as to which no opinion need be expressed), contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

CUSIP Numbers. CUSIP numbers will be applied for by Acacia, as municipal advisor to the Commonwealth, with respect to the Series 2020B Bonds. The Commonwealth will assume no obligation for the assignment or printing of such numbers on the Series 2020B Bonds or for the correctness of such numbers. Neither failure to print such numbers on any Series 2020B Bond nor any error with respect thereto shall constitute cause for a failure or refusal by the successful bidder to accept delivery of and make payment for the Series 2020B Bonds. The CUSIP Service Bureau charge for the assignment of CUSIP numbers on the Series 2020B Bonds shall be paid for by the successful bidder.

Right to Modify or Amend Official Notice of Sale. The Commonwealth reserves the right to modify or amend this Official Notice of Sale prior to the bid date. If any modifications occur, supplemental information with respect to the Series 2020B Bonds will be communicated by posting on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on any announced date for receipt of bids, and bidders shall bid upon the Series 2020B Bonds based upon the terms thereof set forth in this Official Notice of Sale, as so modified by such supplemental information.

Change of Bid Date or Time. The Commonwealth reserves the right to change the date and/or time established for the receipt of bids. Any such change will be announced by posting on TM3 no later than 8:30 a.m. (Boston, Massachusetts time) on the announced bid date. If any date and/or time fixed for the receipt of bids and the sale of the Series 2020B Bonds is changed, an alternative sale date and time will be announced at least one business day prior to such alternative sale date. On any such alternative sale date and time, any bidder may submit bids

electronically as described above for the purchase of the Series 2020B Bonds in conformity in all respects with the provision of this Official Notice of Sale, except for the date and/or time of sale and except for any changes announced by posting on TM3 at the time the sale date and/or time are announced.

Minority/Women Business Enterprises. It is the policy of the Commonwealth that appropriate consideration be given to firms who (a) are minority business enterprises and women's business enterprises and (b) have significant local ownership or presence. The State Treasurer requests and strongly urges bidders to make a good-faith effort to meet this goal by including such firms in their management group or syndicate and/or in the provision of legal services or other advisory services.

Additional Information. Further information concerning the Commonwealth and the Series 2020B Bonds is contained in the Preliminary Official Statement dated February 11, 2020, to which prospective bidders are directed, and to which this Official Notice of Sale is attached. The Preliminary Official Statement is provided for informational purposes only and is not a part of this Official Notice of Sale. Copies of the Preliminary Official Statement and this Official Notice of Sale may be viewed and downloaded at the Commonwealth's website: www.massbondholder.com and at the EMMA website, www.emma.msrb.org. Additional information may be obtained from Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General (617-367-3900, ext. 816).

The Commonwealth of Massachusetts

/s/ Deborah B. Goldberg
Treasurer and Receiver-General

OFFICIAL NOTICE OF SALE

THE COMMONWEALTH OF MASSACHUSETTS



\$350,000,000*
General Obligation Bonds
Consolidated Loan of 2020, Series C

February 11, 2020

NOTICE IS HEREBY GIVEN that electronic bids will be received by Deborah B. Goldberg, Treasurer and Receiver-General of The Commonwealth of Massachusetts (the “State Treasurer”), for the purchase of General Obligation Bonds, Consolidated Loan of 2020, Series C (the “Series 2020C Bonds”), of The Commonwealth of Massachusetts (the “Commonwealth”) to be sold in an aggregate principal amount of \$350,000,000*. Bids for the purchase of the Series 2020C Bonds will be submitted via Parity. No other method of submitting bids will be accepted. The bids will be received via Parity up to the time described below under the captions “Time” and “Procedures for Electronic Bidding.”

The Series 2020C Bonds will constitute general obligations of the Commonwealth, and the full faith and credit of the Commonwealth are pledged to the payment of the principal of and interest on the Series 2020C Bonds. The Preliminary Official Statement referred to below contains certain information regarding statutory limits on state tax revenue growth and should be read in conjunction herewith.

Time. Bids will be received by the Commonwealth via Parity at 11:00 a.m. (Boston, Massachusetts time) on February 19, 2020 (subject to the provisions described below under the caption “Procedures for Electronic Bidding”) or at such later date and/or other time as shall be established by the State Treasurer and communicated on Thomson Municipal Market Monitor News (www.tm3.com) (“TM3”), as described herein under the caption “Change of Bid Date or Time.” If no legal bid or bids are received for the Series 2020C Bonds on February 19, 2020, an alternative date and time may be designated by the State Treasurer and communicated on TM3.

Details of the Series 2020C Bonds. The Series 2020C Bonds will be dated and bear interest, calculated on the basis of 30-day months and a 360-day year, from the date of delivery, at the rate per annum per maturity specified by the successful bidder, payable semiannually on March 1 and September 1 in each year and at maturity, beginning September 1, 2020. The Series 2020C Bonds shall mature or come due through mandatory sinking fund redemptions on the dates shown below, subject to change as set forth in this Official Notice of Sale, in the principal amounts specified by the successful bidder:

<u>Maturity Date</u> *	<u>Principal Amounts</u> *
March 1, 2047	\$75,000,000
March 1, 2048	75,000,000
March 1, 2049	100,000,000
March 1, 2050	100,000,000

The Series 2020C Bonds will be issued as serial bonds or as a combination of serial bonds and term bonds in accordance with the bid submitted by the successful bidder (see “Bidding Parameters” below).

The Series 2020C Bonds will be delivered as registered bonds and issued by means of a book-entry-only system evidencing ownership therein, in principal amounts of \$5,000 or integral multiples thereof, and transfer thereof on the records of The Depository Trust Company (“DTC”) and its participants. The book-entry-only system is more fully described in the Preliminary Official Statement.

* Preliminary, subject to change.

Redemption.*

Optional Redemption.

The Series 2020C Bonds will be subject to redemption prior to their stated maturity dates on and after March 1, 2030 at the option of the Commonwealth from any monies legally available therefor, in whole or in part at any time, by lot, at 100% of the principal amount thereof, plus accrued interest to the redemption date.

Adjustments to Principal Amount.

Changes Prior to Bidding. The preliminary aggregate principal amount of the Series 2020C Bonds and the preliminary annual principal amounts as set forth in this Official Notice of Sale (the “Preliminary Aggregate Principal Amount” and the “Preliminary Annual Principal Amounts,” respectively; collectively, the “Preliminary Amounts”) may be revised before the receipt of electronic bids for the purchase of the Series 2020C Bonds. Any such revisions (the “Revised Aggregate Principal Amount” and the “Revised Annual Principal Amounts,” respectively; collectively, the “Revised Amounts”) will be ANNOUNCED on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on ANY ANNOUNCED DATE FOR RECEIPT OF BIDS. In the event that no such revisions are made, the Preliminary Amounts will constitute the Revised Amounts. Bidders shall submit bids BASED ON THE REVISED AMOUNTS.

Changes to the Winning Bid. After selecting the winning bid, the Commonwealth will determine the final aggregate principal amount of the Series 2020C Bonds and each final annual principal amount (the “Final Aggregate Principal Amount” and the “Final Annual Principal Amounts,” respectively; collectively, the “Final Amounts”). In determining the Final Amounts, the Commonwealth will not reduce or increase the Revised Aggregate Principal Amount by more than 10% of such amount. THE SUCCESSFUL BIDDER MAY NOT WITHDRAW ITS BID OR CHANGE THE INTEREST RATES BID OR THE INITIAL REOFFERING PRICES (AS HEREIN DEFINED) AS A RESULT OF ANY CHANGES MADE TO THE REVISED AMOUNTS WITHIN THESE LIMITS.

The dollar amount bid by the successful bidder will be adjusted to reflect any adjustments in the aggregate principal amount of the Series 2020C Bonds. Such adjusted bid price will reflect changes in the dollar amount of the underwriter’s discount and original issue discount/premium, if any, but will not change the selling compensation per \$1,000 of par amount of the Series 2020C Bonds from the selling compensation that would have been received based on the purchase price in the winning bid and the initial reoffering prices. The interest rate specified by the successful bidder for each maturity as the initial reoffering prices will not change. The Final Amounts and the adjusted bid price will be communicated to the successful bidder by 11:00 a.m. (Boston, Massachusetts time) on the business day following the sale.

Bidding Parameters. Bids must be for all of the Series 2020C Bonds offered and must offer to pay an aggregate price for all maturities of not less than 100% of the aggregate principal amount of the Series 2020C Bonds.

Bids may provide for all the Series 2020C Bonds to be issued as serial bonds only, or may designate consecutive annual principal amounts (bearing interest at the same rate) to be combined into no more than two term bonds. Series 2020C Bonds issued as term bonds shall be subject to mandatory sinking fund redemption commencing on March 1 of the first year in which maturities have been combined to form such term bond and continuing on March 1 in each year thereafter until the stated maturity date of such term bond.

Bids must state a single fixed interest rate for the Series 2020C Bonds of each maturity. The rate of interest stated for any given maturity shall be in a multiple of one-twentieth or one-eighth of one percent per annum. No maturity may have an interest rate of more than 5.00%.

Bids may not include any conditions not otherwise expressly provided for herein.

Procedures for Electronic Bidding. A prospective electronic bidder must register electronically to bid for the Series 2020C Bonds via Parity pursuant to this Official Notice of Sale. By submitting its bid for the Series 2020C Bonds, a prospective bidder represents and warrants to the Commonwealth that such bidder’s bid for the purchase of

* Preliminary, subject to change.

the Series 2020C Bonds is submitted for and on behalf of such prospective bidder by an officer or agent who is duly authorized to bind the prospective bidder to a legal, valid and enforceable contract for the purchase of the Series 2020C Bonds.

Each prospective electronic bidder shall be solely responsible to register to bid via Parity. Each qualified prospective electronic bidder shall be solely responsible to make necessary arrangements to access Parity for the purpose of submitting its bid in a timely manner and in compliance with the requirements of this Official Notice of Sale. Neither the Commonwealth nor Parity shall have any duty or obligation to undertake such registration to bid for any prospective bidder or to provide or assure such access to any qualified prospective bidder, and neither the Commonwealth nor Parity shall be responsible for a bidder's failure to register to bid or for proper operation of, or have any liability for any delays or interruptions of, or any damages caused by Parity. The Commonwealth is using Parity as a communication mechanism, and not as the Commonwealth's agent, to conduct the electronic bidding for the Series 2020C Bonds. The Commonwealth is not bound by any advice and determination of Parity to the effect that any particular bid complies with the terms of this Official Notice of Sale. All costs and expenses incurred by prospective bidders in connection with their registration and submission of bids via Parity are the sole responsibility of the bidders, and the Commonwealth is not responsible, directly or indirectly, for any such costs or expenses. To the extent that any instructions or directions set forth in Parity conflict with this Official Notice of Sale, the terms of this Official Notice of Sale shall control. If a prospective bidder encounters any difficulty in registering to bid or submitting, modifying or withdrawing a bid for the Series 2020C Bonds, such bidder should telephone Parity's new issues desk at (212) 849-5021 and notify the Commonwealth's municipal advisor, Acacia Financial Group, Inc. ("Acacia"), by telephone at (856) 234-2266.

Electronic bids must be submitted for the purchase of the Series 2020C Bonds (all or none) via Parity by 11:00 a.m. (Boston, Massachusetts time) on February 19, 2020. Bids submitted after such time will not be deemed received via Parity for the purposes of this bidding process. Bids will be communicated electronically to the Commonwealth at 11:00 a.m. (Boston, Massachusetts time), on February 19, 2020. Prior to that time, an eligible prospective bidder may (i) input the proposed terms of its bid via Parity, (ii) modify the proposed terms of its bid, in which event the proposed terms as last modified will (unless the bid is withdrawn as described herein) constitute its bid for the Series 2020C Bonds, or (iii) withdraw its proposed bid. Once the bids are communicated electronically via Parity to the Commonwealth, each bid will constitute an irrevocable offer to purchase the Series 2020C Bonds on the terms therein provided. For purposes of the electronic bidding process, the time as maintained on Parity shall constitute the official time. For information purposes only, bidders are requested to state in their bids the true interest cost to the Commonwealth, as described under "Basis of Award" set forth below, represented by the rate or rates of interest and the bid price specified in their respective bids.

Basis of Award. The Series 2020C Bonds will be awarded to the bidder offering to purchase all of the Series 2020C Bonds at the lowest true interest cost (TIC) to the Commonwealth. The TIC (expressed as an annual interest rate) will be determined as being twice that factor or discount rate, compounded semiannually, which, when applied against each semiannual debt service payment (interest, or principal and interest, as due) for the Series 2020C Bonds, will cause the sum of such discounted semiannual payments to be equal to the total purchase price. The TIC shall be calculated from the expected settlement date of the Series 2020C Bonds (March 3, 2020). If this procedure produces a tie, the Series 2020C Bonds will be awarded and sold to bidders at the discretion of the Commonwealth.

The Commonwealth reserves the right to reject any or all proposals and to waive any irregularity or informality with respect to any proposal. Any award by the State Treasurer to a successful bidder is subject to the approval of the Governor.

Official Statement. The Preliminary Official Statement dated February 11, 2020 and the information contained therein have been deemed final by the Commonwealth as of its date within the meaning of Rule 15c2-12 of the Securities and Exchange Commission ("Rule 15c2-12") with permitted omissions, but are subject to change without notice and to completion or amendment in the Official Statement in final form (the "Final Official Statement"). The Preliminary Official Statement may be viewed and downloaded from the Commonwealth's website: www.massbondholder.com. In addition, the Preliminary Official Statement will be available via the Electronic Municipal Market Access (EMMA) system established by the Municipal Securities Rulemaking Board at www.emma.msrb.org.

The Commonwealth will make available to the successful bidder, within seven (7) business days of the date of sale but no later than two (2) business days prior to settlement, a reasonable number of copies of the Final Official

Statement for delivery (at the expense of the successful bidder) to each potential investor requesting a copy of the Final Official Statement and to each person to whom such bidder and members of its bidding group initially sell the Series 2020C Bonds, provided that the successful bidder cooperates in providing the information required to complete the Final Official Statement. The successful bidder shall comply with the requirements of Rule 15c2-12 and the rules of the Municipal Securities Rulemaking Board, including an obligation, if any, to update the Final Official Statement.

Reoffering Price Certification. The successful bidder shall assist the Commonwealth in establishing the issue price of the Series 2020C Bonds and shall execute and deliver to the Commonwealth at Closing an “issue price” certificate setting forth the reasonably expected initial offering price to the public of the Series 2020C Bonds, together with the supporting pricing wires or equivalent communications, substantially in the form attached to the Preliminary Official Statement as Appendix E, with such modifications as may be appropriate or necessary, in the reasonable judgment of the successful bidder, the Commonwealth and Bond Counsel. All actions to be taken by the Commonwealth under this Official Notice of Sale to establish the issue price of the Series 2020C Bonds may be taken on behalf of the Commonwealth by the Commonwealth’s municipal advisor identified herein and any notice or report to be provided to the Commonwealth may be provided to the Commonwealth’s municipal advisor. The Commonwealth intends that the provisions of Treasury Regulation Section 1.148-1(f)(3)(i) (defining “competitive sale” for purposes of establishing the issue price of the Series 2020C Bonds) will apply to the initial sale of the Series 2020C Bonds (the “competitive sale requirements”) because (i) the Commonwealth shall disseminate this Official Notice of Sale to potential underwriters in a manner that is reasonably designed to reach potential underwriters; (ii) all bidders shall have an equal opportunity to bid; (iii) the Commonwealth expects to receive bids from at least three underwriters of municipal bonds who have established industry reputations for underwriting new issuances of municipal bonds; and (iv) the Commonwealth anticipates awarding the sale of the Series 2020C Bonds to the bidder who submits a firm offer to purchase the Series 2020C Bonds at the highest price (or lowest interest cost), as set forth in this Official Notice of Sale. Any bid submitted pursuant to this Official Notice of Sale shall be considered a firm offer for the purchase of the Series 2020C Bonds, as specified in the bid, and the bidder certifies that it is an underwriter with an established industry reputation for underwriting municipal bonds.

In the event that the competitive sale requirements are not satisfied, the Commonwealth will reject all bids and cancel the sale. Bidders should prepare their bids on the assumption that the issue price of the Series 2020C Bonds will be the reasonably expected initial offering price to the public.

Continuing Disclosure. To assist bidders in complying with paragraph (b)(5) of Rule 15c2-12, the Commonwealth will undertake in the Series 2020C Bonds to provide annual reports and notices of certain events. A description of this undertaking is set forth in Appendix C of the Preliminary Official Statement and will also be set forth in the Final Official Statement.

Expenses. Each bid will be deemed to be an all-in bid. The successful bidder will be under no obligation to pay the Commonwealth’s issuance costs. The Commonwealth will not pay any expenses of the successful bidder in connection with the purchase of the Series 2020C Bonds.

Settlement. The Series 2020C Bonds will be delivered on March 3, 2020, in New York, New York, at DTC against payment of the purchase price therefor. The successful bidder must make payment of the purchase price of Bonds by 10:00 a.m. (Boston, Massachusetts time) on March 3, 2020 in immediately available funds in Boston, Massachusetts.

There will also be furnished the usual closing papers, including (a) a certificate signed by the Attorney General of the Commonwealth stating that no litigation of any kind is now pending or, to her knowledge, threatened seeking to restrain or enjoin the issuance or delivery of the Series 2020C Bonds or the levy or collection of a material portion of the taxes or other revenues of the Commonwealth, or in any manner questioning the proceedings or authority under which the Series 2020C Bonds are issued, or affecting the validity of the Series 2020C Bonds, or contesting in any way the completeness, accuracy or fairness of the Preliminary Official Statement or Final Official Statement or contesting the title to the office of any official signing the Series 2020C Bonds or the Final Official Statement; and (b) a certificate signed by the State Treasurer and the Secretary of Administration and Finance to the effect that, except for the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement and any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the information in the Preliminary Official Statement and Final Official Statement under the heading “BOOK-ENTRY-ONLY SYSTEM,” “RATINGS,” and in Appendix B and Appendix E, to the best of their respective knowledge and belief, the Preliminary Official Statement, as of the date of sale of the Series 2020C Bonds, and the Final Official Statement,

both as of the date of sale and the date of settlement of the Series 2020C Bonds, did not contain any untrue statement of a material fact and did not omit to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

Legal Opinions. The approving opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, in substantially the form set forth in the Preliminary Official Statement with respect to the Series 2020C Bonds, will be furnished to the successful bidder. The Preliminary Official Statement contains a discussion of the effect of the Internal Revenue Code of 1986, as amended, on the exclusion from gross income of interest on the bonds and a discussion of Bond Counsel's opinion insofar as it concerns such exclusion. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Bond Counsel, will also be furnished to the successful bidder to the effect that (i) the information contained in the Preliminary Official Statement and the Final Official Statement under the headings "THE BONDS," "SECURITY FOR THE BONDS" and in Appendix B, insofar as such information constitutes summaries of certain provisions of the Series 2020C Bonds and applicable Massachusetts law, presents a fair summary of such provisions and that the statements in the Preliminary Official Statement and the Final Official Statement under the caption "Tax Exemption" and in the summary tax opinion contained on the cover of the Preliminary Official Statement and the Final Official Statement, insofar as such statements purport to summarize certain provisions of the Internal Revenue Code of 1986 or purport to summarize such counsel's opinion regarding the Series 2020C Bonds, are correct in all material respects, and (ii) in the course of such counsel's participation in the preparation of the Preliminary Official Statement and the Final Official Statement, no facts came to such counsel's attention that have caused it to conclude that the Preliminary Official Statement, as of its date, or the Final Official Statement, as of the date of sale or the date of settlement of the Series 2020C Bonds (except for the financial and statistical data included therein, the initial offering prices or yields of the Bonds on the inside cover page of the Final Official Statement, any other information concerning the reoffering of the Bonds included therein at the request of the successful bidder and the stabilization clause, if any, and the information in the Preliminary Official Statement and the Final Official Statement under the headings "BOOK-ENTRY-ONLY SYSTEM," "RATINGS," and "COMPETITIVE SALE OF BONDS" and in any other document specifically referenced therein, including any Appendix other than Appendix B, as to which no opinion need be expressed) contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading. An opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, Disclosure Counsel, will also be furnished to the successful bidder to the effect that in the course of such counsel's participation in the preparation of the Commonwealth Information Statement (as defined in the Preliminary Official Statement), and as it may have been further supplemented as of the date of sale of the Series 2020C Bonds, no facts came to such counsel's attention that have caused it to conclude that the Commonwealth Information Statement as of January 29, 2020, or, as it may have been supplemented as of the date of sale of the Series 2020C Bonds, as of said date of sale or as of the date of settlement of the Series 2020C Bonds (except for the financial and statistical data included therein and the information contained in the Exhibits thereto, as to which no opinion need be expressed), contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading.

CUSIP Numbers. CUSIP numbers will be applied for by Acacia, as municipal advisor to the Commonwealth, with respect to the Series 2020C Bonds. The Commonwealth will assume no obligation for the assignment or printing of such numbers on the Series 2020C Bonds or for the correctness of such numbers. Neither failure to print such numbers on any Series 2020C Bond nor any error with respect thereto shall constitute cause for a failure or refusal by the successful bidder to accept delivery of and make payment for the Series 2020C Bonds. The CUSIP Service Bureau charge for the assignment of CUSIP numbers on the Series 2020C Bonds shall be paid for by the successful bidder.

Right to Modify or Amend Official Notice of Sale. The Commonwealth reserves the right to modify or amend this Official Notice of Sale prior to the bid date. If any modifications occur, supplemental information with respect to the Series 2020C Bonds will be communicated by posting on TM3 not later than 8:30 a.m. (Boston, Massachusetts time) on any announced date for receipt of bids, and bidders shall bid upon the Series 2020C Bonds based upon the terms thereof set forth in this Official Notice of Sale, as so modified by such supplemental information.

Change of Bid Date or Time. The Commonwealth reserves the right to change the date and/or time established for the receipt of bids. Any such change will be announced by posting on TM3 no later than 8:30 a.m. (Boston, Massachusetts time) on the announced bid date. If any date and/or time fixed for the receipt of bids and the sale of the Series 2020C Bonds is changed, an alternative sale date and time will be announced at least one business day prior to such alternative sale date. On any such alternative sale date and time, any bidder may submit bids

electronically as described above for the purchase of the Series 2020C Bonds in conformity in all respects with the provision of this Official Notice of Sale, except for the date and/or time of sale and except for any changes announced by posting on TM3 at the time the sale date and/or time are announced.

Minority/Women Business Enterprises. It is the policy of the Commonwealth that appropriate consideration be given to firms who (a) are minority business enterprises and women's business enterprises and (b) have significant local ownership or presence. The State Treasurer requests and strongly urges bidders to make a good-faith effort to meet this goal by including such firms in their management group or syndicate and/or in the provision of legal services or other advisory services.

Additional Information. Further information concerning the Commonwealth and the Series 2020C Bonds is contained in the Preliminary Official Statement dated February 11, 2020, to which prospective bidders are directed, and to which this Official Notice of Sale is attached. The Preliminary Official Statement is provided for informational purposes only and is not a part of this Official Notice of Sale. Copies of the Preliminary Official Statement and this Official Notice of Sale may be viewed and downloaded at the Commonwealth's website: www.massbondholder.com and at the EMMA website, www.emma.msrb.org. Additional information may be obtained from Susan E. Perez, Deputy Treasurer, Office of the Treasurer and Receiver-General (617-367-3900, ext. 816).

The Commonwealth of Massachusetts

/s/ Deborah B. Goldberg
Treasurer and Receiver-General

FORM OF ISSUE PRICE CERTIFICATE

\$[PRINCIPAL AMOUNT]
 THE COMMONWEALTH OF MASSACHUSETTS
 GENERAL OBLIGATION BONDS
 CONSOLIDATED LOAN OF 2020, SERIES [A][B][C]

The undersigned, on behalf of [NAME OF SUCCESSFUL BIDDER] (the “Underwriter”), hereby certifies as set forth below with respect to the sale of the above-captioned obligation (the “Bonds”).

1. Reasonably Expected Initial Offering Price.

(a) As of the Sale Date, the reasonably expected initial offering prices of the Bonds to the Public by the Underwriter are the prices listed in Schedule A (the “Expected Offering Prices”). The Expected Offering Prices are the prices for the Maturities of the Bonds used by the Underwriter in formulating its bid to purchase the Bonds. Attached as Schedule B is a true and correct copy of the bid provided by the Underwriter to purchase the Bonds.

(b) The Underwriter was not given the opportunity to review other bids prior to submitting its bid.

(c) The bid submitted by the Underwriter constituted a firm bid to purchase the Bonds.

2. Defined Terms.

(a) *Maturity* means Bonds with the same credit and payment terms. Bonds with different maturity dates, or Bonds with the same maturity date but different stated interest rates, are treated as separate Maturities.

(b) *Public* means any person (including an individual, trust, estate, partnership, association, company, or corporation) other than a Regulatory Underwriter or a related party to a Regulatory Underwriter. The term “related party” for purposes of this Certificate generally means any two or more persons who have greater than 50 percent common ownership, directly or indirectly.

(c) *Regulatory Underwriter* means (i) any person that agrees pursuant to a written contract with the Commonwealth (or with the lead underwriter to form an underwriting syndicate) to participate in the initial sale of the Bonds to the Public, and (ii) any person that agrees pursuant to a written contract directly or indirectly with a person described in clause (i) of this paragraph to participate in the initial sale of the Bonds to the Public (including a member of a selling group or a party to a retail distribution agreement participating in the initial sale of the Bonds to the Public).

(d) *Sale Date* means the first day on which there is a binding contract in writing for the sale of a Maturity of the Bonds. The Sale Date of the Bonds is February 19, 2020.

The representations set forth in this certificate are limited to factual matters only. Nothing in this certificate represents the Underwriter’s interpretation of any laws, including specifically Sections 103 and 148 of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations thereunder. The undersigned understands that the foregoing information will be relied upon by the Commonwealth with respect to certain of the representations set forth in the Tax Certificate and with respect to compliance with the federal income tax rules affecting the Bonds, and by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., as bond counsel, in connection with rendering its opinion that the interest on the Bonds is excluded from gross income for federal income tax purposes, the preparation of the Internal Revenue Service Form 8038-G, and other federal income tax advice that it may give to the Commonwealth from time to time relating to the Bonds.

[SUCCESSFUL BIDDER], as Underwriter

By: _____
 Name: _____

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