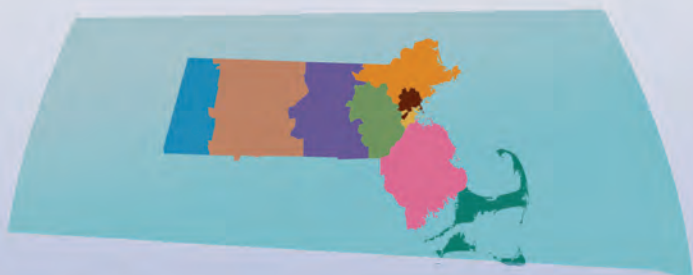
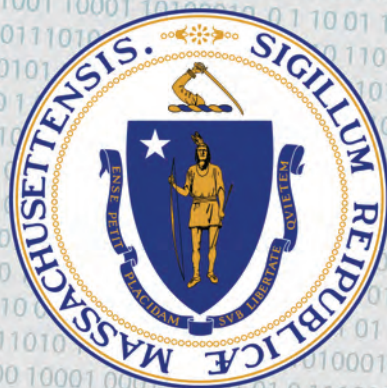


Commonwealth of Massachusetts

COMPREHENSIVE ANNUAL FINANCIAL REPORT

FISCAL YEAR ENDED JUNE 30, 2019



Promoting Women in STEM
through Nexus Regional STEM Networks

Commonwealth of Massachusetts



Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

Prepared by
Office of the Comptroller
Statewide Financial Reporting Team



Andrew W. Maylor
Comptroller of the Commonwealth

This document is available at the Comptroller's website: www.macomptroller.org

Massachusetts Department of Higher Education STEM Nexus STEM Regional Networks - Promoting Women in STEM

The 2019 Commonwealth of Massachusetts Comprehensive Annual Financial Report (CAFR) is pleased to highlight the important work that the Massachusetts Department of Higher Education is doing to promote women in STEM through its Nexus STEM Regional Networks. STEM is the acronym for science, technology, engineering and mathematics. Promoting and supporting women in STEM is critical to bridging the gender and pay gaps for women and improving the quality and scope of STEM opportunities in Massachusetts.

Why is STEM important for women in Massachusetts?

Although Massachusetts was recently ranked 2nd among all 50 states in terms of gender equity in STEM employment, the employment gap between women and men in STEM careers is still wide. ***While women hold more than half of healthcare jobs in Massachusetts, the State has only a modestly higher percentage of women in non-healthcare STEM occupations (29%), compared to the national average (25%).*** Overall, there are 2.5 men to every woman in STEM jobs, slightly better than the national rate of 3 men for every woman.

Managed by the Department of Higher Education the State's Regional STEM Networks serve as hubs for connecting educators, community leaders and industry partners to further excite and energize students about opportunities in STEM subjects. These networks are among the longest standing STEM Networks in the country.

The Massachusetts strategy with the STEM Nexus Regional Networks was to align economic, workforce, and education systems to coordinate systems based on skill needs in regions. The Governor designated a new set of regional boundaries that roll up existing workforce development areas into a smaller set of regions.

Each network is managed by an executive director and housed in either an institution of higher education or a regional employment board. Under the direction of the STEM Advisory Council, the networks play a key role in cultivating interest and engagement in STEM activities in their regions and implementing the priorities of the STEM Advisory Council.

Special thanks to the Massachusetts Department of Higher Education for curating and providing photos of women in STEM education.

Front Cover:

The double helix is made up of photos submitted by (top to bottom): Roxbury Community College, Greenfield Community College and Holyoke Community College.

Back Cover:

Special thanks to Massachusetts College of Liberal Arts for the top photo and mass.edu/stem/getinvolved/pipelinenetworks.asp for the remaining photos on the back cover.

Comprehensive Annual Financial Report

For the Fiscal Year Ended June 30, 2019

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PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS



STEM ADVISORY COUNCIL

The STEM Advisory Council is established by [M.G.L. Chapter 6, Section 218](#) in order to expand access to high-quality STEM education for students across the Commonwealth. Members of the Council include individuals from academia, business, government and non-profits who believe in the necessity of a STEM-literate and skilled citizenry ready to meet the needs of a 21st Century workforce. The Council serves as the central coordinating entity to bring together all of the participants from state agencies, the legislature, and members of the public and private sectors involved with STEM planning and programming.

The Council has named expanding access to work-based learning opportunities in STEM fields through the STEM@Work initiative, developing strong models of STEM Early College Career Pathways, and broadening access to computer science and engineering programs as key priority areas.

In addition, the STEM Advisory Council outlined key principles for its work, including focusing on expanding opportunities for communities with high concentrations of students living in low-income areas, students that are historically underrepresented in STEM fields (such as women), and ensuring high-quality instruction in every corner of the Commonwealth.

The STEM Advisory Council seeks to build a deeper, more diverse human capital pipeline to fill the growing demand for talent by Massachusetts employers, while creating new opportunities for young people and adults to pursue rewarding and productive careers requiring STEM expertise.

Working with educators, legislators, and business and community leaders, the Council seeks to promote the importance of these essential disciplines while also incentivizing the development and spread of best practices that enhance students' successful preparation for entry into the 21st Century workforce.

Content and photo courtesy of: <https://www.mass.edu/stem/home/council.asp> and <http://mass-stem-summit.org/history>.

Introductory Section

(Unaudited)

Letter of Transmittal

Constitutional Officers

Commonwealth Organizational Structure

Advisory Board to the Comptroller

Acknowledgements

Certificate of Achievement

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Berkshire Stem Network



Lindsay McCarthy, Berkshire STEM Program Manager, Massachusetts College of Liberal Arts

Lindsay McCarthy holds dual undergraduate degrees from the University of Massachusetts at Amherst in Social Thought & Political Economy and Psychology as well as a Master's in Public Administration from Westfield State University. After nearly twenty years working with Berkshire County high risk populations for organizations such as the American Red Cross, Big Brothers Big Sisters and Community Action, Ms. McCarthy returned to school and is currently pursuing her Engineering Associates in Science from Berkshire Community College. Ms. McCarthy is a current NASA Community College Aerospace Scholar and passionate advocate for the study and application of mathematics.

For more information: http://www.mcla.edu/About_MCLA/area/Community-Collaborations/stempipeline/index



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COMPTROLLER

Commonwealth of Massachusetts

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February 10, 2020

***To the People of the Commonwealth of Massachusetts,
Governor Charles D. Baker and Honorable Members of the General Court***

We are pleased to provide this Letter of Transmittal for the Commonwealth's fiscal year 2019 (FY19) Comprehensive Annual Financial Report (CAFR) prepared in accordance with Generally Accepted Accounting Principles (GAAP) in the United States of America. The objective of this report is to provide a clear financial picture of our government as a single, unified entity.

This document presents the Commonwealth's financial information on three bases of accounting, each serving a different purpose. The report includes "required supplementary information" in the form of budgetary basis statements, which are prepared in accordance with the Commonwealth's budgetary or statutory basis of accounting and summarized by Commonwealth branch and agency. This information is aggregated from FY19 line item appropriations, the legal level of budgetary control -- i.e., the amount up to which state departments can spend without approval of additional appropriations (in a so-called "supplemental budget") by the Massachusetts Legislature. Line items specify a dollar amount that can be legally spent on specified programs or activities; for example, separate line items are authorized in the state's annual budget for general administrative expenses (including personnel expenses) and for benefit payments in the Commonwealth's Medicaid program. More detailed information on the statutory basis of accounting and the results of operations on that basis from FY19 are found in the Statutory Basis Financial Report (SBFR) issued separately on January 6, 2020. The SBFR documents compliance with the legislatively adopted budget at a fund level. Further documentation is found within the Commonwealth's accounting system, the Massachusetts Management Accounting and Reporting System (MMARS). Each state maintains different rules for budgetary reporting and therefore the SBFR should not be used for comparisons across states.

The CAFR "fund perspective" statements present the governmental operations on a modified accrual basis of accounting. The fund perspective is designed to measure inter-period equity, the extent to which current resources (available within one year) fully fund all current services provided by the government. Long-term liabilities are excluded with the implicit assumption that future tax revenues will fund these liabilities as they come due. This fund perspective provides results similar to the SBFR.

In addition to the fund perspective, this CAFR presents a "government-wide" perspective. This perspective combines all governmental and business-type activities in a statement of net position and a statement of activities, presenting all functions on a full accrual basis of accounting. All capital assets are added to the government-wide statements, as are most long-term liabilities. Funds that are shown as fiduciary under the fund perspective are not portrayed in the government-wide statements, as the assets do not belong to the Commonwealth.

In the government-wide statements, the balance sheet has been organized into a "net position format." This format classifies all assets and liabilities as short and long-term and then subtracts liabilities from assets to arrive at net position.

The Commonwealth's government-wide revenues, expenses and activities are included in the statement of activities. The expenses of the Commonwealth, organized by function, are netted against fees, fines, grant revenues, and assessments generated to fund each function in an attempt to derive the net cost to the taxpayer of each function. This format allows the reader of the financial statements to discern the net cost of a particular function of government funded by taxation and other general revenues.

This CAFR is presented in three sections: **Introductory**, **Financial**, and **Statistical**. The **Introductory Section** contains an overview of current initiatives and summary financial data. The **Financial Section** contains the Management's Discussion and Analysis (MD&A) and the Commonwealth's Basic Financial Statements. GAAP requires that management provide a narrative overview and analysis in the form of an MD&A to accompany the basic financial statements.

This letter of transmittal is designed to complement the MD&A, where the financial analysis is presented. The Commonwealth's MD&A can be found immediately following the Independent Auditors' Report. The **Statistical Section** contains selected financial and demographic information; it also contains background information on the Commonwealth.

PROFILE OF THE COMMONWEALTH

The Commonwealth of Massachusetts was the sixth of the original 13 colonies to ratify the United States Constitution, joining the United States on February 6, 1788. Boston, the capital of the Commonwealth since its founding, dates from 1630. The Commonwealth has an area of 8,257 square miles. Geographically, the Commonwealth includes 351 cities and towns. The largest city is the capital, Boston. Employment is largely in the education, health services, wholesale and retail trade, financial, technology, and public sectors. Due to the Commonwealth's high levels of basic and advanced education and the presence of world-class educational institutions, the Commonwealth's economy is driven in large part by innovation in technology, life sciences, health care, and business services.

The Massachusetts Constitution was ratified in 1780 while the Revolutionary War was still in progress, nine years before the United States Constitution was adopted, and is the oldest written Constitution now in use. It specified three branches of Government: Legislative, Executive, and Judicial. "The Great and General Court," elected every two years, is made up of a Senate of 40 members and a House of Representatives of 160 members. It is the second oldest democratic deliberative body in the world.

The table on page 3 reconciles the fund balances on three bases of accounting: the statutory basis presented in separately issued financial statements on January 6, 2020; the fund basis; and the entity-wide basis statements, the latter two of which are included in this report.

Governmental Funds - Statutory to GAAP - Fund Perspective and to Governmental Activities Net Position
(Amounts 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	(216.4)	
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	(1,438.3)	
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)	
Other short term accruals:		
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 health care providers and insurers	(37.3)	
Workers' compensation and group insurance	(192.1)	
Other accruals, net	292.8	
Net increase to governmental fund balances	2,091.6	
Massachusetts School Building Authority fund balance	1,606.0	
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 of resources related to pension	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 net deferrals on debt refundings	(30,625.6)	
Compensated absences	(616.3)	
Capital leases	(19.8)	
Accrued interest on bonds	(444.0)	
Other long term liabilities	(278.1)	
Total governmental activities net position (entity wide perspective)	\$ (74,080.4)	

The deficit of \$74.080 billion in governmental activities net position is largely attributable to several factors. First, the Commonwealth has made a policy decision to finance construction of assets owned by other government entities, particularly Commonwealth roads and bridges, school buildings, and assets of cities and towns and local authorities. As a result of transportation reform implemented during FY10, the Commonwealth shifted virtually all its road and bridge assets from its books to the newly created Massachusetts Department of Transportation (MassDOT), a component unit of the Commonwealth. Second, starting in FY15, the Commonwealth's net (or unfunded) pension liability, was

placed on the Commonwealth's books in accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. Third, the Commonwealth's net (or unfunded) OPEB, or other post-employment benefits (mainly health insurance), liability, was placed on the Commonwealth's books starting in FY18 in accordance with GASB Statement No. 75, *Accounting and Financial Reporting for Post Employment Benefits Other than Pensions*.

At the end of FY19, MassDOT held \$25.417 billion in road, bridge, and other transportation-related assets (excluding assets of the Massachusetts Bay Transportation Authority) net of related depreciation, the vast majority of which were formerly held by the Commonwealth. The Commonwealth also has financed significant transportation and non-transportation assets currently held by Massachusetts Institutions of Higher Education, Massachusetts cities and towns, and quasi-public authorities. While the exact amount of Commonwealth-funded assets held by these entities is difficult to determine, between FY05 and FY19 the Commonwealth's capital spending on Higher Education capital projects totaled approximately \$2.042 billion, capital spending for transportation-related financial assistance to local governments totaled approximately \$3.884 billion, and other grants and financial assistance for non-Commonwealth entities such as cities and towns and quasi-public authorities funded through the Commonwealth's capital budget totaled \$6.346 billion, including \$1.000 billion to fund the Massachusetts School Building Authority (MSBA) in FY05 and FY06. In addition, the Commonwealth has a net liability of \$5.221 billion for debt and grant obligations for the School Building Assistance Program that finances construction of schools for the Commonwealth's cities and towns. As almost all of this capital spending was financed by Commonwealth debt, the liabilities are retained by the Commonwealth while the assets are held by the Institutions of Higher Education, Massachusetts cities and towns, and entities such as local housing and other quasi-governmental authorities.

Since MassDOT ended FY19 with a positive net position of \$26.156 billion, it is more informative to view the Commonwealth's financial statements in combination with MassDOT than to analyze the two separately, while also keeping in mind that significant assets owned by the Institutions of Higher Education and local governments and authorities were financed by liabilities still on the Commonwealth's books.

As of June 30, 2019, the net pension liability in governmental activities totaled \$38.065 billion, offset by GASB 68 related adjustments (in the form of deferred inflows and outflows) of \$5.685 billion; resulting in a reduction in governmental activities net position of \$32.380 billion. Governmental activities' net OPEB liability totaled \$12.989 billion.

The net deficit in governmental activities (which excludes "business-type activities" of Unemployment Insurance and Higher Education) decreased by \$74 million between June 30, 2018 and June 30, 2019, as increases in assets were approximately offset by increases in liabilities. The most significant changes were as follows:

- The Commonwealth's current assets increased by \$1.900 billion, primarily as result of an increase of \$2.065 billion in cash and cash equivalents, as a strong increase in tax revenues resulted in a statutory basis FY19 operating surplus.
- The Commonwealth's other net post employment benefits (OPEB) liability, after taking into account deferrals of the liability decrease caused by lower than projected retiree medical costs and a change in the discount rate by which OPEB liabilities are calculated, decreased by \$221 million between FY18 and FY19.
- The Commonwealth's net pension liability, after taking into account deferrals of FY19 investment gains and other adjustments that will be recognized over the next several years, increased by \$1.636 billion, primarily due to a reduction, from 7.35%, to 7.25%, in the rate used to discount liabilities.
- As noted on page 3, the Commonwealth continues to fund, through its own debt, transportation-related assets owned by the Massachusetts Department of Transportation (MassDOT), Institutions of Higher Education, cities and towns and quasi-public authorities. In FY19, approximately \$1.961 billion of the more than \$2.601 billion in state-funded capital spending generated assets not owned by the Commonwealth, including \$1.272 billion in transportation spending (more than \$381 million of which were grants and other financial assistance to cities and towns), \$106 million for Institutions of Higher Education (which are attributed to the Commonwealth's business-type activities), and approximately \$275 million in other capital grants and financial assistance to local governments and quasi-public entities. As a result of this capital spending on assets owned by entities other than the Commonwealth, the amount of debt outstanding increased by \$826 million while the Commonwealth's capital assets net of depreciation increased by only \$24 million.

The net deficit in the primary government, in addition to governmental activities, includes the Commonwealth's business-type activities of the Unemployment Insurance system and Higher Education institutions, decreased by \$674 million from FY18, with lower net deficit due primarily to an increase of \$417 million in the Unemployment Insurance fund balance and smaller surpluses in Higher Education.

The Commonwealth engages in multi-year financial planning in several areas, including the adoption of a statutorily required triennial pension funding schedule (which is funded prior to the adoption of each year's annual budget), a five year capital spending plan, and a multi-year debt issuance planning process via a Debt Affordability Committee established in statute, comprised of Massachusetts government and non-government financial experts. The Commonwealth's short and long-term goal is to achieve annual statutory structural budget balance, i.e., where annual revenues equal or exceed annual expenditures, thus minimizing the use of one-time resources. A related goal is to limit the growth in state expenditures to increases in budgeted revenues. The current Administration has also committed to a policy of annual increases in unrestricted aid to cities and towns equal to the growth in projected budgetary fund tax revenues.

REPORTING ENTITY

The financial statements incorporate activity from over 150 departments. These departments include the various agencies, boards, and commissions, the 25 Institutions of Higher Education, the judicial and legislative branches of government, and constitutional offices. The departments record their daily financial operations in the state accounting system, MMARS, operated by the Office of the Comptroller.

In addition, the financial statements include 41 independent public authorities. These entities are defined as component units and meet the criteria for inclusion in the Commonwealth's reporting entity in accordance with GAAP. They are further described in Note 14 to the basic financial statements. The Massachusetts School Building Authority (MSBA) is blended into the Commonwealth's operations.

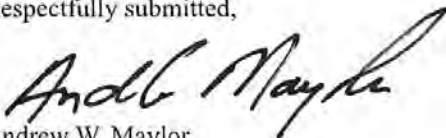
INDEPENDENT AUDIT

The Commonwealth's independent auditors, KPMG LLP, have performed an independent audit of the Commonwealth for the fiscal year ended June 30, 2019. The Independent Auditors' Report is presented in the Financial Section.

The Office of the Comptroller prepares these financial statements and is responsible for the completeness and reliability of the information presented in this report. To provide a reasonable basis for making these representations, the Office of the Comptroller, working in conjunction with the State Auditor, has established a comprehensive internal control framework that is designed to protect the Commonwealth's assets from loss, theft, or misuse and to compile sufficient reliable information for the preparation of the Commonwealth's financial statements in conformity with GAAP. Because of the cost, internal controls should not outweigh their benefits. The Commonwealth's comprehensive framework of internal controls has been designed to provide reasonable, rather than absolute assurance that the financial statements will be free from material misstatement.

We would like to express our sincere thanks to the dedicated employees of the Office of the Comptroller, and in particular Deputy Comptrollers Chris Guido, Jenny Hedderman and Howard Merkowitz and Assistant Comptrollers Kristine Hill-Jones, Kevin McHugh, Amy Nable and Peter Scavotto, whose tireless efforts serve the citizens of the Commonwealth well on a daily basis. We are proud to have them all on this team as we embark on another year of innovation within the Comptroller's Office and establish a model for good governance nationwide.

Respectfully submitted,



Andrew W. Maylor
Comptroller of the Commonwealth

CONSTITUTIONAL OFFICERS

Charles D. Baker
Governor

Karyn E. Polito
Lieutenant Governor

William F. Galvin
Secretary of State

Maura Healey
Attorney General

Deborah B. Goldberg
Treasurer and Receiver-General

Suzanne Bump
Auditor

LEGISLATIVE OFFICERS

Karen E. Spilka
Senate President

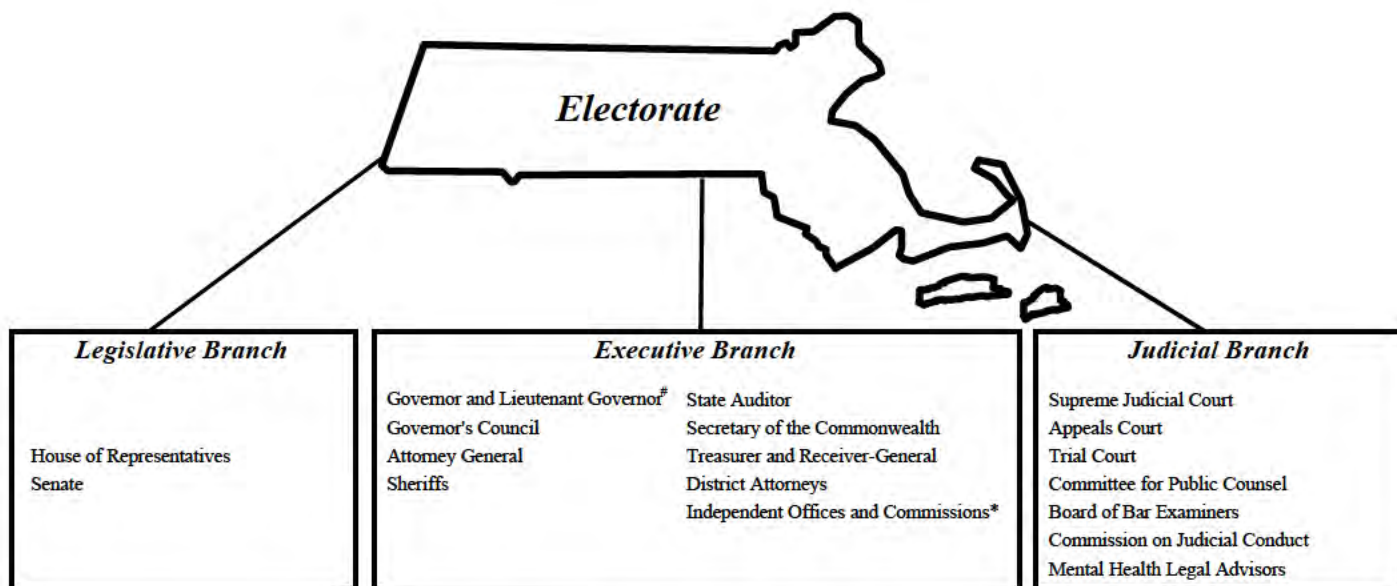
Robert A. DeLeo
Speaker of the House

JUDICIAL OFFICERS

Ralph D. Gants
Chief Justice, Supreme Judicial Court

Mark Green
Chief Justice, Appeals Court

Jonathan Williams
Court Administrator, Trial Court



Executive Branch Independent Offices and Commissions*

Board of Library Commissioners
 Campaign and Political Finance
 Cannabis Control Commission
 Center for Health Information & Analysis
 Commission Against Discrimination

Commission on the Status of Women
 Disabled Persons Protection Commission
 Massachusetts Gaming Commission
 Office of the Child Advocate
 Office of the Comptroller

Office of the Inspector General
 State Ethics Commission
 State Retiree Benefits Trust Fund Board
 University of Massachusetts System

Executive Departments Under Gubernatorial Authority[#]

Administration and Finance

Executive Office for Administration and Finance
 Appellate Tax Board
 Bureau of the State House
 Civil Service Commission
 Department of Revenue
 Developmental Disabilities Council
 Division of Administrative Law Appeals
 Division of Capital Asset Management and Maintenance
 George Fingold Library
 Group Insurance Commission
 Health Policy Commission
 Human Resource Division
 Massachusetts Office on Disability
 Massachusetts Teachers' Retirement System
 Operational Services Division
 Public Employee Retirement Administration Commission

Education

Executive Office of Education
 Department of Early Education and Care
 Department of Elementary and Secondary Education
 Department of Higher Education
 Community Colleges
 State Universities

Housing and Economic Development

Executive Office of Housing and Economic Development
 Department of Business Development
 Office of Consumer Affairs & Business Regulations
 Massachusetts Marketing Partnership
 Department of Housing & Community Development
 Department of Telecommunications and Cable
 Division of Banks
 Division of Insurance
 Division of Professional Licensure
 Division of Standards

Energy and Environmental Affairs

Executive Office of Energy and Environmental Affairs
 Department of Agricultural Resources
 Department of Conservation and Recreation
 Department of Energy Resources
 Department of Environmental Protection
 Department of Fish and Game
 Department of Public Utilities
 State Reclamation Board

Technology and Security

Executive Office of Technology Services and Security

Transportation and Public Works

Executive Office of Transportation and Public Works

Executive Office of Labor and Workforce Development

Health and Human Services

Executive Office of Health and Human Services
 Executive Office of Elder Affairs
 Department of Children and Families
 Department of Developmental Services
 Department of Mental Health
 Department of Public Health
 Department of Transitional Assistance
 Department of Veterans' Services
 Department of Youth Services
 Massachusetts Commission for the Blind
 Massachusetts Commission for the Deaf and Hard of Hearing
 Massachusetts Rehabilitation Commission
 Office for Refugees and Immigrants
 Soldiers' Home, Holyoke
 Soldiers' Home, Massachusetts

Public Safety

Executive Office of Public Safety and Security
 Chief Medical Examiner
 Department of Criminal Justice Information Services
 Department of Correction
 Department of Fire Services
 Department of State Police
 Massachusetts Emergency Management Agency
 Military Division/ Massachusetts National Guard
 Municipal Police Training Committee
 Parole Board
 Sex Offender Registry

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PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Boston STEM Network



Hilary Brayton Hutchison, STEM Partnership Manager, Boston Private Industry Council

As the STEM Partnership Manager at the Boston Private Industry Council, Hilary Hutchison oversees STEM initiatives including statewide STEM Week and manages partnerships with companies in Boston to connect Boston public high school students with internships and career exploration experiences. Prior to this role, she coordinated extended learning time programs at the Boston Public Schools and worked as part of the communications and research team at the Boston Plan for Excellence. Hilary earned a Master's in Social Service Administration from the University of Chicago and a Bachelor's in Psychology and Spanish from Gettysburg College.

"The Boston STEM Network promotes women in STEM by engaging professionals from STEM businesses, associations, education, and the community in volunteer opportunities, meetings, events, and on social media where they can connect with other professionals and inspire youth to explore STEM careers."

"It is important to promote women in STEM to develop the skilled workforce that employers need to meet their vacancies and adapt to industry demands."

For more information: <http://bostonstemnetwork.org/>



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Executive Director/CEO

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Cape Cod STEM Network



Bridget Burger, Network Director Cape Cod Community College.

A graduate of Yale, with a Master's Degree in Education from Lesley University, Bridget Burger is an Ethnomathematics and STEM Institute Scholar at the University of Hawai'i Manoa College of Education. Her work experience has included developing experiential, culturally-relevant STEM curriculum for Pacific Islanders, creating project-based, developmental math curriculum for charter and vocational schools, and collaborating across stakeholders to deliver high-quality educational programs in the community.

In leading the Cape Cod Regional STEM Network, based at Cape Cod Community College, she is able to apply her range of skills and experiences to foster STEM education in the region she calls home. She also coordinates other STEM education programs at Cape Cod Community College, including STEM Starter Academy, funded by the Department of Higher Education, and Offshore Wind Workforce Development, funded by Mass Clean Energy Center. She is also a Co-Principal Investigator of National Science Foundation Award #1930184, investigating pathways for improving outcomes for underserved students in STEM education for rural community college students in the region. She coordinated National Science Foundation Award #1347610, transforming STEM education in the Cape & Islands region through the development of the Cape Cod Regional STEM Network.

"The Cape Cod Regional STEM Network is committed to promoting STEM equity and inclusion for all in our region. We do this in several ways. On our website and in social media posts we regularly feature articles highlighting organizations and individuals engaging women and girls in STEM in our region to broaden the impact of those efforts. We coordinate and host competition events for a Vex robotics league in which more than half of the coaches are women, and helped to connect schools with grants for several new "Girl Powered" robotics teams. Last year, we created an event called Sisters in STEM, which brings together women mentors from 500 Women Scientists, WHOI, and Cape Cod Community College faculty and students to engage in a fun evening of hands-on STEM exploration with over 40 6th-8th grade girls. This program supports participants to strengthen their identity in STEM, form connections, share knowledge, and build a community dedicated to STEM. The program has been so successful that we are looking to expand it."

"Data continues to show that, in many STEM fields, women are grossly underrepresented, compared to other fields. Why? There is a culture in STEM education that, at various stages, discourages girls and women from pursuing, succeeding in, and remaining in STEM degree tracks. We need to change this, because we need diversity in STEM. Our strength and resilience as innovators lies in our diversity--by including and valuing different perspectives and backgrounds in applying STEM knowledge, we generate better, more viable solutions to the problems we face. So promoting and supporting women in STEM is important for all of us. As the hub of the Cape & Islands STEM ecosystem, we are in a unique position to impact our region's STEM culture to do just that."

For more information: <https://capecodstemnetwork.org/>

Financial Section

Independent Auditors' Report

Management's Discussion and Analysis

Basic Financial Statements

Notes to the Basic Financial Statements

Required Supplementary Information Other Than Management's Discussion and Analysis

Other Supplementary Information

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Central STEM Network



Kathy Chen, Executive Director the STEM Education Center at Worcester Polytechnic Institute (WPI).

Kathy Chen has always been curious about the world and ended up studying Chemistry and Materials Science & Engineering at Michigan State University. Although she dreamed of being a 2nd grade teacher, she ended up getting a Ph.D. from MIT in Materials Science and becoming a Professor in Materials Engineering at California Polytechnic State University (“Cal Poly”) San Luis Obispo. After more than 15 years of teaching in higher ed., she made a career shift to contribute more to the PreK-12 levels with equitable and inclusive STEM education by supporting educators to facilitate high-quality STEM experiences through the STEM Education Center at Worcester Polytechnic Institute.

“The mission of the Central MA STEM Network is to develop and deliver engaging STEM experiences for all youth particularly those from underrepresented groups, including women in STEM. In order to address the grand challenges of our world today, we need the wide perspectives, skills, and knowledge of our whole population, and women tend to bring a holistic and collaborative approach to problem solving. It’s important to promote and support women in STEM because they often don’t self-promote themselves, and thus they are not always recognized for their contributions and accomplishments.”

For more information: <https://wp.wpi.edu/cmsn/>



KPMG LLP
Two Financial Center
60 South Street
Boston, MA 02111

Independent Auditors' Report

Mr. Andrew W. Maylor, Comptroller
The Commonwealth of Massachusetts
Boston, Massachusetts

Report on the Financial Statements

We have audited the accompanying financial statements of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the Commonwealth of Massachusetts (the Commonwealth), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the Commonwealth's basic financial statements as listed in the accompanying table of contents.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with U.S. generally accepted accounting principles; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We did not audit the financial statements of the following entities and funds:

- *Governmental Activities*
 - Massachusetts School Building Authority, which is a major governmental fund and represents 8.3% and 1.7% of the total assets and total revenues, respectively, of the Governmental Activities.
- *Business-Type Activities*
 - Individual state universities listed in Note 14 which represent 100% of the total assets and total revenues of the State Universities major enterprise fund
 - Individual community colleges listed in Note 14 which represent 100% of the total assets and total revenues of the Community Colleges major enterprise fund

These entities and funds collectively represent 28.1% and 22.8% of the total assets and total revenues, respectively, of the Business-Type Activities.

- *Discretely Presented Component Units*
 - Individual nonmajor component units listed in Note 14 which represent 7.6% and 5.8% of the total assets and total revenues, respectively, of the aggregate discretely presented component units.



Those financial statements were audited by other auditors, whose reports have been furnished to us, and our opinions, insofar as they relate to the amounts included for these entities and funds indicated above, are based solely on the reports of the other auditors.

We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement. The financial statements of the Massachusetts Municipal Depository Trust, the Massachusetts Technology Park Corporation and the Massachusetts Life Sciences Center were not audited in accordance with *Government Auditing Standards*.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

Opinions

In our opinion, based on our audit and the reports of other auditors, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, the business-type activities, the aggregate discretely presented component units, each major fund, and the aggregate remaining fund information of the Commonwealth of Massachusetts as of June 30, 2019, and the respective changes in financial position, and where applicable, cash flows thereof for the year then ended in accordance with U.S. generally accepted accounting principles.

Other Matters

Required Supplementary Information

U.S. generally accepted accounting principles require that the management's discussion and analysis and required supplementary information, as listed in the accompanying table of contents (collectively referred to as RSI) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the RSI in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.



Supplementary and Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the Commonwealth's basic financial statements. The introductory section, other supplementary information and statistical section as listed in the accompanying table of contents are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplementary information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America by us and other auditors. In our opinion, and the reports of the other auditors, the other supplementary information is fairly stated in all material respects in relation to the basic financial statements as a whole.

The introductory and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated February 10, 2020 on our consideration of the Commonwealth's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the Commonwealth's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the Commonwealth's internal control over financial reporting and compliance.

KPMG LLP

February 10, 2020

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: MetroWest STEM Network



Dr. Irene Porro is the Director of the Christa Corrigan McAuliffe Center for Integrated Science Learning at Framingham State University; Director for the MetroWest STEM Education Network.

An astrophysicist by training, Dr. Irene Porro received her Ph.D. in Space Science and Technology from the University of Padova, Italy. During her doctoral program she was a researcher at the Harvard-Smithsonian Center for Astrophysics, in Cambridge, and then a post-doctoral fellow at the Max Planck Institut für Astronomie in Heidelberg, Germany. She then joined the Massachusetts Institute of Technology where she became the Director of the Education and Outreach Group of the MIT Kavli Institute for Astrophysics and Space Research. Dr. Porro is an alumna of the International Space University, an international education program that specializes in providing graduate-level training to the future leaders of the emerging global space community.

A professional scientist with a deep commitment to social justice, in her work Dr. Porro combines research skills in physics and astrophysics with an interdisciplinary approach to education to promote equity and diversity in STEM fields. Deeply aware of the benefits and sense of empowerment that exposure to the integration of art and science learning experiences produces, she is proud to serve on the advisory board for Catalyst Collaborative @ MIT and to work to support initiatives where both the arts and the sciences are fully respected and valued.

“The MetroWest STEM Education Network works to integrate and articulate our STEM efforts so that youth have access to quality STEM programming and career pathways. MSEN focuses on identify strategies to provide access to students who are financially disadvantaged and from underrepresented populations. Women are often an underrepresented group in STEM and MSEN aims to identify the barriers that may prevent women to pursue STEM education and career pathways to then call on all sectors of the STEM community to work together to remove those barriers.”

“If the outcomes of STEM research and development are going to be services and products to benefit all of humanity, we need to have actual representation of the diversity of humanity in the STEM enterprises that will produce such services and products. Women represent more than 50% of the global population and they should have a comparable representation in all STEM fields. We are clearly not there yet and we need to work so that more women are both competent and confident to pursue their passion and goals in STEM. “

For more information: <https://www.metroweststem.com/>

Management's Discussion and Analysis

(Unaudited)

Financial Highlights – Primary Commonwealth Government

Government-Wide Highlights

This analysis, prepared by the Office of the Comptroller, offers readers of the Commonwealth's financial statements a narrative overview of the activities of the Commonwealth for the fiscal year ended June 30, 2019 (FY19). We encourage readers to consider this information in conjunction with the additional information that is furnished in the letter of transmittal and with the Commonwealth's financial statements, which follow. This analysis is required by the Governmental Accounting Standards Board (GASB), which provides preparers with guidelines on what must be included in and excluded from this analysis.

Net Position – The liabilities and deferred inflows of resources of the primary government exceeded its assets and deferred outflows of resources at the end of FY19 by \$68.431 billion, a decrease in the net deficit of \$674 million from the FY18 net deficit.

Of the \$68.431 billion deficit, “unrestricted net position” has a deficit of \$74.409 billion and there is a \$2.435 billion positive balance attributable to net investment in capital assets. There are five primary reasons for the negative unrestricted net position:

- In FY10, the Commonwealth implemented transportation reform, which created the Massachusetts Department of Transportation (MassDOT) and transferred to that entity virtually all highway and bridge assets of the Commonwealth totaling approximately \$15.521 billion, net of depreciation, as of the date of the transfer. These and subsequently constructed road and bridge assets were valued at \$25.417 billion as of June 30, 2019. However, the Commonwealth originally paid and continues to pay for the construction of these assets and retains approximately \$13.068 billion in transportation-related debt, which is now unrelated to any capital asset owned by the Commonwealth.
- The Commonwealth has a net liability of \$5.221 billion for its share of the construction costs of schools owned and operated by municipalities through the Massachusetts School Building Authority (MSBA).
- The Commonwealth, through debt issuances, also pays for non-transportation capital assets held by quasi-public entities, local governments, and housing authorities.
- With the implementation of Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions—an amendment of GASB Statement No. 27*, which was effective starting in FY15, the Commonwealth was required to place on its books the full amount of its unfunded pension liability (known as the “net pension liability”), which totaled \$38.783 billion as of June 30, 2019.
- The implementation of GASB Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions*, which was effective starting in FY18, required the Commonwealth to record on its statement of net position its unfunded non-pension retiree benefits (or OPEB, mostly health insurance benefits), which totaled \$14.243 billion as of June 30, 2019.

At the end of FY19, the Commonwealth also held \$3.543 billion in “restricted net position”, which are assets restricted primarily for payment of debt service, unemployment insurance benefits, and the Institutions of Higher Education. Approximately \$1.997 billion in restricted net position balances were set aside for unemployment benefits, an additional \$975 million was restricted for debt retirement (of which \$951 million was restricted for MSBA debt retirement), \$275 million was restricted for Higher Education, and \$296 million was restricted for other governmental purposes.

The Commonwealth's governmental activity (which excludes the “business-type activities” of the Institutions of Higher Education and Unemployment Insurance) net deficit decreased by \$74 million, to \$74.080 billion, and its governmental activities unrestricted net deficit decreased by approximately \$336 million, to \$73.918 billion, as of June 30, 2019.

Total revenues of the primary government increased by \$3.076 billion, or 4.9% in FY19, to \$65.719 billion. Total expenses of the primary government increased by \$641 million, or approximately 1.0%, to \$65.045 billion. Details on revenues and expenses can be found on pages 24–27.

The net position of business-type activities increased by \$600 million, due to surpluses of approximately \$183 million in Higher Education activity and \$417 million in the Unemployment Insurance program.

On a "funds perspective" basis, at June 30, 2019, the Commonwealth's governmental funds reported a combined ending fund balance of \$9.111 billion, an increase of \$2.273 billion from June 30, 2018. Of the ending balances:

- There are no nonspendable balances, \$1.317 billion is restricted, \$5.007 billion is committed, \$1.257 billion is assigned and \$1.530 billion is unassigned fund balance (a full discussion of these classifications is included in Note 1 to the basic financial statements, on pages 67–70).
- The MSBA's fund balance of \$1.606 billion is blended with the Commonwealth. Within this fund balance is \$1.502 billion in cash and restricted investments, which resulted primarily from the issuance of debt in FY19 and previous fiscal years, less approximately \$55 million in liabilities. In FY19, \$897 million was dedicated to the MSBA from Commonwealth sales taxes, and the MSBA issued \$200 million in long-term dedicated sales tax bonds to retire outstanding Commercial Paper Notes and close Commercial Paper program.

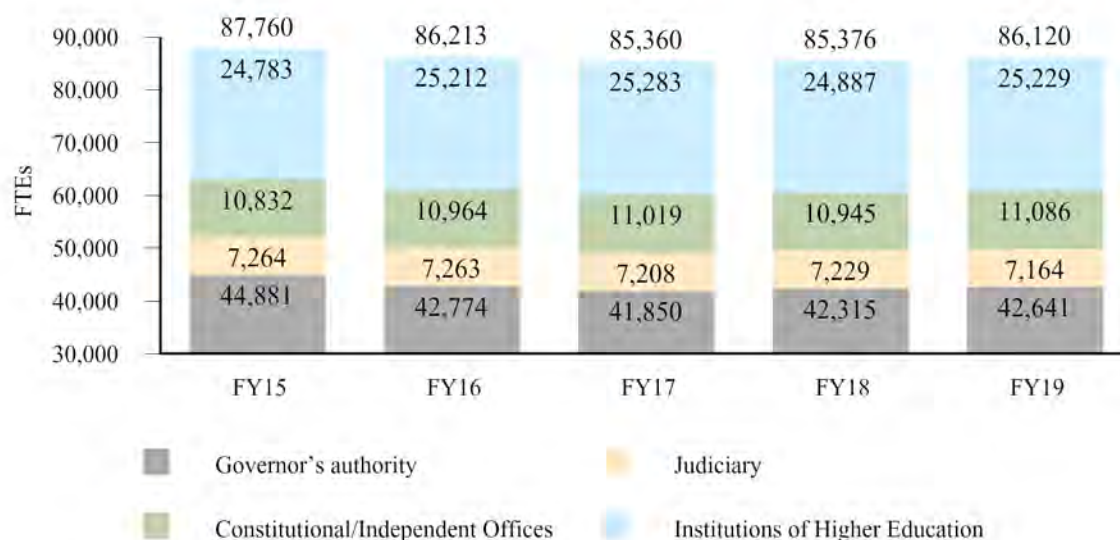
Other highlights of FY19 financial operations include:

- Tobacco settlement proceeds for the year were approximately \$230 million on a GAAP basis, a decrease of approximately \$27 million from FY18. Approximately \$133 million has been reported as a receivable in the governmental funds, equal to half of the anticipated tobacco settlement proceeds to be received in FY20. In FY19 approximately \$71 million, or the equivalent of 30% of tobacco settlement proceeds, was transferred to the State Retiree Benefits Trust Fund (SRBTF) to fund the Commonwealth's liability for retiree health care. Per statute, the proportion of tobacco settlement revenues transferred to the SRBTF increases annually until an amount equal to 100% of the tobacco settlement proceeds is to be transferred to the SRBTF in FY23, although the requirement to transfer increasing percentages of tobacco settlement proceeds was modified for FY19 with the required percentage reduced to 30%.
- During the fiscal year, the Commonwealth passed or agreed to terms of approximately \$10.251 billion in bond authorizations. There were no bond de-authorizations of previously approved capital appropriations during the fiscal year. The Commonwealth determines the timing and extent of capital spending and bonding as part of its five-year capital plan.
- Lottery revenues for FY19 were \$5.653 billion, an increase of approximately \$210 million, or 3.9%, from FY18. Prizes were approximately \$4.446 billion. Lottery profits, after deducting administrative expenses and fringe benefit charges to reimburse the Commonwealth's General Fund for pension and employee health insurance benefits, but prior to distributions to reimburse the Massachusetts Cultural Council and compulsive gamblers appropriation as mandated in the FY19 budget, totaled \$1.104 billion an increase of \$107 million, or 10.7%, from FY18. Mandated transfers to the General Fund to reimburse it for administrative expense appropriations and other spending totaled \$1.207 billion.

Full-Time Equivalent Employment

The following chart shows the Commonwealth's full-time equivalent employment, including the Massachusetts Department of Transportation (MassDOT) for all state funding sources (budgetary, non-budgetary, capital, federal, and trust) over the past five fiscal years. As of June 30, 2019, the number of Commonwealth employees increased by a net of 744 full-time equivalent employees (FTEs) from June 30, 2018, to a total of 86,120. The largest increase was in the University of Massachusetts (456 FTEs).

**Full Time Equivalent Workforce
Including Higher Education
June 2015 – June 2019**



OVERVIEW OF THE FINANCIAL STATEMENTS

This MD&A is intended to serve as an introduction to the Commonwealth's basic financial statements. The Commonwealth's basic financial statements comprise the following: 1) government-wide financial statements; 2) fund financial statements; and 3) notes to the financial statements. This report also contains additional required supplementary information in the form of budgetary schedules, which are prepared on the statutory basis of accounting, as well as pension and other post-employment benefits (OPEB) schedules. Other supplementary information is also provided to furnish additional detail to support the basic financial statements.

Government–Wide Financial Statements

The government-wide financial statements present the reader with a broad overview of the Commonwealth's finances in a manner similar to a private sector business. The statements include the *Statement of Net Position*, which presents the assets and deferred outflows of resources, liabilities and deferred inflows of resources and net position for the government as a whole. Also presented is the *Statement of Activities*, which presents the functional expenses, offsetting revenues and changes in net position of the Commonwealth. The statements report the Commonwealth's net position and changes in net position. An increase or decrease in the Commonwealth's net position is one way to measure financial health as well as the trend of increases or decreases over time. Non-financial measures such as the types of capital investments, changes in taxation, population, employment and economic conditions are also indicators of the overall health of any government.

Both the statement of net position and the statement of activities have separate sections for three different categories of the Commonwealth's operations. These activities are Governmental Activities, Business-type Activities, and Discretely Presented Component Units. Governmental activities are where the Commonwealth's basic services are reported. Business-type activities are those for which fees are charged for particular services. For the Commonwealth, business-type activities comprise the unemployment insurance compensation system and the Institutions of Higher Education. The component units are separate legal entities that are included in this report due to the nature of their governance and financial relationship with the Commonwealth.

The government–wide financial statements can be found on pages 36-39 of this report.

Fund Financial Statements and Component Unit Financial Statements

Funds are groups of related accounts that are used to maintain control over resources that have been segregated for specific activities or objectives. The Commonwealth, like other governments, uses fund accounting to ensure and demonstrate compliance with finance-related legal requirements. Within the funds, budgetary compliance is demonstrated at the appropriation level for budgeted expenditures.

Only the major funds are shown separately in the fund financial statements, with the remaining funds aggregated and reported as nonmajor funds.

Fund financial statements focus on individual parts of the Commonwealth, reporting its operations in more detail than the government-wide statements. The Commonwealth's funds can be divided into three categories: *Governmental Funds*, *Proprietary Funds*, and *Fiduciary Funds*. It is important to realize that these fund categories use different bases of accounting and should be interpreted differently. Further discussion of the funds can be found in the section "Financial Analysis of the Commonwealth's Funds" and in Note 1 to the basic financial statements.

Component unit financial statements are presented for entities where the Commonwealth has financial accountability, but the entities are independent of the core Commonwealth operations. Most component units operate similarly to private-sector businesses.

Although the Massachusetts School Building Authority (MSBA) is a component unit of the Commonwealth, the MSBA's operations have been determined by management to operate in a similar fashion to a Commonwealth department due to the MSBA's service to the Commonwealth and because it relies on a pledged portion of the Commonwealth's sales tax revenue to fund its debt service. In FY05, legislation changed the funding of school construction from a direct appropriation of the Commonwealth to a dedicated portion of the sales tax allocated to the MSBA. Because of the nature of transactions between the Commonwealth and this authority, per GASB Statement No. 39, *Determining Whether Certain Organizations Are Component Units* as amended by GASB Statement No. 61, *The Financial Reporting Entity: Omnibus*, the authority's operations are blended with the primary government and reported as a governmental fund in the government-wide financial statements.

Notes to the Financial Statements, Required Supplementary Information and Other Supplementary Information

The notes to the financial statements provide additional information that is essential to a full understanding of the financial statements as of the date provided in the government-wide and the fund financial statements. The notes to the financial statements can be found on pages 61–134.

The required supplementary information section includes a budgetary comparison schedule for the General Fund, along with a reconciliation comparing the original General Appropriation Act and supplemental appropriations to actual budgetary spending. A variance column is also provided. A further reconciliation schedule of the budgeted revenues and expenses to governmental fund perspective revenues and expenditures for the General Fund is also provided. Required pension and OPEB schedules are also presented in this section.

Other supplementary information is not required, but is included to present combining schedules of various nonmajor funds, fiduciary funds, and component units.

GOVERNMENT-WIDE ANALYSIS

The primary government's combined net position (governmental and business-type activities) showed a net deficit of \$68.431 billion at the end of FY19, a decrease in the net deficit of \$674 million from the end of FY18. Government-wide unrestricted net position is negative by \$74.409 billion. As explained previously, in addition to the \$38.783 billion government-wide net pension liability and the \$14.243 billion OPEB liabilities recorded on the Commonwealth's books, a substantial portion of this deficit is a result of programs where the Commonwealth has funded assets owned by political subdivisions of the Commonwealth (in particular the result of the transfer of assets to MassDOT during FY10), as well as continued borrowing by the Commonwealth that funds, through its capital budget and debt issuance, construction of new assets owned by MassDOT, local governments, and local authorities. MassDOT reports its capital assets on its financial statements, which are incorporated into the Commonwealth's financial statements similarly to other component

units.

***Major Long – Term Obligations for
Assets of Political Subdivisions
(amounts in thousands)***

Massachusetts School Building Authority net deficit.....	\$ 5,220,798
Outstanding bonds issued to fund the MBTA.....	207
Debt related to MassDOT assets.....	13,068,350
Effects on governmental unrestricted net position of items unique to the Commonwealth	<u>\$ 18,289,355</u>

Of the Commonwealth's approximately \$2.601 billion in FY19 state funded capital spending, about \$1.961 billion did not result in capital assets attributed to governmental activities of the Commonwealth, including approximately \$1.272 billion in transportation spending (with \$381 million in grants and other financial assistance to cities and towns), \$106 million for Institutions of Higher Education (which are included in the Commonwealth's business-type activities) and approximately \$275 million in other capital grants and financial assistance to local governments and quasi-public entities. Between FY05 and FY19 the Commonwealth's capital spending on projects owned by non-Commonwealth entities or by the Institutions of Higher Education totaled \$25.043 billion. These include Higher Education capital projects totaling approximately \$2.042 billion, capital spending for transportation projects now owned by the Massachusetts Department of Transportation totaling approximately \$12.527 billion, transportation-related financial assistance to local governments totaling more than \$3.884 billion and other grants and financial assistance for non-Commonwealth entities such as cities and towns and quasi-public authorities funded through the Commonwealth's capital budget of almost \$6.346 billion, including \$1 billion in FY05 and FY06 to capitalize the Massachusetts School Building Authority.

The Commonwealth also funds school construction through debt issued by the MSBA (beyond its initial \$1 billion capitalization), and includes the MSBA's debt on its statement of net position, but the assets paid for with that debt are owned by Massachusetts cities, towns, and school districts.

Current assets and liabilities are amounts that are available in the current period and obligations that will be paid within one year of the financial statement date, respectively. As of June 30, 2019, the Commonwealth's government-wide current unrestricted cash and cash equivalents totaled \$7.962 billion, an increase of \$2.164 billion from June 30, 2018. Total current assets were \$15.827 billion, an increase of \$1.994 billion from June 30, 2018. As of June 30, 2019, the Commonwealth's current liabilities were \$9.481 billion, a decrease of \$430 million from June 30, 2018.

As of June 30, 2019, the primary government's non-current assets increased by \$455 million from June 30, 2018, to \$18.387 billion.

The Commonwealth holds \$12.716 billion in traditional capital assets such as land, construction in process, buildings, infrastructure, and equipment, net of accumulated depreciation. GASB requires the reporting of the value of investments in the Commonwealth's infrastructure, including roads, bridges, beaches, dams and other immovable assets on the face of the Commonwealth's financial statements. As these assets provide services to citizens, they are not available to finance future spending unless they are sold. Although the Commonwealth's investment in its capital assets is also reported net of related debt, it should be noted that the resources needed to repay this debt must be provided from other sources, since the capital assets themselves cannot be used to liquidate these liabilities.

The following table shows the Commonwealth's net position. Restricted net position represents resources that are subject to external constraints.

Net Position as of June 30, 2019 and 2018
(in thousands of dollars)

	Governmental Activities		Business-Type Activities		Total Primary Government	
	June 30, 2019	June 30, 2018*	June 30, 2019	June 30, 2018*	June 30, 2019	June 30, 2018*
Current assets	\$ 13,777,391	\$ 11,877,883	\$ 2,049,611	\$ 1,955,358	\$ 15,827,002	\$ 13,833,241
Non-capital non-current assets	2,475,435	2,557,081	3,196,328	2,784,122	5,671,763	5,341,203
Capital assets	4,807,530	4,783,689	7,908,007	7,807,447	12,715,537	12,591,136
Total assets	21,060,356	19,218,653	13,153,946	12,546,927	34,214,302	31,765,580
Deferred outflows of resources	8,044,092	7,675,378	632,842	564,243	8,676,934	8,239,621
Total assets and deferred outflows	29,104,448	26,894,031	13,786,788	13,111,170	42,891,236	40,005,201
Current liabilities	8,475,674	8,916,003	1,005,649	995,449	9,481,323	9,911,452
Long term liabilities	88,548,459	88,837,409	6,504,498	6,788,016	95,052,957	95,625,425
Total liabilities	97,024,133	97,753,412	7,510,147	7,783,465	104,534,280	105,536,877
Deferred inflows of resources	6,160,667	3,295,107	627,163	277,753	6,787,830	3,572,860
Total liabilities and deferred inflows	103,184,800	101,048,519	8,137,310	8,061,218	111,322,110	109,109,737
Net Position:						
Net investment in capital assets	(1,433,294)	(1,446,934)	3,868,576	3,777,515	2,435,282	2,330,581
Restricted	1,270,844	1,546,202	2,271,721	1,867,748	3,542,565	3,413,950
Unrestricted	(73,917,902)	(74,253,756)	(490,819)	(595,311)	(74,408,721)	(74,849,067)
Total Net Position	\$ (74,080,352)	\$ (74,154,488)	\$ 5,649,478	\$ 5,049,952	\$ (68,430,874)	\$ (69,104,536)

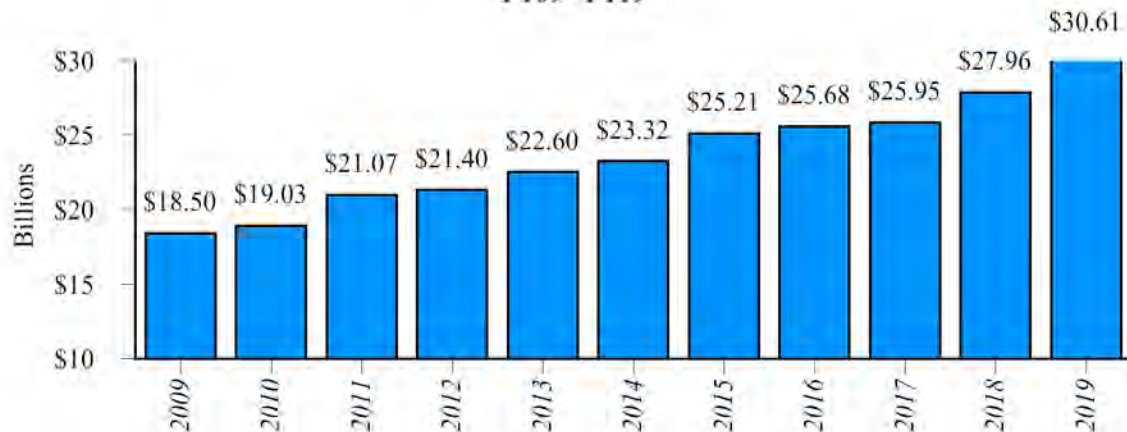
* - Prior year amounts reclassified to conform to current year presentation

Changes in Net Position

As noted earlier, the Commonwealth's total primary government net deficit decreased by approximately \$674 million between FY18 and FY19, to \$68.431 billion. The main reasons for the \$674 million decline in the net deficit were the operating gains in the business-type activities of Unemployment Insurance and Higher Education (which had a \$600 million gain in FY19) and a smaller \$74 million gain in governmental activities, the result of several significant increases and decreases to net position that approximately offset each other.

The following table shows the major categories of government-wide revenues and expenses for FY18 and FY19, as well as net position for the two fiscal years. In FY19, approximately 46.6% of the primary government's total revenue came from taxes, while the remainder resulted from programmatic revenues, including charges for services and grants and contributions, the majority of which was federal aid. FY19 revenues totaled \$65.719 billion, an increase of \$3.076 billion, or 4.9% from FY18, with tax revenue totaling \$30.610 billion, an increase of \$2.646 billion, or 10.2%, from FY18. The increase in tax revenue was attributable primarily to income tax revenue, which increased by \$1.375 billion, or 8.6%, as withholding on wages and capital gains tax revenue growth was strong. Sales tax revenue grew by \$333 million, or 5.1%, corporate excise tax increased by \$773 million, or 33.6% .

**Revenue from Taxation
FY09 - FY19**



**Changes in Net Position during the Fiscal Years Ended June 30, 2019 and 2018
(in thousands of dollars except percentages)**

	Governmental Activities		Business - Type Activities		Total Primary Government		Total Primary Government		
	June 30, 2019	June 30, 2018*	June 30, 2019	June 30, 2018*	June 30, 2019	June 30, 2018*	June 30, 2019 Distribution	June 30, 2018 Distribution	'18 to '19 % Change
Revenues									
Program Revenues:									
Charges for services	\$ 11,411,869	\$ 11,107,419	\$ 4,629,552	\$ 4,408,343	\$ 16,041,421	\$ 15,515,762	24.4%	24.8%	(1.6)%
Operating grants and contributions	16,253,915	16,230,934	976,096	931,780	17,230,011	17,162,714	26.2%	27.4%	(4.4)%
Capital grants and contributions	66,085	99,002	112,033	160,201	178,118	259,203	0.3%	0.4%	(25.0)%
General Revenues:									
Taxes	30,609,957	27,964,093	—	—	30,609,957	27,964,093	46.6%	44.6%	4.5%
Other	1,513,855	1,283,283	145,483	458,018	1,659,338	1,741,301	2.5%	2.8%	(10.7)%
Total Revenues	59,855,681	56,684,731	5,863,164	5,958,342	65,718,845	62,643,073	100.0%	100.0%	
Expenses									
Medicaid	18,093,807	18,105,722	—	—	18,093,807	18,105,722	27.9%	28.1%	(0.7)%
Direct local aid	6,089,548	5,900,634	—	—	6,089,548	5,900,634	9.4%	9.2%	2.2%
Health and human services	8,662,012	8,298,704	—	—	8,662,012	8,298,704	13.3%	12.9%	3.1%
Lottery	4,445,654	4,325,321	—	—	4,445,654	4,325,321	6.8%	6.7%	1.5%
Higher education	—	—	5,345,669	5,283,861	5,345,669	5,283,861	8.2%	8.2%	—%
Early elementary and secondary education	5,607,240	6,101,603	—	—	5,607,240	6,101,603	8.6%	9.5%	(9.5)%
Unemployment compensation	—	—	1,483,901	1,552,404	1,483,901	1,552,404	2.3%	2.4%	(4.2)%
Other	15,317,352	14,836,204	—	—	15,317,352	14,836,204	23.5%	23.0%	2.2%
Total Expenses	58,215,613	57,568,188	6,829,570	6,836,265	65,045,183	64,404,453	100.0%	100.0%	
Excess/(Deficiency)									
before transfers	1,640,068	(883,457)	(966,406)	(877,923)	673,662	(1,761,380)			
Transfers	(1,565,932)	(1,123,731)	1,565,932	1,123,731	—	—			
Change in net position (deficits)	74,136	(2,007,188)	599,526	245,808	673,662	(1,761,380)			
Net position/(deficit) - beginning	(74,154,488)	(72,147,300)	5,049,952	4,804,144	(69,104,536)	(67,343,156)			
Net position/(deficit) - ending	(\$74,080,352)	\$ (74,154,488)	\$ 5,649,478	\$ 5,049,952	(\$68,430,874)	(\$69,104,536)			

* - Prior year amounts reclassified to conform to current year presentation

Operating grants and contributions (including federal revenue for Medicaid and Unemployment Insurance) totaled \$17.230 billion, an increase of \$67 million, or 0.4%, in FY19, with Medicaid reimbursements decreasing by \$18 million, or 0.2%.

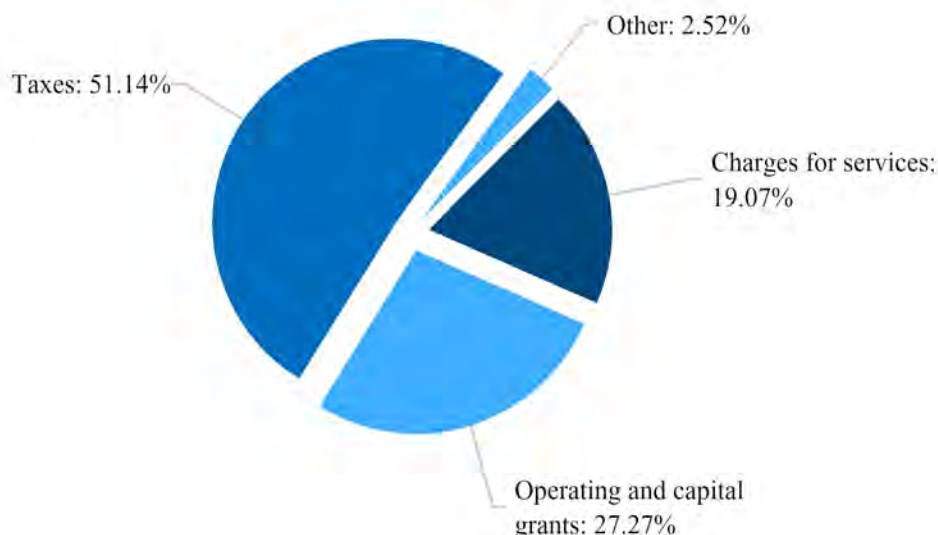
Charges for services totaled \$16.041 billion increasing of \$491 million, or 3.2% from FY18, with increases in charges in Health and Human Services Medicaid and general government, almost fully offset by declines in Lottery ticket purchases and a decrease in Energy and Environmental Affairs charges.

As of June 30, 2019, government-wide restricted net position totaled \$3.543 billion, an increase of \$129 million, with the majority of the increase due to assets restricted for other purposes.

Primary government spending totaled \$65.045 billion, an increase of \$641 million, or 1.0%, from FY18, with governmental activities spending (i.e., excluding business-type activities such as Higher Education and the Unemployment Insurance program) totaling \$58.216 billion, an increase of \$648 million, or 1.1%, and business-type activities spending totaling \$6.830 billion, a decrease of \$7 million, or 0.1%. Medicaid expenses totaled \$18.094 billion, a decrease of \$12 million, or 0.1%, from FY18, as cost saving measures offset increased enrollment growth and higher medical costs. Unemployment insurance compensation expenditures totaled \$1.484 billion, a decrease of \$69 million, or 4.4%. Other significant spending changes occurred in Health and Human services, where spending totaled \$8.662 billion, an increase of \$363 million or 4.4%, in transportation and public works, where spending totaled \$2.554 billion, an increase of \$71 million, or 2.8%, in direct local aid, where spending totaled \$6.090 billion, an increase of \$189 million, or 3.2%, and in general government expenses, where spending totaled \$2.766 billion, a decrease of \$26 million, or 0.9%.

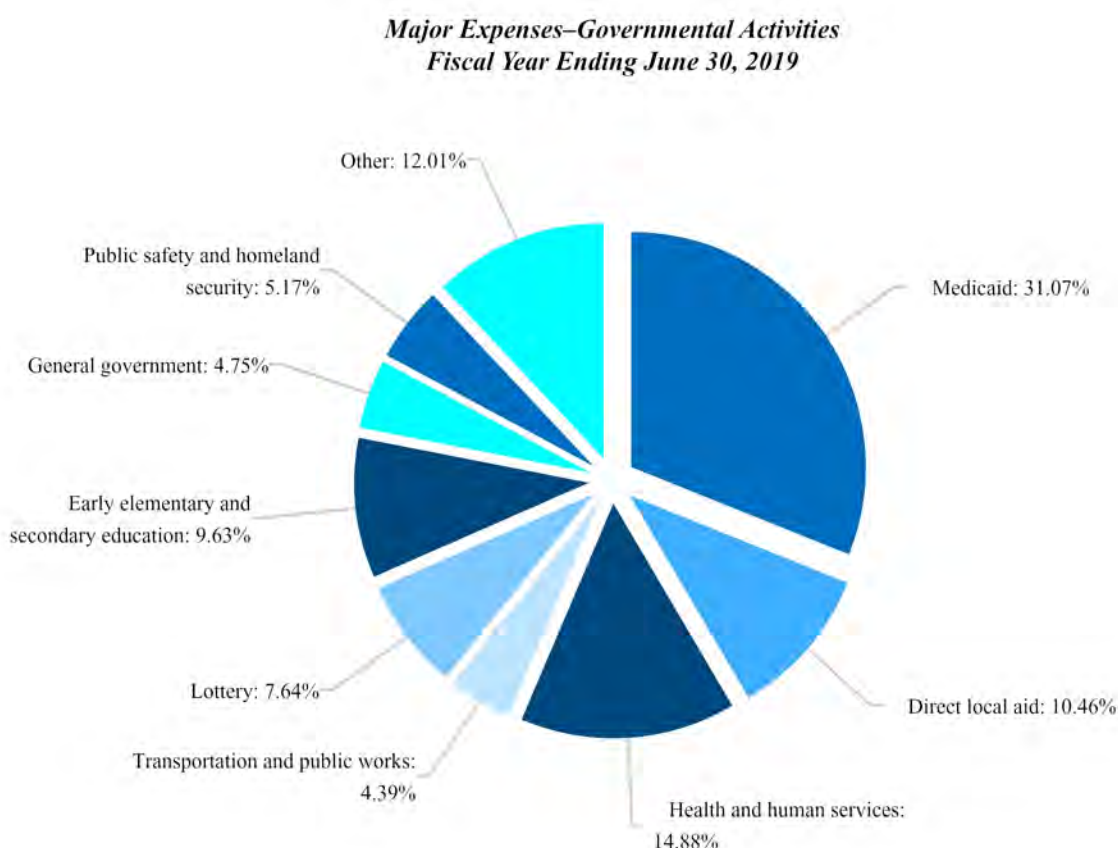
Income taxes comprise the majority of tax revenue. Of the \$30.610 billion in FY19, tax revenue within governmental activities, \$17.423 billion, or approximately 56.9%, of total taxes, was from income taxes, \$6.850 billion, or 22.4%, was from sales taxes, \$3.068 billion, or 10.0%, was from corporate taxes, \$774 million, or 2.5%, was from motor fuels taxes and \$2.494 billion, or 8.2%, was from other forms of taxation. Lottery revenues of \$5.644 billion made up 49.5% of the Commonwealth's governmental charges for services. The largest operating grants were federal Medicaid subsidies, which totaled \$10.170 billion, or approximately 62.6%, of all grants, other health and human services grants of \$3.122 billion, or 19.2% of all grants, and education grants of \$1.278 billion, or 7.9% of all grants. Most of the state's capital grants are for highway construction, and those federal grants are recorded not in the Commonwealth's financial statements but in the financial statements of the Massachusetts Department of Transportation.

*Revenue—Governmental Activities
Fiscal Year Ending June 30, 2019*



Medicaid expenses of \$18.094 billion accounted for 31.1% of the Commonwealth's governmental activities expenses. Historically, approximately half of Medicaid expenses have been reimbursed by the federal government, although under the Affordable Care Act some Medicaid expenditures are reimbursed at higher rates. The largest expense that is not subsidized by program revenues is direct local aid to the municipalities of the Commonwealth of approximately \$6.090 billion.

Other large expenditures for governmental activities included non-Medicaid health and human services costs of approximately \$8.662 billion, accounting for 14.9% of governmental expenses, pre-kindergarten through secondary education costs of approximately \$5.607 billion, accounting for 9.6% of governmental expenses and public safety and homeland security costs of approximately \$3.007 billion, accounting for 5.2% of governmental expenses. State employees' pensions and other post-employment benefits, which are included in the department spending amounts above, were \$2.824 billion.

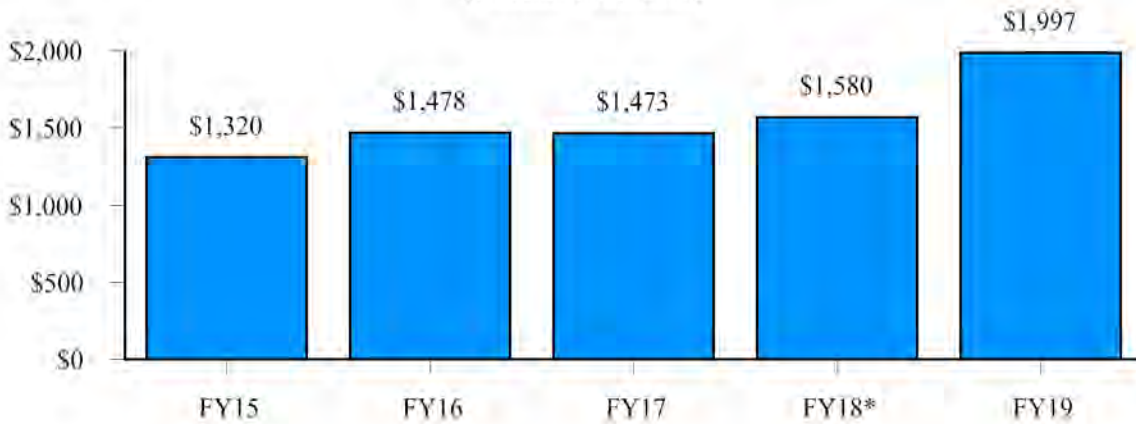


Business-Type Activities

Business-type activities are functions that equate to activities of a private enterprise. In the Commonwealth, the Institutions of Higher Education are deemed to be business-type activities because of their lack of separate taxation. Also, GASB standards mandate that the Unemployment Compensation Trust Fund be reported as a business-type activity.

As of June 30, 2019, business-type activities' net position totaled \$5.649 billion, an increase of \$600 million, or 11.9%, from FY18, with the net position of the Institutions of Higher Education increasing by \$183 million to \$3.653 billion and the net position of the Unemployment Insurance program increasing by \$417 million, to \$1.997 billion. Program revenues of business-type activities totaled \$5.718 billion an increase of \$183 million, or 3.3%, charges for services totaled \$4.630 billion, an increase of \$187 million, or 4.2%, with Unemployment Insurance charges increasing by \$235 million, or 14.5%, and Higher Education charges decreasing by \$48 million, 1.7%. Operating grants and contributions totaled \$976 million, an increase of \$44 million, or 4.8%, and capital grants and contributions totaled \$112 million, a decrease of \$48 million, or 30.1%.

*Unemployment Compensation Trust Fund
Net Position
Fiscal Years 2015 - 2019
(amounts in millions)*



* - Prior year amounts reclassified to conform to current year presentation

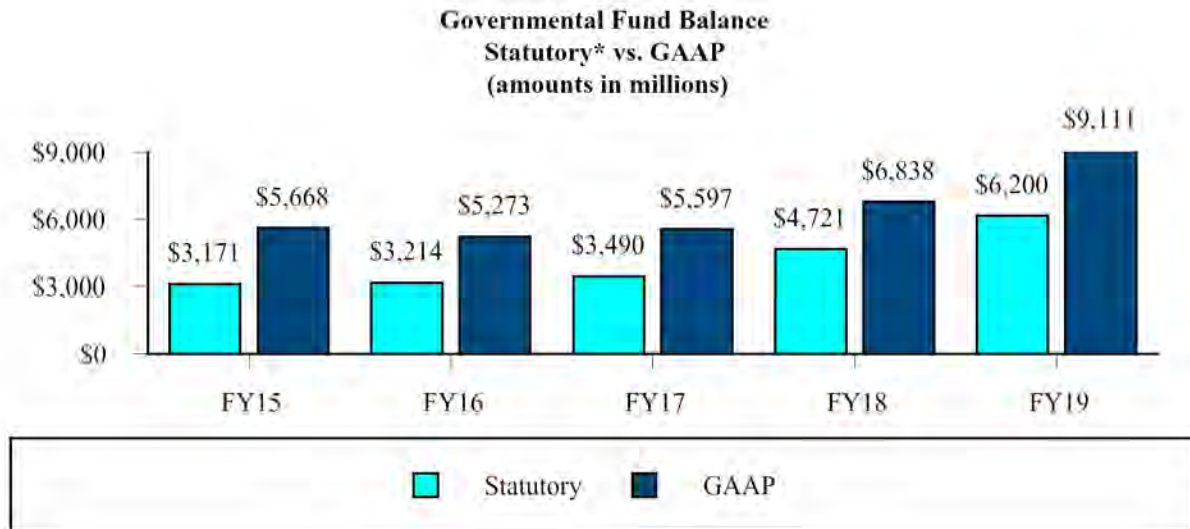
FINANCIAL ANALYSIS OF THE COMMONWEALTH'S FUNDS

The Commonwealth uses fund accounting to demonstrate inter-period equity and the extent to which current resources are financing the full cost of services that citizens are receiving. The basic governmental funds financial statements can be found immediately following the government-wide financial statements.

Governmental Funds

Governmental funds account for the near term inflows, outflows, and balances of expendable resources of the Commonwealth's core functions and services. Each major fund is presented in a separate column in the governmental fund balance sheet and in the governmental fund statement of revenues, expenditures, and changes in fund balances.

The General Fund is the primary operating fund of the Commonwealth. At the end of FY19, the fund balance of the General Fund was \$5.870 billion. Of this amount, \$3.424 billion represents the balance in the Commonwealth's Stabilization Fund. \$445 million was classified as assigned for continuing appropriations from FY19 into FY20 and \$2.001 billion was unassigned.



*Statutory basis includes the Massachusetts Department of Transportation (MassDOT) and excludes expendable trust funds

**Governmental Fund Operations - GAAP Basis - Fund Perspective
(amounts in thousands)**

	FY19	FY18*	FY17*	FY16*	FY15*
Beginning fund balances.....	\$ 6,838,444	\$ 5,597,382	\$ 5,273,746	\$ 5,305,565	\$ 4,619,686
Revenues and other financing sources.....	69,775,850	68,990,424	68,437,190	67,749,681	60,658,731
Expenditures and other financing uses	67,502,959	67,749,362	68,113,554	67,781,500	59,972,852
Excess/(deficiency)	2,272,891	1,241,062	323,636	(31,819)	685,879
Ending fund balances	<u>\$ 9,111,335</u>	<u>\$ 6,838,444</u>	<u>\$ 5,597,382</u>	<u>\$ 5,273,746</u>	<u>\$ 5,305,565</u>

* - Prior year amounts reclassified to conform to current year presentation

FY19 governmental fund revenues and other financing sources totaled \$69.776 billion, an increase of \$786 million, or 1.1%, from FY18, with a decrease of \$1.710 billion in Massachusetts School Building Authority (MSBA) long term debt and commercial paper issuance offsetting an increase of \$2.389 billion, or 3.6%, in non-MSBA revenues and other financing sources. Tax revenues totaled \$30.618 billion, an increase of \$2.375 billion, or 8.4%, primarily due to growth in withholding income, capital gains, sales, and corporate taxes as the Massachusetts economy continued to expand. Federal grants and reimbursements totaled \$16.328 billion, and decreased by only \$3 million. Assessments, fees, and investment earnings totaled \$13.389 billion, an increase of \$509 million, or 4.0%. Revenues from other financing sources totaled \$9.440 billion, a decrease of \$2.096 billion, or 18.2%, due to previously mentioned decreases in debt issuance at the MSBA and by the Commonwealth generally.

FY19 governmental fund expenditures and other financing uses totaled \$67.503 billion, a decrease of \$246 million, or 0.4% from FY18, with the decline resulting from a decrease of \$628 million in payments related to debt refunding transactions during FY18 offset by increases in various programmatic spending. Excluding the MSBA, governmental fund expenditures and other financing uses totaled \$66.486 billion, an increase of \$1.869 billion, or 2.9%, from FY18. Medicaid expenditures totaled \$18.094 billion, a decrease of \$12 million or 0.1%, with the decline due primarily to caseload reductions and lower than projected payments to managed care providers. Debt service expenditures totaled \$2.964 billion, a decrease of \$2.123 billion, or 41.7%, due almost entirely to the retirement of MSBA commercial paper obligations during FY18 which was not repeated in FY19. Post-employment benefits totaled \$1.368 billion, an increase of \$73 million, or 5.6%, with the growth mainly due to increased pension contributions. Direct local aid totaled \$6.090

billion, an increase of \$189 million, or 3.2%. Other financing uses totaled \$7.709 billion, an increase of \$243 million, or 3.3%, with the increase due primarily to increased transfers.

As of June 30, 2019 the Commonwealth's governmental funds reported combined ending fund balance of \$9.111 billion, an increase of \$2.273 billion, or 33.2%, from the previous year.

Governmental Funds - Fund Balance Classification
(amounts in thousands)

	2019	2018*	Change	% Change
Restricted	\$ 1,316,707	\$ 1,519,833	\$ (203,126)	(13.4)%
Unrestricted:				
Committed.....	5,007,488	3,302,222	1,705,266	51.6%
Assigned.....	1,256,717	955,830	300,887	31.5%
Unassigned.....	1,530,423	1,060,559	469,864	44.3%
Total Unrestricted	7,794,628	5,318,611	2,476,017	46.6%
Total fund balances	\$ 9,111,335	\$ 6,838,444	\$ 2,272,891	33.2%

* - Prior year amounts reclassified to conform to current year presentation

GAAP requires that fund balances be classified by the degree of restriction placed upon their use by constitutional, statutory, or contractual requirements, and these classifications are shown in the table above. Restricted fund balances represent amounts restricted for Commonwealth and MSBA debt service or restricted by bond covenants, funds that are restricted in capital projects and special revenue funds, balances in the federal grants funds, and some balances held in expendable trusts. Unrestricted amounts include fund balances classified as committed, including those generated by revenue sources directed to specific purposes but with a lower level of constraint on their use than restricted balances, as well the fund balance of the Stabilization Fund. Unrestricted amounts also included prior appropriations continued, and residual balances in the General Fund, both of which are classified as unassigned. The \$1.705 billion, or 51.6%, increase in committed balances results primarily from growth in ending balance in the Stabilization Fund (which by GAAP is reported as part of the General Fund) in FY19. Assigned fund balance increased by \$301 million or 31.5% due primarily to growth in funds with the MSBA for grants and loans to local cities and towns for school construction projects as a result of increased sales tax collections during FY19 and the \$470 million, or 44.3%, growth in unassigned balances is due mainly to an increase in General Fund tax receivables resulting from the increase in the Commonwealth's tax base between FY18 and FY19. A full discussion of the Commonwealth's fund balance classification policy under GASB 54 can be found in Note 1 to the basic financial statements, on pages 67–70.

Proprietary Funds

Proprietary Funds report activities of the Commonwealth that are structured similar to for-profit businesses. Proprietary fund financial statements provide the same type of information as the government-wide financial statements, only in greater detail.

As discussed above, the business-type activities increased the Commonwealth's net position by approximately \$600 million.

BUDGETARY HIGHLIGHTS

The FY19 budget enacted by the Legislature (the General Appropriation Act) included an FY19 tax revenue estimate of \$28.261 billion (an increase from the FY19 consensus estimate of \$29.299 billion, which the Legislature adjusted upward by \$594 million after tax revenue ended FY18 well above forecast), and further increased by \$247 million to \$28.509 billion as a result of \$122 million in tax law changes and \$125 million in tax settlements included in the General Appropriation Act. \$26.568 billion of that revenue was to be deposited in the budgeted funds and \$1.941 billion was to be deposited directly into non-budgeted funds for transfers of sales tax revenue dedicated to the Massachusetts Bay

Transportation Authority (\$1.038 billion) and the Massachusetts School Building Authority (\$878 million), and revenue deposited in the non-budgeted Workforce Training Fund (\$24 million).

In October 2018, with tax revenues tracking estimates assumed in the FY19 enacted budget, the Secretary of Administration and Finance affirmed the FY19 tax revenue estimate. In January 2019, the Secretary of Administration and Finance revised the Fiscal Year 2019 state tax revenue estimate upward to \$28.641 billion (including \$49 million in projected judgment and settlement revenue), to reflect strong growth in year-to-date income tax collections, primarily due to a surge in capital gains taxes.

FY19 tax revenues upon which the FY19 General Appropriation Act was based ended the year at \$29.741 billion (including \$49 million in tax settlements exceeding \$10 million each), of which \$27.769 billion was deposited in the budgeted funds). Tax revenue deposited in the budgeted funds grew by \$1.862 billion, or 7.2%, from FY18, and was \$1.047 billion above the final FY19 tax estimate.

The FY19 General Appropriation Act (GAA) authorized approximately \$42.758 billion in spending, exclusive of approximately \$2.609 billion in required pension contributions and \$352 million in FY18 spending authorized to be continued into FY19 as part of the FY18 and FY19 general appropriation acts and various FY18 supplemental budgets.

Approximately \$864 million in supplemental appropriations were authorized during FY19, \$321 million of which were enacted prior to June 30, 2019. Subsequent to year end, a supplemental budget was enacted totaling approximately \$542 million in new appropriations, \$297 million of which funded FY19 Medicaid expenses, \$20 million of which funded local road and bridge (Chapter 90) assistance to cities and towns, \$8 million of which funded FY19 local Sheriffs' expenses, and \$8 million of which funded FY19 snow and ice removal costs. The remaining final supplemental appropriations were continued to FY20 and reappropriated, including \$32 million for additional investments in the MBTA, \$11 million for a transfer to the Massachusetts Clean Water Trust for a program to eliminate certain toxic chemicals in city and town drinking water supplies, \$10 million for a pilot program to prevent gun and other violent crime, and \$10 million for matching funds to encourage private contributions to Massachusetts public colleges and universities. In addition to the year-end FY19 supplemental appropriations just described, the year's significant supplemental appropriation activity included:

- \$134 million for the Medical Assistance Trust Fund payments to hospitals that care for low-income patients;
- \$48 million for FY19 collective bargaining costs;
- \$30 million for heating assistance subsidies to low income residents;
- \$28 million for additional Department of Correction costs;
- \$21 million for salary increases of human services direct care workers;
- \$10 million for supplements to wages of home care workers who care for the elderly;
- \$10 million for family shelters and related services to the homeless.

FY19 budgeted revenues and other financing sources (before transfers between the budgeted funds, which are included in both spending and revenue and thus have no effect on fund balances) totaled \$46.383 billion, an increase of \$2.563 billion, or 5.8%, from FY18. As the Massachusetts economy continued to expand robustly, tax revenue grew by \$1.862 billion, or 7.2%. Personal income tax withholding increased by \$488 million, or 3.9%, capital gains revenue (part of the personal income tax) increased by \$875 million, or 73.9%, from FY18, sales and use tax grew by \$253 million, or 5.5%, corporate taxes grew by \$516 million, or 21.6%, and estate and inheritance taxes increased by \$128 million, or 27.1%. Federal reimbursements totaled \$11.772 billion, an increase of \$395 million, or 3.5%, primarily due to growth in reimbursements for increased Medicaid program spending and for Medical Assistance Trust payments to local hospitals that care for Medicaid-eligible patients. Departmental revenue, which consists primarily of assessments and fees for state licenses and state services, totaled \$4.832 billion, an increase of \$90 million, or 1.9%, from FY18. Interfund transfers from non-budgeted funds totaled \$2.010 billion, an increase of \$217 million, or 12.1%, from FY18, due primarily to other non-budgeted fund transfers to the General Fund.

FY19 budgeted expenditures and other financing uses, including transfers to non-budgeted funds (but before transfers

between the budgeted funds) totaled \$44.810 billion, an increase of \$1.930 billion, or 4.5%, from FY18, with the increase primarily attributable to higher spending on Medicaid and other health care spending, pension contributions, and Local Aid.

Spending on programs and services totaled \$37.932 billion, an increase of \$1.800 billion, or 5.0%, from FY18. Medicaid expenditures totaled \$16.521 billion, an increase of \$776 million, or 4.9%, from FY18, with the growth due partly to \$300 million to \$400 million in payments made in June 2019 that in prior years had been made in July. Absent that shifting of payments, FY19 Medicaid expenditures would have grown by 2.4% to 3.0% from FY18. Spending for direct local aid (both education aid and unrestricted aid), at \$6.075 billion, was up \$189 million, also up 3.2%, from FY18.

Spending on state employee health benefits paid through the Group Insurance Commission (excluding benefits paid to retirees) increased by \$12 million, or 0.7%, increasing from \$1.634 billion to \$1.646 billion, as saving initiatives kept growth low. Budgeted debt service totaled \$2.327 billion, up \$4 million, or 0.2%, from FY18.

Interfund transfers to non-budgeted funds totaled \$1.441 billion, a decrease of \$93 million or 6.0%, primarily due to a decrease in transfers to the Medical Assistance Trust Fund (where expenditures vary greatly from year-to-year, depending on the timeliness of federal government approval of certain reimbursements), which declined by \$217 million, or 37.4% from FY18, which offset growth in post-employment benefits (for pension contributions and retiree health benefits), which totaled \$3.110 billion, an increase of \$219 million, or 7.6%, as the Commonwealth increased its pension contribution by \$214 million, or 8.9%, from FY18.

CAPITAL ASSETS

Capital assets of the Commonwealth include land, buildings, improvements, equipment, vehicles and infrastructure. The Commonwealth's investment in capital assets for its governmental and business-type activities as of June 30, 2019 amounts to approximately \$23.181 billion, with accumulated depreciation of approximately \$10.465 billion, leaving a net book value of \$12.716 billion. Infrastructure includes assets that are normally immovable and of value only to the Commonwealth, such as roads, bridges, piers and dams (the investments in capital assets noted above do not include capital assets owned by MassDOT). The total increase in the Commonwealth's net investment in capital assets from 2018 to 2019 was approximately \$124 million, with a \$24 million increase in governmental activities and a \$101 million increase in business-type activities. The major increases in the net value of capital assets was in land and buildings for governmental activities and buildings for business-type activities.

The table below details the capital assets for the Commonwealth.

Capital Assets at Year - End						
(net of depreciation)						
(amounts in thousands)						
	Governmental Activities		Business - Type Activities		Total	
	2019	2018	2019	2018*	2019	2018*
Land	\$ 933,152	\$ 914,565	\$ 228,778	\$ 227,757	\$ 1,161,930	\$ 1,142,322
Historical treasures.....	—	—	1,019	1,464	1,019	1,464
Construction in process.....	608,149	659,462	519,942	851,126	1,128,091	1,510,588
Buildings.....	2,672,109	2,584,028	6,865,744	6,404,083	9,537,853	8,988,111
Machinery and equipment.....	435,180	484,434	243,480	266,330	678,660	750,764
Infrastructure, excluding central artery.....	158,940	141,200	—	—	158,940	141,200
Library collections	—	—	49,044	56,687	49,044	56,687
Total.....	\$ 4,807,530	\$ 4,783,689	\$ 7,908,007	\$ 7,807,447	\$ 12,715,537	\$ 12,591,136

* - Prior year amounts reclassified to conform to current year presentation

Additional detail on the Commonwealth's FY19 capital asset activity can be found in [Note 5](#) to the basic financial

statements (“Capital Assets”) on pages 91–92.

DEBT ADMINISTRATION

The Commonwealth issues short-term and long-term debt. Debt that is general obligation in nature is backed by the full faith and credit of the Commonwealth and paid from governmental funds. Additionally, short-term notes are issued and redeemed annually.

To fund the FY19 capital budget, the Commonwealth borrowed by issuing \$1.808 billion in long-term bonds, which was new money general obligation debt; with no special obligation debt issued during FY19. All new bond sales were either for general government purposes, for road and bridge repair, or unallocated as of year-end and assumed to be for general purposes, including for construction and equipment purchases. In addition, the Commonwealth issued \$819 million in debt to refund already existing debt, taking advantage of continued low interest rates in FY19. During the year, the Commonwealth also issued \$1.5 billion in Revenue Anticipation Notes (RANs) in three separate \$500 million series which were retired in April, May and June 2019.

Approximately 10.5% of the Commonwealth’s \$23.676 billion in general obligation debt outstanding as of June 30, 2019 was issued as variable rate bonds. During fiscal 2019 there were no changes to credit ratings on any of the Commonwealth’s outstanding debt.

The following table details the Commonwealth’s debt by type for the fiscal year compared to the prior fiscal year, excluding premiums and discounts.

Outstanding Long - Term Debt Obligations						
(amounts in thousands)						
	Governmental Activities		Business - Type Activities		Total	
	2019	2018	2019	2018*	2019	2018*
General obligation bonds	\$ 23,676,096	\$ 23,143,374	\$ —	\$ —	\$ 23,676,096	\$ 23,143,374
Special obligation bonds (excluding GANs) ...	3,378,380	3,469,000	—	—	3,378,380	3,469,000
Revenue obligation bonds	—	—	4,284,704	4,430,674	4,284,704	4,430,674
Grant anticipation notes	684,745	748,445	—	—	684,745	748,445
Subtotal	27,739,221	27,360,819	4,284,704	4,430,674	32,023,925	31,791,493
Massachusetts School Building Authority	6,054,994	5,990,554	—	—	6,054,994	5,990,554
Total	\$ 33,794,215	\$ 33,351,373	\$ 4,284,704	\$ 4,430,674	\$ 38,078,919	\$ 37,782,047

* - Prior year amounts reclassified to conform to current year presentation

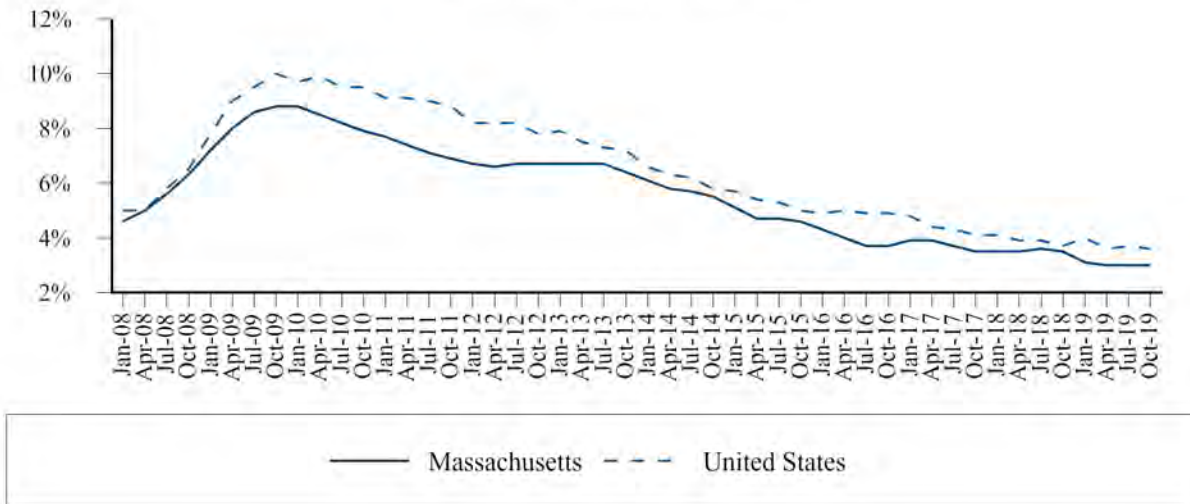
Additional detail on the Commonwealth’s short-term debt can be found in [Note 6](#) (“Short-Term Financing and Credit Arrangements”) on pages 92–93 and [Note 7](#) (“Long-Term Obligations”) on pages 93–108.

ECONOMIC FACTORS AFFECTING NEXT YEAR’S BUDGET

The Commonwealth, with an international reputation for medical, cultural, historical and educational institutions remains the economic and educational hub of New England. The Commonwealth’s economy remains diversified, but its strongest component is its knowledge-based technology and service industries and consequently the State relies heavily on a highly educated workforce. The Commonwealth is home to sixteen S&P 500 companies, among them thirteen Fortune 500 headquarters.

The Massachusetts economy, with its concentration of higher education institutions, life sciences and medical industries and high technology companies has outperformed the nation’s economy as a whole during and immediately following the most recent recession. In July 2019 the Massachusetts unemployment rate was 3.0%, lower than the national rate of 3.7%, and by October 2019 the Massachusetts rate remained at 3.0% compared to the national rate of 3.6%.

Unemployment Rate
January 2008 – October 2019



The FY20 GAA is based on an FY20 tax revenue estimate of approximately \$30.170 billion, an increase of \$429 million, or 1.4%, from FY18 actual tax collections. Of that amount, \$25.265 billion represents taxes available for budget after adjusting for \$4.905 billion in tax revenue that is allocated to state pension contributions (\$2.842 billion), sales tax revenue dedicated to the Massachusetts Bay Transportation Authority (\$1.100 billion) and the Massachusetts School Building Authority (\$940 million), and revenue allocated to the non-budgetary Workforce Training Fund (\$24.5 million), as well as capital gains tax revenue above a certain threshold that is projected to be transferred to the Stabilization Fund (\$452 million).

Through December 31, 2019, FY20 year-to-date tax collections totaled \$13.933 billion, up \$621 million, or 4.7%, from the same period in FY19, \$231 million above the year-to-date benchmark based on the \$30.170 billion FY19 tax revenue estimate. Based on tax revenue collections through January and updated forecasts, in January 2020 the Secretary of Administration and Finance raised the FY20 tax revenue estimate to \$30.339 billion, with \$25.405 billion available for budget.

REQUESTS FOR INFORMATION

This financial report is designed to provide a general overview of the Commonwealth's finances and accountability for all of the Commonwealth's citizens, taxpayers, customers, investors and creditors. Questions concerning any of the information provided in this report or requests for additional information should be addressed via email to comptroller.info@state.ma.us or mail to: Commonwealth of Massachusetts, Office of the Comptroller, 1 Ashburton Place, 9th Floor, Boston, MA, 02108. This report may also be downloaded at: <https://www.macomptroller.org/cafr>.

Basic Financial Statements

Government-wide Financial Statements

Statement of Net Position

Statement of Activities

Statement of Net Position

June 30, 2019

(Amounts in thousands)

	Primary Government			Discretely Presented Component Units
	Governmental Activities	Business-Type Activities	Government Wide Total	
ASSETS AND DEFERRED OUTFLOWS				
Current assets:				
Cash and cash equivalents	\$ 7,271,218	\$ 690,959	\$ 7,962,177	\$ 3,684,140
Restricted cash with fiscal agent	268,318	—	268,318	—
Short-term investments	286,069	585,967	872,036	—
Assets held in trust	—	—	—	67,034
Receivables, net of allowance for uncollectibles:				
Taxes	3,562,052	—	3,562,052	—
Federal grants and reimbursements receivable	1,875,958	21,045	1,897,003	131,497
Loans	7,392	9,953	17,345	673,932
Other receivables	365,345	684,061	1,049,406	349,090
Due from cities and towns	32,540	—	32,540	—
Due from component units	108,499	424	108,923	—
Due from primary government	—	—	—	535,467
Other current assets	—	57,202	57,202	90,897
Total current assets	13,777,391	2,049,611	15,827,002	5,532,057
Noncurrent assets:				
Cash and cash equivalents - restricted	—	244,828	244,828	817,723
Long-term investments	—	1,107,783	1,107,783	1,407,234
Investments, restricted investments and annuity contracts	1,931,066	894	1,931,960	59,459
Receivables, net of allowance for uncollectibles:				
Taxes	227,319	—	227,319	—
Federal grants and reimbursements receivable	61,839	—	61,839	—
Loans	86,913	47,860	134,773	4,102,507
Other receivables	73,346	14,944	88,290	42,870
Due from component units	7,375	—	7,375	—
Due from primary government	—	—	—	4,414
Non-depreciable capital assets	1,541,301	749,739	2,291,040	13,932,646
Depreciable capital assets, net	3,266,229	7,158,268	10,424,497	23,626,262
Other noncurrent assets	87,274	148,740	236,014	107,511
Other noncurrent assets - restricted	303	1,631,279	1,631,582	—
Total noncurrent assets	7,282,965	11,104,335	18,387,300	44,100,626
Total assets	21,060,356	13,153,946	34,214,302	49,632,683
Deferred outflows of resources:				
Deferred change in fair value of interest rate swaps	120,986	35,524	156,510	79,866
Deferred loss on refunding	144,951	108,950	253,901	277,677
Deferred outflows related to pension	7,041,951	207,404	7,249,355	492,812
Deferred outflows related to OPEB	736,204	279,182	1,015,386	297,381
Certain asset retirement obligations	—	1,782	1,782	—
Total deferred outflows of resources	8,044,092	632,842	8,676,934	1,147,736
Total assets and deferred outflows	29,104,448	13,786,788	42,891,236	50,780,419
LIABILITIES AND DEFERRED INFLOWS				
Current liabilities:				
Accounts payable and other liabilities	3,735,951	332,313	4,068,264	1,080,616
Accrued payroll	137,826	175,925	313,751	1,989
Compensated absences	430,617	147,236	577,853	26,482
Accrued interest payable	444,045	21,446	465,491	206,985
Tax refunds and abatements payable	1,316,114	44,532	1,360,646	—
Due to component units	493,339	—	493,339	—
Due to primary government	—	—	—	108,923
Due to federal government	20,886	—	20,886	—
Claims and judgments	13,241	—	13,241	—
Unearned revenue	—	18,154	18,154	269,497

Statement of Net Position

June 30, 2019

(Amounts in thousands)

	Primary Government			Discretely Presented Component Units
	Governmental Activities	Business-Type Activities	Government Wide Total	
Deposits and unearned revenue	—	86,523	86,523	—
School construction grants payable	212,126	—	212,126	—
Capital leases	3,163	2,592	5,755	—
Massachusetts School Building Authority bonds and unamortized premiums	183,617	—	183,617	—
Bonds payable and unamortized premiums	1,479,621	176,928	1,656,549	776,060
Environmental remediation liability	5,128	—	5,128	—
Total current liabilities	8,475,674	1,005,649	9,481,323	2,470,552
Noncurrent liabilities:				
Compensated absences	185,726	61,297	247,023	16,107
Accrued interest payable	—	—	—	191,100
Due to component units	4,414	—	4,414	—
Due to primary government	—	—	—	7,375
Due to federal government - grants	—	6,106	6,106	—
Claims and judgments	20,000	—	20,000	—
Unearned revenue	—	—	—	25,256
Prizes payable	908,737	—	908,737	—
Capital leases	16,672	6,997	23,669	65,774
Bonds payable and unamortized premiums	28,739,695	4,107,776	32,847,471	10,206,145
Massachusetts School Building Authority bonds and unamortized premiums	6,457,903	—	6,457,903	—
School construction grants payable	172,868	—	172,868	—
Environmental remediation liability	512,287	—	512,287	—
Liability for derivative instruments	120,986	56,884	177,870	120,894
Net pension liability	38,065,014	717,493	38,782,507	2,227,990
Net OPEB liability	12,989,069	1,254,384	14,243,453	3,193,027
Other noncurrent liabilities	355,088	293,561	648,649	225,014
Total noncurrent liabilities	88,548,459	6,504,498	95,052,957	16,278,682
Total liabilities	97,024,133	7,510,147	104,534,280	18,749,234
Deferred inflows of resources:				
Deferred service concession arrangements	—	21,576	21,576	336
Deferred gain on refunding	551,224	—	551,224	34,663
Deferred inflows related to pension	1,357,218	113,368	1,470,586	92,897
Deferred inflows related to OPEB	4,252,225	415,251	4,667,476	462,980
Sale of future revenues	—	76,968	76,968	—
Total deferred inflows of resources	6,160,667	627,163	6,787,830	590,876
Total liabilities and deferred inflows	103,184,800	8,137,310	111,322,110	19,340,110
NET POSITION				
Net investment in capital assets	(1,433,294)	3,868,576	2,435,282	31,196,402
Restricted for:				
Unemployment benefits	—	1,996,534	1,996,534	—
Retirement of indebtedness	975,095	—	975,095	—
Higher education endowment funds	—	29,076	29,076	—
Higher education academic support and programs	—	6,853	6,853	—
Higher education scholarships and fellowships:				
Nonexpendable	—	3,779	3,779	—
Expendable	—	8,541	8,541	—
Capital projects - expendable purposes	—	5,530	5,530	—
Other purposes	295,749	221,408	517,157	4,106,076
Unrestricted (deficits)	(73,917,902)	(490,819)	(74,408,721)	(3,862,169)
Total net position	\$ (74,080,352)	\$ 5,649,478	\$ (68,430,874)	\$ 31,440,309

The notes to the financial statements are an integral part of this statement

(concluded)

Statement of Activities

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

Functions/Programs	Expenses	Program Revenues			Net (Expenses) Revenues and Changes in Net Position			Discretely Presented Component Units
		Charges for Services	Operating Grants and Contributions	Capital Grants and Contributions	Primary Government			
					Governmental Activities	Business- Type Activities	Total	
Primary government:								
Governmental Activities:								
General government	\$ 2,766,272	\$ 611,834	\$ 697,944	\$ 6,737	\$ (1,449,757)	\$ —	\$ (1,449,757)	\$ —
Judiciary	1,221,969	81,567	2,668	—	(1,137,734)	—	(1,137,734)	—
Direct local aid	6,089,548	—	—	—	(6,089,548)	—	(6,089,548)	—
Medicaid	18,093,807	1,129,343	10,170,003	58,620	(6,735,841)	—	(6,735,841)	—
Group health insurance.....	1,670,238	808,194	—	—	(862,044)	—	(862,044)	—
Energy and environmental affairs.....	701,950	279,267	83,059	—	(339,624)	—	(339,624)	—
Housing and economic development	1,574,628	163,315	541,643	—	(869,670)	—	(869,670)	—
Health and human services.....	8,662,012	1,411,918	3,122,290	—	(4,127,804)	—	(4,127,804)	—
Transportation and public works	2,554,289	627,941	439	728	(1,925,181)	—	(1,925,181)	—
Early elementary and secondary education.....	5,607,240	8,445	1,278,288	—	(4,320,507)	—	(4,320,507)	—
Public safety and homeland security	3,006,893	338,099	205,537	—	(2,463,257)	—	(2,463,257)	—
Labor and workforce development.....	298,930	307,506	152,044	—	160,620	—	160,620	—
Lottery	4,445,654	5,644,440	—	—	1,198,786	—	1,198,786	—
Interest (unallocated).....	1,522,183	—	—	—	(1,522,183)	—	(1,522,183)	—
Total governmental activities.....	58,215,613	11,411,869	16,253,915	66,085	(30,483,744)	—	(30,483,744)	—
Business-Type Activities:								
Unemployment Compensation	1,483,901	1,852,195	48,610	—	—	416,904	416,904	—
Higher Education:								
University of Massachusetts.....	3,282,171	1,860,268	600,090	25,500	—	(796,313)	(796,313)	—
State Universities.....	1,145,531	679,801	97,336	25,203	—	(343,191)	(343,191)	—
Community Colleges.....	917,967	237,288	230,060	61,330	—	(389,289)	(389,289)	—
Total business-type activities	6,829,570	4,629,552	976,096	112,033	—	(1,111,889)	(1,111,889)	—
Total primary government.....	\$ 65,045,183	\$ 16,041,421	\$ 17,230,011	\$ 178,118	(30,483,744)	(1,111,889)	(31,595,633)	—
Discretely Presented Component Units:								
Massachusetts Department of Transportation	\$ 5,576,079	\$ 1,669,245	\$ 2,270,129	\$ 2,519,180	—	—	—	\$ 882,475
Commonwealth Health Insurance Connector.....	872,639	838,023	45,117	—	—	—	—	10,501
Massachusetts Clean Water Trust.....	125,151	141,569	24,401	91,339	—	—	—	132,158
Other nonmajor component units	492,047	329,873	35,074	63,342	—	—	—	(63,758)
Total discretely presented component units	\$ 7,065,916	\$ 2,978,710	\$ 2,374,721	\$ 2,673,861	—	—	—	961,376

(continued)

	Primary Government			Discretely Presented Component Units
	Governmental Activities	Business- Type Activities	Total	
General revenues:				
Taxes:				
Income	17,422,948	—	17,422,948	—
Sales taxes	6,850,441	—	6,850,441	—
Corporate taxes	3,068,359	—	3,068,359	—
Motor and special fuel taxes	773,830	—	773,830	—
Other taxes	2,494,379	—	2,494,379	—
Miscellaneous:				
Investment earnings/(loss)	180,080	(40,124)	139,956	93,405
Tobacco settlement	230,111	—	230,111	—
Contribution from municipalities	83,857	—	83,857	—
Other revenue	1,019,807	185,607	1,205,414	34,126
Transfers	(1,565,932)	1,565,932	—	—
Total general revenues and transfers	30,557,880	1,711,415	32,269,295	127,531
Change in net position	74,136	599,526	673,662	1,088,907
Net position (deficits) - beginning	(74,154,488)	5,049,952	(69,104,536)	30,351,402
Net position (deficits) - ending	\$ (74,080,352)	\$ 5,649,478	\$ (68,430,874)	\$ 31,440,309

The notes to the financial statements are an integral part of this statement

(concluded)

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Metro North STEM Network



Trey Walsh, Network Director and Director of Youth Programs, MassHire Metro North Workforce Board.

Trey Walsh joined the MassHire Metro North Workforce Board in November 2018 as Youth Programs Manager and now works as the Director of Youth Programs and STEM Network Manager for the MassHire Metro North Workforce Board. Prior to joining the Workforce Board, Trey worked in the disability services field focusing on employment opportunities for people with disabilities and managing youth programs. Trey holds a Bachelor's in Sociology from Gordon College and a Master's in Nonprofit Management with a concentration in Human Services from Northeastern University.

“The Metro North STEM network works with an amazing group of K-12 educators to focus on women and particularly women of color in our entire region, with a focus on the urban and gateway communities of Boston Metro North. We develop partnerships with organizations like Resilient Coders and Salesforce to provide workshops and training to women in our region.

“Even in Massachusetts women are extremely underrepresented in STEM occupations and paid considerably less on average compared to men. The STEM Networks should be at the forefront of shifting this trend towards more equity for women in STEM. In addition, employers in our region are desperate for diverse talent.”

For more information: <https://masshiremetronorth.org/programs/#stem>

Governmental Fund Financial Statements

Balance Sheet
Governmental Funds
June 30, 2019
(Amounts in thousands)

	General	Lotteries	Massachusetts School Building Authority	Other Governmental Funds	Total
ASSETS					
Cash and cash equivalents	\$ 4,373,404	\$ 54,279	\$ 478,244	\$ 2,365,291	\$ 7,271,218
Restricted cash with fiscal agent.....	—	—	1,054	267,264	268,318
Investments and restricted investments	286,069	—	1,022,329	—	1,308,398
Receivables, net of allowance for uncollectibles:					
Taxes	3,546,100	—	69,901	173,370	3,789,371
Due from federal government.....	1,561,661	—	—	376,136	1,937,797
Loan receivable.....	—	—	80,655	13,650	94,305
Other receivables	296,726	6,021	8,528	92,918	404,193
Due from cities and towns	32,540	—	—	—	32,540
Due from other funds	190,540	—	—	73,344	263,884
Due from component units.....	98,724	—	—	9,775	108,499
Total assets	\$ 10,385,764	\$ 60,300	\$ 1,660,711	\$ 3,371,748	\$ 15,478,523
LIABILITIES, DEFERRED INFLOWS OF RESOURCES AND FUND BALANCES					
Liabilities:					
Accounts payable	\$ 2,702,550	\$ 53,662	2,682	\$ 938,743	\$ 3,697,637
Accrued payroll.....	127,517	—	—	10,309	137,826
Tax refunds and abatements payable	1,314,208	—	575	1,331	1,316,114
Due to other funds.....	—	—	—	263,884	263,884
Due to component units	42,854	—	—	450,485	493,339
Due to federal government.....	20,886	—	—	—	20,886
Claims and judgments.....	13,241	—	—	—	13,241
School construction grants payable	—	—	51,443	—	51,443
Other accrued liabilities	1,010	—	—	37,304	38,314
Total liabilities	4,222,266	53,662	54,700	1,702,056	6,032,684
Deferred inflows of resources	293,288	5,180	—	36,036	334,504
Total liabilities and deferred inflows of resources....	4,515,554	58,842	54,700	1,738,092	6,367,188
Fund balances:					
Restricted	—	—	950,855	365,852	1,316,707
Committed.....	3,424,376	1,458	—	1,581,654	5,007,488
Assigned.....	445,216	—	655,156	156,345	1,256,717
Unassigned (deficits)	2,000,618	—	—	(470,195)	1,530,423
Fund balances	5,870,210	1,458	1,606,011	1,633,656	9,111,335
Total liabilities, deferred inflows of resources and fund balances	\$ 10,385,764	\$ 60,300	\$ 1,660,711	\$ 3,371,748	\$ 15,478,523

The notes to the financial statements are an integral part of this statement.

Reconciliation of Governmental Fund Balances to the Statement of Net Position

June 30, 2019

(Amounts in thousands)

Total fund balances - governmental funds.....	\$ 9,111,335
--	---------------------

Amounts reported for governmental activities in the statement of net position are different because:

Capital assets used in governmental activities are not financial resources and, therefore, are not reported in the funds. Those assets consist of:

Capital assets not being depreciated.....	1,541,301	
Capital assets being depreciated, net	3,266,229	
		4,807,530

Revenues are not available soon enough after year end to pay for the current period's expenditures and therefore are unavailable deferred inflows of resources in the governmental funds	334,504
--	---------

Deferred inflows of resources are not reported in the governmental funds:

Gain on refunding	(551,224)	
Pension related	(1,357,218)	
OPEB related	(4,252,225)	
		(6,160,667)

Deferred outflows of resources are not reported in the governmental funds:

Loss on refunding	144,951	
Pension related	7,041,951	
OPEB related	736,204	
		7,923,106

Massachusetts School Building Authority assets.....	94,075
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Long-term receivables	28,000
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Lottery annuity contracts	908,737
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Due from component units.....	7,375
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Certain liabilities, including bonds payable, are not due and payable in the current period and therefore are not reported in the funds. These liabilities include:

Retirement systems' net pension liability	(38,065,014)	
Net OPEB liability.....	(12,989,069)	
Commonwealth bonded debt.....	(27,739,221)	
Unamortized bond premiums	(2,480,095)	
Accrued interest on bonds	(444,045)	
Massachusetts School Building Authority bonded debt.....	(6,641,520)	
Massachusetts School Building Authority grants to municipalities.....	(333,551)	
Prizes payable	(908,737)	
Capital leases	(19,835)	
Environmental remediation liability.....	(517,415)	
Claims and judgments	(20,000)	
Employee benefits, including compensated absences, health insurance benefits and other compensation claims.....	(975,845)	
		(91,134,347)

Total net (deficit) - governmental activities	<u><u>\$ (74,080,352)</u></u>
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The notes to the financial statements are an integral part of this statement.

Statement of Revenues, Expenditures and Changes in Fund Balances
Governmental Funds
Fiscal Year Ended June 30, 2019
(Amounts in thousands)

	General	Lotteries	Massachusetts School Building Authority	Other Governmental Funds	Total
REVENUES					
Taxes	\$ 26,824,607	\$ 465	\$ 896,828	\$ 2,896,389	\$ 30,618,289
Assessments	408,905	—	—	967,741	1,376,646
Federal grants and reimbursements	11,442,827	—	—	4,885,096	16,327,923
Departmental	3,422,622	5,644,020	—	1,523,903	10,590,545
Miscellaneous	745,017	8,262	99,593	569,182	1,422,054
Total revenues	42,843,978	5,652,747	996,421	10,842,311	60,335,457
EXPENDITURES					
Current:					
Legislature	67,643	—	—	—	67,643
Judiciary	982,258	—	—	2,842	985,100
Inspector General	5,083	—	—	17	5,100
Governor and Lieutenant Governor	6,851	—	—	—	6,851
Secretary of the Commonwealth	50,778	—	—	4,425	55,203
Treasurer and Receiver-General	242,196	4,445,623	12,943	1,391,121	6,091,883
Auditor of the Commonwealth	18,382	—	—	—	18,382
Attorney General	52,305	—	—	54,675	106,980
Ethics Commission	2,199	—	—	—	2,199
District Attorney	129,040	—	—	9,328	138,368
Office of Campaign and Political Finance	1,618	—	—	1,088	2,706
Sheriff's Departments	657,905	—	—	14,090	671,995
Disabled Persons Protection Commission	4,249	—	—	762	5,011
Board of Library Commissioners	27,179	—	—	2,802	29,981
Massachusetts Gaming Commission	—	—	—	50,372	50,372
Comptroller	14,065	—	—	1,904	15,969
Administration and Finance	1,972,625	—	—	338,346	2,310,971
Energy and Environmental Affairs	239,796	—	—	237,539	477,335
Health and Human Services	6,192,060	—	—	1,862,090	8,054,150
Executive Office of Technology Services	113,054	—	—	2,600	115,654
Massachusetts Department of Transportation	1,958	—	—	2,347,093	2,349,051
Office of the Child Advocate	772	—	—	—	772
Cannabis Control Commission	1,901	—	—	7,983	9,884
Executive Office of Education	2,907,892	—	—	1,063,942	3,971,834
Center for Health and Information Analysis	20,086	—	—	—	20,086
Massachusetts School Building Assistance	—	—	571,714	—	571,714
Public Safety and Homeland Security	1,224,034	—	—	238,958	1,462,992
Housing and Economic Development	580,681	—	—	575,929	1,156,610
Labor and Workforce Development	41,152	—	—	217,107	258,259
Medicaid	15,951,970	—	—	2,141,837	18,093,807
Post employment benefits	1,325,291	—	1,860	40,410	1,367,561
Direct local aid	6,017,991	—	—	71,557	6,089,548
Capital outlay:					
Capital acquisition and construction	—	—	—	1,309,898	1,309,898
Debt service/commercial paper repayments	—	—	430,634	2,533,122	2,963,756
Principal on current refundings	—	—	—	955,907	955,907
Total expenditures	38,853,014	4,445,623	1,017,151	15,477,744	59,793,532
Excess/(deficiency) of revenues over/(under) expenditures	3,990,964	1,207,124	(20,730)	(4,635,433)	541,925
OTHER FINANCING SOURCES					
Bonds premium	—	—	23,340	446,538	469,878
Issuance of general and special obligation bonds	—	—	200,000	1,808,136	2,008,136
Issuance of current refunding bonds	—	—	—	818,830	818,830
Issuance of capital leases	54	—	—	—	54
Transfers in for debt service	—	—	—	2,486,460	2,486,460
Transfers in	2,013,062	—	—	1,643,973	3,657,035
Total other financing sources	2,013,116	—	223,340	7,203,937	9,440,393
OTHER FINANCING USES					
Transfers out	919,800	1,206,850	—	1,465,644	3,592,294
Transfers of appropriations	1,509,596	—	—	5,656	1,515,252
Transfers of bond proceeds	—	—	—	115,421	115,421
Transfers out for debt service	1,220,266	—	—	1,266,194	2,486,460
Total other financing uses	3,649,662	1,206,850	—	2,852,915	7,709,427
Total other financing sources and uses	(1,636,546)	(1,206,850)	223,340	4,351,022	1,730,966
Net change in fund balances/(deficits)	2,354,418	274	202,610	(284,411)	2,272,891
Fund balances at beginning of year	3,515,792	1,184	1,403,401	1,918,067	6,838,444
Fund balances at end of year	\$ 5,870,210	\$ 1,458	\$ 1,606,011	\$ 1,633,656	\$ 9,111,335

The notes to the financial statements are an integral part of this statement

Reconciliation of Statement of Revenues, Expenditures and Changes in Fund Balances of Governmental Funds to the Statement of Activities

For the fiscal year ended June 30, 2019

(Amounts in thousands)

Net change in fund balances - total governmental funds	\$ 2,272,891
---	---------------------

Amounts reported for governmental activities in the statement of activities are different because:

Governmental funds report capital outlays as expenditures. However, in the statement of activities, the cost of those assets is allocated over their estimated useful lives and reported as depreciation expense. This amount represents capital outlays including increases to construction in process, but excluding reductions and dispositions	273,607
--	---------

Current year depreciation expense	(249,766)
---	-----------

Amounts presented in the statement of activities, but not in the change in fund balances due to difference in revenue and expense recognition under different bases of accounting	(36,284)
---	----------

The issuance of long-term debt provides current financial resources to governmental funds, while the repayment of principal of long-term debt consumes the current financial resources of governmental funds. Neither transaction has any effect on net position. Also, governmental funds report the effect of premiums, discounts, and similar items when debt is first issued, whereas these amounts are deferred and amortized as part of the statement of activities. This amount is the net effect of these differences in the treatment of long-term debt and related items	(814,251)
--	-----------

Change in capital leases	2,657
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Massachusetts School Building Authority	67,394
---	--------

Net pension costs	(1,635,994)
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Net OPEB costs	220,514
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Some expenses reported in the statement of activities do not require the use of current financial resources and therefore, are not reported as expenditures in governmental funds. These expenses include accrued interest, lottery prizes, claims and benefits that are reported in the statement of activities, but not in funds	(26,632)
--	----------

Change in net position of governmental activities	<u>\$ 74,136</u>
--	-------------------------

The notes to the financial statements are an integral part of this statement

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Northeast STEM Network



Christine Shaw, Ph.D., Co-Director Northeast STEM Network, Merrimack College

Dr. Christine Shaw has a Ph.D. in, Law and Public Policy from Northeastern University, a Master's in Psychology from Westfield State University, and a Bachelor's in Social Work and Counseling from Franklin Pierce University. Dr. Shaw served as executive director of regional education initiatives focusing on educator professional development and cross sector partnerships for education delivery Pre-K through university. Dr. Shaw served as national leadership fellow for career and technical education in 2011 and PARCC fellow from 2012 to 2014. Her areas of interest include: research, program evaluation, and economic and workforce development.

“Ways we promote women in STEM is multifold, we have a number of STEM events in the schools that engage women engineers and provide small group opportunities for students to talk with and discuss career paths and the exciting fields they are in. Additionally, we have strong higher education programs in STEM elementary preparation promoting gender equity in early learning around STEM topics. The Northeast STEM Network is also collaborating with a company from Seattle called “Baby Monster”, a start-up focusing on gender neutral learning toys that promote engineering, computer programming and technology through stage and theatre design.”

For more information: <https://www.merrimack.edu/academics/education-and-social-policy/northeast-stem-network/>

Proprietary Fund Financial Statements

Statement of Net Position

Proprietary Funds

June 30, 2019

(Amounts in thousands)

	Unemployment Compensation Trust Fund	University of Massachusetts	State Universities	Community Colleges	Total
ASSETS AND DEFERRED OUTFLOWS:					
Current assets:					
Cash and cash equivalents	\$ 99,149	\$ 97,546	\$ 332,061	\$ 162,203	\$ 690,959
Short-term investments	—	489,907	39,265	56,795	585,967
Receivables, net of allowance for uncollectibles:					
Federal grants and reimbursements receivable	—	15,831	1,887	3,327	21,045
Loans	—	8,770	1,183	—	9,953
Other receivables	354,603	239,296	29,990	37,609	661,498
Due from affiliates	—	22,131	432	—	22,563
Due from foundation	—	5	238	181	424
Other current assets	—	48,096	5,453	3,653	57,202
Total current assets	453,752	921,582	410,509	263,768	2,049,611
Noncurrent assets:					
Cash and cash equivalents - restricted	—	220,346	24,462	20	244,828
Long-term investments	—	869,663	189,924	48,196	1,107,783
Investments and restricted investments	—	—	894	—	894
Other receivables, net	—	13,376	1,568	—	14,944
Loans receivable, net	—	41,747	6,113	—	47,860
Non-depreciable capital assets	—	484,311	114,703	150,725	749,739
Depreciable capital assets, net	—	4,679,889	1,845,743	632,636	7,158,268
Other noncurrent assets	—	136,530	10,947	1,263	148,740
Other noncurrent assets - restricted	1,631,279	—	—	—	1,631,279
Total noncurrent assets	1,631,279	6,445,862	2,194,354	832,840	11,104,335
Total assets	2,085,031	7,367,444	2,604,863	1,096,608	13,153,946
Deferred outflows of resources:					
Deferred change in fair value of interest rate swaps	—	34,262	—	1,262	35,524
Deferred outflows related to pensions	—	113,654	62,336	31,414	207,404
Deferred outflows related to OPEB	—	137,866	96,698	44,618	279,182
Loss on debt refunding	—	69,119	39,831	—	108,950
Certain asset retirement obligations	—	1,782	—	—	1,782
Total deferred outflows of resources	—	356,683	198,865	77,294	632,842
Total assets and deferred outflows	2,085,031	7,724,127	2,803,728	1,173,902	13,786,788
LIABILITIES AND DEFERRED INFLOWS:					
Current liabilities:					
Accounts payable and other liabilities	43,965	203,758	46,297	38,293	332,313
Accrued payroll	—	97,278	53,097	25,550	175,925
Compensated absences	—	81,155	35,328	30,753	147,236
Accrued interest payable	—	20,884	452	110	21,446
Tax refunds and abatements payable	44,532	—	—	—	44,532
Unearned revenue	—	—	15,269	2,885	18,154
Student deposits and unearned revenues	—	54,946	6,823	24,754	86,523
Capital leases	—	583	1,087	922	2,592
Bonds, notes payable and other obligations	—	120,339	51,864	4,725	176,928
Total current liabilities	88,497	578,943	210,217	127,992	1,005,649
Noncurrent liabilities:					
Compensated absences	—	26,243	19,935	15,119	61,297
Due to federal government - grants	—	—	6,106	—	6,106
Capital leases	—	1,253	4,391	1,353	6,997
Bonds, notes payable and other obligations	—	2,787,394	1,266,910	53,472	4,107,776
Liability for derivative instruments	—	55,622	—	1,262	56,884
Net pension liability	—	409,319	200,932	107,242	717,493
Net OPEB liability	—	718,955	347,065	188,364	1,254,384
Other noncurrent liabilities	—	282,250	6,933	4,378	293,561
Total noncurrent liabilities	—	4,281,036	1,852,272	371,190	6,504,498
Total liabilities	88,497	4,859,979	2,062,489	499,182	7,510,147

Statement of Net Position
Proprietary Funds
June 30, 2019
(Amounts in thousands)

	Unemployment Compensation Trust Fund	University of Massachusetts	State Universities	Community Colleges	Total
Deferred inflows of resources:					
Deferred service concession arrangements	—	—	21,303	273	21,576
Deferred inflows related to pensions	—	60,182	21,645	31,541	113,368
Deferred inflows related to OPEB	—	224,224	114,402	76,625	415,251
Sale of future revenues	—	76,839	—	129	76,968
Total deferred inflows of resources	—	361,245	157,350	108,568	627,163
Total liabilities and deferred inflows	88,497	5,221,224	2,219,839	607,750	8,137,310
NET POSITION:					
Net investment in capital assets	—	2,343,872	801,422	723,282	3,868,576
Restricted for:					
Unemployment benefits	1,996,534	—	—	—	1,996,534
Higher education endowment funds	—	28,617	34	425	29,076
Higher education academic support and programs	—	—	891	5,962	6,853
Higher education scholarships and fellowships:					
Nonexpendable	—	—	3,779	—	3,779
Expendable	—	—	5,808	2,733	8,541
Capital projects - expendable purposes	—	—	1,466	4,064	5,530
Other purposes	—	206,023	14,430	955	221,408
Unrestricted	—	(75,609)	(243,941)	(171,269)	(490,819)
Total net position	\$ 1,996,534	\$ 2,502,903	\$ 583,889	\$ 566,152	\$ 5,649,478

The notes to the financial statements are an integral part of this statement

(concluded)

Statement of Revenues, Expenses and Changes in Net Position

Proprietary Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Unemployment Compensation Trust Fund	University of Massachusetts	State Universities	Community Colleges	Total
Operating revenues:					
Unemployment compensation contribution	\$ 1,765,016	\$ —	\$ —	\$ —	\$ 1,765,016
Net tuition and fees.....	—	894,904	428,047	210,874	1,533,825
Grants and reimbursements	—	593,086	97,336	230,060	920,482
Auxiliary enterprises	—	441,795	133,048	4,419	579,262
Sales & services.....	—	385,962	97,254	5,979	489,195
Miscellaneous	87,179	137,607	21,452	16,016	262,254
Total operating revenues.....	1,852,195	2,453,354	777,137	467,348	5,550,034
Operating expenses:					
Unemployment compensation	1,483,901	—	—	—	1,483,901
Instruction.....	—	901,235	365,481	323,680	1,590,396
Research	—	487,725	202	21	487,948
Academic support.....	—	184,462	108,269	101,089	393,820
Student services	—	158,991	120,197	131,099	410,287
Scholarships and fellowships	—	49,509	40,370	51,962	141,841
Public service	—	83,566	6,748	5,559	95,873
Operation and maintenance of plant.....	—	246,725	114,347	82,743	443,815
Institutional support.....	—	269,126	126,396	129,948	525,470
Other operating expenses	—	274,749	3,399	—	278,148
Depreciation	—	276,495	103,800	42,148	422,443
Auxiliary operations	—	338,207	154,888	4,638	497,733
Total operating expenses.....	1,483,901	3,270,790	1,144,097	872,887	6,771,675
Operating income/(loss)	368,294	(817,436)	(366,960)	(405,539)	(1,221,641)
Nonoperating revenues/(expenses):					
Other federal revenues.....	18,006	7,004	—	—	25,010
Other revenues.....	—	178,314	7,293	—	185,607
Other expenses	—	(11,381)	(1,434)	(45,080)	(57,895)
Investment income/(loss)	30,604	(7,984)	(37,179)	5,039	(9,520)
Total nonoperating revenues/(expenses).....	48,610	165,953	(31,320)	(40,041)	143,202
Income/(loss) before capital grants and contributions and transfers	416,904	(651,483)	(398,280)	(445,580)	(1,078,439)
Capital grants and contributions.....	—	25,500	25,203	61,330	112,033
Transfers, net	—	740,002	378,941	446,989	1,565,932
Total capital grants and contributions and transfers.....	—	765,502	404,144	508,319	1,677,965
Change in net position.....	416,904	114,019	5,864	62,739	599,526
Total net position - beginning.....	1,579,630	2,388,884	578,025	503,413	5,049,952
Total net position - ending	\$ 1,996,534	\$ 2,502,903	\$ 583,889	\$ 566,152	\$ 5,649,478

The notes to the financial statements are an integral part of this statement.

Statement of Cash Flows
Proprietary Funds
Fiscal Year Ended June 30, 2019
(Amounts in thousands)

	Unemployment Compensation Trust Fund	University of Massachusetts	State Universities	Community Colleges	Total
CASH FLOWS FROM OPERATING ACTIVITIES					
Collection of unemployment contributions	\$ 1,389,034	\$ —	\$ —	\$ —	\$ 1,389,034
Tuition, residence, dining and other student fees	—	985,247	432,289	207,356	1,624,892
Research grants and contracts	—	587,539	192,299	234,750	1,014,588
Payments to suppliers	—	(950,398)	(270,800)	(151,078)	(1,372,276)
Payments to employees	—	(2,083,965)	(547,385)	(518,107)	(3,149,457)
Payments to students	—	(76,927)	(30,890)	(51,960)	(159,777)
Payments for unemployment benefits	(1,483,715)	—	—	—	(1,483,715)
Collection of loans to students and employees	—	8,778	1,348	—	10,126
Income from contract services	—	—	2,470	1,399	3,869
Maintenance costs	—	—	(420)	—	(420)
Auxiliary enterprise charges	—	441,563	83,540	(257)	524,846
Other receipts	87,179	579,287	19,588	20,335	706,389
Net cash (used in) operating activities	(7,502)	(508,876)	(117,961)	(257,562)	(891,901)
CASH FLOW FROM NON-CAPITAL FINANCING ACTIVITIES					
State appropriations	—	780,221	283,932	297,540	1,361,693
Grants and contracts	18,006	143,766	3,524	3,089	168,385
Student organizations agency transactions	—	(1,297)	—	256	(1,041)
Net cash provided by non-capital financing activities	18,006	922,690	287,456	300,885	1,529,037
CASH FLOWS FROM CAPITAL AND RELATED FINANCING ACTIVITIES					
Capital appropriations	—	25,500	12,727	14,841	53,068
Purchases of capital assets	—	(382,048)	(58,475)	(32,564)	(473,087)
Proceeds/(loss) from sales of capital assets	—	—	1,421	(168)	1,253
Proceeds from debt issuance	—	325,676	18,201	—	343,877
Other capital asset activity	—	7,384	(226)	—	7,158
Advance payment related to service concession arrangement	—	—	6,000	—	6,000
Principal paid on capital debt and leases	—	(358,082)	(46,028)	(5,047)	(409,157)
Interest paid on capital debt and leases	—	(137,517)	(58,243)	(2,014)	(197,774)
Net cash (used in) capital financing activities	—	(519,087)	(124,623)	(24,952)	(668,662)
CASH FLOWS FROM INVESTING ACTIVITIES					
Proceeds from sales and maturities of investments	—	1,350,013	106,171	18,893	1,475,077
Purchases of investments	—	(1,404,860)	(127,928)	(17,176)	(1,549,964)
Investment earnings	30,604	47,623	10,786	2,704	91,717
Net cash provided by/(used in) investing activities	30,604	(7,224)	(10,971)	4,421	16,830
Net increase/(decrease) in cash and cash equivalents	41,108	(112,497)	33,901	22,792	(14,696)
Cash and cash equivalents, restricted cash and cash equivalents at the beginning of the fiscal year	58,041	430,389	322,622	139,431	950,483
Cash and cash equivalents, restricted cash and cash equivalents at the end of the fiscal year	\$ 99,149	\$ 317,892	\$ 356,523	\$ 162,223	\$ 935,787
Reconciliation of net operating revenues and expenses to cash used by operating activities:					
Operating income/(loss)	\$ 368,294	\$ (817,436)	\$ (366,960)	\$ (405,539)	\$ (1,221,641)
Adjustments to reconcile operating income/(loss) to net cash (used in) operating activities:					
Depreciation expense	—	276,495	103,800	42,148	422,443
Fringe benefits paid by the Commonwealth	—	—	89,568	100,129	189,697
Changes in assets and liabilities:					
Accounts receivable, prepaids and other assets	34,785	28,661	(191)	(2,278)	60,977
Accounts payable, accrued liabilities and benefits	186	5,335	25,892	2,914	34,327
Student deposits and other unearned and deferred revenues	—	(3,536)	17,330	(417)	13,377
Other noncurrent assets - restricted and liabilities	(410,767)	1,605	12,600	5,481	(391,081)
Net cash (used in) by operating activities	\$ (7,502)	\$ (508,876)	\$ (117,961)	\$ (257,562)	\$ (891,901)

Non-cash investing, capital and financing activities:

The University System, the State Universities and Community Colleges had approximately \$45 million, \$147 million and \$157 million, respectively, of non-cash activities

The notes to the financial statements are an integral part of this statement

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Northeast STEM Network



Gail E. Gasparich, Ph.D. Dean, College of Arts and Sciences, Salem State University, Co-Director Northeast STEM Network

Dr. Gail E. Gasparich obtained a B.S. in Biology from The College of William and Mary and a Ph.D. in Microbiology and Molecular Biology from The Pennsylvania State University. From 1996-2016 she was a Professor in the Department of Biological Science, Associate Dean for the Fisher College of Science and Mathematics, and served as Assistant Provost at Towson University. She has been awarded 22 extramural research and training grants totaling over \$9 million from the National Science Foundation, National Institutes of Health, the Maryland State Department of Education, the University System of Maryland, and the Massachusetts Department of Higher Education. Most of these grants were aimed at increasing participation of women and underrepresented minorities in the sciences.

Dr. Gasparich has given over 100 invited talks and conference presentations on research results, STEM career paths, increasing diversity in STEM disciplines, and professional development for faculty and postdoctoral fellows. Nationally (and internationally), Dr. Gasparich has served as a Councilor for the National Board of the Association for Women in Science, Division Chair for the American Society of Microbiology, a member of the Diversity Committee of Sigma Xi, and is currently the treasurer for the International Organization of Mycoplasma. In 2013 she was awarded President's Diversity Award. In 2015 she was named to the 100 Inspiring Women in STEM by INSIGHT into Diversity and in 2016 she was named a Fellow of the Association for Women in Science.

"The Northeast STEM Regional Network provides access to mentors and role models for women all along the continuum of their academic and professional careers from PreK to working as a professional. Members provide opportunities for active learning activities with a focus on Computer Sciences, Robotics, and Engineering-all fields where women are very under-represented. Additionally, emphasis on Women in Science career panels and career shadowing experiences are regularly held at member sites."

"The most creative and innovative solutions to problems comes from diverse teams. For those teams to not include representation from half of the population would be a tragic waste of human resources."

For more information: <https://www.merrimack.edu/academics/education-and-social-policy/northeast-stem-network/>

Fiduciary Fund Financial Statements

Statement of Net Position

Fiduciary Funds

June 30, 2019

(Amounts in thousands)

	Post-Employment Benefits and OPEB Trust Funds	External Investment Trust Funds	Private Purpose Trust Funds	Agency Funds
ASSETS				
Cash and cash equivalents	\$ 259,367	\$ 5,193,727	\$ 766	\$ 602,147
Short-term investments	—	39,786	—	—
Net investment in PRIT at fair value	59,226,161	15,605,266	—	—
Investments, restricted investments and annuity contracts	—	—	—	1,426,379
Receivables, net of allowance for uncollectibles:				
Taxes	—	—	—	47,331
Other receivables	198,470	5,977	—	147,350
Other assets	3,126	—	—	—
Total assets	59,687,124	20,844,756	766	\$ 2,223,207
LIABILITIES				
Accounts payable and other accrued liabilities	17,800	13,321	—	\$ 14,060
Due to cities and towns	—	—	—	48,055
Lottery prizes payable	—	—	—	908,737
Agency liabilities	—	—	—	1,252,355
Total liabilities	17,800	13,321	—	\$ 2,223,207
NET POSITION				
Restricted for employees' post-employment benefits	59,669,324	—	—	
Restricted for external investment trust fund participants	—	20,831,435	—	
Restricted for private purposes	—	—	766	
Total net position	\$ 59,669,324	\$ 20,831,435	\$ 766	

The notes to the financial statements are an integral part of this statement.

Statement of Changes in Net Position

Fiduciary Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Post-Employment Benefits and OPEB Trust Funds	External Investment Trust Funds	Private Purpose Trust Funds
ADDITIONS			
Contributions:			
Employer contributions - Commonwealth	\$ 1,514,461	\$ —	\$ —
Non-employer contributions - Commonwealth	1,481,069	—	—
Employer contributions - other employers	10,191	—	—
Employee contributions	1,415,161	—	—
ERIP funding contribution - Commonwealth	28,724	—	—
Boston teachers' contribution from Commonwealth	143,146	—	—
Other additions	196,339	1,448,703	—
Proceeds from sale of units	—	25,174,952	—
Total contributions	4,789,091	26,623,655	—
Net investment gain/(loss):			
Investment gain/(loss)	3,493,641	1,286,625	—
Less: investment expense	(297,244)	(309,466)	—
Net investment gain/(loss)	3,196,397	977,159	—
Total additions	7,985,488	27,600,814	—
DEDUCTIONS			
Administration	34,348	—	—
Retirement benefits and refunds	6,002,102	1,073,298	—
Payments to State Boston Retirement System	143,146	—	—
Other deductions	110,869	—	—
Cost of units redeemed	—	24,106,043	—
Distribution to unit holders	—	109,150	—
Total deductions	6,290,465	25,288,491	—
Change in net position	1,695,023	2,312,323	—
Net position - beginning	57,974,301	18,519,112	766
Net position - ending	\$ 59,669,324	\$ 20,831,435	\$ 766

The notes to the financial statements are an integral part of this statement.

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Pioneer Valley Stem Network



Jennifer Hanselman, Ph.D., Director, Dean, College of Mathematics and Sciences at Westfield State University

Dr. Jennifer Hanselman completed her doctorate in Ecology/Conservation Biology from the Florida Institute of Technology in 2007. Her research, “A 370,000-year history of vegetation and climate change around Lake Titicaca (Bolivia/Peru)” was not only significant in the paleoecological research community, but also inspired her own work in climate literacy. During her career, she has been an active participant in the scientific community and has prioritized the value of outreach in the community. Dr. Hanselman was hired at Westfield State in 2008 in the Biology Department. After serving as department chair from 2016-2018, she was hired as the Founding Dean of the College of Mathematics and Sciences in 2018. Westfield State University became the lead institution of the Pioneer Valley STEM Network in 2019.

“The Pioneer Valley STEM Network serves as a hub for K-12, higher education, industry, and community partners. Through this Network, we are able to reach a diverse population at different points in the STEM pipeline. It is through this coordinated effort that we can promote and support women, providing opportunities for engagement and encourage future STEM careers. We are partnered with the Pioneer Valley Women in STEM organization, supporting the mentorship of women in STEM at all stages of their careers.”

Even though we have made progress, there are still a number of barriers that prevent girls from pursuing a STEM career. We need to work collaboratively to reduce these barriers and promote a positive growth mindset. As we broaden participation in STEM, we are opening the door to new ideas, technologies, and innovation.”

For more information: <http://www.rebhc.org/science-technology-engineering-and-math-stem-initiatives/pioneer-valley-stem-network-pvstemnet/>

***Discretely Presented
Component Unit
Financial Statements***

Statement of Net Position
Discretely Presented Component Units
June 30, 2019
(Amounts in thousands)

	Massachusetts Department of Transportation	Commonwealth Health Insurance Connector	Massachusetts Clean Water Trust	Nonmajor Component Units	Total
ASSETS AND DEFERRED OUTFLOWS					
Current assets:					
Cash and cash equivalents	\$ 464,508	\$ 98,972	\$ 489,850	\$ 295,613	\$ 1,348,943
Short-term investments	—	—	204,741	409,497	614,238
Restricted cash and investments	1,492,834	—	—	228,125	1,720,959
Assets held in trust	—	—	38,988	28,046	67,034
Receivables, net of allowance for uncollectibles:					
Federal grants and reimbursement receivable	84,571	—	46,926	—	131,497
Loans	—	—	621,568	52,364	673,932
Other receivables	248,398	10,152	50,603	39,937	349,090
Due from primary government	492,613	—	—	42,854	535,467
Inventory	—	—	—	77	77
Other current assets	75,895	4,262	—	10,663	90,820
Total current assets	2,858,819	113,386	1,452,676	1,107,176	5,532,057
Noncurrent assets:					
Cash and cash equivalents - restricted	798,551	—	—	19,172	817,723
Long-term investments	—	—	554,961	852,273	1,407,234
Restricted investments and annuity contracts	—	—	—	59,459	59,459
Other receivables, net	24,819	—	—	18,051	42,870
Loans receivables, net	—	—	3,433,922	668,585	4,102,507
Due from primary government	4,414	—	—	—	4,414
Non-depreciable capital assets	13,697,733	1,597	—	233,316	13,932,646
Depreciable capital assets, net	22,817,376	140	—	808,746	23,626,262
Other noncurrent assets	89,478	—	—	18,033	107,511
Total noncurrent assets	37,432,371	1,737	3,988,883	2,677,635	44,100,626
Total assets	40,291,190	115,123	5,441,559	3,784,811	49,632,683
Deferred outflows of resources:					
Deferred change in fair value of interest rate swaps	69,707	—	3,516	6,643	79,866
Deferred loss on refunding	220,310	—	57,367	—	277,677
Deferred outflows related to pension	486,748	—	—	6,064	492,812
Deferred outflows related to OPEB	297,257	—	—	124	297,381
Total deferred outflows of resources	1,074,022	—	60,883	12,831	1,147,736
Total assets and deferred outflows	41,365,212	115,123	5,502,442	3,797,642	50,780,419
LIABILITIES AND DEFERRED INFLOWS					
Current liabilities:					
Accounts payable and other liabilities	914,881	14,936	37,927	112,872	1,080,616
Accrued payroll	—	141	—	1,848	1,989
Compensated absences	22,945	552	—	2,985	26,482
Accrued interest payable	154,614	—	50,049	2,322	206,985
Due to primary government	—	9,775	—	99,148	108,923
Unearned revenue	112,783	44,851	35,963	75,900	269,497
Bonds, notes payable and other obligations	515,441	—	232,395	28,224	776,060
Total current liabilities	1,720,664	70,255	356,334	323,299	2,470,552
Noncurrent liabilities:					
Compensated absences	14,206	—	—	1,901	16,107
Accrued interest payable	191,100	—	—	—	191,100
Due to primary government	—	—	—	7,375	7,375
Unearned revenue	23,706	—	—	1,550	25,256
Capital leases	65,774	—	—	—	65,774
Bonds, notes payable and other obligations	7,034,999	—	2,529,797	641,349	10,206,145
Net pension liability	2,190,108	—	—	37,882	2,227,990
Net OPEB liability	3,181,485	6,177	—	5,365	3,193,027
Liability for derivative instruments	117,378	—	3,516	—	120,894
Other noncurrent liabilities	124,404	—	—	100,610	225,014
Total noncurrent liabilities	12,943,160	6,177	2,533,313	796,032	16,278,682
Total liabilities	14,663,824	76,432	2,889,647	1,119,331	18,749,234
Deferred inflows of resources:					
Deferred gain on refundings	164	—	34,499	—	34,663
Deferred service concession arrangements	—	—	—	336	336
Deferred inflows related to pension	87,223	—	—	5,674	92,897
Deferred inflows related to OPEB	457,732	3,499	—	1,749	462,980
Total deferred inflows of resources	545,119	3,499	34,499	7,759	590,876
Total liabilities and deferred inflows	15,208,943	79,931	2,924,146	1,127,090	19,340,110
NET POSITION					
Net investment in capital assets	30,179,643	1,737	—	1,015,022	31,196,402
Restricted for:					
Other purposes	904,218	—	2,040,327	1,161,531	4,106,076
Unrestricted	(4,927,592)	33,455	537,969	493,999	(3,862,169)
Total net position	\$ 26,156,269	\$ 35,192	\$ 2,578,296	\$ 2,670,552	\$ 31,440,309

The notes to the financial statements are an integral part of this statement

Statement of Revenues, Expenses and Changes in Net Position

Discretely Presented Component Units

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

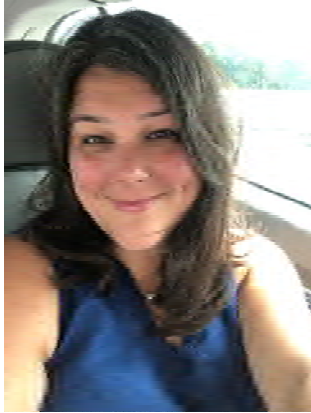
	Massachusetts Department of Transportation	Commonwealth Health Insurance Connector	Massachusetts Clean Water Trust	Nonmajor Component Units	Total
Operating revenues:					
Charges for services	\$ 1,669,245	\$ 837,474	\$ 7,021	\$ 252,875	\$ 2,766,615
Other	—	549	134,548	76,998	212,095
Total operating revenues	1,669,245	838,023	141,569	329,873	2,978,710
Operating expenses:					
Cost of services	3,511,524	801,174	122,458	263,501	4,698,657
Administration costs	1,001,762	71,359	2,693	157,017	1,232,831
Depreciation	1,062,793	106	—	71,529	1,134,428
Total operating expenses	5,576,079	872,639	125,151	492,047	7,065,916
Operating income/(loss)	(3,906,834)	(34,616)	16,418	(162,174)	(4,087,206)
Nonoperating revenues/(expenses):					
Operating grants	2,270,129	45,117	24,401	35,074	2,374,721
Interest income/(loss)	48,167	1,218	—	44,020	93,405
Other nonoperating revenue/(expense)	46,844	2,041	—	(14,759)	34,126
Nonoperating revenues/(expenses), net	2,365,140	48,376	24,401	64,335	2,502,252
Income/(loss) before contributions	(1,541,694)	13,760	40,819	(97,839)	(1,584,954)
Capital contributions	2,519,180	—	91,339	63,342	2,673,861
Change in net position	977,486	13,760	132,158	(34,497)	1,088,907
Net position - beginning	25,178,783	21,432	2,446,138	2,705,049	30,351,402
Net position - ending	\$ 26,156,269	\$ 35,192	\$ 2,578,296	\$ 2,670,552	\$ 31,440,309

The notes to the financial statements are an integral part of this statement

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Southeast STEM Network



Stacey A. Kaminski, Ed.D., Executive Director, CONNECT Partnership

Stacey A. Kaminski received a Bachelor's in Communication Disorders from Bridgewater State University, a Master's in Educational Leadership from Simmons University, and an Ed.D. in Educational Leadership from Northeastern University. Stacey leads CONNECT, a consortium of the five public colleges in Southeast Massachusetts: Bridgewater State University, Bristol Community College, Cape Cod Community College, Massachusetts Maritime Academy, and Massasoit Community College. CONNECT provides oversight for the Southeast STEM Network, which receives funding from the Department of Higher Education's STEM Pipeline Fund.

As the co-director of the Southeast STEM Network, Stacey is responsible for facilitating outreach to PreK-16 educational organizations, businesses, community organizations, and government agencies in order to enhance learning experiences and broaden opportunities for STEM enthusiasts throughout the region. In addition, Stacey currently serves as a member of the Governor's STEM Advisory Council, where she represents the regional STEM Networks.

"The Southeast STEM Network offers programs that reach those presently represented in STEM as well as those underrepresented in STEM. The focus of the Network has been to create programs that meet state and regional needs and to support communities in replicating those programs. Two initiatives that focus specifically on increasing the number of girls in STEM include the Envision the Future Program and Looking Ahead to 2020 and Beyond.

"Life time earnings of workers with STEM Majors is greater than workers with other majors. STEM skills expand career opportunities for graduates in all fields and increase the potential for financial independence. Supporting girls to pursue careers in STEM fields will increase the likelihood of a future for them that is financially secure."

For more information: <http://www.connectsemass.org/stem/>

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1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. FINANCIAL REPORTING ENTITY – BASIS OF PRESENTATION

The accompanying financial statements of the Commonwealth of Massachusetts (the Commonwealth) have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The Governmental Accounting Standards Board (GASB) is the recognized standard-setting body for establishing governmental accounting and financial reporting principles. The Commonwealth's significant accounting policies are described below.

The Commonwealth is comprised of three branches: the Executive Branch, with the Governor as the chief executive officer; the Legislative Branch, consisting of a Senate of 40 members and a House of Representatives of 160 members; and the Judicial Branch, made up of the Supreme Judicial Court, the Appeals Court, and the Trial Court. In addition, the Legislature has established 57 independent authorities and agencies. Below the level of state government are 351 cities and towns exercising the functions of local governments. The cities and towns of the Commonwealth are also organized into 14 counties.

For financial reporting purposes, the Commonwealth has included all funds, organizations, agencies, boards, commissions, and institutions. The Commonwealth has also considered all potential component units for which it is financially accountable, as well as other organizations for which the nature and significance of their relationship with the Commonwealth is such that exclusion would cause the Commonwealth's financial statements to be misleading or incomplete. As required by GAAP, these financial statements present the Commonwealth (the primary government) and its component units. The Commonwealth has included 41 entities as component units in the reporting entity because of the significance of their operational and/or financial relationships with the Commonwealth. Additional information related to the component units is found in Note 14 to the basic financial statements.

Blended Component Units – Blended component units are entities that are legally separate from the Commonwealth but are so closely related to the Commonwealth, that they are, in substance, the same as the Commonwealth or entities providing services entirely or almost entirely to the Commonwealth. The net position and results of operations of the following legally separate entities are presented as part of the Commonwealth's operations:

The Massachusetts School Building Authority (MSBA) is charged with administering the Commonwealth's school construction and renovation program. The MSBA's revenues are derived almost entirely from dedicated sales taxes from the Commonwealth which is 1% of applicable sales tax in the Commonwealth. The MSBA's bonded debt is secured by these sales tax revenues. Expenditures by the MSBA are made on behalf of the Commonwealth as a successor to a long-standing Commonwealth program of school construction. The MSBA's operations and results thereon are blended with the Commonwealth and as such are reported as a major governmental fund.

The Pension Reserves Investment Trust Fund (PRIT) is the investment portfolio for the pension assets of the Commonwealth and as such, is presented as a blended component unit. PRIT is managed by the Pension Reserves Investment Management (PRIM) Board. Certain portions of PRIT's net position totaling approximately \$15.605 billion relate to holdings on behalf of cities and towns that participate in the Pool and are reported as an external investment trust within the fiduciary fund type.

The Massachusetts Municipal Depository Trust (MMDT) is an investment pool of the Commonwealth and its political subdivisions. The various local governments and other political subdivisions share of net position is approximately \$5.226 billion at June 30, 2019, and is reported as an external investment trust within the fiduciary fund type.

Departments Audited Separately from the Commonwealth but not legally separate from the Commonwealth - the following entities are audited separately from the Commonwealth but are not legally separate from the Commonwealth:

The Massachusetts State Lottery Commission, a division of the Office of the State Treasurer and Receiver-General, operates the Commonwealth's lottery. The net position of the Commission and results thereon are presented as a major governmental fund.

The Institutions of Higher Education of the Commonwealth are also not legally separate from the Commonwealth and have operations and net position that are presented as part of the Commonwealth's business-type activities. These systems include:

The University of Massachusetts System including the University of Massachusetts Building Authority, and the Worcester City Campus Corporation. The Worcester City Campus Corporation includes a not-for-profit subsidiary, the Worcester Foundation for Biomedical Research, Inc.

The State University and Community College Systems including the 9 state universities and 15 community colleges located throughout the Commonwealth and the Massachusetts State College Building Authority.

Other Discretely Presented Component Units that are Separately Audited – Discrete component units are entities that are legally separate (often called Authorities) but financially accountable to the Commonwealth, or whose relationships with the Commonwealth are such that exclusion would cause the Commonwealth's financial statements to be misleading or incomplete. The component units column of the basic financial statements includes the financial data of the following entities:

Major component units:

The Massachusetts Department of Transportation (MassDOT) incorporates the former Massachusetts Turnpike Authority and has jurisdiction over the Massachusetts Bay Transportation Authority (MBTA) and the Regional Transit Authorities. MassDOT has attributes of a state department as well as an authority. It operates like a state department for purposes of state finance law and is reported as part of the Commonwealth for compliance with federal and state tax law. In this unique relationship all road and bridge assets of the Commonwealth (including the former Turnpike Authority (MTA)) have been transferred to MassDOT, while the Commonwealth will continue to hold current and future debt for the construction repair, improvement, and replacement of these assets.

The Massachusetts Clean Water Trust provides a combination of federal and Commonwealth funds for water and sewer projects around the Commonwealth as operator of the Commonwealth's State Revolving Fund. The Trust's three member Board is comprised of Commonwealth Officials and the Commonwealth provides annual contract assistance and matching grants to fund the operations of the Trust.

Commonwealth Insurance Connector Authority administers the Commonwealth health insurance programs to facilitate subsidized health insurance for individuals without access to employer-sponsored health insurance as well as offer an affordable commercial health insurance product named Commonwealth Care for small businesses that are eligible for the program. The Authority's 11 member governing board has four members who are Commonwealth Officials, four who are appointed by the Governor with the final three appointed by the Attorney General and is legally accountable to the Commonwealth.

Related Organizations

The following are "related organizations" under GASB Statement No. 14, *The Financial Reporting Entity*, as amended by Statement No. 39, *Determining Whether Certain Organizations are Component Units – an Amendment of GASB Statement No. 14* and Statement No. 61, *The Financial Reporting Entity: Omnibus, an amendment of GASB Statements No. 14 and No. 34*: Massachusetts Port Authority, Massachusetts Housing Finance Agency, MassVentures, and Massachusetts Educational Finance Authority. The Commonwealth is responsible for appointing a voting majority of the members of each entity's board, but the Commonwealth's authority does not extend beyond the appointments. These entities do not meet the criteria for inclusion as component units of the Commonwealth and therefore are not part of these financial statements.

Availability of Financial Statements

The separately audited financial statements of the Commonwealth's component units and funds may be obtained from the various entities, or by contacting the Statewide Financial Reporting Team in the Office of the Comptroller at (617) 973-2660 for component unit contact information.

B. GOVERNMENT-WIDE AND FUND FINANCIAL STATEMENTS

The Statement of Net Position and the Statement of Activities report information on all non-fiduciary activities of the primary government and its component units. Primary government activities are defined as either governmental or business-type activities. Governmental activities generally are financed through taxes, intergovernmental revenues, and other non-exchange revenues. Business-type activities are financed in whole or in part by fees charged to external parties for goods and services.

C. MEASUREMENT FOCUS AND BASIS OF ACCOUNTING*Government-Wide Financial Statements*

The **Statement of Net Position** presents all of the reporting entity's non-fiduciary assets and liabilities, with the difference reported as net position. Net position is reported in three categories:

- **Net investment in capital assets** consists of capital assets, net of accumulated depreciation and reduced by outstanding balances for bonds, notes and other debt that are attributed to the acquisition, construction or improvement of those assets.
- **Restricted net position** results when constraints placed on net position use are either externally imposed by creditors, grantors, contributors, and the like, or imposed by law through enabling legislation.
- **Unrestricted net position** consists of net position which does not meet the definition of the two preceding categories.

Resources from restricted net position are used prior to those from unrestricted net position.

The **Statement of Activities** demonstrates the degree to which the direct expenses of a given function or segment are offset by program revenues. Direct expenses are those that are clearly identifiable within a specific function. Program revenues include charges to customers or applicants who purchase, use or directly benefit from goods, services, or privileges that are restricted to meeting the operational or capital requirements of a particular function. Taxes and other items not meeting the definition of program revenues are instead reported as general revenue and offset or supplant the net operating deficit or surplus from governmental or business-type operations.

Fund Financial Statements

The fund financial statements present a balance sheet and a statement of revenues, expenditures, and changes in fund balances for its major and aggregated non-major funds.

Separate financial statements are provided for governmental funds, proprietary funds, and fiduciary funds. Major individual governmental funds and major individual proprietary funds are reported as separate columns in the fund financial statements pursuant to GASB reporting standards, with non-major funds being combined into a single column.

The Commonwealth reports its financial position and results of operations in funds, each of which is considered a separate accounting entity. The operations of each fund are accounted for with a set of self-balancing accounts that comprise its assets, liabilities, fund equity, revenues, and expenditures/expenses. Transactions between funds within a fund type, if any, have not been eliminated.

Governmental Activities – Government-wide financial statements are reported using the economic resources management focus and the full accrual basis of accounting. 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 have been met.

Governmental Funds – Fund financial statements account for the general governmental activities of the Commonwealth. Governmental fund statements are reported using the current financial resources measurement focus and the modified accrual basis of accounting. Revenues are recognized as they become susceptible to accrual and are both measurable and available. Revenues are considered to be available when they are collected within the current period or soon enough thereafter to pay liabilities of the current period. Significant revenues susceptible to accrual include income, sales and use, corporation, and other taxes, federal grants, federal reimbursements and other reimbursements for use of materials and services which are recognized in the year the materials are received, the grants are expended, or services are provided. The measurement period for accrual for taxes earned is generally one year for income, corporate and other taxes and within thirty days for sales and use taxes. For federal and other reimbursements, the measurement period for accrual is generally sixty days if the related expenditures being reimbursed occurred prior to year-end. Expenditures are recorded in the period in which the related fund liability is incurred. Principal and interest on general long-term obligations are recorded as fund liabilities when due. Compensated absences, claims and judgments, termination benefits and similar activities are recognized to the extent that they are normally expected to be liquidated with expendable available financial resources. Amounts incurred but not reported for Medicaid are reported to the extent that services are rendered before June 30th.

Business-Type Activities – Government-wide financial statements account for activities for which a fee is charged to external users for goods or services. In these services, debt may be issued backed solely by these fees and charges.

There may be also a legal requirement or a policy decision to recover costs. As such, these funds account for operations similarly to a for-profit business. The operations of the Commonwealth's Institutions of Higher Education are reported as systems within the proprietary funds. Proprietary fund types are described in more detail below.

Proprietary and Fiduciary Funds – Fund financial statements are presented on the same basis of accounting as the business-type activities in the government-wide financial statements. For fiduciary funds, post-employment benefits and refunds are recognized when due and payable.

The Commonwealth reports the following fund types:

Governmental Fund Types:

General Fund, a governmental fund, is the primary operating fund of the Commonwealth. It is used to account for all governmental transactions except those required to be accounted for in another fund.

Special Revenue Funds account for specific revenue sources that have been aggregated according to Commonwealth general laws to support specific governmental activities.

Debt Service Funds account for the accumulation of resources for and the payment of debt.

Capital Projects Funds account for the acquisition or construction of major Commonwealth capital facilities financed primarily from bonds and federal reimbursements.

Within the governmental fund types, the Commonwealth has established the following major funds, in addition to the General Fund:

Lottery Funds are governmental funds and account for the operations of the State and Arts Lotteries, which primarily reimburse the General Fund for local aid to cities and towns.

The Massachusetts School Building Authority is presented as a governmental fund, reflecting the activity of the blended component unit, the Massachusetts School Building Authority, accounting for grants to cities, towns and

regional school districts for school construction and renovation projects.

Proprietary Fund Types:

Business-Type Activities account for programs financed in whole or in part by fees charged to external parties for goods and services.

The proprietary funds include the following:

Unemployment Compensation Fund reports the taxes collected from employers and held by the United States Treasury in the Federal Unemployment Trust Fund, from which funds are drawn for the payment of benefits to the unemployed.

College and University Information, is presented here, aggregated by the University's activity, the State Universities' activity and the Community Colleges' activity.

Fiduciary Fund Types:

Post-Employment Benefit and OPEB Trust Funds report resources that are required to be held in trust for the members and beneficiaries of the Commonwealth's post-employment and OPEB benefit plans. These funds recognize employer contributions when legally due and employee contributions in the period when due. Further information on the significant accounting policies for post-employment and OPEB benefit trust funds may be found in Notes 9 and 10 to the basic financial statements on pages 109-124.

External Investment Trust Funds account for the portion of pooled cash and pension assets held under the custodianship of the Commonwealth for the benefit of entities outside the Commonwealth's financial reporting entity, including cities, towns and other political subdivisions of the Commonwealth.

Private Purpose Funds account for various gifts and bequests held by the Commonwealth of which only the income is expendable for purposes specified by the donor. The majority of the individual accounts are for perpetual cemetery care endowments on behalf of deceased individuals.

Agency Funds account for assets held by the Commonwealth on behalf of other governmental entities, other organizations or individuals. These funds include, but are not limited to, fines, forfeitures, tax collections, and payroll withholding taxes. Agency Funds are custodial in nature and do not involve measurement of operations.

Fund Balances:

Governmental fund balances are considered nonspendable, restricted, committed, assigned, and unassigned, based on the relative strength of spending constraints.

Nonspendable fund balances are those that cannot be spent because they are either: (a) not in spendable form; or (b) legally or contractually required to be maintained intact, such as balances in the form of inventories, permanent funds, and notes receivable. As of June 30, 2019, there were no nonspendable fund balances.

Restricted fund balances are those where constraints on their use are: a) externally imposed by creditors (such as through debt covenants), grantors, contributors or laws or regulations of other governments; or b) imposed by constitutional provisions or enabling legislation such that there is a legally enforceable requirement that those resources be used only for the specific purposes stipulated. Legal enforceability means that a government can be compelled by an external party—such as citizens, public interest groups, or the judiciary—to use resources created by enabling legislation only for the stipulated purposes.

Committed fund balances are those that can be used only for specific purposes pursuant to constraints imposed by formal action of the government's highest level of decision-making authority, which in the case of the Commonwealth is the Legislature and Governor. Committed amounts cannot be used for other than the specified purposes unless the Governor and Legislature remove or change the specified use through legislation. The authorization specifying the

purposes for which amounts can be used must have the consent of both the legislative and executive branches of the government prior to the end of the reporting period.

Assigned fund balances are amounts that are constrained by the government's intent to be used for specific purposes, but are neither restricted nor committed. Intent should be expressed by: (a) the governing body itself; or (b) a body (a budget or finance committee, for example) or official to which the governing body has delegated the authority to assign amounts to be used for specific purposes. The Massachusetts Legislature has the authority to assign or modify previously assigned fund balance. In distinction to restricted and committed balances, the authority for making an assignment is not required to be the government's highest level of decision-making authority, i.e., the Legislature and Governor, and the action to assign fund balance can occur after the end of the year. Furthermore, the nature of the actions necessary to remove or modify an assignment is not as prescriptive as it is with committed fund balances—constraints imposed on the use of assigned amounts are more easily removed or modified than those imposed on amounts that are classified as committed. Per GASB Statement No. 54, *Fund Balance Reporting and Governmental Fund Type Definitions*, (GASB 54) assigned balances include those funds remaining at the end of the fiscal year that are reappropriated for the following fiscal year. Assigned balances also include administratively established accounts whose purpose is defined by the Secretary of Administration and Finance and other cabinet secretaries.

Unassigned fund balance is the residual classification for the General Fund. This classification represents fund balance that has not been assigned to other funds and that has not been restricted, committed, or assigned to specific purposes in the General Fund. The General Fund is the only fund that reports a positive unassigned fund balance amount. In addition, in accordance with GASB No. 54, negative balances in other governmental funds are classified as unassigned.

While the Commonwealth has not announced a formal policy governing the priority of spending fund balances, in conformance with GASB 54 requirements, when an expenditure is incurred for purposes for which both restricted and unrestricted resources are available, restricted resources are spent first, followed by committed resources, assigned resources, and unassigned resources.

Details of FY19 governmental fund balances are shown below (amounts in thousands);

	Restricted Purposes	Committed Purposes	Assigned Purposes	Unassigned Purposes	Totals
General Fund					
General Government	\$ —	\$ —	\$ —	\$ 2,000,618	\$ 2,000,618
Stabilization Fund	—	3,424,376	—	—	3,424,376
FY19 Authorizations Reappropriated in FY20	—	—	445,216	—	445,216
Subtotals, General Fund	—	3,424,376	445,216	2,000,618	5,870,210
Lottery Funds					
Lottery Operations	—	1,458	—	—	1,458
Massachusetts School Building Authority (MSBA)					
Debt Service	950,629	—	—	—	950,629
OPEB	226	—	—	—	226
Grants to Cities, Towns and Local School Districts	—	—	655,156	—	655,156
Subtotals, MSB A	950,855	—	655,156	—	1,606,011
Other Governmental Funds					
Restricted by Federal Grantors	32,355	—	—	—	32,355
Child Support - Restricted by Federal Grantors	12,254	—	—	—	12,254
Environmental	—	14,740	16,725	—	31,465
Regional Greenhouse Gas Auction and Mitigation	—	19,650	—	—	19,650
Public Safety - Enhanced 911 Services	—	146,607	—	—	146,607
Public Safety - Other	—	5,138	—	—	5,138
Universal Health Care	—	347,891	—	—	347,891
Marijuana Regulation	—	1,125	—	—	1,125
Other Health Care	—	9,141	—	—	9,141
Social Innovation Financing	—	15,421	—	—	15,421
Workforce Training	—	42,719	—	—	42,719
Department of Industrial Accidents	—	25,523	—	—	25,523
Convention Centers	8,393	285,464	—	—	293,857
General Government Capital Projects Fund	53,933	—	—	—	53,933
Highway Capital Projects Fund	—	—	—	(397,357)	(397,357)
General Government Debt Service	9,057	—	—	—	9,057
Transportation (GANS*/Commonwealth Transportation Fund)	15,409	94,865	—	—	110,274
Gaming Administration	—	5,785	—	—	5,785
Gaming -- Community Mitigation	—	16,461	—	—	16,461
Race Horse Development	—	13,319	—	—	13,319
Housing Preservation	—	14,706	—	—	14,706
Expendable Trusts	234,446	313,108	127,697	—	675,251
Other	5	209,991	11,923	(72,838)	149,081
Subtotals, Other Governmental Funds	365,852	1,581,654	156,345	(470,195)	1,633,656
Totals	\$ 1,316,707	\$ 5,007,488	\$ 1,256,717	\$ 1,530,423	\$ 9,111,335

*Federal Grant Anticipation Notes

The Commonwealth does not have a formally adopted minimum fund balance policy. However, most governmental funds cannot end a fiscal year in deficit. Those funds that are authorized to end a fiscal year in deficit are discussed in Note 8 to the basic financial statements, "Individual Fund Deficits" on page 109.

Stabilization Fund Arrangements:

In accordance with Section 2H of Chapter 29 of the Massachusetts General Laws, the Commonwealth maintains a Stabilization ("Rainy Day") Fund. Per Chapter 29, balances in the Stabilization Fund can be expended only when non-routine budget shortfalls occur and upon appropriation by the Legislature and approval by the Governor. Chapter 29 requires that after calculating the Commonwealth's "consolidated net surplus" (the sum of the "undesigned" balances in certain specific state budgeted funds, equal to balances that are neither restricted nor reappropriated for the following fiscal year) any remaining surplus be transferred to the Stabilization Fund. In addition, withholding taxes on certain Lottery transfers are required to be transferred to the Stabilization Fund. Starting in FY10, statute requires the Comptroller, after certification by the Commissioner of Revenue, to transfer any capital gains tax revenues in excess of \$1 billion (adjusted annually for economic growth) during a fiscal year to the Stabilization Fund. Starting in FY12, statute requires the Comptroller, after certification by the Commissioner of Revenue and the Attorney General, to

transfer to the Stabilization Fund all revenue from individual settlements and judgments greater than \$10 million each that exceeds the five year rolling annual average of such settlements and judgments. During FY19, the settlements and judgments revenue did not reach the five year average threshold and all such revenue was retained in the General Fund.

Historically, balances in the Stabilization Fund have been used almost exclusively during recessionary periods to offset budget shortfalls after other budgetary measures have been taken. Per Chapter 29, the Commonwealth is required to maintain a balanced budget, and if a revenue shortfall is projected, the Secretary of Administration and Finance is required to reduce state agencies' spending authorizations in an amount equal to any projected shortfall.

The Stabilization Fund ended FY19 with a balance of \$3.424 billion. For the fiscal year ending June 30, 2019, the Stabilization Fund's balance increased by \$53 million from investment income, approximately \$429 thousand in statutorily mandated deposits of withholding taxes on certain Lottery proceeds, \$848 million in above-threshold capital gains tax revenue from the general fund, \$4 million representing 75% of the growth in abandoned property revenue, \$10 million from gaming tax revenue and fines and \$593 million from budgeted funds as part of the FY19 close out and transfer of the consolidated net surplus, off set by \$85 million in transfers to the State Pension Fund and the State Retiree Benefits Trust Fund. In accordance with GASB 54 requirements, balances in the Stabilization Fund are classified as committed.

Fiscal Year-End

All funds and component units are reported using fiscal years, which end on June 30.

Program Revenue

Program revenue is defined by the Commonwealth to be the revenue from fees and assessments collected by departments that are directly applicable to that department's operations.

Operating and non-operating revenues and expenses

Revenues and expenses of business-type activities and proprietary funds are classified as operating or non-operating and are sub-classified by object. Operating revenues and expenses generally result from providing services and producing and delivering goods. All other revenues and expenses are reported as non-operating.

D. CASH, CASH EQUIVALENTS, SHORT-TERM INVESTMENTS AND INVESTMENTS

The Commonwealth follows the practice of pooling cash and cash equivalents. Cash equivalents consist of short-term investments with an original maturity of three months or less and are stated at cost. Interest earned on pooled cash is allocated to the General Fund and, when so directed by law, to certain other Governmental Funds.

The Office of the Treasurer and Receiver-General (Treasury) manages the Commonwealth's short-term external mixed investment pool, the Massachusetts Municipal Depository Trust (MMDT), which is comprised of two portfolios: a Cash Portfolio and a Short Term Bond Portfolio. The Cash Portfolio is a money-market-like investment pool; its investments are carried at amortized cost. As of June 30, 2019, the MMDT's entire cash fund is included as cash equivalents in the accompanying financial statements. The Short Term Bond Portfolio investments are carried at fair value. As of June 30, 2019, the MMDT's entire bond fund is included as short-term investments in the accompanying financial statements.

Investors in MMDT are not allowed to overdraw their shares. For a complete copy of MMDT's separately issued financial statements, please contact the Office of the State Treasurer's Cash Management Department, at (617) 367-9333 or download the statements from the Cash Management section of the Office of the State Treasurer's website at www.mass.gov/treasury. Massachusetts General Law Chapter 29, Section 38 enumerates the Commonwealth's investment policy for non-pension assets.

The post-employment and OPEB benefit trust funds invest in the Pension Reserves Investment Trust (PRIT) Fund, a

diversified external investment pool managed by the Pension Reserves Investment Management (PRIM) Board and are reported at fair value in the accompanying financial statements. The State Employees', Teachers' Public Employee Retirement Systems (PERS) and the State Retirees' Benefit Trust (SRBT) are required to invest in the PRIT Fund and comprise approximately 38.2%, 39.2% and 1.7% respectively, of the net position of the PRIT Fund. For a complete copy of PRIT's separately issued financial statements, contact the PRIM Board at 84 State Street, Boston, MA 02109.

Other Commonwealth investments are comprised of equities (marketable securities) and fixed income securities, as well as interests in alternative investment funds such as private equity, debt and real estate. Marketable securities are reported at fair value based upon quoted market prices. Investments in fixed income securities, including U.S. government agency obligations, are reported at fair value using independent pricing services. In determining the price, the services may reflect such factors as market prices, yields, maturities, and ratings, supplemented by deal quotations. Alternative investments are generally reported at net asset values (NAV) reported by the investment manager for the respective securities, which are used as a practical expedient to estimate the fair value of the Commonwealth's interests therein, unless it is probable that all or a portion of the investment will be sold for an amount different from NAV. As of June 30, 2019, the Commonwealth had no plans or intentions to sell investments at amounts different from NAV.

Reported fair values for shares in registered mutual funds are based on share prices reported by the funds as of the last business day of the fiscal year.

Investments also include pooled investment funds with Commonfund which are valued at fair value based upon estimated net asset values provided by the management of Commonfund. These pooled investment funds are invested in marketable debt and equity securities.

Certificates of deposit and guaranteed investment/annuity contracts are carried at amortized cost.

E. RECEIVABLES

In general, tax revenue is recognized on the government-wide statements when assessed or levied and on the governmental financial statements to the extent that it is both measurable and available, based upon collection experience. If revenue is not received within the availability period, receivables are deferred. Receivables are stated net of estimated allowances for uncollectible accounts.

Reimbursements due to the Commonwealth for its expenditures on federally-funded-reimbursement and grant programs are reported as "Federal grants and reimbursements" or "Due from federal government" in the statement of net position.

"Other Receivables" represent amounts due to the Commonwealth including Lottery revenues and Higher Education receivables from students, amounts due to the University of Massachusetts from related organizations and other items. Also included in other receivables for FY19 are amounts due to the Commonwealth under provisions of the Master Settlement Agreement among five tobacco companies and 46 states, including the Commonwealth. Pursuant to provisions of GASB Technical Bulletin No. 2004-1 "Tobacco Settlement Recognition and Financial Reporting Entity Issues", a receivable has been recorded in the general fund for approximately \$133 million, representing 50% of the amounts expected to be received during FY20. Also, included as a long-term receivable is approximately \$28 million representing the Commonwealth's share of the Nonparticipating Manufacturer (NPM) adjustment for 2004 tobacco sales which were not contested by the manufacturers.

"Loans Receivables" - The MSBA has entered into various loan agreements with municipalities at a 2.0% interest rate with principal to be paid in equal installments for varying terms. Currently, the longest repayment schedule has a final payment in FY43. This program is designed to assist a limited number of school districts with unanticipated inflationary construction costs over the district's original project budget. The loans outstanding as of June 30, 2019 were \$81 million, of which \$7 million is due in FY20. During FY19, the MSBA collected \$7 million of scheduled principal payments.

F. DUE FROM CITIES AND TOWNS

“Due from Cities and Towns” represents reimbursements due to the Commonwealth for its expenditures on certain programs for the benefit of cities and towns.

G. CAPITAL ASSETS

Capital assets, which include property, plant, equipment and infrastructure (e.g. roads, bridges, ramps and other similar items), are reported in the applicable governmental or business-type activity columns of the government-wide financial statements.

Methods used to value capital assets

Capital assets are recorded at historical cost or estimated historical cost if purchased or constructed. Donated capital assets are recorded at acquisition value at the date of acquisition.

Capitalization policies

All land, non-depreciable land improvements and donated historical treasures or works of art are capitalized. Single pieces of equipment, vehicles, computer equipment and software that equal or exceed \$50,000 are capitalized. Buildings and infrastructure projects with a cost that equals or exceeds \$100,000 are capitalized. The costs of normal maintenance and repairs that do not add to the value of assets or materially extend asset lives are not capitalized.

Capital assets of the component units are capitalized upon purchase and depreciated on a straight-line basis over the estimated useful lives of the assets.

Depreciation and useful lives

Applicable capital assets are depreciated using the straight-line method. Unless unallocable, depreciation expense is charged to the function of the capital asset being depreciated. Estimated useful lives are as follows:

<i>Type of Asset</i>	Estimated Useful Life (in years)
Buildings.....	40
Infrastructure	20 to 50
Library collections that are not historical treasures.....	15
Equipment, office equipment and furniture, and life safety equipment	10
Computer hardware and software.....	3 to 7
Vehicles.....	5

Construction in process

Construction in process includes all associated cumulative costs of a constructed capital asset. Construction in process is relieved at the point at which an asset is placed in service for its intended use.

H. INTERFUND / INTRAFUND TRANSACTIONS

As a general rule, the effect of interfund activity has been eliminated in the government-wide statements. Exceptions to this rule are: 1) activities between funds reported as governmental activities and funds reported as business-type activities and 2) activities between funds that are reported in different functional categories in either the governmental or business-type activities column. Elimination of these activities would distort the direct costs and program revenues for the functions concerned. Interfund receivables and payables have been eliminated from the government-wide Statement of Net Position, except for the residual amounts due between governmental and business-type activities.

I. STATEWIDE COST ALLOCATION PLAN – FRINGE BENEFIT COST RECOVERY

The Commonwealth has elected not to present its cost allocation and recovery separately on the Statement of Activities. Certain costs of nine “central service” agencies of the Commonwealth are recovered from the remaining agencies in a federally approved statewide cost allocation plan. These costs that are allocated are based upon benefits received by the user agency that benefit from these services. The Commonwealth also appropriates and pays the fringe benefit costs of its employees and retirees, as well as MassDOT employees and retirees, through the General Fund. These fringe benefits include the costs of employees’ group health insurance, pensions, unemployment compensation, and other costs necessary to support the workforce. As directed by Massachusetts General Laws, these costs are assessed to other funds based on payroll costs, net of credits for direct payments. Since fringe benefit costs are not separately appropriated or otherwise provided for in these funds, the required assessment creates an unfavorable budget variance in the budgeted funds. The employees’ group health insurance and workers’ compensation activity is accounted for in the governmental funds.

J. SCHOOL CONSTRUCTION GRANTS, CONTRACT ASSISTANCE AND OTHER PAYABLES

Under the former school building assistance program (prior to the creation of the MSBA) the Commonwealth reimbursed 50% to 90% of approved eligible construction and borrowing costs for school construction and renovation to municipalities and regional school districts for 728 previously approved projects noted by MSBA as Prior Grant projects. The MSBA has assumed responsibility for these projects under its enabling statute.

The MSBA records a liability for its share of total eligible project costs differently depending on the type of project. However, for all projects, the MSBA recognizes a liability for its estimated share of total eligible project costs when the applicable eligibility requirements have been met.

Prior Grants - All of the 728 Prior Grant projects had been receiving an annual payment under the former program. The liability for these projects will be reduced over time through annual payments, and savings from debt refundings by the local communities in which the MSBA shares in the savings based on the reimbursement rate of the project. As of June 30, 2019, the liability for prior grant projects is approximately \$163 million.

Waiting List - The MSBA funds Waiting List projects using two different methods, lump sum and progress payments. Each funding method has different eligibility requirements.

Waiting List projects that are under the lump sum method were recognized as a liability once construction started. The liability for these projects will be reduced over time through annual payments and savings from debt refundings by the local communities in which the MSBA shares in the savings based on the reimbursement rate of the project. These projects operate similar to Prior Grant projects. As of June 30, 2019, the liability outstanding for Waiting List projects under the lump sum method is \$59 million.

Under the progress payment method, the MSBA's shares of costs incurred are generally recognized as a liability once a grantee requests reimbursement from the MSBA. As of June 30, 2019, there is no remaining liability related to the progress payment method.

Waiting List projects that are not currently recognized as a liability are considered commitments of the MSBA. As of June 30, 2019, there are no commitments outstanding for the Waiting List projects.

New Program - The MSBA funds New Program projects on a progress payment basis. Under this process, communities may submit reimbursement requests no more frequently than once per month. Upon review, audit, and approval, the MSBA processes payment for its share of eligible costs incurred. The MSBA's share of costs incurred for New Program projects are recognized as a liability once a grantee's request for reimbursement is reviewed, audited, and approved by the MSBA. The MSBA has recorded a liability of \$51 million in the governmental funds for reimbursements received, reviewed, and approved for payment by June 30, 2019. Additionally, a liability of \$112 million was recorded for the reimbursements not reviewed or approved for payment prior to June 30, 2019, as well as final project hold back payments subject to final audit and Board approval after year end. The long-term portion of this liability is estimated at \$48 million. New Program projects that are not currently recognized as a liability are considered commitments of the MSBA. As of June 30, 2019, the amount of commitments outstanding for the New Program projects is \$1.7 billion, and will be funded under the progress payment method.

For all projects, regardless of the funding mechanism, costs incurred by the grantees are subject to audit by the MSBA. Completion of these audits will allow the MSBA to determine the final approved cost of these projects, and the MSBA will adjust the payments it makes for these projects, as necessary, in accordance with the results of those audits.

As of June 30, 2019, MSBA had an outstanding liability of \$163 million, and \$1.7 billion of commitments outstanding, for the New Program projects. The Commonwealth dedicates a 1% statewide sales tax (drawn from the existing statewide 6.25% sales tax), excluding sales tax revenues on meals and from certain additional statutorily exempted revenues from sales, to the School Modernization and Reconstruction Trust Fund (the "SMART Fund"), in support of these grant programs and for all other operations of the MSBA, including debt service.

The Massachusetts Clean Water Trust (the Trust) loans to its borrowers are subsidized by interest earnings on its pledged assets which include debt service reserve funds, direct loans and contract assistance provided to the Trust by the Commonwealth. Although borrowers are obligated to the Trust to make scheduled payments, these subsidies are expected to be available for the duration of the loan financing agreements. The Commonwealth has committed to provide contract assistance in the amount of \$242 million over 30 years. This obligation of the Commonwealth to the Trust is a general obligation of the Commonwealth, for which its full faith and credit are pledged. Annual appropriations are made each year by the Commonwealth to fund the current year's obligation.

Accounts payable includes amounts due to vendors of the Commonwealth for goods and services delivered before June 30th but paid for after year-end, the largest of which is Medicaid for \$1.086 billion.

K. COMPENSATED ABSENCES

Compensated absences are recorded as a long-term liability in the Statement of Net Position. For the governmental fund statements, accumulated vacation and sick leave are reported as expenditures and fund liabilities when incurred upon retirement, termination or death. Sick and vacation payments to terminated employees as of June 30, 2019 but paid after the fiscal year ends are also reported in the funds.

Employees are granted vacation and sick leave in varying amounts based on collective bargaining agreements and state laws. Upon retirement, termination or death, certain employees are compensated for unused vacation and sick leave (subject to certain limitations) at their current rate of pay.

Compensated absences in the governmental funds are liquidated from the same sources that fund the personnel expenses of the employees who are compensated for unused vacation and sick leave pay. In most cases, this is the General Fund, but also includes non-General Fund sources to the extent that personnel expenses are charged to those funding sources.

In the business-type activity and the discretely presented component units, employees' accumulated vacation and sick leave are recorded as an expense and liability as the benefits accrue.

L. DEDICATED REVENUES AND PLEDGES

The Commonwealth has a number of pledges of revenue streams for its own bonds and various other bond issues of other authorities. Commonwealth debt supported by dedicated revenue streams include special obligation bonds for road and bridge construction secured by motor fuels taxes and federal grant anticipation notes (GANS) secured by federal grants for highway construction. Detailed information on pledges for the Commonwealth's own debt is included in sections B and C of Note 7, on pages 98-99.

The Commonwealth dedicates receipts from the sales tax (other than the tax on meals) to the Massachusetts Bay Transportation Authority (MBTA) and the Massachusetts School Building Authority (MSBA). Each entity receives 1.0% of the sales tax. The MBTA's portion is subject to an inflation-adjusted floor.

The amount dedicated to the MBTA is accounted for in a nonbudgeted special revenue fund and is subject to adjustment equal to the lesser of the annual increase in the Boston consumer price index or prior calendar year annual sales taxes, with a floor of 0.0% and a ceiling of 3.0%. Legislation approved by the Governor on October 31, 2014 increased the amount statutorily required to be credited to the MBTA by \$160 million annually, starting in fiscal 2015. The \$160 million increase in the dedicated sales tax revenue amount and the amount included in the inflation-adjusted floor was intended to replace the \$160 million annual state appropriation the MBTA received from fiscal 2010 through fiscal 2014.

In FY19, approximately \$1.054 billion and \$897 million of the dedicated sales tax revenue stream was directed to the MBTA and the MSBA, respectively.

The Commonwealth has also pledged sales tax revenue and rooms tax surcharges from areas contiguous to convention centers and the Worcester DCU Arena and Convention Center to support such centers' operations. As of June 30, 2019, taxes within the Convention Center districts support approximately \$528 million of outstanding principal and approximately \$261 million of interest on debts related to these Convention Centers. Taxes collected in FY19 were approximately \$161 million, while debt service on the bonds was approximately \$55 million.

Under additional transportation finance reform effective July 1, 2013, motor vehicle sales tax collections were shifted from the General Fund to the Commonwealth Transportation Fund (CTF), while also eliminating a 0.385% pledge of regular and meals sales tax to the CTF. During FY19, approximately \$566 million in motor vehicle sales tax revenue was transferred to MassDOT. From the Commonwealth Transportation Fund, \$127 million was dedicated to funding the operations of the MBTA while an additional \$88 million was dedicated to funding the operations of the regional transit authorities. These amounts are transferred through the CTF.

M. LOTTERY REVENUE AND PRIZES

Ticket revenues and prizes awarded by the Massachusetts Lottery Commission are recognized as drawings are held. For certain prizes payable in installments, the Commonwealth purchases annuities and principal-only and interest-only Treasury strips in the Commonwealth's name, which are recorded as annuity contracts and prizes payable in the agency fund and on the Statement of Net Position. Though the annuities are in the Commonwealth's name in the case of a default, they are solely for the benefit of the prizewinner. The Commonwealth retains the risk related to such annuities.

N. RISK FINANCING

The Commonwealth self-insures for employees' workers' compensation, casualty, theft, tort claims and other losses. Such losses, including estimates of amounts incurred but not reported, are included as accrued liabilities in the accompanying financial statements when the loss is incurred. For employees' workers' compensation, the Commonwealth assumes the full risk of claims filed under a program managed by the Human Resources Division. For personal injury or property damages, Massachusetts General Laws limits the risk assumed by the Commonwealth to \$100,000 per occurrence, in most circumstances. The Group Insurance Commission administers health care and other insurance for the Commonwealth's employees and retirees.

O. DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES

Deferred outflows of resources are defined as a consumption of net assets by the government that is applicable to a future reporting period. Deferred inflows of resources are defined as an acquisition of net assets by the government that is applicable to a future reporting period. Deferred outflows of resources increase net position, similar to assets, and deferred inflows of resources decrease net position, similar to liabilities.

P. NET POSITION

The Commonwealth reports net position as restricted where legally segregated for a specific future use by enabling legislation. Otherwise, these balances are considered unrestricted.

Net position has been restricted as follows:

"Restricted for unemployment benefits" – identifies amounts solely for the payment of unemployment compensation under federal labor laws.

"Restricted for retirement of indebtedness" – identifies amounts held by fiscal agents to fund future debt service obligations pertaining to Special Obligation Revenue Bonds authorized under Section 20 of Chapter 29 of the Massachusetts General Laws and Chapter 33 of the Acts of 1991. It also includes amounts held for Grant Anticipation Notes authorized by Chapter 11 of the Acts of 1997 and Chapter 121 of the Acts of 1998.

"Restricted for other purposes" – identifies amounts held for various externally imposed restrictions either by creditors, grantors or laws and regulations of other governments.

The net position of the Post-Employment Benefit and OPEB Trust Funds and the Pension Reserves Investment Trust portion of the External Investment Trust Funds are restricted for post-employment benefits. These restrictions identify resources held in trust for the members and beneficiaries of the Commonwealth's post-employment benefit plans. The Pension Reserves Investment Trust portion of the External Investment Trust Funds also includes pooled cash and pension assets held under the custodianship of the Commonwealth for the benefits of cities, towns and other political subdivisions of the Commonwealth.

Q. SERVICE CONCESSION AGREEMENTS

The higher education institutions of the Commonwealth (State Universities and Colleges) enter in to services concession agreements for campus dining facilities and bookstores. In exchange for these agreements the vendors provide contributions to the institutions to improve the facilities as well as revenue sharing arrangements. All improvements and equipment purchased with the payments remain the property of institutions. The contracts range from five to eighteen years in duration. These agreements generate deferred inflows of resources, and liability for the unamortized portion of assets transferred. Per terms of the agreements, either party can terminate the agreement at any time, without

cause, by providing a written notice. In the event of termination, the unamortized portion is to be returned. Following is a summary of amounts of the arrangements as of June 30, 2019 (amounts in thousands):

State Universities.....	\$	21,303
Community Colleges		273
Total	\$	<u>21,576</u>

Approximately \$22 million in the carrying value of capital assets and \$8 million in liabilities associated with these service concession agreements are reported in the business-type activities in these financial statements.

R. RECLASSIFICATIONS/IMMATERIAL CORRECTIONS

Certain amounts in the separately issued component units' financial statements have been reclassified to conform to the accounting classifications used by the Commonwealth.

The Commonwealth changed the reporting of revenues received from certain license plate fees and the related expense from fiduciary activities (agency fund) to other (nonmajor) governmental funds. The result of this change was to increase beginning fund balance of the other (nonmajor) governmental funds by \$246 thousand as of July 1, 2018. Further, the Commonwealth increased the beginning net position of the business-type activities and unemployment compensation (major) fund by \$34.6 million as of July 1, 2018 to correct the previous under recording of unemployment compensation contributions (revenue). Additionally, the Commonwealth decreased the beginning net position of the business-type activities and State Universities (major) fund by \$356 thousand as of July 1, 2018 to correct the previous recognition of capital assets and bonds payable. Finally, the Commonwealth changed the reporting of the Springfield Technical Community College Assistance Corporation from a blended component unit that was reported in the Community Colleges (major) Fund to a discretely presented component unit. The result of this change was to decrease beginning net position of the Community Colleges (major) Fund and increase net position of the aggregate discretely presented component units by \$3.2 million as of July 1, 2018.

S. ESTIMATES

The preparation of the Comprehensive Annual Financial Report requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosures at the date of the financial report.

Estimates also affect the reported amounts of revenues and expenditures during the reporting period. Actual results could differ from those estimates.

T. PENSIONS AND OPEB

For purposes of measuring the net pension liability, deferred outflows of resources and deferred inflows of resources related to pensions, and pension expense, information about the fiduciary net position of the State Employees' Retirement System (SERS) and the Massachusetts Teachers' Retirement System (MTRS) and additions to/deductions from the SERS and the MTRS fiduciary net position have been determined on the same basis as they are reported by SERS and MTRS. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

For purposes of measuring the liability, deferred outflows of resources and deferred inflows of resources, and expense associated with the Commonwealth's requirement to contribute to the Boston Retirement System (BRS) for Boston teachers, information about BRS's fiduciary net position and additions to/deductions from BRS's fiduciary net position have been determined on the same basis as they are reported by BRS. For this purpose, benefit payments (including refunds of contributions) are recognized when due and payable in accordance with the benefit terms. Investments are

reported at fair value.

For purposes of measuring the net OPEB liability, deferred outflows of resources and deferred inflows of resources related to OPEB, and OPEB expense, information about the fiduciary net position of the State Retiree Benefit Trust (SRBT) and additions to/deductions from the SRBT fiduciary net position have been determined on the same basis as they are reported by the SRBT. For this purpose, benefit payments are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

U. SIGNIFICANT NEW ACCOUNTING PRONOUNCEMENTS

The Commonwealth implemented the following significant new accounting pronouncements during FY19:

GASB Statement 83, *Certain Asset Retirement Obligations*. This Statement requires the measurement of an asset retirement obligation based on the current value of expected future outlays and that a deferred outflow of resources be recorded and measured at the amount of the corresponding liability. The requirements of this Statement did not impact the governmental activities of the Commonwealth however, it did impact the University of Massachusetts (a business-type activity that is separately audited) which resulted in a deferred outflow of resources and a related liability of approximately \$2 million to be recorded on the statement of net position. See the University of Massachusetts audited financial statements for additional information.

GASB Statement 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. This Statement defines debt for footnote disclosure in the financial statements and establishes additional disclosure requirements related to debt obligations, including direct borrowings. See Note 7 for further information on long-term obligations.

2. DEPOSITS, SHORT-TERM INVESTMENTS AND INVESTMENTS

Primary Government

The Commonwealth's cash and cash equivalents and restricted cash is comprised of the following (amounts in thousands):

	Governmental Activities	Business-Type Activities	Government Wide Total	Fiduciary Funds
Cash	\$ 411,764	\$ 547,142 ⁽¹⁾	\$ 958,906	\$ 1,915,234
MMDT - cash fund	6,859,454	388,645 ⁽¹⁾	7,248,099	4,140,773
Restricted cash with fiscal agent.....	268,318	—	268,318	—
Total	<u>\$ 7,539,536</u>	<u>\$ 935,787</u>	<u>\$ 8,475,323</u>	<u>\$ 6,056,007</u>

(1) of which \$244,828 is presented as restricted cash in the accompanying financial statements.

Lottery Annuity Contracts and U.S. Treasury Strips

The Massachusetts State Lottery Commission, a division of the Office of the State Treasurer and Receiver-General, purchases annuity contracts from insurance companies and United States treasury strips to fund the Commonwealth's liability for future installment prize obligations. These annuities and treasury strips represent obligations of the insurance companies and the custodial banks, respectively, to provide a fixed series of payments over a specified period. Only the annuity investments are subject to credit risk. For the annuity contracts, risk is controlled by purchasing these investments only from insurance companies with the top two ratings issued by a national recognized ratings organization. However, due to the nature of these annuity contracts, the credit quality of the insurance company issuer is subject to change. As of June 30, 2019, the amortized cost of annuities was approximately \$111 million. At June 30, 2019, the

U.S Treasury Strips have a fair value of approximately \$797 million. Approximately 87.7% of these amounts are held in United States Treasury strips at a custodial bank. No insurance company has an amount of annuities over 5.3% of the overall portfolio.

MSBA Deposits and Investments

The MSBA is authorized to invest in obligations of the US Treasury, its agencies and instrumentalities, bonds or notes of public agencies or municipalities, bank time deposits, guaranteed investment contracts, money market accounts and repurchase agreements. These investments are recorded at fair value. The MSBA has an investment policy that establishes the minimum credit quality for certain instruments, outlines investment procedures and updates for periodic reporting. The MSBA investment policy does not specifically limit the amount the MSBA may invest in any one issuer.

As of June 30, 2019, the MSBA held the following deposits and investments which are a component of Governmental Activities above (amounts in thousands):

Cash and cash equivalents.....	\$ 478,244
Restricted cash with fiscal agent.....	1,054
Restricted investments	1,022,329
Total.....	<u>\$ 1,501,627</u>

Custodial Credit Risk – Pooled Cash

Custodial credit risk is the risk that in the event of a bank failure, deposits and investments may not be returned to the Commonwealth. Cash balances represent amounts held in bank depository accounts that may be subject to custodial credit risk.

The Commonwealth requires all bank deposits in excess of insurance coverage by the Federal Deposit Insurance Corporation (FDIC) to be collateralized with a perfected pledge of eligible collateral or a letter of credit. For programs created by the Treasury, such as the Small Business Banking Program, eligible collateral must be pledged in an amount equal to 102% of the amount of the deposits that exceed FDIC insurance. Sufficient collateral to cover total Commonwealth deposits in excess of the FDIC insured amount must be pledged and held in safekeeping by a custodian that is approved by and under the control of the Treasurer and Receiver General.

Membership by a financial institution in the Depositors Insurance Fund (DIF) or the Share Insurance Fund (SIF) will be accepted by the Treasurer and Receiver General's Office as alternative security, provided that the financial institution submits proof of membership in the DIF or the SIF. Membership in the DIF is limited to Massachusetts chartered savings banks while membership in the SIF is limited to Massachusetts cooperative banks.

Custodial Credit Risk – Higher Education

The Institutions of Higher Education have investment policies that may vary by institution for custodial credit risk. Each institution carries deposits that are fully insured by the FDIC, as well as uninsured deposits. As of June 30, 2019, the bank balances of uninsured deposits totaled approximately \$282 million.

Custodial Credit Risk – MSBA

The MSBA does not have a formal investment policy for custodial credit risk. The MSBA carries deposits that are fully insured by the Federal Deposit Insurance Corporation (FDIC) insurance, as well as deposits that are fully collateralized. As of June 30, 2019, all MSBA bank balances were fully protected against loss.

Interest Rate Risk – MMDT

Interest rate risk is the extent that changes in interest rates of debt investments will adversely affect the fair value of an investment. These investments include certain short-term cash equivalents, various long-term items and restricted assets by maturity in years. The Treasury cash portfolio minimizes the risk of the fair value of securities falling due to changes in interest rates by maintaining a dollar-weighted average portfolio maturity of 60 days or less. The Treasury

cash portfolio's assets are managed to maintain a dollar-weighted average life to maturity of 77 days or less.

The MMDT Cash Portfolio's dollar-weighted average maturity fluctuated from 28 days on July 1, 2018 to 33 days on June 30, 2019.

Investments in the MMDT Short Term Bond Portfolio are made in investment-grade securities as defined by national statistical rating agencies. The Commonwealth assesses risk for the Short Term Bond Portfolio by using duration. Duration is the weighted maturity of the security's cash flows, where the present values of the cash flows serve as weights.

For the MMDT Short Term Bond Portfolio, the duration fluctuated from 2.50 to 2.55 years. At June 30, 2019, investments in the MMDT Short Term Bond Portfolio had a total net position of \$780 million with investment maturities ranging from less than one year to ten years. At June 30, 2019, the Short Term Bond Portfolio's effective maturity schedule was as follows:

Securities with an Effective Maturity of	Percentage of Total Net Position
Less than one year.....	16.3%
One to five years	80.8%
Six to ten years.....	2.3%
Total*	99.4%

*The remaining 0.6% consists of cash equivalents and other assets.

Interest Rate Risk – Higher Education

As of June 30, 2019, the Institutions of Higher Education had debt investments stated at fair value of approximately \$343 million and had investment maturities ranging from less than one year to more than ten years, with approximately 23.6% of the investment's fair values maturing in less than 1 year, approximately 57.1% from one to five years, approximately 9.9% from six to ten years, and approximately 9.4% more than ten years.

Interest Rate Risk - MSBA

The MSBA's investment policy does not specifically limit investment maturities as a means of managing its exposure to fair value losses arising from interest rates. As of June 30, 2019, the MSBA had approximately \$200 million invested in a collateralized guaranteed investment contract and approximately \$532 million invested in U.S. Treasury Bonds and Municipal Bonds. These investments are included in restricted investments on the balance sheet. The guaranteed investment contract matures on August 15, 2030 while the U. S. Treasury Bonds and Municipal Bonds mature from 2027 to 2045. These investments represent approximately 68% of the MSBA's total investments in debt service funds and debt service reserve funds.

Interest Rate Risk – Agency Funds

The agency funds hold certain debt investments in trust as collateral for regulatory purposes. As of June 30, 2019, these investments had a fair value of approximately \$518 million, with investment maturities ranging from less than one year to more than ten years. Of the total fair value, approximately 11.0% has maturities of less than one year, 60.8% from one to five years, 15.7% from six to ten years and 12.5% greater than ten years.

Credit Risk – MMDT

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. The Commonwealth, exclusive of Pension Trust Funds, minimizes concentration of credit risk, the risk attributed to the magnitude of the investment in a single issuer. The Commonwealth's investment policy prohibits the Treasury from investing more than 5% of the total investment portfolio in any single financial institution or issuer, excluding various

public entity securities and repurchase agreements. However, there are no restrictions on the amount that can be invested in public entity securities and the portfolio may be invested in U.S. Treasury and other Government Sponsored Enterprises (GSE's) obligations and repurchase agreements.

The Treasury cash portfolio is invested only in First Tier Securities as defined by the Securities and Exchange Commission's Rule 2A-7 of the [Investment Company Act of 1940](#). The Treasury does have additional policies regarding credit ratings of investments which can be found at <http://www.mymmdt.com/MMDT/daf/pdf/products/regulatory/G44885-27.pdf>. At June 30, 2019, the Cash Portfolio's securities were all rated as First Tier.

At June 30, 2019, the Short Term Bond Portfolio's follows:

Portfolio Composition	Percentage of Total Net Position
AAA.....	69.8%
AA.....	3.6%
A.....	12.3%
BBB	13.7%
Total*	99.4%

* The remaining 0.6% consists of cash equivalents and other assets.

Credit Risk – Higher Education

For the Institutions of Higher Education presented in the Business-Type Activities, fair values of debt investments were approximately \$101 million at AAA, approximately \$69 million from AA+ to A- and approximately \$173 million either unrated, BBB+ or less.

Credit Risk – MSBA

The MSBA's investment policy generally limits investments in fixed income products with institutions that have an investment grade rating as determined by one of the nationally recognized rating agencies. The MSBA's policy requires issuers of investment contracts to be rated AA or above by at least two of the nationally recognized rating agencies or A with pledged collateral equal to 102% of the principal balance. As of June 30, 2019, the guaranteed investment contracts were not rated; however, the issuer was rated AA by Standard & Poor's and A2 by Moody's and the guaranteed investment contracts were collateralized.

As of June 30, 2019, the MSBA's investments in municipal bonds were rated AA+ or above.

Credit Risk – Agency Funds

The agency funds had debt investments with a fair value of \$518 million, of which approximately \$318 million were in U.S Government securities. Of the remaining \$200 million the majority were investment grade or above.

Interest Rate Risk – PRIT Funds

As pension and OPEB trust funds have a longer investment horizon than many of the Commonwealth's other investments, the PRIM Board manages PRIT's exposure to fair value loss arising from movements in interest rates by establishing duration guidelines with its fixed income investment managers. The guidelines with each individual manager require that the effective duration of the domestic fixed income investment portfolio be within a specified percentage or number of years of the effective duration band of the appropriate benchmark index. For emerging markets fixed income investments, the portfolio must have a duration with a band ranging from three to eight years.

Effective duration is a measure of a fixed income investment's exposure to fair value changes arising from changes in interest rates. Effective duration makes assumptions regarding the most likely timing and amounts of variable cash flows. These assumptions take into consideration factors indicative of investments highly sensitive to interest rate

changes, including callable options, prepayments and other factors.

The PRIM Board compares the effective duration of a manager's portfolio to their relevant benchmark including Bloomberg Barclays Capital Aggregate index, US Treasury STRIPS 20+ Year index, Bloomberg Barclays Capital US TIPS index, Barclays Capital Inflation Linked Bonds index, S&P LSTA Leveraged Loan index, JP Morgan Global Emerging Markets Bond index, JP Morgan Global Diversified Emerging Markets Bond index, and the Intercontinental Exchange Bank of America Merrill Lynch (ICE BofAML) High Yield index. The PRIT Fund had fixed income and short-term investments totaling approximately \$21.280 billion at fair value with an effective weighted average duration range from 0.14 to 16.03 years at June 30, 2019.

Credit Risk – PRIT Funds

The PRIM Board establishes credit investment guidelines with each of its fixed income securities investment managers in establishing a diversified portfolio. These guidelines vary depending on the manager's strategy and the role of its portfolio to the overall diversification of the PRIT fund. The guidelines for the PRIT Fund's core fixed income portfolio establish the minimum credit rating for any security in the portfolio and the overall weighted average credit rating of the portfolio. The guidelines for the PRIT Fund's high yield, fixed income portfolio establish a market value range of securities to be held with a specific minimum credit rating and the overall weighted average credit rating of the portfolio.

Credit risk for derivative instruments held by PRIT results from counterparty risk. PRIT is exposed to credit risk resulting from counterparties being unable to meet their obligations under the terms of the derivative agreements. The weighted average quality rating of the debt securities portfolio, excluding pooled investments, investments explicitly backed by the United States Government and other nonrated investments was BBB at June 30, 2019.

Credit ratings associated with the Commonwealth's investment in the PRIT Fund ranged from AAA to A- investments with a fair value of approximately \$2.333 billion, BBB+ to B- investments with a fair value of approximately \$2.963 billion, \$630 million rated CCC+ to D, \$8.10 billion are unrated, and the remaining \$7.463 billion are investments that are explicitly backed by the U. S. Government.

Foreign Currency Risk – PRIT Funds

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of investments. The Treasury does not have a policy regarding foreign currency risk for the Pension Trust. The PRIM Board manages PRIT's exposure to foreign currencies by hedging a percentage of PRIT's non-U.S. dollar denominated investments through forward foreign currency contracts. The PRIT Fund's investments in foreign currency denominated investments as of June 30, 2019 were approximately \$244 million in cash and short-term investments, \$13.634 billion in equities, \$1.127 billion in fixed income investments, \$490 million in portfolio completion strategies, \$1.136 billion in private equity investments and \$315 million in timber investments. An additional \$3.360 billion is invested in international investments denominated in U. S. dollars.

Concentration of Credit Risk – PRIT

The PRIM Board manages PRIT's exposure to concentration of credit risk by establishing guidelines with each investment manager that limit the percent of investment in any single issue or issuer. PRIT has no investments, at fair value, that exceed 5% of PRIT's net position held in trust for pool participants as of June 30, 2019.

A. DERIVATIVE INSTRUMENTS

PRIT may invest in derivative instruments. In accordance with GASB Statement No 53, *Accounting and Financial Reporting for Derivative Instruments*, PRIT's derivatives are accounted for as investment derivatives and are reported at fair value.

Forward Currency Contracts

PRIT enters into forward currency contracts to hedge the exposure to changes in foreign currency exchange rates on

foreign portfolio holdings. The fair value of the contracts will fluctuate with changes in currency exchange rates. Risks may arise from the potential inability of counterparties to meet the terms of their contracts and from unanticipated movements in the value of a foreign currency relative to the U.S. dollar.

The contracts are marked-to-market daily and the change in fair value is recorded as an unrealized gain or loss by PRIT.

When a contract is closed, PRIT records a realized gain or loss equal to the difference between the cost of the contract at the time it was opened and the value at the time it was closed.

As of June 30, 2019, PRIT had open foreign exchange contracts with combined net unrealized loss of approximately \$13 million with various delivery dates.

Further information on derivative instruments can be found in the notes to PRIT's basic financial statements.

Futures Contracts

PRIT may purchase and sell financial futures contracts to hedge against changes in the values of securities the fund owns or expects to purchase.

Upon entering such contracts, they must pledge to the broker an amount of cash or securities equal to a percentage of the contract amount.

The potential risk is that the change in the value of futures contracts may not correspond to the change in the value of underlying instruments, which may not correspond to the change in value of the hedged instruments. In addition, there is a risk that PRIT may not be able to close out its future positions due to a non-liquid secondary market. Risks may also arise from the potential inability of a counterparty to meet the terms of a contract and from unanticipated movements in the value of a foreign currency relative to the U.S. dollar.

PRIT may also invest in financial futures contracts for non-hedging purposes.

PRIT held contracts outstanding at June 30, 2019 with various expirations from FY20 to FY23. These contracts are for cash and cash equivalents, fixed income, equities and commodities. A portion of the contracts were short contracts. The aggregated notional exposure amount as of June 30, 2019 was approximately \$2.227 billion with a fair value of \$2.260 billion, yielding an unrealized net gain of approximately \$33 million.

Payments are made or received by PRIT each day, depending on the daily fluctuations in the value of the underlying security and are recorded as unrealized gains or losses. When the contracts are closed, the PRIT Fund recognizes a realized gain or loss.

Swaps – PRIT

PRIT has entered into swap agreements to gain exposure to certain markets and actively hedge other exposures to market and credit risk. The swap contracts are reported at fair value, which represents their estimated liquidation values on costs. PRIT either receives cash from the swap counterparties or pays the swap counterparties monthly depending on whether the fixed-rate interest is lower or higher than the variable-rate interest. Changes in fair value are included as part of investment income.

As of June 30, 2019, PRIT had contracts in effect with an aggregated notional amount of approximately \$315.606 billion to various investment banks that had maturity dates from FY20 to FY64. The contracts have an aggregate fair value gain of approximately \$97 million. PRIT values these contracts using standard methods and techniques including the discounted cash flow analysis and option pricing models.

PRIT's counterparty exposure was with various major investment companies with ratings ranging from AA- to A and various other banks with other ratings. Open swap contracts as of June 30, 2019 were as follows (amounts in thousands):

Counterparty	Credit Ratings	Interest Rate Swaps		Credit Default Swaps		Total Return and Other Swaps	
		Gross Notional	Fair Value	Gross Notional	Fair Value	Gross Notional	Fair Value
Citibank NA	A+	\$ 5,810	\$ —	\$ 6,178	\$ (295)	\$ 331,795	\$ 15,145
CME Group Inc.....	AA-	1,302,534	(4,548)	—	—	8,080	29
Credit Suisse	A	—	—	1,346,835	20,492	—	—
Goldman Sachs	A+	—	—	107,902	274	36,392	1,973
LCH Clearnet Ltd	AA-	608,982	(12,004)	—	—	339,948	(1,949)
Merrill Lynch	A+	—	—	24,280	(243)	2,288,028	78,094
Morgan Stanley	A+	—	—	274,194	(3,031)	597,467	40,941
SMBC Capital Markets Inc.....	A+	250,000	(9,271)	—	—	—	—
U.S. Bank National Association...	A+	500,000	(1,265)	—	—	—	—
All others.....	Various	306,323,741	(3,041)	946,263	(26,112)	307,913	1,648
Totals.....		<u>\$ 308,991,067</u>	<u>\$ (30,129)</u>	<u>\$ 2,705,652</u>	<u>\$ (8,915)</u>	<u>\$ 3,909,623</u>	<u>\$ 135,881</u>

B. DISCRETELY PRESENTED COMPONENT UNIT INVESTMENTS

Component units invest in derivative transactions. Detailed information on those transactions is found in the notes to the basic financial statements of those component units.

C. FAIR VALUE MEASUREMENTS OF INVESTMENTS

In accordance with GASB Statement No. 72, *Fair Value Measurement and Application*, the Commonwealth categorizes the fair value measurements of its investments within the fair value hierarchy established by GAAP. The fair value hierarchy categorizes the inputs to valuation techniques used for fair value measurement into three levels as follows:

- Level 1 - Inputs are quoted prices for identical investments in active markets.
- Level 2 - Observable inputs other than quoted market prices.
- Level 3 - Unobservable inputs.

The fair value hierarchy gives the highest priority to Level 1 inputs and the lowest priority to Level 3 inputs. In certain instances where the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy the level in the fair value hierarchy is based on the lowest level of input that is significant to the fair measurement.

Level 2 investments are categorized using various inputs that include, but are not limited to, pricing models, independent third party evaluated services, benchmarking yields, reported trades, broker-dealer quotes, issuer spreads and benchmarking securities among others.

The following tables present a summary of the fair value hierarchy of investments at June 30, 2019 (amounts in thousands):

<i>Primary government</i>	Total	Level		
		1	2	3
Debt securities:				
US Treasury and agency securities	\$ 608,940	\$ 601,474	\$ 7,466	\$ —
Municipal securities	110,307	18,376	91,931	—
Institutional money market funds	220,290	210,529	9,761	—
Corporate debt/bonds	83,631	592	82,997	42
Corporate stock	22,558	22,558	—	—
Asset backed securities	19,382	—	19,382	—
Registered investment companies	40,956	40,780	176	—
Mortgage backed securities	18,272	3,273	14,999	—
Other fixed income	137,307	137,307	—	—
Total debt securities	1,261,643	1,034,889	226,712	42
Equity securities	232,274	230,689	—	1,585
Other investments:				
REITS	20,615	20,615	—	—
Investments measured at the Net Asset Value (NAV):				
Commonfund (pooled investment funds)	353,437			
Private equity	25,599			
Private debt	18,834			
Private real estate	7,422			
Other	15,910			
Total investments measured at the NAV	421,202			
Other investments at fair value:				
MMDT - bond fund	365,733			
Subtotal investments at fair value	2,301,467	\$ 1,286,193	\$ 226,712	\$ 1,627
Other investments:				
Guaranteed investment contracts	206,251			
Certificates of deposit	7,678			
Other	490,518			
Total other investments	704,447			
Total investments - primary government	\$ 3,005,914			
Derivative instruments:				
Interest rate swaps (liabilities)	\$ 177,870	\$ —	\$ 177,870	\$ —

Included in the preceding schedule is approximately \$3 million of various money market mutual fund investments related to the business type activities which are classified as cash equivalents in the accompanying financial statements.

Lottery annuity contracts and U.S. Treasury Strips of approximately \$909 million as of June 30, 2019 is presented in governmental activities on the Statement of Net Position and also in the fiduciary funds as further explained in the Reconciliation of Fund Balances to the Statement of Net Position. In these fair value tables, the Lottery annuity contracts and U.S. Treasury Strips are presented solely in the fiduciary funds.

<i>Fiduciary funds:</i>	Total	Level		
		1	2	3
Debt securities:				
US Treasury securities	\$ 1,141,786	\$ 1,141,786	\$ —	\$ —
Bonds	116,901	32,484	84,417	—
Total debt securities	1,258,687	1,174,270	84,417	—
Investments measured at the Net Asset Value (NAV):				
Mutual funds	56,303			
Other investments at fair value:				
MMDT - bond fund	39,786			
Net investment in PRIT	74,831,427			
Total other investments at fair value	74,871,213			
Subtotal investments at fair value	76,186,203	\$ 1,174,270	\$ 84,417	\$ —
Other investments:				
Annuity contacts	111,389			
Total investments - fiduciary funds	\$ 76,297,592			

3. RECEIVABLES AND TAX ABATEMENTS

A. RECEIVABLES

Taxes, federal reimbursements, loans and other receivables are presented in the statement of net position, exclusive of amounts due from cities and towns and component units as follows (amounts in thousands):

<i>Primary Government</i>	Taxes Receivable	Federal Grants and Reimbursements	Loans	Other Receivables	Total
<u>Governmental Activities:</u>					
Gross receivables	\$ 5,081,865	\$ 2,039,129	\$ 94,305	\$ 1,581,015	\$ 8,796,314
Less: allowance for uncollectibles	(1,292,494)	(101,332)	—	(1,142,324)	(2,536,150)
Receivables, net allowance for uncollectibles	3,789,371	1,937,797	94,305	438,691	6,260,164
Less: current portion	(3,562,052)	(1,875,958)	(7,392)	(365,345)	(5,810,747)
Noncurrent receivables	\$ 227,319	\$ 61,839	\$ 86,913	\$ 73,346	\$ 449,417
<u>Business-Type activities:</u>					
Gross receivables	\$ —	\$ 21,045	\$ 62,073	\$ 1,177,464	\$ 1,260,582
Less: allowance for uncollectibles	—	—	(4,260)	(478,459)	(482,719)
Receivables, net allowance for uncollectibles	—	21,045	57,813	699,005	777,863
Less: current portion	—	(21,045)	(9,953)	(684,061)	(715,059)
Noncurrent receivables	\$ —	\$ —	\$ 47,860	\$ 14,944	\$ 62,804

B. TAX ABATEMENTS

As of June 30, 2019, the Commonwealth provided tax abatements through the following three programs: the Massachusetts Economic Development Incentive Program Credit (EDIP), Life Sciences Tax Incentive Program and the Film Tax Credit.

Economic Development Incentive Program

Under the Economic Development Incentive Program (EDIP), companies receive state and local tax incentives in exchange for job creation, manufacturing job retention and private investment commitments. On or after January 1, 2010 and before January 1, 2017, the Economic Assistance Coordination Council (EACC) may award to taxpayers up to 40% of the cost of qualifying properties as credits to certain certified projects ("expansion project", "enhanced expansion project", or a "manufacturing retention project"). The EACC may also award EDIP credits of up to \$1,000 per job (\$5,000 per job in gateway municipalities) to certified job creation projects. The total award for a project may not exceed \$1 million. On or after January 1, 2017, the credit is instead determined by the EACC based on factors set out in M.G.L. c. 23A, § 3D.

For tax years beginning on or after January 1, 2019, the EACC is authorized to establish a program to incentivize businesses to occupy vacant storefronts in downtown areas. Pursuant to this program, the EACC may award up to \$500,000 of available EDIP tax credits annually to businesses that occupy previously vacant storefronts. The businesses must commit to occupying the previously vacant storefront for a period of not less than one year.

The total dollar amount of the EDIP credit that may be used in a calendar year is \$30 million.

The taxes eligible for abatement using these credits include the corporate excise, financial institutions excise, insurance premiums excise and personal income tax, with tax payments reduced by applying the amount of the credits directly against the relevant calculation of tax liability as determined by the rules governing the particular tax to be abated.

For projects certified before January 1, 2017, if a project's certification is revoked, or if property upon which a certification is based is sold prior to the end of its useful life, the difference between the credit taken and the credit allowed for actual use must be added back as additional taxes due in the year of disposition, except if the property had been in qualified use for more than twelve consecutive years. For an expansion project where the actual number of permanent full-time employees employed by the controlling business at the project is less than 50% of the number of such permanent full-time employees projected in the project proposal, this shall be deemed a material variance for the purpose of a revocation determination. Upon such a revocation, all tax credits available to the controlling business as a result of project certification shall be revoked and forfeited for the year in which revocation occurred and all subsequent years, and the Commonwealth, in the case of a certified expansion project, shall recover the value of any tax credits received by the controlling business prior to or subsequent to such revocation.

For projects certified on or after January 1, 2017, recapture is required only if the EACC revokes certification. The amount of credit subject to recapture shall be proportionate to the corporation's job creation requirements applicable to the certified project. The corporation's proportion of compliance will be determined by the EACC as part of the revocation process and reported to DOR and the taxpayer at time of revocation.

Life Sciences Tax Incentive Program

The Massachusetts Life Sciences Center (MLSC) certifies and awards four types of tax abatements to life sciences companies, with the purpose of increasing Massachusetts' employment of companies in the life sciences sector of the economy. These abatements, which are 90%-refundable, together with other life sciences tax incentives, are subject to an aggregate \$25 million annual cap.

- The Life Sciences Investment Tax Credit is equal to 10% of the cost of qualifying property acquired, constructed, reconstructed or erected during the taxable year and used exclusively in Massachusetts.
- The Life Sciences User Fees Tax Credit is equal to 100% of the user fees paid to the U.S. Food and Drug Administration (USFDA) upon submission of an application to manufacture a human drug in Massachusetts, and may be claimed in the taxable year in which the application for licensure of an establishment to manufacture the drug is approved by the USFDA. To be eligible for the credit, more than 50% of the research and development costs for the drug must have been incurred in Massachusetts.

- Taxpayers seeking to claim a Life Sciences Jobs Tax Credit must commit to the creation of a minimum of 50 net new permanent full-time positions in Massachusetts. The amount of the credit is determined by the Life Sciences Center.
- The Life Sciences Center may authorize a life sciences company to obtain refunds of existing Research Credits. Generally, the Research Credit for research expenses incurred in Massachusetts is based on a formula that measures taxpayers' year-to-year increases in Massachusetts research expenses. See the regulations and public written statements cited below for a more detailed description of the formula.

Under each of these tax abatements, grantees agree to increase or maintain its employee headcount in Massachusetts, compared to the company's "baseline" employee headcount at the time of the award and the company's projected net increase in headcount in the tax year following award. Baseline and projected headcounts are summed to create a "total projected headcount" metric that is used for MLSC agreement and compliance purposes.

A company that has received tax incentives from the MLSC and subsequently fails to achieve the minimum net new headcount thresholds as specified in the MLSC's Annual Tax report and Multiple Awards policy will have the award terminated and must return the amount of the tax abatement claimed to the Commonwealth, although the company may be given an additional year to achieve the employment goals if the MLSC determines that it has the potential to meet those goals. The MLSC is required by statute to de-certify any company that fails to achieve at least 70% of its job target for two consecutive years. The MLSC has decided through administrative action that any company failing to achieve at least 80% of its job target by the end of any extension period and, in the case of the Life Sciences Job Incentive Refundable Credit, failing to create at least 50 net new jobs, will be de-certified. More information on these job creation and clawback requirements is available on the MLSC's website, <http://www.masslifesciences.com/programs/tax/>.

The taxes eligible for abatement using these credits include the corporate excise, financial institutions excise, insurance premiums excise and personal income tax, with tax payments reduced by applying the amount of the credits directly against the relevant calculation of tax liability as determined by the rules governing the particular tax to be abated.

Film Tax Incentive

Under M.G.L. c. 62, § 6(l) and M.G.L. c. 63, § 38X, the Department of Revenue is authorized to grant tax abatements to encourage the production in Massachusetts of motion pictures, television shows, and commercials. Entities that fund such productions (known under the statute as "motion picture production companies") may claim (1) a credit equal to 25% of the total qualifying aggregate payroll for employing persons within the Commonwealth in connection with filming and production of a motion picture and (2) a credit equal to 25% of their Massachusetts production expenses. Each credit has its own qualification requirements and a taxpayer is allowed to qualify for and claim both credits. The production companies must incur a minimum of \$50,000 in qualified expenses during a consecutive twelve-month qualification period. The credits are either transferable or 90% refundable to the motion picture production companies to the extent that the credits exceed the companies' Massachusetts tax liability. Transferees do not qualify for the 90%-refundability option.

The taxes eligible for abatement using these credits include the corporate excise, financial institutions excise, insurance premiums excise and personal income tax, with tax payments reduced by applying the amount of the credits directly against the relevant calculation of tax liability as determined by the rules governing the particular tax to be abated. There is no cap on the amount of the credits.

There are no provisions in statute to recapture the film tax credits.

In addition to the tax credit, sales of tangible personal property to a qualifying motion picture production company or to an accredited film school student for the production expenses related to a school film project are exempt from the sales tax. In order to qualify for the sales tax exemption, a motion picture production company must incur at least \$50,000 in total production costs in Massachusetts during a consecutive 12 month period and must be conditionally pre-approved as a qualifying company by the Commissioner of Revenue. Any taxpayer that has been conditionally pre-approved for the sales tax exemption that then fails to expend the requisite \$50,000 within a consecutive 12 month period shall be liable for the sales taxes that would have been due had the conditional pre-approval not been granted.

The following is the total revenue estimated to be reduced under these programs for fiscal year 2019 (amounts in thousands):

Tax abatement program	Total estimated revenue reduced by
Economic Development Incentive Program (EDIP)	\$ 40,198 ⁽¹⁾
Life Sciences Tax Incentive Program	20,000 ⁽²⁾
Film Tax Incentive Program:	
Film Tax Credit	25,876 ⁽³⁾
Sales Tax Exemption	323 ⁽⁴⁾
Total	<u>\$ 86,397</u>

Sources:

(1) Massachusetts Office of Business Development, credits approved in FY2019.

(2) <http://www.masslifesciences.com/baker-polito-administration-announces-job-creation-incentives-for-27-massachusetts-life-sciences-companies/#more-8328>, incentives awarded in FY2019.

(3) Massachusetts Department of Revenue, film tax credits approved during FY2019.

(4) Massachusetts Department of Revenue, FY2020 Tax Expenditure Budget, sales tax exemption approved to motion picture production companies or to accredited film school students during FY2019 (<https://www.mass.gov/doc/2020-tax-expenditure-budget/download> or https://budget.digital.mass.gov/bb/h1/fy20h1/tax_20/items/htax3004.htm).

4. INTERFUND RECEIVABLES, PAYABLES AND TRANSFERS BETWEEN FUNDS

The purposes of interfund receivables, payables and transfers between funds vary by legislative authority. Transfers include the following: intergovernmental services, fringe benefit cost assessments, the year-end Stabilization Fund transfer, certain license fees collected by the Registry of Motor Vehicles that fund various highway project initiatives, fund closure transfers, and various other transfers for operations, largely for Institutions of Higher Education.

Activity between funds reflected as due to/from primary government in the various statements is summarized as follows (amounts in thousands):

	General	Lotteries	Other Governmental Funds	Total
Governmental funds:				
<u>Transfers in:</u>				
Debt service	\$ —	\$ —	\$ 2,486,460	\$ 2,486,460
Transfers in	2,013,062	—	1,643,973	3,657,035
Subtotal	2,013,062	—	4,130,433	6,143,495
<u>Transfers out:</u>				
Appropriations	(1,509,596)	—	(5,656)	(1,515,252)
Transfer of bond proceeds.....	—	—	(115,421)	(115,421)
Debt service	(1,220,266)	—	(1,266,194)	(2,486,460)
Transfers out	(919,800)	(1,206,850)	(1,465,644)	(3,592,294)
Subtotal	(3,649,662)	(1,206,850)	(2,852,915)	(7,709,427)
Total governmental funds.....	\$ (1,636,600)	\$ (1,206,850)	\$ 1,277,518	(1,565,932)
Proprietary funds:	University of Massachusetts	State Universities	Community Colleges	Total
<u>Transfers in:</u>				
Transfers in from the General Fund and other governmental funds.....	\$ 780,077	\$ 392,925	\$ 457,671	1,630,673
<u>Transfers out:</u>				
Transfers out to the General Fund.....	(40,075)	(13,984)	(10,682)	(64,741)
Total proprietary funds	\$ 740,002	\$ 378,941	\$ 446,989	1,565,932
Net transfers in/(out) between funds				\$ —

Due to/from component units on the Statement of Net Position reflects a timing difference for payments of approximately \$42 million at year end.

Remaining receivables and payables between funds as of June 30, 2019 largely occur due to the timing of accruals and the funding of escrows. The University of Massachusetts also reported unremitted benefits costs as of June 30, 2019. The amount due to the General Fund largely represents deficits funded by the General Fund. The following is a summary of receivables and payables between funds remaining as of June 30, 2019 (amounts in thousands):

Receivable Fund	Payable Fund	Amount
Governmental Funds:		
General	Non-major Governmental Funds	\$ 190,540
Non-major Governmental Funds	Non-major Governmental Funds	73,344
Total Governmental Funds		\$ 263,884

5. CAPITAL ASSETS

Capital asset activities for both governmental and business-type activities were as follows (amounts in thousands):

<i>Governmental Activities</i>	Beginning Balance July 1, 2018	Increases	Decreases and Reclassifications	Ending Balance June 30, 2019
Capital assets not being depreciated:				
Land.....	\$ 914,565	\$ 18,629	\$ (42)	\$ 933,152
Construction in process	659,462	122,248	(173,561)	608,149
Total capital assets not being depreciated	1,574,027	140,877	(173,603)	1,541,301
Capital assets being depreciated:				
Buildings	5,957,369	191,283	(4,319)	6,144,333
Machinery and equipment	1,758,838	101,692	(64,684)	1,795,846
Infrastructure non - central artery/tunnel project	409,079	27,924	—	437,003
Total capital assets being depreciated.....	8,125,286	320,899	(69,003)	8,377,182
Less, accumulated depreciation:				
Buildings	(3,373,341)	(103,027)	4,144	(3,472,224)
Machinery and equipment	(1,274,404)	(136,555)	50,293	(1,360,666)
Infrastructure non - central artery/tunnel project	(267,879)	(10,184)	—	(278,063)
Total accumulated depreciation.....	(4,915,624)	(249,766)	54,437	(5,110,953)
Total capital assets being depreciated, net.....	3,209,662	71,133	(14,566)	3,266,229
Governmental activities capital assets, net.....	4,783,689	212,010	(188,169)	4,807,530
 <i>Business - Type Activities</i>				
Capital assets not being depreciated:				
Land.....	227,757	1,701	(680)	228,778
Construction in process	851,126	434,282	(765,466)	519,942
Historical treasures	1,464	1,042	(1,487)	1,019
Total capital assets not being depreciated	1,080,347	437,025	(767,633)	749,739
Capital assets being depreciated:				
Buildings	10,486,014	809,648	(35,340)	11,260,322
Machinery and equipment	1,150,211	68,225	(30,976)	1,187,460
Library collections, not including historical treasures	72,166	1,034	(8,534)	64,666
Total capital assets being depreciated.....	11,708,391	878,907	(74,850)	12,512,448
Less, accumulated depreciation:				
Buildings	(4,082,109)	(357,397)	44,928	(4,394,578)
Machinery and equipment	(883,703)	(64,423)	4,146	(943,980)
Library collections, not including historical treasures	(15,479)	(623)	480	(15,622)
Total accumulated depreciation.....	(4,981,291)	(422,443)	49,554	(5,354,180)
Total capital assets being depreciated, net.....	6,727,100	456,464	(25,296)	7,158,268
Business - type activities capital assets, net	7,807,447	893,489	(792,929)	7,908,007
Total Primary Government capital assets, net.....	\$ 12,591,136	\$ 1,105,499	\$ (981,098)	\$ 12,715,537

Depreciation expense was charged to the various functions of governmental and business-type activities as follows (amounts in thousands):

Function	Amount
General government.....	\$ 128,655
Judiciary.....	18,965
Health and human services	26,439
Early elementary and secondary education	3,641
Public safety and homeland security	63,611
Housing and economic development.....	43
Labor and workforce development.....	8,412
Total depreciation, governmental activities	<u>\$ 249,766</u>
University of Massachusetts	\$ 276,495
State universities	103,800
Community colleges	42,148
Total depreciation, business-type activities.....	<u>\$ 422,443</u>

6. SHORT-TERM FINANCING AND CREDIT AGREEMENTS

Massachusetts General Laws authorize the Treasurer to issue temporary notes in anticipation of revenue or bond financing. Short-term borrowing may be issued as fixed rate notes, floating rate notes or through a commercial paper program supported by bank liquidity facilities maintained by the Commonwealth. Per the State Constitution, revenue anticipation notes (RANs) issued for cash flow purposes are required to be paid within the same fiscal year. Temporary financings for capital needs, such as bond anticipation notes, may be outstanding for up to three years, per statute.

A. GENERAL FUND

The balance of revenue anticipation notes (RANs) and commercial paper outstanding may fluctuate during a fiscal year, but all short-term borrowing for cash flow purposes must be reduced to zero by June 30. For short-term borrowing for cash flow purposes, the Commonwealth borrowed \$1.5 billion by selling RANs in August, 2018 in three separate \$500 million series which were retired in April, May and June 2019.

The following schedule details short-term financing for all funds for the fiscal year (amounts in thousands):

	July 1, 2018 Beginning Balance	Issued/ Drawn	Redeemed/ Repaid	June 30, 2019 Ending Balance
General Fund:				
Revenue anticipation notes.....	<u>\$ —</u>	<u>\$ 1,500,000</u>	<u>\$ (1,500,000)</u>	<u>\$ —</u>

B. CREDIT FACILITIES

During FY19, the Commonwealth maintained credit facilities to provide liquidity support for commercial paper notes totaling \$400 million. The Commonwealth started FY19 with two credit facilities to provide such liquidity support. One facility with TD Bank (\$200 million) was set to expire in FY18 and was extended to April 18, 2023, while the other facility with State Street Bank (\$200 million) expired in FY19. In lieu of replacing or extending that facility the Commonwealth entered into a note purchase agreement to issue general obligation tax exempt bonds or revenue anticipation notes up to \$200 million with RBC Capital Markets, LLC. In addition to credit facilities for commercial paper, the Commonwealth maintained standby bond purchase agreements for outstanding Variable Rate Demand Bonds (VRDBs) sold from (FY01 through FY06). These VRDBs require external liquidity support because bond-holders have the right to tender the bonds back to the Commonwealth at par at any time. As of June 30, 2019, these agreements totaled \$483 million, were unused and will expire on various dates in FY21 through FY23.

7. LONG-TERM OBLIGATIONS

Section 1 of Article 62 of the Massachusetts Constitution empowers the State Legislature to borrow money on the credit of the Commonwealth for various public purposes. Under the State Constitution, the Commonwealth may pledge its credit to borrow money only by a vote of two-thirds of each house of the Legislature. Borrowed funds may be used for defense of the State or of the United States, and 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.” The Legislature may not in any manner allow the Commonwealth’s credit to 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 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.

Statutorily, the authority to borrow is delegated to the Massachusetts State Treasurer & Receiver General pursuant to Chapter 29 of the Massachusetts General Laws. Section 49 of Chapter 29 of the Massachusetts General Laws is the primary statute governing the issuance of Commonwealth debt and contains a number of provisions spelling out the process for the issuance of bonds.

The issuance of bonds to fund the Commonwealth’s capital needs must be authorized by the Legislature. Pursuant to legislative authorizations to borrow, the Governor determines the amount and timing of any authorized borrowing to fund capital investments. At the request of the Governor, the State Treasurer & Receiver General borrows by issuing bonds to the public. The Governor approves the use of the bond proceeds by agencies to pay for authorized and budgeted capital projects.

Massachusetts General Law provides for the allocation of bond proceeds to bond authorizations and capital spending in arrears (as needed), as expenditures are made, or at the time of issuance of the bonds. In general, bond proceeds are primarily allocated to capital spending that has already occurred. When allocating in arrears, the allocation of segregated bond proceeds is a reimbursement to the General Fund.

Bond proceeds that are awaiting allocation are typically invested by the State Treasurer in the Commonwealth’s primary investment vehicle, the Massachusetts Municipal Depository Trust (MMDT) (for more information please see the notes on the Commonwealth’s short-term investments). Bond proceeds are segregated from other funds until they are allocated to capital expenditures, a process that requires review by the Commonwealth’s bond counsel.

The Commonwealth has waived its sovereign immunity and consented to be sued on contractual obligations, including bonds and notes issued by it and all claims with respect hereto. 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 the payment of principal or interest on bonds and notes of the Commonwealth may also be subject to the provisions of federal or Commonwealth statutes, if any, enacted to extend the time for payment or impose other constraints upon enforcement. The Commonwealth cannot file for bankruptcy under the United States Bankruptcy Code.

As of June 30, 2019, the Commonwealth had issued two types of long-term debt obligations: general obligation bonds and special obligation bonds. General obligation bonds, which account for the large majority of outstanding Commonwealth bonds, are backed by the full faith and credit of the Commonwealth. Special obligation bonds, however, are bonds secured by all or a portion of a specific revenue source that are pledged to bondholders and are not general obligations of the Commonwealth. For this type of securities, bondholders rely on pledged revenue only for repayment of principal and interest.

The following is a summary of the Commonwealth's outstanding debt, exclusive of capital leases, (amounts in thousands):

Type of Bond	Amount Outstanding
General obligation bonds - public offering, net proceeds	\$ 25,149,764
General obligation bonds - direct placement, net proceeds	581,285
Special obligation bonds (including GANs) - public offering, net proceeds	4,488,267
Outstanding Commonwealth bonds, net proceeds	30,219,316
MSBA bonds, - public offering, net proceeds	6,641,520
Total governmental activities, net proceeds	36,860,836
Less:	
Unamortized premiums on general obligation bonds - public offering*	(2,054,953)
Unamortized premiums on special obligation bonds	(425,142)
Unamortized premiums on MSBA bonds	(586,526)
Total governmental activities, principal	\$ 33,794,215

* - As of June 30, 2019 there were no unamortized premiums on direct placement GO bonds.

The general obligation (GO) bonds listed in the table above include outstanding tax-exempt bonds, taxable bonds including Build America Bonds, College Opportunity Bonds, and debt assumed from former counties. The special obligation (SO) bonds listed above include outstanding tax-exempt and taxable bonds (including Build America Bonds and Recovery Zone Economic Development Bonds) secured by indentures that legally define the specific revenues pledged to bondholders, as defined in the trust agreement. This includes outstanding bonds or notes secured by Federal Highway funds to be received by the Commonwealth, certain portions of the Commonwealth's motor fuel excise taxes and Registry of Motor Vehicle fees, and dedicated taxes and fees levied in certain geographic areas of the state to support the Commonwealth's convention center facilities. As of June 30, 2019, there were four different special obligation bond programs with bonds outstanding. It should be noted that one of the four bond programs has a closed lien, meaning that no additional new-money bonds will be issued under that specific special obligation bond indenture.

The following is a table of GO bonds principal outstanding as of June 30, 2019, (amounts in thousands):

General Obligation Bonds	Principal Outstanding	Percent of Total GO
Fixed rate bonds	\$ 21,188,024	89.5%
Variable rate bonds	2,488,072	10.5%
Total	\$ 23,676,096	100.0%

The following is a table of the different types of outstanding variable rate GO bonds, (amounts in thousands):

Variable Rate GO Bonds	Principal Outstanding	Percent of Total GO
Direct purchase bonds	\$ 518,285	2.2%
LIBOR index bonds.....	751,320	3.2%
Variable rate demand bonds.....	482,955	2.0%
Multi-Modal	400,000	1.7%
SIFMA index bonds.....	88,490	0.4%
College opportunity bonds	150,927	0.6%
CPI-index bonds	96,095	0.4%
Total	<u>\$ 2,488,072</u>	<u>10.5%</u>

The following is a table of hedged and unhedged variable rate GO bonds, (amounts in thousands):

	Principal Outstanding	Percent of Total GO
Hedged variable rate GO bonds	\$ 1,060,690	4.5%
Unhedged variable rate GO bonds ..	1,427,382	6.0%
Total variable rate GO bonds.....	<u>\$ 2,488,072</u>	<u>10.5%</u>

The following is a table of SO bond principal, by rate structure, outstanding as of June 30, 2019, (amounts in thousands):

Special Obligation Bonds	Principal Outstanding	Percent of Total SO
Fixed rate bonds	\$ 4,009,100	98.7%
Variable rate bonds	54,025	1.3%
Total	<u>\$ 4,063,125</u>	<u>100.0%</u>

All of the variable rate special obligation bonds are hedged as of June 30, 2019.

The following is a table of the different types of outstanding Special Obligation bonds (amounts in thousands):

Special Obligation Bonds	Amount Outstanding
Special obligation dedicated tax revenue bonds, net proceeds:	
Fixed rate convention center bonds	\$ 527,635
Special obligation revenue bonds, net proceeds:	
Fixed rate gas tax bonds	26,905
CPI variable rate gas tax bonds	54,025
Total gas tax bonds, net proceeds	80,930
Special obligation revenue bonds, net proceeds:	
Accelerated bridge program	1,801,363
Rail enhancement program	1,254,234
Total revenue bonds, net proceeds	3,055,597
Special obligation GANS, net proceeds:	
Federal highway grant anticipation notes and accelerated bridge program	824,105
Total special obligation bonds, net proceeds	4,488,267
Less: unamortized premiums	(425,142)
Outstanding special obligation principal	<u>\$ 4,063,125</u>

A. GENERAL OBLIGATION BONDS

General obligation bonds are authorized and issued primarily to provide funds for the Commonwealth's five-year capital improvement program (CIP), including capital infrastructure projects throughout the state as well as Commonwealth-supported local government capital improvements. The five-year plan is developed by the Executive Office for Administration and Finance (A&F) and updated annually. The CIP is primarily funded through the issuance of bonds that are sold by the State Treasurer and Receiver General. The Commonwealth borrows from the capital markets by selling GO bonds and notes pursuant to Chapter 29 of the Massachusetts General Laws. GO bonds are backed by the full faith and credit of the Commonwealth and are paid from the Governmental Funds, to which debt service principal and interest payments are appropriated in the state's operating budget.

In addition to GO bonds issued to fund the state's capital needs, certain bonds are approved by the Legislature to be issued for a specific program. These bonds, known as College Opportunity Bonds, are issued pursuant to statute directly to the Massachusetts Educational Financing Authority for its pre-paid tuition program called the "U.Plan". As of June 30, 2019, the Commonwealth had approximately \$151 million in "U. Plan" bonds (at accreted value) outstanding. Pursuant to statute, all of the outstanding bonds are variable rate bonds. Interest on the bonds is based on the percentage change in the consumer price index plus 2.0% together with current interest at the rate of 0.5%.

In terms of bond structure, the large majority of GO bonds have been sold as fixed rate obligations. As of June 30, 2019, approximately 89.5% of the Commonwealth's outstanding GO debt is in the form of fixed-rate bonds. The remaining 10.5% of outstanding GO debt is in the form of variable rate bonds – bonds whose rate of interest fluctuate based on market or market index changes. The outstanding GO variable rate debt consists of several different variable rate structures. These structures include floating rate notes in various interest rate modes, direct purchase agreements in various interest rated modes, multi-modal bonds currently in the Term Mode, and variable rate demand bonds. Variable rate demand bonds, or "VRDBs", are long-term bonds whose interest rates re-set daily or weekly through an active remarketing process. Because these bonds provide bondholders with a "put" or tender feature enabling the bonds to be sold back to the Commonwealth at par at any time by an investor, they are supported by standby liquidity facilities provided by third-party commercial banks which require the applicable bank to purchase any bonds that are tendered

by investors and not successfully remarketed. As of June 30, 2019, the Commonwealth had approximately \$483 million in outstanding VRDBs. This accounts for approximately 2.0% of total GO debt and approximately 19.4% of total GO variable-rate debt. All of these bonds are uninsured. As of June 30, 2019, none of the Commonwealth's outstanding VRDBs have been subject to failed remarketing and "put" back to the Commonwealth; consequently, there have not been any draws on any of the outstanding bank liquidity facilities.

A portion of the Commonwealth's outstanding bonds have been directly purchased by banks (or "direct purchase bonds"). These variable rate, direct purchase bonds bear interest at an index rate and are payable on the first business day of each month until maturity. As of June 30, 2019, the Commonwealth had \$518 million direct purchase bonds outstanding.

The following table details the general obligation direct purchase bonds (amounts in thousands):

Series	Par Outstanding	Final Maturity	Reset Mode/ Payment Frequency	Direct Purchase Bank	Direct Purchase Agreement Date	Direct Purchase Expiration Date
2016 Series C.....	\$ 200,000	4/1/2046*	1 Month LIBOR/ Monthly Pay	State Street	5/12/2016	4/1/2021
2001 Series B Refunding Bonds	97,920	1/1/2021	1 Month LIBOR/ Monthly Pay	TD Bank	8/1/2017	1/1/2021
2016 Series B.....	100,000	4/1/2036*	1 Month LIBOR/ Monthly Pay	TD Bank	5/10/2016	4/1/2021
2018 Series A Refunding Bonds.....	120,365	2/1/2021	1 Month SIFMA/ Monthly Pay	RBC Capital	1/30/2018	2/1/2021
Total	<u>\$ 518,285</u>					

* - These issuances have a mandatory tender prior to their final maturity Put dates.

The remaining outstanding GO variable-rate debt pays interest to bondholders based on certain indices. For example, as of June 30, 2019, the Commonwealth had approximately \$96 million of bonds that pay interest based on the consumer price index (CPI); \$751 million of bonds that pay interest based on the three-month London Interbank Offered Rate (LIBOR); \$88 million of bonds that pay interest based on the Securities Industry and Financial Markets Association (SIFMA) Index, and \$400 million in Multi-Modal bonds. These bonds make up approximately 0.4%, 3.2%, 0.4% and 1.7% of total outstanding general obligation indebtedness, respectively.

To fund the FY19 capital budget and prior capital spending, the Commonwealth borrowed by issuing \$1.808 billion in new money long-term bonds, all of which was general obligation debt. In addition, \$819 million in current refunding bonds were issued in four separate transactions. These transactions were executed for savings. The present value savings of the refunding transactions are immaterial to these financial statements.

MSBA Debt

As of June 30, 2019, the MSBA had outstanding approximately \$6.642 billion of Dedicated Sales Tax bonds, which includes approximately \$587 million of unamortized premiums for the purpose of funding school construction and renovation projects. Coupons on the bonds range from approximately 3.00% to 5.715% and each series is payable semiannually with the latest maturity occurring in FY48. A portion of the interest on the Dedicated Sales Tax Bonds is reimbursed by the federal government. Of the \$6.055 billion of debt outstanding as of June 30, 2019, \$450 million is taxable Build America Bonds for which the MSBA is eligible to receive a 35% interest subsidy directly from the United States Treasury. In addition, \$293 million of the Subordinated Dedicated Sales Tax Bonds was issued as "Qualified School Construction Bonds" for which the MSBA is eligible to receive a 100% interest subsidy payment directly from the United States Treasury. During FY19, the federal government continued automatic budget cuts imposed through sequestration required pursuant to the Budget Control Act of 2011. On September 30, 2013, the IRS published a notice indicating that subsidy payments processed on or after October 1, 2013 and on or before September 30, 2014 will be reduced by the FY14 sequestration rate of 7.2%. The notice was updated in September 2014 to announce that subsidy payments processed on or after October 1, 2014 and on or before September 30, 2015 will be reduced by the FY15 sequestration rate of 7.3%. The subsidy payments made between October 1, 2015 and September 30, 2016

were reduced by the FY16 sequestration rate of 6.8%. The subsidy payments made between October 1, 2016 and September 30, 2017 were reduced by the FY16 sequestration rate of 6.9%. The subsidy payments made between October 1, 2017 and September 30, 2018 were reduced by the FY17 sequestration rate of 6.6%. The IRS announced that the sequestration rate for the federal fiscal year ending September, 2019 would be 6.2%. The notice states that the sequestration reduction rate will be applied unless and until a law is enacted that cancels or otherwise modifies the sequester. The reductions were approximately \$2 million on the 2009 Series B Bonds, 2010 Series A Bonds and 2011 Series A Bonds in FY19.

B. SPECIAL OBLIGATION BONDS

Commonwealth Transportation Fund (CTF)

The largest amount of special obligation bonds outstanding (by par) are bonds secured by certain revenues of the Commonwealth Transportation Fund (CTF), with no new bonds issued during FY19. These bonds mature from FY20 to FY48 and are secured by a senior lien on 17 cents of the total 24 cents per gallon gasoline tax, the full 24 cents per gallon of special fuels taxes (comprised primarily of taxes on diesel fuel), and the full 19.1% of the average price per gallon tax on liquefied natural gas and all Registry of Motor Vehicle fees deposited into the CTF. These bonds also have a subordinate lien on 6.86 cents of the 24 cent per gallon gasoline tax not included in the senior lien. As of June 30, 2019, approximately \$1.665 billion and \$1.105 billion in principal was outstanding on the ABP and REP bonds, respectively, and approximately \$1.122 billion and \$967 million of interest (net of the federal subsidy) was expected to be paid through maturity related to the ABP and REP bonds, respectively.

Motor Fuels Tax Bonds

Other special obligation bonds for highway construction purposes are secured by a senior lien on 6.86 cents of the 24 cent per gallon gasoline tax. As of June 30, 2019 bonds secured by these pledged funds totaled approximately \$81 million of principal. These bonds mature from FY20 to FY22 and were issued in multiple series. Principal and interest paid during FY19 amounted to approximately \$24 million and \$6 million, respectively.

Convention Center Fund

Chapter 152 of the Acts of 1997, as amended, authorized \$694 million of special obligation bonds to be issued for the purpose of building a new convention center in Boston (\$609 million), the Springfield Civic Center (\$66 million) and the Worcester Convention Center (\$19 million). The bonds are payable from monies credited to the Convention Center Fund created by that 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%). As of June 30, 2019, taxes within the Convention Center districts support approximately \$528 million of outstanding principal and approximately \$261 million of interest on debts related to these Convention Centers. Taxes collected in FY19 were approximately \$161 million, while debt service on the bonds was approximately \$55 million.

C. FEDERAL GRANT ANTICIPATION NOTES

All federal highway reimbursements are dedicated to funding the principal portion only of federal grant anticipation notes (GANs) issued in fiscal 2011, 2014, 2015, 2017 and 2018 with no new bonds issued in FY19. As of June 30, 2019, total principal remaining to be paid is approximately \$685 million. Maturities are from FY20 through FY27. Debt service paid during FY19 was approximately \$100 million.

The legislation authorizing such notes contains a statutory covenant that as long as any such GANs remain outstanding, the Commonwealth will deposit all federal highway reimbursements into the Grant Anticipation Note Trust Fund, to be released to the Commonwealth once all the debt service and reserve funding obligations of the trust agreement

securing the GANs have been met. Principal amortization of the notes will continue through FY27. Such notes and the interest thereon are secured by the pledge of federal highway construction reimbursement payments and by a contingent pledge of certain motor fuels excises. In practice, the interest on such notes has been paid from Commonwealth appropriations.

D. THE BUILD AMERICA BOND PROGRAM

As part of the federal America Recovery and Reinvestment Act (ARRA) in 2009, municipal issuers were authorized to issue taxable bonds to fund new capital expenditures and receive an interest rate subsidy from the U.S. Treasury. As part of the temporary Build America Bond (BABs) program issuers, including the Commonwealth, issued taxable bonds in calendar years 2009 and 2010 in return for a subsidy from the federal government equal to 35% to 45% of the interest costs on the bonds, depending on whether the proceeds were used for projects in economically distressed areas. Between the GO bond program and the special obligation bond programs, the Commonwealth issued a total of \$2.791 billion in Build America Bonds and Recovery Zone Economic Development Bonds in six separate financings over the two-year period of the program. All of the bonds were issued as “direct pay to issuer”, meaning that the interest rate subsidies would be paid to the Commonwealth from the U.S. Treasury and not pledged to bondholders. As of June 30, 2019, the expected interest rate subsidy to be received through final maturity of all of the bonds issued as part of this program totaled \$611 million. The Commonwealth’s repayment obligation to bondholders is based on the gross interest rate. From a budgetary perspective, the bonds’ debt service is net of the interest-rate subsidy.

Given the interest rate subsidy from the U.S. Treasury and given market conditions at the time of the Commonwealth’s BABs sales, this program resulted in borrowings whose net interest costs will be significantly lower than the interest on traditional tax-exempt bonds. The BABs program expired on December 31, 2010.

E. INTEREST RATE SWAP AGREEMENTS – OBJECTIVES AND RISKS

Prior to 2008, the Commonwealth had periodically entered into interest rate swap agreements for the sole purpose of hedging interest-rate risk on a portion of its outstanding variable rate bonds. By synthetically fixing the interest rates via the swap agreement this generally resulted in lower interest costs than traditional fixed rate bonds. Of the Commonwealth’s variable-rate debt (including special obligation bonds) outstanding of approximately \$2.542 billion, approximately \$1.115 billion was hedged via floating-to-fixed interest rate swap agreements. Of this amount, \$1.061 billion are for G.O. bonds and the remainder on outstanding special obligation bonds.

In connection with the issuance of variable rate GO refunding bonds in 1998, 2001, 2003, 2005, 2006, and 2007, the Commonwealth entered into interest rate swap hedge agreements with certain counterparties to hedge against the volatility of the interest rates on certain bonds whose interest costs were floating and not fixed. Additional swap agreements were entered into to hedge this same volatility on certain special obligation bonds, including the Commonwealth’s Series 2005 Special Obligation Tax Revenue (Gas Tax) Bonds. Since 2008, the Commonwealth has not entered into any new swap agreements and has restructured its swap portfolio to novate or transfer several outstanding swap agreements to new counterparties with stronger credit ratings following the financial crisis of 2008. In many cases, the original bonds that were hedged by the swap agreements have been refinanced with new variable rate bonds. In all cases, the new bonds that were issued are effective hedges pursuant to GASB Statement No. 53.

In addition, a floating-to-fixed rate swap agreement was novated or transferred to the Commonwealth from the Route 3 North Transportation Improvements Association (secured by Commonwealth Contract Assistance) in November 2008 after the lease revenue bonds associated with that swap experienced remarketing failure. The swap was assigned to a portion of the Commonwealth’s previously unhedged variable rate bonds that were outstanding.

Under the terms of these floating-to-fixed rate hedge agreements, counterparties to the hedge agreements are obligated to pay the Commonwealth an amount equal to or approximately equal to the variable-rate interest payment to bondholders of the related bonds or an interest payment based on a market index. In return, the Commonwealth is obligated to pay counterparties a stipulated fixed rate. The floating rate payments received by the Commonwealth from its swap counterparties are used to offset the variable rate payments paid to bondholders. Only the net difference in interest payments is actually exchanged with the swap counterparty. The net payments made or received on these hedge

agreements are reported as part of interest expense recorded in the Commonwealth's basic financial statements. In all cases, the Commonwealth remains responsible for making interest payments to the variable rate bondholders.

Objective of the Interest Rate Swap Agreements

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. But in both scenarios, the net obligation of the Commonwealth is essentially fixed through the life of the swap and bonds. As of June 30, 2019, all of the Commonwealth's interest rate swaps were floating-to-fixed rate agreements and were deemed effective hedges pursuant to GASB Statement No. 53.

Terms of the Interest Rate Swap Agreements

The variable rate bonds and their related swap agreements have final maturities ranging from 2020 to 2033. The swaps' total notional value of approximately \$1.115 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 3.810% 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 which are generally based on a market index. For almost all of the outstanding swap agreements, the Commonwealth receives an interest rate based on changes to LIBOR, the SIFMA index, or the CPI index. In some of these agreements, the variable rate payment to bondholders is exactly equal to the variable rate payment received from the swap counterparty. In other agreements, there is a slight differential in the payments resulting from refinancing of variable rate bonds. One of the agreements is a which is not linked to a variable rate index is a Cost of Funds swap where the swap counterparty pays the exact cost of the funds of the underlying variable rate bond.

Credit Risk of the Interest Rate Swap Agreements

As of June 30, 2019, the Commonwealth is not exposed to credit risk because the swaps had a negative fair value. Should interest rates change and the fair value of the swaps become positive, the Commonwealth would be exposed to credit risk in the amount of the swaps fair value. All of the Commonwealth's counterparties are required to post collateral in certain circumstances, including credit rating downgrades. The Commonwealth is not required to post collateral in any of its existing swap agreements.

The chart below details the Commonwealth's outstanding swaps and related bond issuances (amounts in thousands except for percentages).

Associated Bond Issue	Notional Amounts Outstanding	Effective Date	Replacement Agreement Effective Date	Terms		Fair value at June 30			Final Termination Date	Counterparty	Counterparty Credit Rating Moody's/S&P/ Fitch	
				Fixed Rate Paid (Range)	Variable Rate Received	2019	2018	Change in Fair Value				
<u>General Obligation Bonds</u>												
Series 2000A	\$ —	8/16/2007	8/16/2007	3.942%	SIFMA - 3 basis points	\$ —	\$ (69)	\$ 69	8/1/2018	Merrill Lynch Capital Services	NR/A3/A+	
Series 2000A	—	8/16/2007	8/16/2007	3.942%	SIFMA - 3 basis points	—	(34)	34	8/1/2018	JP Morgan formerly Bear Stearns	A+/Aa3/AA	
Series 2001B & C refunding	195,840	2/20/2001	2/20/2001	4.15%	Cost of Funds	(6,009)	(10,760)	4,751	1/1/2021	Morgan Stanley Capital Services	NR/WR/-	
Series 2016C, portion of Series 2016B	268,345	4/2/2009	4/2/2009	4.515%	67% 3- Month LIBOR	(64,493)	(54,556)	(9,937)	6/15/2033	Barclays Bank PLC	A/A2/A+	
Series 2006C refunding	96,095	1/1/2007	1/1/2007	3.81% - 3.85%	CPI-based formula	(920)	(894)	(26)	11/1/2020	Wells Fargo Bank	A+/Aa2/AA-	
Series 2007A refunding	31,665	10/8/2008	10/8/2008	3.936%	67% 3- Month LIBOR + 0.46%	(890)	(1,182)	292	11/1/2020	Wells Fargo Bank	A+/Aa2/AA-	
Series 2007A refunding	348,380	10/8/2008	10/8/2008	3.936%	67% 3- Month LIBOR + 0.55%	(36,679)	(30,545)	(6,134)	11/1/2025	Bank of NY Mellon	AA-/Aa2/AA	
Series 2018A refunding	120,365	3/15/2005	3/15/2005	3.843% - 3.903%	SIFMA	(10,304)	(40,094)	29,790	2/1/2023	Wells Fargo Bank	A+/Aa2/AA-	
Subtotal	1,060,690					(119,295)	(138,134)	18,839				
<u>Special Obligation Dedicated Tax Revenue Bonds</u>												
Series 2005A (Gas Tax)	54,025	1/12/2005	1/12/2005	4.937% - 5.059%	CPI-based formula	(1,691)	(1,550)	(141)	6/1/2022	Merrill Lynch Capital Services	NR/A2/A+	
Total	\$ 1,114,715					\$ (120,986)	\$ (139,684)	\$ 18,698				

Fair value of the Interest Rate Swap Agreements

The aggregate fair value balance of interest rate swaps at June 30, 2019 was negative \$121 million and is reflected on the statement of net position as a liability for derivative instruments which is offset by deferred outflows from derivative instruments. The fair values of the interest rate swaps are estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swap assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. These payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the date of each future net settlement on the swaps. Because all of the interest rate swaps were deemed effective hedges, changes in fair value of the interest rate swaps during the fiscal year ended June 30, 2019 were recognized as deferred outflows resulting in no impact on the Statement of Activities.

If all the Commonwealth's swap agreements had been terminated as of the end of FY19, the Commonwealth would have been required to make a payment of this magnitude. Although the Commonwealth has the option of terminating its swap agreements at any time (and either make or receive any termination payment due), the Commonwealth's counterparties do not have such an option. Therefore, the Commonwealth would only have to make a payment of the amount estimated above if certain termination events occurred, as described below. Based on the terms and provisions of the swap agreements and the Commonwealth's current bond ratings, an involuntary termination of the swap agreements due to an event of the Commonwealth is remote. In the case of a voluntary termination due to an event of a counterparty, the Commonwealth would likely seek to maintain the existing hedge by replacing that counterparty with another.

Basis and Market-Access Risk of the Interest Rate Swap Agreements

Because the terms on most of the interest rate swap hedge agreements require the Commonwealth's counterparties to make variable rate payments equal or approximately equal to those the Commonwealth makes on the related variable rate bonds, the Commonwealth is not subject to significant basis risk as a result of the terms of these agreements. Under certain circumstances, such as a downgrade of the credit rating of the bonds being hedged or the enactment of tax-

related legislation which causes the related bonds to trade differently, certain of the swap agreements provide that the Commonwealth's counterparties, may, at their option, pay a variable rate that is based on one or more market indices such as LIBOR or the SIFMA swap index. Under these circumstances, the Commonwealth would be subject to basis risk if these indices varied from the basis for the variable rates that were paid to bondholders that were determined for the Commonwealth's variable-rate demand bonds through the associated remarketing process. For certain other interest rate swap agreements, the variable rate on the swap is based on a market index that differs from the variable rate on the hedged bonds, which is generally remarketed or auction rate. The Commonwealth is subject to basis risk on these agreements.

All but one of the swap contracts outstanding have the same or shorter maturity dates and amortizations as the related bonds. The 2018A refunding bonds that are hedged by the \$120 million notional swap with Wells Fargo Bank comes due before the swap termination date. For one of the swap agreements, the underlying bonds have mandatory tender dates that come due before the termination date of the associated swaps. This applies to the 2016B and 2016C bonds being hedged by the \$268 million notional swap with Barclays Bank. The Commonwealth's stated debt plan is to either identify other variable rate bonds the swap may hedge upon the mandatory tender date or to re-market or issue bonds in the same variable rate index mode as the swap agreement to ensure hedge effectiveness pursuant to GASB Statement No. 53. If the Commonwealth is unable to identify other variable rate bonds the swaps may hedge, the Commonwealth would be required to make net settlement payments on the swaps without the offsetting effects of changes in variable rate bond settlement payments.

On January 17, 2019, the Commonwealth issued \$318 million General Obligation Refunding Bonds 2019 Series A to refund the (SIFMA Index Bonds) 2015 Series C, 2017 Series A and 2006 (VRDB) Series B bonds. In addition, approximately \$78 million General Obligation Refunding Bonds 2019 Series B (Delayed Delivery) were issued to refund the (SIFMA Index Bonds) 2017 Series B, 2009 Series B and 2009 Series C on May 3, 2019. The Commonwealth selected to refinance the SIFMA floating rate bonds and terminated the mini-swaps associated with each maturity on February 5, 2019. The 2018 Series A refunding bonds is the only outstanding bonds that is being hedged by \$120 million notional swap with Wells Fargo Bank.

Termination Risk of the Interest Rate Swap Agreements

The swap agreements are based on the International Swap Dealers Association (ISDA) Master Agreement, which includes standard termination events, such as failure to pay and bankruptcy. The swap agreements include termination events additional to those in the standard ISDA master agreement based on credit ratings. The swap agreements are not otherwise subject to termination except at the Commonwealth's option. The swap agreements require that the Commonwealth's counterparties maintain certain ratings levels. If they fail to maintain such ratings, the Commonwealth would have the option to terminate the related swap agreement and receive or pay a termination payment depending on the interest rates at the time. Similarly, the Commonwealth is required to maintain certain credit ratings under the agreements, generally 'BBB-' or above, well above the current credit rating of 'AA-' (based on long-term ratings assigned by Standard & Poor's). If the Commonwealth's rating fell below the defined threshold levels, the Commonwealth's counterparties would have the option to terminate the related swap agreements or for certain agreements choose to make variable rate payments based on a market index (instead of the actual bond rate) which would subject the Commonwealth to basis risk, as previously described. If one or more of the swap agreements were terminated, then the related variable rate bonds would no longer be hedged and the Commonwealth would no longer be paying a synthetic fixed rate with respect to the bonds. In addition, if at the time of termination, the swap had a negative fair value, the Commonwealth would incur a loss and would be required to settle with the related counterparty or counterparties at the swaps' fair market values. However, to avoid a termination payment and to maintain the interest rate hedge, when the terminating event is an event of the counterparty, the Commonwealth would likely seek to replace counterparties to the swap agreement. Based on the terms and provisions of the swap agreements and the Commonwealth's current bond ratings, an involuntary termination of the swaps due to an event of the Commonwealth is remote.

F. OUTSTANDING SWAPPED DEBT*Security for Interest Rate Swap Agreements*

Under legislation approved by the then Governor on August 11, 2008, 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 shall constitute general obligations of the Commonwealth for which its full faith and credit is pledged.

Future bond interest payments are calculated using rates applicable to the scheduled payment nearest to June 30, 2019 for variable rate bonds. The net swap payments are calculated by subtracting the projected future variable rate interest payment per the swap agreement from the projected future fixed rate payment per the swap agreement. Projected future variable rate payments on the swap agreements are based on variable rates applicable to the scheduled payment nearest to June 30, 2019. The actual amount of variable rate interest paid to bondholders and net swap payments made to counterparties are affected by changes in variable interest rates, changes in inflation (CPI), as well as changes in the London Interbank Offered Rate (LIBOR) and the Securities Industry and Financial Markets Association (SIFMA) floating rate indices. Changes in the amounts paid to bondholders versus amounts paid to counterparties are largely offsetting.

Debt service requirements to maturity for variable-rate bonds hedged by interest rate swap agreements and projected future net settlement payments on interest rate swap agreements at June 30, 2019 are provided below (amounts in thousands):

Fiscal Year Ending June 30	Variable-Rate Bonds		Interest Rate Swaps, Net	Total
	Principal	Interest		
2020	\$ 202,290	\$ 23,768	\$ 20,211	\$ 246,269
2021	177,265	18,370	16,818	212,453
2022	126,575	15,377	14,075	156,027
2023	142,290	11,565	11,689	165,544
2024	126,385	8,411	8,913	143,709
2025 - 2029	244,610	15,555	21,672	281,837
2030 - 2033	95,300	3,504	5,353	104,157
Total	<u>\$ 1,114,715</u>	<u>\$ 96,550</u>	<u>\$ 98,731</u>	<u>\$ 1,309,996</u>

Business - Type Activities – Swapped Debt

The business-type activities have various swaps. At June 30, 2019, the fair value liability of the outstanding interest rate swaps was \$57 million.

Component Unit – Swapped Debt

At June 30, 2019, the majority of interest rate swaps outstanding are held by MassDOT, which in aggregate have a negative fair value of approximately \$117 million. For complete details, see separate MassDOT financial statements.

G. OUTSTANDING LONG-TERM DEBT AND CHANGES IN LONG TERM DEBT

The amount of long-term debt authorized but unissued is measured in accordance with the statutory basis of accounting. Long-term debt principal outstanding and debt authorized and unissued at June 30, 2019 is as follows (amounts in thousands):

Purpose	Principal Outstanding	Fiscal Year Maturities	Authorized and Unissued
GANs	\$ 684,745	2020 - 2027	\$ —
Capital projects:			
General	13,365,819	2020 - 2049	17,675,168
Highway	12,346,449	2020 - 2049	10,731,566
Local aid.....	814,573	2020 - 2039	11,105
Other.....	527,635	2020 - 2034	—
Subtotal	27,054,476		28,417,839
Subtotal - governmental activities debt (exclusive of MSBA)	27,739,221		\$ 28,417,839
MSBA debt.....	6,054,994		
Governmental activities debt	\$ 33,794,215		

Interest rates on the Commonwealth's outstanding debt at the end of FY19 ranged from 0.5% to 6.6%.

Changes in long-term debt outstanding (excluding discount and premium) and bonds authorized - unissued for the year ended June 30, 2019 are as follows (amounts in thousands):

	Governmental Funds (excluding MSBA)	MSBA	Total Governmental Funds Bonded Debt	Authorized and Unissued
Balance July 1, 2018	\$ 27,360,819	\$ 5,990,554	\$ 33,351,373	\$ 20,860,482
Plus: Increases in bonds authorized.....	—	—	—	10,250,655
General and special obligation bonds:				
Proceeds, defined as principal, plus premium,				
less discount	3,079,932	223,340	3,303,272	(2,693,298)
Less: Premium/discount	(446,538)	(23,340)	(469,878)	—
Less: Principal on refunded bonds	(959,670)	—	(959,670)	—
Less: Bonds retired	(1,295,322)	(135,560)	(1,430,882)	—
Outstanding principal June 30, 2019.....	\$ 27,739,221	\$ 6,054,994	\$ 33,794,215	\$ 28,417,839

Business - Type Activities – Colleges and University Debt

Building authorities related to the University of Massachusetts and the state universities have issued bonds for construction of higher education facilities and equipment. Such bonds are guaranteed by the Commonwealth in an aggregate amount not to exceed \$200 million. The bond agreements generally provide that revenues from student fees are pledged as collateral on the bonds and establish bond reserve funds, bond funds, and maintenance reserve funds. The University of Massachusetts and state universities have also entered into various loan agreements as participants in the MassDevelopment's ongoing capital asset program to finance construction projects and equipment.

At June 30, 2019, debt service requirements to maturity for principal and interest are as follows (amounts in thousands):

Fiscal Year Ended June 30	Governmental Activities									Business - Type Activities	
	Excluding MSBA Debt						MSBA Debt			Revenue Obligation	
	Public Offering Debt		Direct Placement Debt		Total Non MSBA Debt		Principal	Interest	Interest subsidies (1)	Principal	Interest
	Principal	Interest	Principal	Interest	Principal	Interest					
2020	\$ 1,344,739	\$ 1,234,742	\$ 49,670	\$ 18,223	\$ 1,394,409	\$ 1,252,965	\$ 135,452	\$ 291,711	\$ (24,213)	\$ 176,928	\$ 185,596
2021	1,343,833	1,175,658	168,615	14,180	1,512,448	1,189,838	133,373	285,753	(24,213)	180,700	179,255
2022	1,406,282	1,110,282	—	9,000	1,406,282	1,119,282	135,532	279,535	(24,213)	174,493	172,643
2023	1,250,401	1,045,916	—	9,000	1,250,401	1,054,916	158,126	273,499	(24,213)	181,851	164,683
2024	1,277,886	983,977	—	9,000	1,277,886	992,977	134,925	266,443	(24,213)	185,028	163,445
2025 - 2029	5,496,278	4,073,415	60,000	42,900	5,556,278	4,116,315	1,216,806	1,191,125	(101,074)	891,980	683,928
2030 - 2034	4,628,689	2,877,956	100,000	29,500	4,728,689	2,907,456	1,361,745	854,501	(41,062)	797,442	468,374
2035 - 2039	4,015,299	1,929,452	70,000	15,550	4,085,299	1,945,002	1,475,930	502,390	(19,093)	856,524	289,513
2040 - 2044	4,381,020	983,451	50,000	6,950	4,431,020	990,401	1,001,820	195,703	(573)	655,479	108,881
2045 - 2049	2,076,509	181,637	20,000	800	2,096,509	182,437	301,285	32,282	—	184,279	13,434
Total long - term debt	27,220,936	15,596,486	518,285	155,103	27,739,221	15,751,589	6,054,994	4,172,942	(282,867)	4,284,704	2,429,752
Less: current portion	(1,344,739)	(1,234,742)	(49,670)	(18,223)	(1,394,409)	(1,252,965)	(135,452)	(291,711)	24,213	(176,928)	(185,596)
Long - term debt	<u>\$ 25,876,197</u>	<u>\$ 14,361,744</u>	<u>\$ 468,615</u>	<u>\$ 136,880</u>	<u>\$ 26,344,812</u>	<u>\$ 14,498,624</u>	<u>\$ 5,919,542</u>	<u>\$ 3,881,231</u>	<u>\$ (258,654)</u>	<u>\$ 4,107,776</u>	<u>\$ 2,244,156</u>

(1) FY19 interest subsidies reflect announced sequestration reductions. There may be sequestration reductions in future years as well.

H. PRIOR DEFEASANCE

The Commonwealth defeased certain general and special obligation bonds by purchasing securities from the proceeds of advance refunding bonds or from surplus operating funds and placing them in irrevocable trusts to provide for all future debt service payments on the defeased bonds. The trust account assets and the liabilities for the defeased bonds are not included in the financial statements. As of June 30, 2019, approximately \$2.025 billion of bonds outstanding from advance refunding activities is considered defeased.

Business - Type Activities

The Massachusetts State College Building Authority (MSCBA) defeased various bonds by issuing refunding bonds and placing the proceeds in irrevocable trusts to provide for all future debt service payments on the defeased bonds. The trust assets and the liabilities of the defeased bonds are not included in the business type activity financial statements. As of June 30, 2019, approximately \$189 million of bonds outstanding from advanced refunding transactions are considered defeased.

I. STATUTORY DEBT LIMIT

The Massachusetts General Laws, as recently amended, establishes limits on the amount of direct debt outstanding. By statutorily limiting the Commonwealth's ability to issue direct debt, a control is established on annual capital spending. The direct debt limit for FY19 was approximately \$24.019 billion. Outstanding debt subject to the limit at June 30, 2019 was approximately \$22.087 billion.

For purposes of determining compliance with the limit, outstanding direct debt is defined by statute, as amended on June 10, 2013 (effective January 1, 2013), as principal outstanding. It excludes BANs and associated discount or premium, if any, special obligation bonds, GANs, refunded bonds, certain refunding bonds, debt issued by counties, debt issued in conjunction with the MBTA Forward Funding, certain Central Artery/Tunnel debt, debt issued for the SMART program and effective August 10, 2016 bonds issued under the Rail Enhancement Program. The amounts excluded from the debt limit are as follows (amounts in thousands):

	Principal Outstanding
Statutory debt June 30, 2019	\$ 27,739,221
Less amounts excluded:	
Central artery project bonds	(1,013,492)
Accelerated bridge program	(2,349,950)
MBTA forward funding	(207)
SMART bonds	(574,902)
Convention center bonds	(527,635)
Special obligation gas tax bonds	(80,930)
Rail enhancement program bonds	(1,104,610)
Outstanding direct debt June 30, 2019	<u>\$ 22,087,495</u>

J. ADMINISTRATION DEBT LIMIT

During FY09, the Administration announced a policy that sets the annual borrowing limit at a level designed to keep debt service at a maximum of 8% of budgeted revenues. For this purpose, debt service includes principal and interest payments on all general obligation debt, special obligation gas tax debt, interest on federal grant anticipation notes, general obligation contract assistance payment obligations, and budgetary contract assistance payment obligations on certain capital lease financings. Debt of the Massachusetts School Building Authority and of the Massachusetts Bay Transportation Authority that is supported by the portion of the sales tax legally dedicated to such entities is not included for purposes of this analysis, as the Commonwealth is not liable for such debt; similarly, the sales tax revenues legally dedicated to such entities are not included in the budgeted revenue projections.

In addition to keeping debt service at a maximum of 8% of budgeted revenues, the debt management policy limits future growth in annual bond issuance (the "bond cap") to not more than \$125 million through fiscal 2019. This additional constraint is designed to ensure that projected growth in the bond cap will be held to stable and sustainable levels.

The current Administration intends to treat all debt and debt-like obligations of the Commonwealth as subject to the bond cap for purposes of developing the annual capital budget, except in limited circumstances when there is a sound policy justification for not including a particular debt issue. Debt may be excluded from the bond cap, for example, where there is a new, dedicated source of project-related revenues supporting the payment of debt service on such debt. In such cases, the dedicated revenue would also be excluded from projected budgeted revenues for purposes of determining the bond cap as described above.

The following table shows the annual bond cap, the resulting total annual debt service payment obligations and debt service as a percentage of statutory basis budgeted revenues, (amounts in thousands):

	Fiscal 2019
Bond cap as approved by the Governor	\$ 2,340,000
Total annual debt service obligations.....	3,489,029
Statutory basis budgeted fund revenues.....	48,375,847
Debt service as % of budgeted revenues.....	7.2%

K. CHANGES IN LONG-TERM LIABILITIES

The following table summarizes changes in long-term liabilities for both governmental activities and business-type activities (amounts in thousands):

Changes in Long Term Liabilities - Governmental Activities:

Description	Beginning Balance	Additions	Deletions	Ending Balance	Due Within One Year
Other long-term obligations:					
Compensated absences	\$ 605,328	\$ 616,343	\$ (605,328)	\$ 616,343	\$ 430,617
Claims and judgments	22,498	28,466	(17,723)	33,241	13,241
Prizes payable	971,434	81,653	(144,350)	908,737	—
School construction grants payable	481,656	489,882	(586,544)	384,994	212,126
Environmental remediation liability	530,611	—	(13,196)	517,415	5,128
Lottery instant grand prizes	2,588	194	—	2,782	—
Workers' compensation	260,904	62,782	(62,299)	261,387	43,129
Arbitrage rebate - MSBA	2,459	496	(1,228)	1,727	—
Group insurance claims	130,736	1,665,999	(1,645,462)	151,273	148,952
Cost of living adjustment	132,000	—	(2,000)	130,000	—
Net pension liability	36,724,303	4,175,168	(2,834,457)	38,065,014	—
Net OPEB liability	15,289,604	468,883	(2,769,418)	12,989,069	—
Total other long-term obligations	55,154,121	7,589,866	(8,682,005)	54,061,982	853,193
Liability for derivative instruments	139,684	120,986	(139,684)	120,986	—
Bonded debt:					
Bonds and notes payable - non MSBA	27,360,819	2,633,394	(2,254,992)	27,739,221	1,394,409
Unamortized bond and note premiums - non MSBA	2,135,582	446,539	(102,026)	2,480,095	85,212
MSBA bonds and notes payable excluding premiums	5,990,554	200,000	(135,560)	6,054,994	135,452
Unamortized bond and note premiums - MSBA	612,731	23,340	(49,545)	586,526	48,165
MSBA other liabilities	602	541	(475)	668	394
Other financing arrangements:					
Capital leases	22,492	54	(2,711)	19,835	3,163
Total bonded debt and other financing arrangements	36,122,780	3,303,868	(2,545,309)	36,881,339	1,666,795
Long-term liabilities, governmental activities	\$ 91,416,585	\$ 11,014,720	\$ (11,366,998)	\$ 91,064,307	\$ 2,519,988

Governmental long-term liabilities, other than debt, are typically liquidated by general fund resources.

Changes in Major Long Term Liabilities - Business-Type Activities:

Description	Beginning Balance	Additions	Deletions	Ending Balance	Due Within One Year
Other long-term obligations:					
Compensated absences	\$ 211,567	\$ 27,903	\$ (30,937)	\$ 208,533	\$ 147,236
Net pension liability	716,650	100,624	(99,781)	717,493	—
Net OPEB liability	1,391,846	165,345	(302,807)	1,254,384	—
Total other long-term obligations	2,320,063	293,872	(433,525)	2,180,410	147,236
Liability for derivative instruments	42,557	14,327	—	56,884	—
Bonded Debt:					
Bonds and notes payable, including MSCBA	4,430,674	326,762	(472,732)	4,284,704	176,928
Other financing arrangements:					
Capital leases	9,825	2,421	(2,657)	9,589	2,592
Total bonded debt and other financing arrangements	4,440,499	329,183	(475,389)	4,294,293	179,520
Long-term liabilities, business - type activities	\$ 6,803,119	\$ 637,382	\$ (908,914)	\$ 6,531,587	\$ 326,756

Discretely Presented Component Units – The change in bonds and notes outstanding at June 30, 2019, net of unamortized discounts and premiums, compensated absences, net pension and net OPEB liabilities are as follows (amounts in thousands):

			Beginning Balance	Increases	Decreases	Ending Balance	Due Within One Year
	Interest Rates	Maturities					
Major component units:							
MassDOT	0.00 - 7.15%	2020 - 2047	\$ 7,695,776	\$ 852,113	\$ (997,449)	\$ 7,550,440	\$ 515,441
MCWT	2.00 - 5.25%	2020 - 2047	2,932,678	189,523	(360,009)	2,762,192	232,395
Nonmajor component units	3.00 - 6.11%	2020 - 2040	664,743	86,610	(81,780)	669,573	28,224
Total bonds and notes payable			11,293,197	1,128,246	(1,439,238)	10,982,205	776,060
Compensated absences, net			41,307	23,851	(22,569)	42,589	26,482
Net pension liability			1,973,209	396,126	(141,345)	2,227,990	—
Net OPEB liability			3,082,223	420,785	(309,981)	3,193,027	—
Total long term liabilities			<u>\$ 16,389,936</u>	<u>\$ 1,969,008</u>	<u>\$ (1,913,133)</u>	<u>\$ 16,445,811</u>	<u>\$ 802,542</u>

The net pension liability of the discretely presented component units of \$2.228 billion includes \$1.619 billion related to the MBTA and RTAs and \$609 million related to entities that participate in SERS. See the MassDOT financial statements for further information regarding the MBTA and RTA pension plans and see pages 109-118 of this report for the SERS pension disclosures.

Further information on debt is found in the notes to the basic financial statements for the various component units.

8. INDIVIDUAL FUND DEFICITS

Certain funds within the Governmental Fund Type had fund deficits at June 30, 2019. None of these funds were in deficit due to finance-related contractual provisions and all were allowed to be in deficit by General Law. The amounts are as follows (amounts in thousands):

Other Governmental Funds	Amount
Other Special Revenue Funds:	
Community Preservation Trust Fund.....	\$ (22,273)
Health Information Technology Trust Fund	(4,475)
Government Land Bank Fund	(35,033)
Highway Capital Projects Fund	(397,357)
Federal Highway Construction Program Capital Projects Fund.....	(11,057)

9. PENSIONS

The Commonwealth is statutorily responsible for the pension benefits for Commonwealth employees (members of the State Employees' Retirement System) and for teachers of the cities, towns, regional school districts throughout the Commonwealth and Quincy College (members of the Teachers' Retirement System). The members of the retirement systems do not participate in the Social Security System.

A. PLAN DESCRIPTIONS

Plan administration

The Massachusetts *State Employees' Retirement System* (SERS) is a public employee retirement system (PERS), that administers a cost-sharing multiple employer defined benefit pension plan covering substantially all employees of the Commonwealth and certain employees of the independent authorities and agencies, including the state police officers at the Massachusetts Port Authority. The former Massachusetts Turnpike Authority (MTA) employees and retirees became members of SERS upon the creation of MassDOT. Other employees who transferred to MassDOT have been, and remain, members of SERS. The assets and liabilities of the former MTA have been transferred to SERS. SERS is administered by the Massachusetts State Retirement Board (the SRB) and is part of the reporting entity and does not issue a stand-alone audited financial report.

Management of the SERS is vested in the SRB, which consists of five members—two elected by current and active SERS members, one by the remaining members of the SRB, one who is appointed by the State Treasurer, and the State Treasurer, who serves as ex-officio and is the Chairman of the SRB.

The Massachusetts *Teachers' Retirement System* (MTRS) is a PERS that administers a cost-sharing multiple employer defined benefit pension plan managed by the Commonwealth on behalf of municipal teachers and municipal teacher retirees. The Commonwealth is a non-employer contributing entity and is legally responsible for all contributions and future benefit requirements of the MTRS. The MTRS covers certified teachers in cities (except Boston), towns, regional school districts and Quincy College. The MTRS is administered by the Massachusetts Teachers' Retirement Board (the MTRB) and is part of the reporting entity and does not issue a stand-alone audited financial report.

Management of the MTRS is vested in the MTRB, which consists of seven members—two elected by the MTRS members, one who is chosen by the six other MTRB members, the State Treasurer (or their designee), the State Auditor (or their designee), a member appointed by the Governor, and the Commissioner of Education (or their designee), who serves as ex-officio and is the Chairman of the MTRB.

The *Boston Retirement System* (BRS) is a PERS that administers a cost-sharing multiple employer defined benefit

pension plan managed by the City of Boston Retirement Board covering all City of Boston departments and agencies as well as the School Department, the Boston Planning and Development Agency, the Boston Housing Authority, the Public Health Commission and the Boston Water and Sewer Commission. The BRS is not administered by the Commonwealth and is not part of the reporting entity of the Commonwealth.

Chapter 112 of the Acts of 2010, signed on May 22, 2010, changed the methodology for the Commonwealth funding of Boston teachers in the BRS (hereafter referred to as BRS-Teachers) and created a special funding situation for the Commonwealth. The cost of pension benefits of the other participants of the BRS is the responsibility of the City of Boston. Chapter 112 clarified that the Commonwealth is legally responsible for all contributions and future benefit requirements for BRS-Teachers. The net pension liability related to the BRS-Teachers is included in the Commonwealth's net pension liability in this report.

Management of the BRS is vested with in a Board of Trustees, which consists of five members—two elected by the active and retired members of the system, the City Auditor as ex-officio, one member appointed by the Mayor of Boston, and one member who is elected by the other four members. The BRS issues a stand-alone audited financial report. For a complete copy of BRS's separately issued financial statements, please contact the City of Boston Retirement Board at (617) 635-4305, or you may download this report at <http://www.cityofboston.gov/retirement/investment.asp>.

Plan membership. As of January 1, 2019, for SERS and MTRS, the dates of the most recent valuations, plan membership consisted of the following:

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

Benefits provided. SERS, MTRS and BRS provide retirement, disability, survivor, and death benefits to members and their beneficiaries. Massachusetts General Laws (MGL) establishes uniform benefit and contribution requirements for all contributory PERS. These requirements 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. The authority for amending these provisions rests with the Legislature.

Members become vested after ten years of creditable service. A superannuation retirement allowance may be received upon the completion of twenty years of service or upon reaching the age of 55 with ten years of service. Normal retirement for most employees occurs at age 65; for certain hazardous duty and public safety positions, normal retirement is at age 55. Most employees who joined the system after April 1, 2012 cannot retire and receive benefits prior to age 60.

The policy for post-retirement benefit increases for all retirees of the SERS, MTRS and for those participants who serve in the City of Boston's School Department in a teaching capacity is subject to legislative approval.

Contributions. The retirement systems' funding policies have been established by Chapter 32 of the MGL. The Legislature has the authority to amend these policies. The annuity portion of the SERS and 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.

Chapter 32 of the General Laws directs the Secretary of Administration and Finance to prepare a funding schedule to meet actuarially determined requirements, and to update this funding schedule every three years on the basis of new actuarial valuation reports prepared under the Secretary's direction. Any such schedule is subject to legislative approval.

If a schedule is not so approved, payments are to be made in accordance with the most recently approved schedule. Under the current schedule adopted in January 2017, the amortization payments increase 8.94% per year to FY36 with a final amortization payment in FY36 (four years before the statutory deadline of FY40). The funding schedule as published follows an acceptable actuarial funding methodology to compute normal cost and the unfunded accrued actuarial liability.

Member contributions for SERS, MTRS and BRS vary depending on the most recent date of membership:

Hire Date	% of Compensation
Prior to 1975	5% of regular compensation
1975 - 1983	7% of regular compensation
1984 to 6/30/1996	8% of regular compensation
7/1/1996 to present	9% of regular compensation except for State Police, which is 12% of regular compensation
7/1/2001 to present	11% of regular compensation (for teachers hired after 7/1/01 and those accepting provisions of Chapter 114 of the Acts of 2000)
1979 to present	An additional 2% of regular compensation in excess of \$30,000

In addition, members of Group 1 who join the system on or after April 2, 2012 will have their withholding rate reduced to 6% after achieving 30 years of creditable service.

B. INVESTMENTS

Investment Policy. SERS and MTRS are required to invest in the Pension Reserves Investment Trust (PRIT) Fund, which is managed by the Pension Reserves Investment Management (PRIM) Board. The PRIM Board seeks to maximize the total return on investments, within acceptable levels of risk and cost for an approximately 60% funded public pension fund. 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 investment policy statement adopted by the PRIM Board requires a comprehensive review of the PRIM Board's asset allocation plan and its underlying assumptions at reasonable intervals of not more than three to five years. In addition, the investment policy statement requires that the PRIM Board conduct an annual evaluation of the PRIT Fund's asset allocation. The PRIM Board's last comprehensive review of the PRIT Fund asset allocation was conducted during FY2019.

The following was the PRIT Fund asset allocation as of June 30, 2019:

Asset Class	Target Allocation
Global Equity	39.0%
Core Fixed Income	15.0%
Private Equity	13.0%
Portfolio Completion Strategies	11.0%
Real Estate	10.0%
Value Added Fixed Income	8.0%
Timber/Natural Resources	4.0%
Total	100.0%

The annual money-weighted return on pension plan investments calculated as the internal rate of return on pension plan investments net of pension plan expenses for FY 2019 were 5.63% and 5.62% for SERS and MTRS, respectively. A money-weighted rate of return expresses investment performance, net of pension plan investment expense, adjusted for the changing amounts actually invested.

C. NET PENSION LIABILITY OF THE SYSTEMS REQUIRED BY GASB 67

The components of the net pension liability for SERS and MTRS at June 30, 2019 are as follows (amounts in thousands):

	SERS	MTRS
Total pension liability.....	\$ 43,398,000	\$ 54,751,000
Plan fiduciary net position	(28,763,796)	(29,536,980)
Net pension liability	<u>\$ 14,634,204</u>	<u>\$ 25,214,020</u>
Fiduciary net position as a percentage of the total pension liability	66.3%	53.9%

Additional information regarding changes in the net pension liability can be found in the Required Supplementary Information section of these financial statements.

Actuarial assumptions. The total pension liability, for both SERS and MTRS, was determined by an actuarial valuation as of January 1, 2019 rolled forward to June 30, 2019, using the following actuarial assumptions:

- The actuarial assumptions included: (a) 7.25% investment rate of return, a decrease from the rate used in the January 1, 2018 actuarial valuation of 7.35%; (b) 3.5% interest rate credited to the annuity savings fund; and (c) 3.0% cost of living increase on the first \$13,000 of allowance per year.
- Salary increases are based on analyses of past experience but range from 4.0% to 9.0% depending on group and length of service.
- Experience studies were performed as follows:
 - SERS:**
 - Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011, updated to reflect actual experience from 2012 through 2016 for post-retirement mortality.
 - MTRS:**
 - Dated July 21, 2014 and encompasses the period January 1, 2006 to December 31, 2011, updated to reflect post-retirement mortality through January 1, 2017.
- Mortality rates were as follows:
 - SERS:**
 - Pre-retirement mortality reflects RP-2014 Blue Collar Employees table projected generationally with Scale MP-2016, set forward 1 year for females.
 - Post-retirement mortality reflects RP-2014 Blue Collar Healthy Annuitant table projected generationally with Scale MP-2016, set forward 1 year for females.
 - For disabled retirees, mortality reflects the post-retirement mortality described above, set forward 1 year.
 - MTRS:**
 - Pre-retirement mortality reflects RP-2014 White Collar Employees table projected generationally with Scale MP-2016 (gender distinct).
 - Post-retirement mortality reflects RP-2014 White Collar Healthy Annuitant table projected generationally with Scale MP-2016 (gender distinct).
 - For disabled members, the mortality rate is assumed to be in accordance with RP-2014 White Collar Healthy Annuitant Table projected generationally with Scale MP-2016 (gender distinct).

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate arithmetic expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These assumptions are converted into nominal assumptions by adding inflation, then combined by weighting them by the target asset allocation percentages. Finally, the arithmetic portfolio expected return is converted into a geometric expected return using assumed asset class standard deviations and correlations. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2019 (see the discussion of the pension plan's investment policy in Note 9(B)) are summarized in the following table:

Asset Class	Long-term Expected Real Rate of Return
Private Equity	8.2%
Global Equity.....	4.9%
Value Added Fixed Income	4.7%
Timberland/Natural Resources	4.1%
Portfolio Completion Strategies	3.9%
Real Estate	3.6%
Core Fixed Income	1.3%

Discount rate. The discount rate used to measure the pension liability for SERS and MTRS was 7.25%. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rates and the Commonwealth's contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rates. Based on those assumptions, the SERS and MTRS net positions were projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability for SERS and MTRS.

Sensitivity of the net pension liability to changes in the discount rate. The following presents the net pension liability of SERS and MTRS, calculated using the discount rate of 7.25%, as well as what the SERS and MTRS net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.25%) or 1-percentage-point higher (8.25%) than the current rate (amounts in thousands):

	1% Decrease (6.25%)	Current Discount Rate (7.25%)	1% Increase (8.25%)
SERS net pension liability	\$ 19,478,600	\$ 14,634,204	\$ 10,494,900
MTRS net pension liability	31,232,100	25,214,020	20,062,500

D. NET PENSION LIABILITY OF THE COMMONWEALTH REQUIRED BY GASB 68

Proportionate Share of Net Pension Liability

As of the respective measurement dates below, the net pension liability for SERS, MTRS and BRS were \$13.230 billion, \$23.711 billion, and \$4.586 billion, respectively. The net pension liabilities for SERS and MTRS were determined by an actuarial valuation as of January 1, 2018 and rolled forward to June 30, 2018. The BRS net pension liability was determined by an actuarial valuation as of January 1, 2018 and rolled forward to December 31, 2018. The SERS, MTRS and BRS actuarial valuations were rolled forward to their respective measurement dates using generally accepted actuarial procedures.

The Commonwealth (the primary government) reported the following net pension liabilities for its proportionate share of the SERS, MTRS and BRS-Teachers net pension liabilities (amounts in thousands):

System	Measurement Date	Proportionate Share	Net Pension Liability
State Employees' Retirement System	June 30, 2018	94.6%	\$ 12,520,028
Massachusetts Teachers' Retirement System.....	June 30, 2018	100.0%	23,711,289
Boston Retirement System - Teachers.....	December 31, 2018	55.6%	2,551,190
Total net pension liability			<u>\$ 38,782,507</u>

Certain of the Commonwealth's discretely presented component units (the Massachusetts Convention Center Authority [MCCA] and the Massachusetts Department of Transportation [MassDOT]) participate in SERS. As of the measurement date the proportionate share of the SERS net pension liability for the discretely presented component units was as follows (amounts in thousands):

System	Measurement Date	Proportionate Share	Net Pension Liability
State Employees' Retirement System	June 30, 2018	4.6%	<u>\$ 609,373</u>

Pension Expense and Deferred Outflows and Inflows of Resources Related to Pension

As of the measurement dates, the Commonwealth (primary government) recognized pension expense of approximately \$4.113 billion and the discretely presented component units recognized approximately \$318 million of pension expense. The following details the components of deferred outflows of resources and deferred inflows of resources related to pensions (amounts in thousands):

	Primary Government						Discretely Presented Component Units	
	SERS		MTRS		BRS-Teachers			
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Change of assumptions	\$ 1,268,827	\$ —	\$ 2,615,499	\$ —	\$ 187,322	\$ —	\$ 174,811	\$ 2,909
Changes in proportion	172,019	128,748	—	—	—	—	2,903	47,572
Net difference between projected and actual earnings on pension plan investments ...	—	435,182	—	467,208	65,609	—	115,845	21,182
Differences between expected and actual experience	397,030	255,159	163,343	38,207	—	146,082	113,681	21,234
Payments made after the measurement date	935,996	—	1,443,710	—	—	—	85,572	—
Totals	<u>\$ 2,773,872</u>	<u>\$ 819,089</u>	<u>\$ 4,222,552</u>	<u>\$ 505,415</u>	<u>\$ 252,931</u>	<u>\$ 146,082</u>	<u>\$ 492,812</u>	<u>\$ 92,897</u>

The \$2.380 billion and \$86 million reported as deferred outflows of resources in the primary government and the discretely presented component units, respectively, are the contributions made subsequent to the measurement date and will be recognized as a reduction of the net pension liability in the next fiscal year. Other amounts reported above as deferred outflows of resources and deferred inflows of resource related to pension will be recognized in pension expense as follows (amounts in thousands):

Fiscal Year Ending June 30	Primary Government			Discretely Presented Component Units
	SERS	MTRS	BRS-Teachers	
2020.....	\$ 781,223	\$ 999,920	\$ 57,811	\$ 144,104
2021.....	355,345	768,779	23,299	89,140
2022.....	(185,194)	67,350	(6,239)	49,704
2023.....	19,973	228,901	45,291	30,263
2024.....	47,440	193,111	(13,313)	1,132
Thereafter	—	15,366	—	—
Totals	<u>\$ 1,018,787</u>	<u>\$ 2,273,427</u>	<u>\$ 106,849</u>	<u>\$ 314,343</u>

The SERS and MTRS total pension liabilities were based on an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018, using the following actuarial assumptions:

1. The actuarial assumptions included (a) 7.35% investment rate of return, (b) 3.50% interest rate credited to the annuity savings fund and (c) 3.00% cost of living increase on the first \$13,000 of allowance per year.
2. Salary increases are based on analyses of past experience but range from 4.00% to 9.00% (SERS) and 4.0% to 7.50% (MTRS) depending on group and length of service.

3. Experience studies were performed as follows:

SERS:

- Dated February 27, 2014 and encompasses the period January 1, 2006 to December 31, 2011

MTRS:

- Dated July 21, 2014 and encompasses the period January 1, 2006 to December 31, 2011

4. Mortality rates were as follows:

SERS:

- Pre-retirement - reflects RP-2014 Blue Collar Employees Table projected generationally with Scale MP-2016, set forward 1 year for females
- Post-retirement - reflects RP-2014 Blue Collar Healthy Annuitant Table projected generationally with Scale MP-2016, set forward 1 year for females
- Disability - the mortality rate reflects RP-2014 Blue Collar Healthy Annuitant table projected generationally with Scale MP-2016, set forward 1 year.

MTRS:

- Pre-retirement - reflects RP-2014 White Collar Employees Table projected generationally with Scale MP-2016 (gender distinct).
- Post-retirement - reflects RP-2014 White Collar Healthy Annuitant Table projected generationally with Scale MP-2016 (gender distinct).
- Disability - assumed to be in accordance with the RP-2014 White Collar Healthy Annuitant Table projected generationally with Scale MP-2016 (gender distinct).

The BRS-Teachers total pension liability was based on an actuarial valuation as of January 1, 2018 rolled forward to December 31, 2018, using the following actuarial assumptions:

1. The actuarial assumptions included (a) 7.35% investment rate of return, (b) 3.25% interest rate credited to the annuity savings fund and (c) 3.0% cost of living increase on the first \$14,000 per year.

2. Salary increases range from 4.0% to 7.5% depending on length of service.
3. Mortality rates were as follows:
 - Healthy - reflects RP-2014 White Collar Employee and Healthy Annuitant Mortality Tables projected generationally with Scale MP-2016.
 - Disabled - reflects RP-2014 Healthy Annuitant Mortality Table set forward four years projected generationally using Scale BB2D from 2014.

Investments

The Massachusetts legislature enacted Section 17 of Chapter 112 of the Acts of 2010, which requires the SBRS to invest all assets, current and future, related to BRS-Teachers in the PRIT pooled fund.

The following was the PRIT Fund target asset allocation and best estimates of geometric rates of return for each major asset class as of June 30, 2018:

Asset Class	Target Allocation	Long-term Expected Real Rate of Return*
Global Equity.....	39.00%	5.00%
Portfolio Completion Strategies	13.00%	3.70%
Core Fixed Income	12.00%	0.90%
Private Equity	12.00%	6.60%
Real Estate	10.00%	3.80%
Value Added Fixed Income	10.00%	3.80%
Timber/Natural Resources	4.00%	3.40%
Total	100.00%	

* - BRS does not separately provide the long-term expected real rate of return for BRS-Teachers assets invested in the PRIT Fund as of the BRS measurement date.

Because SERS, MTRS and BRS-Teachers are all required to invest in the PRIT Fund, the long-term expected real rate of return was determined on that same basis as described in Note 9C.

The discount rate used to measure the pension liabilities was 7.35% for SERS and MTRS as of the June 30, 2018 measurement date and for BRS-Teachers as of the December 31, 2018 measurement date.

Sensitivity of the proportionate share of the net pension liability to changes in the discount rate. The following presents the net pension liability of the Commonwealth calculated using the discount rate of 7.35%, as well as what the Commonwealth's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.35%) or 1-percentage-point higher (7.35%) than the current rate (amounts in thousands):

	1% Decrease (6.35%)	Current Discount Rate (7.35%)	1% Increase (8.35%)
SERS net pension liability	\$ 16,868,883	\$ 12,520,028	\$ 8,795,813
MTRS net pension liability	29,482,300	23,711,289	18,771,300
BRS-Teachers net pension liability	3,038,009	2,551,190	2,148,745

E. STATEMENTS OF NET POSITION AND CHANGES IN NET POSITION

The following table displays the Statement of Net Position and the Statement of Changes in Net Position for the SERS, and the MTRS as of June 30, 2019, (amounts in thousands):

	Pension Trust Funds		
	State Employees' PERS	Teachers' PERS	Total
ASSETS			
Cash and cash equivalents	\$ 89,142	\$ 87,771	\$ 176,913
Net investment in PRIT at fair value	28,574,559	29,365,494	57,940,053
Other receivables	112,966	85,504	198,470
Other assets	17	3,109	3,126
Total assets	28,776,684	29,541,878	58,318,562
LIABILITIES			
Accounts payable	12,888	4,898	17,786
Net position available for post-employment benefits	\$ 28,763,796	\$ 29,536,980	\$ 58,300,776
ADDITIONS			
Contributions:			
Employer contributions - Commonwealth and MassDOT	\$ 919,545	\$ —	\$ 919,545
Non-employer contributions - Commonwealth	37,359	1,443,710	1,481,069
Employer and non-employer contributions - other	10,191	—	10,191
Employee contributions	632,730	782,431	1,415,161
ERIP funding contribution - Commonwealth	28,724	—	28,724
Boston teachers' contributions from Commonwealth	—	143,146	143,146
Other additions	104,765	91,386	196,151
Total contributions	1,733,314	2,460,673	4,193,987
Net investment gain/(loss):			
Investment gain/(loss)	1,686,838	1,732,202	3,419,040
Less: investment expense	(143,440)	(147,432)	(290,872)
Net investment gain/(loss)	1,543,398	1,584,770	3,128,168
Total additions	3,276,712	4,045,443	7,322,155
DEDUCTIONS			
Administration	15,853	18,324	34,177
Retirement benefits and refunds	2,427,556	3,092,363	5,519,919
Payments to State Boston Retirement System	—	143,146	143,146
Other deductions	64,528	46,341	110,869
Total deductions	2,507,937	3,300,174	5,808,111
Change in net position	768,775	745,269	1,514,044
Net position available for post-employment benefits at beginning of year	27,995,021	28,791,711	56,786,732
Net position available for post-employment benefits at end of year	\$ 28,763,796	\$ 29,536,980	\$ 58,300,776

F. RESERVES

Chapter 32 of the MGL establishes certain legally required reserve accounts for both SERS and MTRS. These reserves are used to account for the accumulation of resources according to purpose for which they are received, acquired or held. The reserve accounts can only be modified or changed by legislation.

The balances of legally required reserves at June 30, 2019 were as follows (amounts in thousands):

	SERS	MTRS	Purpose
Annuity Savings Fund	\$ 6,637,100	\$ 8,384,603	Active members' contribution balance
Annuity Reserve Fund	1,938,258	1,909,423	Retired members' contribution account
Special Military Service Fund...	34	282	Members' contribution account while on military leave
Pension Reserve Fund	20,188,404	19,242,672	Amounts appropriated to fund future retirement benefits
Total	<u>\$ 28,763,796</u>	<u>\$ 29,536,980</u>	

10. OTHER POST EMPLOYMENT BENEFITS**A. PLAN DESCRIPTIONS****Plan administration**

The Commonwealth administers a single employer defined benefit Other Post-Employment Benefit (OPEB) plan. Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by PRIM. The GIC has representation on the Board of Trustees of the State Retirees' Benefits Trust (SRBT).

The SRBT is set up solely to pay for OPEB benefits and the cost to administer those benefits. It can only be revoked when all such health care and other non-pension benefits, current and future, have been paid or defeased. GIC administers benefit payments, while the Trustees are responsible for investment decisions. The SRBT is administered by the board of trustees and is reported as an OPEB Trust Fund and does not issue a stand-alone audited financial report.

Management of the SRBT is vested with a board of trustees, which consists of seven members including the Secretary of Administration and Finance (or their designee), the Executive Director of the GIC (or their designee), the Executive Director of PERAC (or their designee), the State Treasurer (or their designee), the Comptroller (or a designee), one person appointed by the Governor and one person appointed by the State Treasurer. The members elect one person to serve as chair of the board.

Plan membership. As of January 1, 2019 the date of the most recent actuarial valuation, plan membership consisted of the following:

	SRBT
Inactive plan members or beneficiaries currently receiving benefit payments	85,108
Inactive plan members entitled to but not yet receiving benefit payments	3,219
Active plan members	69,751
Total	<u>158,078</u>

Benefits provided. Under Chapter 32A of the Massachusetts General Laws (MGL) the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth, housing authorities, redevelopment authorities and certain other governmental agencies. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefit costs, which are comparable

to contributions required from employees.

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2019 and as of the valuation date (January 1, 2019), Commonwealth participants contributed 10% to 20% of premium costs, depending on the date of hire and whether the participant is active, retiree, or survivor status. As part of the FY10 General Appropriation Act, all active employees pay an additional 5% of premium costs. Normal costs paid for OPEB to retirees during FY19 totaled approximately \$482 million.

Effective beginning FY14, the Commonwealth by statute is required to allocate, to the SRBT, a portion of revenue received under the Master Settlement Agreement with tobacco companies, increasing from 10% in FY14 to 100% by FY23. In FY19, 30% of tobacco settlement proceeds or approximately \$71 million was allocated to the SRBT. The percentage of proceeds to be transferred to the SRBT in FY19 was set at 30%, overriding existing statute.

B. INVESTMENTS

Investment Policy. The SRBT is required to invest in the PRIT Fund. Consequently, information about SRBT's target asset allocation and long-term expected real rate of return as of June 30, 2019, are the same as discussed in Notes 9 (B) and (C).

The annual money-weighted return on OPEB plan investments calculated as the internal rate of return on OPEB plan investments net of OPEB plan expenses for fiscal 2019 was 5.87%. A money-weighted rate of return expresses investment performance, net of OPEB plan investment expense, adjusted for the changing amounts actually invested.

C. NET OPEB LIABILITY OF THE OPEB PLAN REQUIRED BY GASB 74

The components of the net OPEB liability at June 30, 2019 are as follows (amounts in thousands);

	SRBT
Total OPEB liability	\$ 13,592,288
Plan fiduciary net position.....	(1,368,548)
Net OPEB liability.....	<u>\$ 12,223,740</u>
Fiduciary net position as a percentage of the total OPEB liability	10.1%

Additional information regarding changes in the net OPEB liability can be found in the Required Supplementary Information Section of these financial statements.

Actuarial assumptions. The total OPEB liability was determined by an actuarial valuation as of January 1, 2019 rolled forward to June 30, 2019, using the following actuarial assumptions:

1. The following annual healthcare cost trend rates: (1) 7.5%, decreasing by 0.5% each year to 5.50% in 2023 and 2024 and then decreasing by 0.50% each year to an ultimate rate of 4.5% in 2026 for Medical, (2) 5.0% per year until 2025, then decreasing to 4.50% in 2026 for EGWP and (3) 4.5% for administration costs.
2. Mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2016 from the central year, with females set forward one year.

Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the Commonwealth and those non-Commonwealth governments that participate in the GIC) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs on a premium basis between the Commonwealth and those non-Commonwealth governments that participate in the GIC to that point. The actuarial methods and assumptions used include techniques that are designed to reduce short-term volatility in actuarial

accrued liabilities and the actuarial value of assets, consistent with the long-term perspective of the calculations.

Discount rate. The discount rate used to measure the OPEB liability was 3.69%. This rate was based on a blend of the Bond Buyer Index rate (3.51%) as of the measurement date and the long-term expected rate of return. The plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2029. Therefore, the long-term expected rate of return on plan investments of 7.25% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2019.

Sensitivity of the net OPEB liability to changes in the discount rate. The following presents the OPEB plan's net OPEB liability calculated using the discount rate of 3.69%, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower (2.69%) or 1-percentage-point higher (4.69%) than the current rate (amounts in thousands):

	1% Decrease (2.69%)	Current Discount Rate (3.69%)	1% Increase (4.69%)
Net OPEB liability.....	\$ 14,433,874	\$ 12,223,740	\$ 10,453,313

Sensitivity of the net OPEB liability to changes in the healthcare cost trend rates. The following presents the OPEB plan's net OPEB liability, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rate (amounts in thousands):

	1% Decrease (b)	Current Healthcare Cost Trend Rate (a)	1% Increase (c)
Net OPEB liability.....	\$ 10,168,347	\$ 12,223,740	\$ 14,895,856

a - The current healthcare cost trend rates are as follows: 7.5% for Medicare, 5.0% for EGWP and 4.5% for administration costs.

b - The healthcare cost trend rates after a 1% decrease are as follows: 6.5% for Medicare, 4.0% for EGWP and 3.5% for administration costs.

c - The healthcare cost trend rates after a 1% increase are as follows: 8.5% for Medicare, 6.0% for EGWP and 5.5% for administration costs.

D. NET OPEB LIABILITY OF THE COMMONWEALTH REQUIRED BY GASB 75

The Commonwealth's net OPEB liability was measured as of June 30, 2018 and the total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018.

The Commonwealth's reporting entity reported the following net OPEB liability (amounts in thousands):

	Net OPEB Liability	
Primary government.....	\$ 14,243,453	(A)
Discretely presented component unit	3,193,027	(B)
Total net OPEB liability	\$ 17,436,480	

(A) - Of this amount \$1,371 relates to business-type activities not participating in the Commonwealth's OPEB plan

(B) - Of this amount \$2,525,905 relates to discretely presented component units not participating in the Commonwealth's OPEB plan

OPEB Expense and Deferred Outflows and Inflows of Resources Related to OPEB

As of June 30, 2018, the measurement date, the Commonwealth (primary government) and the discretely presented component units recognized OPEB expense of approximately \$383 million and \$147 million, respectively. The following details the components of deferred outflows of resources and deferred inflows of resources related to OPEB (amounts in thousands):

	Primary Government		Discretely Presented Component Unit	
	Deferred Outflows of Resources	Deferred Inflows of Resources	Deferred Outflows of Resources	Deferred Inflows of Resources
Changes in proportion	\$ 269,969	\$ 219,607	\$ —	\$ 49,850
Differences between expected and actual experience	172,983	30,659	225,278	86,715
Change of assumptions.....	—	4,381,658	—	323,000
Net difference between projected and actual earnings on				
OPEB plan investments	—	35,552	124	3,415
Payments made after the measurement date.....	572,434	—	71,979	—
Totals	<u>\$ 1,015,386</u>	<u>\$ 4,667,476</u>	<u>\$ 297,381</u>	<u>\$ 462,980</u>

The \$572 million and \$72 million reported as deferred outflows of resources in the primary government and the discretely presented component units, respectively, are the contributions made subsequent to the measurement date and will be recognized as a reduction of the net OPEB liability in the next fiscal year. Other amounts reported above as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense as follows (amounts in thousands):

	Primary Government	Discretely Presented Component Unit
2020	\$ (969,266)	\$ (56,509)
2021	(969,267)	(56,507)
2022	(969,267)	(56,509)
2023	(876,959)	(50,382)
2024	(436,847)	(15,411)
Thereafter.....	(2,918)	(2,260)
Total	<u>\$ (4,224,524)</u>	<u>\$ (237,578)</u>

Actuarial Assumptions

The total OPEB liability based on the actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018 used the following actuarial assumptions:

1. The following annual healthcare cost trend rates: (1) 8.0%, decreasing by 0.5% each year to 5.5% in 2023 and then decreasing 0.25% to an ultimate rate of 5.0% in 2025 for medical and (2) 5.0% for administration costs. Healthcare costs are offset by reimbursements for Employer Group Waiver Plans (EGWP), which are assumed to increase 5.0% per year.
2. The mortality rate was in accordance with RP2014 Blue Collar Mortality Table projected with scale MP-2016 from the central year, with females set forward one year.

3. Participation rates:
- 100% of all retirees who currently have health care coverage will continue with the same coverage, except that retirees under age 65 with POS/PPO coverage switch to Indemnity at age 65 and those over age 65 with POS/PPO coverage switch to HMO.
 - All current retirees, other than those indicated on the census data as not being eligible by Medicare, have Medicare coverage upon attainment of age 65, as do their spouses. All future retirees are assumed to have Medicare coverage upon attainment of age 65.
 - 80% of current and future contingent eligible participants will elect health care benefits at age 55, or current age if later.
 - Actives, upon retirement, take coverage, and are assumed to have the following coverage:

	Retirement Age	
	Under 65	Age 65+
Indemnity	40.0%	85.0%
POS/PPO	50.0%	—%
HMO	10.0%	15.0%

Discount Rate

The discount rate used to measure the OPEB liability as of June 30, 2018 was 3.95%. This rate was based on a blend of the Bond Buyer Index rate of 3.87% as of the measurement date and the long-term expected rate of return on plan investments of 7.35%. The plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are not covered by projected assets is 2025. Therefore, the long-term expected rate of return on plan investments was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2018.

Investments

The long-term expected rate of return as of June 30, 2018 was 7.35%. Investment assets of the Plan are held by the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB Plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity	39.0%	5.0%
Portfolio Completion Strategies.....	13.0%	3.7%
Core Fixed Income	12.0%	0.9%
Private Equity	12.0%	6.6%
Real Estate.....	10.0%	3.8%
Value Added Fixed Income	10.0%	3.8%
Timber/Natural Resources	4.0%	3.4%
Total	100.0%	

Changes in Net OPEB liability

The following presents the changes in the net OPEB liability of entities participating in the Commonwealth's OPEB plan (including MassDOT, a discretely presented component unit) as of June 30, 2018 (amounts in thousands):

	Increase/(Decrease)		
	Total OPEB Liability (a)	Plan Fiduciary Net Position (b)	Net OPEB Liability (a) - (b)
Balances at June 30, 2017	\$ 18,480,936	\$ 996,407	\$ 17,484,529
Changes for the year:			
Service cost	792,134	—	792,134
Interest	691,630	—	691,630
Differences between expected and actual experience.....	218,891	—	218,891
Changes of assumptions	(3,643,055)	—	(3,643,055)
Contributions-employer.....	—	542,896	(542,896)
Net investment income	—	93,308	(93,308)
Benefit payments	(443,763)	(443,763)	—
Administrative expense	—	(150)	150
Other additions.....	—	(1,262)	1,262
Other changes	—	133	(133)
Net changes	(2,384,163)	191,162	(2,575,325)
Balances at June 30, 2018	<u>\$ 16,096,773</u>	<u>\$ 1,187,569</u>	<u>\$ 14,909,204</u>

Sensitivity Analysis of the net OPEB liability to changes in the discount rate

The following presents the net OPEB liability of entities participating in the Commonwealth's OPEB plan (excluding MassDOT) calculated using the discount rate, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate (amounts in thousands):

	1% Decrease 2.95%	Current Rate 3.95%	1% Increase 4.95%
Net OPEB liability	<u>\$ 16,817,457</u>	<u>\$ 14,242,083</u>	<u>\$ 12,183,110</u>

Sensitivity Analysis of the net OPEB liability to changes in the healthcare cost trend rate

The following presents the net OPEB liability of entities participating in the Commonwealth's OPEB plan (excluding MassDOT), as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rate, as disclosed on page 121 of this report (amounts in thousands):

	1% Decrease	Current Rate	1% Increase
Net OPEB liability	<u>\$ 11,832,713</u>	<u>\$ 14,242,083</u>	<u>\$ 17,387,407</u>

MSBA

The MSBA, a blended component unit, sponsors its own single-employer defined benefit OPEB plan. The disclosures related to the net OPEB asset of the MSBA are not included in these notes to the financial statements due to immateriality (approximately \$226 thousand).

E. STATEMENT OF NET POSITION AND CHANGES IN NET POSITION

The following table displays the Statement of Net Position and Statement of Changes in Net Position for the State Retirees' Benefit Trust as of June 30, 2019 (amounts in thousands):

	OPEB Trust Fund
	State Retiree Benefits
ASSETS	
Cash and cash equivalents	\$ 82,454
Net investment in PRIT at fair value	1,286,108
Total assets	1,368,562
LIABILITIES	
Accounts payable	14
Net position available for other post-employment benefits	\$ 1,368,548
ADDITIONS	
Contributions:	
Employer contributions - Commonwealth	\$ 594,916
Other additions	188
Total contributions	595,104
Net investment gain/(loss):	
Investment gain/(loss)	74,601
Less: investment expense	(6,372)
Net investment gain/(loss)	68,229
Total additions	663,333
DEDUCTIONS	
Administration	171
Retirement benefits and refunds	482,183
Total deductions	482,354
Change in net position	180,979
Net position available for other post-employment benefits at beginning of year	1,187,569
Net position available for other post-employment benefits at end of year	\$ 1,368,548

11. LEASES**Primary Government**

In order to finance the acquisition of equipment, the Commonwealth has entered into various lease/purchase agreements, including tax-exempt lease purchase (TELP) agreements, which are accounted for as capital leases. Included in the capital assets of the Commonwealth are additions financed by capital leases. For FY19, these additions are approximately \$54 thousand. Lease agreements are for various terms and contain clauses indicating that their continuation is subject to appropriation by the Legislature.

The Commonwealth has numerous operating lease agreements for real property and equipment with varying terms.

These agreements contain provisions indicating that continuation is subject to appropriation by the Legislature.

The Institutions of Higher Education lease real property and equipment under numerous operating lease agreements for varying terms. The following schedule summarizes future minimum payments under non-cancelable leases for governmental activities and for the Institutions of Higher Education – reported as a business-type activity, for the fiscal year ended June 30, 2019 (amounts in thousands):

Fiscal Year Ended June 30	Governmental Activities					Business - Type Activities				
	Capital Leases		Operating Leases	MSBA Operating Leases	Governmental Activities Total	Capital Leases		Operating Leases	Business - Type Activities Total	
	Principal	Interest				Principal	Interest			
2020.....	\$ 3,163	\$ 566	\$ 236,284	\$ 1,117	\$ 241,130	\$ 2,592	\$ 302	\$ 46,169	\$ 49,063	
2021.....	3,110	556	144,044	1,141	148,851	2,143	245	41,079	43,467	
2022.....	3,087	552	121,686	1,166	126,491	1,707	190	30,667	32,564	
2023.....	3,023	541	105,047	1,191	109,802	930	146	28,218	29,294	
2024.....	3,162	565	87,514	1,215	92,456	598	103	25,150	25,851	
2025 - 2029	4,279	765	223,878	1,240	230,162	1,619	122	103,411	105,152	
2030 - 2034	11	2	50,352	—	50,365	—	—	55,388	55,388	
2035 - 2039	—	—	43,660	—	43,660	—	—	6,314	6,314	
2040 - 2044	—	—	43,705	—	43,705	—	—	2,046	2,046	
2045 - 2049	—	—	37,731	—	37,731	—	—	—	—	
2050 - 2054	—	—	7,185	—	7,185	—	—	—	—	
Total lease obligations	19,835	3,547	1,101,086	7,070	1,131,538	9,589	1,108	338,442	349,139	
Less: current portion	(3,163)	(566)	(236,284)	(1,117)	(241,130)	(2,592)	(302)	(46,169)	(49,063)	
Long-term lease obligations	\$ 16,672	\$ 2,981	\$ 864,802	\$ 5,953	\$ 890,408	\$ 6,997	\$ 806	\$ 292,273	\$ 300,076	

Capital assets acquired under capital lease (amounts in thousands):

Asset type:	Primary Government	
	Governmental Activities	Business - Type Activities
Buildings	\$ —	\$ 16,656
Machinery and equipment.....	34,152	8,865
Total assets	34,152	25,521
Less: accumulated depreciation	(14,128)	(15,841)
Total.....	<u>\$ 20,024</u>	<u>\$ 9,680</u>

12. OTHER LONG-TERM LIABILITIES

A. WORKERS' COMPENSATION AND GROUP INSURANCE LIABILITIES

Workers' Compensation is managed as part of the course of the Commonwealth's general operations. No separate fund for workers' compensation is provided for in Massachusetts General Laws (MGL). Claims for compensation are not separately insured and are funded by the Commonwealth only when incurred. Such losses, including estimates of amounts incurred, but not reported, are included as accrued liabilities in the accompanying financial statements when the loss is incurred. The Commonwealth assumes the full risk of claims filed under a program managed by the Human Resources Division. For personal injury, MGL limits the risk assumed by the Commonwealth to \$100,000 per occurrence, in most circumstances.

Workers' compensation costs are recognized when claims are presented and paid. The Commonwealth's outstanding liability for such claims at June 30, 2019 is estimated to be \$261 million of which approximately \$43 million is expected to be paid during FY20.

Changes in the Commonwealth's liability relating to workers' compensation claims in FY19 and FY18 were (amounts in thousands):

	FY19	FY18
Claims liability, beginning of year.....	\$ 260,904	\$ 260,180
Increase in liability estimate	62,782	61,678
Payments and decreases in liability estimate	(62,299)	(60,954)
Claims liability, end of year	<u>\$ 261,387</u>	<u>\$ 260,904</u>

The Group Insurance Commission (GIC), a department of the Commonwealth, manages health insurance claims of the Commonwealth's active and retired employees. The Commonwealth is self-insured and various health insurance providers provide health care services to the employees. The accrued liability is estimated based on data provided to the GIC by the insurance companies who participate in the self-insured plans.

Changes in the Commonwealth's liability relating to group insurance claims in FY19 and FY18 were (amounts in thousands):

	FY19	FY18
Claims liability, beginning of year.....	\$ 130,736	\$ 116,504
Increase in liability estimate	1,665,999	1,648,074
Payments and decreases in liability estimate	(1,645,462)	(1,633,842)
Claims liability, end of year	<u>\$ 151,273</u>	<u>\$ 130,736</u>

B. OTHER CLAIMS & JUDGMENTS

A number of lawsuits are pending or threatened against the Commonwealth, which arise from the ordinary course of operations. These include claims for property damage and personal injury, breaches of contract, condemnation proceedings and other alleged violations of law. The Commonwealth records a liability for those cases in which it is probable that a loss will be incurred and the amount of the potential judgment can be reasonably estimated or a settlement or judgment has been reached but not paid.

The following amounts were recognized for claims and judgments in FY19 and FY18 (amounts in thousands):

	FY19	FY18
Unpaid claims, beginning of year.....	\$ 22,498	\$ 12,518
Incurred claims	28,466	22,700
Claim payments and reductions.....	(17,723)	(12,720)
Unpaid claims end of year	<u>\$ 33,241</u>	<u>\$ 22,498</u>

C. ENVIRONMENTAL REMEDIATION

Governmental Accounting Standards Board Statement No. 49, *Accounting and Financial Reporting for Pollution Remediation Obligations* (GASB 49) provides guidance in estimating and reporting the potential costs of pollution remediation. While GASB 49 does not require the Commonwealth to search for pollution, it does require the Commonwealth to reasonably estimate and report a remediation liability when any of the following obligating events has occurred:

- Pollution poses an imminent danger to the public and the Commonwealth is compelled to take action;
- The Commonwealth is found in violation of a pollution-related permit or license;
- The Commonwealth is named, or has evidence that it will be named, as a responsible party by a regulator;
- The Commonwealth is named, or has evidence that it will be named, in a lawsuit to enforce a cleanup;
- The Commonwealth commences or legally obligates itself to conduct remediation activities.

Site investigation, planning and design, cleanup and site monitoring are typical remediation activities underway across the Commonwealth. Several Commonwealth agencies have dedicated programs, rules and regulations that routinely deal with remediation related issues; others become aware of pollution conditions in the fulfillment of their missions. The Commonwealth has the knowledge and expertise to estimate the remediation obligations presented herein based upon prior experience in identifying and funding similar remediation activities.

The standard requires the Commonwealth to calculate pollution remediation liabilities using the expected cash flow technique, which measures the liability as the sum of probability-weighted amounts in a range of possible estimated amounts. Where the Commonwealth cannot reasonably estimate a pollution remediation obligation it does not report a liability. Several state departments perform continual monitoring of polluted sites. Since the monitoring for such sites is perpetual, undiscounted multi-year costs for such sites have not been estimated. Because of a lack of information about the type and extent of the remediation effort that could be required, no range of outlays for the overall remediation effort for such sites could be developed at this time.

The remediation obligation estimates that appear in this report are subject to change over time. Cost may vary due to price fluctuations, changes in technology, changes in potential responsible parties, results of environmental studies, changes to statutes or regulations and other factors that could result in revisions to these estimates. Prospective recoveries from responsible parties may reduce the Commonwealth's obligation. Capital assets may be created when pollution remediation outlays are made under specific circumstances.

During FY19, the Commonwealth had the following activity related to environmental remediation (amounts in thousands):

	Governmental Activities
Environmental remediation liability, beginning of year	\$ 530,611
Expected additional future outlays, changes in liability estimates	(6,109)
FY19 outlays for environmental remediation	(7,087)
Environmental remediation liability, end of year.....	<u>\$ 517,415</u>

Massachusetts Military Reservation. 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.

Closed State Facilities. The Commonwealth has 17 facilities that contain a total of 235 buildings, mainly in closed state hospitals that may have varying degrees of asbestos, polychlorinated biphenyl (PCB's) and other compounds that are currently in a dormant state. The Commonwealth typically sells these facilities at minimal cost to private developers who assume full responsibility for all cleanup activity. Cost estimates are only performed during the sale process. At this time, the Commonwealth has no estimate of any potential asset that would be developed from these activities that would ready these sites for sale.

D. COST OF LIVING ADJUSTMENTS

The Commonwealth is financially responsible for the cost of living adjustment (COLA) granted to participants in various retirement systems of cities, towns and counties in fiscal years 1981 to 1997. Chapter 17 of the Acts of 1997 effective for fiscal year 1998 transferred the responsibility for funding COLAs for separate (non-teacher) retirement systems of cities and towns to their respective systems. Any future COLA granted by the Legislature to employees of these plans will be the responsibility of the individual system, assuming approval by the local board. The individual employer governments are also responsible for the basic pension benefits.

During fiscal year 2019, there was a decrease of approximately \$2 million in the liability for COLAs granted to participants in retirement systems of cities, towns and counties.

As of June 30, 2019, the Commonwealth's liability for COLA was approximately \$130 million.

13. CONTINGENCIES/COMMITMENTS

The Commonwealth receives significant financial assistance from the federal government. Entitlement to these resources is generally contingent upon compliance with terms and conditions of the grant or reimbursement agreements and with applicable federal regulations, including the expenditure of the resources for eligible purposes. Substantially all federal financial assistance is subject to financial and compliance audits.

Chapter 200A of the Massachusetts General Laws, the Commonwealth's Abandoned Property Law, requires deposit of certain unclaimed assets into a managed Fiduciary Fund. These unclaimed assets are to be remitted to the General Fund each June 30, where it is included as miscellaneous revenue. Amounts remitted during FY19 totaled approximately \$126 million. A portion of accumulated claims since the law's enactment represent a contingency, because claims for refunds can be made by the owners of the property.

Drug Testing Laboratory disputes. On August 28, 2012, a chemist formerly employed at the Department of Public Health's drug testing laboratory in Boston admitted to several types of misconduct involving her handling of laboratory samples, which were used in criminal cases. The Governor was informed and ordered the immediate closure of the laboratory. The Governor established a central office to identify individuals who may have been affected by the chemist's alleged malfeasance, which the office has estimated as possibly tens of thousands of criminal drug cases. The Governor also announced that the Inspector General is conducting an independent assessment of the laboratory's operations. In addition, the Attorney General's Office is conducting a criminal investigation. On December 17, 2012, the former chemist was indicted by a Statewide Grand Jury on 27 charges in connection with altering drug evidence during the testing process and obstructing justice. She was arraigned on December 20, 2012 in Suffolk Superior Court and pled guilty in 2013. There likely will be significant, but as yet undetermined, state costs required to investigate and respond to the chemist's alleged malfeasance. Supplemental appropriations totaling \$30 million were approved during fiscal 2013 to create a fund to reimburse agencies and cities for costs associated with investigating and responding to misconduct at the state drug testing laboratory. In addition, there may be substantial costs to defend civil complaints alleging state liability in both state and federal court and for potential judgments. As the number of specific cases affected by the chemist's misconduct has not been definitively determined, there is not sufficient information to fully estimate these additional state costs.

A. PRIMARY GOVERNMENT

The Commonwealth continues to guarantee certain Massachusetts Bay Transportation Authority (MBTA) debt outstanding at June 30, 2019, totaling approximately \$161 million.

The MBTA's Forward Funding legislation of 1999 provides for the MBTA to issue general obligation, revenue or other debt secured by a pledge or conveyance of all or a portion of revenues, receipts or other assets or funds of the MBTA. Accordingly, all MBTA debt issued after this legislation is not backed by the full faith and credit of the Commonwealth.

Additional commitments of the Commonwealth remain for the University of Massachusetts Building Authority. As of June 30, 2019, the University of Massachusetts Building Authority has approximately \$2.856 billion, of outstanding debt, of which approximately \$111 million is guaranteed by the Commonwealth.

B. TOBACCO SETTLEMENT

A Master Settlement Agreement (MSA) was executed in November of 1998 between five tobacco companies and 46 states, including the Commonwealth. Several additional tobacco companies have joined the MSA and are bound by its terms.

The MSA called for, among other things, annual payments to the states in perpetuity. These payments have been estimated to total more than \$200 billion over the first 25 years, subject to various offsets, reductions and adjustments.

In FY19, the Commonwealth received approximately \$237 million, or 65.1% of the estimated amounts shown in the MSA. Amounts received in FY19 continued to be less than had previously been projected as payments under the MSA, primarily because the payment amounts are related to national tobacco sales volumes, which have continued to decline since the settlement. The Commonwealth's allocable share of the base amounts payable under the MSA is approximately 4.04% or approximately \$8.962 billion through 2025, which is subject to adjustments, reductions and offsets. However, in pending litigation, tobacco manufacturers are claiming that because of certain developments, they are entitled to reduce future payments under the MSA and, from FY06 to the present, certain manufacturers have withheld portions of the payments due to the states. The Commonwealth continues to pursue legal action to compel the payment of these additional funds and to obtain a legal determination that the Commonwealth is immune from any downward adjustment to its settlement payments.

In FY04, a Suffolk Superior Court jury rejected the claims of the Commonwealth's private tobacco attorneys that they should be paid a fee amounting to 25% of the Commonwealth's tobacco settlement money. The jury awarded the plaintiffs 10.5% of the amount the Commonwealth receives under the MSA through 2025, minus an offset for amounts received by the attorneys from the tobacco companies pursuant to an arbitration award. To date, however, the attorneys have received more than 10.5% of what the Commonwealth has received under the MSA. As of June 30, 2019, the Commonwealth owes nothing under the jury award. Whether the Commonwealth will in the future be required to pay any sum on private counsel's claim will depend on the actual payments received by the Commonwealth under the MSA through 2025, as well as on the amounts the attorneys receive through the arbitration payments.

C. OTHER CONSTRUCTION COMMITMENTS

At June 30, 2019, the Commonwealth had commitments of approximately \$425 million related to ongoing construction projects.

D. CONTRACTUAL ASSISTANCE TO AUTHORITIES

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: (a) general obligation contract assistance; (b) budgetary contractual assistance liabilities; or (c) 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 obligations arise from statutory requirements for payments by the Commonwealth to the Massachusetts Clean Water Trust, the Massachusetts Department of Transportation 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. Such assistance constitutes a pledge of the Commonwealth's credit for which a two-thirds vote of the Legislature is required.

Budgetary contract assistance liabilities do not constitute a pledge of the Commonwealth's credit. Contingent liabilities relate to debt obligations of independent authorities and agencies of the Commonwealth, or payment obligations of such entities on hedging transactions related to such debt, 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 contingent liabilities consist of guarantees and similar obligations with respect to which the Commonwealth's credit has been or may be pledged. Under legislation approved by the Governor during FY09, the Commonwealth may pledge its credit to guarantee payment obligations of the Massachusetts Turnpike Authority (succeeded by MassDOT in FY10) with respect to certain hedging transactions or provide financial support subject to annual appropriation and without a pledge of the Commonwealth's credit. The same legislation authorizes the Commonwealth to provide credit support to the Turnpike Authority (succeeded by MassDOT) in connection with the issuance of certain refunding bonds, subject to annual appropriation and without a pledge of the Commonwealth's credit. In addition, 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 replenish the capital reserve funds securing certain debt obligations of the Massachusetts Housing Finance Agency and the Commonwealth's obligation to fund debt service, solely from monies otherwise appropriated for the affected institution, owed by certain community colleges and state universities on bonds issued by the Massachusetts Health and Educational Facilities Authority and the Massachusetts State College Building Authority.

E. MSBA

The MSBA has estimated the amount of outstanding New Program commitments at June 30, 2019 to be \$1.7 billion.

F. SOCIAL IMPACT BONDS

In January 2014, the Commonwealth entered into a "pay for success contract" (Social Impact Bonds) with a nonprofit intermediary organization and a nonprofit social service agency to reduce the recidivism rate of young men in the juvenile justice system or on probation. The Commonwealth is obligated to make success payments totaling \$28 million through calendar year 2019 and the Commonwealth's obligation to make such payments is a general obligation for which the Commonwealth's full faith and credit are pledged. Payments are only made based upon successful achievement of specified outcomes based on defined performance targets contained in the contract. The Commonwealth entered into a second such contract in December 2014 to address chronic individual homelessness. The contract obligates the Commonwealth to make up to \$6 million in success payments, in the aggregate, through fiscal 2021. In June, 2016 the Commonwealth entered into a third contract to assist individuals in Adult Basic Education (ABE) or English for Speakers of Other Languages (ESOL) programs to 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 total amount of payments backed by the full faith and credit of the Commonwealth under such contracts may not exceed, in the aggregate, \$50 million. As the amount required to be paid as of June 30, 2019 cannot be determined until performance targets have been achieved as determined by independent evaluators, no liability

has been accrued in these financial statements for these contracts.

G. PENSIONS

The Massachusetts State Employees' Retirement System (MSERS) and the Massachusetts Teachers' Retirement System (MTRS) (collectively referred to as the Retirement Systems), in conjunction with the Commonwealth, are evaluating 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 the operation of tax-exempt pension plans.

The activities being reviewed include (i) the statutorily directed funding of the budget for the Public Employees' Retirement Administration Commission (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 have 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, the MSERS and MTRS have submitted to the Internal Revenue Service for its consideration a request for a closing agreement which 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.

14. COMPONENT UNITS AND DETAILS OF DEPARTMENTS AND ENTITIES THAT ARE SEPARATELY AUDITED

The Commonwealth has also considered all potential component units for which it is financially accountable as well as other organizations for which the nature and significance of their relationship with the Commonwealth is such that exclusion would cause the Commonwealth's financial statements to be misleading or incomplete. As required by GAAP, these financial statements present the Commonwealth of Massachusetts (the primary government) and its component units. The Commonwealth has included 40 entities as component units in the reporting entity because of the significance of their operational and/or financial relationships with the Commonwealth. Details of those entities' operations can be found in those entities' basic financial statements and notes to those entities' basic financial statements.

The following entities are presented in the basic financial statements (all having a June 30, 2019 fiscal year end) (entities marked with an * are not legally separate from the Commonwealth but have separately audited financial statements). Entities that are marked with a § also were not audited in accordance with *Governmental Auditing Standards* as promulgated by the Comptroller General of the United States.

Entities Audited by KPMG LLP:

The Pension Reserves Investment Trust Fund (PRIT)

*The Massachusetts State Lottery Commission

The Massachusetts Department of Transportation (MassDOT)

The Massachusetts Clean Water Trust

Commonwealth Health Insurance Connector Authority

*§The Massachusetts Municipal Depository Trust (MMDT)

*The University of Massachusetts System

University of Massachusetts Foundation, Inc.

Entities Audited by Other Auditors:

The Massachusetts School Building Authority (MSBA)

***State Universities:**

Bridgewater State University
 Fitchburg State University
 Framingham State University
 Massachusetts College of Art
 Massachusetts Maritime Academy
 Massachusetts College of Liberal Arts
 Salem State University
 Westfield State University
 Worcester State University
 The Massachusetts State College Building Authority

***Community Colleges:**

Berkshire Community College
 Bristol Community College
 Bunker Hill Community College
 Cape Cod Community College
 Greenfield Community College
 Holyoke Community College
 Massasoit Community College
 Massachusetts Bay Community College
 Middlesex Community College
 Mount Wachusett Community College
 Northern Essex Community College
 North Shore Community College
 Quinsigamond Community College
 Roxbury Community College
 Springfield Technical Community College

Nonmajor Discretely Presented Component Units:

Massachusetts Convention Center Authority (MCCA)
 Massachusetts Development Finance Agency (MassDevelopment)
 §Massachusetts Technology Park Corporation (MTPC)
 Massachusetts Clean Energy Center (CEC)
 Massachusetts Housing Partnership (MHP)

Economic Development Entities (5 separate entities):

Massachusetts Growth Capital Corporation (MGCC)
 Commonwealth Corporation
 Community Economic Development Assistance Corporation (CEDAC)
 §Massachusetts Life Sciences Center
 Commonwealth Zoological Corporation (Zoo)

Higher Education Foundations (25 separate entities):

Bridgewater State University Foundation:
 The Bridgewater State University Foundation
 The Bridgewater Alumni Association of Bridgewater State University
 Fitchburg State University Foundation, Inc.
 Framingham State University Foundation, Inc.
 Massachusetts College of Art Foundation, Inc.
 Massachusetts College of Liberal Arts Foundation, Inc.
 The Massachusetts Maritime Academy Foundation, Inc.

Salem State University Foundation:

The Salem State University Foundation, Inc.

Salem State University Assistance Corporation

Westfield State University Foundation, Inc.

Worcester State Foundation

Berkshire Community College Foundation

Bristol Community College Foundation

Bunker Hill Community College Foundation

Cape Cod Community College Educational Foundation, Inc.

Greenfield Community College Foundation, Inc.

Holyoke Community College Foundation

Massachusetts Bay Community College Foundation, Inc.

Massasoit Community College Foundation

Middlesex Community College Foundation, Inc.

North Shore Community College Foundation

Springfield Technical Community College Foundation

Springfield Technical Community College Assistance Corporation

The Mount Wachusett Community College Foundation, Inc.

The Northern Essex Community College Foundation, Inc.

The Quinsigamond Community College Foundation, Inc.

The Roxbury Community College Foundation, Inc.

15. SUBSEQUENT EVENTS

SUBSEQUENT BOND ISSUANCES

On July 31, 2019, the MSBA issued \$300 million of Subordinated Dedicated Sales Tax Bonds (2019 Series A Bonds) for the purpose of funding school construction and renovation projects. The market generated premiums of approximately \$53 million on the bond issuance. The bonds mature at various dates through February 2049 and interest is due semi-annually each February 15th and August 15th. The bonds carry an interest rate of 5.0%.

On August 1, 2019, the Commonwealth issued approximately \$8 million in GO Bonds, Consolidated Loan of 2019 Series A (College Opportunity Bonds). These bonds carry an interest rate of 0.50%. The first principal payment is due on August 1, 2024 with final maturity on August 1, 2039.

On September 12, 2019, the Commonwealth issued \$858 million in federally taxable GO Refunding Bonds 2019, Series D. These bonds were issued to advance refund approximately \$805 million of various GO bonds and carries interest rates of 2.663% to 2.813% with final maturity on September 1, 2043. The refunding resulted in reduced debt service of approximately \$210 million and a present value savings of approximately \$146 million over the life of the bonds.

On September 12, 2019, the Commonwealth issued \$189 million in GO Refunding Bonds 2019, Series E. These bonds were issued to refund, on a current basis, approximately \$209 million in various GO bonds and carries a 3.00% interest rate with final maturity on December 1, 2027. The refunding resulted in reduced debt service of approximately \$24 million and a present value savings of approximately \$23 million over the life of the bonds.

On September 12, 2019, the Commonwealth issued \$425 million in GO Bonds, Consolidated Loan of 2019, Series G and \$400 million in federally taxable GO Bonds, Consolidated Loan of 2019, Series H. The Series G bonds carry interest rates ranging from 3.00% to 5.00% with the first principal payment on September 1, 2025 and final maturity on September 1, 2039. The Series H bonds carry an interest rate of 2.90% with the first principal payment on September 1, 2045 and final maturity on September 1, 2049.

On October 29, 2019, the Commonwealth issued \$1.4 billion in GO Revenue Anticipation Notes (RANS) in two \$500 million notes (2019 Series A and 2019 Series B) and one \$400 million note (2019 Series C). These notes carry an interest rate of 4.0% and mature on April 23, 2020, May 21, 2020 and June 18, 2020, respectively.

On November 20, 2019, the MSBA advance refunded \$748 million of 2011 Series B Dedicated Sales Tax Bonds by issuing \$715 million of Subordinated Dedicated Sales Tax Refunding Bonds 2019 Series B Bonds (federally taxable). The bonds mature on October 15, 2040 and the interest is payable semi-annually on April 15th and October 15th. The coupons on the bonds range from 1.855% to 3.395%. The refunding resulted in reduced debt service of approximately \$193 million and a present value savings of \$135 million over the life of the debt.

On November 21, 2019, the Commonwealth issued approximately \$54 million Federal Highway Grant Anticipation Notes (Accelerated Bridge Program) 2019 Series A. These notes carry an interest rate of 5.00% with the first principal payment on June 15, 2026 and final maturity on June 15, 2027.

On November 21, 2019, the Commonwealth issued \$200 million in Commonwealth Transportation Fund Revenue Bonds 2019 Series A. These bonds carry an interest rate of 5.00% with the first principal payment on June 1, 2044 and final maturity on June 1, 2049.

All debt issues were sold as tax exempt, except as noted.

Required Supplementary Information Other Than Management's Discussion and Analysis

(Unaudited)

*Schedule of Revenue, Expenditures and Changes in Fund Balances – Statutory Basis – Budget and Actual –
General Fund*

*Explanation of Differences Between Revenues, Expenditures and Other Financing Sources/(Uses) for the
General Fund on a Budgetary Basis and GAAP Basis*

*Notes to Required Supplementary Information – Budgetary Reporting
Required OPEB and Pension Schedules*

Schedule of Revenues, Expenditures and Changes In Fund Balances - Statutory Basis - Budget and Actual

General Fund

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Original Budget	Final Budget	Actual	Variance
REVENUES AND OTHER FINANCING SOURCES				
Revenues:				
Taxes	\$ 25,195,500	\$ 25,195,500	\$ 26,396,285	\$ 1,200,785
Assessments	442,780	442,780	409,190	(33,590)
Federal grants and reimbursements	11,497,356	11,497,356	11,762,585	265,229
Tobacco settlement revenue	251,241	251,241	236,632	(14,609)
Departmental	3,202,261	3,202,261	3,443,476	241,215
Miscellaneous	305,014	305,014	430,985	125,971
Total revenues	40,894,152	40,894,152	42,679,153	1,785,001
Other financing sources:				
Fringe benefit cost recovery	465,209	465,209	451,149	(14,060)
Lottery reimbursements	110,457	110,457	107,289	(3,168)
Lottery distributions	995,602	995,602	1,088,049	92,447
Operating transfers in	225,419	225,419	207,944	(17,475)
Stabilization transfer	—	398,809	1,454,575	1,055,766
Total other financing sources	1,796,687	2,195,496	3,309,006	1,113,510
Total revenues and other financing sources	42,690,839	43,089,648	45,988,159	2,898,511
EXPENDITURES AND OTHER FINANCING USES				
Expenditures:				
Legislature	105,511	105,511	67,643	37,868
Judiciary	1,002,179	1,002,178	982,509	19,669
Inspector General	5,086	5,086	5,083	3
Governor and Lieutenant Governor	8,018	8,018	6,851	1,167
Secretary of the Commonwealth	55,940	55,940	50,778	5,162
Treasurer and Receiver-General	253,963	253,963	244,182	9,781
Auditor of the Commonwealth	19,180	19,180	18,382	798
Attorney General	53,413	53,413	51,562	1,851
Ethics Commission	2,255	2,255	2,199	56
District Attorney	130,579	130,579	129,040	1,539
Office of Campaign & Political Finance	1,654	1,654	1,618	36
Sheriff's Departments	658,950	658,950	657,858	1,092
Disabled Persons Protection Commission	4,251	4,251	4,249	2
Board of Library Commissioners	27,241	27,241	27,179	62
Comptroller	14,895	14,895	14,066	829
Administration and finance	2,507,763	2,507,764	2,244,877	262,887
Energy and environmental affairs	260,312	260,312	239,793	20,519
Health and human services	6,538,228	6,403,202	6,295,158	108,044
Executive Office of Technology Services and Security	137,261	137,261	112,947	24,314
Office of the Child Advocate	1,229	1,229	772	457
Cannabis Control Commission	2,000	2,000	1,901	99
Executive Office of education	2,593,818	2,593,818	2,491,427	102,391
Center for Health Information and Analysis	30,699	30,699	20,086	10,613
Public safety and homeland security	1,312,880	1,312,880	1,224,034	88,846
Housing and economic development	633,565	633,565	580,681	52,884
Labor and workforce development	75,919	75,919	49,831	26,088
Direct local aid	6,011,427	6,011,427	6,003,140	8,287
Medicaid	16,520,617	16,655,643	16,520,543	135,100
Post employment benefits	3,080,259	3,080,259	3,069,787	10,472
Debt service:				
Principal retirement	652,398	652,398	625,037	27,361
Interest and fiscal charges	614,538	614,538	595,228	19,310
Total expenditures	43,316,028	43,316,028	42,338,441	977,587
Other financing uses:				
Operating transfers out	388,734	388,734	477,302	(88,568)
State Retiree Benefits transfer	—	—	42,420	(42,420)
State Pension transfer	—	—	42,420	(42,420)
Medical assistance transfer	586,600	586,600	363,078	223,522
Stabilization transfer	—	389,200	1,206,132	(816,932)
Total other financing uses	975,334	1,364,534	2,131,352	(766,818)
Total expenditures and other financing uses	44,291,362	44,680,562	44,469,793	210,769
Excess/(deficiency) of revenues and other financing sources over expenditures and other financing uses	\$ (1,600,523)	\$ (1,590,914)	1,518,366	\$ 3,109,280
Fund balances/(deficits) at beginning of year			2,351,226	
Fund balances/(deficits) at end of year			<u>\$ 3,869,592</u>	

See Independent Auditors' Report and notes to required supplementary information

**Explanation of Differences between Revenues, Expenditures and Other Financing Sources/(Uses)
for the General Fund on a Budgetary Basis and GAAP Basis (in thousands):**

REVENUES

Actual amounts (budgetary basis) "revenues" from the budgetary comparison schedules	\$ 42,679,153
Adjustments for amounts budgeted for on a cash basis, rather than on the modified accrual basis:	
Tax receivable, net	227,699
Tax refunds and abatements payable, net	200,623
Federal reimbursements and other receivables	(339,483)
Reclassifications:	
Higher education revenue is reclassified for GAAP reporting	(68,225)
Inflows from component units and other miscellaneous financing sources	184,539
Certain revenue is reclassified to fiduciary funds for GAAP reporting	(40,328)
Total revenues as reported on the Statement of Revenues, Expenditures and Changes in Fund Balances - Governmental Funds	<u><u>\$ 42,843,978</u></u>

OTHER FINANCING SOURCES

Actual amounts (budgetary basis) "other financing sources" from the budgetary comparison schedule	\$ 3,309,006
Adjustments and Reclassifications:	
Proceeds of capital lease on GAAP basis	54
Consolidation of transfers between funds	(1,209,585)
Inflows from component units and other miscellaneous financing sources	(86,359)
Total other financing sources as reported on the Statement of Revenues, Expenditures and Changes in Fund Balances - Governmental Funds	<u><u>\$ 2,013,116</u></u>

EXPENDITURES

Actual amounts (budgetary basis) "expenditures" from the budgetary comparison schedule	\$ 42,338,441
Adjustments for amounts budgeted for on a cash basis, rather than on the modified accrual basis:	
Medicaid payments	(672,000)
Compensated absences and other accrued liabilities	26,112
Reclassifications:	
Capital lease additions are additions to expenditures for GAAP purposes on a fund perspective	54
Budgetary debt service are reclassified to transfers out to a debt service fund for GAAP purposes as the Commonwealth does not have a statutory debt service fund	(1,220,266)
Higher education expenditures are reclassified for GAAP reporting	(1,577,813)
Expenditures to component units reported on a GAAP basis	(1,186)
Certain expenditures are reclassified to fiduciary funds for GAAP reporting	(40,328)
Total expenditures as reported on the Statement of Revenues, Expenditures and Changes in Fund Balances - Governmental Funds	<u><u>\$ 38,853,014</u></u>

OTHER FINANCING USES

Actual amounts (budgetary basis) "other financing uses" from the budgetary comparison schedule	\$ 2,131,352
Adjustments and Reclassifications:	
Consolidation of transfers between funds	(1,209,585)
Budgetary higher education amounts are reclassified to transfers under the modified accrual basis	1,509,587
Budgetary debt service are reclassified to transfers out to a debt service fund for GAAP purposes as the Commonwealth does not have a statutory debt service fund	1,220,266
Transfers to component units reported on a GAAP basis	(1,958)
Total other financing uses as reported on the Statement of Revenues, Expenditures and Changes in Fund Balances - Governmental Funds	<u><u>\$ 3,649,662</u></u>

See Independent Auditors' Report and notes to required supplementary information.

Note to Required Supplementary Information – Budgetary Reporting

The Commonwealth passes a combined budget for all budgeted operations. State finance law requires that a balanced budget be approved by the Governor and the Legislature. The Governor presents an annual budget to the Legislature, which includes estimates of revenues and other financing sources and recommended expenditures and other financing uses. The Legislature, which has full authority to amend the budget, adopts an expenditure budget by appropriating monies at the individual appropriation account level in an annual appropriations act. Generally, expenditures may not exceed the level of spending authorized for an appropriation account.

Before signing the appropriations act, the Governor may veto or reduce any specific item, subject to legislative override. Further changes to the budget established in the annual appropriations act may be made via supplemental appropriation acts or other legislative acts. These must also be signed by the Governor and are subject to the line item veto.

In addition, Massachusetts General Laws authorize the Secretary of Administration and Finance, with the approval of the Governor, upon determination that available revenues will be insufficient to meet authorized expenditures, to withhold allotments of appropriated funds which effectively reduce the account's expenditure budget. The majority of the Commonwealth's appropriations are non-continuing accounts which lapse at the end of each fiscal year. Others are continuing accounts for which the Legislature has authorized that an unspent balance from the prior year be carried forward and made available for spending in the current fiscal year. In addition, the Legislature may direct that certain revenues be retained and made available for spending within an appropriation. Fringe benefits, pension costs, and certain other costs which are mandated by state finance law are not itemized in the appropriation process and are not separately budgeted.

Because revenue budgets are not updated subsequent to the original appropriation act, the comparison of the initial revenue budget to the subsequent, and often modified, expenditure budget can be misleading. Also, these financial statements portray fund accounting with gross inflows and outflows, thus creating a difference to separately published budget documents, which eliminate some interfund activity. In conducting the budget process, the Commonwealth excludes those interfund transactions that by their nature have no impact on the combined fund balance of the budgeted funds.

The FY04 General Appropriation Act (Chapter 26, Section 167 of the Acts of 2003), amended section 9C, directing the Governor to notify the Legislature in writing as to the reasons for and the effect of any reductions in spending. Alternatively, the Governor may propose specific additional revenues to fund the deficiency. The Governor may also propose to transfer funds from the Stabilization Fund to cure the deficiency. This proposal must be delivered to the Legislature 15 days before any reductions take effect.

The following table summarizes budgetary activity for FY19 (amounts in thousands):

	Revenues	Expenditures
General Appropriation Act, Chapter 154 of the Acts of 2018:		
Direct appropriations.....	\$ 42,416,300	\$ 41,257,530
Estimated revenues, transfers, retained revenue appropriations, and appropriations carried forward from FY2018.....	—	1,500,398
Total original budget	42,416,300	42,757,928
Supplemental Acts of 2018:		
Chapter 273	—	134,150
Chapter 368	—	3,850
Supplemental Acts of 2019:		
Chapter 5	—	134,783
Chapter 6	—	8,000
Chapter 21	—	3,500
Chapter 34	—	36,695
Chapter 67	—	250
Chapter 142	—	542,433
Total budgeted revenues and expenditures per Legislative action	—	863,661
Plus: Pension contributions and revenue authorized in the General Appropriation Act, and other transfers of revenue and spending	3,001,470	3,220,225
Budgeted revenues and expenditures as reported.....	\$ 45,417,770	\$ 46,841,814

As the budget is not passed taking into account the structure of funds, but of appropriations, reports contained within the Commonwealth's MMARS accounting system demonstrate budgetary compliance by appropriation. Those reports are available upon request at the Office of the State Comptroller, Statewide Financial Reporting Team, at (617) 973-2660 or can be downloaded directly at <http://www.macomptroller.info/comptroller/docs/reports-audits/NGA206S%2001-24-2020.pdf>.

Schedule of Changes in the State Employees' Retirement System (SERS) Net Pension Liability and Related Ratios

(Amounts in thousands, except for percentages)

	2019	2018	2017	2016	2015
Total pension liability, 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
Change in benefit terms.....	—	—	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	434,000	622,000	304,000	—	2,330,000
Benefit payments, including refunds of member contributions	(2,427,556)	(2,314,447)	(2,207,582)	(2,107,327)	(1,876,451)
Net change in total pension liability	2,173,000	2,118,000	1,347,000	2,334,586	4,070,414
Total pension liability, June 30 (a)	<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, July 1	\$ 27,995,021	\$ 26,282,232	\$ 23,971,156	\$ 24,042,585	\$ 23,930,895
Contributions:					
Employers - Commonwealth and MassDOT	919,545	842,864	716,266	660,818	601,931
Non-employer contributions - Commonwealth.....	37,359	33,310	28,455	21,830	18,040
Employer and non-employer contributions - 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	104,765	118,124	232,548	397,077	92,503
Total contributions.....	1,733,314	1,633,291	1,619,133	1,717,408	1,277,775
Net investment income.....	1,543,398	2,460,748	2,987,632	422,938	800,886
Benefit payments, including refunds of plan member contributions.....	(2,427,556)	(2,314,447)	(2,207,582)	(2,107,327)	(1,876,451)
Administrative expense	(15,853)	(16,369)	(30,030)	(20,624)	(15,966)
Other changes	(64,528)	(50,434)	(58,077)	(83,824)	(74,554)
Net change in plan fiduciary net position.....	768,775	1,712,789	2,311,076	(71,429)	111,690
Plan fiduciary net position, June 30 (b).....	<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 - June 30 (a) - (b)	<u>\$ 14,634,204</u>	<u>\$ 13,229,979</u>	<u>\$ 12,824,768</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 payroll (as of the actuarial valuation date).....	\$ 6,354,473	\$ 6,155,194	\$ 5,927,012	\$ 5,792,288	\$ 5,591,911
Net pension liability as a percentage of covered employee payroll	230.3%	214.9%	216.4%	238.1%	203.6%

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule.

2014
\$ 29,988,000
631,634
2,405,204
—
—
102,000
(1,771,838)
1,367,000
\$ 31,355,000
\$ 21,084,958
550,483
21,293
6,048
—
501,106
68,967
1,147,897
3,551,012
(1,771,838)
(12,705)
(68,429)
2,845,937
\$ 23,930,895
\$ 7,424,105
76.3%
\$ 5,344,510
138.9%

FY2019 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in the investment rate of return

SERS changed its discount rate to 7.25% from 7.35%. This change resulted in an increase to the total pension liability of approximately \$434 million.

FY2018 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in the investment rate of return

SERS changed its discount rate to 7.35% from 7.50%. This change resulted in an increase to the total pension liability of approximately \$613 million.

Change in mortality

The following mortality assumption changes were made in the January 1, 2018 Actuarial Valuation:

- Disabled members - would reflect the same assumptions as for superannuation retirees, but with an age set forward of one year.

This change resulted in an increase to the total pension liability of approximately \$9 million.

FY2017 Changes in Actuarial Assumptions

Changes of Benefit Terms:

Chapter 79 of the Acts 2014 established an early retirement incentive (ERI) program for certain employees of the highway division of the Massachusetts Department of Transportation whose positions have been eliminated due to automation of toll collections. Most members retiring under the ERI program had a date retirement of October 28, 2016. 112 members took the ERI and retired during FY2017. As a result, the total pension liability of SERS increased by approximately \$10 million.

Changes of Assumptions:

Change in mortality

The following mortality assumption changes were made in the January 1, 2017 Actuarial Valuation:

- Pre-retirement - was changed to RP-2014 Blue Collar Employees table projected generationally with Scale MP-2016 set forward 1 year for females from RP-2000 Employees table projected generationally with Scale BB and a base year of 2009 (gender distinct).
- Post-retirement - was changed to RP-2014 Blue Collar Healthy Annuitant table projected generationally with Scale MP-2016 set forward 1 year for females from RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2009 (gender distinct).
- Disabled members - is assumed to be in accordance with the RP-2000 Healthy Annuitant Table projected generationally with Scale BB and a base year of 2015 (gender distinct), and is unchanged from the prior valuation.

These changes resulted in an increase to the total pension of approximately \$304 million.

(Continued)

FY2016 Changes in Actuarial Assumptions

Changes in Benefit Terms:

Chapter 176 of the Acts of 2011 created a one time election for eligible members of the Optional Retirement Plan (ORP) to transfer to the State Employee's Retirement System (SERS) and purchase service for the period while members of the ORP. As a result, the total pension liability of SERS has increased by approximately \$400 million.

FY2015 Changes in Actuarial Assumptions

Changes in Benefit Terms:

In May 2015, Chapter 19 of the Acts of 2015 created an Early Retirement Incentive (ERI) for certain members of SERS who upon election of the ERI retired effective June 30, 2015. As a result, the total pension liability has increased by approximately \$230 million.

Changes of Assumptions:

Change in the investment rate of return

The Commonwealth revised its discount rate to 7.50% from 7.75%. This change resulted in an increase to the total pension liability of approximately \$933 million.

Change in mortality

The following mortality assumption changes were made in the January 1, 2015 Actuarial Valuation:

- Pre-retirement - was changed to RP-2000 Employees table projected generationally with Scale BB and a base year of 2009 (gender distinct) from RP-2000 Employees table projected 22 years with Scale AA.
- Post-retirement - was changed to RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2009 (gender distinct) from RP-2000 Healthy Annuitant table projected 17 years with Scale AA.
- Disabled members - was changed to be assumed to be in accordance with RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2015 (gender distinct) from RP-2000 Healthy Annuitant table projected 7 years with Scale AA set forward 3 years for males.

These changes resulted in an increase to the total pension liability of approximately \$1.397 billion.

FY2014 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in Experience

An updated experience study was issued on February 27, 2014 and encompassed the period January 1, 2006 to December 31, 2011. The study reviewed salary increases and rates of retirement, disability, turnover, and mortality. This study adjusted the mortality assumption which resulted in an increase to the total pension liability of approximately \$102 million.

See Independent Auditors' Report

**Schedule of Changes in the Massachusetts Teachers' Retirement
System (MTRS) Net Pension Liability and Related Ratios**

(Amounts in thousands, except for percentages)

	2019	2018	2017	2016	2015
Total pension liability, 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.....	3,763,191	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	577,000	845,000	1,176,000	—	3,080,000
Benefit payments, including refunds of plan member contributions	(3,092,363)	(2,992,578)	(2,896,567)	(2,791,011)	(2,684,049)
Net change in total pension liability	2,248,000	2,479,000	2,724,000	1,381,289	4,483,711
Total pension liability, June 30 (a)	<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, July 1	\$ 28,791,711	\$ 27,138,609	\$ 24,942,072	\$ 25,429,068	\$ 25,538,646
Contributions:					
Non-employer.....	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	234,532	231,734	223,746	202,796	190,925
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.....	(3,092,363)	(2,992,578)	(2,896,567)	(2,791,011)	(2,684,049)
Administrative expense	(18,324)	(19,528)	(24,053)	(24,220)	(23,444)
Other changes	(189,487)	(179,573)	(172,668)	(139,929)	(130,384)
Net change in plan fiduciary net position.....	745,269	1,653,102	2,196,537	(486,996)	(109,578)
Plan fiduciary net position, June 30 (b).....	<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 - June 30 (a) - (b)	<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 payroll (as of actuarial valuation date)	\$ 7,074,960	\$ 6,829,012	\$ 6,583,871	\$ 6,388,732	\$ 6,204,274
Net pension liability as a percentage of covered employee payroll	356.4%	347.2%	347.6%	350.0%	330.3%

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule.

2014
\$ 39,931,000
720,712
3,227,025
—
108,000
(2,551,737)
1,504,000
\$ 41,435,000
\$ 22,697,302
937,379
653,328
150,522
1,741,229
3,771,883
(2,551,737)
(20,499)
(99,532)
2,841,344
\$ 25,538,646
\$ 15,896,354
61.6%
\$ 5,962,650
266.6%

FY2019 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in the investment rate of return

The Commonwealth revised its discount rate to 7.25% from 7.35%. This change resulted in an increase to the total pension liability of approximately \$577 million.

FY2018 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in the investment rate of return

The Commonwealth revised its discount rate to 7.35% from 7.50%. This change resulted in an increase to the total pension liability of approximately \$845 million.

FY2017 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in mortality

The following mortality assumption changes were made in the January 1, 2017 Actuarial Valuation:

- Pre-retirement - was changed to RP-2014 White Collar Employees table projected generationally with Scale MP-2016 (gender distinct) from RP-2014 Employees table projected generationally with Scale BB).
- Post-retirement - was changed to RP-2014 White Collar Healthy Annuitant table projected generationally with Scale MP-2016 (gender distinct) from RP-2014 Healthy Annuitant table projected generationally with Scale BB).
- Disabled members - is assumed to be in accordance with RP-2014 Healthy Annuitant table projected generationally with Scale BB and a base year of 2014 set forward 4 years and is unchanged from the prior valuation.

These changes resulted in an increase to the total pension liability of approximately \$1.176 billion.

FY2015 Changes in Actuarial Assumptions

Changes of assumptions:

Change in the investment rate of return

The Commonwealth revised its discount rate to 7.50% from 7.75%. This change resulted in an increase to the total pension liability of approximately \$1.190 billion.

Change in mortality

The following mortality assumption changes were made in the January 1, 2015 Actuarial Valuation:

- Pre-retirement - was changed to RP-2014 Employees table projected generationally with Scale BB and a base year of 2014 (gender distinct) from RP-2000 Employees table adjusted for "white-collar" employment projected 22 years with Scale AA.
- Post-retirement - was changed to RP-2014 Healthy Annuitant table projected generationally with Scale BB and a base year of 2014 (gender distinct) from RP-2000 Healthy Annuitant table adjusted for large annuity amounts and projected 17 years with Scale AA.

(Continued)

- Disabled members - was changed to be assumed to be in accordance with RP-2014 Healthy Annuitant table projected generationally with Scale BB and a base year of 2014 set forward 4 years from RP-2000 Healthy Annuitant table adjusted for large annuity amounts and projected 7 years with Scale AA set forward 3 years for males.

These changes resulted in an increase to the total pension liability of approximately \$1.890 billion.

FY2014 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in Experience

An updated experience study was issued on February 27, 2014 and encompassed the period January 1, 2006 to December 31, 2011. The study reviewed salary increases and rates of retirement, disability, turnover, and mortality. This study adjusted the mortality assumption which resulted in an increase to the total pension liability of approximately \$108 million.

See Independent Auditors' Report

Schedule of Changes in the State Retirees' Benefit Trust (SRBT)
Net OPEB Liability and Related Ratios

(Amounts in thousands, except for percentages)

	2019	2018	2017
Total OPEB liability, 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	(4,125,306)	(3,643,000)	(2,393,700)
Benefit payments, including refunds of member contributions	(482,183)	(443,763)	(441,064)
Net change in total pension liability	(2,504,485)	(2,384,163)	(1,340,664)
Total OPEB liability, June 30 (a).....	<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	188	133	784
Total contributions.....	595,104	543,029	466,233
Net investment income	68,229	93,308	105,822
Benefit payments, including refunds of plan member contributions	(482,183)	(443,763)	(441,064)
Administrative expense	(171)	(150)	(127)
Other changes	—	(1,262)	(500)
Net change in plan fiduciary net position.....	180,979	191,162	130,364
Plan fiduciary net position, June 30 (b).....	<u>\$ 1,368,548</u>	<u>\$ 1,187,569</u>	<u>\$ 996,407</u>
Plan net OPEB liability - June 30 (a) - (b)	<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)	\$ 6,354,473	\$ 6,155,194	\$ 5,927,012
Net OPEB liability as a percentage of covered employee payroll	192.4%	242.2%	295.0%

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule.

FY2019 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in base OPEB rates for medical and prescriptions

Annually, a recalibration of the underlying healthcare costs is performed using healthcare cost experience from the GIC and developing new per person annual costs under the different health plan options. The expectation is that the new rates will be equal to the prior year rates plus one year of healthcare trend (medical inflation).

This resulted in a decrease to the total OPEB liability of approximately \$3.774 billion.

Change in trend on future costs

The healthcare trend rate decreased from 8.0% in FY2018 to 7.5% in FY2019, which impacts the high cost excise tax. This resulted in a decrease to the total OPEB liability of approximately \$772 million.

Change in medical plan election rates

The pre age 65 medical plan election percentages were updated to better reflect plan experience and resulted in a decrease to the total OPEB liability of approximately \$77 million.

Change in future retirees' plan participation rates

Plan participation rate for future retirees was changed from 80% to 85% to better reflect recent plan experience and increased the OPEB liability approximately \$49 million.

Change in discount rate

The discount rate was decreased to 3.69% (based on a blend of the Bond Buyer Index rate (3.51%) as of the measurement date and the expected rate of return on assets) as required by GASB Statement No. 74. This decrease in the discount rate resulted in an increase in the total OPEB liability of approximately \$449 million.

FY2018 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in base OPEB rates for medical and prescriptions

Annually, a recalibration of the underlying healthcare costs is performed using healthcare cost experience from the GIC and developing new per person annual costs under the different health plan options. The expectation is that the new rates will be equal to the prior year rates plus one year of healthcare trend (medical inflation).

This resulted in a decrease to the total OPEB liability of approximately \$2.679 billion.

Change in trend on future costs

The healthcare trend rate decreased from 8.5% in FY2017 to 8.0% in FY2018, which impacts the high cost excise tax. This resulted in a decrease to the total OPEB liability of approximately \$82 million.

Change in mortality

The following mortality assumption changes were made in the January 1, 2018 Actuarial Valuation:

- Disabled members - would reflect the same assumptions as for superannuation retirees, but with an age set forward of one year.

This change resulted in a decrease to the total OPEB liability of approximately \$1 million.

Change in discount rate

The discount rate was increased to 3.95% (based on a blend of the Bond Buyer Index rate (3.87%) as of the measurement date and the expected rate of return on assets) as required by GASB Statement No. 74. This increase in the discount rate resulted in a decrease to the total OPEB liability of approximately \$880 million.

FY2017 Changes in Actuarial Assumptions

Changes of Assumptions:

Change in discount rate

The discount rate was increased to 3.63% (based on a blend of the Bond Buyer Index rate (3.58%) as of the measurement date and the expected rate of return on assets) as required by GASB Statement No. 74. The June 30, 2016 discount rate was calculated to be 2.80%. This increase in the discount rate resulted in a decrease to the total OPEB liability of approximately \$2.394 billion.

See Independent Auditors' Report

Schedule of Investment Returns

	Fiscal Year Ending June 30					
	2019	2018	2017	2016	2015	2014
Annual money-weighted rate of return, net of investment expense - SERS.....	5.63%	9.58%	12.74%	1.79%	3.40%	17.13%
Annual money-weighted rate of return, net of investment expense - MTRS	5.62%	9.58%	12.75%	1.78%	3.40%	17.12%
Annual money-weighted rate of return, net of investment expense - SRBT	5.87%	9.46%	12.90%	(1)	(1)	(1)

(1) - GASB 74 implemented in FY2017.

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report

Schedule of Proportionate Share of the Net Pension Liability and Contributions
State Employees' Retirement System

Last 10 Years
(amounts in thousands)

Proportionate Share of the Net Pension Liability	2019 (measurement date June 30, 2018)	2018 (measurement date June 30, 2017)	2017 (measurement date June 30, 2016)	2016 (measurement date June 30, 2015)
Proportion of the net pension liability	94.6%	94.5%	94.3%	93.8%
Proportionate share of the net pension liability	\$ 12,520,028	\$ 12,122,363	\$ 12,996,818	\$ 10,682,765
Plan net position as a percentage of the total pension liability	67.9%	67.2%	63.5%	67.9%
Covered payroll.....	\$ 5,440,103	\$ 5,397,203	\$ 5,249,985	\$ 5,136,405
Net pension liability as a percentage of covered payroll	230.1%	224.6%	247.6%	208.0%

	Fiscal Year Ending June 30				
Contributions	2019	2018	2017	2016	2015
Statutorily required contribution	\$ 956,904	\$ 876,174	\$ 744,721	\$ 682,648	\$ 619,971
Contributions in relation to the statutorily required contribution	956,904	876,174	744,721	682,648	619,971
Annual contribution deficiency/(excess).....	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Covered payroll	\$ 5,641,512	\$ 5,440,103	\$ 5,397,203	\$ 5,249,985	\$ 5,136,405
Contributions as a percentage of covered payroll	17.0%	16.1%	13.8%	13.0%	12.1%

The State Employees' Retirement System (SERS) is included in the CAFR as a pension trust fund in the fiduciary fund type. SERS is a defined-benefit multiple employer, cost-sharing public employee retirement system.

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule

2015
(measurement
date June 30,
2014)

93.9%

\$ 6,972,443

76.3%

\$ 4,975,346

140.1%

2014

\$ 571,776

571,776

\$ —

\$ 4,975,346

11.5%

Schedule of Proportionate Share of the Net Pension Liability and Contributions
Massachusetts Teachers' Retirement System

Last 10 Years
(amounts in thousands)

Proportionate Share of the Net Pension Liability	2019 (measurement date June 30, 2018)	2018 (measurement date June 30, 2017)	2017 (measurement date June 30, 2016)	2016 (measurement date June 30, 2015)
Proportion of the net pension liability	100.0%	100.0%	100.0%	100.0%
Proportionate share of the net pension liability	\$ 23,711,289	\$ 22,885,391	\$ 22,357,928	\$ 20,489,643
Plan net position as a percentage of the total pension liability	54.8%	54.3%	52.7%	55.4%

Contributions	Fiscal Year Ending June 30				
	2019	2018	2017	2016	2015
Statutorily required contribution	\$ 1,443,710	\$ 1,314,783	\$ 1,235,515	\$ 1,124,583	\$ 1,021,930
Contributions in relation to the statutorily required contribution	1,443,710	1,314,783	1,235,515	1,124,583	1,021,930
Annual contribution deficiency/(excess)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

The Massachusetts Teachers' Retirement System (MTRS) is included in the CAFR as a pension trust fund in the fiduciary fund type. MTRS is a defined-benefit multiple employer, cost-sharing public employee retirement system.

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule

2015
(measurement
date June 30,
2014)

100.0%

\$ 15,896,354

61.6%

2014

\$ 937,379

937,379

\$ —

Schedule of Proportionate Share of the Net Pension Liability and Contributions
Boston Retirement System - Teachers
Last 10 Years
(amounts in thousands)

Proportionate Share of the Net Pension Liability	2019 (measurement date December 31, 2018)	2018 (measurement date December 31, 2017)	2017 (measurement date December 31, 2016)	2016 (measurement date December 31, 2015)	2015 (measurement date December 31, 2014)
Proportion of the net pension liability	55.6%	60.5%	55.9%	54.5%	53.7%
Proportionate share of the net pension liability.....	\$ 2,551,190	\$ 2,433,199	\$ 2,325,286	\$ 2,402,267	\$ 2,066,546
Plan net position as a percentage of the total pension liability	58.3%	62.7%	58.4%	55.8%	59.6%

Contributions	Fiscal Year Ending December 31					
	2018	2017	2016	2015	2014	2013
Statutorily required contribution	\$ 143,146	\$ 131,298	\$ 132,477	\$ 120,434	\$ 109,485	\$ 99,532
Contributions in relation to the statutorily required contribution	143,146	131,298	132,477	120,434	109,485	99,532
Annual contribution deficiency/(excess)	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>

The Boston Retirement System (BRS) is included in the City of Boston's CAFR. The Boston Teachers' portion of the BRS total pension liability is reported in the Commonwealth's CAFR as a part of the total net pension liability.

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report and notes to the schedule

NOTES TO THE SCHEDULES OF PROPORTIONATE SHARE OF THE NET PENSION LIABILITY AND CONTRIBUTIONS

SERS and MTRS:

In accordance with Chapter 32 of the Massachusetts General Laws (MGL), the Commonwealth's statutorily determined contributions to SERS and MTRS are based on a three-year funding schedule adopted by the legislature based upon the previous year's actuarial valuation. The most recent funding schedule was adopted in January 2017 (for fiscal years 2018 through 2020) based upon the January 1, 2016 actuarial valuation as prepared by the Public Employee Retirement Administration Commission (PERAC) using the following assumptions:

1. The annual required contribution for FY2019 was determined as part of the January 1, 2016 actuarial valuation using the entry age normal cost method.
2. The actuarial assumptions included (a) 7.50% investment rate of return, (b) 3.50% interest rate credited to the annuity savings fund and (c) 3.00% cost of living increase per year (on the first \$13,000 of an allowance).
3. Salary increases are based on analyses of past experience but range from 4.0% to 9.0% depending on group and length of service.
4. The assumptions do not include post-retirement benefit increases, which are taken into account when granted under amendments to General Laws.
5. The actuarial value of assets was determined using various techniques that smooth the effects of short-term volatility in the market value of investments, with a phased-in approach. Under this approach, 20% of the gains or losses occurring in the prior year are recognized, 40% of those occurring two years prior, etc., so that 100% of gains and losses occurring five years prior are recognized. The actuarial value of assets is adjusted if necessary in order to remain between 90% and 110% of market value.
6. Normal costs are amortized using level percentage of payroll, closed.
7. The remaining amortization period for the unfunded pension liability at January 1, 2016 was 20 years to FY36.

BRS-Teachers:

The actuarially determined contributions were calculated as of December 31, 2017. The funding requirements are established for the employers' fiscal year ended June 30, 2018 and later years and are analyzed based on the preceding two years' experience. The following actuarial methods and assumptions were used to determine the required contribution rates:

Actuarial cost method	Entry age normal cost method
Amortization method	Prior year's contribution increased by 8.94% for Boston Teachers
Remaining amortization period	18 years remaining as of January 1, 2018 for Boston Teachers
Asset valuation method	Sum of actuarial value at beginning of year, contributions and investment earnings based on the actuarial interest assumption less benefit payments and operating expenses plus 20% of market value at end of year in excess of that sum, plus additional adjustment toward market value as necessary so that final actuarial value is within 20% of market value.
Inflation	3.25%
Salary increases	Varies by length of service with ultimate rate of 4.00% for Boston Teachers
Investment rate of return	7.35% for Boston Teachers

See Independent Auditors' Report

Schedule of Employer Contributions - OPEB
Commonwealth of Massachusetts
Last 10 Years
(amounts in thousands)

Contributions	Fiscal Year Ending June 30		
	2019	2018	2017
Statutorily required contribution	\$ 572,434	\$ 520,703	\$ 419,932
Contributions in relation to the statutorily required contribution.....	572,434	520,703	419,932
Annual contribution deficiency/(excess).....	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>
Covered payroll	\$ 6,354,473	\$ 6,155,194	\$ 5,927,012
Contributions as a percentage of covered payroll	9.0%	8.5%	7.1%

Note: This schedule is intended to present 10 years of data. Additional years will be presented when available.

See Independent Auditors' Report

Other Supplementary Information

Combining Balance Sheet – Other Governmental Funds

Combining Statement of Revenues, Expenditures and Changes in Fund Balance – Other Governmental Funds

Combining Statement of Revenues, Expenditures and Changes in Fund Balances – Budgetary Basis – Budget and Actual – Other Budgeted Nonmajor Governmental Funds

Combining Budget to GAAP Reconciliation – Other Budgeted Nonmajor Governmental Funds

Combining Statement of Net Position Available for Post-Employment Benefits – Pension and OPEB Trust Funds

Combining Statement of Changes in Net Position Available for Post-Employment Benefits – Pension and OPEB Trust Funds

Combining Statement of Net Position Held in Trust for Pool Participants – External Investment Trust Funds

Combining Statement of Changes in Net Position Held in Trust for Pool Participants – External Investment Trust Funds

Combining Statement of Changes in Assets and Liabilities – Agency Funds

Combining Statement of Net Position – Nonmajor Discretely Presented Component Units

Combining Statement of Revenues, Expenses and Changes in Net Position – Nonmajor Discretely Presented Component Units

Combining Balance Sheet

Other Governmental Funds

June 30, 2019

(Amounts in thousands)

	Special Revenue						
	Commonwealth Transportation	Federal Grants	Universal Health Care	Environmental	Community First Trust	Gaming Control	Gaming Revenue
ASSETS							
Cash and cash equivalents	\$ 53,677	\$ 455	\$ 426,114	\$ 32,224	\$ 1,260	\$ 8,920	\$ —
Restricted cash with fiscal agent.....	15,409	—	—	—	—	—	—
Receivables, net of allowance for uncollectibles:							
Taxes	73,303	—	8,050	85	—	—	—
Due from federal government.....	—	297,395	—	983	—	—	—
Loans receivable	—	—	—	—	—	—	—
Other receivables	93	—	56,771	175	—	419	—
Due from other funds	—	—	—	—	—	—	—
Due from component unit	—	—	9,775	—	—	—	—
Total assets	\$ 142,482	\$ 297,850	\$ 500,710	\$ 33,467	\$ 1,260	\$ 9,339	\$ —
LIABILITIES AND FUND BALANCES							
Liabilities:							
Accounts payable	\$ 21,677	\$ 219,201	\$ 79,350	\$ 1,787	\$ 1,255	\$ 3,380	\$ —
Accrued payroll.....	—	5,500	129	215	—	174	—
Tax refunds and abatements payable	701	—	—	—	—	—	—
Due to other funds.....	—	40,794	—	—	—	—	—
Due to component units	9,830	—	—	—	—	—	—
Other accrued liabilities	—	—	37,304	—	—	—	—
Total liabilities	32,208	265,495	116,783	2,002	1,255	3,554	—
Deferred inflows of resources.....	—	—	36,036	—	—	—	—
Total liabilities and deferred inflows of resources	32,208	265,495	152,819	2,002	1,255	3,554	—
Fund balances:							
Restricted	15,409	32,355	—	—	5	—	—
Committed.....	94,865	—	347,891	14,740	—	5,785	—
Assigned.....	—	—	—	16,725	—	—	—
Unassigned (deficits)	—	—	—	—	—	—	—
Fund balances (deficits)	110,274	32,355	347,891	31,465	5	5,785	—
Total liabilities and fund balances	\$ 142,482	\$ 297,850	\$ 500,710	\$ 33,467	\$ 1,260	\$ 9,339	\$ —

See Independent Auditors' Report

Special Revenue									
MBTA State & Local Contribution	Community Preservation Trust	Health Insurance Portability and Accountability Act	Division of Professional Licensure	Enhanced 911	Health Information Technology Trust	Regional Greenhouse Gas Initiative (RGGI) Auction Trust	Workforce Training Trust	Child Support Enforcement	Department of Industrial Accidents
\$ 94,991	\$ 20,755	\$ 5,502	\$ 5,055	\$ 161,153	\$ —	\$ 27,354	\$ 52,343	\$ 7,307	\$ 15,692
—	—	—	—	—	—	—	—	—	—
69,901	739	—	—	—	—	—	4,314	—	—
—	—	—	—	—	—	—	—	2,595	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	3,901	9,970
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
\$ 164,892	\$ 21,494	\$ 5,502	\$ 5,055	\$ 161,153	\$ —	\$ 27,354	\$ 56,657	\$ 13,803	\$ 25,662
\$ 69,479	\$ 43,767	\$ 1,690	\$ 152	\$ 14,268	\$ 3,875	\$ 7,673	\$ 13,879	\$ 1,430	\$ 139
—	—	12	44	278	101	31	4	119	—
575	—	—	—	—	—	—	55	—	—
—	—	—	—	—	499	—	—	—	—
94,838	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
164,892	43,767	1,702	196	14,546	4,475	7,704	13,938	1,549	139
—	—	—	—	—	—	—	—	—	—
164,892	43,767	1,702	196	14,546	4,475	7,704	13,938	1,549	139
—	—	—	—	—	—	—	—	12,254	—
—	—	3,800	4,859	146,607	—	19,650	42,719	—	25,523
—	—	—	—	—	—	—	—	—	—
—	(22,273)	—	—	—	(4,475)	—	—	—	—
—	(22,273)	3,800	4,859	146,607	(4,475)	19,650	42,719	12,254	25,523
\$ 164,892	\$ 21,494	\$ 5,502	\$ 5,055	\$ 161,153	\$ —	\$ 27,354	\$ 56,657	\$ 13,803	\$ 25,662

continued

Combining Balance Sheet

Other Governmental Funds

June 30, 2019

(Amounts in thousands)

	Special Revenue					
	Convention and Exhibition Center	Grant Anticipation Note Trust	Massachusetts Tourism Trust	Expendable Trust	Other	Debt Service
ASSETS						
Cash and cash equivalents	\$ 121,248	\$ 5,486	\$ 2,809	\$ 701,545	\$ 164,915	\$ 8,815
Restricted cash with fiscal agent	165,726	85,887	—	—	—	242
Receivables, net of allowance for uncollectibles:						
Taxes	16,609	—	—	342	27	—
Due from federal government	—	73,344	—	1,819	—	—
Loans receivable	—	—	—	—	13,650	—
Other receivables	—	—	—	21,352	237	—
Due from other funds	—	—	—	—	—	—
Due from component unit	—	—	—	—	—	—
Total assets	\$ 303,583	\$ 164,717	\$ 2,809	\$ 725,058	\$ 178,829	\$ 9,057
LIABILITIES AND FUND BALANCES						
Liabilities:						
Accounts payable	\$ 18,119	\$ —	\$ 166	\$ 47,887	\$ 18,696	\$ —
Accrued payroll	—	—	22	1,920	594	—
Tax refunds and abatements payable	—	—	—	—	—	—
Due to other funds	—	73,344	—	—	—	—
Due to component units	—	—	—	—	—	—
Other accrued liabilities	—	—	—	—	—	—
Total liabilities	18,119	73,344	188	49,807	19,290	—
Deferred inflows of resources	—	—	—	—	—	—
Total liabilities and deferred inflows of resources	18,119	73,344	188	49,807	19,290	—
Fund balances:						
Restricted	—	—	—	234,446	—	9,057
Committed	285,464	91,373	2,621	313,108	182,649	—
Assigned	—	—	—	127,697	11,923	—
Unassigned (deficits)	—	—	—	—	(35,033)	—
Fund balances (deficits)	285,464	91,373	2,621	675,251	159,539	9,057
Total liabilities and fund balances	\$ 303,583	\$ 164,717	\$ 2,809	\$ 725,058	\$ 178,829	\$ 9,057

See Independent Auditors' Report

Capital Projects					
General Capital Projects	Convention and Exhibition Center	Highway Capital Projects	Federal Highway Construction Program	Other	Total
\$ 430,084	\$ 8,393	—	\$ 8,694	\$ 500	\$ 2,365,291
—	—	—	—	—	267,264
—	—	—	—	—	173,370
—	—	—	—	—	376,136
—	—	—	—	—	13,650
—	—	—	—	—	92,918
—	—	—	73,344	—	73,344
—	—	—	—	—	9,775
\$ 430,084	\$ 8,393	\$ —	\$ 82,038	\$ 500	\$ 3,371,748
\$ 370,373	\$ —	\$ —	\$ —	\$ 500	\$ 938,743
1,166	—	—	—	—	10,309
—	—	—	—	—	1,331
—	—	149,247	—	—	263,884
4,612	—	248,110	93,095	—	450,485
—	—	—	—	—	37,304
376,151	—	397,357	93,095	500	1,702,056
—	—	—	—	—	36,036
376,151	—	397,357	93,095	500	1,738,092
53,933	8,393	—	—	—	365,852
—	—	—	—	—	1,581,654
—	—	—	—	—	156,345
—	—	(397,357)	(11,057)	—	(470,195)
53,933	8,393	(397,357)	(11,057)	—	1,633,656
\$ 430,084	\$ 8,393	\$ —	\$ 82,038	\$ 500	\$ 3,371,748

Combining Statement of Revenues, Expenditures and Changes in Fund Balances

Other Governmental Funds
Fiscal Year Ended June 30, 2019
(Amounts in thousands)

	Special Revenue						
	Commonwealth Transportation	Federal Grants	Universal Health Care	Environmental	Community First Trust	Gaming Control	Gaming Revenue
REVENUES							
Taxes	\$ 1,355,739	\$ —	\$ 128,972	\$ 1,009	\$ —	\$ —	\$ 130,702
Assessments	22,352	—	651,793	—	—	—	—
Federal grants and reimbursements	—	3,678,368	372,622	9,361	—	—	—
Departmental	657,019	—	420,193	39,100	—	29,615	35,500
Miscellaneous	1,419	—	5,755	82	—	—	—
Total revenues	2,036,529	3,678,368	1,579,335	49,552	—	29,615	166,202
OTHER FINANCING SOURCES							
Bonds premium	—	—	—	—	—	—	—
Issuance of general and special obligation bonds	—	—	—	—	—	—	—
Issuance of current refunding bonds	—	—	—	—	—	—	—
Transfers in for debt service	—	—	—	—	—	—	—
Transfers in	138,737	1,111	614,517	283	—	—	—
Total other financing sources	138,737	1,111	614,517	283	—	—	—
Total revenues and other financing sources	2,175,266	3,679,479	2,193,852	49,835	—	29,615	166,202
EXPENDITURES							
Current:							
Judiciary	—	2,414	—	—	—	—	—
Inspector General	—	—	—	—	—	—	—
Secretary of the Commonwealth	—	892	—	—	—	—	—
Treasurer and Receiver-General	—	1,061	—	—	—	—	—
Attorney General	—	44,757	—	—	—	1,507	—
District Attorney	—	2,764	—	—	—	—	—
Office campaign and political finance	—	—	—	—	—	—	—
Sheriff's Departments	—	2,809	—	—	—	—	—
Disabled Person Protection Commission	—	762	—	—	—	—	—
Board of Library Commissioners	—	2,802	—	—	—	—	—
Massachusetts Gaming Commission	—	—	1,000	—	—	27,955	—
Comptroller	—	—	—	—	—	—	—
Administration and Finance	125,000	5,004	5,061	13,807	—	—	—
Energy and Environmental Affairs	—	39,126	—	16,471	—	—	—
Health and Human Services	—	1,652,198	14,830	—	—	915	—
Executive Office of Technology Services	—	—	—	—	—	—	—
Massachusetts Department of Transportation	598,310	395	—	—	—	—	—
Cannabis Control Commission	—	—	—	—	—	—	—
Executive Office of Education	—	1,035,951	—	—	—	—	—
Public Safety and Homeland Security	—	109,358	—	—	—	60	—
Housing and Economic Development	—	530,229	—	—	—	—	—
Labor and Workforce development	—	121,313	—	—	—	—	—
Medicaid	—	—	2,024,060	—	1,323	—	—
Post employment benefits	40,410	—	—	—	—	—	—
Direct local aid	—	—	—	—	—	—	—
Capital outlay:							
Capital acquisition and construction	—	—	—	—	—	—	—
Debt service	—	—	—	—	—	—	—
Principal on current refundings	—	—	—	—	—	—	—
Total expenditures	763,720	3,551,835	2,044,951	30,278	1,323	30,437	—
OTHER FINANCING USES							
Transfers out	265,577	115,593	20,107	4,034	—	5,912	166,202
Transfers of appropriations	—	1,823	—	—	—	—	—
Transfers of bond proceeds	—	—	—	—	—	—	—
Transfers out for debt service	1,106,845	—	—	—	—	—	—
Total other financing uses	1,372,422	117,416	20,107	4,034	—	5,912	166,202
Total expenditures and other financing uses	2,136,142	3,669,251	2,065,058	34,312	1,323	36,349	166,202
Excess (deficiency) of revenues and other financing sources over expenditures and other financing uses	39,124	10,228	128,794	15,523	(1,323)	(6,734)	—
Fund balances (deficits) at beginning of year	71,150	22,127	219,097	15,942	1,328	12,519	—
Fund balances (deficits) at end of year	\$ 110,274	\$ 32,355	\$ 347,891	\$ 31,465	\$ 5	\$ 5,785	\$ —

See Independent Auditors' Report

Special Revenue									
MBTA State & Local Contribution	Community Preservation Trust	Health Insurance Portability and Accountability Act	Division of Professional Licensure	Enhanced 911	Health Information Technology Trust	Regional Greenhouse Gas Initiative (RGGI) Auction Trust	Workforce Training Trust	Child Support Enforcement	Department of Industrial Accidents
\$ 1,054,261	\$ 23,131	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 23,541	\$ —	\$ —
170,120	—	—	—	—	—	—	—	—	24,621
—	—	8,537	—	—	74,195	—	—	22,922	—
—	—	—	11,144	128,216	—	46,148	—	3,561	5,808
—	155	—	—	551	—	—	—	216	69
1,224,381	23,286	8,537	11,144	128,767	74,195	46,148	23,541	26,699	30,498
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	10,000	—	—	—	26,453	—	—	—	—
—	10,000	—	—	—	26,453	—	—	—	—
1,224,381	33,286	8,537	11,144	128,767	100,648	46,148	23,541	26,699	30,498
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1,224,381	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	188	—
—	—	—	—	7,333	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	53,577	—	30	—	—	5	—	23,630	—
—	—	—	—	—	—	40,902	—	—	—
—	—	—	—	59	—	—	—	—	—
—	—	—	—	343	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	79,380	—	—	—	—	—
—	—	—	8,978	—	—	—	—	—	—
—	—	—	—	—	—	—	26,654	—	1,025
—	—	13,884	—	—	102,570	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
1,224,381	53,577	13,884	9,008	87,115	102,570	40,907	26,654	23,818	1,025
—	18	64	2,131	5,715	147	—	1,161	2,673	25,814
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	18	64	2,131	5,715	147	—	1,161	2,673	25,814
1,224,381	53,595	13,948	11,139	92,830	102,717	40,907	27,815	26,491	26,839
—	(20,309)	(5,411)	5	35,937	(2,069)	5,241	(4,274)	208	3,659
—	(1,964)	9,211	4,854	110,670	(2,406)	14,409	46,993	12,046	21,864
\$ —	\$ (22,273)	\$ 3,800	\$ 4,859	\$ 146,607	\$ (4,475)	\$ 19,650	\$ 42,719	\$ 12,254	\$ 25,523

continued

Combining Statement of Revenues, Expenditures and Changes in Fund Balances

Other Governmental Funds
Fiscal Year Ended June 30, 2019
(Amounts in thousands)

	Special Revenue					
	Convention and Exhibition Center	Grant Anticipation Note Trust	Massachusetts Tourism Trust	Expendable Trust	Other	Debt Service
REVENUES						
Taxes	\$ 160,801	\$ —	\$ 3,416	\$ —	\$ 14,817	\$ —
Assessments	—	—	—	62,479	36,376	—
Federal grants and reimbursements	—	571,822	—	25,902	8,583	46,699
Departmental	—	—	—	51,943	90,316	—
Miscellaneous	2,700	3,164	—	547,677	1,996	4
Total revenues	163,501	574,986	3,416	688,001	152,088	46,703
OTHER FINANCING SOURCES						
Bonds premium	—	—	—	—	—	138,834
Issuance of general and special obligation bonds	—	—	—	—	—	—
Issuance of current refunding bonds	—	—	—	—	—	818,830
Transfers in for debt service	—	—	—	—	—	2,486,460
Transfers in	—	30,151	978	19,131	187,075	—
Total other financing sources	—	30,151	978	19,131	187,075	3,444,124
Total revenues and other financing sources	163,501	605,137	4,394	707,132	339,163	3,490,827
EXPENDITURES						
Current:						
Judiciary	—	—	—	277	151	—
Inspector General	—	—	—	17	—	—
Secretary of the Commonwealth	—	—	—	—	3,533	—
Treasurer and Receiver-General	—	—	—	158,811	—	1,757
Attorney General	—	—	—	8,131	280	—
District Attorney	—	—	—	6,281	95	—
Office campaign and political finance	—	—	—	—	1,088	—
Sheriff's Departments	—	—	—	2,839	1,109	—
Disabled Person Protection Commission	—	—	—	—	—	—
Board of Library Commissioners	—	—	—	—	—	—
Massachusetts Gaming Commission	—	—	—	—	21,417	—
Comptroller	—	—	—	322	1,582	—
Administration and Finance	39,711	—	—	43,177	29,344	—
Energy and Environmental Affairs	—	—	—	97,415	43,625	—
Health and Human Services	—	—	—	135,580	58,508	—
Executive Office of Technology Services	—	—	—	1,143	1,114	—
Massachusetts Department of Transportation	—	—	—	—	—	—
Cannabis Control Commission	—	—	—	—	7,983	—
Executive Office of Education	—	—	—	23,509	4,482	—
Public Safety and Homeland Security	—	—	—	41,287	8,873	—
Housing and Economic Development	—	—	9,180	19,345	8,197	—
Labor and Workforce development	—	—	—	66,679	1,436	—
Medicaid	—	—	—	—	—	—
Post employment benefits	—	—	—	—	—	—
Direct local aid	—	—	—	—	71,557	—
Capital outlay:						
Capital acquisition and construction	—	—	—	—	—	—
Debt service	—	—	—	—	—	2,533,122
Principal on current refundings	—	—	—	—	—	955,907
Total expenditures	39,711	—	9,180	604,813	264,374	3,490,786
OTHER FINANCING USES						
Transfers out	—	505,807	—	159,140	46,733	—
Transfers of appropriations	—	—	—	2,295	1,538	—
Transfers of bond proceeds	—	—	—	—	—	—
Transfers out for debt service	54,601	100,493	—	—	4,255	—
Total other financing uses	54,601	606,300	—	161,435	52,526	—
Total expenditures and other financing uses	94,312	606,300	9,180	766,248	316,900	3,490,786
Excess (deficiency) of revenues and other financing sources over expenditures and other financing uses	69,189	(1,163)	(4,786)	(59,116)	22,263	41
Fund balances (deficits) at beginning of year	216,275	92,536	7,407	734,367	137,276	9,016
Fund balances (deficits) at end of year	\$ 285,464	\$ 91,373	\$ 2,621	\$ 675,251	\$ 159,539	\$ 9,057

See Independent Auditors' Report

Capital Projects					
General Capital Projects	Convention and Exhibition Center	Highway Capital Projects	Federal Highway Construction Program	Other	Total
\$ —	\$ —	\$ —	\$ —	\$ —	\$ 2,896,389
—	—	—	—	—	967,741
65,357	—	—	728	—	4,885,096
—	—	—	5,340	—	1,523,903
—	—	5,394	—	—	569,182
65,357	—	5,394	6,068	—	10,842,311
178,170	—	129,522	—	12	446,538
1,120,401	—	687,235	—	500	1,808,136
—	—	—	—	—	818,830
—	—	—	—	—	2,486,460
—	—	—	615,537	—	1,643,973
1,298,571	—	816,757	615,537	512	7,203,937
1,363,928	—	822,151	621,605	512	18,046,248
—	—	—	—	—	2,842
—	—	—	—	—	17
—	—	—	—	—	4,425
2,991	—	2,108	—	12	1,391,121
—	—	—	—	—	54,675
—	—	—	—	—	9,328
—	—	—	—	—	1,088
—	—	—	—	—	14,090
—	—	—	—	—	762
—	—	—	—	—	2,802
—	—	—	—	—	50,372
—	—	—	—	—	1,904
—	—	—	—	—	338,346
—	—	—	—	—	237,539
—	—	—	—	—	1,862,090
—	—	—	—	—	2,600
95,084	—	1,046,503	606,801	—	2,347,093
—	—	—	—	—	7,983
—	—	—	—	—	1,063,942
—	—	—	—	—	238,958
—	—	—	—	—	575,929
—	—	—	—	—	217,107
—	—	—	—	—	2,141,837
—	—	—	—	—	40,410
—	—	—	—	—	71,557
1,298,488	—	6,631	4,279	500	1,309,898
—	—	—	—	—	2,533,122
—	—	—	—	—	955,907
1,396,563	—	1,055,242	611,080	512	15,477,744
17,572	—	109,729	11,515	—	1,465,644
—	—	—	—	—	5,656
115,421	—	—	—	—	115,421
—	—	—	—	—	1,266,194
132,993	—	109,729	11,515	—	2,852,915
1,529,556	—	1,164,971	622,595	512	18,330,659
(165,628)	—	(342,820)	(990)	—	(284,411)
219,561	8,393	(54,537)	(10,067)	—	1,918,067
\$ 53,933	\$ 8,393	\$ (397,357)	\$ (11,057)	\$ —	\$ 1,633,656

Combining Statement of Revenues, Expenditures and Changes in Fund Balances - Budgetary Basis - Budget and Actual
Other Budgeted Nonmajor Governmental Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Commonwealth Transportation Fund				Environmental Funds			
	Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance
REVENUES AND OTHER FINANCING SOURCES								
Revenues:								
Taxes	\$ 1,335,100	\$ 1,335,100	\$ 1,357,356	\$ 22,256	\$ 1,000	\$ 1,000	\$ 1,011	\$ 11
Assessments	22,528	22,528	22,603	75	—	—	—	—
Federal grants and reimbursements	—	—	—	—	7,500	7,500	9,320	1,820
Departmental	666,461	666,461	657,019	(9,442)	38,715	38,715	39,073	358
Miscellaneous	—	—	1,418	1,418	386	386	82	(304)
Total revenues	2,024,089	2,024,089	2,038,396	14,307	47,601	47,601	49,486	1,885
Other financing sources:								
Operating transfers in	128,996	128,996	138,737	9,741	191	191	282	91
Total other financing sources	128,996	128,996	138,737	9,741	191	191	282	91
Total revenues and other financing sources	2,153,085	2,153,085	2,177,133	24,048	47,792	47,792	49,768	1,976
EXPENDITURES AND OTHER FINANCING USES								
Expenditures:								
Treasurer and Receiver-General	257,712	—	—	—	—	—	—	—
Attorney General	—	—	—	—	—	—	—	—
Sheriffs' Department	—	—	—	—	—	—	—	—
Administration and Finance	—	—	—	—	28,161	29,869	13,807	16,062
Energy and Environmental Affairs	—	—	—	—	20,021	20,021	16,470	3,551
Health and Human services	—	—	—	—	—	—	—	—
Massachusetts Department of Transportation	127,000	127,000	127,000	—	—	—	—	—
Cannabis Control Commission	—	—	—	—	—	—	—	—
Executive Office of Education	—	—	—	—	—	—	—	—
Public Safety and Homeland Security	—	—	—	—	—	—	—	—
Housing and Economic Development	—	—	—	—	—	—	—	—
Labor and Workforce Development	—	—	—	—	—	—	—	—
Direct local aid	—	—	—	—	—	—	—	—
Post employment benefits	—	40,410	40,410	—	—	—	—	—
Debt service:								
Principal retirement	—	645,645	579,469	66,176	—	—	—	—
Interest and fiscal charges	—	504,625	527,376	(22,751)	—	—	—	—
Total expenditures	384,712	1,317,680	1,274,255	43,425	48,182	49,890	30,277	19,613
Other financing uses:								
Fringe benefit cost assessment	—	—	—	—	—	—	4,034	(4,034)
Operating transfers out	456,315	639,417	643,208	(3,791)	—	—	—	—
Stabilization transfer	—	—	231,634	(231,634)	—	—	—	—
Total other financing uses	456,315	639,417	874,842	(235,425)	—	—	4,034	(4,034)
Total expenditures and other financing uses	841,027	1,957,097	2,149,097	(192,000)	48,182	49,890	34,311	15,579
Excess/(deficiency) of revenues and other financing sources over/(under) expenditures and other financing uses	<u>\$ 1,312,058</u>	<u>\$ 195,988</u>	28,036	<u>\$ (167,952)</u>	<u>\$ (390)</u>	<u>\$ (2,098)</u>	15,457	<u>\$ 17,555</u>
Fund balances at beginning of year			19,373				14,765	
Fund balances at end of year			<u>\$ 47,409</u>				<u>\$ 30,222</u>	

See Independent Auditors' Report

Public Safety Trust Fund				Community First Trust Fund				Gaming Local Aid Fund			
Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance
\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
1,200	1,200	1,151	(49)	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
1,200	1,200	1,151	(49)	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	66,395	66,395	87,955	21,560
—	—	—	—	—	—	—	—	66,395	66,395	87,955	21,560
1,200	1,200	1,151	(49)	—	—	—	—	66,395	66,395	87,955	21,560
—	—	—	—	—	—	—	—	—	—	—	—
—	4	—	4	—	—	—	—	—	—	—	—
—	30	30	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	21,305	21,305	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	2,136	2,019	117	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	66,816	66,650	166
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	2,170	2,049	121	—	—	—	—	—	88,121	87,955	166
—	—	358	(358)	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	358	(358)	—	—	—	—	—	—	—	—
—	2,170	2,407	(237)	—	—	—	—	—	88,121	87,955	166
<u>\$ 1,200</u>	<u>\$ (970)</u>	<u>(1,256)</u>	<u>\$ (286)</u>	<u>\$ —</u>	<u>\$ —</u>	<u>—</u>	<u>\$ —</u>	<u>\$ 66,395</u>	<u>\$ (21,726)</u>	<u>—</u>	<u>\$ 21,726</u>
		1,256				—				—	
		<u>\$ —</u>				<u>\$ —</u>				<u>\$ —</u>	

(continued)

Combining Statement of Revenues, Expenditures and Changes in Fund Balances - Budgetary Basis - Budget and Actual

Other Budgeted Nonmajor Governmental Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Education Fund				Local Aid Stabilization Fund			
	Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance
REVENUES AND OTHER FINANCING SOURCES								
Revenues:								
Taxes	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Assessments	—	—	—	—	—	—	—	—
Federal grants and reimbursements	—	—	—	—	—	—	—	—
Departmental	—	—	—	—	—	—	—	—
Miscellaneous	—	—	—	—	—	—	—	—
Total revenues	—	—	—	—	—	—	—	—
Other financing sources:								
Operating transfers in	8,396	8,396	13,693	5,297	—	—	—	—
Total other financing sources	8,396	8,396	13,693	5,297	—	—	—	—
Total revenues and other financing sources	8,396	8,396	13,693	5,297	—	—	—	—
EXPENDITURES AND OTHER FINANCING USES								
Expenditures:								
Treasurer and Receiver-General	—	—	—	—	—	—	—	—
Attorney General	—	—	—	—	—	—	—	—
Sheriffs' Department	—	—	—	—	—	—	—	—
Administration and Finance	—	3,230	3,230	—	—	—	—	—
Energy and Environmental Affairs	—	—	—	—	—	—	—	—
Health and Human services	—	—	—	—	—	—	—	—
Massachusetts Department of Transportation	—	—	—	—	—	—	—	—
Cannabis Control Commission	—	—	—	—	—	—	—	—
Executive Office of Education	—	3,656	3,530	126	9,100	—	—	—
Public Safety and Homeland Security	—	—	—	—	—	—	—	—
Housing and Economic Development	—	—	—	—	—	—	—	—
Labor and Workforce Development	—	—	—	—	—	—	—	—
Direct local aid	—	4,908	4,907	1	—	—	—	—
Post employment benefits	—	—	—	—	—	—	—	—
Debt service:								
Principal retirement	—	—	—	—	—	—	—	—
Interest and fiscal charges	—	—	—	—	—	—	—	—
Total expenditures	—	11,794	11,667	127	9,100	—	—	—
Other financing uses:								
Fringe benefit cost assessment	—	—	11	(11)	—	—	—	—
Operating transfers out	—	—	—	—	—	—	—	—
Stabilization transfer	—	—	276	(276)	—	—	—	—
Total other financing uses	—	—	287	(287)	—	—	—	—
Total expenditures and other financing uses	—	11,794	11,954	(160)	9,100	—	—	—
Excess/(deficiency) of revenues and other financing sources over/(under) expenditures and other financing uses	\$ 8,396	\$ (3,398)	1,739	\$ 5,137	\$ (9,100)	\$ —	—	\$ —
Fund balances at beginning of year			—				50	
Fund balances at end of year			\$ 1,739				\$ 50	

See Independent Auditors' Report

Gaming Economic Development Fund				Community College Fund				Marijuana Regulation Fund			
Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance	Original Budget	Final Budget	Actual	Variance
\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 40,000	\$ 40,000	\$ 13,949	\$ (26,051)
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	2,857	2,857	8,742	5,885
—	—	—	—	—	—	—	—	—	—	25	25
—	—	—	—	—	—	—	—	42,857	42,857	22,716	(20,141)
5,698	5,698	9,292	3,594	—	—	—	—	—	—	21,579	21,579
5,698	5,698	9,292	3,594	—	—	—	—	—	—	21,579	21,579
5,698	5,698	9,292	3,594	—	—	—	—	42,857	42,857	44,295	1,438
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	120	117	3
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	1,241	1,241	604	637
—	—	—	—	—	—	—	—	204	30,869	29,989	880
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	2,796	11,055	7,982	3,073
10,000	5,602	1,106	4,496	4,775	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	164	164	—
—	—	—	—	—	—	—	—	—	52	52	—
—	375	375	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—
10,000	5,977	1,481	4,496	4,775	—	—	—	4,241	43,501	38,908	4,593
—	—	42	(42)	—	—	—	—	—	—	1,563	(1,563)
—	—	32	(32)	—	—	—	—	—	—	—	—
—	—	275	(275)	—	—	—	—	—	—	2,699	(2,699)
—	—	349	(349)	—	—	—	—	—	—	4,262	(4,262)
10,000	5,977	1,830	4,147	4,775	—	—	—	4,241	43,501	43,170	331
<u>\$ (4,302)</u>	<u>\$ (279)</u>	7,462	<u>\$ 7,741</u>	<u>\$ (4,775)</u>	<u>\$ —</u>	—	<u>\$ —</u>	<u>\$ 38,616</u>	<u>\$ (644)</u>	1,125	<u>\$ 1,769</u>
		—				—				—	
		<u>\$ 7,462</u>				<u>\$ —</u>				<u>\$ 1,125</u>	

(continued)

Combining Statement of Revenues, Expenditures and Changes in Fund Balances - Budgetary Basis - Budget and Actual

Other Budgeted Nonmajor Governmental Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Totals			
	Original Budget	Final Budget	Actual	Variance
REVENUES AND OTHER FINANCING SOURCES				
Revenues:				
Taxes	\$ 1,376,100	\$ 1,376,100	\$ 1,372,316	\$ (3,784)
Assessments	22,528	22,528	22,603	75
Federal grants and reimbursements	7,500	7,500	9,320	1,820
Departmental	709,233	709,233	705,985	(3,248)
Miscellaneous	386	386	1,525	1,139
Total revenues	2,115,747	2,115,747	2,111,749	(3,998)
Other financing sources:				
Operating transfers in	209,676	209,676	271,538	61,862
Total other financing sources	209,676	209,676	271,538	61,862
Total revenues and other financing sources	2,325,423	2,325,423	2,383,287	57,864
EXPENDITURES AND OTHER FINANCING USES				
Expenditures:				
Treasurer and Receiver-General	257,712	—	—	—
Attorney General	—	4	—	4
Sheriffs' Department	—	150	147	3
Administration and Finance	28,161	54,404	38,342	16,062
Energy and Environmental Affairs	21,262	21,262	17,074	4,188
Health and Human services	204	30,869	29,989	880
Massachusetts Department of Transportation	127,000	127,000	127,000	—
Cannabis Control Commission	2,796	11,055	7,982	3,073
Executive Office of Education	23,875	9,258	4,636	4,622
Public Safety and Homeland Security	—	2,300	2,183	117
Housing and Economic Development	—	52	52	—
Labor and Workforce Development	—	375	375	—
Direct local aid	—	71,724	71,557	167
Post employment benefits	—	40,410	40,410	—
Debt service:				
Principal retirement	—	645,645	579,469	66,176
Interest and fiscal charges	—	504,625	527,376	(22,751)
Total expenditures	461,010	1,519,133	1,446,592	72,541
Other financing uses:				
Fringe benefit cost assessment	—	—	6,008	(6,008)
Operating transfers out	456,315	639,417	643,240	(3,823)
Stabilization transfer	—	—	234,884	(234,884)
Total other financing uses	456,315	639,417	884,132	(244,715)
Total expenditures and other financing uses	917,325	2,158,550	2,330,724	(172,174)
Excess/(deficiency) of revenues and other financing sources over/(under) expenditures and other financing uses	\$ 1,408,098	\$ 166,873	52,563	\$ (114,310)
Fund balances at beginning of year			35,444	
Fund balances at end of year			\$ 88,007	

See Independent Auditors' Report

PROMOTING WOMEN IN STEM IN MASSACHUSETTS

MASSACHUSETTS STEM NETWORKS

HIGHLIGHT: Southeast STEM Network



Katherine Honey, MPA, Director of Southeast STEM Network

Katherine Henry received a Bachelor's in Education from the University of Massachusetts Boston, and a Master's in Public Administration, Executive Program, Suffolk University. Throughout her career, Katherine has been employed by the Massachusetts Department of Education, serving as an education specialist, supporting the state Director of Special Education on issues relative to the provision of educational services to students with disabilities. As a liaison, she worked with the Board of Education Gifted & Talented Education Advisory Council to support educational services for students who are gifted and talented. In addition, Katherine refined a program to improve group and individual effectiveness which was identified by New England Educational Research Organization, Inc. as educationally and scientifically important.

The programs and initiatives she has planned include the Commonwealth's STEM Week 2018 & 2019, Work-based Learning Seminar Series, STEM Resource Fairs, regional meetings and replication projects such as the 2012 STEM Career Expo and the 2015 Envision the Future Program - a program which focused on increasing the interest of girls in computing, biotechnology and engineering. Throughout her tenure at the network, she has worked with hundreds of STEM Stakeholders in the Southeast Massachusetts region and across Massachusetts to develop programs. These stakeholders include parents, PreK-16 educators, and representatives of business, government and community organizations.

Combining Budget to GAAP Reconciliation
Other Budgeted Nonmajor Governmental Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Commonwealth Transportation Fund	Environmental Funds	Public Safety Trust Fund*	Community First Trust Fund
Total actual revenues - budgetary basis (pages 168–172)	\$ 2,038,396	\$ 49,486	\$ 1,151	\$ —
Adjustments:				
Taxes receivable, net	(942)	(2)	—	—
Tax refunds and abatements payable, net	(675)	—	—	—
Federal grants receivables, net	—	41	—	—
Departmental and other receivables, net	(251)	27	—	—
Miscellaneous adjustments	1	—	—	—
Total actual revenues - GAAP basis (pages 164–167)	<u>\$ 2,036,529</u>	<u>\$ 49,552</u>	<u>\$ 1,151</u>	<u>\$ —</u>
 Total actual other financing sources - budgetary basis (pages 168–172)	 \$ 138,737	 \$ 282	 \$ —	 \$ —
Adjustments:				
Miscellaneous adjustments	—	1	—	—
Total actual other financing sources - GAAP basis (pages 164–167)	<u>\$ 138,737</u>	<u>\$ 283</u>	<u>\$ —</u>	<u>\$ —</u>
 Total actual expenditures- budgetary basis (pages 168–172)	 \$ 1,274,255	 \$ 30,277	 \$ 2,049	 \$ —
Adjustment:				
Due to component units accrual, net	(12,956)	—	—	—
Miscellaneous adjustments	—	1	(1)	—
Reclassification:				
MassDOT transfers out is reclassified to expenditures	609,266	—	—	—
Higher education expenditures are reclassified to transfers out	—	—	—	—
Debt service principal and interest payments are reclassified to transfers out to the debt service fund	(1,106,845)	—	—	—
Nonbudgeted fund included on a GAAP basis	—	—	—	1,323
Total actual expenditures - GAAP basis (pages 164–167)	<u>\$ 763,720</u>	<u>\$ 30,278</u>	<u>\$ 2,048</u>	<u>\$ 1,323</u>
 Total actual other financing uses - budgetary basis (pages 168–172)	 \$ 874,842	 \$ 4,034	 \$ 358	 \$ —
Adjustment:				
Miscellaneous adjustments	1	—	—	—
Reclassification:				
MassDOT transfers out is reclassified to expenditures	(609,266)	—	—	—
Higher education expenditures are reclassified to transfers out	—	—	—	—
Debt service principal and interest payments are reclassified to transfers out to the debt service fund	1,106,845	—	—	—
Total actual other financing uses - GAAP basis (pages 164–167)	<u>\$ 1,372,422</u>	<u>\$ 4,034</u>	<u>\$ 358</u>	<u>\$ —</u>

* On a GAAP basis, the activities for the Public Safety Trust 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 are combined in the other special revenue funds in the combined statement of revenues, expenditures and changes in fund balance. The revenues, other financing sources, expenditures and other financing uses of the other special revenue funds are \$152,088, \$187,075, \$264,374 and \$52,526, respectively (all amounts in thousands).

See Independent Auditors' Report

Gaming Local Aid Fund*	Education Fund*	Local Aid Stabilization Fund*	Gaming Economic Development Fund*	Community College Fund*	Marijuana Regulation Fund*	Totals
\$ —	\$ —	\$ —	\$ —	\$ —	\$ 22,716	\$ 2,111,749
—	—	—	—	—	—	(944)
—	—	—	—	—	—	(675)
—	—	—	—	—	—	41
—	—	—	—	—	—	(224)
—	—	—	—	—	—	1
<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 22,716</u>	<u>\$ 2,109,948</u>
\$ 87,955	\$ 13,693	\$ —	\$ 9,292	\$ —	\$ 21,579	\$ 271,538
—	—	—	—	—	—	1
<u>\$ 87,955</u>	<u>\$ 13,693</u>	<u>\$ —</u>	<u>\$ 9,292</u>	<u>\$ —</u>	<u>\$ 21,579</u>	<u>\$ 271,539</u>
\$ 87,955	\$ 11,667	\$ —	\$ 1,481	\$ —	\$ 38,908	\$ 1,446,592
—	—	—	—	—	—	(12,956)
—	—	—	(1)	—	—	(1)
—	—	—	—	—	—	609,266
—	—	—	(1,105)	—	—	(1,105)
—	—	—	—	—	—	(1,106,845)
—	—	—	—	—	—	1,323
<u>\$ 87,955</u>	<u>\$ 11,667</u>	<u>\$ —</u>	<u>\$ 375</u>	<u>\$ —</u>	<u>\$ 38,908</u>	<u>\$ 936,274</u>
\$ —	\$ 287	\$ —	\$ 349	\$ —	\$ 4,262	\$ 884,132
—	—	—	1	—	—	2
—	—	—	—	—	—	(609,266)
—	—	—	1,105	—	—	1,105
—	—	—	—	—	—	1,106,845
<u>\$ —</u>	<u>\$ 287</u>	<u>\$ —</u>	<u>\$ 1,455</u>	<u>\$ —</u>	<u>\$ 4,262</u>	<u>\$ 1,381,076</u>

Combining Statement of Net Position Available for Post-Employment Benefits

Pension and OPEB Trust Funds

June 30, 2019

(Amounts in thousands)

	Pension Trust Funds		OPEB Trust Fund	
	State Employees' PERS	Teacher's PERS	State Retiree Benefits	Total
ASSETS				
Cash and cash equivalents.....	\$ 89,142	\$ 87,771	\$ 82,454	\$ 259,367
Net investment in PRIT at fair value.....	28,574,559	29,365,494	1,286,108	59,226,161
Other receivables.....	112,966	85,504	—	198,470
Other assets.....	17	3,109	—	3,126
Total assets	28,776,684	29,541,878	1,368,562	59,687,124
LIABILITIES				
Accounts payable	12,888	4,898	14	17,800
Net position available for post-employment benefits	\$ 28,763,796	\$ 29,536,980	\$ 1,368,548	\$ 59,669,324

See Independent Auditors' Report

Combining Statement of Changes in Net Position Available for Post-Employment Benefits

Pension and OPEB Trust Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Pension Trust Funds		OPEB Trust Fund	
	State Employees' PERS	Teacher's PERS	State Retiree Benefits	Total
ADDITIONS				
Contributions:				
Employer contributions - Commonwealth and MassDOT	\$ 919,545	\$ —	\$ 594,916	\$ 1,514,461
Non-employer contributions - Commonwealth	37,359	1,443,710	—	1,481,069
Employer and non-employer contributions - other	10,191	—	—	10,191
ERIP funding contribution - Commonwealth	28,724	—	—	28,724
Employee contributions	632,730	782,431	—	1,415,161
Boston teachers' contribution from Commonwealth	—	143,146	—	143,146
Other additions	104,765	91,386	188	196,339
Total contributions	1,733,314	2,460,673	595,104	4,789,091
Net investment gain/(loss):				
Investment gain/(loss)	1,686,838	1,732,202	74,601	3,493,641
Less: investment expense	(143,440)	(147,432)	(6,372)	(297,244)
Net Investment gain/(loss)	1,543,398	1,584,770	68,229	3,196,397
Total additions	3,276,712	4,045,443	663,333	7,985,488
DEDUCTIONS				
Administration	15,853	18,324	171	34,348
Retirement benefits and refunds	2,427,556	3,092,363	482,183	6,002,102
Payments to State Boston Retirement System	—	143,146	—	143,146
Other deductions	64,528	46,341	—	110,869
Total deductions	2,507,937	3,300,174	482,354	6,290,465
Change in net position	768,775	745,269	180,979	1,695,023
Net position available for post-employment benefits at beginning of year	27,995,021	28,791,711	1,187,569	57,974,301
Net position available for post-employment benefits at end of year	\$ 28,763,796	\$ 29,536,980	\$ 1,368,548	\$ 59,669,324

See Independent Auditors' Report

Combining Statement of Net Position Held in Trust for Pool Participants
External Investment Trust Funds

June 30, 2019

(Amounts in thousands)

	Massachusetts Municipal Depository Trust	Pension Reserves Investment Trust	Total
ASSETS			
Cash and cash equivalents	\$ 5,193,727	\$ —	\$ 5,193,727
Short-term investments.....	39,786	—	39,786
Net investment in PRIT at fair value.....	—	15,605,266	15,605,266
Receivables, net of allowance for uncollectibles:			
Other receivables	5,977	—	5,977
Total assets	5,239,490	15,605,266	20,844,756
LIABILITIES			
Accounts payable	13,321	—	13,321
Net position held in trust for pool/pension participants	\$ 5,226,169	\$ 15,605,266	\$ 20,831,435

See Independent Auditors' Report

Combining Statement of Changes in Net Position Held in Trust for Pool Participants

External Investment Trust Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Massachusetts Municipal Depository Trust	Pension Reserves Investment Trust	Total
ADDITIONS			
Contributions:			
Other participant contributions	\$ —	\$ 1,448,703	\$ 1,448,703
Proceeds from sale of units	25,174,952	—	25,174,952
Total contributions	25,174,952	1,448,703	26,623,655
Net investment gain/(loss):			
Investment gain/(loss)	112,206	1,174,419	1,286,625
Less: investment expense	(2,007)	(307,459)	(309,466)
Net Investment gain/(loss)	110,199	866,960	977,159
Total additions	25,285,151	2,315,663	27,600,814
DEDUCTIONS			
Cost of units redeemed	24,106,043	—	24,106,043
Distributions to unit holders from net interest income	109,150	—	109,150
Retirement benefits and refunds	—	1,073,298	1,073,298
Total deductions	24,215,193	1,073,298	25,288,491
Change in net position	1,069,958	1,242,365	2,312,323
Net position held in trust for pool/participants at beginning of year	4,156,211	14,362,901	18,519,112
Net position held in trust for pool/participants at end of year	\$ 5,226,169	\$ 15,605,266	\$ 20,831,435

See Independent Auditors' Report

Combining Statement of Changes in Assets and Liabilities

Agency Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Balance July 1, 2018	Additions	Deductions	Balance June 30, 2019
Central Agency Funds				
ASSETS				
Cash and cash equivalents	\$ 288,196	\$ 8,418,613	\$ (8,400,174)	\$ 306,635
Investments, restricted investments and annuity contracts	971,433	81,653	(144,349)	908,737
Taxes receivable.....	41,382	47,331	(41,382)	47,331
Other receivables	—	1,421	(1,402)	19
Total assets.....	\$ 1,301,011	\$ 8,549,018	\$ (8,587,307)	\$ 1,262,722
LIABILITIES				
Accounts payable.....	\$ 35,642	\$ 6,821,783	\$ (6,851,868)	\$ 5,557
Due to cities and towns	43,416	661,535	(656,896)	48,055
Due to federal government.....	1	56	(57)	—
Lottery prizes payable.....	971,434	81,653	(144,350)	908,737
Agency liabilities	250,518	6,249,399	(6,199,544)	300,373
Total liabilities	\$ 1,301,011	\$ 13,814,426	\$ (13,852,715)	\$ 1,262,722
Court Escrow and Client Accounts				
ASSETS				
Cash and cash equivalents	\$ 170,557	\$ 1,506,726	\$ (1,500,264)	\$ 177,019
Other receivables	127,101	147,331	(127,101)	147,331
Total assets.....	\$ 297,658	\$ 1,654,057	\$ (1,627,365)	\$ 324,350
LIABILITIES				
Accounts payable.....	\$ 5,888	\$ 1,258,267	\$ (1,255,652)	\$ 8,503
Agency liabilities	291,770	2,177,246	(2,153,169)	315,847
Total liabilities	\$ 297,658	\$ 3,435,513	\$ (3,408,821)	\$ 324,350
Statutory Bonds and Deposits				
ASSETS				
Cash and cash equivalents	\$ 144,492	\$ 707,102	\$ (733,101)	\$ 118,493
Investments, restricted investments and annuity contracts	519,496	18,900	(20,754)	517,642
Total assets.....	\$ 663,988	\$ 726,002	\$ (753,855)	\$ 636,135
LIABILITIES				
Agency liabilities	\$ 663,988	\$ 630,745	\$ (658,598)	\$ 636,135

See Independent Auditors' Report

Combining Statement Changes in Assets and Liabilities

Agency Funds

Fiscal Year Ended June 30, 2019

(Amounts in thousands)

	Balance July 1, 2018	Additions	Deductions	Balance June 30, 2019
<u>Total Agency Funds</u>				
ASSETS				
Cash and cash equivalents	\$ 603,245	\$ 10,632,441	\$ (10,633,539)	\$ 602,147
Investments, restricted investments and annuity contracts	1,490,929	100,553	(165,103)	1,426,379
Taxes receivable	41,382	47,331	(41,382)	47,331
Other receivables	127,101	148,752	(128,503)	147,350
Total assets	\$ 2,262,657	\$ 10,929,077	\$ (10,968,527)	\$ 2,223,207
LIABILITIES				
Accounts payable	\$ 41,530	\$ 8,080,050	\$ (8,107,520)	\$ 14,060
Due to cities and towns	43,416	661,535	(656,896)	48,055
Due to federal government	1	56	(57)	—
Lottery prizes payable	971,434	81,653	(144,350)	908,737
Agency liabilities	1,206,276	9,057,390	(9,011,311)	1,252,355
Total liabilities	\$ 2,262,657	\$ 17,880,684	\$ (17,920,134)	\$ 2,223,207

See Independent Auditors' Report

Combining Statement of Net Position
Nonmajor Discretely Presented Component Units
June 30, 2019
(Amounts in thousands)

	Massachusetts Convention Center Authority	Massachusetts Development Finance Agency	Massachusetts Clean Energy Center	Massachusetts Technology Park Corporation	Massachusetts Housing Partnership	Economic Development Entities	Higher Education Foundations	Total
ASSETS AND DEFERRED OUTFLOWS								
Current assets:								
Cash and cash equivalents	\$ 32,423	\$ 34,758	\$ 30,264	\$ 121	\$ 96,399	\$ 73,896	\$ 27,752	\$ 295,613
Short-term investments	—	193,170	133,450	3,614	32,419	3,655	43,189	409,497
Restricted cash and investments	587	96,313	26,797	16,982	—	84,586	2,860	228,125
Assets held in trust	26,205	—	—	—	—	1,841	—	28,046
Receivables, net of allowance for uncollectibles:								
Loans	398	13,436	3,717	—	20,715	14,098	—	52,364
Other receivables	9,670	9,655	2,221	376	2,902	4,743	10,370	39,937
Due from primary government	15,625	5,277	—	8,887	—	13,065	—	42,854
Inventory	—	—	—	—	—	77	—	77
Other current assets	2,989	5,763	308	469	—	540	594	10,663
Total current assets	87,897	358,372	196,757	30,449	152,435	196,501	84,765	1,107,176
Noncurrent assets:								
Cash and cash equivalents - restricted	—	16,452	—	2,720	—	—	—	19,172
Long - term investments	—	64,255	—	—	—	—	788,018	852,273
Restricted investments	—	—	—	—	—	—	59,459	59,459
Accounts receivables, net	—	859	—	111	—	1,354	15,727	18,051
Loans receivables, net	15,273	61,489	—	—	554,061	37,762	—	668,585
Non-depreciable capital assets	197,728	9,714	4,532	—	—	—	21,342	233,316
Depreciable capital assets, net	461,971	84,662	134,771	58,252	859	20,250	47,981	808,746
Other noncurrent assets	—	4,974	—	—	1,033	3,807	8,219	18,033
Total noncurrent assets	674,972	242,405	139,303	61,083	555,953	63,173	940,746	2,677,635
Total assets	762,869	600,777	336,060	91,532	708,388	259,674	1,025,511	3,784,811
Deferred outflows of resources:								
Deferred change in fair value of interest rate swaps	—	—	—	—	6,643	—	—	6,643
Deferred outflows related to pension	6,064	—	—	—	—	—	—	6,064
Deferred outflows related to OPEB	124	—	—	—	—	—	—	124
Total deferred outflows of resources	6,188	—	—	—	6,643	—	—	12,831
Total assets and deferred outflows	769,057	600,777	336,060	91,532	715,031	259,674	1,025,511	3,797,642
LIABILITIES AND DEFERRED INFLOWS								
Current liabilities:								
Accounts payable and other liabilities	17,944	11,033	27,743	6,930	717	19,079	29,426	112,872
Accrued payroll	—	—	—	—	1,253	595	—	1,848
Compensated absences	1,014	1,158	218	—	—	595	—	2,985
Accrued interest payable	—	231	—	—	2,091	—	—	2,322
Due to primary government	—	98,724	—	—	—	—	424	99,148
Unearned revenue	18,525	23,875	—	65	—	32,174	1,261	75,900
Bonds, notes payable and other obligations	—	390	—	—	14,876	9,470	3,488	28,224
Total current liabilities	37,483	135,411	27,961	6,995	18,937	61,913	34,599	323,299
Noncurrent liabilities:								
Compensated absences	1,361	—	—	362	—	178	—	1,901
Due to primary government	—	7,375	—	—	—	—	—	7,375
Unearned revenue	84	—	—	—	—	211	1,255	1,550
Bonds, notes payable and other obligations	—	5,279	—	—	548,372	71,903	15,795	641,349
Net pension liability	37,882	—	—	—	—	—	—	37,882
Net OPEB liability	5,365	—	—	—	—	—	—	5,365
Other noncurrent liabilities	—	11,809	—	322	84,079	1,841	2,559	100,610
Total noncurrent liabilities	44,692	24,463	—	684	632,451	74,133	19,609	796,032
Total liabilities	82,175	159,874	27,961	7,679	651,388	136,046	54,208	1,119,331
Deferred inflows of resources:								
Deferred service concession arrangements	—	—	—	—	—	336	—	336
Deferred inflows related to pension	5,674	—	—	—	—	—	—	5,674
Deferred inflows related to OPEB	1,749	—	—	—	—	—	—	1,749
Total deferred inflows of resources	7,423	—	—	—	—	336	—	7,759
Total liabilities and deferred inflows	89,598	159,874	27,961	7,679	651,388	136,382	54,208	1,127,090
NET POSITION								
Net investment in capital assets	659,699	84,573	139,303	58,252	859	24,023	48,313	1,015,022
Restricted for:								
Other purposes	26,778	169,206	26,797	22,361	21,789	54,263	840,337	1,161,531
Unrestricted	(7,018)	187,124	141,999	3,240	40,995	45,006	82,653	493,999
Total net position	\$ 679,459	\$ 440,903	\$ 308,099	\$ 83,853	\$ 63,643	\$ 123,292	\$ 971,303	\$ 2,670,552

See Independent Auditors' Report

Combining Statement of Revenues, Expenses and Changes in Net Position
Nonmajor Discretely Presented Component Units
Fiscal Year Ended June 30, 2019
(Amounts in thousands)

	Massachusetts Convention Center Authority	Massachusetts Development Finance Agency	Massachusetts Clean Energy Center	Massachusetts Technology Park Corporation	Massachusetts Housing Partnership	Economic Development Entities	Higher Education Foundations	Total
Operating revenues:								
Charges for services	\$ 73,635	\$ 54,832	\$ 2,596	\$ 5,540	\$ 9,627	\$ 86,792	\$ 19,853	\$ 252,875
Other	5,422	5,116	22,364	15,786	—	1,533	26,777	76,998
Total operating revenues	79,057	59,948	24,960	21,326	9,627	88,325	46,630	329,873
Operating expenses:								
Cost of services	56,828	52,096	44,031	23,956	665	85,925	—	263,501
Administration costs	32,406	17,456	10,880	380	8,226	19,492	68,177	157,017
Depreciation	47,966	9,049	3,755	6,228	159	1,878	2,494	71,529
Total operating expenses	137,200	78,601	58,666	30,564	9,050	107,295	70,671	492,047
Operating income/(loss)	(58,143)	(18,653)	(33,706)	(9,238)	577	(18,970)	(24,041)	(162,174)
Nonoperating revenues/(expenses):								
Operating grants	17,773	382	2,589	—	1,756	12,574	—	35,074
Interest income/(loss)	1,791	7,948	—	913	1,714	1,298	30,356	44,020
Other nonoperating revenue/(expense)	1,830	(72,090)	12,079	—	388	(3,334)	46,368	(14,759)
Nonoperating revenues/(expenses), net	21,394	(63,760)	14,668	913	3,858	10,538	76,724	64,335
Income/(loss) before contributions	(36,749)	(82,413)	(19,038)	(8,325)	4,435	(8,432)	52,683	(97,839)
Capital contributions	22,836	27,781	—	—	—	12,725	—	63,342
Change in net position/(deficits)	(13,913)	(54,632)	(19,038)	(8,325)	4,435	4,293	52,683	(34,497)
Net position - beginning	693,372	495,535	327,137	92,178	59,208	118,999	918,620	2,705,049
Net position - ending	\$ 679,459	\$ 440,903	\$ 308,099	\$ 83,853	\$ 63,643	\$ 123,292	\$ 971,303	\$ 2,670,552

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PROMOTING WOMEN IN STEM IN MASSACHUSETTS MASSACHUSETTS STEM NETWORKS

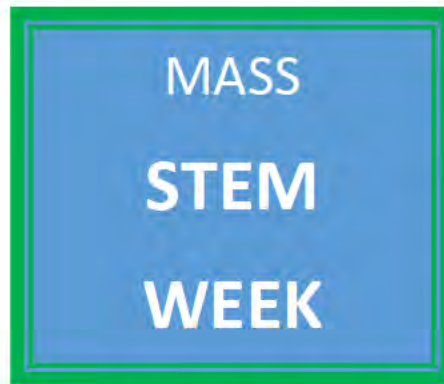


Massachusetts STEM Summit

The Massachusetts STEM Summit provides a venue for learning and collaboration among educators, workforce professionals, business leaders, policymakers, and other active participants in the STEM movement.

The Summit has been hosted by the UMass Donahue Institute, Massachusetts Business Roundtable and the Massachusetts STEM Advisory Council and supported by generous contributions from a broad array of public and private organizations invested in the economic vitality of the state, including businesses, educational institutions, government agencies, and non-profit entities.

Photo and content courtesy of: <http://www.mass-stem-summit.org/>.



Massachusetts STEM Week takes place in October each year and is organized by the Executive Office of Education and the STEM Advisory Council in partnership with the state's nine Regional STEM Networks. It is a statewide effort to boost the interest, awareness and ability for all learners to envision themselves in STEM education and employment opportunities, and compliment the formal instruction happening in the Commonwealth beyond STEM week.

Massachusetts is building stronger pipelines to increase the number of high school students, community college students, and out-of-school youth entering high-quality careers, including STEM careers.

“STEM Week is an opportunity to showcase all the good work teachers and students are already doing in science, technology, engineering and math every day,” **Education Secretary James Peyser said**. “It is also a chance to spark some students’ interest, and highlight for them how STEM touches so many fields and so many professions.”

Photo and content courtesy of: <https://www.massstemweek.org/> and <https://www.mass.edu/about/stemweek2018-recap.asp>.

Statistical Section

(Unaudited)

Schedule of Net Position by Component – Last Ten Fiscal Years
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These schedules contain trend information to help the reader understand how the Commonwealth's financial performance and fiscal health has changed over time. The schedules are presented for the last ten fiscal years, except where noted. Schedules included are:

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Schedule of Net Position by Component

Last Ten Fiscal Years

(Amounts in thousands)

	2019	2018*	2017*	2016*	2015*
Governmental activities					
Net investment in capital assets.....	\$ (1,433,294)	\$ (1,446,934)	\$ (1,320,834)	\$ (1,067,098)	\$ (768,411)
Restricted.....	1,270,844	1,546,202	1,926,716	1,538,662	1,541,566
Unrestricted	(73,917,902)	(74,253,756)	(63,992,403)	(59,111,068)	(55,626,250)
Total governmental activities net position	\$ (74,080,352)	\$ (74,154,488)	\$ (63,386,521)	\$ (58,639,504)	\$ (54,853,095)
Business-type activities					
Net investment in capital assets.....	\$ 3,868,576	\$ 3,777,515	\$ 3,623,966	\$ 3,311,658	\$ 3,055,444
Restricted.....	2,271,721	1,833,109	1,735,575	1,745,840	1,539,785
Unrestricted	(490,819)	(595,311)	722,923	678,667	697,056
Total business-type activities net position.....	\$ 5,649,478	\$ 5,015,313	\$ 6,082,464	\$ 5,736,165	\$ 5,292,285
Commonwealth net position					
Net investment in capital assets.....	\$ 2,435,282	\$ 2,330,581	\$ 2,303,132	\$ 2,244,560	\$ 2,287,033
Restricted.....	3,542,565	3,379,311	3,662,291	3,284,502	3,081,351
Unrestricted	(74,408,721)	(74,849,067)	(63,269,480)	(58,432,401)	(54,929,194)
Total Commonwealth net position.....	\$ (68,430,874)	\$ (69,139,175)	\$ (57,304,057)	\$ (52,903,339)	\$ (49,560,810)

* - Prior year amounts reclassified to conform to current year presentation

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2014*	2013*	2012*	2011*	2010*
\$ (502,370)	\$ (592,483)	\$ (849,338)	\$ (722,469)	\$ (885,593)
1,455,704	1,386,416	1,456,715	1,520,702	1,403,877
(53,381,659)	(26,733,592)	(24,904,848)	(23,630,855)	(22,891,414)
\$ (52,428,325)	\$ (25,939,659)	\$ (24,297,471)	\$ (22,832,622)	\$ (22,373,130)
\$ 2,794,845	\$ 2,605,263	\$ 2,366,038	\$ 2,026,223	\$ 1,767,434
1,590,545	1,209,630	1,576,865	1,364,646	1,148,751
675,796	1,026,230	969,309	978,043	857,263
\$ 5,061,186	\$ 4,841,123	\$ 4,912,212	\$ 4,368,912	\$ 3,773,448
\$ 2,292,475	\$ 2,012,780	\$ 1,516,700	\$ 1,303,754	\$ 881,841
3,046,249	2,596,046	3,033,580	2,885,348	2,552,628
(52,705,863)	(25,707,362)	(23,935,539)	(22,652,812)	(22,034,151)
\$ (47,367,139)	\$ (21,098,536)	\$ (19,385,259)	\$ (18,463,710)	\$ (18,599,681)

Changes in Net Position
Last Ten Fiscal Years
(Amounts in thousands)

	2019	2018*	2017*	2016*	2015*
EXPENSES					
Governmental Activities:					
General government.....	\$ 2,766,272	\$ 2,792,959	\$ 2,764,634	\$ 2,616,051	\$ 2,703,519
Judiciary.....	1,221,969	1,162,698	1,226,221	1,154,038	1,026,429
Direct local aid.....	6,089,548	5,900,634	5,734,682	5,598,687	5,469,412
Medicaid.....	18,093,807	18,105,722	17,182,691	16,825,110	15,086,742
Group health insurance.....	1,670,238	1,648,278	1,668,100	1,632,703	1,657,018
Energy and environmental.....	701,950	732,161	720,182	1,069,510	671,801
Housing and economic development.....	1,574,628	1,544,103	1,411,189	1,367,957	1,314,980
Health and human services.....	8,662,012	8,298,704	8,131,843	7,912,817	7,605,180
Transportation and public works.....	2,554,289	2,483,768	2,535,121	2,711,910	2,689,975
Early elementary and secondary education.....	5,607,240	6,101,603	6,243,115	5,420,052	4,654,161
Public safety and homeland security.....	3,006,893	2,757,266	2,913,849	2,746,612	2,486,107
Labor and workforce development.....	298,930	295,061	312,510	324,678	309,091
Lottery.....	4,445,654	4,325,321	4,128,209	4,299,592	4,109,611
Interest (unallocated).....	1,522,183	1,419,910	1,384,248	1,250,004	1,263,218
Total governmental activities.....	58,215,613	57,568,188	56,356,594	54,929,721	51,047,244
Business-type Activities:					
Unemployment compensation.....	1,483,901	1,552,404	1,514,002	1,499,811	1,598,084
Higher Education					
University of Massachusetts.....	3,282,171	3,307,087	3,167,596	3,151,215	2,809,062
State Universities.....	1,145,531	1,089,551	1,063,196	1,002,577	994,341
Community Colleges.....	917,967	887,223	936,241	928,067	891,906
Total business-type activities.....	6,829,570	6,836,265	6,681,035	6,581,670	6,293,393
Total Commonwealth expenses.....	\$ 65,045,183	\$ 64,404,453	\$ 63,037,629	\$ 61,511,391	\$ 57,340,637
REVENUES					
Program Revenues:					
Governmental Activities					
Charges for services					
General government.....	\$ 611,834	\$ 652,138	\$ 594,132	\$ 565,434	\$ 634,289
Judiciary.....	81,567	91,500	95,937	100,568	105,521
Medicaid.....	1,129,343	1,054,698	897,542	841,697	1,052,170
Group health insurance.....	808,194	941,946	802,628	799,011	755,712
Energy and environmental.....	279,267	273,504	249,565	289,738	253,856
Housing and economic development.....	163,315	213,530	194,940	173,941	164,438
Health and human services.....	1,411,918	1,292,584	1,359,519	1,224,967	405,710
Transportation and public works.....	627,941	625,595	596,200	577,292	577,430
Early elementary and secondary education.....	8,445	7,846	7,919	7,508	7,649
Public safety and homeland security.....	338,099	248,234	280,400	284,264	256,596
Labor and workforce development.....	307,506	269,293	40,652	38,581	175,130
Lottery.....	5,644,440	5,436,551	5,254,468	5,405,128	5,193,545
Total charges for services.....	11,411,869	11,107,419	10,373,902	10,308,129	9,582,046
Operating grants and contributions.....	16,253,915	16,230,934	15,519,380	15,158,087	13,950,227
Capital grants and contributions.....	66,085	99,002	58,354	85,759	81,475
Total governmental activities.....	27,731,869	27,437,355	25,951,636	25,551,975	23,613,748
Business-type Activities					
Charges for services					
Unemployment Compensation.....	1,852,195	1,617,394	1,468,492	1,611,096	1,492,067
Higher Education					
University of Massachusetts.....	1,860,268	1,907,824	1,882,899	1,875,144	1,602,043
State Universities.....	679,801	658,608	654,170	616,025	583,669
Community Colleges.....	237,288	259,156	274,868	274,252	266,956
Operating grants and contributions.....	976,096	931,780	909,228	891,823	936,917
Capital grants and contributions.....	112,033	160,201	238,621	265,714	206,128
Total business-type activities.....	5,717,681	5,534,963	5,428,278	5,534,054	5,087,780
Total Commonwealth program revenues.....	\$ 33,449,550	\$ 32,972,318	\$ 31,379,914	\$ 31,086,029	\$ 28,701,528
General Revenues and Other Changes in Net Position (all types consolidated):					
Governmental Activities					
Taxes (all types).....	\$ 30,609,957	\$ 27,964,093	\$ 25,949,577	\$ 25,676,303	\$ 25,209,826
Investment earnings and miscellaneous.....	1,513,855	1,283,283	995,073	1,161,089	1,251,288
Transfers.....	(1,565,932)	(1,123,731)	(1,286,709)	(1,246,055)	(1,429,174)
Transfers to/from MassDOT.....	—	—	—	—	—
Total governmental activities.....	30,557,880	28,123,645	25,657,941	25,591,337	25,031,940
Business-type Activities					
Investment earnings and miscellaneous.....	145,483	423,379	312,347	245,441	7,536
Other losses.....	—	—	—	—	—
Transfers.....	1,565,932	1,123,731	1,286,709	1,246,055	1,429,174
Total business-type activities.....	1,711,415	1,547,110	1,599,056	1,491,496	1,436,710
Total Commonwealth general revenues.....	\$ 32,269,295	\$ 29,670,755	\$ 27,256,997	\$ 27,082,833	\$ 26,468,650
CHANGES IN NET POSITION					
Governmental activities.....	\$ 74,136	\$ (2,007,188)	\$ (4,747,017)	\$ (3,786,409)	\$ (2,401,556)
Business-type activities.....	599,526	245,808	346,299	443,880	231,099
Total changes in net position including restatements.....	\$ 673,662	\$ (1,761,380)	\$ (4,400,718)	\$ (3,342,529)	\$ (2,170,457)

* - Prior year amounts reclassified to conform to current year presentation

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2014*	2013*	2012*	2011*	2010*
\$ 2,521,454	\$ 2,571,881	\$ 2,384,167	\$ 2,312,298	\$ 2,317,183
1,007,234	983,314	936,113	1,000,902	991,310
5,353,521	5,179,104	4,991,532	4,845,738	5,030,363
14,034,862	12,286,342	11,708,397	12,124,261	10,677,999
1,403,590	1,282,661	1,218,079	1,113,544	1,092,178
615,854	524,632	568,898	689,258	305,233
1,289,156	1,250,008	1,246,213	1,365,368	1,291,142
7,308,295	7,737,736	7,619,987	7,139,948	7,110,366
2,379,178	1,868,020	1,759,589	2,270,136	2,062,054
4,714,555	4,493,537	4,336,326	3,585,958	3,806,149
2,451,881	2,391,982	2,323,452	2,295,561	2,292,163
352,454	385,757	472,044	498,560	470,878
3,980,980	3,982,700	3,877,305	3,661,834	3,649,396
1,197,709	1,206,542	1,202,772	1,177,569	1,090,471
48,610,723	46,144,216	44,644,874	44,080,935	42,186,885
2,036,431	2,718,447	3,466,500	4,388,360	5,435,611
2,925,013	2,759,488	2,684,039	2,865,015	2,640,134
922,383	864,161	851,118	834,453	762,043
852,946	814,245	801,038	772,883	716,526
6,736,773	7,156,341	7,802,695	8,860,711	9,554,314
\$ 55,347,496	\$ 53,300,557	\$ 52,447,569	\$ 52,941,646	\$ 51,741,199
\$ 361,105	\$ 352,291	\$ 458,320	\$ 443,869	\$ 464,592
108,766	111,384	114,170	120,293	128,198
1,226,108	471,539	297,566	258,032	185,463
660,359	619,982	495,377	431,078	349,870
262,339	228,019	214,340	270,449	214,269
165,365	150,690	142,320	142,387	221,340
483,080	1,143,551	931,535	896,328	797,929
530,853	567,348	505,842	502,004	517,045
10,067	6,748	6,783	6,645	9,661
228,730	218,643	205,546	193,983	202,427
150,394	246,577	237,772	142,731	38,319
5,049,536	5,041,329	4,940,151	4,630,205	4,626,777
9,236,702	9,158,101	8,549,722	8,038,004	7,755,890
13,121,648	12,836,122	12,909,908	14,217,481	12,771,164
30,699	18,726	79,733	168,912	779,403
22,389,049	22,012,949	21,539,363	22,424,397	21,306,457
1,897,495	1,923,476	1,982,602	1,945,801	1,727,964
1,697,585	1,640,296	1,519,496	1,685,386	1,527,880
558,170	533,347	523,979	530,078	479,900
270,512	281,428	275,778	250,341	235,865
1,347,423	1,791,196	2,525,342	3,500,210	4,020,351
122,081	123,396	162,271	42,819	48,684
5,893,266	6,293,139	6,989,468	7,954,635	8,040,644
\$ 28,282,315	\$ 28,306,088	\$ 28,528,831	\$ 30,379,032	\$ 29,347,101
\$ 23,319,168	\$ 22,599,332	\$ 21,403,426	\$ 21,066,430	\$ 19,034,227
1,131,848	985,810	1,393,192	991,519	1,475,096
(1,205,141)	(1,096,061)	(1,155,955)	(860,904)	(864,697)
—	—	—	—	(8,983,955)
23,245,875	22,489,081	21,640,663	21,197,045	10,660,671
306,690	271,832	214,056	652,489	504,404
—	—	—	(10,746)	(12,125)
1,205,141	1,096,061	1,155,955	860,904	864,697
1,511,831	1,367,893	1,370,011	1,502,647	1,356,976
\$ 24,757,706	\$ 23,856,974	\$ 23,010,674	\$ 22,699,692	\$ 12,017,647
\$ (2,975,800)	\$(1,642,18	\$ (1,464,850)	\$ (459,493)	\$ (10,219,754)
668,324	504,691	556,784	596,571	(156,694)
\$ (2,307,476)	\$ (1,137,496)	\$ (908,066)	\$ 137,078	\$ (10,376,448)

Fund Balances, Governmental Funds

Last Ten Fiscal Years

(Modified accrual basis of accounting)

(Amounts in thousands)

	2019	2018*	2017*	2016*	2015*
Fund balances GASB 54:					
Nonspendable	\$ —	\$ —	\$ —	\$ —	\$ —
Restricted ⁽¹⁾	1,316,707	1,519,833	1,926,716	1,377,671	1,792,461
Committed ⁽²⁾	5,007,488	3,302,222	2,351,687	2,422,088	2,375,367
Assigned ⁽³⁾	1,256,717	955,830	684,655	845,567	576,632
Unassigned	1,530,423	1,060,559	634,324	628,420	561,105
Total governmental fund balances	\$ 9,111,335	\$ 6,838,444	\$ 5,597,382	\$ 5,273,746	\$ 5,305,565

* - Prior year amounts reclassified to conform to current year presentation

- (1) Restricted fund balance decreased from FY18 mainly due to amounts in the capital projects funds. These amounts will vary from year to year depending on the timing of bond sales as well as the amount and nature of capital projects on going during any given fiscal year.
- (2) The increase in the committed fund balance from FY18 is due to an increase of approximately \$1.423 billion in the ending balance of the Commonwealth's stabilization fund.
- (3) Assigned fund balance increased from FY18 as a result of amounts held by the Massachusetts School Building Authority (MSBA) for grants and loans to other governmental entities.

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2014*	2013*	2012*	2011*	2010*
\$ —	\$ —	\$ —	\$ —	\$ 5,000
1,518,671	1,558,842	2,196,201	1,675,969	1,906,663
2,250,157	2,324,445	2,404,475	2,020,252	2,166,390
510,353	595,085	574,621	750,462	156,483
340,505	391,795	1,143,978	821,188	351,395
\$ 4,619,686	\$ 4,870,167	\$ 6,319,275	\$ 5,267,871	\$ 4,585,931

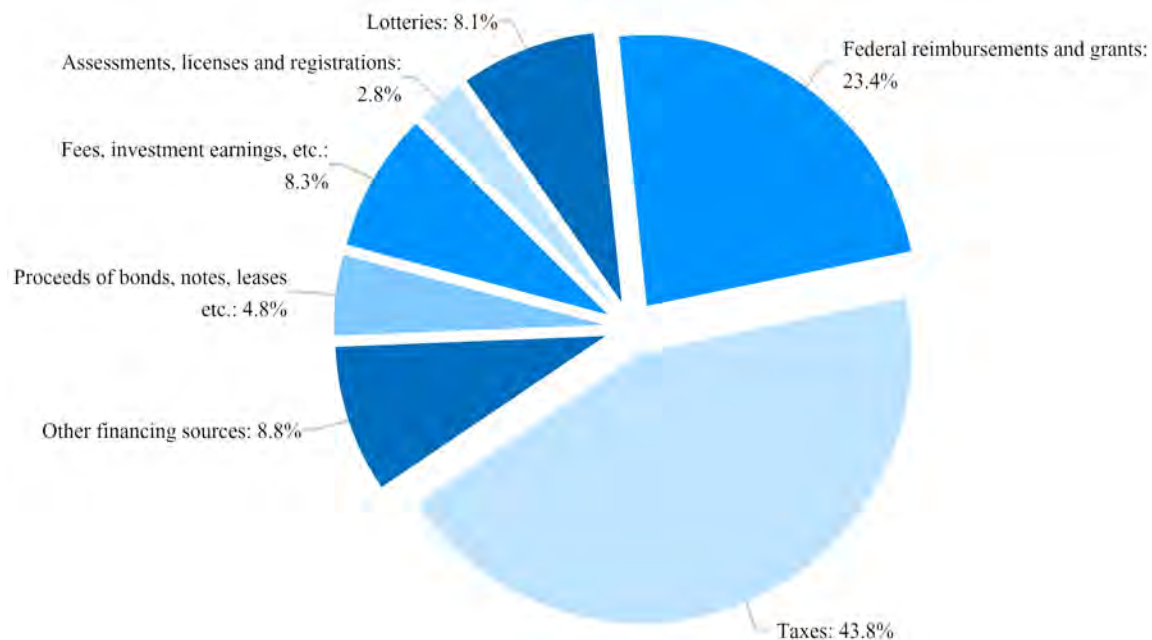
Ten-Year Schedule of Revenues and Other Financing Sources
All Governmental Fund Types - Fund Perspective
(Modified Accrual Basis of Accounting)

(Amounts in millions)

	2019	% Total	2018	% Total	2017	% Total	2016	% Total	2015	% Total
Taxes	\$ 30,618	43.8	\$ 28,243	41.1	\$ 25,828	37.7	\$ 25,746	38.0	\$ 25,258	41.7
Federal reimbursements	12,650	18.1	12,647	18.3	11,932	17.4	11,577	17.1	10,462	17.2
Federal grants	3,678	5.3	3,684	5.3	3,635	5.3	3,656	5.4	3,583	5.9
Lotteries	5,652	8.1	5,442	7.9	5,258	7.7	5,406	8.0	5,194	8.6
Assessments	1,377	2.0	1,354	2.0	1,219	1.8	1,104	1.6	1,026	1.7
Motor vehicle licenses and registrations	566	0.8	566	0.8	554	0.8	546	0.8	546	0.9
Fees, investment earnings, etc.	5,794	8.3	5,518	8.0	4,966	7.3	4,957	7.3	4,540	7.5
Issuance of general and special obligation bonds	2,008	2.9	2,779	4.0	3,464	5.1	3,969	5.9	3,761	6.2
Issuance of refunding bonds	819	1.2	993	1.4	1,853	2.7	1,463	2.2	632	1.0
Bond premiums	470	0.7	562	0.8	812	1.2	613	0.9	379	0.6
Proceeds of capital lease	—	—	—	—	1	—	31	—	31	0.1
Other financing sources	6,143	8.8	7,202	10.4	8,915	13.0	8,682	12.8	5,247	8.6
Total revenues and other financing sources	<u>\$ 69,775</u>	<u>100.0</u>	<u>\$ 68,990</u>	<u>100.0</u>	<u>\$ 68,437</u>	<u>100.0</u>	<u>\$ 67,750</u>	<u>100.0</u>	<u>\$ 60,659</u>	<u>100.0</u>

See Independent Auditors' Report

**Apportionment of Revenues by Source -
Fiscal Year Ended June 30, 2019**



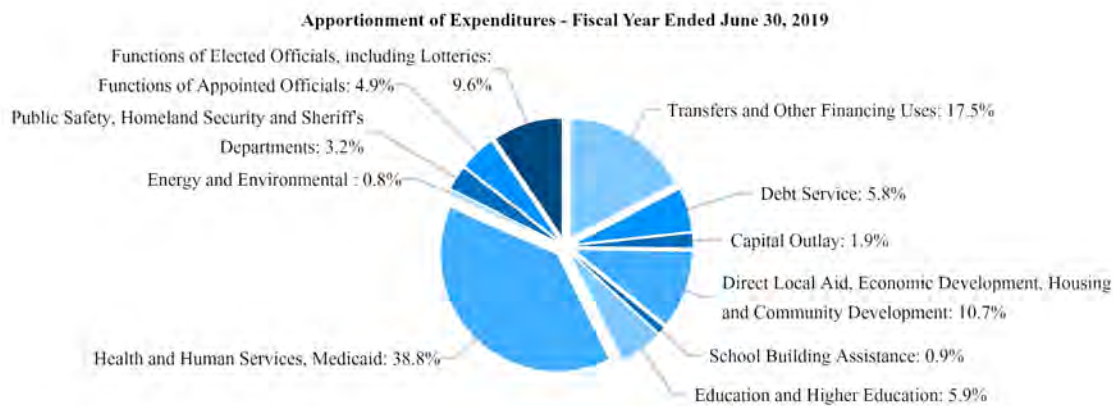
2014	% Total	2013	% Total	2012	% Total	2011	% Total	2010	% Total
\$ 23,786	41.6	\$ 22,391	40.5	\$ 21,533	39.6	\$ 20,854	38.7	\$ 18,991	37.3
9,417	16.5	8,981	16.2	8,934	16.4	10,066	18.8	9,453	18.5
3,730	6.5	3,887	7.0	4,051	7.5	4,311	8.0	4,097	8.0
5,049	8.8	5,042	9.1	4,944	9.1	4,631	8.6	4,628	9.1
1,080	1.8	1,093	2.0	1,024	1.9	980	1.8	965	2.0
495	0.9	487	0.9	474	0.9	461	0.9	463	0.9
4,152	7.3	3,750	6.8	3,823	7.0	3,246	6.0	3,365	6.6
2,360	4.1	1,471	2.7	2,902	5.3	2,233	4.1	2,419	4.7
1,236	2.2	1,913	3.5	388	0.7	888	1.6	538	1.1
193	0.3	398	0.7	260	0.5	130	0.2	16	—
11	—	1	—	4	—	12	—	17	—
5,701	10.0	5,876	10.6	6,033	11.1	6,086	11.3	6,027	11.8
<u>\$ 57,210</u>	<u>100.0</u>	<u>\$ 55,290</u>	<u>100.0</u>	<u>\$ 54,370</u>	<u>100.0</u>	<u>\$ 53,898</u>	<u>100.0</u>	<u>\$ 50,979</u>	<u>100.0</u>

Ten-Year Schedule of Expenditures and Other Financing Uses by Secretariat
All Governmental Fund Types - Fund Perspective
(Modified Accrual Basis of Accounting)
(Amounts in millions)

	2019	% Total	2018	% Total	2017	% Total	2016	% Total	2015	% Total
Legislature	\$ 68	0.1	\$ 68	0.1	\$ 67	0.1	\$ 61	0.1	\$ 61	0.1
Judiciary	985	1.5	921	1.4	908	1.3	880	1.3	845	1.4
Inspector General	5	—	5	—	4	—	5	—	5	—
Governor and Lieutenant Governor	7	—	7	—	7	—	7	—	6	—
Secretary of the Commonwealth	55	0.1	45	0.1	51	0.1	44	0.1	50	0.1
Treasurer and Receiver-General	6,092	9.0	5,854	8.6	5,657	8.2	5,799	8.7	5,602	9.6
Auditor of the Commonwealth	18	—	19	—	18	—	19	—	18	—
Attorney General	107	0.2	98	0.1	76	0.1	67	0.1	41	0.1
Ethics Commission	2	—	2	—	2	—	2	—	2	—
District Attorney	138	0.2	129	0.2	130	0.2	124	0.2	119	0.2
Office of Campaign and Political Finance	3	—	2	—	2	—	2	—	3	—
Sheriff's Department	672	1.0	635	0.9	624	0.9	616	0.9	593	1.0
Disabled Persons Protection Commission	5	—	4	—	3	—	3	—	3	—
Board of Library Commissioners	30	—	28	—	28	—	28	—	28	—
Massachusetts Gaming Commission	50	0.1	44	0.1	37	0.1	34	0.1	23	—
Comptroller	16	—	16	—	17	—	17	—	16	—
Administration and Finance	2,311	3.4	2,475	3.7	2,444	3.6	2,416	3.6	2,490	4.2
Energy and Environmental	477	0.7	445	0.7	405	0.6	436	0.6	417	0.7
Health and Human Services	8,054	12.0	7,813	11.5	7,463	11.0	7,402	10.9	7,211	12.0
Executive Office of Technology Services	116	0.2	81	0.1	—	—	—	—	—	—
Transportation and Public Works	—	—	—	—	—	—	—	—	—	—
Massachusetts Department of Transportation	2,349	3.5	2,387	3.5	2,391	3.5	2,595	3.8	2,611	4.4
Office of the Child Advocate	1	—	1	—	1	—	1	—	—	—
Cannabis Control Commission	10	—	2	—	—	—	—	—	—	—
Executive Office of Education*	3,972	5.9	3,723	5.5	3,589	5.3	3,478	5.1	3,320	5.5
Center for Health and Information Analysis	20	—	21	—	23	—	27	—	28	—
Massachusetts School Building Assistance	572	0.9	550	0.8	621	0.9	626	0.9	732	1.2
Public Safety and Homeland Security	1,463	2.2	1,400	2.1	1,374	2.0	1,385	2.0	1,334	2.2
Housing and Economic Development*	1,157	1.7	1,089	1.6	1,021	1.5	1,048	1.5	1,021	1.7
Labor and Workforce Development*	258	0.4	255	0.4	259	0.4	277	0.4	269	0.4
Medicaid	18,094	26.8	18,106	26.9	17,183	25.2	16,825	24.9	15,087	25.2
Pension	1,368	2.0	1,294	1.9	1,127	1.7	1,103	1.6	902	1.5
Direct local aid	6,090	9.0	5,901	8.7	5,735	8.4	5,599	8.3	5,469	9.1
Capital outlay:										
Local aid	—	—	—	—	—	—	1	—	—	—
Capital acquisition and construction	1,310	1.9	1,253	1.8	1,202	1.8	1,162	1.7	1,205	2.0
Debt service:										
Principal/commercial paper repayment	1,480	2.2	3,706	5.5	4,676	6.9	4,487	6.6	1,781	3.0
Interest	1,484	2.2	1,381	2.0	1,262	1.9	1,248	1.8	1,187	2.0
Principal on current refunding	956	1.4	522	0.8	188	0.3	250	0.4	203	0.3
Other financing uses:										
Payments to refunding bond escrow agent	—	—	628	0.9	2,304	3.4	2,613	3.9	615	1.0
Transfers	7,709	11.4	6,838	10.1	7,215	10.6	7,094	10.5	6,676	11.1
Total expenditures and other financing uses	<u>\$ 67,503</u>	<u>100.0</u>	<u>\$ 67,748</u>	<u>100.0</u>	<u>\$ 68,114</u>	<u>100.0</u>	<u>\$ 67,781</u>	<u>100.0</u>	<u>\$ 59,973</u>	<u>100.0</u>
Change in Governmental Fund Balance	<u>\$ 2,273</u>		<u>\$ 1,241</u>		<u>\$ 324</u>		<u>\$ (32)</u>		<u>\$ 686</u>	

* Reflects departmental and functional reorganizations as of the year implemented. Prior years not restated.

See Independent Auditors' Report



2014	% Total	2013	% Total	2012	% Total	2011	% Total	2010	% Total
\$ 56	0.1	\$ 57	0.1	\$ 58	0.1	\$ 58	0.1	\$ 59	0.1
816	1.4	792	1.4	757	1.4	771	1.4	769	1.5
6	—	6	—	3	—	4	—	4	—
5	—	6	—	7	—	5	—	5	—
51	0.1	49	0.1	41	0.1	45	0.1	52	0.1
5,327	9.5	5,307	9.5	5,282	9.9	5,084	9.6	4,862	9.7
18	—	18	—	17	—	18	—	18	—
88	0.2	76	0.1	55	0.1	34	0.1	52	0.1
2	—	2	—	2	—	2	—	2	—
115	0.2	115	0.2	110	0.2	104	0.2	102	0.2
1	—	1	—	1	—	3	—	1	—
565	1.0	541	1.0	529	1.0	514	1.0	394	0.8
2	—	2	—	2	—	2	—	2	—
25	—	25	—	24	—	25	—	28	0.1
23	—	14	—	1	—	—	—	—	—
16	—	14	—	14	—	14	—	13	—
2,296	4.0	2,295	4.1	1,949	3.7	1,852	3.3	1,686	3.3
410	0.7	365	0.6	351	0.7	368	0.7	403	0.8
6,957	12.1	7,384	13.1	7,301	13.6	6,791	12.8	6,655	12.9
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	474	0.9
2,296	4.0	1,785	3.1	1,679	3.1	2,086	3.9	1,209	2.3
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
3,201	5.6	3,008	5.3	3,069	5.8	3,232	6.1	2,968	5.8
26	—	9	—	—	—	—	—	—	—
869	1.5	1,037	1.8	975	1.8	791	1.5	973	1.9
1,274	2.2	1,296	2.3	1,208	2.3	1,146	2.2	1,282	2.5
1,035	1.8	988	1.7	999	1.9	1,082	2.0	1,060	2.1
330	0.6	350	0.6	455	0.9	478	0.9	447	0.9
14,035	24.4	12,286	21.7	11,708	22.0	12,124	22.8	10,678	20.8
865	1.5	878	1.5	801	1.5	744	1.4	587	1.1
5,353	9.3	5,179	9.1	4,991	9.4	4,846	9.1	5,030	9.8
—	—	—	—	—	—	—	—	1	—
999	1.7	854	1.5	847	1.6	885	1.7	1,300	2.5
—	—	—	—	—	—	—	—	—	—
1,546	2.7	1,525	2.7	1,297	2.4	1,071	2.0	1,300	2.5
1,223	2.1	1,229	2.2	1,207	2.3	1,149	2.2	1,107	2.2
159	0.3	230	0.4	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
562	1.0	2,046	3.6	388	0.7	945	1.8	537	1.0
6,907	12.0	6,972	12.3	7,189	13.5	6,947	13.1	7,395	14.4
<u>\$ 57,461</u>	<u>100.0</u>	<u>\$ 56,739</u>	<u>100.0</u>	<u>\$ 53,319</u>	<u>100.0</u>	<u>\$ 53,217</u>	<u>100.0</u>	<u>\$ 51,455</u>	<u>100.3</u>
<u>\$ (251)</u>		<u>\$ (1,448)</u>		<u>\$ 1,051</u>		<u>\$ 681</u>		<u>\$ (476)</u>	

Personal Income by Industry
Last Ten Calendar Years

(Amounts in millions)

	2018	2017	2016	2015	2014
Total personal income	\$ 483,433	\$ 450,962	\$ 442,500	\$ 415,636	\$ 396,206
Unearned income.....	118,567	111,017	108,349	97,728	94,494
Farm earnings	103	129	151	195	178
Nonfarm earnings	364,763	339,816	334,000	317,713	301,534
Private earnings	349,476	323,875	319,931	272,533	262,843
Agricultural services, forestry, fishing.....	659	716	677	406	354
Mining.....	274	608	379	276	270
Construction.....	23,177	20,609	19,473	17,197	15,481
Manufacturing	27,271	26,550	27,181	26,497	25,921
Durable goods	19,239	18,709	18,894	18,193	18,224
Nondurable goods	8,032	7,841	8,287	8,304	7,697
Transportation and utilities	9,667	8,649	8,330	7,600	7,295
Wholesale trade.....	15,102	14,830	14,621	13,938	13,546
Retail trade.....	16,432	15,982	15,520	14,716	14,137
Services.....	256,894	235,931	233,750	191,903	185,839
Government.....	42,557	42,492	41,130	39,921	38,691
Federal, civilian	5,458	5,477	5,427	5,202	5,007
Military	900	891	860	860	874
State and local	36,199	36,124	34,843	33,859	32,810
Personal income tax revenue (fiscal year, statutory basis)...	\$ 17,109	\$ 16,240	\$ 14,394	\$ 14,449	\$ 13,202
Total personal income	\$ 483,433	\$ 450,962	\$ 442,500	\$ 415,636	\$ 396,206
Average Effective Rate.....	3.54%	3.60%	3.25%	3.48%	3.33%
Highest Earned Income Tax Rate.....	5.05%	5.10%	5.10%	5.15%	5.20%

Sources: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System and the Massachusetts Department of Revenue. Average effective rate is individual income tax revenue divided by personal income.

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2013	2012	2011	2010	2009
\$ 381,271	\$ 363,944	\$ 352,243	\$ 336,400	\$ 324,681
91,615	87,333	83,338	81,190	78,336
151	150	136	186	137
289,505	276,461	268,769	255,024	246,208
252,939	243,503	236,764	223,785	215,397
373	426	409	383	376
201	113	124	97	101
14,759	13,426	12,526	11,687	11,717
25,341	26,375	25,388	25,108	23,290
17,977	19,223	18,319	18,053	16,466
7,364	7,152	7,069	7,055	6,824
7,083	6,742	6,604	6,208	6,029
13,483	12,979	13,082	12,501	12,458
13,565	13,333	12,891	12,599	12,255
178,134	170,109	165,740	155,202	149,171
36,567	32,959	32,006	31,241	30,812
4,792	5,442	5,426	5,431	5,314
943	1,221	1,245	1,260	1,220
30,832	26,296	25,335	24,550	24,278
\$ 12,831	\$ 11,911	\$ 11,576	\$ 10,110	\$ 10,584
\$ 381,271	\$ 363,944	\$ 352,243	\$ 336,400	\$ 324,680
3.37%	3.27%	3.29%	3.01%	3.26%
5.25%	5.25%	5.30%	5.30%	5.30%

Commonwealth of Massachusetts
Personal Income Tax Filers and Liability by Income Level
Calendar (Tax) Years 2017 and 2008

(Amounts, except income level are in thousands)

Calendar Year 2017 (or Fiscal Year 2018)

Income Level	Number of Filers	Percentage of Total	Personal Income Tax Liability	Percentage of Total
\$100,001 and higher	831,688	21.5%	\$ 11,274,838	74.7%
\$75,001 - \$100,000.....	319,109	8.2%	1,168,285	7.7%
\$50,001 - \$75,000.....	514,219	13.3%	1,279,064	8.5%
\$25,001 - \$50,000.....	827,507	21.3%	1,071,015	7.1%
\$10,001 - \$25,000.....	659,444	17.0%	274,512	1.8%
\$10,000 and lower	726,197	18.7%	34,033	0.2%
Total.....	<u>3,878,164</u>	<u>100.0%</u>	<u>\$ 15,101,747</u>	<u>100.0%</u>

Calendar Year 2008 (or Fiscal Year 2009)

Income Level	Number of Filers	Percentage of Total	Personal Income Tax Liability	Percentage of Total
\$100,001 and higher	587,308	16.9%	\$ 7,004,100	66.1%
\$75,001 - \$100,000.....	290,124	8.3%	1,082,830	10.2%
\$50,001 - \$75,000.....	465,154	13.3%	1,181,520	11.1%
\$25,001 - \$50,000.....	782,365	22.4%	1,037,660	9.8%
\$10,001 - \$25,000.....	645,107	18.5%	263,510	2.5%
\$10,000 and lower	719,002	20.6%	31,190	0.3%
Total.....	<u>3,489,060</u>	<u>100.0%</u>	<u>\$ 10,600,810</u>	<u>100.0%</u>

Source: Massachusetts Department of Revenue - 2017 is the most recent tax year for which complete data is available.

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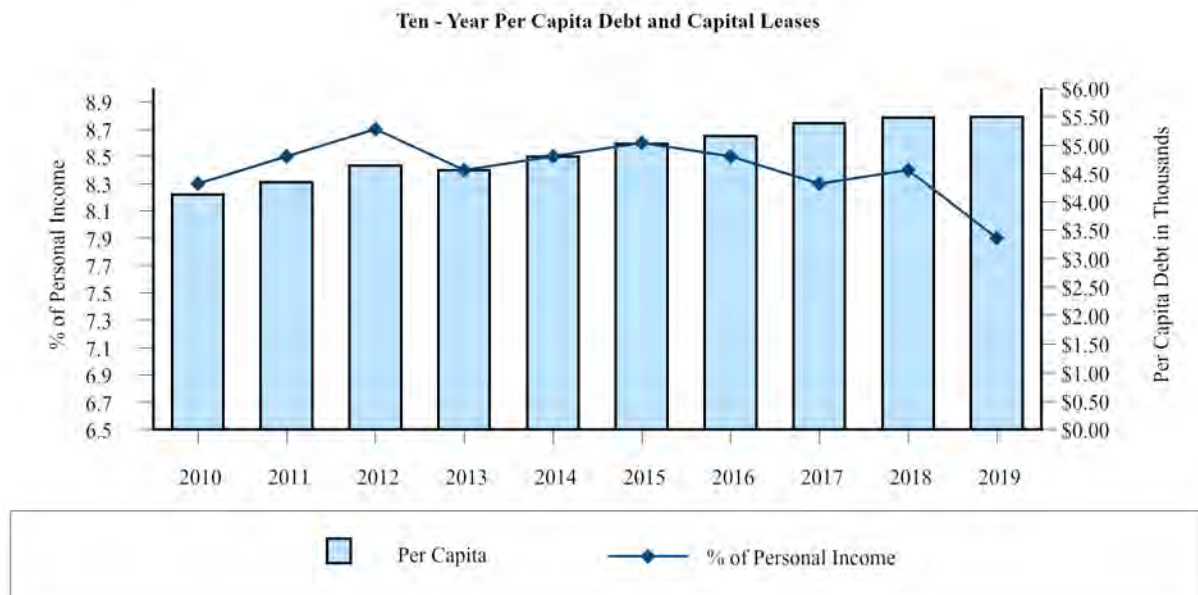
Ten -Year Schedule of Per Capita General Long-Term Bonded Debt and Capital Leases

(Amounts in thousands, except for percentages)

Fiscal Year Ended June 30	Governmental Activities			Business-Type Activities			Total Primary Government	Prior Year Personal Income	Massachusetts Resident Population (4)	Debt as a % of Personal Income	Amount of Debt Per Capita
	Bonded Debt (1)	Capital Leases	MSBA Bonded debt (2)	Bonded Debt (3)	Capital Leases						
2019	\$ 27,739,221	\$ 19,835	\$ 6,054,994	\$ 4,284,704	\$ 9,589	\$ 38,108,343	\$ 483,433,495	6,902	7 9%	\$ 5 52	
2018	27,360,819	22,492	5,990,554	4,438,502	9,825	37,822,192	450,961,579	6,863	8 4%	5 51	
2017	26,445,665	30,856	5,828,790	4,529,353	8,979	36,843,643	442,500,000	6,826	8 3%	5 40	
2016	25,079,591	41,302	5,624,275	4,438,282	9,887	35,193,337	415,636,000	6,796	8 5%	5 18	
2015	23,826,301	42,928	5,714,410	4,553,105	9,895	34,146,639	396,206,000	6,764	8 6%	5 05	
2014	22,419,852	55,878	5,632,470	4,243,731	14,529	32,366,460	381,271,000	6,714	8 5%	4 82	
2013	21,513,039	50,831	5,195,160	3,736,432	19,299	30,514,761	363,943,750	6,663	8 4%	4 58	
2012	21,907,683	60,457	5,443,265	3,370,389	23,327	30,805,121	352,242,750	6,613	8 7%	4 66	
2011	20,875,055	60,975	4,395,390	3,277,413	31,105	28,639,938	336,399,750	6,566	8 5%	4 36	
2010	19,726,507	76,608	4,488,535	2,731,124	40,924	27,063,698	324,680,250	6,518	8 3%	4 15	

- (1) Excludes Massachusetts School Building Authority debt. Amounts of bonded debt for governmental activities are the amount of debt for statutory debt calculation purposes. For fiscal 2010 through 2012, debt outstanding was defined in state finance law as net proceeds of debt issued. State finance law was amended, effective January 1, 2013, to change the statutory definition of outstanding debt from net proceeds to principal. Therefore, fiscal years prior to 2013 are calculated using net proceeds; fiscal 2013 and thereafter are calculated using principal.
- (2) The Massachusetts School Building Authority (MSBA) is presented as a blended component unit in these financial statements.
- (3) Business-type activities bond debt includes notes payable of the Institutions of Higher Education.
- (4) Population estimates have been restated to most current United States Census Bureau Data. Population data is reported as of July 1 of the previous year. *Source - HTTP //www.fedstats.gov (US Census Bureau.)*

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Ten Year Schedule of Outstanding Direct Debt and Statutory Debt Limit

(Amounts in thousands)

	2019 (3)	2018 (3)	2017 (3)	2016 (3)	2015 (3)
Outstanding principal as of June 30 (1).....	\$ 27,739,221	\$ 27,360,819	\$ 26,445,665	\$ 25,079,591	\$ 23,826,301
Plus/(less) amounts excluded:					
Net amortized (discount)/premium and issuance costs	—	—	—	—	—
Total net proceeds/principal	27,739,221	27,360,819	26,445,665	25,079,591	23,826,301
Less net proceeds/principal of direct debt excluded from statutory debt limit:					
Central artery project bonds	(1,013,492)	(1,092,519)	(1,110,195)	(1,150,296)	(1,197,127)
Accelerated bridge program	(2,349,950)	(2,429,000)	(2,380,740)	(2,192,930)	(2,195,004)
County debt assumed.....	—	—	—	—	—
(Premium)/discount	—	—	—	—	—
Grant anticipation notes (2).....	—	—	—	—	—
School Modernization and Reconstruction Trust Bonds...	(574,902)	(598,985)	(632,348)	(652,197)	(689,446)
Convention center bonds	(527,635)	(552,110)	(575,420)	(597,630)	(618,705)
MBTA forward funding bonds	(207)	(207)	(207)	(207)	(207)
Special obligation gas bonds	(80,930)	(105,230)	(128,270)	(170,735)	(210,635)
Rail enhancement program bonds (4)	(1,104,610)	(1,131,105)	(644,540)	—	—
Outstanding direct debt, net proceeds/principal	22,087,495	21,451,663	20,973,945	20,315,596	18,915,177
Statutory debt limit*	24,019,204	22,875,433	21,786,126	20,748,692	19,760,659
Debt margin (debt limit less direct debt).....	\$ 1,931,709	\$ 1,423,770	\$ 812,181	\$ 433,096	\$ 845,482
Debt margin as a percentage of direct debt limit.....	8.0%	6.2%	3.7%	2.1%	4.3%

(1) Exclusive of the Massachusetts School Building Authority debt.

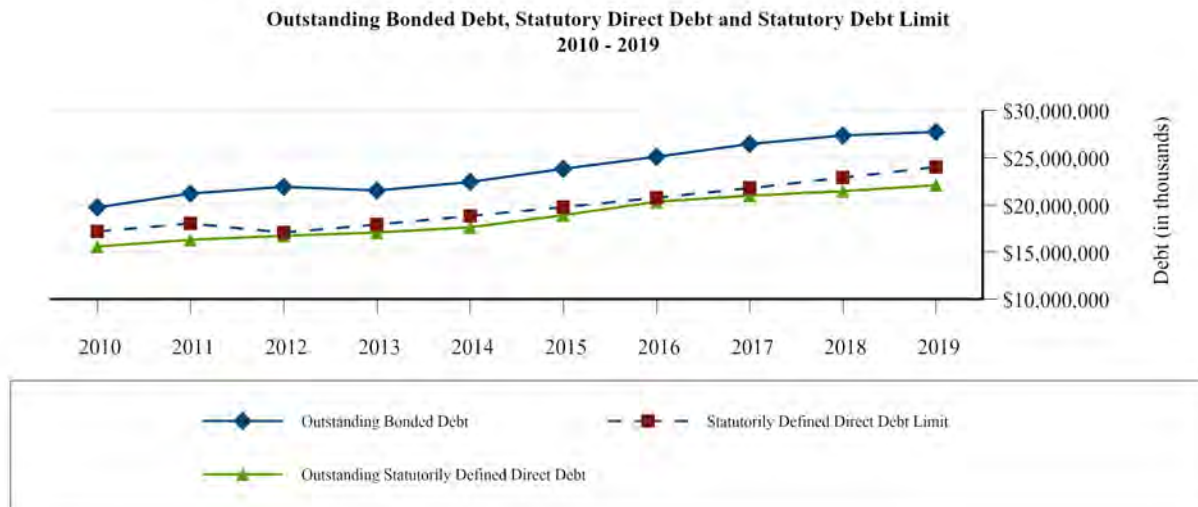
(2) Inclusive of crossover refunding amounts.

(3) For fiscal 2009 through 2012, debt outstanding was defined in state finance law as net proceeds of debt issued. State finance law was amended, effective January 1, 2013, to change the statutory definition of outstanding debt from net proceeds to principal. Therefore, fiscal years prior to 2013 are calculated using net proceeds; fiscal 2013 and thereafter are calculated using principal.

(4) Section 4 of Chapter 220 of the Acts of 2016 exempted bonds issued under the Rail Enhancement Program from the statutory debt limit.

* Section 60A of Chapter 165 of the Acts of 2012, as amended, reset the statutory defined debt limit, effective July 1, 2012, to \$17.070 billion

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2014 (3)	2013 (3)	2012	2011	2010
\$ 22,419,852	\$ 21,513,039	\$ 21,433,553	\$ 20,875,056	\$ 19,509,819
—	—	474,130	335,078	216,688
22,419,852	21,513,039	21,907,683	21,210,134	19,726,507
(1,241,263)	(1,303,013)	(1,342,841)	(1,356,606)	(1,243,250)
(1,756,395)	(1,088,605)	(1,095,385)	(676,125)	—
—	—	(75)	(150)	(225)
—	—	(474,130)	(335,078)	216,688
(178,390)	(349,100)	(510,385)	(666,790)	(997,467)
(723,917)	(764,337)	(795,009)	(824,279)	(894,502)
(638,700)	(638,700)	(638,700)	(643,715)	(643,715)
(207)	(207)	(207)	(44,472)	(165,559)
(249,705)	(296,395)	(337,545)	(371,665)	(419,785)
—	—	—	—	—
17,631,275	17,072,682	16,713,406	16,291,254	15,578,692
18,819,675	17,923,500	17,070,000	18,042,424	17,183,261
\$ 1,188,400	\$ 850,818	\$ 356,594	\$ 1,751,170	\$ 1,604,569
6.3%	4.7%	2.1%	9.7%	9.3%

Ten Fiscal Year Schedule of Pledged Revenue Coverage
Special Obligation Highway Bonds (Motor Fuels Taxation and Motor Vehicle Fees), Convention Center Bonds (Tax Incremental Financing) and
Grant Anticipation Notes (Federal Highway Grants)

(Statutory Basis, Amounts in Thousands, Except for Ratios)

	2019	2018	2017	2016	2015
Highway Bonds					
For issues prior to December 2010, the bonds are secured by a pledge of 6.86¢ of the 21¢ per gallon state gasoline excise tax for FY2008 and before. For FY2009 and after, the pledge is up to 10¢ of the tax. Bonds issued in December 2010, May 2012 and November 2013 (Commonwealth Transportation Fund, or "CTF bonds") are secured by a senior lien on 17.085 cents of the total 24 cent per gallon gasoline tax, the full 21 cents per gallon of special fuels taxes (comprised primarily of taxes on diesel fuel), the full 19.1% of the average price per gallon tax on liquefied natural gas and all Registry of Motor Vehicle fees deposited in the Commonwealth Transportation Fund. Federal Build America Bonds subsidies are also pledged to all CTF bonds. The bonds also have a subordinate lien on 6.86¢ of the 24¢ per gallon gasoline tax not included in the senior lien. Revenues pledged to the bonds are available prior to use for any other purposes. Thus, operating expenses paid from these revenue sources are not applicable for the purpose of calculating debt service coverage ratios and are not shown in this table. The 2010 bonds were issued as federally taxable Build America Bonds/Recovery Zone Economic Development Bonds; the programs provide an interest subsidy of 35-45% directly to the Commonwealth. The interest subsidy is shown as pledged funds and debt service is gross of the subsidy.					
Pre-2010 Bond Issues					
Tax Receipts.....	\$ 192,614	\$ 191,183	\$ 191,820	\$ 190,803	\$ 187,913
Operating Expenses	N/A	N/A	N/A	N/A	N/A
Net Available Revenues	\$ 192,614	\$ 191,183	\$ 191,820	\$ 190,803	\$ 187,913
Annual Debt Service	\$ 29,818	\$ 29,825	\$ 51,276	\$ 50,906	\$ 52,225
Debt Service Coverage Ratio.....	6.46	6.41	3.74	3.75	3.60
Ratings History of Bonds (Fitch, Moody's and S&P)*.....	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA
Post-2010 Bond Issues (Includes Revenues in Excess of Those Needed to Pay Debt Service on Pre-2010 Highway Bonds)					
Receipts.....	\$ 1,373,116	\$ 1,362,788	\$ 1,326,734	\$ 1,294,357	\$ 1,283,248
Operating Expenses	N/A	N/A	N/A	N/A	N/A
Net Available Revenues	\$ 1,373,116	\$ 1,362,788	\$ 1,326,734	\$ 1,294,357	\$ 1,283,248
Annual Debt Service	\$ 176,189	\$ 149,968	\$ 129,024	\$ 94,859	\$ 81,054
Debt Service Coverage Ratio.....	7.79	9.09	10.28	13.65	15.83
Ratings History of Bonds (Fitch, Moody's and S&P)*.....	NA, Aaa, AAA	NA, Aaa, AAA	NA, Aaa, AAA	NA, Aaa, AAA	NA, Aaa, AAA
Convention Center Bonds					
These bonds are secured by amounts payable to the Convention Center Fund, which include certain hotel tax receipts in Boston, Cambridge, Springfield, surcharges on car rentals, parking, sightseeing tours and cruises and sales tax receipts in those cities. Revenues pledged to the bonds are available prior to use for any other purposes. Thus, operating expenses paid from these revenue sources are not applicable for the purpose of calculating debt service coverage ratios and are not shown in this table.					
Receipts.....	\$ 164,197	\$ 146,872	\$ 133,789	\$ 134,806	\$ 124,937
Operating Expenses	N/A	N/A	N/A	N/A	N/A
Net Available Revenues	\$ 164,197	\$ 146,872	\$ 133,789	\$ 134,806	\$ 124,937
Annual Debt Service	\$ 54,601	\$ 54,473	\$ 54,540	\$ 54,540	\$ 52,852
Debt Service Coverage Ratio.....	3.01	2.70	2.45	2.47	2.36
Ratings History of Bonds (Fitch, Moody's and S&P)*.....	NA, A1, A	NA, A1, A	NA, A1, A	NA, A1, A	NA, A1, A
Grant Anticipation Notes (GANS)					
Notes issued prior to December 2010 ("Senior Federal Highway Notes") were secured by all federal highway reimbursements, which are deposited in the Grant Anticipation Note Trust fund. The outstanding pre-December 2010 notes were retired in June 2015 and Notes issued in December 2010 ("Federal Highway Grant Anticipation Notes") and after are secured by all federal highway reimbursements. Revenues pledged to the notes are available prior to use for any other purposes. Thus, operating expenses paid from these revenue sources are not applicable for the purpose of calculating debt service coverage ratios and are not shown in this table. The 2010 bonds were issued as federally taxable Build America Bonds; the program provides an interest subsidy of 35% directly to the Commonwealth. The interest subsidy is shown as pledged funds and debt service is gross of the subsidy.					
Post 2010 GANS (Includes Revenues in Excess of those Needed to Pay Debt Service on Pre-2010 Highway Bonds)					
Receipts.....	\$ 1,771,001	\$ 1,756,726	\$ 1,734,397	\$ 1,707,187	\$ 1,556,243
Operating Expenses	N/A	N/A	N/A	N/A	N/A
Net Available Revenues	\$ 1,771,001	\$ 1,756,726	\$ 1,734,397	\$ 1,707,187	\$ 1,556,243
Annual Debt Service	\$ 86,093	\$ 83,804	\$ 80,486	\$ 76,049	\$ 33,472
Debt Service Coverage Ratio.....	20.57	20.96	21.55	22.45	46.49
Ratings History of Bonds (Fitch, Moody's and S&P)*.....	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA

*Uninsured rating, if available.

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2014	2013	2012	2011	2010
\$ 187,467 N/A	\$ 186,638 N/A	\$ 190,129 N/A	\$ 189,763 N/A	\$ 188,666 N/A
\$ 187,467	\$ 186,638	\$ 190,129	\$ 189,763	\$ 188,666
\$ 52,228	\$ 58,922	\$ 58,939	\$ 59,453	\$ 58,931
3.59	3.17	3.23	3.19	3.2
AA+, Aa1, AAA	AA+, Aa1, AAA	AA+, Aa1, AAA	AA, Aa1, AAA	AA, Aa2, AA+
\$ 1,210.405 N/A	\$ 1,170,297 N/A	\$ 1,121,709 N/A	\$ 626,619 N/A	
\$ 1,210.405	\$ 1,170,297	\$ 1,121,709	\$ 626,619	
\$ 69,921	\$ 58,108	\$ 32,623	\$ 14,318	
17.31	20.14	34.38	43.76	
NA, Aaa, AAA	NA, Aaa, AAA	NA, Aaa, AAA	NA, Aaa, AAA	
\$ 109,879 N/A	\$ 100,631 N/A	\$ 94,234 N/A	\$ 84,905 N/A	\$ 75,432 N/A
\$ 109,879	\$ 100,631	\$ 94,234	\$ 84,905	\$ 75,432
\$ 34,486	\$ 34,486	\$ 34,486	\$ 34,486	\$ 34,486
3.19	2.92	2.73	2.46	2.19
NA, A1, A	NA, A1, A	NA, A1, A	NA, A1, A	NA, A1, A
\$ 1,562,732 N/A	\$ 1,575,266 N/A	\$ 1,674,485 N/A	\$ 909,546 N/A	
\$ 1,562,732	\$ 1,575,266	\$ 1,674,485	\$ 909,546	
\$ 4,268	\$ 4,973	\$ 4,271	\$ 2,039	
366.15	316.76	392.06	446.07	
AA+, Aa1, AAA	AA+, Aa2, AAA	AA+, Aa2, AAA	AA+, Aa2, AAA	

**Ten-Year Schedule of Percentage of Annual Debt Service Expenditures
For General Bonded Debt to Total Non-Capital Expenditures - Fund Perspective
All Governmental Fund Types**

(Amounts in thousands)

Fiscal year ended June 30	Debt service ⁽¹⁾	Total non-capital expenditures ⁽²⁾	Ratio (%)
2019	\$ 3,489,029	\$ 58,502,774	6.0
2018	3,040,834	56,925,468	5.3
2017	2,667,043	54,239,919	4.9
2016	2,720,117	53,748,227	5.1
2015	2,703,200	51,171,135	5.3
2014	2,534,285	48,312,870	5.2
2013	2,351,074	45,733,298	5.1
2012	2,160,589	44,070,405	4.9
2011	1,904,881	43,881,014	4.3
2010	2,116,507	40,152,632	5.3

(1) Business type activities debts are secured solely by leases between the Institutions of Higher Education and two blended building authorities. Excludes Massachusetts School Building Authority debt service paid by the Authority.

(2) Expenditures are shown net of Massachusetts School Building Authority expenditures as they are school building assistance capital grants to local cities and towns.

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Debt Service to Non-Capital Expenditures Ratio 2010 - 2019



**Component Units Revenue Bond Coverage
For the Last Ten Fiscal Years**

(Amounts in thousands)

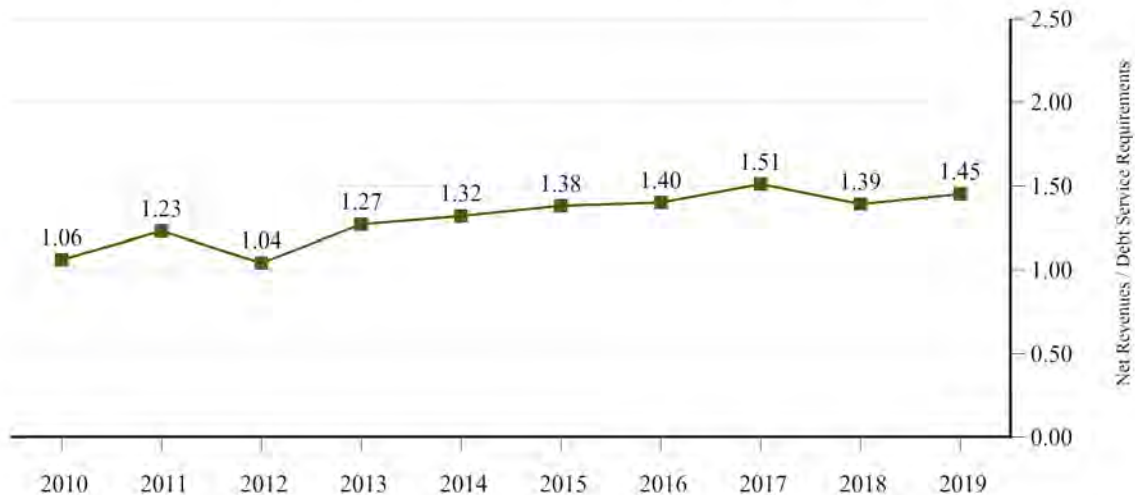
Fiscal year ended June 30	Net Revenues ⁽¹⁾	Debt service requirements ⁽²⁾	Coverage Ratio (%)
2019	\$ 2,073,011	\$ 1,431,521	1.45
2018	1,831,742	1,322,491	1.39
2017	1,763,564	1,169,651	1.51
2016	1,817,135	1,298,267	1.40
2015	1,950,292	1,417,420	1.38
2014	1,481,374	1,126,392	1.32
2013	1,585,500	1,244,358	1.27
2012	1,584,013	1,517,899	1.04
2011	1,444,813	1,170,149	1.23
2010	1,460,045	1,383,231	1.06

- (1) Net revenues represent revenue pledged and available for the repayment of revenue bonds. In most cases, revenue pledged for the bonds is available prior to use for any other purposes. Thus, operating expenses paid from these revenue sources are not applicable when calculating debt service coverage and are not subtracted from pledged revenues.
- (2) Debt service requirements represent total debt service payments made less debt service paid on short-term borrowings of only those Authorities with revenue bonds outstanding.

Source: Office of the Comptroller

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Component Units Revenue Bond Coverage 2010 - 2019



Ten-Year Schedule of Massachusetts and United States Resident Population

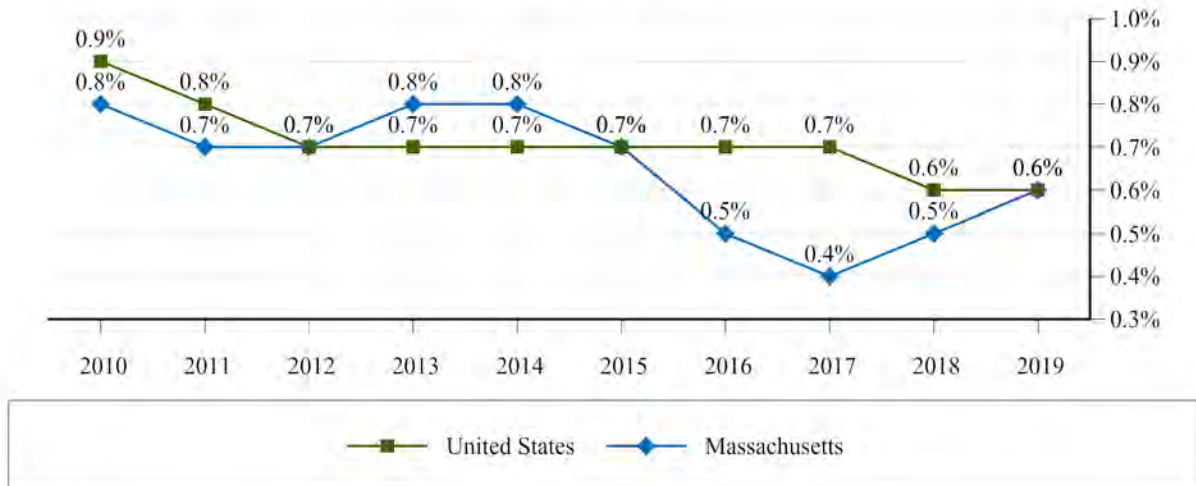
(Amounts in thousands)

Beginning of Fiscal Year	Massachusetts Resident Population ⁽¹⁾	% Change	United States Resident Population (1)	% Change	Massachusetts as % of U.S.
2019	6,902	0.6%	327,167	0.6%	2.1%
2018	6,863	0.5%	325,147	0.6%	2.1%
2017	6,826	0.4%	323,071	0.7%	2.1%
2016	6,796	0.5%	320,743	0.7%	2.1%
2015	6,764	0.7%	318,386	0.7%	2.1%
2014	6,714	0.8%	316,058	0.7%	2.1%
2013	6,663	0.8%	313,874	0.7%	2.1%
2012	6,613	0.7%	311,580	0.7%	2.1%
2011	6,566	0.7%	309,326	0.8%	2.1%
2010	6,518	0.8%	306,772	0.9%	2.1%

(1) Population estimates have been restated using most current United States Census Bureau Data. Population data is reported as of July 1 of the previous year and has been restated to most recent United States Census Bureau Data.

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**Massachusetts and United States Estimated Year-to-Year Population Change
2010 - 2019**

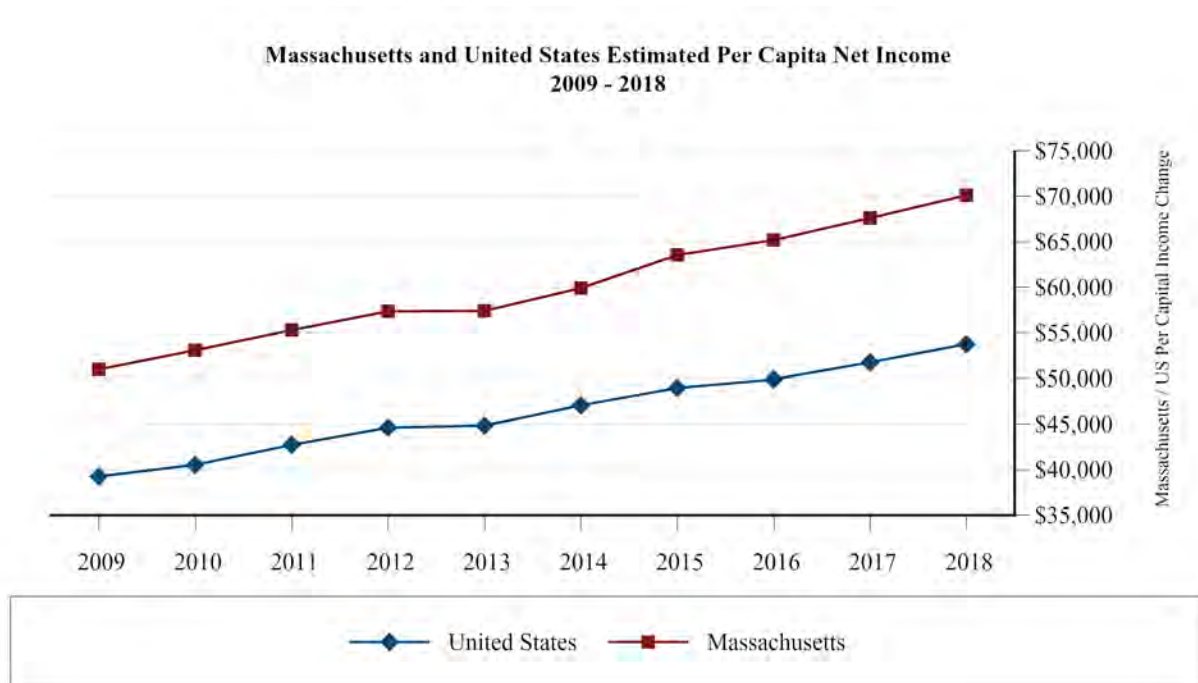


Ten-Year Schedule of Massachusetts and United States Resident Per Capita Net Income

Calendar year	Massachusetts	% Change	United States	% Change	Massachusetts as % of U.S.
2018	\$ 70,073	3.7 %	\$ 53,712	3.8 %	130.5%
2017	67,596	3.7 %	51,731	3.7 %	130.7%
2016	65,164	2.6 %	49,883	1.8 %	130.6%
2015	63,505	6.0 %	48,985	4.1 %	129.6%
2014	59,892	4.4 %	47,060	4.9 %	127.3%
2013	57,394	0.1 %	44,851	0.6 %	128.0%
2012	57,323	3.7 %	44,599	4.4 %	128.5%
2011	55,273	4.2 %	42,735	5.4 %	129.3%
2010	53,061	4.1 %	40,546	3.2 %	130.9%
2009	50,962	(1.7)%	39,284	(4.0)%	129.7%

Source: Bureau of Economic Analysis, US Department of Commerce. Prior years restated due to revised estimates released on March 26, 2019.

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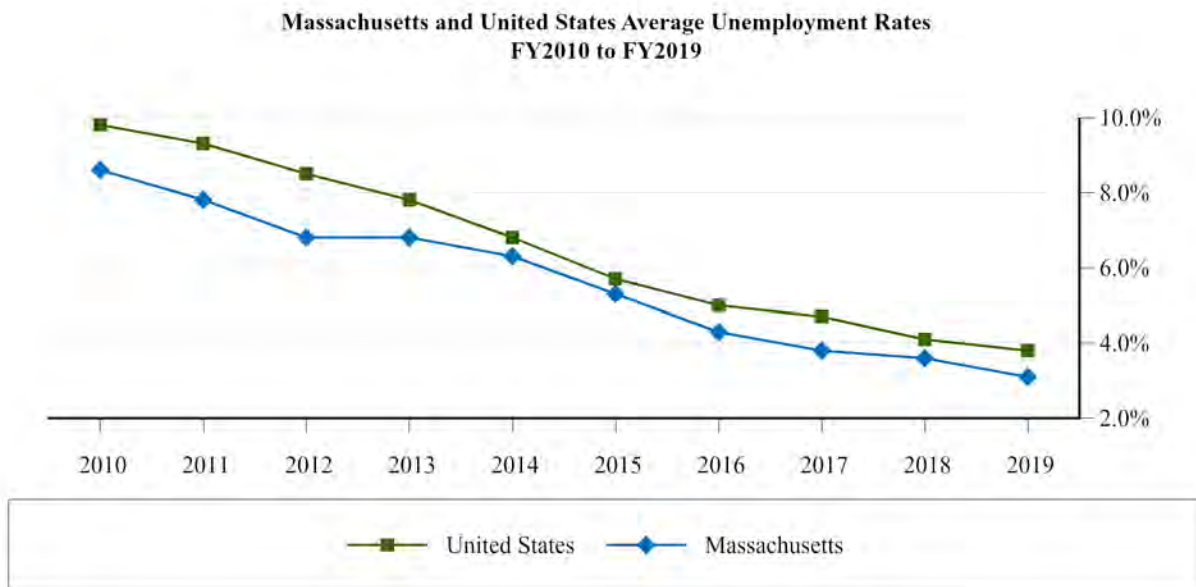


**Ten-Year Schedule of Fiscal Year Annual Average Civilian Labor Force,
Unemployment and Unemployment Rates
For Massachusetts and the United States**
(Amounts in thousands)

Fiscal Year	Massachusetts			United States			Massachusetts Rate as % of U.S. Rate
	Labor Force	Unemployment	Unemployment Rate %	Labor Force	Unemployment	Unemployment Rate %	
2019	3,835	118	3.1%	162,691	6,127	3.8%	81.7%
2018	3,748	135	3.6%	161,166	6,624	4.1%	87.6%
2017	3,657	138	3.8%	159,792	7,441	4.7%	81.0%
2016	3,592	155	4.3%	158,028	7,892	5.0%	86.4%
2015	3,596	189	5.3%	156,617	8,906	5.7%	92.4%
2014	3,531	221	6.3%	155,470	10,514	6.8%	92.5%
2013	3,504	238	6.8%	155,346	12,079	7.8%	87.4%
2012	3,472	237	6.8%	154,297	13,153	8.5%	80.1%
2011	3,472	270	7.8%	153,615	14,252	9.3%	83.8%
2010	3,478	299	8.6%	153,906	15,009	9.8%	88.2%

Source: Federal Bureau of Labor Statistics, August 2019. Seasonally adjusted. Previous data has been updated by the Federal Bureau of Labor Statistics

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Largest Private Sector Massachusetts Employers 2019 and 2010

(Alphabetical Order)

2019			2010		
Employer	Headquarters	Product or Service	Employer	Headquarters	Product or Service
Bay State Medical Center, Inc	Springfield	Hospital	Bay State Medical Center, Inc	Springfield	Hospital
Beth Israel Deaconess Medical Center	Boston	Hospital	Beth Israel Deaconess Medical Center	Boston	Hospital
Boston Medical Center Corporation	Boston	Hospital	Boston Medical Center Corporation	Boston	Hospital
Boston University	Boston	University	Boston University	Boston	University
Brigham and Women's Hospital, Inc	Boston	Hospital	Brigham and Women's Hospital, Inc	Boston	Hospital
DeMoulas Supermarkets, Inc	Tewksbury	Supermarket	DeMoulas Supermarkets, Inc	Tewksbury	Supermarket
EMC Corporation	Hopkinton	Computer Storage & Peripherals	EMC Corporation	Hopkinton	Computer Storage & Peripherals
General Hospital Corporation	Boston	Hospital	General Hospital Corporation	Boston	Hospital
Harvard University	Cambridge	University	Harvard University	Cambridge	University
Massachusetts Institute of Technology	Cambridge	University	Massachusetts Institute of Technology	Cambridge	University
Northeastern University	Boston	University	Raytheon Company	Lexington	Electronics / Defense
Partners Healthcare Systems, Inc	Boston	Hospital	S & S Credit Company, Inc	Quincy	Supermarket
Raytheon Company	Lexington	Electronics / Defense	Shaw's Supermarkets, Inc	West Bridgewater	Supermarket
The Stop & Shop Supermarkets, Co	Quincy	Supermarket	Southcoast Hospitals Group	New Bedford	Hospital
Shaw's Supermarkets, Inc	West Bridgewater	Supermarket	State Street Bank and Trust Company	Boston	Banking
State Street Bank and Trust Company	Boston	Banking	The Children's Hospital Corporation	Boston	Hospital
The Children's Hospital Corporation	Boston	Hospital	Tufts University	Boston	University
The TJX Companies, Inc	Framingham	Retail	UMASS Memorial Medical Center, Inc	Worcester	Hospital
UMASS Memorial Medical Center, Inc	Worcester	Hospital			

Source Massachusetts Executive Office of Labor and Workforce Development, Division of Unemployment Assistance - March 2019 survey. In addition, CVS Pharmacy, Inc, Home Depot U.S.A.; Inc., Target Corp, United Parcel Services, Inc., Wal-Mart Associates, Inc. and Whole Foods Market Group, Inc. are all large Massachusetts employers, but are headquartered outside of Massachusetts. Verizon New England is a subsidiary of Verizon Communications, headquartered in New York. The information is based on employers registered for unemployment insurance. The list may not include those employers who do business in Massachusetts under multiple legal corporations and those who register each store, facility or franchisee as a separate employer.

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Full Time Equivalent Employees
By Function/Program
Last Ten Years

Functions/Programs	2019	2018	2017	2016	2015
General government.....	6,900	6,855	6,905	7,018	7,696
Judiciary.....	7,164	7,229	7,208	7,264	7,264
Energy and environmental affairs.....	2,614	2,533	2,509	2,539	2,689
Health and human services	22,209	22,104	21,817	21,557	22,060
Transportation and construction	3,555	3,527	3,482	4,004	4,357
Education	852	821	815	907	970
Public safety and homeland security	16,676	16,502	16,522	16,868	17,057
Housing and economic development.....	922	918	818	844	884
Higher Education:					
University of Massachusetts	15,193	14,737	15,032	15,130	14,670
State universities	5,219	5,233	5,186	5,050	5,036
Community colleges	4,816	4,917	5,066	5,032	5,077
Totals	86,120	85,376	85,360	86,213	87,760
Percentage change.....	0.9%	—%	(1.0)%	(1.8)%	1.5%

Source: Office of the State Comptroller

"Education" includes the Department of Elementary and Secondary Education, the Executive Office of Education, the Board of Higher Education and Early Education and Care. Transportation and construction includes MassDOT. FTE's are rounded. Prior years not restated for changes. Includes approximately 6,600 FTEs transferred to the Commonwealth's payroll in FY10 and FY09 in the categories of Higher Education, Transportation and construction and Public safety and homeland security.

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2014	2013	2012	2011	2010	Change - 2019 from 2010
7,637	7,627	7,408	8,020	8,280	(16.7)%
7,195	7,297	7,087	7,111	7,388	(3.0)%
2,629	2,684	2,685	2,737	2,783	(6.1)%
21,496	21,996	21,042	21,011	21,401	3.8 %
4,301	4,243	4,230	4,209	4,127	(13.9)%
1,099	928	922	1,037	1,575	(45.9)%
17,215	16,907	16,503	15,785	15,857	5.2 %
891	868	845	831	846	9.0 %
14,066	14,688	14,159	14,159	14,031	8.3 %
4,969	4,856	4,747	4,487	4,282	21.9 %
4,990	5,111	4,834	4,684	4,276	12.6 %
86,488	87,205	84,462	84,071	84,846	1.5 %
<u>(0.8)%</u>	<u>3.2%</u>	<u>0.5%</u>	<u>(0.9)%</u>	<u>2.2%</u>	

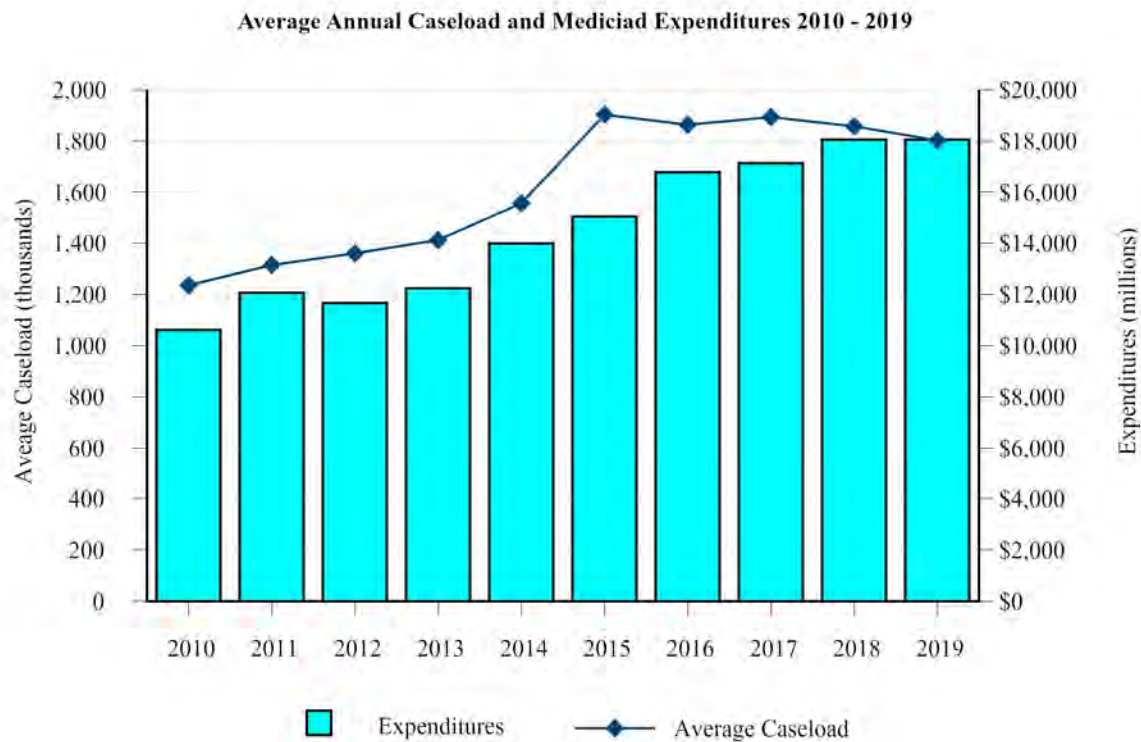
**Average Annual Medicaid Caseload and
Medicaid Expenditures - Fund Perspective
Last Ten Fiscal Years**

(Caseload amount in thousands, expenditure amounts in millions)

Fiscal year ended June 30	Average annual caseload	Medicaid expenditures	Average expenditures per case
2019*	1,803	\$18,094	\$10,035
2018*	1,857	18,106	9,750
2017*	1,893	17,183	9,077
2016*	1,863	16,825	9,031
2015*	1,903	15,087	7,928
2014*	1,556	14,035	9,020
2013	1,413	12,286	8,695
2012	1,361	11,708	8,602
2011	1,315	12,124	9,220
2010	1,263	10,678	8,454

* Includes members in transitional coverage program starting January 1, 2014.

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Massachusetts Road Inventory
Calendar Year End, Lane Miles by Type
Last Ten Calendar Years

Calendar Year	Interstate	Arterial	Collector	Local	Total	% Change	Total Urban	Total Rural
2018	3,199	15,587	9,047	44,383	72,216	(0.58)%	85.7%	14.3%
2017	3,204	15,618	9,051	44,761	72,634	1.16 %	85.9%	14.1%
2016	3,204	15,624	9,050	43,926	71,804	(1.02)%	85.9%	14.1%
2015	3,204	15,641	9,048	44,654	72,547	0.24 %	85.8%	14.2%
2014	3,211	15,645	9,048	44,472	72,376	(0.01)%	85.7%	14.3%
2013	3,211	15,674	9,058	44,438	72,381	0.16 %	85.7%	14.3%
2012	3,212	15,639	9,038	44,379	72,268	0.13 %	85.8%	14.2%
2011	3,212	15,051	9,611	44,300	72,174	0.2 %	81.1%	18.9%
2010	3,210	15,047	9,607	44,169	72,033	0.2 %	81.1%	18.9%
2009	3,212	14,974	9,589	44,112	71,887	0.3 %	81.1%	18.9%

Source: Massachusetts Highway Department, Bureau of Transportation Planning and Development Annual Road Inventory Reports, Lane Miles Table 8. Exclusive of shoulders

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Massachusetts Real Property Owned and Leased
Annual Inventory, Acreage, Improvements and Square Footage
Last Ten Years

Functions/Programs	Survey Year 2019	Survey Year 2018	Survey Year 2017	Survey Year 2016	Survey Year 2015
General Government:					
Total Acreage	4,812	5,108	4,964	2,488	2,574
Number of Improvements	307	287	268	118	173
Gross square footage	6,056,184	5,848,109	6,054,449	4,808,125	6,803,498
Judiciary:					
Total Acreage	152	155	154	153	153
Number of Improvements	69	73	75	75	75
Gross square footage	4,763,973	4,935,067	5,224,810	4,843,949	4,843,949
Energy and environmental affairs:					
Total Acreage	692,352	689,821	688,129	680,310	674,046
Number of Improvements	2,625	2,352	2,184	2,186	2,186
Gross square footage	12,292,810	8,410,119	8,214,843	8,134,142	8,134,142
Housing and economic development:					
Total Acreage	2	2	2	2	2
Number of Improvements	6	6	6	6	6
Gross square footage	78,012	78,012	78,012	78,012	78,012
Health and human services:					
Total Acreage	2,560	2,760	2,862	5,568	5,623
Number of Improvements	462	455	455	627	627
Gross square footage	7,908,283	8,390,655	8,131,022	8,361,435	8,360,310
Transportation and public works:					
Total Acreage	6,951	7,160	7,195	6,968	6,966
Number of Improvements	971	965	952	930	929
Gross square footage	6,296,235	6,273,557	6,123,984	5,820,282	4,919,282
Education:					
Total Acreage	208	220	208	208	208
Number of Improvements	30	40	40	40	40
Gross square footage	223,706	207,633	207,633	207,633	207,633
Public safety and homeland security:					
Total Acreage	10,336	12,071	19,271	19,150	19,150
Number of Improvements	1,129	1,100	1,118	1,063	1,014
Gross square footage	15,394,170	15,176,714	14,998,157	13,845,503	13,376,555
Higher Education:					
Total Acreage	5,923	5,715	6,770	7,244	7,243
Number of Improvements	1,185	1,136	1,101	1,078	1,076
Gross square footage	42,092,601	40,434,772	43,339,713	38,443,057	38,411,260
Totals for Commonwealth (exclusive of Component Units):					
Total Acreage	723,296	723,012	729,555	722,091	715,965
Number of Improvements	6,784	6,414	6,199	6,123	6,126
Gross square footage	95,105,974	89,754,638	92,372,623	84,542,138	85,134,641
Percentage Change for Commonwealth:					
Acreage	—%	(0.9)%	1.0%	0.9 %	0.7%
Improvement	5.8%	3.5 %	1.2%	— %	2.5%
Gross square footage	6.0%	(2.8)%	9.3%	(0.7)%	6.4%

Source: Executive Office of Administration and Finance, Division of Capital Asset Management and Maintenance. See <http://www.mass.gov/anf/property-mgmt-and-construction/sale-and-lease-of-state-assets/comprehensive-real-estate-serv/massets-reports.html>

See Independent Auditors' Report

Survey Year 2014	Survey Year 2013	Survey Year 2012	Survey Year 2011	Survey Year 2010
3,114	3,101	3,039	2,993	2,373
513	333	279	255	227
10,916,681	9,076,550	7,690,761	7,206,548	6,797,819
149	148	148	141	141
74	73	73	68	68
5,310,049	4,700,920	4,700,920	4,787,564	4,787,564
668,631	652,400	642,799	627,286	623,952
1,806	2,192	2,191	2,182	2,183
6,507,161	7,287,961	7,283,666	7,295,922	7,299,322
—	2	2	2	2
4	5	5	6	6
57,812	68,412	68,412	77,642	77,642
5,834	5,829	6,407	6,449	7,196
907	792	855	866	866
10,995,096	9,759,611	10,923,090	10,834,266	10,809,259
7,014	6,965	6,972	7,013	6,966
675	921	919	918	918
1,989,583	4,876,689	4,876,689	4,873,783	4,876,689
208	208	208	233	233
40	43	43	43	43
205,503	272,352	272,352	272,352	272,352
19,166	19,169	19,172	19,158	18,693
1,083	997	990	991	1,029
14,402,161	12,213,112	12,191,229	12,141,396	12,685,447
7,128	7,473	7,254	7,178	7,169
873	1,009	1,007	987	975
29,666,140	32,594,800	32,523,400	32,144,815	32,117,854
711,244	695,295	686,001	670,453	666,725
5,975	6,365	6,362	6,316	6,315
80,050,186	80,850,407	80,530,519	79,634,288	79,723,948
2.3 %	1.4%	2.3 %	0.6 %	2.7%
(6.1)%	—%	0.7 %	— %	0.1%
(1.0)%	0.4%	1.1 %	(0.1)%	1.0%

Massachusetts Public Higher Education
Enrollment and Degrees Conferred
Last Ten Academic Years

Academic Year	Fall 2018	Fall 2017	Fall 2016	Fall 2015	Fall 2014
ENROLLMENT					
University System					
Undergraduate (FTE)	56,544	56,275	51,209	50,816	49,725
Graduate (FTE)	18,161	18,284	12,769	12,517	12,576
System Enrollment	74,705	74,559	63,978	63,333	62,301
State University System					
Undergraduate (FTE)	35,081	36,074	35,909	34,700	35,507
Graduate (FTE)	6,169	5,694	5,641	8,007	7,507
System Enrollment	41,250	41,768	41,550	42,707	43,014
Community College System					
Undergraduate (FTE)	47,832	52,306	55,336	59,827	58,764
DEGREES CONFERRED					
	2019	2018	2017	2016	2015
University System					
Certificates (MD)	573	571	505	423	435
Associates	93	82	73	85	103
Bachelors.....	13,118	13,036	12,754	12,124	11,841
Masters	4,099	4,013	3,771	3,669	3,787
Doctoral.....	665	599	602	575	504
Certificate of Advance Graduate Study	67	71	76	86	81
Post-Baccalaureate Certificate	696	708	842	769	738
First Professional	47	49	50	53	64
Total Degrees	19,358	19,129	18,673	17,784	17,553
State University System					
Certificates	39	28	35	40	29
Bachelors.....	8,692	8,867	8,775	8,762	8,534
Masters	2,693	2,388	2,283	2,353	2,116
Certificate of Advance Graduate Study	92	85	83	73	63
Post-Baccalaureate Certificate	370	302	359	283	304
Total Degrees	11,886	11,670	11,535	11,511	11,046
Community College System					
Certificates	2,886	3,332	3,147	3,131	3,288
Associates	10,276	10,416	11,067	11,317	11,517
Total Degrees	13,162	13,748	14,214	14,448	14,805
Total All Systems - Degrees	44,406	44,547	44,422	43,743	43,404

Source Massachusetts Board of Higher Education. Enrollment information based at the start of the academic year.

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Fall 2013	Fall 2012	Fall 2011	Fall 2010	Fall 2009	Change - 2018 from 2009
48,893	48,136	47,432	48,018	44,543	26.9 %
12,442	12,202	12,048	11,734	10,177	78.5 %
61,335	60,338	59,480	59,752	54,720	36.5 %
35,429	34,773	35,639	36,721	34,129	2.8 %
7,704	7,894	6,224	7,227	4,582	34.6 %
43,133	42,667	41,863	43,948	38,711	6.6 %
64,584	62,445	64,586	64,971	60,602	(21.1)%
2014	2013	2012	2011	2010	% Change - 2019 from 2010
376	426	348	246	329	74.2 %
96	121	97	100	111	(16.2)%
11,544	10,910	10,399	9,958	9,362	40.1 %
3,559	3,442	3,360	3,242	3,029	35.3 %
501	486	450	414	400	66.3 %
77	62	89	87	79	(15.2)%
691	664	659	550	509	36.7 %
79	103	43	47	—	N/A
16,923	16,214	15,445	14,644	13,819	40.1 %
34	37	29	35	572	(93.2)%
8,184	8,024	7,722	7,190	6,886	26.2 %
2,478	2,327	2,404	2,376	2,467	9.2 %
113	108	143	116	170	(45.9)%
327	371	362	408	362	2.2 %
11,136	10,867	10,660	10,125	10,457	13.7 %
3,365	2,929	2,888	3,020	2,770	4.2 %
11,341	10,772	10,404	9,693	9,257	11.0 %
14,706	13,701	13,292	12,713	12,027	9.4 %
42,765	40,782	39,397	37,482	36,303	22.3 %

Calculation of Transfers: Stabilization Fund*

Fiscal Year Ended June 30, 2019

(Amounts are in thousands)

This statement is prepared on the statutory basis of accounting pursuant to General Laws Chapter 29, Section 5c. It presents information contained in the official books and accounting records of the Commonwealth. Financial statements supporting this calculation are presented in the Financial Section of this report.

	General Fund	Commonwealth Transportation Fund	Local Capital Projects Fund	Education Fund	Gaming Economic Development Fund	Marijuana Regulation Fund	Underground Storage Tank Petroleum Product Cleanup Fund	Total
Budgeted Fund Undesignated Balances (Consolidated Net Surplus).....	\$ 387,733	\$ 231,634	\$ 105	\$ 276	\$ 275	\$ 2,699	\$ —	\$ 622,722
<u>Disposition of Consolidated Net Surplus per Section 81 of Ch. 41 of the Acts of 2019:</u>								
To the Massachusetts Life Sciences Investment Fund.....	(10,000)	—	—	—	—	—	—	(10,000)
To the Massachusetts Community Preservation Trust Fund.....	(20,000)	—	—	—	—	—	—	(20,000)
Remaining Consolidated Net Surplus to be Deposited in Stabilization Fund	<u>\$ 357,733</u>	<u>\$ 231,634</u>	<u>\$ 105</u>	<u>\$ 276</u>	<u>\$ 275</u>	<u>\$ 2,699</u>	<u>\$ —</u>	<u>\$ 592,722</u>

Stabilization Balance Reconciliation:

Balance as of July 1, 2018.....	\$ 2,001,299
Capital Gains Tax Transfers to Stabilization Fund during FY2019 per Chapter 29, Section 5G.....	848,399
Minus Capital Gains Tax Transfers from Stabilization Fund to State Pension and State Retiree Benefits Trust Funds	(84,840)
Transfer to Stabilization Fund from Abandoned Property Revenue Growth from Prior Fiscal Year.....	3,673
Transfer of certain tax revenues to the Stabilization Fund.....	429
Transfer of 10% of casino gaming tax revenue (MGM and Encore)	6,231
Transfer of 10% of Encore casino fines	3,550
Stabilization Fund investment income	52,913
Remaining Consolidated Net Surplus Deposited in Stabilization Fund, per Calculation Above.....	592,722
Stabilization Fund Balance as of June 30, 2019.....	<u>\$ 3,424,376</u>
Memo: Change in Stabilization Fund Balance, FY18-19	\$ 1,423,077

* Excludes funds with no FY19 balances or activity

Note: Details may not add to totals due to rounding

See Independent Auditors' Report

Calculation of Transfers: Tax Reduction Fund

June 30, 2019

(Amounts in thousands)

This statement is prepared pursuant to Chapters 29 Sections 2H and 2I of the Massachusetts General Laws, as amended. It is prepared on the statutory basis of accounting and presents information contained in the official books and accounting records of the Commonwealth. Supporting information is presented in individual schedules, as indicated, and in the Financial Section of this report.

The computation is as follows:

Part 1: Comparison of Stabilization Fund, after current fiscal year transfers, to 15% of budgeted revenues and other financial resources:

Undesignated fund balance in the Stabilization Fund	\$ 3,424,376
Allowable Stabilization Fund balance	<u>6,957,381</u>
Stabilization Fund excess, if any, transferable to Tax Reduction Fund.....	<u>\$ —</u>

Part 2: Status of Stabilization Fund after transfers:

Stabilization Fund balance.....	\$ 3,424,376
Transfer to Tax Reduction Fund	<u>—</u>
Stabilization Fund balance after transfer to Tax Reduction Fund	<u>\$ 3,424,376</u>

Part 3: Status of Tax Reduction Fund after transfers:

Tax Reduction Fund balance	\$ —
Transfers from Stabilization Fund	<u>—</u>
Tax Reduction Fund balance after transfers	<u>\$ —</u>

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MASSACHUSETTS GENERAL INFORMATION

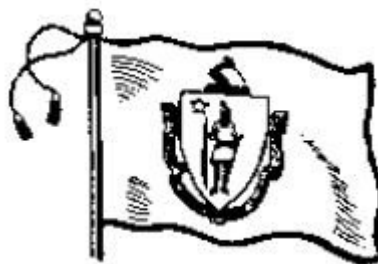
Admitted to Union (6th State): 1788
Population: 6,902,149

Capital: Boston
Nickname: Bay State

The State Seal



The State Flag



The State Seal, adopted by Governor John Hancock and the Council on December 13, 1780 and made official by the General Court on June 4, 1885, is circular and bears a representation of the arms of the Commonwealth encircled with the words "Sigillum Reipublicae Massachusettensis" (Seal of the Republic of Massachusetts). The arms, according to legislative enactment, consists of "a shield having a blue field or surface with an Indian thereon, dressed in a shirt and moccasins, holding in his right hand a bow, and in his left hand an arrow, point downward, all of gold; and in the upper corner of the field, above his right arm, bent at the elbow, clothed and ruffled, with the hand grasping a broadsword."

The State Flag is white, a representation of the coat of arms on both sides. It was adopted in its final form in 1971; before that, the obverse side depicted a pine tree.

The State Flower



The Mayflower

The State Fish



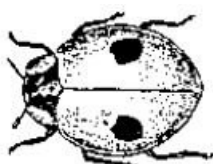
The Cod, a soft-finned fish, usually 10-20 lbs. A sculpture of a cod hangs in the House of Representatives as a tribute to this useful aquatic creature.

The State Bird



The Black Capped Chickadee

The State Insect



The Lady Bug

The State Tree



The American Elm was adopted as the official tree March 21, 1941 to commemorate the fact that General George Washington took command of the Continental Army beneath one on Cambridge Common in 1775.

The State Dog



The Boston Terrier, the first purebred dog developed in America (1869), is a cross between an English bulldog and an English terrier.

Beverage: Cranberry Juice
Dessert: Boston Cream Pie

Muffin: The Corn Muffin
Cookie: Chocolate Chip

Horse: The Morgan Horse
Bean: Navy Bean

