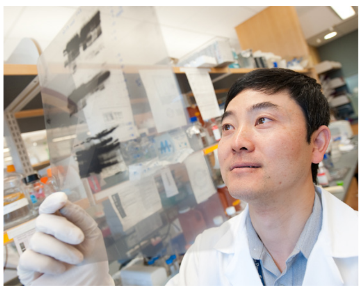
UNIVERSITY OF MASSACHUSETTS

Annual Financial Report 2016



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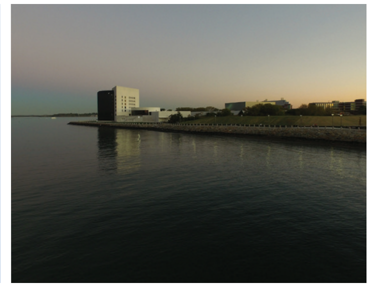
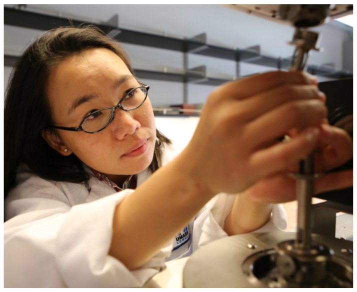
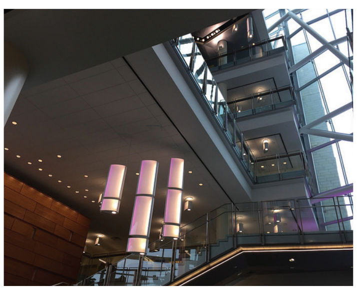
This publication is distributed by the University Controller's Office to present audited financial statements to the community, governmental bodies, investors and creditors.



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November 30, 2016

To the Board of Trustees
and President Martin T. Meehan J.D.

We are pleased to submit the annual Financial Report of the University of Massachusetts for the year ended June 30, 2016. The enclosed financial statements incorporate all financial activity of the University and its five campuses. This statement has been audited by an independent certified public accountant and is fully represented in the financial report of the Commonwealth of Massachusetts. Detailed information about each campus is provided as supplemental information.

The financial information presented in the Financial Report is designed to aid a wide variety of readers to assess the effectiveness of the University's management of its resources in meeting its primary mission of instruction, research, and public service. This report is intended to form a comprehensive and permanent record of the finances of the University of Massachusetts, and it is submitted as the public accounting of the University's financial affairs for the fiscal year ended June 30, 2016 including comparative information as of June 30, 2015.

The University's net assets increased $132.8 million from $2.67 billion in fiscal year 2015 to $2.80 billion in fiscal year 2016. This increase is primarily attributed to investments in infrastructure, increased public service activities and increased State Appropriations.

Each year, the Board of Trustees reviews a five-year projection for key financial indicators that are likely to determine the success of the University over the long term. For the key indicators of operating margin, primary reserve, and debt service to operations, for FY2016, the University was on target with meeting projections. Overall, the University continues to make strategic investments that support the achievement of its long-term financial objectives of growth and stability.

Respectfully submitted,

Christine M. Wilda
Senior Vice President for Administration and
Finance & Treasurer

Sarah B. Mongeau
University Controller

Grant Thornton LLP
75 State Street, 13th Floor
Boston, MA 02109

T 617.723.7900
F 617.723.3640
www.GrantThornton.com
linkd.in/GrantThorntonUS
twitter.com/GrantThorntonUS

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

Board of Trustees of the
University of Massachusetts

Report on the financial statements

We have audited the accompanying financial statements of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts (the "University"), an enterprise fund of the Commonwealth of Massachusetts as of and for the years ended June 30, 2016 and 2015, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the 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 accounting principles generally accepted in the United States of America; 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.

Auditor's responsibility

Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits 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.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's 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 University'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 University'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, the basic financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts as of June 30, 2016 and 2015, and the respective changes in financial position and cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other matters

Required supplementary information

Accounting principles generally accepted in the United States of America require that the Management's Discussion and Analysis on pages 3 through 12 and the Schedule of the University's Proportionate Share of the Net Pension Liability and the University's Contributions for the Massachusetts State Employees' Retirement System on page 46, be presented to supplement the basic financial statements. Such information, although not a required 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. This required supplementary information is the responsibility of management. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America. These limited procedures 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.

Other reporting required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report, dated December 15, 2016, on our consideration of the University'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 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 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 University's internal control over financial reporting and compliance.

Grant Thornton LLP

Boston, Massachusetts
December 15, 2016

Management's Discussion and Analysis (unaudited)

Introduction

This unaudited section of the University of Massachusetts (the "University") Annual Financial Report presents our discussion and analysis of the financial position and performance of the University and its component units during the fiscal year ended June 30, 2016 with comparative information as of June 30, 2015 and June 30, 2014. This discussion and analysis has been prepared by management along with the accompanying financial statements and related footnote disclosures and should be read in conjunction with, and is qualified in its entirety by, the financial statements and footnotes. The accompanying financial statements, footnotes and this discussion are the responsibility of management.

The University of Massachusetts is a state coeducational institution for higher education with separate campuses at Amherst, Boston, Dartmouth, Lowell and Worcester all located in the Commonwealth of Massachusetts (the "Commonwealth"). The University was established in 1863 in Amherst, under the provisions of the 1862 Morrill Land Grant Acts, as the Massachusetts Agricultural College. It became known as the Massachusetts State College in 1932 and in 1947 became the University of Massachusetts. The Boston campus was opened in 1965 and the Worcester campus, Medical School, was opened in 1970. The Lowell and Dartmouth campuses (previously the University of Lowell and Southeastern Massachusetts University, respectively) were made a part of the University by a legislative act of the Commonwealth, effective September 1, 1991.

The University's mission is to provide an affordable and accessible education of high quality and to conduct programs of research and public service that advance knowledge and improve the lives of the people of the Commonwealth, the nation and the world. In the fall of 2015, the University enrolled 63,333 full-time equivalent ("FTE") students. The University is committed to providing, without discrimination, diverse program offerings to meet the needs of the whole of the state's population. The University's five campuses are geographically dispersed throughout Massachusetts and possess unique and complementary missions.

Financial Highlights

The University's combined net position increased $132.75 million from $2.67 billion in fiscal year 2015 to $2.80 billion in fiscal year 2016. Net position at June 30, 2014 was $2.82 billion.

From fiscal year 2015 to fiscal year 2016, the Net Pension Liability increased from $237.1 million to $408.4 million. This increase is primarily attributed to changes in the assumptions used to calculate the pension obligations (interest rate of return decreased from 8.0% to 7.5%, impact of an Early Retirement Incentive plan created in May 2015 and changes to mortality rate tables) coupled with decreases in the projected and actual earnings on pension plan investments.

From fiscal year 2015 to fiscal year 2016 the University's operating revenue increased by $290.7 million and operating expenditures increased $358.5 million. The increases in operating revenues are primarily attributed to increases in student fees, increased enrollment and increased public service activities. The increases in operating expenditures are primarily attributed to increased salaries and fringe benefit rates and increased public service activities.

From fiscal year 2015 to fiscal year 2016, the University's net non-operating revenues/(expenses) increased $58.6 million. This increase was primarily attributed to increased State Appropriations (see State Appropriations).

Using the Annual Financial Report

One of the most important questions asked about University finances is whether the University as a whole is better off or worse off as a result of the year's activities. The key to understanding this question lies within the Statement of Net Position, Statement of Revenues, Expenses and Changes in Net Position and the Statement of Cash Flows. These statements present financial information in a form similar to that used by private sector companies. The University's net position (the difference between assets and liabilities) is one indicator of the University's financial health. Over time, increases or decreases in net position is one indicator of the improvement or erosion of an institution's financial health when considered with non-financial facts such as enrollment levels, operating expenses, and the condition of the facilities.

The Statement of Net Position includes all assets and liabilities, as well as deferred inflows and outflows of resources of the University. It is prepared under the accrual basis of accounting, whereby revenues and assets are recognized when the services are provided and expenses and liabilities are recognized when services are incurred, regardless of when cash is exchanged. Net Position is further broken down into three categories: invested in capital assets-net of related debt, restricted and unrestricted. Amounts reported in invested in capital assets-net of related debt represent the historical cost of property and equipment, reduced by the balance of related debt outstanding and depreciation expense charged over the years. Net Position is reported as restricted when constraints are imposed by third parties, such as donors or enabling legislation. Restricted net position is either non-expendable, as in the case of endowment gifts to be held in perpetuity, or expendable, as in the case of funds to be spent on scholarships and research. All other assets are unrestricted; however, they may be committed for use under contract or designation by the Board of Trustees.

The Statement of Revenues, Expenses and Changes in Net Position presents the revenues earned or received and expenses incurred during the year. Activities are reported as either operating or non-operating. Operating revenues and expenses include tuition and fees, grant and contract activity, auxiliary enterprises and activity for the general operations of the institution not including appropriations from state and federal sources. Non-operating revenues and expenses include appropriations, capital grants and contracts, endowment, gifts, investment income, and non-operating federal grants (Pell Grants). With a public University's dependency on support from the state, Pell grants, and gifts, it is common for institutions to have operating expenses exceed operating revenues. That is because the prescribed financial reporting model classifies state appropriations, Pell grants, and gifts as non-operating revenues. The utilization of long-lived assets, referred to as capital assets, is reflected in the financial statements as depreciation expense, which amortizes the cost of a capital asset over its expected useful life.

Another important factor to consider when evaluating financial viability is the University's ability to meet financial obligations as they mature. The statement of cash flows presents information related to cash inflows and outflows summarized by operating, capital and non-capital, financing and investing activities. The footnotes provide additional information that is essential to understanding the information provided in the external financial statements.

Reporting Entity

The financial statements report information about the University as a whole using accounting methods similar to those used by private-sector companies. The financial statements of the University are separated between University (including its blended component units) and its discretely presented Component Unit activities. The University's discretely presented Component Units (or Related Organizations) are the University of Massachusetts Foundation, Inc., and the University of Massachusetts Dartmouth Foundation, Inc. **See Table 1.**

Condensed Financial Information

At June 30, 2016, total University net position was $2.8 billion, an increase of $132.7 million over the $2.67 billion in net position for fiscal year 2015. The University's largest asset continues to be its net investment in its physical plant of $4.62 billion at June 30, 2016, $4.33 billion at June 30, 2015 and $4.06 billion in fiscal year 2014.

Table 1. University of Massachusetts Condensed Statement of Net Position
As of June 30, 2016, 2015 and 2014 (in thousands of dollars)

	University June 30, 2016	University June 30, 2015	FY14–15 Change	University June 30, 2014
ASSETS				
Current Assets	$677,927	$692,679	$(14,752)	$592,750
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	4,615,776	4,333,761	282,015	4,064,786
All Other Noncurrent Assets	1,294,028	1,501,421	(207,393)	1,543,391
Total Assets	**6,587,731**	**6,527,861**	**59,870**	**6,200,927**
DEFERRED OUTFLOWS OF RESOURCES	**293,432**	**178,410**	**115,022**	**123,567**
LIABILITIES				
Current Liabilities	774,837	856,460	(81,623)	674,330
Noncurrent Liabilities	3,294,183	3,133,710	160,473	2,831,869
Total Liabilities	**4,069,020**	**3,990,170**	**78,850**	**3,506,199**
DEFERRED INFLOWS OF RESOURCES	**12,050**	**48,753**	**(36,703)**	**—**
NET POSITION				
Invested in Capital Assets Net of Related Debt	2,013,966	1,887,941	126,025	1,800,767
Restricted				
Nonexpendable	18,384	18,378	6	17,387
Expendable	218,272	169,591	48,681	174,530
Unrestricted	549,471	591,438	(41,967)	825,611
Total Net Position	**$2,800,093**	**$2,667,348**	**$132,745**	**$2,818,295**

Table 2. University of Massachusetts Condensed Statement of Net Position for Related Organizations
As of June 30, 2016 and 2015 and 2014 (in thousands of dollars)

	University Related Organizations June 30, 2016	University Related Organizations June 30, 2015	FY15–16 Change	University Related Organizations June 30, 2014
ASSETS				
Current Assets	$619	$1,373	$(754)	$1,678
Noncurrent Assets				
Investment in Plant Net of Accumulated Depreciation	8,090	8,293	(203)	8,478
All Other Noncurrent Assets	473,954	478,645	(4,691)	454,646
Total Assets	**482,663**	**488,311**	**(5,648)**	**464,802**
LIABILITIES				
Current Liabilities	29,194	31,421	(2,227)	15,525
Noncurrent Liabilities	3,502	3,505	(3)	3,483
Total Liabilities	**32,696**	**34,926**	**(2,230)**	**19,008**
NET POSITION				
Invested in Capital Assets Net of Related Debt	8,090	8,293	(203)	8,477
Restricted				
Nonexpendable	374,566	330,301	44,265	309,718
Expendable	46,275	90,413	(44,138)	101,195
Unrestricted	21,035	24,378	(3,343)	26,404
Total Net Position	**$449,966**	**$453,385**	**$(3,419)**	**$445,794**

University liabilities totaled $4.07 billion at June 30, 2016, an increase of $78.8 million over fiscal year 2015. Long-term liabilities represent 81.0% of the total liabilities which primarily consist of bonds payable amounting to $2.65 billion and Net Pension Liability of $408.4 million at June 30, 2016.

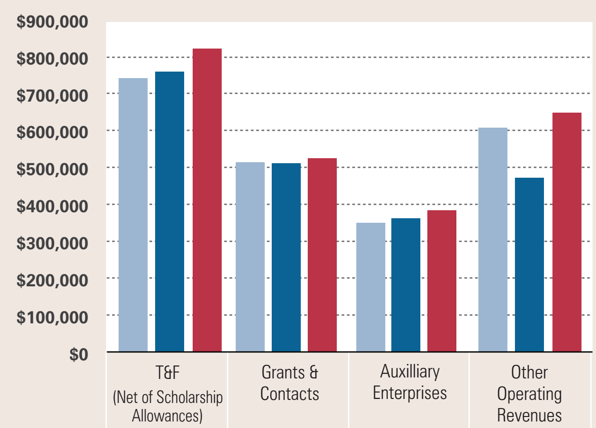
The University's current assets as of June 30, 2016 of $677.9 million were below the current liabilities of $774.8 million, and as a result the current ratio was 0.87 dollars in assets to every one dollar in liabilities. Current assets of $692.7 million at June 30, 2015 were below the current liabilities of $856.5 million, resulting in a current ratio of 0.81.

The unrestricted and restricted expendable net position totaled $767.7 million in fiscal year 2016, which represents 24% of total operating expenditures of $3.14 billion for fiscal year 2016. The unrestricted and restricted expendable net position totaled $761.0 million in fiscal year 2015, which represents 27% of total operating expenditures of $2.78 billion. The unrestricted and restricted expendable net position totaled $1.00 billion in fiscal year 2014, which represents 36% of total operating expenditures of $2.81 billion. **See Tables 2, 3, 4, and Figure 1.**

Total operating revenues for fiscal year 2016 were $2.40 billion. This represents a $290.7 million increase from the $2.11 billion in operating revenues in fiscal year 2015. The most significant sources of operating revenue for the University are tuition and fees, grants and contracts, auxiliary services and public service activities at the Worcester Medical School campus categorized in the chart above as "Other Operating Revenues". While not classified on the financial statements as operating revenue, state appropriations serve as a primary source for funding the core mission of the University. State appropriation revenue, described in detail in a section below, is used almost exclusively to fund payroll for University employees.

In fiscal year 2016, operating expenditures, including depreciation and amortization, totaled $3.14 billion. Of this total, $1.62 billion or 52% was used to support the academic core activities of the University, including $434.2 million in research. In fiscal year 2015 operating expenditures, including depreciation and amortization totaled $2.78 billion. The chart below displays fiscal years 2016, 2015 and 2014 operating spend. **See Figure 2.**

Figure 1. Sources of Operating Revenues
FY 2014, 2015 and 2016



	T&F (Net of Scholarship Allowances)	Grants & Contacts	Auxilliary Enterprises	Other Operating Revenues
June 30, 2014	$740,116	$511,694	$349,485	$607,984
June 30, 2015	$765,218	$510,741	$362,193	$474,632
June 30, 2016	$826,815	$528,352	$383,281	$665,048

Table 3. University of Massachusetts Condensed Statement of Revenues, Expenses, and Changes in Net Position

For the Year Ended June 30, 2016, 2015 and 2014 (in thousands of dollars)

	University June 30, 2016	University June 30, 2015	FY15–16 Change	University June 30, 2014
Operating Revenues				
Tuition and Fees (net of scholarship allowances)	$826,815	$765,218	$61,597	$740,116
Grants and Contracts	528,352	510,741	17,611	511,694
Auxiliary Enterprises	383,281	362,193	21,088	349,485
Other Operating Revenue	665,048	474,632	190,416	607,984
Total Operating Revenues	**2,403,496**	**2,112,784**	**290,712**	**2,209,279**
Operating Expenses	**3,140,753**	**2,782,297**	**358,456**	**2,809,900**
Operating Loss	**(737,257)**	**(669,513)**	**(67,744)**	**(600,621)**
Nonoperating Revenues/(Expenses)				
Federal Appropriations	6,827	6,619	208	7,020
State Appropriations	669,748	621,200	48,548	570,618
Interest on Indebtedness	(105,276)	(100,332)	(4,944)	(89,496)
Other Nonoperating Income	90,443	74,892	15,551	133,386
Nonoperating Federal Grants	75,743	76,539	(796)	74,279
Net Nonoperating Revenues	**737,485**	**678,918**	**58,567**	**695,807**
Income Before Other Revenues, Expenses, Gains, and Losses	**228**	**9,405**	**(9,177)**	**95,186**
Capital Appropriations, Grants and Other Sources	172,557	118,405	54,152	134,369
Disposal of Plant Facilities	(10,462)	(12,120)	1,658	(6,198)
Other Additions/(Deductions)	(29,578)	(27,731)	(1,847)	(19,418)
Total Other Revenues, Expenses, Gains, and Losses	**132,517**	**78,554**	**53,963**	**108,753**
Total Increase in Net Position	**132,745**	**87,959**	**44,786**	**203,939**
Net Position				
Net Position at the Beginning of the Year	2,667,348	2,818,295	(150,947)	2,614,356
*Cumulative effect of change in accounting principle***	-	(238,849)	(238,849)	
Net Position at the Beginning of the Year, adjusted	2,667,348	2,579,389	87,959	2,614,356
Net Position at the End of the Year	**$2,800,093**	**$2,667,348**	**$(106,161)**	**$2,818,295**

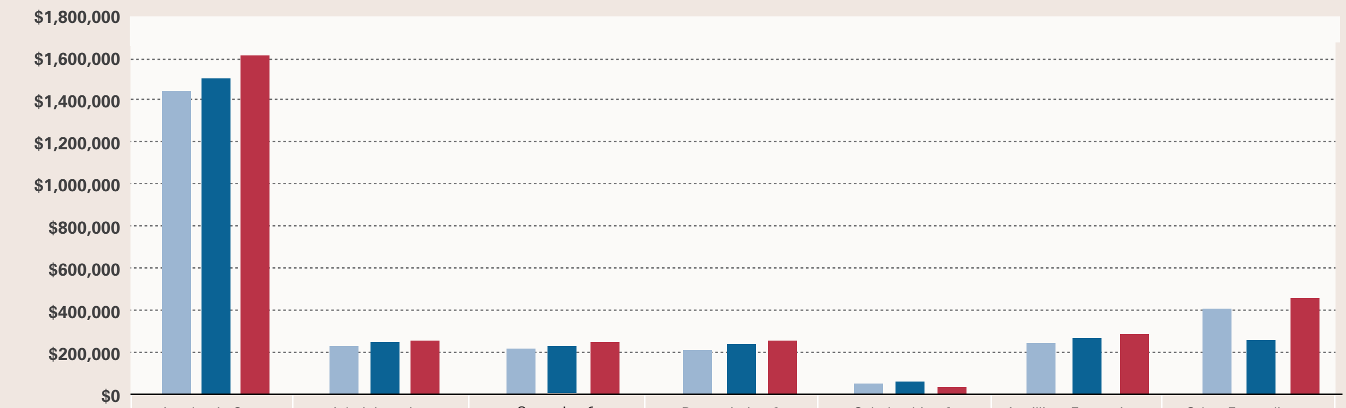
**Adoption of GASB 68 for the year ended 6/30/2015.

Table 4. University of Massachusetts Condensed Statement of Revenues, Expenses, and Changes in Net Position for University Related Organizations

For the Years Ended June 30, 2016, 2015 and 2014 (in thousands of dollars)

	University Related Organizations June 30, 2016	University Related Organizations June 30, 2015	FY15–16 Change	University Related Organizations June 30, 2014
Operating Expenses	**$17,068**	**$16,709**	**$359**	**$11,443**
Operating Loss	**(17,068)**	**(16,709)**	**359**	**(11,443)**
Nonoperating Revenues/(Expenses)				
Other Nonoperating Income	**20,351**	**18,480**	**1,871**	54,982
Net Nonoperating Revenues	**20,351**	**18,480**	**1,871**	**54,982**
Income Before Other Revenues, Expenses, Gains, and Losses	**3,283**	**1,771**	**1,512**	**43,539**
Additions to Permanent Endowments	25,864	21,618	4,246	17,566
Other Additions	(32,566)	(15,798)	(16,768)	(1,523)
Total Other Revenues, Expenses, Gains, and Losses	**(6,702)**	**5,820**	**(12,522)**	**16,043**
Total Increase in Net Position	**(3,419)**	**7,591**	**(11,010)**	**59,582**
Net Position				
Net Position at the Beginning of the Year	453,385	445,794	7,591	386,212
Net Position at the End of the Year	**$449,966**	**$453,385**	**$(3,419)**	**$445,794**

Figure 2. Operating Expenses by Category
FY 2014, 2015 and 2016



	Academic Core	Administration	Operation & Maintenance of Plant	Depreciation & Amortization	Scholarships & Fellowships	Auxilliary Enterprises	Other Expenditures
June 30, 2014	$1,446,340	$219,920	$214,972	$204,233	$49,242	$265,080	$410,113
June 30, 2015	$1,514,496	$237,212	$217,913	$221,043	$49,300	$273,680	$268,653
June 30, 2016	$1,623,333	$248,379	$228,406	$240,865	$44,645	$297,089	$458,036

Public Service Activities

Other operating revenues includes Public Service Activities and consists largely of sales and services provided to third parties by the UMass Medical School campus through its Commonwealth Medicine ("CWM") programs, which provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Included in this category of activities are CWM revenues of $283.8 million and $268.7 million for the years ended June 30, 2016 and 2015, respectively. Included in expenditures are CWM expenditures of $244.1 million and $227.7 million for the years ended June 30, 2016 and 2015, respectively.

In addition to CWM activities, Public Service Activities also includes payments received by the Medical School for educational services it provides to its clinical affiliate UMass Memorial Health Care, Inc. ("UMass Memorial") as required by the enabling legislation enacted by the Commonwealth in 1997. Educational services revenues included in public service revenues were $209.9 million and $43.8 million for the years ended June 30, 2016 and 2015, respectively. Finally, Public Service Activity expenditures also include payments made to the Commonwealth of Massachusetts of $166.0 million for the year ended June 30, 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

State Appropriations

In fiscal year 2016, state appropriations represent approximately 21% of all operating and non-operating revenues. The level of state support is a key factor influencing the University's overall financial condition. Although the state appropriation is unrestricted revenue, nearly 100% of the state appropriation supports payroll and benefits for University employees.

The net state appropriation for the University increased by $48.55 million from fiscal year 2015, with the increase attributable to a higher level of State Appropriation and related fringe benefit support.

During the year ended June 30, 2016, the University reported $30.6 million of tuition revenues remitted to the State Treasurer's Office for the general fund of the Commonwealth of Massachusetts. Through fiscal year 2016, the University is required to remit tuition revenue received to the Commonwealth. Therefore, the University collects student tuition on behalf of the Commonwealth and remits it to the Commonwealth's General Fund. The amount of tuition remitted to the Commonwealth was $31.1 million in fiscal year 2015 and $34.3 million in fiscal year 2014. There is no direct connection between the amount of tuition revenues collected by the University and the amount of state funds appropriated in any given year.

The amount of tuition retained by the University during 2016, 2015, and 2014 for out-of-state students was $85.1 million, $82.0 million, and $75.8 million, respectively. Beginning in fiscal year 2017, the

University has been granted the Legislative authority to retain all tuition in-state and out-of-state.

The following table details the Commonwealth operating appropriations received by the University for fiscal years ending June 30, 2016, 2015 and 2014: **See Table 5.**

Table 5. The Commonwealth Operating Appropriations Received by the University
For Fiscal Years Ended June 30, 2016, 2015 and 2014

	FY2016	FY2015	FY2014
Gross Commonwealth Appropriations	$546,952	$516,794	$486,656
Plus: Fringe Benefits*	178,032	159,403	141,881
	724,984	**676,197**	**628,537**
Less: Mandatory Waivers	(24,653)	(23,942)	(23,594)
Less: Tuition Remitted	(30,583)	(31,055)	(34,325)
Net Commonwealth Support	**$669,748**	**$621,200**	**$570,618**

*The Commonwealth pays the fringe benefits for University employees paid from Commonwealth operating appropriations. Therefore, such fringe benefit support is added to the "State Appropriations" financial statement line item as presented in the above table. The University pays the Commonwealth for the fringe benefit cost of the employees paid from funding sources other than Commonwealth operating appropriations.

Capital Appropriations from the Commonwealth

The University faces a financial challenge to maintain and upgrade its capital assets including its infrastructure, buildings and grounds. In order to have a successful capital program, the University must rely on a combination of revenue sources to fund its investment. In fiscal year 2016, there was $121.3 million of capital support provided to the University through appropriations and grants from the Commonwealth. This funding is attributed to the Commonwealth's Division of Capital Asset Management ("DCAM") which funded several large capital projects in fiscal year 2016 through the State's Higher Education Bond Bill and Life Sciences Bond Bill, which were passed in 2008 and have projects funded on each of the campuses. The completion of major construction projects managed by DCAM are underway at all five of the University's campuses and current bond support continues for key projects in the plan.

Grant and Contract Revenue

Collectively, the University's Amherst Campus and Medical School in Worcester account for approximately 76% of University grant and contract activity. The Boston, Dartmouth, and Lowell campuses continue to have significant sponsored research activity.

The following table details the University's grant and contract revenues (in thousands) for the fiscal years ended June 30, 2016, 2015 and 2014: **See Table 6.**

Table 6. The University's Grant and Contract Revenues
For Fiscal Years Ended June 30, 2016, 2015 and 2014 (in thousands of dollars)

	FY2016	FY2015	FY2014
Federal Grants and Contracts	$329,403	$313,754	$322,047
State Grants and Contracts	75,306	70,871	74,996
Local Grants and Contracts	2,445	1,717	2,223
Private Grants and Contracts	121,198	124,399	112,428
Total Grants and Contracts	**$528,352**	**$510,741**	**$511,694**

Discretely Presented Component Units

University of Massachusetts Foundation, Inc.

The combined University and Foundation endowment has decreased to approximately $734.2 million at June 30, 2016 from $768.4 million at June 30, 2015 and from $757.5 million at June 30, 2014.

The Foundation utilizes the pooled investment concept whereby all invested funds are in one investment pool, except for investments of certain funds that are otherwise restricted. Pooled investment funds will receive an annual distribution of 4% of the endowment fund's average market value for the preceding twelve quarters on a one-year lag. Only quarters with funds on deposit shall be included in the average. In addition, a prudence rule will be utilized to limit spending from a particular endowment fund to no lower than 93% of its book value. The Foundation distributed $27.3 million (4%) and $24.6 million (4%) in fiscal year 2016 and 2015, respectively.

The total investment loss of the Foundation for fiscal year 2016 was $39.1 million as compared to 2015, which, including realized and unrealized investment activity, was a net loss of approximately $5.7 million. This is consistent with investment return performance at other institutions.

University of Massachusetts Dartmouth Foundation, Inc.

Total marketable securities for the Dartmouth Foundation were $52.7 million at June 30, 2016 down from $54.8 million at June 30, 2015, which are held by the University of Massachusetts Foundation, Inc. The Dartmouth Foundation total investment loss for fiscal year 2016, including realized and unrealized investment activity, was a net loss of $1.9 million as compared to a net gain of $.4 million in 2015.

Tuition and Fees

For academic years 2013-2014 and 2014-2015, the Board of Trustees voted to freeze the mandatory curriculum fee for in state undergraduate students based on the increase to the State appropriation. For academic year 2015-2016, tuition was raised on average 7.2% which included a new mandatory technology fee at each of the campuses. For academic year 2016-2017, tuition was raised an average 5.6% for in-state undergraduate students. Affordability will continue to be a priority of the University and increases in fees will be considered in conjunction with State support on an annual basis.

Enrollment

Admission to the University is open to residents of the Commonwealth and non-residents on a competitive basis. In the fall 2015 semester, Massachusetts residents accounted for approximately 81.4% and 52.5% of the University's total undergraduate and graduate enrollment, respectively. Total enrollment in the fall of 2015 was 63,333 FTE (73,744 headcount students). Enrollments at the University have shown significant increases over the last five years (58,564 FTE in fall 2010). The 8% enrollment growth is consistent with the University's efforts to increase its reach across the Commonwealth and to recruit non-resident students and is reflective of the quality education provided by the University of Massachusetts.

Degrees Awarded

The University awards four levels of degrees, as follows: associate, bachelors, masters and doctoral/professional degrees. A total of 17,851 degrees were awarded in the 2014-2015 academic year reflecting a 3.9% increase from the previous year. Of these awards, 66.5% were at the undergraduate level and 21.9% were at the graduate level. The remaining were associates degrees and undergraduate certificates.

Bonds Payable

As of June 30, 2016, the University had outstanding bonds of approximately $2.98 billion representing $2.83 billion of University of Massachusetts Building Authority bonds (the "Building Authority Bonds"), $56.5 million of University of Massachusetts bonds financed through the Massachusetts Health and Educational Facilities Authority which has been merged into MassDevelopment (the "UMass HEFA Bonds"), and $93.2 million of bonds financed through the Worcester City Campus Corporation (the "WCCC Bonds"). Bonds payable is the University's largest liability at June 30, 2016. The Building Authority's active projects include residence hall construction and renovation, renovation of general education buildings, replacement of core infrastructure, and construction of academic, laboratory, and research facilities. The proceeds from the UMass HEFA Bonds were used to create a revolving loan program and to fund the construction of two new campus centers at the Boston and Lowell campuses (funded jointly with the Commonwealth).

On July 3, 2014, the Building Authority issued $67.4 million of Refunding Revenue Bonds, Senior Series 2014-3 (the "2014-3 Bonds"). The 2014-3 Bonds included a premium of $12.0 million. The 2014-3 Bonds are tax-exempt and mature at various dates through 2029. The interest on the bonds is payable semi-annually each November 1st and May 1st and the interest rates on the bonds range from 2.0% to 5.0%. The 2014-3 Bonds were issued to refinance a portion of the Massachusetts Health and Educational Facilities Authority's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series D (2005).

On March 25, 2015, the Building Authority issued $298.8 million of Project Revenue Bonds, Senior Series 2015-1 (the "2015-1 Bonds") and $191.8 million of Refunding Revenue Bonds, Senior Series 2015-2 (the "2015-2 Bonds"). The 2015-1 Bonds included a premium of $35.7 million. The 2015-1 Bonds are tax-exempt and mature at various dates through 2045. The interest on the 2015-1 Bonds is payable semi-annually each November 1st and May 1st and the interest rates on the 2015-1 Bonds range from 4.0% to 5.0%. The 2015-2 Bonds included a premium of $34.0 million. The 2015-2 Bonds are tax-exempt and mature at various dates through 2036. The interest on the 2015-2 Bonds is payable semi-annually each November 1st and May 1st and the interest rates on the 2015-2 Bonds range from 3.0% to 5.0%. The 2015-2 Bonds were issued to refinance a portion of the Massachusetts Health and Educational Facilities Authority's Revenue Bonds, Worcester City Campus Corporation Issue (University of Massachusetts Project), Series E & F (2007).

University Rating

The University is relying on a carefully planned and executed debt strategy to support master and strategic planning at the campuses and for the University as a whole. Bonds issued by the University of Massachusetts and the University of Massachusetts Building Authority are rated AA, Aa2 and AA- as rated by Fitch, Moody's and Standard & Poor's rating agencies, respectively.

Limitations on Additional Indebtedness

The University may, without limit, issue additional indebtedness or request the Building Authority to issue additional indebtedness on behalf of the University so long as such indebtedness is payable from all available funds of the University. However, the University may request that the Building Authority issue additional indebtedness not payable from all available funds of the University provided that the additional indebtedness is secured by certain pledged revenues and the maximum annual debt service on all revenue indebtedness does not exceed 8% of the University's available revenues.

The Building Authority is authorized by its enabling act to issue bonds with the unconditional guarantee of the Commonwealth of Massachusetts for the punctual payment of the interest and principal payments on the guaranteed bonds. The full faith and credit of the Commonwealth are pledged for the performance of its guarantee. The enabling act, as amended, presently limits to $200 million the total principal amount of notes and bonds of the Building Authority that may be Commonwealth guaranteed and outstanding at any one time. The amount of bond obligations guaranteed by the Commonwealth at June 30, 2016 and 2015 was $117.4 million and $121.6 million, respectively.

Capital Plan

In September 2016, the University's Trustees approved a five-year (fiscal years 2017-2021) update to its capital plan with $2.30 billion of projects approved to continue or commence over the next 24 months. The University generally has funded its capital plans through a combination of funding received from University operations, bonds issued by the University of Massachusetts Building Authority and MassDevelopment, Commonwealth appropriations, and private fundraising. The execution of certain projects from the University's capital plan is due to funding from the Commonwealth through the Higher Education and Life Sciences Bond Bills. **See Table 7.**

Table 7. Approved Capital Projects

Campus	Total Approved Projects (in millions and as of September 2015)
Amherst	$739,650
Boston	$889,150
Dartmouth	$94,746
Lowell	$357,000
Worcester	$216,314
Total	**$2,296,860**
# of Projects	**78**

The University's five-year capital plan for fiscal years 2017-2021 includes major projects that were previously approved by the University Trustees in prior-year capital plans. In recent years, the University enhanced its policy regarding the approval of capital projects to ensure a clear process and to provide for multiple reviews during the process so that the President's Office, Building Authority and the Board of Trustees (the Board) are actively involved. Since the capital program requires significant investment, the President's office and the Board wanted to ensure that the proper steps were in place for reviewing and approving projects so that the University continues to live within its current capital and debt policies.

Factors Impacting Future Periods

There are a number of issues of University-wide importance that directly impact the financial operations of the University. Many of these issues, such as improving academic quality, realizing strong financial results, investing in capital assets, expanding fundraising capacity, operating more efficiently, being the most effective University for students and the Commonwealth given the available resources, and measuring performance are ongoing activities of continuous importance to the Board of Trustees and University leadership that impact the financial and budget planning each year. The level of state support, the impact of collectively bargained wage increases, and the ability of student-fee supported activities to meet inflationary pressures determine the limits of program expansion, new initiatives and strategic investments, as well as the ability of the University to meet its core mission and ongoing operational needs.

In spite of investing more than $3.5 billion on capital improvements over the last decade, the University's FY17-22 capital plan projects spending another $2.2 billion over the next five years. The commitment of operating funds for servicing debt and/or funding capital expenditures has an ongoing impact on the overall financial position of the University. In order to support the University's capital plan, the University of Massachusetts Building Authority will be issuing new bonds for renovations, new construction, and deferred maintenance projects at the Amherst, Boston, Dartmouth, Lowell, and Worcester campuses in support of the capital plan.

The University, as well as Legislative and Executive Leadership in the Commonwealth, understand that despite the significant level of capital activity being financed through University debt, a much higher level of state support needs to be dedicated to higher education facilities. As such, the Massachusetts Legislature passed a higher education bond bill in August 2008. The Higher Education Improvement Act authorized $2.2 billion for capital improvement spending over the next ten years at community colleges, state universities, and the University. More than $1 billion of these funds are directed to University projects exclusively. Although the financial challenges faced by the Commonwealth have slowed down the pace of this funding, the University continues to work to ensure that critical needs are met.

In addition, a major state effort to assist the Commonwealth in increasing its competitive position in the Life Sciences Industry was signed into law by the Governor on June 16, 2008. The $1 billion Life Sciences Industry Investment Act authorized $500 million of capital funding over ten years. It is anticipated that some portion of this funding, possibly as much as $242 million, will be used to support facility improvements at the University. $90 million has already been dedicated to partially fund the Sherman Center at the University's Medical School in Worcester. Additionally, $95 million has been provided for a research facility at the Amherst Campus and significant capital investments in collaborative facilities and programs involving the Boston, Dartmouth, and Lowell campuses.

In addition to capital funding, the life sciences initiative provides a number of opportunities for the University to participate in the planning and program implementation of this important economic development effort.

The University is working with UMBA on a Public-Private Partnership with Capstone Development Partners, LLC, for the development and management of the first residential facility to be located on the University's Boston campus. The $115.6M project will include living-learning space, approximately 1,082-beds, and 263,000 gross square feet. The project will also contain a 1st floor commons that includes a University-wide dining facility, which will be separately funded by the University. The project is expected to be completed for use in the Fall 2018 semester.

Research funding for the University of Massachusetts was strong despite Federal sequestration of funds. For the University, research expenditures were $628.8 million is fiscal year 2015 and $603 million in fiscal year 2014. Most research at the University is externally funded, with the federal government providing a majority of the funding through the National Institutes of Health, the National Science Foundation, and other sources. Among Massachusetts colleges and universities, UMass ranks third in research and development expenditures, behind only MIT and Harvard. The University, as well as most major public research universities across the United States, is closely monitoring the potential reduction in federal funding for research and development programs.

In recent years the online learning consortium of the University, UMassOnline, has shown significant growth in enrollments, course offerings and revenue generation benefiting the campuses and raising the profile of the University throughout this important sector of the higher education market. UMassOnline provides marketing and technology support for UMass' online offerings that enable students, professionals, and lifelong learners to take courses anywhere, anytime. With over 150 undergraduate and graduate degree, certificate and professional development programs and more than 1,500 courses available from University faculty, UMassOnline is one of the largest accredited online programs available.

For fiscal year 2016, UMassOnline and the Continuing Education units at the five campuses collaboratively generated tuition revenue in excess of $96 million and supported 70,864 course enrollments, an increase of 7.2% for revenue and an increase of 6.1% for course enrollments as compared to fiscal year 2015.

The fiscal year 2015 budget approved in July 2014 provided for a base state appropriation of $519.0 million. This investment, along with the additional fringe support, allowed the University to freeze the mandatory curriculum fee for the second consecutive year for in state undergraduate students. However, the State did not fund the first year of collective bargaining contracts to date that cost approximately $13.1 million in State support. Although $2.2 million of the collective bargaining costs were received in fiscal year 2015, the University did not receive the remaining $10.9 million until the next fiscal year. Additionally, the University was issued a 9C budget reduction in February 2015 totaling $7.8 million which was absorbed into operations.

The fiscal year 2016 budget approved in July 2015 totaled $531.8 million. The additional $10.6 million provided for a portion of the fiscal year 2016 collective bargaining agreement costs however did not support the full costs or the amount not funded in fiscal year 2015. In late fiscal year 2016 supplemental funding totaling $10.9 million was provided to support the outstanding fiscal year 2015 collective bargaining costs. Unfortunately, this was not carried into the University's base funding for fiscal year 2017.

In July 2016 the State approved the FY17 budget for the University totaling $508.3 million. While this is a reduction of $3.5 million below the FY16 total available spending it appears much larger as the State also adjusted the appropriation to account for the University retaining all tuition in FY17. Last year, the State passed legislation to allow the University to retain all tuition. While the University was granted the ability to retain out of State Tuition in FY12, in state tuition continued to be remitted to the State annually. The FY17 budget is the first year that all tuition will be retained by the University resulting in an approximately $31 million reduction in State appropriation to make the change have a net zero impact on both the State and University.

Contacting the University

This financial report is designed to provide the University, the Commonwealth, the public and other interested parties with an overview of the financial results of the University and an explanation of the University's financial condition. If you have any questions about this report or require additional information, you can contact the University by calling the University Controller, Sarah Mongeau, at (774) 455-7520 or by email at smongeau@umassp.edu.

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Table 8. Consolidated Statement of Net Position

AS OF JUNE 30, 2016 AND 2015 (IN THOUSANDS OF DOLLARS)

	University June 30, 2016	University Related Organizations June 30, 2016	University June 30, 2015	University Related Organizations June 30, 2015
ASSETS				
Current Assets				
Cash and Cash Equivalents	$101,207		$89,965	
Cash Held By State Treasurer	8,888		27,597	
Accounts, Grants and Loans Receivable, net	244,178		249,517	
Pledges Receivable, net	7,464	$371	10,620	$500
Short Term Investments	206,266		265,248	
Inventories, net	18,006		17,472	
Accounts Receivable from UMass Memorial	35,724		17,463	
Due From Related Organizations	69	193	59	203
Other Assets	56,125	55	14,738	670
Total Current Assets	**677,927**	**619**	**692,679**	**1,373**
Noncurrent Assets				
Cash and Cash Equivalents		1,475		2,018
Cash Held By State Treasurer	8,342		5,403	
Cash and Securities Held By Trustees	486,015		707,061	
Accounts, Grants and Loans Receivable, net	38,526		38,382	
Pledges Receivable, net	17,595	1,690	6,275	293
Investments	734,205	468,260	737,788	476,272
Other Assets	9,345	2,528	6,512	62
Investment In Plant, net	4,615,776	8,090	4,333,761	8,293
Total Noncurrent Assets	**5,909,804**	**482,043**	**5,835,182**	**486,938**
Total Assets	**6,587,731**	**482,662**	**6,527,861**	**488,311**
DEFERRED OUTFLOWS OF RESOURCES				
Deferred Change in Fair Value of Interest Rate Swaps	$65,428		$51,059	
Loss on Debt Refunding	80,851		80,312	
Pensions	147,153		47,039	
Total Deferred Outflows of Resources	**293,432**		**$178,410**	
LIABILITIES				
Current Liabilities				
Accounts Payable	$105,652	$64	$120,090	$691
Accrued Salaries and Wages	112,521		127,341	
Accrued Compensated Absences	80,730		76,634	
Accrued Workers' Compensation	3,252		3,495	
Accrued Interest Payable	21,976		22,650	
Bonds Payable	332,996		398,015	
Capital Lease Obligations	169		170	
Accelerated Variable Rate Debt, current	5,000		6,000	
Assets Held on Behalf of Others		27,837		29,284
Accounts Payable to UMass Memorial	3,707		2,787	
Due to Related Organizations	193	69	203	59
Unearned Revenues and Credits	44,041	1,224	45,530	1,387
Advances and Deposits	6,712		6,191	
Other Liabilities	57,888		47,354	
Total Current Liabilities	**774,837**	**29,194**	**856,460**	**31,421**
Noncurrent Liabilities				
Accrued Compensated Absences	35,671		31,813	
Accrued Workers' Compensation	12,160		10,886	
Bonds Payable	2,646,626		2,685,235	
Capital Lease Obligations	429		562	
Derivative Instruments, Interest Rate Swaps	90,478		71,054	
Net Pension Liability	408,418		237,135	
Unearned Revenues and Credits	23,936		26,821	
Advances and Deposits	27,705		28,621	
Other Liabilities	48,760	3,502	41,583	3,505
Total Noncurrent Liabilities	**3,294,183**	**3,502**	**3,133,710**	**3,505**
Total Liabilities	**4,069,020**	**32,696**	**$3,990,170**	**34,926**
DEFERRED INFLOWS OF RESOURCES				
Pensions	12,050		$48,753	
Net Position				
Invested in Capital Assets Net of Related Debt	2,013,966	8,090	$1,887,941	8,293
Restricted				
Nonexpendable	18,384	374,566	18,378	328,226
Expendable	218,272	46,275	169,591	92.488
Unrestricted	549,471	21,035	591,438	24,378
Total Net Position	**$2,800,093**	**$449,966**	**$2,667,348**	**$453,385**

Table 9. Consolidated Statement of Revenues, Expenses, and Changes in Net Position

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015 (IN THOUSANDS OF DOLLARS)

	University June 30, 2016	University Related Organizations June 30, 2016	University June 30, 2015	University Related Organizations June 30, 2015
REVENUES				
Operating Revenues				
Tuition and Fees (net of scholarship allowances of $244,025 at June 30, 2016 and $212,469 at June 30, 2015)	$826,815		$765,218	
Federal Grants and Contracts	329,403		313,754	
State Grants and Contracts	75,306		70,871	
Local Grants and Contracts	2,445		1,717	
Private Grants and Contracts	121,198		124,399	
Sales and Service, Educational	27,500		25,601	
Auxiliary Enterprises	383,281		362,193	
Other Operating Revenues:				
Sales and Service, Independent Operations	47,613		48,368	
Sales and Service, Public Service Activities	476,831		295,429	
Other	113,104		105,234	
Total Operating Revenues	**2,403,496**		**2,112,784**	
EXPENSES				
Operating Expenses				
Educational and General				
Instruction	794,691		712,430	
Research	434,213		433,586	
Public Service	71,457	$16,502	72,910	$16,359
Academic Support	181,057		167,582	
Student Services	141,915		127,988	
Institutional Support	248,379		237,212	
Operation and Maintenance of Plant	228,406		217,913	
Depreciation and Amortization	240,865	202	221,043	201
Scholarships and Fellowship	44,645	364	49,300	149
Auxiliary Enterprises	297,089		273,680	
Other Expenditures				
Independent Operations	47,930		40,961	
Public Service Activities	410,106		227,692	
Total Operating Expenses	**3,140,753**	**17,068**	**2,782,297**	**16,709**
Operating Loss	**(737,257)**	**(17,068)**	**(669,513)**	**(16,709)**
NONOPERATING REVENUES/(EXPENSES)				
Federal Appropriations	6,827		6,619	
State Appropriations	669,748		621,200	
Gifts	42,415		30,351	17,111
Investment Income	29,381	18,783	29,579	(18)
Unrealized Loss on Investments	(7,633)	182	(11,327)	
Endowment Income Distributed for Operations	24,740		23,362	1,387
Interest on Indebtedness	(105,276)	1,386	(100,332)	
Nonoperating Federal Grants	75,743		76,539	
Other Nonoperating Income	1,540		2,927	
Net Nonoperating Revenues	**737,485**	**20,351**	**678,918**	**(18,480)**
Income Before Other Revenues, Expenses, Gains and Losses	**228**	**3,283**	**9,405**	**(1,771)**
OTHER REVENUES, EXPENSES, GAINS, AND LOSSES				
Capital Appropriations	121,298		62,582	
Capital Grants and Contracts	51,259		55,823	
Endowment Loss, net of amount used for operations	(28,958)	(36,524)	(13,086)	(16,057)
Additions to Permanent Endowments		25,864	920	26,218
Capital Contribution	2,985			
Disposal of Plant Facilities	(10,462)		(12,120)	
Other Additions/(Deductions)	(3,605)	3,958	(15,565)	259
Total Other Revenues, Expenses, Gains, and Losses	**132,517**	**(6,702)**	**78,554**	**5,820**
Total Increase in Net Position	**132,745**	**(3,419)**	**87,959**	**7,591**
NET POSITION				
Net Position at Beginning of Year	2,667,348	**453,385**	2,579,389	445,794
Net Position at the End of Year	$2,800,093	**$449,966**	**$2,667,348**	**$453,385**

The accompanying notes are an integral part of the financial statements.

Table 10. Consolidated Statements of Cash Flows

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015 (IN THOUSANDS OF DOLLARS)

	University June 30, 2016	University June 30, 2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Tuition and Fees	$829,654	$802,554
Grants and Contracts	791,533	778,001
Payments to Suppliers	(1,295,707)	(1,046,986)
Payments to Employees	(1,444,036)	(1,352,448)
Payments for Benefits	(354,120)	(295,584)
Payments for Scholarships and Fellowships	(44,635)	(49,294)
Loans Issued to Students and Employees	(5,596)	(5,899)
Collections of Loans to Students and Employees	7,099	8,668
Auxiliary Enterprises Receipts	369,715	354,192
Sales and Service, Educational	24,328	22,720
Sales and Service, Independent Operations	57,451	54,621
Sales and Service, Public Service Activities	493,461	317,039
Net Cash Used for Operating Activities	**(570,853)**	**(412,416)**
CASH FLOWS FROM NONCAPITAL FINANCING ACTIVITIES		
State Appropriations	724,985	676,197
Tuition Remitted to the State	(30,583)	(31,055)
Federal Appropriations	6,827	6,619
Gifts and Grants for Other than Capital Purposes	26,831	27,106
Nonoperating Federal Grants	75,743	76,539
Student Organization Agency Transactions	527	(431)
Net Cash Provided by Noncapital Financing Activities	**804,330**	**754,975**
CASH FLOWS FROM CAPITAL AND OTHER FINANCING ACTIVITIES		
Proceeds from Capital Debt	8,668	365,501
Bond Issuance Costs Paid	2	(789)
Capital Appropriations	121,297	62,497
Capital Grants and Contracts	58,759	50,199
Purchases of Capital Assets and Construction	(191,039)	(152,369)
Principal Paid on Capital Debt and Leases	(78,287)	(161,296)
Interest Paid on Capital Debt and Leases	(113,746)	(106,625)
Use of Debt Proceeds on Deposit with Trustees	(321,964)	(330,330)
Net Cash Used for Capital Financing Activities	**(516,310)**	**(273,212)**
CASH FLOWS FROM INVESTING ACTIVITIES		
Proceeds from Sales and Maturities of Investments	1,138,588	876,156
Interest on Investments	8,862	8,651
Purchase of Investments	(1,090,191)	(928,361)
Net Cash (Used in)/Provided by Investing Activities	**57,259**	**(43,554)**
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	**(225,574)**	**25,792**
Cash and Cash Equivalents — Beginning of the Year	**830,026**	**804,234**
Cash and Cash Equivalents — End of Year	**$604,452**	**$830,026**
RECONCILIATION OF OPERATING LOSS TO NET CASH PROVIDED BY OPERATING ACTIVITIES		
Operating Loss	($737,257)	(669,513)
Adjustments to reconcile loss to net cash used by Operating Activities:		
Depreciation and Amortization Expense	240,865	221,043
Changes in Assets and Liabilities:		
Receivable, net	(2,969)	(15,355)
Inventories	(534)	(1,174)
Due to/from Related Organizations		(273)
Accounts Receivable/Payable UMass Memorial	(17,341)	22,267
Other Assets	(44,077)	(5,067)
Accounts Payable (non-capital)	(17,821)	3,419
Accrued Liabilities	(5,835)	18,671
Deferred Revenue	(4,374)	10,185
Advances and Deposits	(395)	(194)
Other Liabilities	18,885	3,574
Net Cash Used for Operating Activities	**($570,853)**	**($412,417)**
SUPPLEMENTAL DISCLOSOURE OF NONCASH ACTIVITIES		
Bonds to refund existing debt		302,388
Assets Acquired and Included in Accounts Payable and Other Liabilities	63,109	59,726

The accompanying notes are an integral part of the financial statements.

The accompanying notes are an integral part of the financial statements.

Notes to Consolidated Financial Statements

1. SUMMARY OF ORGANIZATION AND SIGNIFICANT ACCOUNTING POLICIES

Organization

The consolidated financial statements herein present the financial position, results of operations, changes in net position, and cash flows of the University of Massachusetts ("University"), a federal land grant institution. The financial statements of the University include the Amherst, Boston, Dartmouth, Lowell and Worcester Medical School campuses, and the Central Administration office of the University, Worcester City Campus Corporation ("WCCC"), the University of Massachusetts Amherst Foundation ("UMass Amherst Foundation"), as well as the University of Massachusetts Building Authority ("the Building Authority").

The Building Authority is a public instrumentality of the Commonwealth created by Chapter 773 of the Acts of 1960 (referred to as the "Enabling Act"), whose purpose is to provide dormitories, dining commons, and other buildings and structures for use by the University. WCCC is a tax exempt organization founded to support research and real property activities for the University. The UMass Amherst Foundation was established in 2003 as a tax exempt organization founded to foster and promote the growth, progress, and general welfare of the University. These component units are included in the financial statements of the University because of the significance and exclusivity of their financial relationships with the University.

The University Related Organizations column in the accompanying financial statements includes the financial information of the University's discretely presented component units. The University of Massachusetts Foundation, Inc. ("Foundation") and the University of Massachusetts Dartmouth Foundation, Inc. ("Dartmouth Foundation") are related tax exempt organizations founded to foster and promote the growth, progress and general welfare of the University, and are reported in a separate column to emphasize that they are Massachusetts not-for-profit organizations legally separate from the University. These component units are included as part of the University's financial statements because of the nature and the significance of their financial relationship with the University. The financial statement presentation of the discretely presented component units has been reclassified to conform to the University presentation. The financial reports of all above mentioned component units are available upon request from the University.

The University is an enterprise fund of the Commonwealth of Massachusetts ("Commonwealth"). The financial balances and activities included in these financial statements are, therefore, also included in the Commonwealth's comprehensive annual financial report.

Basis of Presentation

The accompanying financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America as prescribed by the Governmental Accounting Standards Board ("GASB") using the economic resources measurement focus and the accrual basis of accounting. These financial statements are reported on a consolidated basis, and all intra-University transactions are eliminated.

Operating revenues consist of tuition and fees, grants and contracts, sales and services of educational activities (including royalties from licensing agreements) and auxiliary enterprise revenues. Operating expenses include salaries, wages, fringe benefits, utilities, subcontracts on grants and contracts, supplies and services (including independent operations and public service activities), and depreciation and amortization. All other revenues and expenses of the University are reported as non-operating revenues and expenses including state general appropriations, federal appropriations, non-capital gifts, short term investment income, endowment income used in operations, interest expense, and capital additions and deductions. Other revenues, expenses, gains and losses represent all capital items, other changes in long term plant, and changes in endowment net position. Revenues are recognized when earned and expenses are recognized when incurred with the exception of revenue earned on certain public service activities. Restricted grant revenue is recognized only when all eligibility requirements have been met. Contributions, including unconditional promises to give (pledges) for non-endowment or non-capital purposes, are recognized as revenues in the period received. Pledges to restricted non-expendable endowments are recognized as revenues in the period received. Conditional promises to give are not recognized until they become unconditional, that is when the conditions on which they depend are substantially met. The University applies restricted net assets first when an expense or outlay is incurred for purposes for which both restricted and unrestricted net assets are available.

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, and disclosures of contingencies at the date of the financial statements, revenues and expenditures recognized during the reporting period. Significant estimates include the accrual for employee compensated absences, and workers' compensation liability, the allowance for doubtful accounts, valuation of certain investments, amounts recorded in connection with the pension obligation and the related defined inflows and outflows. Actual results could differ from those estimates.

The University reports its financial statements as a "business-type activity" ("BTA") under GASB Statement No. 35, *Basic Financial Statements – and Management's Discussion and Analysis – for Public Colleges and Universities* (GASB 35). BTAs are defined as activities are financed in whole or in part by fees charged to external parties for goods or services.

In order to ensure observance of limitations and restrictions placed on the use of available resources, the accounts of the University are maintained internally in accordance with the principles of fund accounting. This is the procedure by which resources for various purposes are maintained in separate funds in accordance with the activities or objectives specified. GASB 35 establishes standards for external financial reporting by public colleges and universities that resources be classified into the following net position categories:

- **Invested in capital assets, net of related debt:** Capital assets, at historical cost or fair market value on date of gift, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction or improvement of those assets.

- **Restricted Nonexpendable:** Resources subject to externally imposed stipulations that they be maintained permanently by the University.

- **Restricted Expendable:** Resources whose use by the University is subject to externally imposed stipulations. Such assets include restricted grants and contracts, the accumulated net gains/losses on true endowment funds, as well as restricted funds loaned to students, restricted gifts and endowment income, and other similar restricted funds.

- **Unrestricted:** Resources that are not subject to externally imposed stipulations. Substantially all unrestricted net assets are designated to support academic, research, auxiliary enterprises or unrestricted funds functioning as endowments, or are committed to capital construction projects.

Revenues are reported net of discounts and allowances. As a result, student financial aid expenditures are reported as an allowance against tuition and fees revenue while stipends and other payments made directly to students are recorded as scholarship and fellowship expenditures on the statements of revenues, expenses, and changes in net position. Discounts and allowances for tuition and fees and auxiliary enterprises are calculated using the Alternate Method which reports tuition and fee revenue net of scholarship allowances.

Adoption Of Accounting Pronouncements

For the year ended June 30, 2016, the University adopted the provisions of GASB Statement No.72, "Fair Value measurements and Application" ("GASB 72"). This statement addresses the accounting and financial reporting issues related to fair value measurements, as well as requires certain disclosures to be made about fair value measurements, the level of fair value hierarchy, and valuation techniques. GASB 72 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. This statement also provides guidance for determining a fair value measurement for financial reporting purposes, as well as for applying fair value to certain investments and swap counterparties at the measurement date. The University assessed the impact of GASB No. 72 on its financial statements and has added required disclosures of assets and liabilities reported at fair value in accompanying financial statements. The determination of fair value as it relates to the interest rate swaps was also impacted by the adoption of GASB 72. As the amounts were immaterial, the University did not adjust the fair value of this liability at June 30, 2015. Implementation of GASB 72 did not have any impact on the net position of the University.

New GASB Pronouncements

In June 2015 the GASB released Statement No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions.* The primary objective of this Statement is to improve accounting and financial reporting by state and local governments for postemployment benefits other than pensions (other postemployment benefits or OPEB). It also improves information provided by state and local governmental employers about financial support for OPEB that is provided by other entities. This Statement replaces the requirements of Statements No. 45, *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions*, as amended, and No. 57, *OPEB Measurements by Agent Employers and Agent Multiple-Employer Plans*. Management is evaluating the impact this pronouncement will have on the University.

Classification Of Assets And Liabilities

The University presents current and non-current assets and liabilities in the statements of net position. Assets and liabilities are considered current if they mature in one year or less, or are expected to be received, used, or paid within one year or less. Investments with a maturity of greater than one year and balances that have externally imposed restrictions as to use are considered non-current. Cash Held by State Treasurer includes balances with restrictions as to use and balances that may be rolled forward for use toward the restricted purposes in future years, and such balances are classified as non-current. Cash held by trustees is presented based upon its expected period of use and the restrictions imposed on the balances by external parties.

Cash And Cash Equivalents And Investments

Cash and cash equivalents consist primarily of petty cash, demand deposit accounts, savings accounts, and money market accounts with a maturity of three months or less when purchased.

Investments are reported at their respective fair values. Short-term investments consist of deposits with original maturities of less than one year and are available for current use. Securities received as a gift are recorded at estimated fair value at the date of the gift.

Private equity and certain other non-marketable securities held by the Foundation are valued using current estimates of fair value by management based on information provided by the general partner or investment manager for the respective securities. The Foundation believes that the carrying amounts of these investments are a reasonable estimate of fair value, however, their estimated value is subject to uncertainty and therefore may differ from the value that would have been used had a ready market for such investment existed. Venture capital investments represent initial investments made to certain funds and are reported at fair value based on company stock price.

Investment securities are exposed to various risks, such as interest rate, market and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect the amounts reported in the accompanying financial statements.

Investment income includes dividends and interest income and is recognized on the accrual basis. In computing realized gains and losses, cost is determined on a specific identification basis.

Restricted Grants And Contracts

The University receives monies from federal and state government agencies under grants and contracts for research and other activities including medical service reimbursements. The University records the recovery of indirect costs applicable to research programs, and other activities which provide for the full or partial reimbursement of such costs, as revenue. Recovery of indirect costs for the years ended June 30, 2016 and 2015 was $119.0 million and $112.2 million, respectively, and is a component of grants and contracts revenue. The costs, both direct and indirect, charged to these grants and contracts are subject to audit by the granting agency. The University believes that any audit adjustments would not have a material effect on the University's financial statements.

Pledges And Endowment Spending

Pledges for non-endowment purposes are presented net of amounts deemed uncollectible, and after discounting to the present value of the expected future cash flows. Because of uncertainties with regard to whether they are realizable, bequests and intentions and other conditional promises are not recognized as assets until the specified conditions are met.

The Foundation utilizes the pooled investment concept whereby all invested funds are in one investment pool, except for investments of certain funds that are otherwise restricted. Pooled investment funds will receive an annual distribution of 4% of the endowment fund's average market value for the preceding twelve quarters on a one year lag. Only quarters with funds on deposit shall be included in the average. In addition, a prudence rule will be utilized limiting spending from a particular endowment fund to no lower than 93% of its book value. The actual spending rate approved was 4% for 2016 and 2015. Future utilization of gains is dependent on market performance. Deficiencies for donor-restricted endowment funds resulting from declines in market value would be offset by an allocation from unrestricted net position to restricted expendable net position, and would be recorded in realized and unrealized gains (losses) on sale of investments. In fiscal years 2016 and 2015, the deficiencies were $3.2 million and $0.1 million respectively. The Foundation believes that these adjustments are temporary and will not require permanent funding.

Inventories

The University's inventories consist of books, general merchandise, central stores, vaccines, and operating supplies which are carried at the lower of cost (first-in, first-out and average cost methods) or market value.

Investment In Plant

Capital assets are stated at cost or fair value upon receipt as a gift. Net interest costs incurred during the construction period for major capital projects are capitalized. Repairs and maintenance costs are expensed as incurred, whereas major improvements that extend the estimated useful lives of the assets are capitalized as additions to property and equipment. Depreciation of capital assets is provided on a straight-line basis over the estimated useful lives of the respective assets. The University records a full year of depreciation in the year of acquisition. Land is not depreciated. The University does not capitalize works of art, historical treasures or library books.

Following is the range of useful lives for the University's depreciable assets:

Table 11. The Range of Useful Lives for the University's Depreciable Assets

Assets	
Buildings	20–50 years
Building Improvements	3–20 years
Equipment and Furniture	3–15 years
Software	5 years
Land Improvements	20 years

Compensated Absences

Employees earn the right to be compensated during absences for annual vacation leave and sick leave. The accompanying statements of net position reflect an accrual for the amounts earned and ultimately payable for such benefits as of the end of the fiscal year. The accrual equates to the entire amount of vacation time earned and an actuarially determined liability for the sick leave component of compensated absences. Employees are only entitled to 20% of their sick leave balance upon retirement. The actuarial calculation utilized the probability of retirement for this estimate.

Unearned Revenue

Unearned revenue consists of amounts billed or received in advance of the University providing goods or services. Unearned revenue is recognized as revenue as expenses are incurred and therefore earned.

Advances and Deposits

Advances from the U.S. Government for Federal Perkins Loans to students are reported as part of advances and deposits. Future loans to students are made available only from repayments of outstanding principal amounts plus accumulated interest received thereon. Funding for the low-interest Federal Perkins Loan program will expire September 30, 2017. Universities and colleges are not allowed to make Federal Perkins Loans to new borrowers after this date.

Tuition and State Appropriations

The accompanying financial statements for the years ended June 30, 2016 and 2015 present as tuition revenue approximately $30.6 million and $31.1 million, respectively, of in-state tuition received by the University and remitted to the State Treasurer's Office for the general fund of the Commonwealth of Massachusetts. The amount of tuition retained by the University related to out-of-state students during 2016 and 2015 was $85.1 million and $82.0 million, respectively. The recorded amount of State Appropriations received by the University has been reduced by a corresponding amount of tuition remitted as shown below (in thousands):

Table 12. The Recorded Amount of State Appropriations Received by the University Has Been Reduced by a Corresponding Amount of Tuition Remitted
(in thousands of dollars)

	2016	2015
Gross Commonwealth Appropriations	$546,953	$516,794
Plus: Fringe Benefits	178,032	159,403
	724,985	**676,197**
Less: Tuition Remitted	(30,583)	(31,055)
Less: Mandatory Waivers	(24,654)	(23,942)
Net Commonwealth Support	**$669,748**	**$621,200**

Auxiliary Enterprises

An auxiliary enterprise is an entity that exists to furnish a service to students, faculty or staff acting in a personal capacity, and that charges a fee for the use of goods and services. For the years ended June 30, 2016 and 2015, the University recognized Auxiliary Enterprise revenue of $383.3 million and $362.2 million, respectively.

Other operating revenues and expenditures, sales and services, public service activities

Public Service Activities consist largely of sales and services provided to third parties by the UMass Medical School campus under its Commonwealth Medicine ("CWM") programs, which provide public consulting and services in health care financing, administration and policy to federal, state and local agencies and not-for-profit health and policy organizations. Included in this category of activities are Commonwealth Medicine revenues of $283.8 million and $268.7 million for the years ended June 30, 2016 and 2015, respectively. Included in expenditures are Commonwealth Medicine expenditures of $244.1 million and $227.7 million for the years ended June 30, 2016 and 2015, respectively.

Public Service Activities also include payments received by the Medical School for educational services it provides to its clinical affiliate, UMass Memorial, as required by the enabling legislation enacted by the Commonwealth in 1997. Educational services revenues included in public service revenues were $209.9 million and $43.8 million for the years ended June 30, 2016 and 2015, respectively. Finally, Public Service Activity expenditures include payments made to the Commonwealth of Massachusetts of $166.0 million for the year ended June 30, 2016, pursuant to requirements of legislation enacted by the State Legislature of Massachusetts.

Fringe Benefits For Current Employees And Post Employment Obligations – Pension And Non-Pension

The University participates in the Commonwealth's Fringe Benefit programs, including active employee and post – employment health insurance, unemployment compensation, pension, and workers' compensation benefits. Health insurance and pension costs for active employees and retirees are paid through a fringe benefit rate charged to the University by the Commonwealth. Workers' compensation costs are assessed separately based on actual University experience.

In addition to providing pension benefits, under Chapter 32A of the Massachusetts General Laws, 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 is comparable to contributions required from employees. The Commonwealth is reimbursed for the cost of benefits to retirees of the eligible authorities and non-state agencies.

The Commonwealth's Group Insurance Commission ("GIC") was established by the Legislature in 1955 to provide and administer health insurance and other benefits to the Commonwealth's employees and retirees, and their dependents and survivors. The GIC also covers housing and redevelopment authorities' personnel, certain authorities and other offline agencies, retired municipal teachers from certain cities and towns and municipalities as an agent multiple employer program, accounted for as an agency fund activity of the Commonwealth, not the University.

The GIC administers a plan included within the State Retiree Benefits Trust Fund, an irrevocable trust. Any assets accumulated in excess of liabilities to pay premiums or benefits or administrative expenses are retained in that fund. The GIC's administrative costs are financed through Commonwealth appropriations and employee investment returns. The Legislature determines employees' and retirees' contribution ratios.

The GIC is a quasi-independent state agency governed by an eleven-member body ("the Commission") appointed by the Governor. The GIC is located administratively within the Executive Office of Administration and Finance, and is responsible for providing health insurance and other benefits to the Commonwealth's employees and retirees and their survivors and dependents. During the fiscal years that ended on June 30, 2016 and June 30, 2015, respectively, the GIC provided health insurance for its members through indemnity, PPO, and HMO plans. The GIC also administered carve-outs for the pharmacy benefit and mental health and substance abuse benefits for certain of its health plans. In addition to health insurance, the GIC sponsors life insurance, long-term disability insurance (for active employees only), dental and vision coverage for employees not covered by collective bargaining, a retiree discount vision plan and retiree dental plan, and finally, a pre-tax health care spending account and dependent care assistance program (for active employees only).

Pursuant to the provisions of Paragraph (e), Section 5 of Chapter 163 of the Acts of 1997 and consistent with the September 22, 1992 Memorandum of Understanding between the Commonwealth of Massachusetts Executive Office of Administration and Finance and the University of Massachusetts, the University's Medical School campus has assumed the obligation for the cost of fringe benefits provided by the Commonwealth to University Medical School employees (other than those employees paid from state appropriated funds) for all periods on or after July 1, 1989. The Medical School determines the actual costs for the health insurance benefits and actuarially calculates the incurred service costs for pensions and retiree health insurance.

Income Tax Status

The University and the Building Authority are component units of the Commonwealth of Massachusetts and are exempt from Federal and state income tax under the doctrine of intergovernmental tax immunity found in the U.S. Constitution. The University qualifies as a public charity eligible to receive charitable contributions under Section 170(b)(1)(A)(ii) of the Internal Revenue Code, as amended (the Code). The Building Authority qualifies as a public charity under Section 170(b)(1)(A)(iv) of the Code.

The Worcester City Campus Corporation (WCCC), and the University Related Organizations are organizations described in Section 501(c)(3) of the Code, and are generally exempt from income taxes pursuant to Section 501(a) of the Code. WCCC and the University Related Organizations are required to assess uncertain tax positions and have determined that there were no such positions that are material to the financial statements.

Comparative Information And Reclassifications

The University's financial statements include prior year comparative information. Certain reclassifications were made in prior year to conform to current year presentation.

Beginning in fiscal year 2016, in an effort to increase the transparency of activity that flowed through Investment Income and Endowment Returns, management decided to distinguish between Investment Return, Unrealized Gains and Losses on Investments, Endowment Distributed for Operations and Endowment Return, net of amounts used in operations. Fiscal year 2015 was reclassified to conform to this new presentation.

2. CASH AND CASH EQUIVALENTS AND INVESTMENTS

The University's investments are made in accordance with the Investment Policy and Guidelines Statement Operating Cash Portfolio adopted in May 2005 and later amended in June 2009 by the Board of Trustees (the "Investment Policy") and the Statement of Investment and Spending Policies of the University of Massachusetts Foundation, Inc. The goals of these documents are to preserve capital, provide liquidity, and generate investment income. The University of Massachusetts has statutory authority under Massachusetts General Laws Chapter 75 to collect, manage, and disburse trust funds of the University.

Investments are reported at their respective fair values. The values of publicly traded fixed income and equity securities are based upon quoted market prices at the close of business on the last day of the fiscal year. Private equities and certain other non-marketable securities are valued using current estimates in fair value by management based on information provided by the general partner or investment manager for the respective securities. Investments in units of non-publicly traded pooled funds are valued at the unit value determined by the fund's administrator based on quoted market prices of the underlying investments. Private equities and other non-marketable securities represent approximately 23.5% and 24.4% of the University's investments at June 30, 2016 and 2015, respectively.

Custodial Credit Risk — Custodial Credit Risk is the risk that, in the event of a failure of the counterparty, the University would not be able to recover the value of its deposits, investments or collateral securities that were in the possession of an outside party. The University does not have a formal policy related to mitigation of custodial credit risk. Deposits are exposed to custodial risk if they are uninsured and uncollateralized. Investment securities are exposed to custodial credit risk if they are uninsured or not registered in the name of the University and are held by either the counterparty or the counterparty's trust department or agent but not in the University's name. As of June 30, 2016 and 2015, all cash and investment accounts were held on behalf of the University by the Trustees, in the Trustees' name.

The University maintains depository, payroll, disbursement, receipt, and imprest accounts. In addition to bank account deposits, the University held money market instruments which are classified as investments. Interest bearing and money market accounts carry Federal Deposit Insurance Corporation (FDIC) insurance up to $250,000 per account. None of the accounts are collateralized above the FDIC insured amounts.

At June 30, 2016 and 2015, the carrying amounts, bank balances and FDIC insured amounts were as follows (in thousands): **See Table 13.**

At June 30, 2016, the University held a carrying and fair market value of $737.3 million in non-money market investments compared to a carrying and fair market value of $713.7 million at June 30, 2015. In the event of negligence due to the University's custodian and/or investment manager(s), it is expected that investment balances of $737.3 million and $713.7 million at June 30, 2016 and 2015, respectively, would be fully recovered. However, these amounts are subject to both interest rate risk and credit risk.

Concentration of Credit Risk — Concentration of credit risk is assumed to arise when the amount of investments that the University has with one issuer exceeds 5% or more of the total value of the University's investments. The University does not have a formal policy for concentration of credit risk.

As of June 30, 2016 and June 30, 2015, there is no concentration of investments with one issuer of the University portfolio, excluding U. S. Government guaranteed obligations, which exceed 5% of the portfolio.

Credit Risk — Credit risk is the risk that the University will lose money because of the default of the security issuer or investment counterparty. The University's Investment Policy and Guidelines Statement allows each portfolio manager full discretion within the parameters of the investment guidelines specific to that manager.

The table below presents the fair value (in thousands) and average credit quality of the fixed income component of the University's investment portfolio as of June 30, 2016 and 2015, respectively: **See Table 14.**

The table below presents the fair value (in thousands) by credit quality of the rated debt investments component, which includes cash and cash equivalents, of the University's investment portfolio as of June 30, 2016 and 2015, respectively: **See Table 15 and 16.**

Table 13. The Carrying Amounts, Bank Balances and FDIC Insured Amounts
At June 30, 2016 and 2015 (in thousands of dollars)

	2016			2015		
	Book Balance	Bank Balance	FDIC Insured	Book Balance	Bank Balance	FDIC Insured
Depository Accounts	$102,155	$85,605	$999	$90,691	$70,176	$1,052
Certificates of Deposit	20,650	20,650	20,400	650	650	400
Money Market	164,505	164,505	2,501	233,305	233,305	2,501
Total	**$287,310**	**$270,760**	**$23,900**	**$324,646**	**$304,131**	**$3,953**

Table 14. The Fair Value and Average Credit Quality of the Fixed Income Component of the University's Investment Portfolio

As of June 30, 2016 and 2015, respectively (in thousands of dollars)

Asset Class	June 30, 2016 Fair Value	Average Credit Quality	June 30, 2015 Fair Value	Average Credit Quality
Short Duration	$270,117	AAA	$314,081	AAA
Intermediate Duration	$239,218	A	$231,382	A

Table 15. Rated Debt Investments — 2016

(in thousands of dollars)

		S&P Quality Ratings							
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
US Agencies	$535								$535
US Government	34,641								36,641
Certificates of Deposit	20,500								20,500
Corporate Debt	107,428	20,736	7,017	$28,393	$38,718				12,564
Municipal/Public Bonds	5,455	442	1,875	2,040	1,098				
Bond Mutual Funds	151,385	65,982	19,627	14,766	23,002	$13,016	$6,717	$1,592	6,683
Money Market Funds	189,391	21,038							168,353
	$509,535	**$108,198**	**$28,519**	**$45,199**	**$62,818**	**$13,016**	**$6,717**	**$1,592**	**$243,276**

Table 16. Rated Debt Investments — 2015

(in thousands of dollars)

		S&P Quality Ratings							
	Fair Value	AAA	AA	A	BBB	BB	B	<B	Unrated
US Agencies	$1,313		$582						$731
US Government	34,856		48						34,808
Certificates of Deposit	500	$500							
Corporate Debt	100,192	22,117	6,662	$25,797	$26,957				18,659
Municipal/Public Bonds	4,767	439	2,899	312	1,117				
Bond Mutual Funds	113,655	44,137	3,159	12,754	18,835	$14,590	$8,667	$2,986	8,527
Money Market Funds	290,180	290,067							113
	$525,463	**$357,260**	**$13,350**	**$38,863**	**$46,909**	**$14,590**	**$8,667**	**$2,986**	**$62,838**

Interest Rate Risk — Interest rate risk is the risk that changes in interest rates will adversely affect the fair market value of an investment. The University's Investment Policy and Guidelines Statement establishes targets for the preferred duration of the fixed income component of the investment portfolio by asset class by limiting investments through targeted allocations to different asset classes.

The table below shows the allocation for each asset class and the fair value (in thousands) for each as of June 30, 2016 and 2015, respectively: **See Table 17.**

Table 17. The Allocation for Each Asset Class and the Fair Value for Each

As of June 30, 2016 and 2015 (in thousands of dollars)

Asset Class	6/30/16 Allocation	6/30/16 Fair Value	6/30/15 Allocation	6/30/15 Fair Value
Short Duration	32%	$270,117	32%	$314,081
Intermediate Duration	23%	239,218	23%	231,382
Alternative Assets	24%	220,543	24%	244,456
Equities	18%	9,108	18%	182,880
Commodities	2%	183,027	2%	18,704
Real Estate	1%	18,458	1%	11,533
	100%	**$940,471**	**100%**	**$1,003,036**

The table below presents the fair value (in thousands) by investment maturity of the rated debt investments component, which includes cash and cash equivalents, of the University's investment portfolio as of June 30, 2016 and 2015, respectively: **See Table 18 and 19.**

Fair Value Measurements — GASB No. 72, *"Fair Value measurements and Application"* sets forth the framework for measuring fair value. That framework provides a fair value hierarchy that prioritizes the inputs to valuation technics used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy under GASB No. 72 are described as follows:

Level 1 – Inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets that the University has the ability to access.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly and include:
- Quoted prices for similar assets or liabilities in active markets;

Table 18. Investments — 2016
(in thousands of dollars)

		Investment Maturity (in Years)			
Investment Type	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
US Agencies	$535	$343	$192		
US Government	34,641	1,180	29,935	$3,526	
Certificates of Deposit	20,500	20,500			
Corporate Debt	107,428	34,560	67,054	5,814	
Municipal/Public Bonds	5,455	5,455			
Bond Mutual Funds	151,385	18,688	82,901	36,419	$13,377
Money Market Mutual Funds	189,391	189,391			
Sub Total Debt	**$509,335**	**$270,117**	**$180,082**	**$45,759**	**$13,377**
Other Investments					
Alternative Assets	220,543				
Equity Securities - International	106,102				
Equity Securities - Domestic	76,925				
Commodities	9,108				
Real Estate	18,458				
Grand Total	**$940,471**				

Table 19. Investments — 2015
(in thousands of dollars)

		Investment Maturity (in Years)			
Investment Type	Fair Value	Less than 1	1 to 5	6 to 10	More than 10
Debt Securities					
US Agencies	$1,313		$1,313		
US Government	34,856		33,862	$994	
Certificates of Deposit	500	$500			
Corporate Debt	100,192	1,284	93,411	5,097	$400
Municipal/Public Bonds	4,767	3,407	1,360		
Bond Mutual Funds	113,655	18,710	46,479	33,791	14,675
Money Market Mutual Funds	290,180	290,180			
Sub Total Debt	**$545,463**	**$314,081**	**$176,425**	**$39,882**	**$15,075**
Other Investments					
Alternative Assets	244,456				
Equity Securities - International	110,903				
Equity Securities - Domestic	71,977				
Commodities	18,704				
Real Estate	11,533				
Grand Total	**$1,003,036**				

- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable fir the asset or liability;
- Inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value measurement. Unobservable inputs are developed based on the best information available in the circumstances and may include the University's own data.

Table 20. Investments and Derivative Instruments Measured at Fair Value — 2016
(in thousands of dollars)

		Fair Value Measurements Using		
Investments by fair value level	6/30/2016	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
US Treasury securities	$31,873	$31,873		
Government agency bonds	535		$535	
Asset backed securities	23,951		23,951	
Commerical mortgage-backed securities	11,552		11,552	
Government issued commercial mortgage-backed securities	421		421	
Government mortgage-backed securities	3,911		3,911	
Non Government Backed CMO's	404		404	
Corporate bonds	71,756		71,598	$158
Municipal and provincial bonds	5,455		5,455	
Other fixed income	151,384	137,608	13,776	
Total debt securities	**$301,242**	**$169,481**	**$131,603**	**$158**
Equity Securities				
Dometic equities	76,924	76,074		850
International equities	106,106	106,106		
Total Equity Securities	**$183,030**	**$182,180**		**850**
Other Securities				
Commodities	9,108	9,108		
REITS	18,458	18,458		
Total Other Securities	**27,566**	**27,566**		
Total investments by fair value level	**$511,838**	**$379,227**	**$131,603**	**$1,008**
Investments measured at the net asset value (NAV)				
Multi Strategy hedge funds				
Equity	41,970			
Long/short	28,614			
Fixed income	59,131			
Absolute return	59,139			
Real assets	12,055			
Private equity	1,147			
Private debt	14,989			
Private real estate	3,497			
Total investments measured at the NAV	**$220,542**			
Total Investments measured at fair value	**$732,380**			
Cash and Cash Equivalents	208,091			
Total Investments Per Financial Statements	**$940,471**			
Total Debt, Equity and Alts	732,380			
Total Cash and other	208,091			
Grand total to tie to LS	**$940,471**			

Level 1 Foundation Agency and First Niagra total

Level 1 includes public CVIP securities (PBC 33), Foundation and First Niagra

The following table presents the investments carried at fair value, as of June 30, 2016, by the GASB 72 valuation hierarchy defined above:**See Table 20.**

The following table presents the investments carried at fair value, as of June 30, 2015, by the GASB 72 valuation hierarchy defined above: **See Table 21.**

Table 21. Investments and Derivative Instruments Measured at Fair Value — 2015
(in thousands of dollars)

		Fair Value Measurements Using		
Investments by fair value level	6/30/2015	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Debt Securities				
US Treasury securities	$29,345	$29,345		
Government agency bonds	1,313		$1,313	
Asset backed securities	27,851		27,851	
Commerical mortgage-backed securities	17,464		17,464	
Government issued commercial mortgage-backed securities	1,319		1,319	
Government mortgage-backed securities	4,192		4,192	
Corporate bonds	55,003		54,985	$17
Municipal and provincial bonds	4,767		4,767	
Other fixed income	113,655	113,655		
Total debt securities	**$254,909**	**$143,000**	**$111,891**	**$17**
Equity Securities				
Dometic equities	72,477	71,577		900
International equities	110,903	110,903		
Total Equity Securities	**$183,380**	**$182,480**		**$900**
Other Securities				
Commodities	18,704	18,704		
REITS	11.533	11,533		
Total Other Securities	**30,237**	**30,237**		
Total investments by fair value level	**$468,526**	**$355,717**	**$111,891**	**$917**
Investments measured at the net asset value (NAV)				
Multi Strategy hedge funds				
Equity	42,205			
Long/short	40,981			
Fixed income	71,753			
Absolute return	62,163			
Real assets	12,329			
Private equity	493			
Private debt	14,532			
Total investments measured at the NAV	**$244,456**			
Total Investments measured at fair value	**$712,982**			
Cash and Cash Equivalents	290,054			
Total Investments Per Financial Statements	**$1,003,036**			
Total Debt, Equity and Alts	712,982			
Total Cash and other	290,054			
Grand total to tie to LS	**$1,003,036**			

Foundation Agency total
Level 1 includes public CVIP securities (PBC 33)

3. CASH HELD BY STATE TREASURER

Accounts payable, accrued salaries and outlays for future capital projects to be funded from state-appropriated funds totaled $17.3 million at June 30, 2016 and $33.0 million at June 30, 2015. The University has recorded a comparable amount of cash held by the State Treasurer for the benefit of the University, which will be subsequently utilized to pay for such liabilities. The cash is held in the State Treasurer's pooled cash account. The Commonwealth requires all bank deposits in excess of insurance coverage by the FDIC to be collateralized with a perfected pledge of eligible collateral. 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.

4. CASH AND SECURITIES HELD BY TRUSTEES

Cash and securities held by trustees primarily consist of unspent bond proceeds, amounts held for the future payment of debt service on such borrowings and designated funds from the Building Authority. At June 30, 2016 and June 30, 2015, there was $.9 million and $6.2 million, respectively, available from the Revolving Loan Fund established with 2000 Series A bond proceeds issued to acquire and implement enterprise resource planning technology along with other projects (see Note 8) and $485.1 million and $700.9 million, respectively, held by trustees related to the Building Authority.

Pursuant to Trust Agreements between the Building Authority and its bond trustees, all funds deposited with those trustees (approximately $486.0 million at June 30, 2016 and $707.1 million at June 30, 2015) shall be continuously maintained for the benefit of the Building Authority and Registered owners of the Bonds. All investments shall be (a) held with a bank or trust company approved by the Trustees and the Building Authority, as custodians, or (b) in such other manner as may be required or permitted by applicable state and Federal laws and regulations. Investments shall consist of (a) direct obligations of, or obligations which are unconditionally guaranteed by the United States of America, or any other agency or corporation which has been created pursuant to an act of Congress of the United States as an agency or instrumentality thereof; or (b) other marketable securities eligible as collateral for the deposit of trust funds under regulations of the Comptroller of the Currency having a market value not less than the amount of such deposit. Direct obligations of, or obligations which are unconditionally guaranteed by the United States of America or any other agency or corporation which has been created pursuant to an act of Congress of the United States as an agency or instrumentality thereof, may be subject to repurchase upon demand by the owner pursuant to a repurchase agreement with a bank or trust company.

Cash Deposits – Custodial Credit Risk The Building Authority holds a majority of its cash and cash equivalents in high quality money market mutual funds that invest in securities that are permitted investments under the Building Authority's Enabling Act or in money market mutual funds that have been specifically permitted by state legislation. The Building Authority's cash and cash equivalents consisted of the following as of June 30 (in thousands):

Table 22. The Building Authority's Cash and Cash Equivalents

As of June 30, 2016 and 2015 (in thousands of dollars)

	2016	2015
Cash	$4,577	$3,580
Permitted Money Market Accounts ("MMA")	475,240	692,194
Total Cash and Cash Equivalents	**$479,817**	**$695,774**

Custodial credit risk is the risk that, in the event of a bank failure, the University will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. The University does not have a deposit policy for custodial credit risk. As of June 30, 2016 and June 30, 2015, the bank balances of uninsured deposits totaled $4,077 million and $3,261 million, respectively. For purposes of disclosure under GASB Statement No. 40, *Deposit and Investment Risk Disclosures,* money market accounts investing in debt securities are considered investments and therefore, are included in the investment disclosures that follow.

Investments

As of June 30, 2016, the Building Authority's investments consisted of the following:**See Table 23.**

As of June 30, 2015, the Building Authority's investments consisted of the following:**See Table 24.**

Because money market funds are highly liquid, they are presented as investments with maturities of less than one year.

Interest Rate Risk The Building Authority has a formal investment policy that establishes minimum credit quality of certain instruments, outlines investment procedures, and provides for periodic reporting. Generally, the Building Authority holds its investments until maturity.

Credit Risk Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. The risk is measured by the assignment of a rating by a nationally recognized statistical rating organization.

Table 23. The Building Authority's Investments
As of June 30, 2016

		Investment Maturities (in Years)		
Investment Type	Fair Value	Less than 1	1 to 5	6 to 10
Debt Securities				
Repurchase Agreements	$5,318		$5,318	
MoneyMarket Funds	475,239	$ 475,239		
Total	**$480,557**	**$475,239**	**$5,318**	

Table 24. The Building Authority's Investments
As of June 30, 2015

		Investment Maturities (in Years)		
Investment Type	Fair Value	Less than 1	1 to 5	6 to 10
Debt Securities				
Repurchase Agreements	$5,318			$5,318
MoneyMarket Funds	692,194	$692,194		
Total	**$697,512**	**$692,194**		**$5,318**

The Enabling Act specifies the permitted investments of the Building Authority. These permitted investments include direct obligations of or obligations which are unconditionally guaranteed by the United States of America ("Treasuries"), obligations of an agency or organization created pursuant to an act of Congress of the United States as an agency or instrumentality thereof ("Agencies"), time deposits or certificate of deposits fully secured by Treasuries or Agencies, and Treasuries and Agencies subject to repurchase agreements. Other legislation allows the Building Authority to invest in the Massachusetts Municipal Depository Trust (the "MMDT"), a money market account sponsored by the Treasurer of the Commonwealth and managed by Federated Investors, Inc. Additionally, the Building Authority's Bond Trustee invests some of the Building Authority's funds in money market accounts that are permitted and collateralized by Treasuries.

No credit risk disclosures are required under GASB 40 relating to the Building Authority's investment in Treasuries. The Building Authority's investments in repurchase agreements are not rated but are fully collateralized by Treasuries and Agencies. MMDT is unrated.

Custodial Credit Risk The Building Authority's Enabling Act does not contain legal or policy requirements that would limit the exposure to custodial credit risk except that interest-bearing time deposits or certificates of deposit of banking institutions or trust companies must be continuously and fully secured by Treasuries or Agencies.

Custodial credit risk generally applies only to direct investments in marketable securities. Custodial credit risk does not apply to indirect investment in securities through the use of mutual funds or government investment pools, such as MMDT. Direct investments in marketable securities are held by the Building Authority's Bond Trustee as the Building Authority's agent. In accordance with the Building Authority's repurchase agreements, collateral for the agreements is held in segregated accounts with market values between 100% and 105% of the repurchase price, depending on the type of asset used as security and the specific repurchase agreement.

Concentrations of Credit Risk The Building Authority places no limit on the amount it may invest in any one issuer. As of June 30, 2016, the Building Authority had 98.0% of its investments in MMDT. As of June 30, 2015, the Building Authority had 98.7% of its investments in MMDT.

5. ACCOUNTS, GRANTS AND LOANS RECEIVABLE

Accounts, grants and loans receivable as of June 30, 2016 and 2015 are as follows (in thousands): **See Table 25.**

UMass Memorial

The University and UMass Memorial have the following ongoing agreements:

- UMass Memorial has been granted the right to occupy portions of the University's Worcester Medical School campus for a period of 99 years and UMass Memorial has agreed to share responsibility for various capital and operating expenses relating to the occupied premises. UMass Memorial has also agreed to contribute to capital improvements to shared facilities.

- UMass Memorial has agreed to make certain payments to the University and its related organizations, including: 1) an annual fee of $12.0 million (plus an inflation adjustment), for 99 years as long as the University continues to operate a medical school; and 2) a participation payment based on a percentage of net operating income of UMass Memorial for which revenue is recognized by the University when the amounts are received.

The University is reimbursed by, and reimburses UMass Memorial for shared services, cross-funded employees, and other agreed upon activities provided and purchased. For the years ended June 30, 2016 and 2015, the reimbursements for services provided to UMass Memorial were $125.2 million and $156.3 million, respectively. Included in these amounts are payroll paid by the University on behalf of UMass Memorial in an agency capacity in the amount of $71.3 million and $96.2 million for fiscal years 2016 and 2015, respectively. At June 30, 2016 and 2015, the University has recorded a receivable in the amount of $35.7million and $17.5 million, respectively from UMass Memorial which includes $22.9 million and $9.5 million, respectively, in payroll and related fringe charges. The University has recorded a payable at June 30, 2016 of $3.6 million primarily for cross-funded payroll.

At June 30, 2015, the University had a payable of $2.8 million primarily for cross-funded payroll.

Table 25. Accounts, Grants and Loans Receivable
As of June 30, 2016 and 2015 (in thousands of dollars)

	2016	2015
Student Accounts Receivable	$56,661	$54,295
Less Allowance for Uncollectible Accounts	(23,077)	(23,955)
	33,584	**30,340**
Grants and Contracts Receivable	98,383	94,929
Less Allowance for Uncollectible Accounts	(2,108)	(2,124)
	96,275	**92,805**
Student Loans Receivable	44,760	45,362
Less Allowance for Uncollectible Accounts	(303)	(296)
	44,457	**45,066**
Commonwealth Medicine	69,489	66,894
Less Allowance for Uncollectible Accounts	(500)	(822)
	68,989	**66,072**
Other	39,996	54,763
Less Allowance for Uncollectible Accounts	(597)	(1,147)
	39,399	**53,616**
Total, net	282,704	287,899
Less Current Portion, net	(244,178)	(249,517)
Long-term, net	**$38,526**	**$38,382**

6. RELATED ORGANIZATIONS

Related party activity with the Foundation includes loan agreements and investments of the University's endowment assets and Intermediate Term Investment Fund (ITIF) with the Foundation.

As of June 30, 2016, the net position of the Foundation included as related organization in the accompanying financial statements of the University is $465.8 million, of which $438.9 million are restricted funds and $26.9 million are unrestricted funds. During the fiscal year ended June 30, 2016, the University received $29.7 million from the Foundation, and transferred $14.7 million to the Foundation of which $0.0 million related to the establishment of quasi-endowment. At June 30, 2016, the University's investments include $309.0 million of endowment funds held in a custodial relationship at the Foundation, and $283.2 million in ITIF.

As of June 30, 2015, the net position of the Foundation was $468.4 million, of which $438.4 million are restricted funds and $30.0 million are unrestricted funds. During the fiscal year ended June 30, 2015, the University received $28.5 million from the Foundation, and transferred $14.1 million to the Foundation of which $3.8 million related to the establishment of quasi-endowment. At June 30, 2015, the University's investments include $333.3 million of endowment funds held in a custodial relationship at the Foundation, and $291.4 million in ITIF.

The University leases office space from the Foundation for an annual rent of approximately $0.4 million.

The Building Authority and the Commonwealth have entered into various lease agreements under which the Commonwealth leases to the Building Authority certain property for nominal amounts.

Through July 31, 2015, the University of Massachusetts Club (the "Club") was managed by UMass Club Management, LLC, a wholly owned subsidiary of ClubCorp USA. The Authority provided operating support for the Club of approximately $102,000 in fiscal year 2016. On August 1, 2015 management of the Club was transitioned to the not-for-profit organization University Services, Inc. The Authority did not provide additional operating support in fiscal year 2016 once University Services, Inc. took over management of the Club. The Authority provided $187,700 in operating support to ClubCorp USA in fiscal 2015.

7. INVESTMENT IN PLANT

Investment in plant activity for the year ended June 30, 2016 is comprised of the following (in thousands): **See Table 26.**

Investment in plant activity for the year ended June 30, 2015 is comprised of the following (in thousands): **See Table 27.**

The University has capitalized interest on borrowings, net of interest earned on related debt reserve funds, during the construction period of major capital projects. Capitalized interest is added to the cost of the underlying assets being constructed, and is amortized over the useful lives of the assets. For the years ended June 30, 2016 and 2015, the University capitalized net interest costs of $22.1 million and $23.6 million, respectively.

8. BONDS PAYABLE

Bond Payable activity for the year ended June 30, 2016 is summarized as follows (in thousands): **See Table 29.**

Principal and interest, which is estimated using rates in effect at June 30, 2016, on bonds payable for the next five fiscal years and in subsequent five-year periods are as follows (in thousands): **See Table 30.**

The 2011-1 variable rate bonds have an outstanding principal balance of $128.2 million and are classified as a current debt obligation as a result of the liquidity facilities expiring in June 2017. The Authority expects to redeem these variable rate bonds on their original principal amortization schedule. The 2011-2 window bonds with a principal outstanding balance of $97.3 million have no supporting liquidity facility and therefore are classified as a current debt obligation. Consistent with prior years, the Authority expects to redeem this bond based on its original amortization schedule and based on annual maturities on that schedule.

Bond payable activity for the year ended June 30, 2015 is summarized as follows (in thousands): **See Table 31.**

University of Massachusetts Building Authority

The bond agreements related to the Building Authority bonds generally provide that the net revenues of the Building Authority are pledged as collateral on the bonds and also provide for the establishment of bond reserve funds, bond funds, and maintenance reserve funds.

The University is obligated under its contracts for financial assistance, management and services with the Building Authority to collect rates, rents, fees and other charges with respect to such facilities sufficient to pay principal and interest on the Building Authority's bonds and certain other costs such as insurance on such facilities.

Pursuant to the authority given by the Building Authority's enabling act, the Commonwealth, acting by and through the Trustees of the University, has guaranteed the payment of principal and interest on the Building Authority's bonds. (The guarantee is a general obligation of the Commonwealth to which the full faith and credit of the Commonwealth are pledged. As is generally the case with other general obligations of the Commonwealth, funds with which to honor the guarantee, should it be called upon, will be provided by Commonwealth appropriation). The Building Authority's enabling act provides that the outstanding principal amount of notes and bonds of the Building Authority guaranteed by the Commonwealth cannot exceed $200 million. The amount of bond obligations guaranteed by the Commonwealth was $117.4 million and $121.6 million at June 30, 2016 and June 30, 2015, respectively.

When the Building Authority no longer has any bonds outstanding, its properties revert to the Commonwealth, and all its funds (other than funds pledged to bondholders) are required to be paid into the Treasury of the Commonwealth.

Variable Rate Bonds On April 15, 2016, the Building Authority entered into a standby purchase agreement with Barclays Bank PLC ("Barclays") which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 29 basis points (or higher, under certain circumstances) of the commitment amount. In fiscal year 2016 the Building Authority incurred fees in connection with the Barclays agreement in the amount of $123,205. The agreement expires on April 22, 2019 and may be extended if a mutual interest exists between the Building Authority and Barclays. Previously, the 2008-1 bonds were supported with a standby purchase agreement with J.P. Morgan Chase Bank, N.A. ("J.P. Morgan"). Fees incurred by the Building Authority in connection with J.P. Morgan totaled $.4 million and $.5 million for the year ended June 30, 2016 and June 30, 2015, respectively.

The 2008-A bonds are supported by a standby bond purchase agreement with Barclays Bank PLC ("Barclays") which requires Barclays to purchase bonds that are tendered and not remarketed. Under the terms of the Barclays standby bond purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 32.5 basis points (or higher, under certain circumstances) of the commitment amount. The agreement expired in April 2016. The Building Authority and Barclays executed a first amendment to the agreement and extended the agreement until April 15, 2019. Under the first amendment to the standby purchase agreement, the Building Authority is required to pay Barclays in quarterly installments a facility fee in the amount of 27.5 basis points (or higher, under certain circumstances) of the initial commitment and may be extended if a mutual interest exists between both the Building Authority and Barclays. Fees incurred by the Building Authority in connection with the Barclays agreement totaled $84,230 and $87,072 for the years ended June 30, 2016 and June 30, 2015, respectively.

The 2011-1 bonds are supported by a standby bond purchase agreement with Wells Fargo Bank, N.A. ("Wells") which requires Wells to purchase bonds tendered and not remarketed in an amount not to exceed the principal on the bonds plus accrued

Table 26. Investment in Plant Activity
For the Year Ended June 30, 2016 (in thousands of dollars)

	Beginning Balance	Additions/Adjustments	Retirements/Adjustments	Ending Balance
UNIVERSITY				
Buildings and Improvements	$5,447,343	$251,688	($8,031)	$5,691,000
Equipment and Furniture	634,270	59,330	(34,632)	658,968
Software	136,570	1,052	(1,119)	136,503
Library Books	74,576	—	(8,598)	65,978
	6,292,759	**312,070**	**(52,380)**	**6,552,449**
Accumulated Depreciation	(2,494,718)	(240,957)	38,462	(2,697,213)
Subtotal	3,798,041	71,113	(13,918)	3,855,236
Land	71,579	12,582	—	84,161
Construction in Progress	464,142	428,789	(216,552)	676,379
Subtotal	535,721	441,371	(216,552)	760,540
Total	**$4,333,762**	**$512,484**	**($230,470)**	**$4,615,776**
UNIVERSITY RELATED ORGANIZATIONS				
Buildings and Improvements	7,942	—	—	7,942
Equipment and Furniture	168	—	—	168
	8,110	—	—	8,110
Accumulated Depreciation	(1,238)	($201)	—	(1,439)
Subtotal	6,872	(201)	—	6,671
Land	1,421	—	—	1,419
Total	**$8,291**	**($201)**	—	**$8,090**

Table 27. Investment in Plant Activity
For the Year Ended June 30, 2015 (in thousands of dollars)

	Beginning Balance	Additions/Adjustments	Retirements/Adjustments	Ending Balance
UNIVERSITY				
Buildings and Improvements	$4,694,649	$76,310	($9,616)	$5,447,343
Equipment and Furniture	609,786	53,085	(28,601)	634,270
Software	136,904	737	(1,071)	136,570
Library Books	84,315	—	(9,739)	74,576
	5,525,654	**816,132**	**(49,027)**	**6,292,759**
Accumulated Depreciation	(2,309,127)	(220,952)	35,361	(2,494,718)
Subtotal	3,216,527	595,180	(13,666)	3,798,041
Land	68,852	2,727	—	71,579
Construction in Progress	779,407	415,396	(730,661)	464,142
Subtotal	848,259	418,123	(730,661)	535,721
Total	**$4,064,786**	**$1,013,303**	**($744,327)**	**$4,333,762**
UNIVERSITY RELATED ORGANIZATIONS				
Buildings and Improvements	7,942	—	—	7,942
Equipment and Furniture	168	—	—	168
	8,110	—	—	8,110
Accumulated Depreciation	(1,053)	($185)	—	(1,238)
Subtotal	7,057	(185)	—	6,872
Land	1,421	—	—	1,421
Total	**$8,478**	**($185)**	—	**$8,293**

Table 28. Amounts Outstanding
At June 30, 2016 (in thousands of dollars)

Issue Borrowing	Original Borrowing	Maturity Date	Interest Rate	Amount Outstanding
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY				
Series 2004-1	$183,965	2016	5.25%	$1,515
Series 2008-A	26,580	2038	variable	20,105
Series 2008-1	232,545	2038	variable	179,425
Series 2008-2	120,560	2038	4.00% - 5.00%	63,025
Series 2009-1	247,810	2039	3.00% - 5.00%	108,365
Series 2009-2	271,855	2039	6.42% - 6.57%	271,855
Series 2009-3	28,570	2039	5.28% - 6.17%	26,235
Series 2010-1	118,985	2020	5.00%	72,310
Series 2010-2	430,320	2040	3.80% - 5.45%	430,320
Series 2010-3	3,005	2040	5.75%	2,785
Series 2011-1	135,040	2034	variable	128,245
Series 2011-2	101,700	2034	variable	97,265
Series 2013-1	212,585	2043	2.00% - 5.00%	203,420
Series 2013-2	71,790	2043	.43% - 2.69%	67,355
Series 2013-3	24,640	2043	4.00% - 5.00%	24,640
Series 2014-1	293,890	2045	3.00% - 5.00%	293,465
Series 2014-2	14,085	2020	.44% - 2.10%	11,330
Series 2014-4	157,855	2026	.20% - 3.38%	149,975
Series 2014-3	67,365	2029	2.00% - 5.00%	64,470
Series 2015-1	298,795	2036	4.00% - 5.00%	298,795
Series 2015-2	191,825	2036	3.00% - 5.00%	191,825
				2,706,705
			Unamortized Bond Premium	**122,146**
			SUBTOTAL	**2,828,851**
UNIVERSITY OF MASSACHUSETTS HEFA/MDFA				
2000 Series A	20,000	2030	variable	20,000
2007 Series D	10,435	2031	3.50% - 4.25%	8,645
Series 2011	29,970	2034	2.50% - 4.00%	26,940
				55,585
			Unamortized Bond Premium	949
			SUBTOTAL	**56,534**
WCCC HEFA/MDFA				
Series 2005-D	99,325	2029	5.00% - 5.25%	1,335
Series 2007-E	118,750	2036	3.50% - 5.00%	31,250
Series 2007-F	101,745	2036	4.00% - 5.00%	51,890
Series 2011	10,495	2023	2.00% - 5.00%	7,495
				91,970
			Unamortized Bond Premium	1,215
			SUBTOTAL	**93,185**
MDFA				
Clean Renewable Energy Bonds	1,625	2027	3.50%	1,052
			TOTAL	**$2,979,622**

interest up to 185 days at an annual interest rate not to exceed 12 percent. Under the agreement, the Building Authority was required to pay Wells in quarterly installments a facility fee in the amount of 40 basis points (or higher, under certain circumstances) of the initial commitment. The initial commitment under the agreement was set at $143.3 million and was subject to adjustment from time to time in accordance with the provisions of the agreement. The standby bond purchase agreement expired on June 9, 2014. The Building Authority and Wells executed a first amendment to the standby bond purchase agreement to extend the agreement until June 9, 2017. Under the first amendment to the standby purchase agreement, the Building Authority is required to pay Wells in quarterly installments a facility fee in the amount of 25 basis points (or higher, under certain circumstances) of the initial commitment. The initial commitment under the first

Table 29. Bond Payable Activity
For the Year Ended June 30, 2016 (in thousands of dollars)

	Beginning Balance	Additions/Amortization	Retirements/Repayments	Ending Balance
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY				
Series 2004-A	$2,340		$(2,340)	
Series 2004-1	8,300		(6,785)	$1,515
Series 2005-1	2,805		(2,805)	
Series 2005-2	16,005		(16,005)	
Series 2008-A	21,035		(930)	20,105
Series 2008-1	187,125		(7,700)	179,425
Series 2008-2	65,835		(2,810)	63,025
Series 2009-1	120,575		(12,210)	108,365
Series 2009-2	271,855			271,855
Series 2009-3	26,755		(520)	26,235
Series 2010-1	84,775		(12,465)	72,310
Series 2010-2	430,320			430,320
Series 2010-3	2,835		(50)	2,785
Series 2011-1	129,690		(1,445)	128,245
Series 2011-2	98,220		(955)	97,265
Series 2013-1	208,060		(4,640)	203,420
Series 2013-2	69,570		(2,235)	67,335
Series 2013-3	24,640			24,640
Series 2014-1	293,890		(425)	293,465
Series 2014-2	14,085		(2,755)	11,330
Series 2014-4	153,800		(3,825)	149,975
Series 2014-3	67,365		(2,895)	64,470
Series 2015-1	298,795			298,795
Series 2015-2	191,825			191,825
Plus: Unamortized Bond Premium	133,429		(11,283)	122,146
Subtotal	**2,923,929**		**(95,078)**	**2,828,851**
UNIVERSITY OF MASSACHUSETTS HEFA/MDFA				
2000 Series A	20,000			20,000
2007 Series D	9,025		(380)	8,645
Series 2011	27,925		(985)	26,940
Plus: Unamortized Bond Premium	895		54	949
Subtotal	**57,845**		**(1,311)**	**56,534**
WCCC HEFA/MDFA				
WCCC 2005 Series D	1,785		(450)	1,335
WCCC 2007 Series E	33,945		(2,695)	31,250
WCCC 2007 Series F	54,830		(2,940)	51,890
Series 2011	8,270		(775)	7,495
Plus: Unamortized Bond Premium	1.499		(284)	1,215
Subtotal	**100,329**		**(7,144)**	**93,185**
MDFA				
Clean Renewable Energy Bonds	1,147		(95)	1,052
Total	**$3,083,250**		**$(103,628)**	**$2,979,622**

amendment to the standby bond purchase agreement was set at $139.1 million and is subject to adjustment from time to time in accordance with the provisions of the agreement. Fees incurred by the Building Authority in connection with the Wells agreement totaled $0.4 million and $0.4 million for the years ended June 30, 2016 and 2015, respectively.

Window Bonds In fiscal year 2011, the Building Authority issued its 2011-2 bonds in a variable rate Window Bond mode. As with the Building Authority's other variable rate bonds, the Window Bondholders can tender the bonds at any time. However, unlike the Building Authority's other variable rate bonds, where the bondholders will receive payment on any tendered bonds 7 days from the tender, Window Bondholders are not required to receive funds for the tender until after a 30 day remarketing period and an additional 180 day funding window period. Due to this 210 day funding period, the Building Authority is not required to obtain any type of liquidity support for the 2011-2 bonds and the bonds are

Table 30. Principal and Interest on Bonds Payable For the Next Five Fiscal Years and In Subsequent Five-Year Periods
Estimated Using Rates in Effect at June 30, 2016
(in thousands of dollars)

Fiscal Year	Principal	Interest
2017	$94,586	$114,869
2018	94,991	112,464
2019	99,976	109,248
2020	103,321	105,600
2021	108,108	101,307
2022-2026	503,361	448,094
2027-2031	505,120	348,576
2032-2036	499,610	246,334
2037-2041	545,790	127,121
2042-2046	300,450	27,901
2047-2051		
Total	**$2,855,313**	**$1,741,514**

considered supported with self-liquidity. Window Bondholders receive an interest rate on the Window Bonds at a fixed spread over the Securities Industry and Financial Markets Association Municipal Swap IndexTM ("SIFMA"). The initial spread to the SIFMA index is 9 basis points.

Bond Refundings There were no refunding of bonds in the fiscal year 2016.

In Fiscal year 2015, the Building Authority issued $191.8 million of Refunding Revenue Senior Series 2015-2 Bonds which advance refunded $104.5 million for WCCC bonds series, $37.2 million of the Building Authority's 2008-2 bonds and $66.7 million of the Building Authority's 2009-1 bonds. The Building Authority deposited into trust accounts funds sufficient to provide for all future debt service payments on the refunded bonds until the bonds are called.

These advanced refunded bonds are considered defeased and, accordingly, the liability for the bonds payable and the assets held to repay the debt are not recorded in the Building Authority's financial statements.

In connection with the Building Authority's refundings, the Building Authority recorded a difference between the reacquisition price and the net carrying amount of the refunded debt of $95.4 million. This balance is being reported as a component of deferred outflows, loss on debt refunding, and will be amortized as an increase in interest expense over remaining term of the original life of the refunded bonds. These refundings reduced the Building Authority's debt service payments in future years by $73.8 million and resulted in an economic gain (the present value of the savings) of $56.2 million.

Bond Premium and Issuance Expenses There were no new bond issues in the fiscal year 2016, thus no bond premiums were recorded in the current year. In fiscal year 2015, the Building Authority received premiums at issuance totaling $190.6 million. The Building Authority amortizes the premiums received as a reduction in interest expense over the life of the respective bond issue.

In connection with the Building Authority's bond issues, the Building Authority incurred certain issuance costs associated with the bond offerings. In fiscal year 2015 these costs amounted to $3.5 million, respectively, and were expensed in accordance with the provisions of GASB Statement No. 65, *Items Previously Reported as Assets and Liabilities.*

Interest Rate Swaps The Building Authority uses derivative instruments to manage the impact of interest rate changes on its cash flows and net position by mitigating its exposure to certain market risks associated with operations, and does not use derivative instruments for trading or speculative purposes.

The Building Authority's contracts are evaluated pursuant to GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments* ("GASB No. 53") to determine whether they meet the definition of derivative instruments, and if so, whether they effectively hedge the expected cash flows associated with interest rate risk exposures. The Building Authority applies hedge accounting for derivative instruments that are deemed effective hedges and under GASB No. 53 are referred to as hedging derivative instruments. Under hedge accounting, changes in the fair value of a hedging derivative instrument are reported as a deferred inflow or deferred outflow in the statement of net position until the contract is settled or terminated.

All settlement payments or receipts for hedging derivative instruments are recorded as interest expense in the period settled.

The Building Authority's hedging derivative instruments at June 30, 2016 and 2015 were as follows: **See Table 32.**

The terms of the Building Authority's financial derivative instruments that were outstanding at June 30, 2016 are summarized in the table below: **See Table 33.**

Fair Values — The Building Authority implemented GASB No 72, *Fair Value measurements and Application*" in fiscal year 2016. GASB 72 defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between swap counterparties at the measurement date, which includes the non-performance risk. The Building Authority engaged an independent party to perform the valuations. The expected swap cash flows are calculated using the zero-coupon discounting method which takes into consideration the prevailing interest rate environment, the specific terms and conditions of a given transaction, and assumes that the current forward rates

Table 31. Bond Payable Activity
For the Year Ended June 30, 2015 (in thousands of dollars)

	Beginning Balance	Additions/Amortization	Retirements/Repayments	Ending Balance
UNIVERSITY OF MASSACHUSETTS BUILDING AUTHORITY				
Series 2003-1	$6,155		$(6,155)	
Series 2004-A	4,575		(2,235)	$2,340
Series 2004-1	16,600		(8,300)	8,300
Series 2005-1	5,480		(2,675)	2,805
Series 2005-2	25,200		(9,195)	16,005
Series 2008-A	21,930		(895)	21,035
Series 2008-1	194,530		(7,405)	187,125
Series 2008-2	105,725		(39,890)	65,835
Series 2009-1	198,670		(78,095)	120,575
Series 2009-2	271,855			271,855
Series 2009-3	27,250		(495)	26,755
Series 2010-1	96,645		(11,870)	84,775
Series 2010-2	430,320			430,320
Series 2010-3	2,880		(45)	2,835
Series 2011-1	131,090		(1,400)	129,690
Series 2011-2	99,135		(915)	98,220
Series 2013-1	212,585		(4,525)	208,060
Series 2013-2	71,790		(2,220)	69,570
Series 2013-3	24,640			24,640
Series 2014-1	293,890			293,890
Series 2014-2	14,085			14,085
Series 2014-4	157,855		(4,055)	153,800
Series 2014-3		$67,365		67,365
Series 2015-1		298,795		298,795
Series 2015-2		191,825		191,825
Plus: Unamortized Bond Premium	64,807	81,639	(13,017)	133,429
Subtotal	**2,477,692**	**639,624**	**(193,387)**	**2,923,929**
UNIVERSITY OF MASSACHUSETTS HEFA/MDFA				
2000 Series A	20,000			20,000
2007 Series D	9,395		(370)	9,025
Series 2011	28,880		(955)	27,925
Plus: Unamortized Bond Premium	1,056		(161)	895
Subtotal	**59,331**		**(1,486)**	**57,845**
WCCC HEFA/MDFA				
WCCC 2005 Series D	78,676		(76,891)	1,785
WCCC 2007 Series E	105,659		(71,715)	33,944
WCCC 2007 Series F	84,416		(29,585)	54,831
Series 2011	9,030		(760)	8,270
Plus: Unamortized Bond Premium	8,398		(6,899)	1,499
Subtotal	**286,179**		**(185,850)**	**100,329**
MDFA				
Clean Renewable Energy Bonds	1,242		(95)	1,147
Total	**$2,824,444**	**$639,624**	**$(380,818)**	**$3,083,250**

implied by the yield curve are the market's best estimate of future spot interest rates. The income approach is then used to obtain the fair value of the swaps, where future amounts (the expected swap cash flows) are converted to a single current (discounted) amount, using a rate of return that takes into account the relative risk of nonperformance associated with the cash flows, and time value of money. Where applicable under the income approach, the option pricing model technique, such as the Black-Derman-Toy model, or other appropriate option pricing model is used. As the interest rate swaps are valued using the LIBOR swap rate observed at commonly quoted intervals for the full term of the swaps, the measurement results in the swap fair values being categorized as Level 2.

As of June 30, 2016 and 2015, the Building Authority's swaps had a negative fair value of $90.5 million and $71.1 million, respectively, and as such are presented as noncurrent liabilities.

Table 32. The Building Authority's Hedging Derivative Instruments
At June 30, 2016 and 2015 (in thousands of dollars)

	Fair Value June 30, 2015	Net Change in Fair Value	Fair Value June 30, 2015	Type of Hedge	Financial Statement Classification for Changes in Liability
Series 2008-1 Swap	($29,349)	($8,878)	($38,227)	Cash Flow	Non-current Liability
Series 2008-A Swap	(3,367)	(971)	(4,338)	Cash Flow	Non-current Liability
Series 2006-1 Swap	(38,338)	(9,575)	(47,913)	Cash Flow	Non-current Liability
Total	**($71,054)**	**($19,424)**	**($90,478)**		

Table 33. The Terms of the Building Authority's Financial Derivative Instruments That Were Outstanding
At June 30, 2016 (in thousands of dollars)

	Type	Effective Date	Termination Date	Rate Authority Pays	Authority Receives	Original Notional Value
Series 2008-1 Swap	Synthetic Fixed	May 1, 2008	May 1, 2038	3.388%	70% of 1-Month LIBOR	$232,545
Series 2008-A Swap	Synthetic Fixed	Nov 13, 2008	May 1, 2038	3.378%	70% of 1-Month LIBOR	26,580
Series 2006-1 Swap	Synthetic Fixed	Apr 20, 2006	Nov 1, 2034	3.482%	60% of 3-Month LIBOR + .18%	$243,830

Credit risk **—** As of June 30, 2016, the Building Authority was not exposed to credit risk on the swaps as the fair value was negative. Since changes in interest rates affect the fair values of swap agreements, it is possible that the swap agreements with negative fair values become positive which would expose the Authority to credit risk. To mitigate the potential for credit risk, when a swap position has a positive fair value and if the counterparty's credit quality falls below A3/A/A, the fair value of the swap will be fully collateralized by the counterparty with U.S. Government Securities or US Government Agency Securities. Collateral posted by the counterparty will be held by a third-party custodian.

The credit ratings for the Authority's counterparties at June 30, 2016 are as follows:

Table 34. The Credit Ratings for the Building Authority's Counterparties
At June 30, 2016

	Credit Ratings		
	Moody's	S&P	Fitch
UBS AG	A1	A	A
Deutsche Bank AG	Baa2	BBB+	A–
Citi Bank NA	A1	A	A+

Basis risk **—** The Building Authority is exposed to basis risk on its pay-fixed interest rate swaps because the variable-rate payment received by the Building Authority (a percent of LIBOR) on these hedging derivative instruments is based on indexes other than the actual interest rates the Authority pays on its hedged variable rate debt. Should the relationship between LIBOR and the actual variable rate interest payments on the bonds converge, the expected cost savings may not materialize.

Termination risk **—** The Building Authority's swaps are governed under the International Swap Dealers Association Master Agreement (the "Master Agreement"), which includes standard termination events, such as failure to pay and bankruptcy. Additionally, the Master Agreement was amended so that the swap may be terminated by the Building Authority if the counterparty's credit quality rating falls below certain levels or the counterparty fails to have a rating. Further, the swap may be terminated by the counterparties if the long-term, unsecured, unenhanced senior debt rating of any bonds issued by the Building Authority is withdrawn, suspended or falls below certain levels or the Authority fails to have a rating. The Building Authority or the counterparties may terminate the swaps if the other party fails to perform under the terms of the contract. The A Building Authority may also terminate the swaps at its option. If the swap is terminated, the variable-rate bonds would no longer carry a synthetic fixed interest rate and the Building Authority's interest payment will be based solely upon the rate required by the related bonds as issued. When a termination event occurs, a mark-to-market (or "fair market value") calculation is performed to determine whether the Building Authority is owed or must pay cash to close out the swap position. A negative fair value means the Building Authority would incur a loss and need to make a termination payment to settle the swap position. A positive fair value means the Authority would realize a gain and receive a termination payment in settlement of the swap position.

Contingencies **—** All of the Building Authority's swaps include provisions that require the Building Authority to post collateral in the event its credit rating falls below certain levels. In the event the Building Authority is rated A2 by Moody's Investors Service or A by Standard & Poor's, the Building Authority would need to post collateral equal to amounts above the fair value of its swaps in liability positions above $10.0 million. In the event the Building Authority is not rated or rated below A3 by Moody's Investors Service or below A- by Standard & Poor's, the Building Authority must post collateral in the amount of the fair value of the swaps in liability positions. The collateral posted is to be in the form of cash obligations guaranteed by the U.S. Treasury, or negotiable debt obligations issued by the Federal Home Loan Mortgage Association or the Federal National Mortgage Association. If the Building Authority does not post collateral, the derivative instrument may be terminated by the counterparty. The Building Authority's credit rating is Aa2 from Moody's Investors Service, AA from Fitch Ratings, and AA- from Standard and Poor's at June 30, 2016; therefore, no collateral was required to be posted.

Termination of hedge accounting **—** In June of 2011, the Building Authority undertook an advance refunding of the 2008-3 and 2008-4 variable rate bonds hedged by the Series 2006-1 Swap. As part of the refunding, the Series 2006-1 swap was re-assigned to a new underlying notional (the 2011-1 and 2011-2 Bonds) with identical terms. This refunding and reassignment effectively terminated the original hedge. At June 30, 2011, the Series 2006-1 Swap was considered a hedging derivative instrument. In accordance with GASB No. 53, at the time of a termination event related to an advance refunding of the hedged debt, the balance of the amounts in deferred outflows is to be included in the net carrying amount of the refunded debt for the purposes of calculating the deferred loss on refunding. The balance of the deferred outflows that was included in the net carrying amount of the refunded debt at the time of the refunding was $22.2 million. The change in fair value of the Series 2006-1 Swap from the refunding date to June 30, 2016 is reported as a deferred outflow as the swap was determined to be effective at June 30, 2016.

Table 35. Swap Payments and Associated Debt
Using Rates as of June 30, 2016, the Debt Service Requirements of the Variable-Rate Debt and Net Swap Payments, Assuming Current Interest Rates Remain the Same for Their Term

Fiscal Year Ending June 30,	Principal	Interest	Interest Rate Swaps, Net	Total
2017	$11,625	$387	$12,601	$24,613
2018	11,770	378	12,270	24,418
2019	12,215	370	11,912	24,497
2020	12,720	359	11,522	24,601
2021	17,955	227	5,987	24,169
2022-2026	151,915	1,221	39,466	192,602
2027-2031	138,310	571	19,336	158,217
2032-2036	54,235	109	3,687	58,031
2037-2041	1,620	13	504	2,137
Total	**$412,365**	**$3,635**	**$117,285**	**$533,285**

Swap payments and associated debt. Using rates as of June 30, 2016, the debt service requirements of the variable-rate debt and net swap payments, assuming current interest rates remain the same for their term, were as follows: **See Table 35.**

As actual rates vary, variable-rate bond interest payments and net swap payments will vary.

MassDevelopment

University of Massachusetts Series A, D and 2011

The University, through the Massachusetts Development Finance Agency ("MassDevelopment"), has issued bonds in order to construct new student centers on the Boston and Lowell campuses; to create a pool of funds to acquire telecommunications, electronics, computer, office, research, equipment and administrative systems; and to fund the related renovation costs and to refund previously issued bonds.

Variable Rate Debt: In March 2000, the University issued $40.0 million of MHEFA Variable Rate Demand Revenue Bonds, University of Massachusetts Issue, Series A (the "Series A Bonds") to create a pool of funds from which the University could finance and refinance the acquisition of certain equipment and related renovation costs at the various University campuses on a revolving basis throughout the term of the Series A Bonds. The Series A Bonds were remarketed on April 1, 2016 and now bear interest at the long term rate of 1.15%. The newest long term rate period will end on March 31, 2019 and the Remarketed Series A Bonds will be subject to mandatory tender for purchase on April 1, 2019. The purchase price of the bonds will be paid from the remarketing of such bonds. However, if the remarketing proceeds are insufficient, the University will be obligated to purchase the bonds tendered, up to an aggregate principal amount of $20.0 million. The Remarketed Series A Bonds will mature on November 1, 2030 and are subject to mandatory purchase prior to maturity as described above. Interest on the Remarketed Series A Bonds in the newest long-term rate period is payable on October 1 and April 1. The Remarketed Series A Bonds are considered a reissuance for federal tax purposes. The Remarketed Series A Bonds are not supported by any insurance policy, liquidity facility or other credit enhancement. The Remarketed Series A Bonds are a general obligation of the University payable from all funds of the University permitted to be applied thereto. The University's unrestricted net position secures the obligations of the University with respect to the Remarketed Series A Bonds. The University is required to certify annually that there are sufficient funds in the unrestricted net position to cover the debt service on the Remarketed Series A Bonds.

Debt covenants: The University of Massachusetts Series A, D, and 2011 bonds include a covenant for the maintenance of a debt service fund as outlined in the related debt agreement. The University is required to make deposits in this debt service fund on or before the twenty-fifth day of each March and September. As of June 30, 2016 and 2015, the university is in compliance with this covenant.

Refundings: In November 2011, the University issued $30.0 million of Massachusetts Development Finance Agency Revenue Refunding Bonds (the "Series 2011 Bonds"). The University deposited the proceeds into an irrevocable trust fund to provide for payment of the MHEFA Revenue Bonds, University of Massachusetts Issue, 2002 Series C (the "Series C Bonds"). This payment was made as a lump sum in October 2012. The Series 2011 bonds were issued at a premium of $1.2 million. These bonds bear interest at various fixed rates ranging from 2.5% to 4.0% and mature on October 1, 2034. As a result of the change in future payments, the University will reduce its aggregate debt service payments by $4.8 million and achieve an economic gain of $3.4 million.

In January 2007, the University issued $10.4 million of MHEFA Revenue Bonds, University of Massachusetts Issue Series D. The proceeds from this issuance were used to advance refund a portion of the MHEFA Revenue Bonds, University of Massachusetts Issue, 2001 Series B (the "Series B Bonds"). These advance refunded bonds were defeased, and accordingly, the liability for the bonds payable and the assets held to repay the debt have not been included in the University's financial statements.

Worcester City Campus Corporation Series D, E, F and 2011

The Worcester City Campus Corporation (WCCC) through MassDevelopment has issued bonds to finance the construction or acquisition of the Lazare Research Building, South Road parking garage, Ambulatory Care Center ("ACC"), two buildings housing the operations of MassBiologics, One Innovation Drive, 373, 377 and 381 Plantation Street, Worcester and to refund previously issued bonds.

In November 2011, the Corporation issued $10.5 million of Massachusetts Development Finance Agency Revenue Refunding Bonds (the "Series 2011 Bonds"). The Series 2011 Bonds were issued at a premium of $1.1 million. The proceeds of the Series 2011 Bonds were used to refund the Massachusetts Health and Education Facilities Authority (MHEFA) Series B Bonds, which were used to finance the construction of a parking garage, the acquisition and installation of equipment at the Lazare Research Building, and the financing of 373 Plantation Street.

In January 2007, the Corporation issued $101.7 million of MHEFA Revenue Bonds (the Series F Bonds). The Series F Bonds were issued at a premium of $2.8 million. These bonds have been partially refunded by Series 2015 bonds.

In January 2007, the Corporation issued $118.8 million of MHEFA Revenue Bonds (the Series E Bonds). The Series E Bonds were issued at a premium of $3.9 million. The Corporation deposited $32.4 million of the proceeds to an irrevocable trust fund to provide for partial advanced refunding of outstanding MHEFA Series B Revenue Bonds. In accordance with the applicable guidance, a portion of the Series B Bonds totaling $30.8 million and the related irrevocable trust has been derecognized by the Corporation. Approximately $85.7 million of the Series E Bonds proceeds were used to finance the construction of the Ambulatory Care Center. These bonds have been partially refunded by Series 2015 bonds.

In April 2005, the Corporation issued $99.3 million of MHEFA Revenue Bonds (the Series D Bonds). The Corporation deposited the proceeds to an irrevocable trust fund to provide for payment of the MHEFA Series A Revenue Bonds. The proceeds from the Series A Bonds were previously used to fund the construction of the Lazare Research Building. In accordance with the applicable guidance, the Series A Bonds and the related irrevocable trust were derecognized by the Corporation. The Series D Bonds have been partially refunded by Series 2014 Bonds. The Series D Bonds were issued at a premium of $4.1 million.

Pledged Revenues: WCCC is obligated under the terms of indebtedness to make debt service payments from revenues received from certain facility leases. Total applicable pledged revenues were $6.5 million and $6.6 million for fiscal years 2016 and 2015, respectively.

Clean Renewable Energy Bonds

During 2011, the University entered into an Energy Services agreement for Solar Panel construction with the Commonwealth's Division of Capital Asset Management and Century Bank and Trust Company. The financing arrangement included $1.6 million in Clean Renewable Energy Bonds. The outstanding principal balance for these bonds was $1.1 million as of June 30, 2016.

9. LEASES

The University leases certain equipment and facilities under operating leases with terms exceeding one year, which are cancelable at the University's option with 30 day notice. The rent expense related to these operating leases amounted to approximately $27.1 million and $25.6 million for the years ended June 30, 2016 and 2015, respectively. The master leases primarily consist of telecommunications, software, and co-generation systems. The University also leases space to third party tenants. During 2016 and 2015, the amount reported as rental income was $18.3 million and $18.8 million, respectively.

The following presents a schedule of future minimum payments under non-cancelable operating leases for the next five years and in subsequent five-year periods for the University as of June 30, 2016 (in thousands): **See Table 36.**

Table 36. A Schedule of Future Minimum Payments Under Non-Cancelable Operating Leases for the Next Five Years and in Subsequent Five-Year Periods for the University
As of June 30, 2016 (in thousands of dollars)

Year	Operating Leases
2017	$23,082
2018	22,452
2019	22,010
2020	20,836
2021	20,471
2022 and thereafter	148,975
Total Payments	**$257,826**

10. OTHER LONG-TERM LIABILITIES

During the year ended June 30, 2016, the following changes occurred in long-term liabilities as recorded in the statements of net position (in thousands): **See Table 37.**

During the year ended June 30, 2015 the following changes occurred in long-term liabilities as recorded in the statement of net position (in thousands): **See Table 38.**

11. FRINGE BENEFITS

Expenditures for the years ended June 30, 2016 and 2015 include $295.1million and $257.8 million, respectively, for the employer portion of fringe benefit costs (pension expense, health insurance for active employees and retirees, and terminal leave) that was paid directly by the Commonwealth of Massachusetts. Of this amount, $117.1 million for 2016 and $98.4 million for 2015 was reimbursed to the Commonwealth and $178.0 million and $159.4 million, respectively, is included in revenue as state appropriations.

12. MEDICAL SCHOOL LEARNING CONTRACTS

The University's Medical School enters into learning contracts with certain medical students. These contracts give students the option of deferring a portion of their tuition until after residency training, and canceling all or a portion of their tuition if they practice primary care medicine for two or four full years (depending on conditions) in the Commonwealth. The University does not record as revenue the portion of tuition deferred under these learning contracts until actual cash repayments are received. The cumulative amount granted under such learning contracts plus accrued interest totaled $73.2 million and $70.9 million at June 30, 2016 and 2015, respectively. Cumulative repayments totaled approximately $56.2 million and $53.8 million as of June 30, 2016 and 2015, respectively.

13. PENSIONS

The Massachusetts State Employees' Retirement System (MSERS) is a public employee retirement system (PERS) that administers a cost-sharing multi-employer defined benefit plan as defined by Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, covering substantially all employees of the Commonwealth. Management of MSERS is vested in the Massachusetts State Retirement Board (the MSRB) which consists of five members- two elected by current and active MSERS members, one by the remaining members of the MSRB, one who is appointed by the State Treasurer and the State Treasurer, who serves as ex-officio and is the Chair of the MSRB.

MSERS provides 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 creditable 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 prior to age 60.

The MSERS' funding policies have been established by Chapter 32 of MGL. The Legislature has the authority to amend these policies. The annuity portion of the MSERS 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.

Member contributions for MSERS vary depending on the most recent date of membership: **See Table 39.**

Table 37. Changes Occurred in Long-Term Liabilities
During the Year Ended June 30, 2015 (in thousands of dollars)

	Beginning Balance	Additions/Adjustments	Reductions/Adjustments	Ending Balance
UNIVERSITY				
Capital Lease Obligations	$562	$198	($331)	$ 429
Compensated Absences	31,813	3,858		35,671
Workers' Compensation	10,886	1,274		12,160
Unearned Revenues and Credits	26,822	13,049	(15,935)	23,936
Advances and Deposits	28,621	1,056	(1,972)	27,705
Other Liabilities	41,583	8,536	(1,359)	48,760
UNIVERSITY RELATED ORGANIZATIONS				
Other Liabilities	$3,505			$3,502

Table 38. Changes Occurred in Long-Term Liabilities
During the Year Ended June 30, 2015 (in thousands of dollars)

	Beginning Balance	Additions/Adjustments	Reductions/Adjustments	Ending Balance
UNIVERSITY				
Capital Lease Obligations		$562		$ 562
Compensated Absences	$31,779	34		31,813
Workers' Compensation	10,811	75		10,886
Unearned Revenues and Credits	21,243	23,585	($18,006)	26,822
Advances and Deposits	28,094	758	(231)	28,621
Other Liabilities	43,263		(1,680)	41,583
UNIVERSITY RELATED ORGANIZATIONS				
Other Liabilities	$3,483	$22		$3,505

The University makes contributions on behalf of the employees through a fringe benefit charge assessed by the Commonwealth. The fringe benefit charged amounted to $84.5 million and $85.7 million for the years ended June 30, 2016 and 2015, respectively. Annual covered payroll was 75.8% and 76.2% for the years ended June 30, 2016 and 2015, respectively of annual total payroll for the University. The amount of pension expense included in the fringe charge was $25.1 million and $22.4 million for the years ended June 30, 2016 and 2015, respectively.

Table 39. MSER Member Contributions by Date of Membership

Hire Date	% of Compensation
Prior to 1975	5% of regular compensation
1975 to 1983	7% of regular compensation
1984 to 6/30/1996	8% of regular compensation
7/1/1996 to present	9% of regular compensation
1979 to present	An additional 2% of regular compensation in excess of $30,000

Actuarial Assumptions The total pension liability for the June 30, 2015 measurement date was determined by an actuarial valuation as of January 1, 2015 rolled forward to June 30, 2015. This valuation used the following assumptions:

1. a) 7.5% investment rate of return, (b) 3.5% discount rate credited to an annuity savings fund and (c) 3.00% cost of living increase per year.
2. Salary increases are based on analyses of past experience but range from 3.5% to 9.0% depending on group and length of service.
3. 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 of SERS has increased by approximately $230 million as of June 30, 2015.
4. Mortality rates were as follows:

    a) Pre-retirement – reflects RP-2000 Employees table projected generationally with Scale BB and a base year of 2009 (gender distinct)

b) Post-retirement – reflects RP-2000 Healthy Annuitant table projected generationally with Scale BB and a base year of 2009 (gender distinct)

c) Disability – the mortality rate 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)

The total pension liability for the June 30, 2014 measurement date was determined by an actuarial valuation as of January 1, 2014 rolled forward to June 30, 2014. This valuation used the following assumptions:

1. (a) 8.0% investment rate of return, (b) 3.5% interest rate credited to an annuity savings fund and (c) 3.0% cost of living increase per year.

2. Salary increases are based on analyses of past experience but range from 3.5% to 9.0% depending on group and length of service.

3. Mortality rates were as follows:
   a) Pre-retirement – reflects RP-2000 Employees table projected 20 years with Scale AA (gender distinct)
   b) Post-retirement – reflects Healthy Annuitant table projected 15 years with Scale AA (gender distinct)
   c) Disability – the mortality rate is assumed to be in accordance with the RP-2000 Table projected 5 years with Scale AA (gender distinct) set forward 3 years for males.

Investment assets of MSERS are with the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on pension 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, 2015 are summarized in the following table: **See Table 40.**

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, 2014 and 2013 are summarized in the following table: **See Table 41.**

Discount Rate The Discount rate used to measure the total pension liability was 7.5%. The projection of cash flows used to determine the discount rate assumed that plan member's 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 net position was 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.

Sensitivity Analysis The following illustrates the sensitivity of the collective net pension liability to changes in the discount rate as of June 30, 2015. In particular, the table presents the MSERS collective pension liability assuming it was calculated using a single discount rate that is one-percentage-point lower or one-percentage-point higher than the current discount rate (amounts in thousands):

Table 40. Summary of PRIT Fund's Target Asset Allocation
As of June 30, 2015

Asset Class	Target Allocation	Long-term Expected Real Rate of Return
Global Equity	40.00%	6.90%
Core Fixed Income	13.00%	2.40%
Private Equity	10.00%	8.50%
Real Estate	10.00%	6.50%
Value Added Fixed Income	10.00%	5.80%
Hedge Funds	9.00%	5.80%
Portfolio Completion Strategies	4.00%	5.50%
Timber / Natural Resources	4.00%	6.50%
Total	**100.00%**	

Table 41. Summary of PRIT Fund's Target Asset Allocation
As of June 30, 2014

Asset Class	Target Allocation	Long-term Expected Real Rate of Return 2014
Global Equity	43.00%	7.20%
Core Fixed Income	13.00%	2.50%
Hedge Funds	10.00%	5.50%
Private Equity	10.00%	8.80%
Real Estate	10.00%	6.30%
Value Added Fixed Income	10.00%	6.30%
Timber / Natural Resources	4.00%	5.00%
Total	**100.00%**	

Table 42. MSERS Collective Pension Liability
As of June 30, 2016 (in thousands of dollars)

Fiscal Year Ended	1% Decrease to 6.5%	Current Discount Rate 7.5%	1% Increase to 8.5%
June 30, 2016	$606,780	$408,418	$308.037
June 30, 2015	$342,861	$237,135	$145,815

For the year ending June 30, 2016, the University recognized $34.5 million of pension expense, which is recorded in Operating Expenses. The following table shows the components of pension expense as of June 30, 2016 (amounts in thousands):

Table 43. Components of Pension Expense
As of June 30, 2016 (in thousands of dollars)

Proportionate Share of Plan Pension Expense	$46,106
Net Amortization of Deferred Amounts from Change in Proportion	11,224
2016 Payments	(22,864)
Pension Expense	**$34,466**

Pension Liabilities, Pension Expense, and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions At June 30, 2016 the University reported a liability of $408.4 million for its proportionate share of MSERS's net pension liability. The net pension liability was measured as of June 30, 2015 and the total pension liability was used to calculate the net pension liability which was determined by an actuarial valuation as of that date. The University's proportion of the net pension liability was based on a projection of the University's long-term share of contributions to the pension plan relative to the total projected contributions of all participating entities, actuarially determined. There were no changes of assumptions or other inputs that affected measurement of the total pension liability during the measurement period. There were no changes of benefit terms that affected measurement of the total pension liability during the measurement period.

At June 30, 2016, the University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

Table 44. The University's Proportionate Share of MSERS's Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension
As of June 30, 2016 (in thousands of dollars)

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions		$70,730
Changes in Proportion Due to Internal Allocation		45,965
Employer Contributions after measurement date		22,386
Differences Between Expected and Actual Experience		8,072
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	$11,736	
Changes in Proportion From Commonwealth	314	
	$12,050	**$147,153**

At June 30, 2015, the University reported its proportionate share of MSERS's deferred outflows of resources and deferred inflows of resources related to pension from the following sources:

Table 45. The University's Proportionate Share of MSERS's Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pension
As of June 30, 2015 (in thousands of dollars)

	Deferred Inflows of Resources	Deferred Outflows of Resources
Changes of Assumptions		$2,666
Changes in Proportion Due to Internal Allocation		21,910
Employer Contributions after measurement date		22,463
Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	$48,672	
Changes in Proportion From Commonwealth	82	
	$48,754	**$47,039**

The net amounts of the employer's balances of deferred outflows and inflows of resources related to pensions will be recognized in pension expense as follows:

Table 46. Pension Expense — Net Amounts of the Employer's Balances of Deferred Outflows and Inflows of Resources (in thousands of dollars)

Year Ended June 30	
2017	$20,439
2018	$20,439
2019	$20,439
2020	$33,774
2021	$17,627
Thereafter	—

Non-vested faculty and certain other employees of the University can opt out of MSERS and participate in a defined contribution plan, the Massachusetts Optional Retirement Program ("ORP"), administered by the Commonwealth's Department of Higher Education. At June 30, 2016 and 2015, there were 3,783 and 4,449 University employees, respectively participating in ORP. Employees contribute at the same rate as members in SERS do and the Commonwealth matches 5% of employee contributions. The Commonwealth contributed $10.4 million and $6.2 million in 2016 and 2015, respectively. University employees contributed $24.4 million and $28.6 million in 2016 and 2015, respectively.

The MSERS and ORP retirement contributions of employees who become members of MSERS or ORP after January 1, 2011 are subject to a state compensation limit. Effective January 1, 2011, the University established a defined contribution plan, the University of Massachusetts 401(a) Retirement Gap Plan, administered by the University's Treasury Office. Employees with MSERS or ORP membership dates after January 1, 2011 are eligible employees for the Gap Plan. Eligible employees begin participation in the Gap Plan when their regular compensation exceeds the state compensation limit in effect for the plan year, at which point their contributions to MSERS or ORP are required to stop for the remainder of the plan year. Employee contributions to the Gap Plan are mandatory and at the same rate as MSERS and ORP; the University contributes 5%. At June 30, 2016 and 2015 plan assets totaled approximately $1.529 million and $891.4 million, respectively.

14. CONCENTRATION OF CREDIT RISK (Other than Cash and Investments)

The receivable from UMass Memorial Medical Center (UMMMC) which is uncollateralized represents a potential concentration of credit risk for the university. The receivable from UMass Memorial represents 11.2% and 5.7% of total accounts receivable for the University at June 30, 2016 and 2015, respectively. The University also had uncollateralized receivables one organization comprising approximately 12.0% of the total outstanding receivables at June 30, 2016 and uncollateralized receivables from three other organizations comprising approximately 11.8%, 8.0% and 3.7% of the total outstanding receivables at June 30, 2015.

15. COMMITMENTS AND CONTINGENCIES

The Building Authority, University, and WCCC have outstanding purchase commitments under construction contracts and real estate agreements in amounts aggregating $157.3 million and $205.7 million at June 30, 2016 and 2015, respectively. In connection with the investments in certain limited partnership agreements, the Foundation has $84.7 million and $60.1 million in committed calls as of June 30, 2016 and 2015, respectively, which are scheduled to be funded over a number of years. The University has entered an Energy Performance Contract that is being managed by the Commonwealth's Division of Capital Asset Management (DCAM) under its Clean Energy Investment Program. This project includes 32 energy conservation measures. The installation costs will be incurred over 2 phases with Phase 1 being $18.0 million and Phase 2 being $13.5 million. The term of these transactions is 20 years. The University has a commitment to the Commonwealth for Clean Energy Investment Program Funds used through June 30, 2016 and 2015 in the amount of $28.2 million and $29.1 million, respectively.

The University, as an agency of the Commonwealth, is self-insured for property loss exposure, subject to appropriation from the state legislature. However, properties owned by the University of Massachusetts Building Authority located on a campus of the University, such as the Mullins Center, dining commons, and most dormitories, are insured by the Building Authority. In addition, certain properties owned by other University Related Organizations and leased to the University are insured by the related organization. The University and its employees are protected against tort claims through sovereign immunity under Chapter 258 of the Massachusetts General Laws. The University maintains certain liability insurance policies, including Commercial General Liability, leased Automotive Liability, Directors and Officers and Comprehensive Crime policies. Employees of the University are covered for Worker's Compensation protection under Chapter 152 of the Massachusetts General Laws. The University has recorded a liability for future expected costs of its workers' compensation claims of $15.4 million as of June 30, 2016 and $14.4 million as of June 30, 2015. Estimated future payments related to such costs have been discounted at a rate of 4.0%.

The University is a defendant in various lawsuits and is subject to various contractual matters; however, University management is of the opinion that the ultimate outcome of all litigation or potential contractual obligations will not have a material effect on the financial position, financial results or cash flows of the University.

From time to time the University and/or its affiliated organizations are subject to audits of programs that are funded through either federal and/or state agencies. The University is aware that the Office of the Inspector General for the U.S. Department of Health and Human Services performed an audit of Medicaid Supplemental Revenues ("MSR") received by UMMMC, the final report for which was issued December 2009. Portions of this report continue to be contested and the final outcome of this audit is currently unknown. Dependent on the final outcome, UMMMC may be required to repay any MSR received deemed to be disallowed as a result of the audit. Dependent on that outcome, the University, consistent with the Agreement for Medical Educational Services, made part of the Definitive Agreement between the University and UMMMC, and its subsequent amendments and the indemnification provisions in these Agreements, may be required to indemnify UMMMC for a portion of any amounts due. Although the final outcome of this audit is currently unknown, and management believes that as of the date of the financial statements it is not probable that a liability exists, management concludes it is reasonably possible that amounts could be repaid and that those amounts may be material to the University's financial position and results of operations.

Five Universities in the Commonwealth of Massachusetts jointly formed the Massachusetts Green High Performance Computing Center, Inc. (MGHPCC) and MGHPCC Holyoke, Inc. in May 2010 and April 2012, respectively, to construct and operate a research computing center located in Holyoke, Massachusetts. MGHPCC and MGHPCC Holyoke, Inc. are tax-exempt organizations under Internal Revenue Code section 501(c) (3). Each respective university agreed to contribute $10.0 million and as of June 30, 2016, each university had contributed the required amounts. The University's unamortized $5.0 million investment is included in its Statement of Financial Position within Other Assets.

16. SUBSEQUENT EVENTS

On November 8, 2016, the Building Authority entered into an agreement whereby the Building Authority sub-leased property on the University of Boston campus to Provident Commonwealth Educational Resources Inc., a Massachusetts not-for-profit corporation. The land is leased to the Authority by the Commonwealth. Provident Commonwealth Educational Resources, Inc. will engage a contractor to construct a 1,082 bed student housing facility on the site. The Building Authority will sub-lease the property to Provident Commonwealth Educational Resources Inc. for a term of approximately 40 years. Commencing approximately one year following the completion of the project (estimated completion August 2018), the annual rental amount payable to the Building Authority under the ground lease will be $1.0 million.

Pursuant to the Dining Facility Sublease dated November 8, 2016 between Provident Commonwealth Education Resources Inc., as sub-lessor and the Building Authority, as sub-lessee, Provident Commonwealth Educational Resources Inc. shall lease the dining facility, located within the residential hall, to the Building Authority and the Building Authority shall operate the Dining Facility.

For purposes of determining the effects of subsequent events on these financial statements, management has evaluated events subsequent to June 30, 2016 through December 7, 2016, the date on which the financial statements were available to be issued and determined that there are no other matters requiring recognition or disclosure to the accompanying financial statements.

Table 47. Required Supplementary Information — Unaudited

AS OF JUNE 30, 2016 (IN THOUSANDS OF DOLLARS)

Schedule of the University's Proportionate Share of the Net Pension Liability Massachusetts State Employees' Retirement System	
University's proportion of the net pension liability	3.922%
University's proportionate share of the net pension liability	$408,418
University's covered-employee payroll	$1,139,719
University's proportionate share of the net pension liability as a percentage of its covered-employee payroll	35.83%
Plan fiduciary net position as a percentage of total pension liability	67.87%
Schedule of the University's Contributions Massachusetts State Employees' Retirement System	
Contractually required contribution	$22,386
Contributrions in relation to the contractually required contribution	(22,386)
Contribution deficiency (excess)	—
University's covered-employee payroll	$1,139,719
Contributions as a percentage of covered-employee payroll	1.96%

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Grant Thornton LLP
75 State Street, 13th Floor
Boston, MA 02109

T 617.723.7900
F 617.723.3640
www.GrantThornton.com
linkd.in/GrantThorntonUS
twitter.com/GrantThorntonUS

REPORT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

Board of Trustees
University of Massachusetts

We have audited, 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, the financial statements of the business-type activities and the aggregate discretely presented component units of the University of Massachusetts (the "University"), an enterprise fund of the Commonwealth of Massachusetts, as of and for the years ended June 30, 2016 and 2015, and the related notes to the financial statements, which collectively comprise the University's basic financial statements, and our report thereon dated December 15, 2016 expressed a unmodified opinions on those financial statements. Our audits were performed for the purpose of forming opinions on these financial statements that collectively comprise the University's basic financial statements.

The accompanying Combining Statements of Net Position for University Related Organizations and of Revenues, Expenses, and Changes in Net Position as of and for the years ended June 30, 2016 and 2015 are presented for purposes of additional analysis and is not a required part of the financial statements. Such 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. The supplementary information has been subjected to the auditing procedures applied in the audits of the basic financial statements and certain additional procedures. These additional procedures included comparing and reconciling the 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. In our opinion, the supplementary information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

Grant Thornton LLP

Boston, Massachusetts
December 15, 2016

Table 48. Combining Statements of Net Position for University Related Organizations

AS OF JUNE 30, 2016 AND 2015 (IN THOUSANDS OF DOLLARS) — SUPPLEMENTAL SCHEDULE I

	June 30, 2016				June 30, 2015			
	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.
ASSETS								
Current Assets								
Accounts, Grants and Loans Receivable, net								
Pledges Receivable, net	$371	($7,296)	$6,635	$1,032	$500	($6,581)	$6,045	$1,036
Due from Related Organizations	193	193			203	203		
Other Assets	55		55		670		659	11
Total Current Assets	**619**	**(7,103)**	**6,690**	**1,032**	**1,373**	**(6,378)**	**6,704**	**1,047**
Noncurrent Assets							135	1,883
Cash and Cash Equivalents	1,475	(19,392)	98	1,377	2,018	(18,099)	16,319	2,073
Pledges Receivable, net	1,690	(641,171)	19,904	1,178	293	(675,928)	1,097,353	54,847
Investments	468,260		1,056,774	52,657	476,272			62
Other Assets	2,528			2,528	62			
Investment In Plant, net	8,090		8,090		8,293		8,293	
Total Noncurrent Assets	**482,043**	**(660,563)**	**1,084,866**	**57,740**	**486,938**	**(694,027)**	**1,122,100**	**58,865**
Total Assets	**482,662**	**(667,666)**	**1,091,556**	**58,772**	**488,311**	**(700,405)**	**1,128,804**	**59,912**
LIABILITIES								
Current Liabilities								
Accounts Payable	$64		63	$1	$691		682	$9
Due To Related Organization	69	(6,575)		6,644	59	(7,131)		7,190
Assets Held on Behalf of the University		(593,116)	593,116			(625,555)	625,555	
Assets Held on Behalf of Others	27,837		27,837		29,284		29,284	
Unearned Revenues and Credits	1,224		1,224		1,387		1,387	
Total Current Liabilities	**29,194**	**(599,691)**	**622,240**	**6,645**	**31,421**	**(632,686)**	**656,908**	**7,199**
Noncurrent Liabilities								
Other Liabilities	3,502		3,502		3,505		3,505	
Total Noncurrent Liabilities	3,502		**3,502**		3,505		**3,505**	
Total Liabilities	**32,696**	**(599,691)**	**625,742**	**6,645**	**34,926**	**(632,686)**	**660,413**	**7,199**
Net Position								
Invested in Capital Assets Net of Related Debt	8,090	8,090			8,293	8,293		
Restricted								
Nonexpendable	374,566	(37,235)	374,566	37,235	330,301	(55,662)	351,668	34,295
Expendable	46,275	(30,740)	64,380	12,635	90,413	(12,057)	86,684	15,786
Unrestricted	21,035	(8,090)	26,868	2,257	24,378	(8,293)	30,039	2,632
Total Net Position	**$449,966**	**($67,975)**	**$465,814**	**$52,127**	**$453,385**	**($67,719)**	**$468,391**	**$52,713**

Table 49. Combining Statements of Revenues, Expenses and Changes in Net Position for University Related Organizations

FOR THE YEARS ENDED JUNE 30, 2016 AND 2015 (IN THOUSANDS OF DOLLARS) — SUPPLEMENTAL SCHEDULE II

	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.	Total	Eliminations and Adjustments	The University of Massachusetts Foundation, Inc.	The University of Massachusetts Dartmouth Foundation, Inc.
	June 30, 2016				June 30, 2015			
EXPENSES								
Operating Expenses								
Educational and General								
Public Service	$16,502	($971)	$13,927	$3,546	$16,359	($1,758)	$16,500	$1,617
Depreciation	202		202		201		201	
Scholarships and Fellowships	364	(1,497)	811	1,050	149	(1,410)	710	849
Total Operating Expenses	**17,068**	**(2,468)**	**14,940**	**4,596**	**16,709**	**(3,168)**	**17,411**	**2,466**
Total Operating Income/(Loss)	**(17,068)**	**2,468**	**(14,940)**	**(4,596)**	**(16,709)**	**3,168**	**(17,411)**	**(2,466)**
NONOPERATING REVENUES/(EXPENSES)								
Gifts	18,783	1,074	11,387	6,322	17,111	680	12,765	3,666
Investment Income	182	(79)	126	135	(18)	(84)		66
Endowment Income from Spending Rate	1,386	40,568	(39,182)		1,387	7,149	(5,762)	
Net Nonoperating Revenues	**20,351**	**41,563**	**(27,669)**	**6,457**	**18,480**	**7,745**	**7,003**	**3,732**
Income/(Loss) Before Other Revenues, Expenses, Gains and Losses	**3,283**	**44,031**	**(42,609)**	**1,861**	**1,771**	**10,913**	**(10,408)**	**1,266**
OTHER REVENUES, EXPENSES, GAINS, AND LOSSES								
Additions to Permanent Endowments	25,864	(3,094)	28,958		21,618	(6,749)	28,367	
Less: Amounts Earned/Received on Behalf of the University		(36,498)	36,498			(21,025)	21,025	
Less: Amounts Earned/Received on Behalf of Others		(1,831)	1,831			(12)	12	
Endowment Return	(36,524)	(34,671)		(1,853)	(16,057)	(15,646)	(32)	(379)
Distribution to University		28,637	(28,637)			27,211	(27,211)	
Other Additions/Deductions	3,958	3,170	1,382	(594)	259	(581)	1,507	(667)
Total Other Revenues, Expenses, Gains, and Losses	**(6,702)**	**(44,287)**	**40,032**	**(2,447)**	**5,820**	**(16,802)**	**23,668**	**(1,046)**
Total Increase/(Decrease) in Net Assets	**(3,419)**	**(256)**	**(2,577)**	**(586)**	**7,591**	**(5,889)**	**13,260**	**220**
NET POSITION								
Net Position at Beginning of Year	453,385	(67,719)	468,391	52,713	445,794	(61,830)	455,131	52,493
Net Position at End of Year	**$449,966**	**($67,975)**	$465,814	**$52,127**	**$453,385**	**($67,719)**	**$468,391**	**$52,713**

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