ANNUAL FINANCIAL REPORT

2018-2019

MICHIGAN STATE UNIVERSITY

TABLE OF CONTENTS

MICHIGAN STATE UNIVERSITY

TRUSTEES, EXECUTIVE TEAM, AND FINANCE MANAGEMENT AT JUNE 30, 2019

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Finance Business Application
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University Financial
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University Tax Manager

Kate Reasner
Student Loans Receivable
Manager

Laurie K. Schlenke
Student Account Services
Manager

Lindy Smith
Payroll Operations Manager

Steven J. Ueberroth
Finance Business Application
Support Functional Manager

MICHIGAN STATE
UNIVERSITY

October 25, 2019

We are pleased to present Michigan State University's financial report for the fiscal years ending June 30, 2018, and June 30, 2019. The financial report was prepared by Finance staff in accordance with generally accepted accounting principles for public colleges and universities as defined by the Governmental Accounting Standards Board (GASB). The Board of Trustees adopted the report as part of MSU's commitment to report annually on its fiscal affairs. Plante & Moran, PLLC, certified public accountants, audited these financial statements. The information reported fairly represents the University's financial position.

Financial Report Highlights:

- Revenues totaled $2.9 billion, while expenses totaled $2.7 billion.
- The University's financial assets totaled $7.0 billion.
- Total net position grew $146 million to $2.5 billion, in part due to investment income of $247 million.
- Grant and contract revenue contributed $548 million.
- Charitable gifts received and pledged from donors totaled $273 million.
- The University issued $772 million in net new debt used to finance capital construction projects and pay an accrued legal settlement.

The University's prudent stewardship of financial resources provides certainty for students and their families, as well as providing the resources necessary for the University to embrace opportunities and meet challenges. The University's continued financial strength through difficult challenges in fiscal year 2019 demonstrates our disciplined stewardship at work.

MSU has been working to advance knowledge and transform lives for more than 164 years by making its exceptional programs accessible to students from Michigan and around the globe. The University offers more than 200 programs of study in 17 degree-granting colleges. MSU's strength and stature as one of the top 100 research universities in the world results from its outstanding faculty, staff and students.

As our nation's pioneer land-grant University, MSU undertakes its mission of world-class instruction, research, and public service to solve the world's most pressing problems. Through the combined efforts of its faculty, staff, students, alumni, and worldwide supporters, MSU continues to make a significant impact on Michigan, the nation, and the world. Go Green!

Mark P. Haas

Mark P. Haas
Vice President for Finance and Treasurer

OFFICE OF THE
VICE PRESIDENT FOR FINANCE

Mark P. Haas
Vice President for Finance
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INTRODUCTION

Michigan State University (the University, or MSU) is recognized around the world as a leading academic institution with world class faculty, top graduate study programs, a powerful research portfolio, and an engaged entrepreneurial spirit. MSU is ranked among the top 100 universities in the world by *Times Higher Education* and *U.S. News and World Report*, and features 30 programs in the top 25 nationally, including nine rated number one. The University's excellence, cultivated over a 164-year history, is rooted in the core values of its land grant heritage in providing quality, inclusiveness, and connectivity in all that it does.

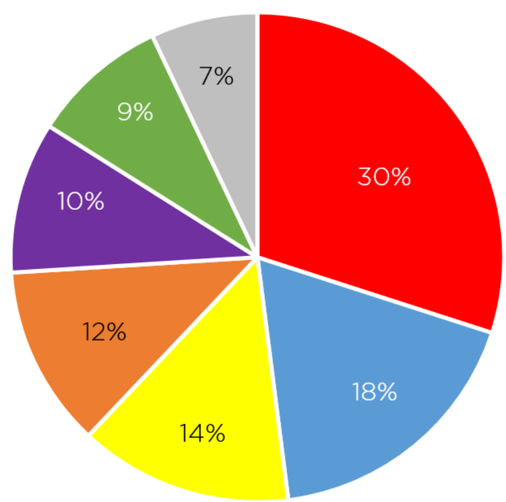
MAINTAINING FINANCES THROUGH ADVERSITY

MSU has exercised prudent financial stewardship over the years and never more so than this past year. Managing finances through leadership transitions and extraordinary expenses required diligent actions by all of the Finance staff. From reducing expenses to managing cash flows, the University has maintained a strong financial foundation. With assets and deferred outflows of $7.2 billion and liabilities and deferred inflows of $4.7 billion, the University's net position is $2.5 billion as of June 30, 2019.

Revenue diversification and solid cash and debt management by the University's Treasury and Financial Management team has long been an important strategy for the University to achieve financial stability. This strategy has been an integral element in enabling the institution to be financially stable through different economic cycles and adverse expenses, as well as reduce dependence on student tuition and fee increases. MSU maintained solid AA credit ratings from both Moody's and Standard and Poor's.

Sources of Net Revenue (millions):

$ 868	Tuition, net of discounts
528	Grants and contracts
412	Auxiliary activities
351	State appropriations
283	Other departmental activities
247	Net investment income (endowments and operating cash)
183	Private gifts and capital grants
$ 2,872	Total net revenues



Students and Academics

During 2019, MSU welcomed its largest and most diverse entering class in history, with a total 8,442 undergraduate students, including 2,032 students of color and 714 international students. MSU enrolls approximately 77 percent in-state resident undergraduate students, more than any Michigan public university; and exceeds the Big Ten average by 10 percent, making it among the most home-state centric in the conference. At the same time, MSU draws students from all over the state, country and world. This year, MSU enrolled individuals from all 83 counties in Michigan, all 50 states in the United States, and more than 140 countries.

MSU remains focused on helping students reduce the time to and cost of their degree. The Go Green Go 15 initiative is one way the University is tackling these challenges, seeking to create higher rates of credit momentum (i.e., enrolling in 15 credits per semester) among our students that strongly correlates to higher levels of student academic success. MSU has also adopted a flat rate-tuition structure for the 2019-20 academic year, a structure that will incentivize students to complete their degrees in four years and, thereby, keep expenses as low as possible.

MSU provides diverse learning experiences that blend the theoretical with the practical, combines curricular and co-curricular experiences, and instills an entrepreneurial mindset in its students. Student learning experiences include study abroad, hands-on research engagement, service learning, internships, co-ops, field placement, student teaching, and clinical placement during their degree program. All complement a variety of classroom experiences to provide rich learning opportunities. Curricular and co-curricular experiences aim to help students develop both deep knowledge within a specific content area as well as a broad set of skills across content areas focused on critical thinking, analytical reasoning, and communication.

The Hub for Innovation in Learning and Technology (The Hub) operates to create and accelerate new ways to collaborate, learn, research, and deliver instruction. Ongoing projects include launching a cohort-based, interdisciplinary learning experience for first year students, linking math, arts and humanities, social science, and biological courses in a themed sequence to create a common intellectual experience for students.

Our collective efforts aimed to enhancing the student experience has resulted in MSU's graduation rate exceeding the *U.S. News and World Report* predicted graduation rate by 10%. Additionally, more than 90% of MSU graduates are employed or continuing their education within nine months of graduation, approximately 10% above the national average.

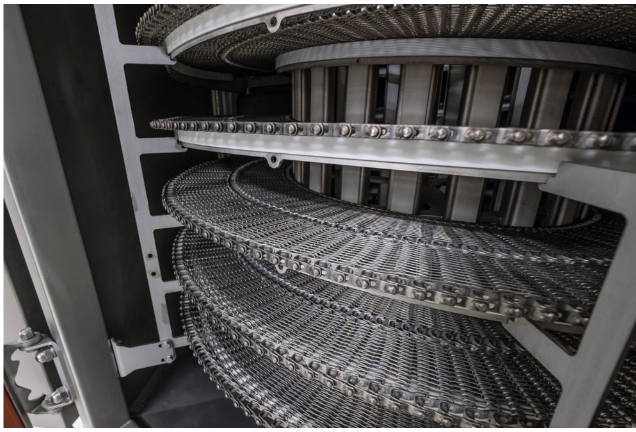
Research

MSU recognizes that research is central to the University's mission and to building a mid-Michigan "talent center" by providing learning opportunities that take place in and outside of the classroom and employ progressive pedagogy. MSU is working to provide state-of-the-art facilities and infrastructure that will help attract and retain top-quality students, faculty, and researchers. This is vital to remaining competitive in key fields, both nationally and internationally. Examples of facilities that are attracting researchers and professionals include:

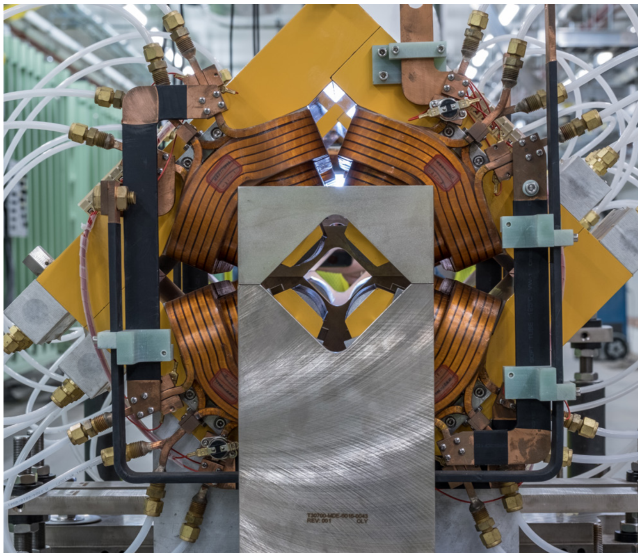
- The new Interdisciplinary Science and Technology Building, a $100 million, 170,000 square-foot facility opening for the fall of 2019, is crucial to attracting top researchers and in landing multidisciplinary grants from the National Science Foundation and the National Institutes of Health. The building's five stories are comprised of wet bench laboratories, computational research space, offices, and core and collaborative space that include areas for shared equipment.

- In August of 2018, MSU broke ground on a new STEM Teaching and Learning Facility. The facility will include modern teaching laboratories that incorporate active learning principles and foster cross-disciplinary teaching and learning, as well as support developing and evolving changes in related curriculum and its delivery. The project is part of the Strategic Academic Development Initiative – a framework to continue investments supporting student success, aligning with state and national priorities to graduate more students in STEM-related fields.

- The Food Processing and Innovation Center (FPIC) opened spring 2018. It is Michigan's leading independent commercial food development, processing, packaging and research facility. Businesses big and small rent space in the state-of-the-art facility featuring the latest in processing and packaging technology to meet their needs and take their business to the next level. The goal of FPIC is to increase economic activity and jobs created by the expansion of food processing and manufacturing companies.

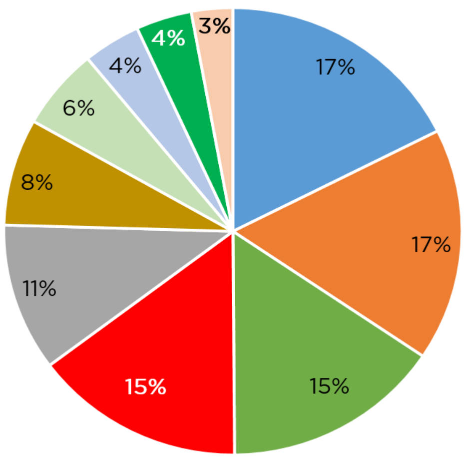


- In partnership with the U.S. Department of Energy Office of Science, MSU continues to construct and operate the $730 million Facility for Rare Isotope Beams (FRIB), a scientific user facility that spans nearly 500,000 square feet. Since 1958, MSU has been known for its innovations in nuclear science, and today the University is home to the nation's No. 1 nuclear physics graduate program. When it becomes fully operational by 2022, FRIB will power discoveries, develop applications for society and educate the next generation of nuclear scientists who will advance the benefits of rare isotope science for generations to come. From construction through operation, FRIB is expected to generate accumulated wages totaling $1.7 billion and add $4.4 billion to the state's economy.



MSU continues to ensure that research programs grow, providing an impetus for economic development while creating a culture of innovation and creativity that maintains the University's international competitiveness. MSU is a leader in creating knowledge for the 21st century, routinely expending in excess of $500 million in sponsored awards annually, focused in areas such as food systems; plant sciences; health sciences; computational sciences emphasizing biology and food/food-chain; and population and the environment, including food, water, and energy. To enhance these efforts and maintain its position as a world-class research university, MSU has committed to hiring approximately 100 additional faculty members over the five-year period of 2015-2020, with over 80 hired to date.

Sources of Net Sponsored Program Revenue (millions):



$ 91	Federal US Dept. of Health and Human Services
87	Federal National Science Foundation
80	Federal US Dept. of Energy
77	Local/Private Revenue
55	Federal US Dept. of Education
40	Federal US Dept. of Agriculture
30	Federal USAID
21	Federal Other
20	State Revenues
15	Federal US Dept. of Defense
$ 516	Total net Sponsored Program revenues

Community Health Care

In August 2018, the MSU Board of Trustees approved the creation of a new organization, MSU Health Care, Inc., that encompasses MSU's colleges of Human Medicine, Osteopathic Medicine, and Nursing to be the multi-specialty group practice of the University. This new organization will have its own governing body and management structure allowing for more health focused long-term planning and strategic initiatives. The new organization's mission is to improve the health of all the communities we serve and to provide care that is safe, compassionate, and focused on patients and their families. The transfer of operations to this new entity is in process and will encompass 260 providers from 14 clinical departments at MSU.

Further, Michigan State University will broaden its community health care footprint through a partnership with McLaren Health Care, as the medical provider looks to build a new hospital near the University's campus. McLaren announced that it will combine two of its Lansing hospitals into a new $450 million facility that will be located on land purchased from the MSU Foundation in the University Corporate Research Park. This new facility will help MSU recruit top physicians and researchers to the region by providing access to tools and data that will build a healthier society and develop new life-saving therapies and treatments.

CONCLUSION

Michigan State University's programmatic strategy is premised on the foundation of advancing the common global good with uncommon will and seeks to further education and research in Science, Technology, Engineering and Math, as well as other curricular priorities to expand economic impact locally, regionally, and internationally. MSU's programmatic investments seek to integrate technology and teaching, prioritize interdisciplinary study, facilitate innovation and research, narrow graduation gaps amongst various student groups, and foster a healthier campus.

Michigan State University is recognized around the world as a leading academic institution with world-class faculty, top graduate school programs, a powerful research portfolio, and an engaged, entrepreneurial spirit. Together, the collective will of our students, our faculty and staff, our partners and the stakeholders and communities we serve, can and will shape our world to be a better place and inspire the next generation of Spartans to greatness.

Our financial team is dedicated to the support of the University's mission and is proud of the fiscal integrity with which it upholds and advances the University's priorities.

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Independent Auditor's Report

To the Board of Trustees
Michigan State University

Report on the Financial Statements

We have audited the accompanying financial statements of Michigan State University (the "University") and its discretely presented component unit as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise Michigan State 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 did not audit the financial statements of Michigan State University Foundation (the "Foundation"), which is the sole discretely presented component unit. Those financial statements were audited by other auditors whose report has been furnished to us and our opinion, insofar as it relates to the amounts included for the Foundation, is based solely on the report of the other auditors. 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. The financial statements of the Foundation were not audited under *Government Auditing Standards*.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the 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 entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

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

Opinions

In our opinion, based on our audit and the report of other auditors, the financial statements referred to above present fairly, in all material respects, the respective financial position of Michigan State University and its discretely presented component unit as of June 30, 2019 and 2018 and the respective changes in its financial position and, where applicable, cash flows for the years then ended, in accordance with accounting principles generally accepted in the United States of America.

To the Board of Trustees
Michigan State University

Required Supplemental Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and schedule of changes in the University's total OPEB liability and related ratios be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, which considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audits were conducted for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements. The listing of trustees, officers, and finance management; the report from the vice president for finance and treasurer; and the transmittal letter are presented for purposes of additional analysis and are not a required part of the basic financial statements. The listing of trustees, officers, and finance management; the report from the vice president for finance and treasurer; and the transmittal letter have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 24, 2019 on our consideration of Michigan State University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, 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 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 Michigan State University's internal control over financial reporting and compliance.

Plante & Moran, PLLC

October 24, 2019

Introduction

The following discussion provides an overview of the financial position of Michigan State University (the "University") for the fiscal years ended June 30, 2019 and 2018.

Included is an analysis of the University's Statement of Net Position, which presents the assets, deferred outflows, liabilities, deferred inflows, and net position of the University. All are measured as of the fiscal year end. The Statement of Revenues, Expenses, and Changes in Net Position reflects revenues and expenses recognized during the fiscal year. These financial statements are prepared in accordance with Governmental Accounting Standards Board (GASB) principles.

The Michigan State University Foundation (the "Foundation") is a legally separate entity that meets the criteria set forth for component units under GASB regulations. The Foundation provides financial support for the objectives, purposes, and programs of the University. Although the University does not control the timing, purpose, or amount of its receipts from the Foundation, the resources (and income thereon) the Foundation holds and invests are solely for the benefit of the University. Because the Foundation's resources are solely for the benefit of the University, the Foundation is considered a component unit of the University and is discretely presented in the University's financial statements. The Foundation is a private organization that reports under Financial Accounting Standards Board (FASB) standards. As such, certain revenue recognition criteria and presentation features are sometimes different from GASB. No modifications have been made to the Foundation financial information included in the University's financial report to account for these differences.

MSU Health Care, Inc. and Lysander Series of Aesir Series, LLC ("Lysander") are additional legally separate entities, both formed during the year ended June 30, 2019, that meet the criteria set forth for component units under GASB regulations. MSU Health Care, Inc. is a multi-specialty medical practice that will operate the University's primary care, sports medicine, diagnostics, and testing among other services beginning July 1, 2020. The University is the sole corporate member of MSU Health Care, Inc., which is reported as a blended component unit. Lysander is a cell captive insurance company used by the University to gain access to global reinsurers for purposes of obtaining general liability insurance and automobile liability insurance. Lysander exclusively benefits the University and the University has full control of Lysander, which is also reported as a blended component unit.

The University's financial statements, related footnote disclosures, and required supplementary information (RSI), including management's discussion and analysis, have been prepared by management. GASB required supplementary information is not audited and should be read in conjunction with the financial statements and footnotes.

Statement of Net Position

The Statement of Net Position includes all assets, deferred outflows, liabilities, and deferred inflows. It is prepared under the accrual basis of accounting, whereby revenues and assets are recognized when services are provided and expenses and liabilities are recognized when others provide the services, regardless of when cash is exchanged. Deferred outflows and deferred inflows of resources are recognized through the consumption or acquisition of resources by the University that is applicable to a future reporting period. Assets, deferred outflows, liabilities, and deferred inflows are generally measured using current values. One exception is capital assets, which are stated at historical cost less an allowance for depreciation rather than current market values.

Below is a summarized comparison of the University's assets, deferred outflows, liabilities, deferred inflows, and net position at June 30, 2019 and 2018 adjusted to illustrate the impact of postemployment benefit obligations. The 2017 fiscal year is shown as originally reported:

(in millions)	2019	OPEB Adjustment	2019 Net of OPEB	2018	OPEB Adjustment	2018 Net of OPEB	2017
Current assets	$ 739	-	$ 739	$ 636	-	$ 636	$ 542
Noncurrent assets:							
Restricted cash and cash equivalents and restricted investments	145	-	145	-	-	-	-
Endowment and other investments	3,151	-	3,151	2,954	-	2,954	2,792
Capital assets, net	2,862	-	2,862	2,743	-	2,743	2,614
Other	125	-	125	112	-	112	136
Total assets	7,022	-	7,022	6,445	-	6,445	6,084
Deferred outflows of resources	163	(115)	48	166	(125)	41	55
Current liabilities	759	(44)	715	1,177	(42)	1,135	586
Noncurrent liabilities	3,521	(1,603)	1,918	3,082	(1,974)	1,108	1,621
Total liabilities	4,280	(1,647)	2,633	4,259	(2,016)	2,243	2,207
Deferred inflows of resources	423	(405)	18	17	-	17	-
Net Investment in Capital Assets	1,511	-	1,511	1,527	-	1,527	1,419
Restricted:							
Nonexpendable	763	-	763	709	-	709	647
Expendable	894	-	894	826	-	826	755
Unrestricted	(686)	1,937	1,251	(727)	1,891	1,164	1,111
Net position	$ 2,482	$ 1,937	$ 4,419	$ 2,335	$ 1,891	$ 4,226	$ 3,932

For more detailed information see the accompanying Statements of Net Position.

Current assets:

Current assets consist of cash and cash equivalents, investments, net accounts and interest receivable, and other assets. During 2019, cash and cash equivalents increased $73 million, with $46 million of the increase related to restricted cash held in a Litigation Reserve fund (see note 10), which was funded by Series 2018A bond proceeds. The remaining increase of $27 million is a function of the University's operating, financing, and investing activities as reported in the statement of cash flows. Investments increased $12 million, primarily due to increases in short-term investment reserves. Net receivables increased $16 million due to an $11 million increase in state sponsored medical programs and a $5 million increase in various other departmental activities. State sponsored medical program accounts receivable balances generally reflected timing differences between delivery of service and payment by the state.

During 2018, cash and cash equivalents increased $44 million, primarily a function of the University's operating, financing, and investing activities as reported in the statement of cash flows. Investments increased $50 million, primarily due to increases in short-term investment reserves. These increases were offset by a decrease in net receivables of $4 million due to a $26 million decrease from federal, state, and local sponsored programs partially offset by a $21 million increase in state sponsored medical programs. Sponsored program accounts receivable balances generally reflected timing differences between amounts expended in accordance with grant or contract guidelines and actual cash draws from the grantor.

Noncurrent assets:

Restricted cash and cash equivalents and restricted investments

All balances represent unspent bond proceeds, which are externally restricted for the construction or purchase of capital assets, and funded by Series 2019B bond proceeds. There were no unspent bond proceeds in 2018 or 2017.

Endowment and other investments

At June 30, 2019 and 2018, the University's endowment investments totaled $2,878 million (an increase of $178 million) and $2,700 million (an increase of $169 million), respectively. Endowment gifts and University-designated additions to endowment investments totaled $55 million in 2019 and $70 million in 2018. In addition, $18 million in 2019 and $16 million in 2018, respectively, of unspent spending policy distributions were reinvested into the respective endowments, consistent with the underlying endowment agreements. Additionally, there was a net transfer in of accumulated capital gains of $1 million in 2019 and $25 million in 2018, respectively, for programmatic and capital initiatives. Realized and unrealized net investment gains within the investment portfolio accounted for a $104 million increase in 2019 and a $58 million increase in 2018.

Other investments consist primarily of retirement and postemployment benefit reserves, which totaled $101 million and $95 million at June 30, 2019 and 2018, respectively. Also included in other investments was the Liquidity Reserve Pool component of the University's Operating Cash Pool ($108 million in 2019 and $103 million in 2018).

Capital assets

The University continues to implement its long-range plan to modernize and renew its teaching, research, and residential life facilities in support of its mission. At June 30, 2019, 2018, and 2017, the University's investments in capital assets were as follows:

	2019	2018	2017
		(in millions)	
Land	$ 48	$ 48	$ 44
Buildings and site improvements	3,709	3,655	3,042
Construction in progress	491	324	712
Software and other intangibles	119	119	117
Equipment and other	957	911	853
Museum collections	22	15	14
Less: accumulated depreciation	(2,484)	(2,329)	(2,168)
	$ 2,862	$ 2,743	$ 2,614

Major additions to buildings and site improvements during 2019 included $11 million for the Wilson Road Extension, $6 million for Jenison Field House Alterations, $5 million for Cook Hall Building Renovations, and $3 million for IM Sports West Indoor Turf Replacement. Major additions to buildings and site improvements during 2018 included $215 million for the Facility for Rare Isotope Beams, $135 million for 1855 Place, $82 million for the Grand Rapids Research Facility, $53 million for the Breslin Center facility, $39 million for the Data Center, and $30 million for the Cyclotron Building - Office additions.

Construction in progress reflects multi-year projects which, once completed and placed into service, are generally categorized as buildings and site improvements. The 2019 balance included $98 million for Interdisciplinary Science and Technology, $59 million for the Edward J. Minskoff Pavilion, $22 million for the STEM Teaching and Learning Facilities, and $196 million for the Facility for the Rare Isotope Beams specialized equipment fabrication. The 2018 balance included $61 million for Interdisciplinary Science and Technology, $32 million for the Edward J. Minskoff Pavilion, and $184 million for the Facility for Rare Isotope Beams specialized equipment fabrication.

As of June 30, 2019, the University had initiated plans and incurred certain contractual commitments related to the construction and renovation of various facilities. The costs to complete the projects are estimated to be $268 million and are to be funded over multiple years from debt proceeds, capital grants, private gifts, and other University funds.

Deferred outflows of resources:

At June 30, 2019 and 2018, deferred outflows of resources totaled $163 million (a decrease of $3 million) and $166 million (an increase of $111 million), respectively. In 2019, deferred amounts related to changes in assumptions used to calculate the valuation of other postemployment benefits and related contributions made subsequent to the measurement date (in accordance with the adoption of GASB No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75")) decreased by $10 million. Deferred outflows related to deferred losses on refunding debt in 2010 decreased by $1 million. Offsetting this decrease is an increase in accumulated changes in the fair value of hedging derivative instruments of $8 million.

Current liabilities:

Current liabilities consist primarily of trade accounts and interest payable, accrued compensation and other personnel costs, unearned revenues, and other liabilities payable within one year or less. The net decrease in 2019 was due primarily to a $498 million decrease in self-insurance liabilities driven by the $500 million accrued legal settlement (see note 10) at June 30, 2018 being paid in 2019, which was offset by an increase in deposits held for others of $46 million related to restricted funds held in a Litigation Reserve fund. Accounts payable also increased by $69 million, which was largely driven by growth in certain medical service plan and Medicaid Enhanced Reimbursement program costs and the related timing of payments to service providers. The decrease in the current portion of long-term debt and other obligations is due to a net decrease in outstanding General Revenue Commercial Paper (short-term financing).

The net increase in 2018 was due in part to a $500 million accrued legal settlement and increases in the current portion of long-term debt ($51 million) and other postemployment benefit obligations ($42 million). The current portion of net other postemployment obligations was new in 2018 in accordance with GASB 75. The increase in the current portion of long-term debt and other obligations is due to a net increase in outstanding General Revenue Commercial Paper (short-term financing).

Noncurrent liabilities, primarily debt and net postemployment benefit obligations:

At June 30, 2019, the University had noncurrent debt and other obligations outstanding of $1,806 million compared with $1,004 million at June 30, 2018. During the year ended June 30, 2019, the University issued Series 2018A ($492 million), Series 2019A ($323 million), and Series 2019B ($292 million). Series 2018A, along with current funds of the University, were used to fund the accrued legal settlement. The University paid $425 million to claimants as prescribed in the settlement agreement with an additional $75 million paid to a Litigation Reserve fund for future claimants and related legal expenses. The proceeds from Series 2019A were used to partially refund Series 2018A ($300 million) with the remainder used to refund outstanding commercial paper. The proceeds from Series 2019B are being used to fund construction projects at the University and to refund outstanding commercial paper. The University has outstanding General Revenue Bonds of $1,781 million and $971 million in 2019 and 2018, respectively (including $81 million and $44 million in 2019 and 2018, respectively, of related original issue premiums). The University periodically reviews its debt capacity and related capital asset needs to optimize the use of its long-term resources. As of June 30, 2019, the University's outstanding General Revenue debt carried an investment grade credit rating from Moody's and Standard & Poor's of Aa2 and AA, respectively.

At June 30, 2019 and 2018, the noncurrent portion of the University's net postemployment benefit obligations (OPEB) totaled $1,603 (a decrease of $334) and $1,974 (an increase of $1,509). For the fiscal year ended June 30, 2018 the University adopted the provisions of GASB 75. The adoption of the standard resulted in revaluing the unfunded liability using a 20 year tax-exempt municipal rate as the discount rate, and reporting the full unfunded actuarial liability in its entirety in the financial statements as specified by GASB 75.

During the year ended June 30, 2019, the University conducted an experience study to evaluate the reasonableness of assumptions used in the OPEB valuation compared to actual results. As a result, certain assumptions were updated to reflect the University's historical experience resulting in a reduction in the liability. In addition, discount rates were updated to reflect current rates as of the measurement date causing the liability to decrease (see note 12). As GASB 75 requires annual updates to estimated liabilities based on current discount rates, the liability estimate may vary dramatically from year to year in future reports. Although the financial reporting of the liability will be changing, the University's approach on funding the retirement benefits continue to be on a pay-as-you-go-basis. Thus, there will be no impact on the payment of the other postemployment benefits.

Deferred inflows of resources:

At June 30, 2019 and 2018, deferred inflows of resources totaled $423 million and $17 million respectively (an increase of $406 million). Deferred inflows of resources increased by $405 million representing deferred amounts due to changes in assumptions used to calculate the valuation of other postemployment benefits driven by the experience study conducted in 2019 and an increase in the discount rate used to calculate the other postemployment benefits liability. The remaining balance is the University's investment value resulting from irrevocable split-interest agreements (primarily Charitable Remainder Trusts) at June 30, 2019. In accordance with GASB 81 amounts are deferred until all provisions of the agreements are satisfied.

Net position:

Net position represents residual University assets and deferred outflows after liabilities and deferred inflows are deducted. The University's net position at June 30, 2019, 2018, and 2017 was as follows:

	2019	2018	2017
		(in millions)	
Net investment in capital assets	$ 1,511	$ 1,527	$ 1,419
Restricted:			
Nonexpendable	763	709	647
Expendable	894	826	755
Total restricted	1,657	1,535	1,402
Unrestricted - before OPEB	1,251	1,164	1,576
Total net position - before OPEB	4,419	4,226	4,397
OPEB (Unrestricted)	(1,937)	(1,891)	(465)
Total net position	$ 2,482	$ 2,335	$ 3,932

Net investment in capital assets represents the University's land, buildings, software, and equipment net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction, or improvement of those assets.

Restricted nonexpendable net position is subject to externally imposed stipulations that they be maintained permanently. Such net position includes the corpus portion (historical value) of gifts to the University's permanent endowment funds and certain investment earnings stipulated by the donor to be reinvested permanently.

Restricted expendable net position is subject to externally imposed restrictions governing its use. Such net position includes the net appreciation of the University's permanent endowment funds that have not been stipulated by the donor to be reinvested permanently, restricted quasi-endowments, restricted gifts, and federal and state sponsored programs.

Unrestricted net position is not subject to externally imposed restrictions; however, virtually all of the University's unrestricted net position is subject to internal designation to meet various specific commitments. These commitments include funding the completion of the 2019 summer semester and the first quarter of fiscal year 2020, maintaining reserves for capital projects, sustaining working capital balances for self-supporting departmental activities, and preserving unrestricted quasi and term endowments. At June 30, 2019 and 2018, the unrestricted balances related to these specific commitments totaled $1,251 million (an increase of $87 million) and $1,164 million (a decrease of $412 million due primarily to the accrued legal settlement), respectively. Offsetting these balances is a draw on unrestricted net position for commitments related to postemployment benefits. At June 30, 2019 and 2018, these commitments reduced unrestricted net position by $1,937 million and $1,891 million, respectively.

Statement of Revenues, Expenses, and Changes in Net Position

The Statement of Revenues, Expenses, and Changes in Net Position presents the operating results of the University, as well as the nonoperating revenues and expenses. Operating revenues primarily include net student tuition and fees, grants and contracts, and auxiliary activities. Given a public university's dependency on revenues such as state appropriations, gifts, and investment income, which are prescribed by GASB as nonoperating revenues, operating expenses will exceed operating revenues, resulting in an operating loss. Net nonoperating revenues or expenses are an integral component in determining the increase or decrease in net position.

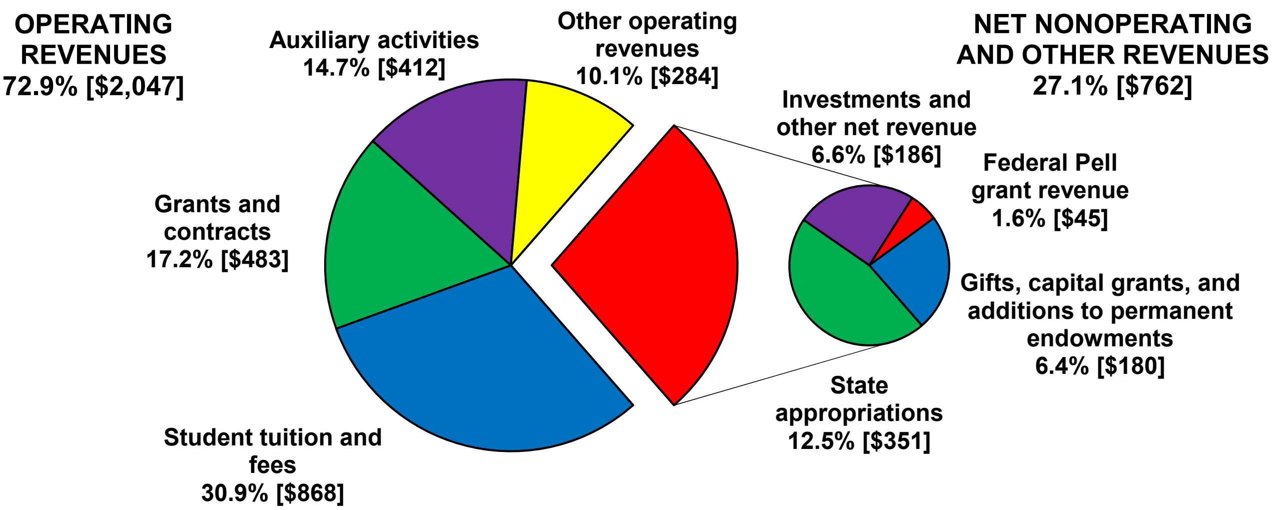
A summarized comparison of the University's revenues, expenses, and changes in net position for the years ended June 30, 2019, 2018, and 2017 follows:

	2019	2018 *(in millions)*	2017
Operating revenues:			
Student tuition and fees, net of allowances	$ 868	$ 868	$ 859
Grants and contracts	483	463	445
Auxiliary activities	412	374	357
Other operating revenues	284	282	271
Total operating revenues	2,047	1,987	1,932
Operating expenses:			
Instruction and departmental research	784	799	762
Research	411	400	381
Public service	344	327	287
Academic support	133	136	131
Student services	58	55	51
Scholarships and fellowships	73	72	67
Institutional support*	179	666	143
Operation and maintenance of plant	136	129	130
Auxiliary enterprises	362	336	321
Depreciation	179	177	154
Other operating expenses, net	3	3	8
Total operating expenses	2,662	3,100	2,435
Operating loss	(615)	(1,113)	(503)
Nonoperating revenues (expenses):			
State operating appropriation	286	281	276
State AgBioResearch appropriation	35	34	33
State Extension appropriation	30	29	29
Federal Pell grant revenue	45	44	38
Gifts	61	64	68
Net investment income	247	320	391
Interest expense on indebtedness	(63)	(45)	(38)
Other nonoperating revenues, net	2	7	8
Net nonoperating revenues	643	734	805
Income (loss) before other	28	(379)	302
Capital grants and gifts	75	70	122
Additions to permanent endowments	44	63	58
Increase (decrease) in net position	147	(246)	482
Net position, beginning of year	2,335	3,932	3,450
Cumulative effect of change in accounting principles	-	(1,351)	-
Net position, beginning of year, restated	2,335	2,581	3,450
Net position, end of year	$ 2,482	$ 2,335	$ 3,932

* Includes the $500 million accrued legal settlement in 2018

The University is supported by a diverse stream of revenue including student tuition and fees, state appropriations, federal and state sponsored programs, private gifts and grants, and investment income. The University continues to seek revenue from all possible sources consistent with its mission and to manage the financial resources to make quality education affordable to its students.

Total net revenues by source for the year ended June 30, 2019 are presented in millions of dollars:



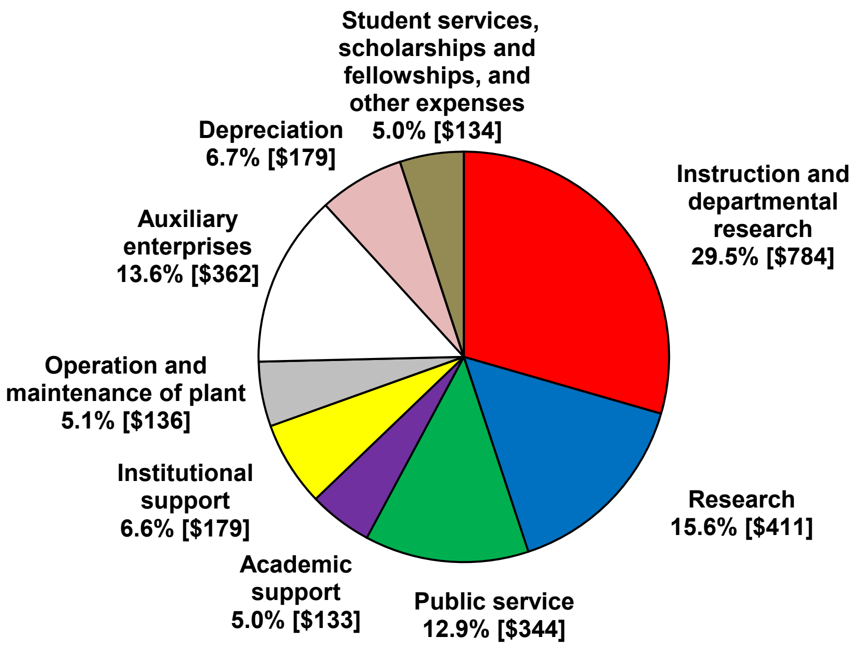
TOTAL NET REVENUES $2.8 BILLION

Operating revenues: The primary source of operating revenue for the University was student tuition and fees (net of scholarship allowances), totaling $868 million in both 2019 and 2018. Gross tuition and fees revenue was consistent with prior year primarily due to a freeze on freshman in-state tuition and changes in student blend. Other major revenue sources in 2019 included federal grants and contracts of $381 million (an increase of $24 million), including $358 million in sponsored programs, and auxiliary activities (activities that provide services to students, faculty, staff, and the public) totaled $412 million (an increase of $38 million). In 2018, net tuition and fees increased $9 million due in part to increases in student credit hours and rates and changes in student blend, federal grants and contracts increased $20 million, and auxiliary activities increased $17 million.

Net nonoperating and other revenues: The primary source of this net revenue was State appropriations, which totaled $351 million in 2019, an increase of $7 million. In 2019, the University received $286 million in funding for general operations, compared to $281 million in 2018. Michigan State University Extension and MSU AgBioResearch appropriations totaled $65 million, compared to $63 million in 2018. Other significant components of net nonoperating revenues in 2019 included net investment income, which decreased $73 million due to market conditions. In 2018, net investment income decreased $71 million due to market conditions.

During 2019, $1,539 million was expended for the core missions of the University: instruction and departmental research, research, and public service, an increase of $13 million (0.9%) over 2018. Instruction and departmental research expenses decreased $15 million (1.8%), due primarily to postemployment benefit obligation expense decreasing in 2019 as a result of updated valuation assumptions and changes in the discount rate as noted earlier. Research and public service expenses increased $28 million (3.9%), due primarily to growth in certain medical service plan and Medicaid Enhanced Reimbursement program costs within the College of Human Medicine and College of Osteopathic Medicine ($22 million). Institutional support totaled $179 million, a decrease of $487 million, primarily due the payment of the accrued legal settlement. Auxiliary enterprises totaled $362 million, an increase of $26 million. In 2018, expenses for the core mission of the University increased $96 million and auxiliary enterprises increased $15 million.

Operating expenses by source for the year ended June 30, 2019 are presented in millions of dollars:



TOTAL OPERATING EXPENSES $2.7 BILLION

The University's Economic Outlook

The University's longstanding focus and disciplined management of financial resources provides continuity and planning certainty for students and their families, while, at the same time, providing the resources necessary for the University to respond to numerous opportunities and challenges.

Fiscal year 2019 saw continued emphasis on revenue diversification and prudent cost containment, both focused on maintaining educational excellence, affordability, and accessibility. With a presence in every Michigan county, the University's economic impact exceeds $5.8 billion annually. In the fall of 2019, the University welcomed students from all 50 states and 140 other countries to a campus boasting world-class faculty, programs, and facilities.

The University's fiscal year 2020 budget includes a new flat rate tuition structure for undergraduate students taking between 12 and 18 credits each semester during the 2019-20 academic year. As part of the *Go Green Go 15* program, the University aims to incentivize students to pursue more credits per semester thereby lowering their time to degree and minimizing related levels of indebtedness.

MSU anticipates an approximate 0.5% increase in operating appropriations from the State of Michigan for the 2020 fiscal year. Additionally, the State of Michigan included an additional 0.5% increase in funding for the Indian

Tuition Waiver program. Other adjustments to operating revenues and expenditures are consistent with broader market expectations and have been approved by the Board of Trustees.

Investment income continues to be an important component of MSU's ongoing revenue diversification. As strong stewards of University funds, the University manages its endowment spending rate to ensure necessary resources are available for operations, while maintaining the purchasing power of the endowment assets for decades to come. Over time, MSU's long-term diversified investment strategy has proven to help keep tuition increases lower and provide an important source of support for University operations.

With the support from over 250,000 alumni and friends, MSU surged past its goal by raising $1.83 billion through the *Empower Extraordinary* capital campaign, which concluded in December 2018. This amazing support of Spartans from around the world has allowed the University to meet or exceed its goals to support scholarships and fellowships, create new endowed faculty positions, create new facilities, and increase research and scholarly efforts to solve real-world problems. The momentum from this campaign carried on throughout fiscal year 2019, which ended up representing the best fundraising year in the University's 164-year history.

MSU remains among the top 100 universities in the world receiving recognition for both academic quality and value. Together, we will continue to fulfill our land-grant mission: to advance knowledge and transform lives by providing outstanding education to all who qualify, to seek answers to questions and create solutions, and to advance outreach, engagement, and economic development activities which lead to a better quality of life for individuals and communities, both in Michigan and around the world.

	June 30, 2019	June 30, 2018
ASSETS	(in thousands)	
Current assets:		
Cash and cash equivalents	$ 91,787	$ 64,332
Restricted cash and cash equivalents	45,773	-
Investments	332,287	320,393
Accounts and interest receivable, net	206,644	191,067
Student loans and pledges receivable, net	38,348	34,732
Inventories and other assets	24,252	25,389
Total current assets	739,091	635,913
Noncurrent assets:		
Restricted cash and cash equivalents	46,079	-
Restricted investments	98,536	-
Endowment investments	2,877,833	2,700,319
Other investments	273,057	252,982
Student loans and pledges receivable, net	95,585	83,023
Investments in joint ventures and other assets	29,615	28,823
Derivative instruments - swap asset	460	321
Capital assets, net	2,862,005	2,742,855
Total noncurrent assets	6,283,170	5,808,323
Total assets	**7,022,261**	**6,444,236**
DEFERRED OUTFLOWS OF RESOURCES	**163,228**	**166,272**
LIABILITIES		
Current liabilities:		
Accounts and interest payable	193,981	125,112
Accrued personnel costs	62,745	60,543
Accrued self-insurance liabilities	19,890	517,786
Payroll taxes and other payroll deductions	23,509	22,471
Deposits held for others	70,261	23,956
Unearned revenues	117,598	127,676
Current portion of net other postemployment benefit obligations	44,083	42,094
Current portion of long term debt and other obligations	227,403	257,626
Total current liabilities	759,470	1,177,264
Noncurrent liabilities:		
Accrued personnel costs	36,911	36,881
Accrued self-insurance liabilities	7,186	7,791
Unearned revenues	9,533	11,025
Derivative instruments - swap liability	57,781	48,081
Net other postemployment benefit obligations	1,603,252	1,973,954
Long term debt and other obligations	1,806,109	1,003,762
Total noncurrent liabilities	3,520,772	3,081,494
Total liabilities	**4,280,242**	**4,258,758**
DEFERRED INFLOWS OF RESOURCES	**423,685**	**16,661**
NET POSITION		
Net investment in capital assets	1,511,083	1,527,271
Restricted:		
Nonexpendable	762,991	708,761
Expendable:		
Research and gifts	531,187	508,018
Quasi and term endowments	247,356	217,422
Debt service and capital projects	102,460	88,208
Student loans	12,573	12,253
Unrestricted	(686,088)	(726,844)
TOTAL NET POSITION	**$ 2,481,562**	**$ 2,335,089**

See accompanying notes

	June 30, 2019	June 30, 2018
	(in thousands)	
ASSETS		
Cash equivalents	$ 12,443	$ 8,050
Interest and dividends receivable, net	202	182
Receivable from related party	-	467
Other receivables, net	4,646	4,566
Investments:		
Marketable securities	194,664	192,944
Hedge funds	96,817	107,161
Private equity and venture capital	97,378	83,359
Land held for investment, net	3,347	5,212
Investment in Research Park, net	2,897	5,374
Equity in start-up organizations, net	1,585	1,299
Notes receivable, net	776	646
Prepaid expenses	55	126
Property and equipment, net	5,768	11,000
Intangible assets, net	857	895
TOTAL ASSETS	**$ 421,435**	**$ 421,281**
LIABILITIES AND NET ASSETS		
Liabilities:		
Accrued expenses and other payables	$ 3,083	$ 3,286
Deferred revenue	129	536
Line of credit	-	1,000
Trusts and annuities payable	7,246	7,974
Deposit held for Michigan State University	18,677	19,215
Obligations under life estate agreements	661	707
Total liabilities	**29,796**	**32,718**
Net assets:		
Without donor restrictions	351,994	346,692
With donor restrictions:		
Time or purpose restrictions	38,886	41,112
Perpetual restrictions	759	759
Total net assets with donor restrictions	39,645	41,871
Total net assets	**391,639**	**388,563**
TOTAL LIABILITIES AND NET ASSETS	**$ 421,435**	**$ 421,281**

See accompanying notes

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

	Year ended June 30, 2019	2018
	(in thousands)	
OPERATING REVENUES		
Student tuition and fees	$ 1,008,609	$ 1,008,806
Less: scholarship allowances	140,704	140,904
Net student tuition and fees	867,905	867,902
State of Michigan grants and contracts	16,936	14,263
Federal grants and contracts	380,966	357,133
Local and private sponsored programs	85,318	91,222
Interest and fees on student loans	1,022	965
Departmental activities (net of scholarship allowances of $7,738 in 2019 and $7,580 in 2018)	282,912	281,507
Auxiliary activities (net of room and board allowances of $26,302 in 2019 and $24,835 in 2018)	411,632	373,881
TOTAL OPERATING REVENUES	**2,046,691**	**1,986,873**
OPERATING EXPENSES		
Instruction and departmental research	783,859	798,736
Research	410,887	400,594
Public service	344,030	326,524
Academic support	133,419	136,280
Student services	57,635	54,584
Scholarships and fellowships	73,431	71,869
Institutional support	178,709	665,845
Operation and maintenance of plant	135,552	128,883
Auxiliary enterprises	362,462	335,937
Depreciation	178,729	177,372
Other operating expenses, net	3,117	2,974
TOTAL OPERATING EXPENSES	**2,661,830**	**3,099,598**
Operating loss	(615,139)	(1,112,725)
NONOPERATING REVENUES (EXPENSES)		
State operating appropriation	286,274	281,239
State AgBioResearch appropriation	34,591	33,913
State Extension appropriation	29,838	29,253
Federal Pell grant revenue	44,996	44,471
Gifts	60,746	63,967
Net investment income	246,962	319,886
Interest expense on indebtedness	(62,788)	(45,246)
Other nonoperating revenues, net	1,850	6,507
Net nonoperating revenues	642,469	733,990
INCOME (LOSS) BEFORE OTHER	**27,330**	**(378,735)**
Capital grants and gifts	75,216	69,941
Additions to permanent endowments	43,927	62,503
Increase (decrease) in net position	146,473	(246,291)
Net position, beginning of year	2,335,089	3,931,934
Cumulative effect of change in accounting principles	-	(1,350,554)
Net position, beginning of year, as restated	2,335,089	2,581,380
NET POSITION, END OF YEAR	**$ 2,481,562**	**$ 2,335,089**

See accompanying notes

MICHIGAN STATE UNIVERSITY FOUNDATION
STATEMENTS OF ACTIVITIES AND CHANGES IN NET ASSETS

	Year ended June 30, 2019		
	Without Donor Restrictions	With Donor Restrictions	Total
		(in thousands)	
REVENUE, GAINS AND OTHER SUPPORT:			
Contributions	$ 133	$ 804	$ 937
Income from investments - net of investment fees	13,401	719	14,120
Royalty income	1,283		1,283
Rental income	1,986		1,986
Grants and contracts	863		863
Adjustment to value of annuities payable		486	486
Other income	3,018		3,018
Net assets released from restrictions	4,235	(4,235)	-
TOTAL REVENUE, GAINS AND OTHER SUPPORT	24,919	(2,226)	22,693
EXPENSES:			
Contributions to Michigan State University	12,888		12,888
Salaries, fringe benefits, and payroll taxes	3,385		3,385
Net periodic postretirement benefit cost	152		152
Consultants and interns	903		903
Office expense	273		273
Professional fees	215		215
Events and sponsorships	86		86
Operating expense	909		909
Rent and utilities	950		950
Insurance	131		131
Depreciation and amortization	686		686
Provision for uncollectible receivables	409		409
Other expense	308		308
TOTAL EXPENSES	21,295	- -	21,295
Other postretirement adjustments	(1,678)		(1,678)
Change in net assets	5,302	(2,226)	3,076
Net assets, beginning of year	346,692	41,871	388,563
NET ASSETS, END OF YEAR	$ 351,994	$ 39,645	$ 391,639

	Year ended June 30, 2018		
	Without Donor Restrictions	With Donor Restrictions	Total
		(in thousands)	
REVENUE, GAINS AND OTHER SUPPORT:			
Contributions	$ 351	$ 6,960	$ 7,311
Income from investments - net of investment fees	23,199	2,752	25,951
Royalty income	1,815		1,815
Rental income	2,269		2,269
Grants and contracts	944		944
Adjustment to value of annuities payable		939	939
Other income	141		141
Net assets released from restrictions	25,553	(25,553)	-
TOTAL REVENUE, GAINS AND OTHER SUPPORT	54,272	(14,902)	39,370
EXPENSES:			
Contributions and transfers to Michigan State University	34,810		34,810
Salaries, fringe benefits, and payroll taxes	3,335		3,335
Net periodic postretirement benefit cost	457		457
Consultants and interns	711		711
Office expense	202		202
Professional fees	91		91
Events and sponsorships	507		507
Operating expense	832		832
Rent and utilities	604		604
Insurance	99		99
Depreciation and amortization	814		814
Provision for uncollectible receivables	156		156
Other expense	433		433
TOTAL EXPENSES	43,051	- -	43,051
Change in net assets	11,221	(14,902)	(3,681)
Net assets, beginning of year	335,471	56,773	392,244
NET ASSETS, END OF YEAR	$ 346,692	$ 41,871	$ 388,563

See accompanying notes

	Year ended June 30, 2019	Year ended June 30, 2018
	(in thousands)	
Cash flows from operating activities		
Tuition and fees	$ 865,847	$ 866,730
Research grants and contracts	479,230	471,004
Auxiliary activities	398,599	379,386
Departmental activities	327,955	290,022
Interest and fees on student loans	1,022	965
Loans issued to students	(3,601)	(3,539)
Collection of loans from students	7,936	8,532
Scholarships and fellowships	(114,625)	(110,267)
Payments to suppliers	(698,269)	(622,977)
Payments to employees	(1,582,107)	(1,592,972)
Other payments	(492,860)	(14,552)
Net cash used by operating activities	(810,873)	(327,668)
Cash flows from noncapital financing activities		
State appropriations	349,558	343,200
Federal Pell grant revenue	44,996	44,471
Gifts	58,323	64,625
Endowment gifts	43,835	62,466
Proceeds from issuance of noncapital debt	792,795	-
Principal paid on noncapital debt	(300,000)	-
Interest paid on noncapital debt	(3,519)	-
William D. Ford Direct Lending receipts	348,088	350,530
William D. Ford Direct Lending disbursements	(347,578)	(354,834)
Net cash provided by noncapital financing activities	986,498	510,458
Cash flows from capital and related financing activities		
Capital gifts and grants	57,219	79,195
Proceeds from issuance of capital debt and other long term obligations	385,313	85,365
Purchase of capital assets	(290,568)	(324,080)
Proceeds from sale of capital assets	1,320	1,040
Principal paid on capital debt	(103,713)	(63,267)
Interest paid on capital debt	(49,666)	(49,396)
Other receipts	888	10,062
Net cash provided (used) by capital and related financing activities	793	(261,081)
Cash flows from investing activities		
Investment income, net	200,039	193,277
Proceeds from sales and maturities of investments	4,832,846	4,132,610
Purchase of investments	(5,089,996)	(4,203,637)
Net cash provided (used) by investing activities	(57,111)	122,250
Net increase in cash	119,307	43,959
Cash and cash equivalents, beginning of year	64,332	20,373
Cash and cash equivalents, end of year	**$ 183,639**	**$ 64,332**

See accompanying notes

Reconciliation of net operating loss to cash flows from operating activities:	**Year ended June 30, 2019**	**2018**
	(in thousands)	
Operating loss	$ (615,139)	$ (1,112,725)
Adjustments to reconcile net loss to net cash used by operating activities:		
Depreciation expense	178,729	177,372
Change in assets and liabilities:		
Accounts receivable	(13,185)	5,676
Student loans receivable	4,335	4,993
Inventories and other assets	1,137	(2,238)
Investments in joint ventures and other assets	(792)	5,791
Accounts payable	48,643	28,973
Accrued personnel costs	2,231	2,136
Payroll taxes and other payroll deductions	1,038	(5,469)
Deposits held for others	46,306	(6,288)
Unearned revenues	(11,570)	(10,621)
Accrued self-insurance liabilities	(498,501)	502,634
Net other postemployment benefit obligation	(368,713)	188,010
Change in deferred outflows	9,913	(105,912)
Change in deferred inflows	404,695	-
Net cash used by operating activities	**$ (810,873)**	**$ (327,668)**

1. Organization, basis of presentation, reporting entity, and summary of significant accounting policies

Organization:

Michigan State University (the "University") was founded in 1855 as the Agricultural College of the State of Michigan. It was the first institution of higher learning in the nation to teach scientific agriculture and in 1863 became a pioneer land grant college under the Morrill Act. The University has grown into a comprehensive research university providing undergraduate, graduate, and professional degree programs. The University is not a component unit of the State of Michigan as defined by the Governmental Accounting Standards Board (GASB).

Basis of presentation:

The University follows all applicable GASB pronouncements. The accompanying financial statements have been prepared using the economic resource measurement focus and the accrual basis of accounting in accordance with accounting principles generally accepted in the United States of America for publicly owned colleges and universities and are presented in accordance with the reporting model prescribed in GASB Statement No. 34, *Basic Financial Statements-and Management's Discussion and Analysis-for State and Local Governments*, and GASB Statement No. 35, *Basic Financial Statements-and Management's Discussion and Analysis-for Public Colleges and Universities*, as amended by GASB Statements No. 37, No. 38, and No. 63. The University follows the "business-type" activities requirements of GASB Statement No. 34. This approach requires the following components of the University's financial statements:

- Management's Discussion and Analysis
- Basic Financial Statements: Statement of Net Position; Statement of Revenues, Expenses, and Changes in Net Position; Statement of Cash Flows; and Notes to the Financial Statements

GASB Statement No. 34, as amended by No. 63, establishes standards for external financial reporting for public colleges and universities and requires that resources be classified for accounting and reporting purposes into the following four net position categories:

- Net investment in capital assets: Capital assets, net of accumulated depreciation and outstanding principal balances of debt attributable to the acquisition, construction, or improvement of those assets.
- Restricted:
  Nonexpendable – Net position subject to externally imposed constraints that they be maintained permanently by the University. Nonexpendable net position includes the corpus portion (historical value) of gifts to the University's permanent endowment funds and certain investment earnings stipulated by the donor to be reinvested permanently.

  Expendable – Net position whose use by the University is subject to externally imposed constraints that can be fulfilled by actions of the University pursuant to those constraints or that expire by the passage of time. Expendable net position includes net appreciation of the University's permanent endowment funds that have not been stipulated by the donor to be reinvested permanently.
- Unrestricted: Net position that is not subject to externally imposed constraints. Unrestricted net position may be designated for specific purposes by action of management or the Board of Trustees (the "Board") or may otherwise be limited by contractual agreements with outside parties. Unrestricted net position is generally designated for academic, research, and outreach programs and initiatives, postemployment benefits, and capital asset renewals and replacements.

Reporting entity:

The Michigan State University Foundation (the "Foundation") is a legally separate, tax-exempt entity that meets the criteria set forth for component units under GASB Statement No. 39, *Determining Whether Certain Organizations are Component Units*, as amended by GASB No. 61. The Foundation provides financial support for the objectives, purposes, and programs of the University. Although the University does not control the timing, purpose, or amount of its receipts from the Foundation, the resources (and income thereon) that the Foundation holds and invests are dedicated to benefit the University. Because the resources held by the Foundation can only be used by, or for the benefit of, the University, the Foundation is considered a component unit of the University and its Statements of Financial Position and Statements of Activities and Changes in Net Assets are discretely presented in the University's financial statements. In addition, the Foundation's significant notes are summarized in note 4.

The Foundation is a private organization that reports under FASB standards. As such, certain revenue recognition criteria and presentation features are different from those under GASB. No modifications have been made to the Foundation financial information included in the University's financial report to account for these differences.

Complete financial statements for the Foundation can be obtained by a written request to:

Michigan State University Foundation, 325 E. Grand River Avenue, Suite 275, East Lansing, MI 48823.

In August 2018, articles of incorporation were filed to form a new nonprofit entity called MSU Health Care, Inc. with the University serving as its sole corporate member. MSU Health Care, Inc. is a multi-specialty medical practice that will operate the University's primary care, sports medicine, diagnostics, and testing among other services. As of June 30, 2019, the University had not yet transferred operations of these services to MSU Health Care, Inc. Under the requirements of GASB No. 80, *Blending Requirements for Certain Component Units - an amendment of GASB Statement No. 14,* MSU Health Care, Inc. is reported as a blended component unit. As of June 30, 2019, MSU Health Care, Inc. had total assets of $6,294 and total net position of $6,294. For the year ended June 30, 2019, MSU Health Care, Inc. had total revenues of $6,502 and total expenses of $208.

Lysander Series of Aesir Series, LLC ("Lysander") was formed in July 2018 and is a legally separate entity that meets the criteria set forth for component units under GASB No. 61. Lysander is a cell captive insurance company within an existing and approved captive insurance company used by the University to gain access to global reinsurers for purposes of obtaining general liability insurance and automobile liability insurance as disclosed in note 10. Lysander exclusively benefits the University and the Board is the series member of Lysander which is reported as a blended component unit. As of June 30, 2019, Lysander had total assets of $842, total liabilities of $338, and total net position of $504. For the year ended June 30, 2019, Lysander received a $545 contribution from the University and had total expenses of $41.

Summary of significant accounting policies:

Cash and cash equivalents – For purposes of the Statement of Cash Flows, the University defines cash equivalents as highly liquid, short-term (90 days or less) investments that bear little or no market risk. Cash and cash equivalents held in the Liquidity Reserve Pool (LRP), Common Investment Fund (CIF), and other investment funds are included in investments because the intent of these funds is long-term appreciation. Any cash balances held in these funds at the date of the financial statements are due to timing of reinvesting the proceeds within the fund.

Restricted cash and cash equivalents and restricted investments – Restricted cash and cash equivalents and restricted investments represent unspent bond proceeds that are externally restricted for the construction or purchase of capital assets and funds held in the Litigation Reserve as discussed in note 10.

Pledges – Financial support in the form of pledges is received from business enterprises, foundations, and individuals. Revenue from gift pledges is recorded only when there is an unconditional promise to pay and all eligibility requirements, including time requirements, have been met. Contributions to permanent and term endowments are not recognized as assets until actually received.

Inventories – Inventories are recorded using various methods, including last in first out (LIFO) and first in first out (FIFO).

Investments – Investments are stated at fair value, which represents the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. The University values its investments using a hierarchy of valuation inputs based on the extent to which the inputs are observable in the marketplace. Observable inputs reflect market data obtained from sources independent of the University, while unobservable inputs reflect the University's own assumptions about how market participants would value an asset or a liability based on the best information available. The University uses various industry standard valuation techniques that are appropriate under the circumstances and for which sufficient data is available to measure fair value, maximizing the use of relevant observable inputs and minimizing the use of unobservable inputs.

Capital assets – Capital assets are stated at cost or, when donated, at acquisition value at the date of the gift. Depreciation is computed using the straight-line method, with a full-year expense in the year of acquisition and none in the year of disposal. Assets are depreciated over the estimated useful lives ranging from four to forty years for the respective assets. When assets are retired or otherwise disposed of, the cost and related accumulated depreciation are removed from the accounts. The University capitalizes but does not depreciate certain works of art and historical treasures that are held for exhibition, education, research, or public service. These collections are neither disposed of for financial gain nor encumbered in any way, and are subject to organizational policy that requires the proceeds of items that are sold to be used to acquire other items for collections.

Deferred outflows of resources – This separate financial statement element represents a consumption of net position that applies to a future period and so will not be recognized as an expense until then. Deferred outflows of resources consist of accumulated changes in the fair value of hedging derivative instruments, contributions subsequent to the measurement date and changes in assumptions related to the valuation of other postemployment benefits, and deferred losses on refunding of debt.

Deferred inflows of resources – Deferred inflows of resources represent an addition to net position that applies to a future period and so will not be recognized as revenue until then. Deferred inflows of resources consist of the investment value, net of related liabilities to other beneficiaries, attributable to the University from irrevocable split-interest agreements, and changes in assumptions related to the valuation of other postemployment benefits.

Compensated absences – University employees earn vacation and sick leave benefits based, in part, on length of service. Vacation pay is fully vested when earned. Upon separation from service, employees are paid accumulated vacation and sick pay based upon the nature of separation (death, retirement, or termination). Certain limitations have been placed on the hours of vacation and sick leave that employees may accumulate and carry over for payment at death, retirement, or termination. Unused hours exceeding these limitations are forfeited.

Self-insurance liabilities – Self-insurance liabilities consist of accrued expenses related to the University's self-insurance programs. The accrued legal settlement in 2018 disclosed in note 10 was recognized as a self-insurance liability.

Unearned revenue – Unearned revenue consists primarily of advance ticket sales for athletic events, summer school tuition not earned during the current year, and contract and sponsored program advances.

Derivative instruments – Derivative instruments consist of interest rate swap agreements and are stated at fair value based on the zero coupon valuation method.

Operating and nonoperating revenues – Operating activities as reported in the Statements of Revenues, Expenses, and Changes in Net Position are those activities that generally result from exchange transactions, such as payments received for providing services and payments made for services or goods received. Nearly all of the University's expenses are from exchange transactions. Certain significant revenue streams relied upon for operations are recorded as nonoperating revenues, as defined by GASB Statement No. 34, including state appropriations, federal Pell grant revenue, gifts, and investment income. Restricted and unrestricted resources are spent and tracked at the discretion of the recipient University department within the guidelines of donor restrictions, if any.

Student tuition and fees – Student tuition and fee revenues are reported in the fiscal year in which the substantial portion of the educational term occurs, net of scholarship allowances in the Statements of Revenues, Expenses, and Changes in Net Position. Scholarship allowances represent the difference between the stated charge for goods and services provided by the University and the amount that is paid by the students or third parties on behalf of the students, where the University has discretion over such expenses.

Auxiliary activities – Auxiliary activities primarily represent revenues generated from University Residential and Hospitality Services, Intercollegiate Athletics, and various other departmental activities that provide services to the student body, faculty, staff, and general public.

Donor restricted endowments – Under Michigan law set forth in the Uniform Prudent Management of Institutional Funds Act, as adopted in Michigan in 2009 ("UPMIFA"), the Board acts in a fiduciary capacity as trustee of its endowment funds. UPMIFA requires that the Board exercise its fiduciary duties prudently and consider both the charitable purposes and needs of the University and the purposes of the specific endowment regarding current expenditures and preservation of the purchasing power of the funds. Under the programmatic spending policy established by the Board, 4.4% of the average market value of endowment investments for the twenty quarters of the five fiscal years prior to the beginning of the fiscal year was authorized for expenditure for fiscal year 2019. For fiscal year 2020, the rate will remain at 4.4%.

Eliminations – In preparing the financial statements, the University eliminates inter-fund assets and liabilities and transactions with blended component units that would otherwise be reflected twice in the Statements of Net Position. Similarly, revenues and expenses related to internal service activities and blended component units are also eliminated from the Statement of Revenues, Expenses, and Changes in Net Position. Student tuition and fees are presented net of scholarships and fellowships applied to student accounts where the University has discretion over such expenses, while stipends and other payments made directly to students are presented as scholarship and fellowship expenses.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Use of estimates – The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect amounts reported in the financial statements and the accompanying notes. Actual results could differ from those estimates.

Income taxes – The University is a part of the State of Michigan for purposes of Internal Revenue Code Section 115, and is an organization as described in Internal Revenue Code Section 501(c)(3). The University's income generally is exempt from federal income taxes, although income from certain activities may be subject to taxation as unrelated business income.

Change in accounting policy – Effective for the fiscal year ended June 30, 2019, the University adopted GASB Statement No. 88, *Certain Disclosures Related to Debt, Including Direct Borrowings and Direct Placement*, ("GASB 88"). This statement requires additional information related to debt be disclosed in the financial statements. The adoption of GASB 88 has been applied retroactively to fiscal year 2018 and impacts note 13 of the financial statements.

Effective for the fiscal year ended June 30, 2019, the University adopted GASB Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*, ("GASB 89"). This statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred. Previously such costs were capitalized as part of the related capital asset. The adoption of GASB 89 has been applied prospectively as required by the statement.

2. Cash and cash equivalents

The University's cash and cash equivalents as of June 30, 2019 and 2018 were as follows:

	2019	2018
Cash and cash equivalents, current	$ 91,787	$ 64,332
Restricted cash and cash equivalents, current	45,773	-
Restricted cash and cash equivalents, noncurrent	46,079	-
Total cash and cash equivalents	$ 183,639	$ 64,332

Of the bank balances for cash, $846 of the total $151,296 in 2019 and $857 of the total $84,742 in 2018 were covered by federal depository insurance. Any remaining amounts were uninsured and uncollateralized, as banks holding deposits of the University are legally prohibited from collateralizing these deposits.

(dollars in thousands)

3. Investments

The University manages investments in accordance with the investment policy approved by the Board. The investment policy distinguishes guidelines for the Liquidity Pool (LP), Liquidity Reserve Pool (LRP), and Common Investment Fund (CIF). In addition, the University has other investments that are restricted by external agreements or by special donor limitations (Other).

As of June 30, 2019 and 2018, the University had the following investments:

	June 30, 2019				
Investment type	LP	LRP	CIF	Other	Total
Investment pools	$ 13,389	$ 50,486	$ 2,600,236	$ 68,476	$ 2,732,587
U.S. Treasury bonds	241,048	10,872	14,130	-	266,050
U.S. Government agencies	19,692	12,241	15,908	-	47,841
Municipal bonds	1,289	634	825	-	2,748
Corporate bonds	79,704	20,842	27,086	167	127,799
Asset-backed securities	57,682	7,427	9,650	2,409	77,168
U.S. equities	-	-	251,912	-	251,912
International equities	-	-	40,807	-	40,807
International bonds	18,019	5,485	7,128	-	30,632
Life insurance policies	-	-	-	4,169	4,169
Total	$ 430,823	$ 107,987	$ 2,967,682	$ 75,221	$ 3,581,713

	June 30, 2018				
Investment type	LP	LRP	CIF	Other	Total
Investment pools	$ 12,841	$ 47,900	$ 2,432,276	$ 62,661	$ 2,555,678
U.S. Treasury bonds	108,142	20,546	26,701	-	155,389
U.S. Government agencies	27,748	7,238	9,407	-	44,393
Municipal bonds	-	581	755	-	1,336
Corporate bonds	103,655	13,887	18,047	305	135,894
Asset-backed securities	38,242	7,807	10,145	2,328	58,522
U.S. equities	-	-	228,424	-	228,424
International equities	-	-	49,688	-	49,688
International bonds	29,765	4,629	6,015	-	40,409
Life insurance policies	-	-	-	3,961	3,961
Total	$ 320,393	$ 102,588	$ 2,781,458	$ 69,255	$ 3,273,694

Custodial Credit Risk: For an investment, custodial credit risk is the risk that, in the event of the failure of the counterparty, the University will not be able to recover the value of its investments or collateral securities that are in the possession of an outside party. University investment policy does not limit the value of investments that may be held by an outside party. The University's investments that are held by the University's counterparty in the name of the University as of June 30, 2019 and 2018, respectively, are as follows:

Investment type	2019	2018
Investment pools	$ 44,360	$ 34,917
U.S. Treasury bonds	266,050	155,389
U.S. Government agencies	47,841	44,393
Municipal bonds	2,748	1,336
Corporate bonds	127,799	135,894
Asset-backed securities	77,168	58,522
U.S. equities	250,832	227,573
International equities	40,807	49,688
International bonds	30,632	40,409
Total	$ 888,237	$ 748,121

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

The maturities of fixed income investments as of June 30, 2019 and 2018 were as follows:

June 30, 2019
Fixed Income Investment Maturities

Investment type	Less than 1 year	1-5 years	6-10 years	More than 10 years	Total
Investment pools	$ 663	$ 3,358	$ 41,963	$ 2,275	$ 48,259
U.S. Treasury bonds	33,304	210,116	14,508	8,122	266,050
U.S. Government agencies	783	13,542	2,654	30,862	47,841
Municipal bonds	-	923	-	1,825	2,748
Corporate bonds	42,582	56,964	22,182	6,071	127,799
International bonds	9,605	16,296	3,741	990	30,632
Asset-backed securities	10,292	29,238	9,546	28,092	77,168
Total	$ 97,229	$ 330,437	$ 94,594	$ 78,237	$ 600,497

June 30, 2018
Fixed Income Investment Maturities

Investment type	Less than 1 year	1-5 years	6-10 years	More than 10 years	Total
Investment pools	$ -	$ -	$ 78,818	$ 2,107	$ 80,925
U.S. Treasury bonds	-	132,479	15,546	7,364	155,389
U.S. Government agencies	1,444	17,004	266	25,679	44,393
Municipal bonds	-	-	-	1,336	1,336
Corporate bonds	13,991	101,117	14,008	6,778	135,894
International bonds	918	33,796	4,768	927	40,409
Asset-backed securities	-	14,095	14,605	29,822	58,522
Total	$ 16,353	$ 298,491	$ 128,011	$ 74,013	$ 516,868

Interest Rate Risk: As a means of managing its exposure to fair value losses arising from increasing interest rates, University investment policy limits the average duration of the LP portfolio to three years and the LRP and CIF portfolios to six years. At June 30, 2019 and 2018, the University was in compliance with its investment policy with regard to average duration. University policy does not address average duration of investments by investment type.

The University invests in asset-backed securities such as mortgage pass-through securities issued by U.S. Government agencies. These securities are based on cash flows from interest payments on underlying mortgages. Therefore, they are sensitive to prepayments by mortgagees, which may result from a decline in interest rates.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

The Standard & Poor's credit ratings for fixed income investments at June 30, 2019 and 2018 were as follows:

June 30, 2019

Rating	Investment pools	U.S. Treasury bonds	U.S. Government agencies	Municipal bonds	Corporate bonds	International bonds	Asset-backed securities	Total
AAA	$ -	$ -	$ -	$ -	$ 236	$ -	$ 28,599	$ 28,835
AA	-	-	13,026	1,240	9,079	5,555	3,865	32,765
A	-	-	1,486	1,104	42,330	13,777	943	59,640
BBB	-	-	1,238	404	58,984	8,774	2,449	71,849
BB	-	-	-	-	1,181	181	-	1,362
Below BB	-	-	-	-	-	-	646	646
Not rated	48,259	266,050	32,091	-	15,989	2,345	40,666	405,400
Total	$ 48,259	$ 266,050	$ 47,841	$ 2,748	$ 127,799	$ 30,632	$ 77,168	$ 600,497

June 30, 2018

Rating	Investment pools	U.S. Treasury bonds	U.S. Government agencies	Municipal bonds	Corporate bonds	International bonds	Asset-backed securities	Total
AAA	$ -	$ -	$ -	$ -	$ 267	$ -	$ 14,291	$ 14,558
AA	-	-	18,265	799	23,747	7,471	5,909	56,191
A	-	-	-	166	35,128	19,373	2,101	56,768
BBB	-	-	-	371	75,412	12,836	1,988	90,607
BB	-	-	-	-	465	172	205	842
Not rated	80,925	155,389	26,128	-	875	557	34,028	297,902
Total	$ 80,925	$ 155,389	$ 44,393	$ 1,336	$ 135,894	$ 40,409	$ 58,522	$ 516,868

Credit Risk: As a means of managing credit risk on its fixed income investments, University investment policy limits investment quality of all separately managed funds to AA and limits investments at time of purchase to the following minimum ratings issued by nationally recognized statistical rating organizations by portfolio type as follows:

- LP portfolio - Short-term A1/P1, long-term BBB
- LRP portfolio - Short-term A2/P2, long-term B
- CIF portfolio - Short-term A2/P2, long-term BB

University policy does not address credit risk by investment type.

Concentration of Credit Risk: As a means of managing the concentration of credit risk, University investment policy limits the concentration of investments as follows:

- LP portfolio – No more than 15% of the portfolio's market value may be invested in dollar denominated foreign securities of developed countries (i.e., no emerging markets). No more than 10% of the portfolio's market value will be invested in securities of any single issuer, except those which are obligations of, or fully guaranteed as to both principal and interest by, the U.S. Government or its agencies.

- LRP portfolio – No more than 10% of the portfolio's market value may be invested in securities below BBB. No more than 10% of the portfolio's market value may be invested in securities of any single issuer, except those which are obligations of, or fully guaranteed as to both principal and interest by, the U.S. Government or its agencies.

- CIF portfolio – Investments are managed in accordance with asset allocation guidelines and manager guidelines established at the time of manager appointment and consist of equities, real assets, limited partnerships, absolute return funds, and fixed income assets.

As of June 30, 2019 and 2018, not more than 5% of the University's total investments were invested in any one issuer except those which are obligations of, or fully guaranteed as to both principal and interest by, the U.S. Government or its agencies.

Foreign Currency Risk: University investment policy limits foreign currency risk on its LRP portfolio to 30% of the portfolio's market value, but does not address foreign risks for the LP or CIF portfolios. The University's exposure to foreign currency risk consisted of $13,008 in investments denominated in British pounds sterling and $2,635 in investments denominated in euros at June 30, 2019. The University's exposure to foreign currency risk consisted of $16,945 in investments denominated in British pounds sterling and $3,026 in investments denominated in euros at June 30, 2018.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

4. Foundation investments

The Foundation records investments at fair value. It utilizes valuation techniques that maximize the use of observable inputs and minimizes the use of unobservable inputs. Based on the observability of the inputs used in the valuation techniques the Foundation is required to provide the following information according to the fair value hierarchy. The fair value hierarchy ranks the quality and reliability of the information used to determine fair values. Financial assets carried at fair value will be classified and disclosed in one of the following three categories:

Level 1: Quoted prices for identical assets or liabilities in active markets that the Foundation has the ability to access as of the measurement date.

Level 2: Significant other observable inputs other than Level 1 prices such as quoted prices for similar assets and liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

Level 3: Significant unobservable inputs that reflect a company's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

The Foundation's estimated fair values of investments measured on a recurring basis as of June 30, 2019 and 2018 were as follows:

	Fair value measurement at June 30, 2019 using:			
	Balance at June 30, 2019	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Marketable securities:				
Short-term investments	$ 926	$ 926	$ -	$ -
Domestic equities	74,871	58,545	16,326	-
Foreign equities	87,725	48,743	38,982	-
Fixed income	8,464	8,464	-	-
Mutual funds - equities	14,670	14,670	-	-
Mutual funds - fixed income	8,007	8,007	-	-
Total marketable securities	194,663	139,355	55,308	-
Investments in hedge funds	37,253	-	-	37,253
Investments in private equity and venture capital	88,273	-	-	88,273
Total investments by fair value level	$ 320,189	$ 139,355	$ 55,308	$ 125,526

At June 30, 2019, $59,564 of investments in hedge funds and $9,106 of investments in private equity and venture capital was valued at net asset value and not included above.

	Fair value measurement at June 30, 2018 using:			
	Balance at June 30, 2018	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Marketable securities:				
Short-term investments	$ 1,002	$ 1,002	$ -	$ -
Domestic equities	71,503	58,045	13,458	-
Foreign equities	86,376	46,594	39,782	-
Fixed income	9,606	9,606	-	-
Mutual funds - equities	16,026	16,026	-	-
Mutual funds - fixed income	8,431	8,431	-	-
Total marketable securities	192,944	139,704	53,240	-
Investments in hedge funds	37,906	-	-	37,906
Investments in private equity and venture capital	76,815	-	-	76,815
Total investments by fair value level	$ 307,665	$ 139,704	$ 53,240	$ 114,721

At June 30, 2018, $69,255 of investments in hedge funds and $6,544 of investments in private equity and venture capital was valued at net asset value and not included above.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

The fair value for marketable debt and equity securities are based on quoted market prices. Securities traded on the national securities exchange are valued at the reported sales price on the last business day of the year. Investments traded over the counter on the over-the-counter market and listed securities for which no sale was reported on that date are valued at the average of the last reported bid and ask price.

The Foundation has entered into various hedge funds with investment managers. These investments are secured by the underlying value of the securities composing the portfolios. The carrying amount reported is stated at market value or estimated market value. Although hedge funds have been classified as Level 3, within certain individual funds there may be certain assets or liabilities that are classified as Level 1 or 2 by limited partnerships.

Private equity and venture capital investments are stated at market value or estimated market value. Management, external consultants, and the Board of Directors evaluate these investments for impairment on a quarterly basis. As of June 30, 2019, the Foundation has an outstanding commitment to fund limited partnerships and venture capital investments in the amount of $61,628.

5. Accounts and interest receivable

The composition of accounts and interest receivable at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
State appropriations	$ 63,764	$ 62,619
Research and sponsored programs	54,193	52,065
Departmental activities	73,473	64,189
Interest receivable	2,923	2,375
Other	24,699	22,788
	219,052	204,036
Less: allowance for doubtful accounts	12,408	12,969
Total accounts and interest receivable, net	$ 206,644	$ 191,067

6. Student loans and pledges receivable

The composition of student loans and pledges receivable at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Student loans receivable:		
Perkins Federal Loan Program	$ 24,492	$ 29,940
Health Professions Student Loan Programs	10,488	9,440
Other	2,549	2,860
	37,529	42,240
Less: allowance for doubtful accounts	6,896	7,273
Total student loans receivable, net	30,633	34,967
Pledges receivable:		
Capital	80,955	60,957
Operations	33,397	31,678
	114,352	92,635
Less: allowance for doubtful accounts	11,052	9,847
Total pledges receivable, net	103,300	82,788
Total student loans and pledges receivable, net	133,933	117,755
Less: current portion - student loans	8,299	9,028
Less: current portion - pledges	30,049	25,704
Noncurrent portion	$ 95,585	$ 83,023

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Principal repayment and interest rate terms of federal and University student loans vary considerably. Campus-based federal loan programs are funded principally with federal and institutional contributions to the University under the Perkins and various health professions loan programs.

The Perkins loan program expired on September 30, 2017, which ended the issuance of new loans under this program, and disallowed any new disbursements after June 30, 2018. The University continues to service outstanding loans in accordance with program specifications as permitted by the Federal government.

For the year ended June 30, 2019 and 2018, the University distributed $347,578 and $350,530, respectively, for student loans through the U.S. Department of Education William D. Ford Direct Loan Program. These distributions and related funding sources are not included as expenses and revenues in the accompanying financial statements.

As discussed in note 1, pledges for permanent endowments do not meet eligibility requirements, as defined by GASB Statement No. 33, until the related gift is received. Accordingly, pledges for permanent endowments totaling $39,582 and $42,650 at June 30, 2019 and 2018, respectively, are not recognized as assets in the accompanying financial statements, but are expected to be received in future years.

Payments on pledges receivable at June 30, 2019, expected to be received in the following fiscal years ended June 30, are summarized below. The allowance for uncollectible pledges receivable is made based on prior collection experience and management judgment. Gift pledges expected to be collected in the future years are reported at the net present value of the related cash flows discounted at 4%.

2020	$ 33,180
2021	24,258
2022	17,912
2023	12,586
2024	4,757
2025 and beyond	21,659
Total discounted pledges receivable	114,352
Less: allowance for uncollectible pledges	11,052
Total pledges receivable, net	$ 103,300

7. Investments in joint ventures and other assets

The composition of investment in joint ventures and other assets at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Investment in joint ventures	$ 5,495	$ 5,160
Other assets	24,120	23,663
Total investment in joint ventures and other assets	$ 29,615	$ 28,823

The University is a member of an incorporated nonprofit joint venture which is accounted for under the equity method. University Rehabilitation Alliance, Inc. (URA) has the University and Peckham Vocational Industries of Lansing as members and is an enterprise for the treatment of persons with brain injury. The University is a 50% member of the nonprofit corporation. Copies of financial statements for these entities can be obtained by a written request to: Office of the Controller, Michigan State University, 426 Auditorium Rd., John A. Hannah Administration Building Room 305, East Lansing, Michigan 48824.

Since its inception, the University has extended various lines of credit to URA for capital and operational needs, with a $1,000 line available to URA as of June 30, 2019. As of June 30, 2019, no amounts had been drawn on this line of credit. At June 30, 2019 and 2018, the University had a note receivable balance of $1,896 and $1,964, respectively. This receivable is due in equal monthly installments by March 2036 at a rate of 5.5% and is secured by the land, property, and equipment of URA.

Other assets is comprised of $456 in prepaid expenses, $22,604 deposit made related to a facilities agreement with Consumers Energy, and $1,059 of assets originally granted to the University under the Morrill Act as a pioneer land-grant college. The Consumers agreement called for the University to fund an initial deposit of $23,000 to Consumers Energy that was used for the construction of a 138kV electrical substation to provide energy to the University. The facility is owned and operated by Consumers Energy. The University is entitled to an annual utility expense rebate from Consumers Energy, based in part on annual energy consumption for a period of up to 25 years, up to an accumulated rebate total of $23,000. Any portion of the deposit not applied to future energy expenses through the annual rebate amount by March 2042 will be forfeited.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

8. Capital assets and collections

Capital asset and collection activity for the years ended June 30, 2019 and 2018 follows:

	2018	Additions	Disposals	Transfers	2019
Non-depreciated capital assets:					
Land	$ 47,519	$ 591	$ -	$ -	$ 48,110
Construction in progress	324,458	231,578	(174)	(65,058)	490,804
Museum collections	15,078	2,948	-	4,394	22,420
Total non-depreciated capital assets	387,055	235,117	(174)	(60,664)	561,334
Depreciated capital assets:					
Buildings and site improvements	3,655,232	-	(11,323)	64,842	3,708,751
Software and other intangibles	118,792	-	-	216	119,008
Equipment and other	911,119	66,599	(16,496)	(4,394)	956,828
Less: accumulated depreciation					
Buildings and site improvements	(1,519,962)	(114,998)	7,378	-	(1,627,582)
Software and other intangibles	(104,547)	(4,713)	-	-	(109,260)
Equipment and other	(704,834)	(59,018)	16,778	-	(747,074)
Total depreciated capital assets	2,355,800	(112,130)	(3,663)	60,664	2,300,671
Total capital assets	$ 2,742,855	$ 122,987	$ (3,837)	$ -	$ 2,862,005

	2017	Additions	Disposals	Transfers	2018
Non-depreciated capital assets:					
Land	$ 43,649	$ 1,650	$ (2,481)	$ 4,701	$ 47,519
Construction in progress	712,164	238,255	-	(625,961)	324,458
Museum collections	14,661	417	-	-	15,078
Total non-depreciated capital assets	770,474	240,322	(2,481)	(621,260)	387,055
Depreciated capital assets:					
Buildings and site improvements	3,042,481	-	(6,828)	619,579	3,655,232
Software and other intangibles	117,111	-	-	1,681	118,792
Equipment and other	852,770	72,186	(13,837)	-	911,119
Less: accumulated depreciation					
Buildings and site improvements	(1,408,205)	(114,938)	3,181	-	(1,519,962)
Software and other intangibles	(99,419)	(5,128)	-	-	(104,547)
Equipment and other	(660,722)	(57,306)	13,194	-	(704,834)
Total depreciated capital assets	1,844,016	(105,186)	(4,290)	621,260	2,355,800
Total capital assets	$ 2,614,490	$ 135,136	$ (6,771)	$ -	$ 2,742,855

9. Deferred outflows and inflows of resources

The composition of deferred outflows of resources at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Accumulated changes in fair value of hedging derivative instruments	$ 39,490	$ 31,487
Other postemployment benefits - see note 12	114,914	124,827
Loss on refunding of debt at June 30, 2010	8,824	9,958
Total deferred outflows of resources	$ 163,228	$ 166,272

The composition of deferred inflows of resources at June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Irrevocable split-interest agreements (net of related liabilities)	$ 18,990	$ 16,661
Other postemployment benefits - see note 12	404,695	-
Total deferred inflows of resources	$ 423,685	$ 16,661

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

10. Contingencies and risk management

The University is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; and natural disasters. The University complies with the requirements of GASB Statement No. 10,*Accounting and Financial Reporting for Risk Financing and Related Insurance Issues*, and related guidance, and records liabilities for legal proceedings and other contingent losses in those instances where the liability is deemed probable and the University can reasonably estimate the amount of the loss (or a range of the loss can be estimated). Once established, accruals are adjusted from time to time, as appropriate, to reflect (1) the facts and circumstances known at the time, including information regarding negotiations, settlements, rulings and other relevant events and developments, (2) the advice and analyses of counsel and (3) the assumptions and judgment of management. To manage these risks, the University uses various lines of commercial insurance purchased directly by the University or through Lysander (cell captive insurance company) on an annual basis (including, but not limited to, general liability insurance, educators legal liability insurance, excess medical professional liability insurance, and property insurance) with differing self-insured retentions. The University evaluates self-insured retention amounts annually, and establishes retention amounts based on various factors, including historical claims experience.

The University's liability for various medical professional liability claims is funded based on actuarial valuations. The liability is reported at its present value of $5,009 and $6,454 as of June 30, 2019 and 2018, respectively. The discount rate used was 2.5%, which is based in part on the University's short-term internal cost of capital and industry standards.

The University is also self-insured for various employee benefits that include health care and dental insurance, workers compensation, and unemployment compensation. Claims expenditures and liabilities are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Those losses include an estimate of claims that have been incurred but not reported. The workers compensation liability, which will be settled by fixed payments over an extended period of time, is reported at its present value of $3,759 and $3,669 as of June 30, 2019 and 2018, respectively. The discount rate used was 4%, which is based in part on the University's medium-term internal cost of capital and industry standards.

Changes in the total reported general, professional, and self-insured employee benefit liabilities during 2019, 2018, and 2017 were as follows:

	2019	2018	2017
Balance, beginning of year	$ 525,577	$ 22,943	$ 22,401
Claims incurred and changes in estimates	210,216	704,204	192,687
Claim payments	(708,717)	(201,570)	(192,145)
Balance, end of year	27,076	525,577	22,943
Less: current portion	19,890	517,786	15,334
Noncurrent portion	$ 7,186	$ 7,791	$ 7,609

For those risks that the University has purchased commercial insurance, settled claims have not exceeded the commercial coverage in any of the past three years, with the exception of the civil actions discussed in the following paragraph.

On August 29, 2016, a criminal complaint was filed with the University Police Department against a physician then employed by the University. This criminal complaint and subsequent allegations were made by individuals who accused the physician of sexual assault based, in large part, on conduct that occurred under the guise of medical treatment, including on University non-campus property. The physician was terminated and subsequently pled guilty to criminal charges across multiple jurisdictions and is now incarcerated. Civil actions relating to these crimes were filed by 332 individuals naming the University and, in some cases, several other current and former employees, as co-defendants. On May 17, 2018, a settlement agreement was reached, in principle, with the 332 individuals for $500,000. The University accrued a $500,000 liability for the year ended June 30, 2018, with such expenses included in institutional support within the Statement of Revenues, Expenses, and Changes in Net Position. The settlement agreement became effective on August 28, 2018.

On December 4, 2018, in accordance with the terms of the settlement agreement, the University paid the $500,000 settlement amount. A Qualified Settlement Fund administered by the plaintiffs' counsel received $425,000 and $75,000 was paid to a Litigation Reserve, which will be available until December 5, 2020. Both amounts were primarily funded by private placement bonds (see note 13). The Litigation Reserve is being used to litigate or settle any related claims not released by the settlement agreement and the University may use up to $6,000 plus accumulated interest to fund costs and expenses, including attorney's fees, incurred in defending and settling related claims. In addition, professional fees associated with the bi-annual audit of the Litigation Reserve may be funded by the Litigation Reserve. Within 30 days of December 4, 2020, the University must remit any remaining portions of the Litigation Reserve (including accumulated interest) not designated by the bi-annual auditor as necessary to resolve then-pending claims and not needed to pay outstanding fees and costs of the auditor, defense counsel, and consultation to the Qualified Settlement Fund for distribution to the plaintiffs that settled under the settlement agreement. As of June 30, 2019, 194 claims not released by the settlement have been filed or asserted, of which 54 have been settled and paid for $25,725. In addition, the University has utilized $4,078 to fund costs and expenses, and the Litigation Reserve has earned $576 in interest income, resulting in a remaining balance of $45,773 at June 30, 2019.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

This amount is reported in the Statement of Net Position as restricted cash (asset) and deposits held for others (liability). Subsequent to year-end, the University has settled and paid 23 claims for $10,035. Although unknown claims might be brought in the future, and the outcomes of the remaining known claims are pending, the University has access to the remaining Litigation Reserve balance. Accordingly, no additional amounts have been accrued in the 2019 financial statements.

For the years ended June 30, 2019 and 2018, the University incurred costs totaling $7,200 and $18,681, respectively, for internal investigation, legal, and other related costs associated with the settlement. These expenses are included in institutional support within the Statement of Revenues, Expenses, and Changes in Net Position.

The University has submitted claims to insurance carriers related to claims settled and certain legal costs incurred to date. No insurance reimbursements for settlements and/or legal fees have been received to date. Amounts of future insurance reimbursements are unknown as of June 30, 2019, and as a result no insurance recovery accruals have been recorded in the 2019 financial statements. During the year ended June 30, 2019, the University entered into agreements with third parties to aid in the efforts to seek insurance recoveries with the third parties being compensated by 25% of any such recoveries.

As of June 30, 2019, the University was under various reviews and investigations by external parties, including the United States Department of Education and the Michigan Attorney General. The University and the Department of Education, Office of Civil Rights (OCR), entered into an agreement effective August 27, 2019 to resolve OCR's review of the University's compliance with Title IX. On September 3, 2019, the Department of Education, Federal Student Aid (FSA) division, entered into an agreement with the University that resolved FSA's review of the University's compliance with the *Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act* (the "Clery Act"). The agreement requires certain corrective action be initiated by the University to implement enhancements to the University's Clery Act related policies and procedures, and to identify steps that the University will undertake to ensure continued compliance in the future. In addition, the University agreed to a fine of $4,500, which is recorded as an accrued liability at June 30, 2019. Upon information and belief, the Michigan Attorney General's investigation is ongoing at this time.

In the normal course of its activities, the University has been a party in various other legal actions. Historically, the University has not experienced material losses from such actions. After taking into consideration legal counsel's evaluation of other pending actions, the University is of the opinion that the outcome thereof, other than the litigation associated with the former physician, will not have a material effect on the financial statements.

11. Retirement benefits

The University has a defined contribution base retirement program administered through TIAA and Fidelity Investments for all qualified employees. All regular employees are eligible to participate based on the service requirements specific to their employee group. Participants maintain individual accounts with the base retirement vendors and are fully vested.

Participating employees contribute 5% of their base salary or wages and the University contributes 10% of the employee's base salary or wages, subject to applicable University guidelines and Internal Revenue Service limits. In addition, for certain employees hired after June 30, 2010, and who are not eligible to receive postemployment benefits upon retirement, the University contributes an additional 0.5% or 0.75% (depending on total years of service) of the employee's base salary or wages, subject to applicable limits. Participants may elect to contribute additional amounts to a supplemental program and/or a deferred compensation plan, within specified limits, which are not matched by University contributions. Plan provisions and contribution requirements of plan members and the University are established and may be amended in accordance with University policies, union contracts, or plan provisions. Contributions under the base program, excluding the participants' supplemental contributions, for the years ended June 30, 2019 and 2018 were as follows:

	2019	2018
University contributions	$ 91,318	$ 89,228
Employee contributions	45,142	44,161

In addition, the University has a single-employer, defined benefit plan covering 267 employees hired prior to January 1, 1973. The plan is closed to new entrants and monies have been internally reserved by the University to fully fund program costs. The plan is not funded through a pension trust. The University has recorded a liability of $3,246 and $3,814 representing the total remaining pension obligation based on an actuarial valuation as of January 1, 2019 and 2018, respectively. The benefits are based on the employee's compensation during the last three years of employment and/or years of service.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

12. Net other postemployment benefit (OPEB) obligations

The University provides retiree health and dental care benefits, including prescription drug coverage, to eligible retired employees and qualified spouses/beneficiaries. This is a closed single employer defined benefit plan administered by the University effective for employees hired prior to July 1, 2010. Employees hired on or after July 1, 2010 are eligible to purchase insurance at the average cost of the defined benefit plan. Benefits are provided to eligible faculty, academic staff and support staff who meet normal retirement requirements while still working for the University. Currently, the plan has approximately 20,000 members. The plan does not issue a separate stand-alone financial statement. Terms of benefit plans are generally determined as part of collective bargaining agreements or set by the University for employees who are not represented. The Provost and Executive Vice President for Academic Affairs and the Executive Vice President for Administrative Services are authorized to enter into collective bargaining agreements. In addition, the President and Vice President for Finance and Treasurer are authorized to approve benefit plan changes.

The University's medical plans are self-funded and each plan's premiums are updated annually based on actual claims. The University contributes to the lowest cost health plan's single rate cost for which retirees are eligible. No payment is required by retirees who select the lowest cost health plan for coverage. In the event a retiree selects an alternative health plan, the retiree is responsible for payment of the difference in premium costs. Retirees are responsible for various co-payments. The University does not maintain a separate legal trust to hold assets used to fund postemployment benefits, has no obligation to make contributions in advance of when insurance premiums or claims are due for payment, and currently pays for postemployment benefits on a pay-as-you-go basis.

The University's annual postemployment benefits expense is actuarially determined in accordance with GASB 75. Projections of benefits for financial reporting purposes are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided at the time of each valuation and the historical pattern of sharing of benefit costs between the employer and plan members to that point.

During year ended June 30, 2019, the University's actuaries conducted an experience study based on census data collected as of January 1, 2014, January 1, 2016, and January 1, 2018. As a result of the experience study, certain assumptions were updated to reflect the University's historical experience, including updates to mortality, employee withdrawal rates, retirement age, salary increases, marital status, and employee opt-out rates. The University's reported liability for providing retiree health and dental care benefits is estimated based on an actuarial valuation date of January 1, 2018 and measurement date of December 31, 2018 in accordance with GASB Statement No. 75. The University's liability is calculated using the entry age normal level percent of pay method. The actuarial assumptions are as follows:

Discount rate	4.09%, based on the Bond Buyer 20-year General Obligation Municipal Bond Index
Salary increases	5.0%
Healthcare cost trend rates	7.19% for 2019, decreasing 0.31% per year, to an ultimate rate of 5% for 2026 and later years. As of July 1, 2010, internal policy caps healthcare cost increases at a maximum of 5% per year.

For the year ended June 30, 2018, the University's reported liability for providing retiree health and dental care benefits was estimated based on an actuarial valuation date of January 1, 2018 and measurement date of December 31, 2017 in accordance with GASB Statement No. 75. The University's liability was calculated using the entry age normal level percent of pay method. The actuarial assumptions were as follows:

Discount rate	3.44%, based on the Bond Buyer 20-year General Obligation Municipal Bond Index
Salary increases	4.0%
Healthcare cost trend rates	7.50% for 2018, decreasing 0.31% per year, to an ultimate rate of 5% for 2026 and later years. As of July 1, 2010, internal policy caps healthcare cost increases at a maximum of 5% per year.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

For the December 31, 2018 measurement date, the University utilized separate mortality assumptions for faculty and non-faculty staff. Faculty mortality is based on the Pub T.H-2010.H (A) Public Retirement Plans Mortality Tables with MP-2018 improvement scale. Non-faculty staff mortality is based on the RP-2014 Generational Healthy Mortality Tables, with mixed collar adjustments, projected back to 2006 using scale MP-2014 and then projected forward using MP-2018. As part of the December 31, 2017 measurement date, the University utilized mortality assumptions based on the RP-2014 Generational Healthy Mortality Tables, with white collar adjustments, projected back to 2006 using scale MP-2014 and then projected forward using MP-2017. Additional assumptions updated as a result of the experience study include an increase in the employee withdrawal rates from 0% at age 55 to up to 1.5% at age 65 for certain employee groups, an increase in the retirement age from 62.4 to up to 69.0 for certain employee groups, an increase in the number of covered spouses from 80% for males and 50% for females to 90% for males and 60% for females, and an increase in the retiree opt-out rate from 0% to 8%. Changes in the total reported liability for postemployment benefits obligations for the year ended June 30, 2019 and 2018, are summarized as follows:

	2019	2018
Balance, beginning of year	$ 2,016,048	$ 1,828,038
Service cost	48,202	41,211
Interest cost	70,323	69,928
Changes in assumptions	(447,295)	115,470
Difference between expected and actual plan experience	-	-
Benefits payments	(39,943)	(38,599)
Balance, end of year	1,647,335	2,016,048
Less: current portion	44,083	42,094
Noncurrent portion	$ 1,603,252	$ 1,973,954

Changes in assumptions reflect a change in the discount rate at both the measurement dates of December 31, 2017 and 2018, respectively. In addition, changes in assumptions for the year ended June 30, 2019 also reflect updated assumptions as a result of the 2019 experience study.

In accordance with GASB 75, the University's liability for postemployment benefits obligations at June 30, 2019 and 2018 is not reduced by the anticipated Medicare Retiree Drug Subsidy for future periods. This subsidy would reduce the total postemployment benefits liability by approximately $2,522 and $2,293, respectively.

For both the December 31, 2018 and 2017 measurement dates, amounts are based on the valuation date of January 1, 2018. Therefore, census data, including the number of plan participants, used in both years were the same and consisted of the following:

	2018 and 2019
Active employees - Hired before July 1, 2010	6,791
Active employees - Hired after July 1, 2010	6,027
Retirees receiving benefits	4,401
Dependents	2,879
Total plan participants	20,098

Actuarial valuations of an ongoing plan involve estimates of the value of reported amounts and assumptions about the probability of occurrence of events far into the future. Examples include assumptions about future employment, mortality, and the health care cost trend.

A one-percentage point change in the discount rate and assumed health care cost trend rates would have the following impact on the liability for postemployment benefits obligations at June 30, 2019:

	1% Decrease	Current Rates	1% Increase
Discount rate:			
Net OPEB obligations	$ 1,935,904	$ 1,647,335	$ 1,415,943
Increase (decrease)	288,569	-	(231,392)
Health care trend rate:			
Net OPEB obligations	$ 1,543,030	$ 1,647,335	$ 1,788,307
Increase (decrease)	(104,305)	-	140,972

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

A one-percentage point change in the discount rate and assumed health care cost trend rates would have the following impact on the liability for postemployment benefits obligations at June 30, 2018:

	1% Decrease	Current Rates	1% Increase
Discount rate:			
Net OPEB obligations	$ 2,416,516	$ 2,016,048	$ 1,701,319
Increase (decrease)	400,468	-	(314,729)
Health care trend rate:			
Net OPEB obligations	$ 1,897,593	$ 2,016,048	$ 2,168,318
Increase (decrease)	(118,455)	-	152,270

The components of postemployment benefits expense for the year ended June 30, 2019 and 2018 are summarized as follows:

	2019	2018
Service cost	$ 48,202	$ 41,211
Interest cost	70,323	69,928
Amortization of changes in assumptions	(30,936)	11,664
Total expense	$ 87,589	$ 122,803

Deferred outflows and inflows of resources related to postemployment benefits obligations at June 30, 2019 are summarized as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net deferred impact to OPEB
Changes in assumptions	$ 92,142	$ 404,695	$ (312,553)
Benefit payments made after measurement date	22,772	-	22,772
Total	$ 114,914	$ 404,695	$ (289,781)

Deferred outflows and inflows of resources related to postemployment benefits obligations at June 30, 2018 are summarized as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net deferred impact to OPEB
Changes in assumptions	$ 103,806	$ -	$ 103,806
Benefit payments made after measurement date	21,021	-	21,021
Total	$ 124,827	$ -	$ 124,827

Of the total amount reported as deferred outflows of resources related to OPEB at June 30, 2019, $22,772 resulting from University contributions subsequent to the measurement date and before the end of the fiscal year will be included as a reduction in the net OPEB liability in the year ended June 30, 2020. Deferred outflows and inflows related to changes in assumptions and the difference between expected and actual plan experience will be amortized into expense in the following years ended June 30 based upon the average future work life expectancy of plan participants.

2020	$ (30,936)
2021	(30,936)
2022	(30,936)
2023	(30,936)
2024	(30,936)
2025 and beyond	(157,873)
Total	$ (312,553)

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

13. Long term debt and other obligations

Long term debt and other obligations for the years ended June 30, 2019 and 2018 are summarized as follows:

	2018	Borrowed	Retired	2019	Current Portion
General Revenue Bonds:					
Series 2019A	$ -	$ 323,070	$ -	$ 323,070	$ -
Series 2019B	-	292,105	-	292,105	-
Series 2018A - Direct placement	-	491,800	300,000	191,800	9,720
Series 2015A	188,235	-	3,825	184,410	4,000
Series 2013A	157,575	-	3,725	153,850	3,900
Series 2010A	205,000	-	-	205,000	-
Series 2010C	194,810	-	14,820	179,990	15,390
Series 2007A	2,090	-	2,090	-	-
Series 2007B	25,000	-	-	25,000	1,990
Series 2005	54,140	-	-	54,140	-
Series 2003A	48,205	-	-	48,205	-
Series 2000A	77,125	-	-	77,125	-
	952,180	1,106,975	324,460	1,734,695	35,000
General Revenue Commercial Paper:					
Series B taxable	138,285	33,790	44,360	127,715	127,715
Series F tax-exempt	87,215	-	34,730	52,485	52,485
	225,500	33,790	79,090	180,200	180,200
Unamortized bond premiums	46,977	36,834	2,780	81,031	3,012
Student loan deposits	35,846	509	-	36,355	8,936
Lease obligations and other	885	509	163	1,231	255
Total long term debt and other obligations	$ 1,261,388	$ 1,178,617	$ 406,493	$ 2,033,512	$ 227,403

	2017	Borrowed	Retired	2018	Current Portion
General Revenue Bonds:					
Series 2015A	$ 191,890	$ -	$ 3,655	$ 188,235	$ 3,825
Series 2013A	161,140	-	3,565	157,575	3,725
Series 2010A	205,000	-	-	205,000	-
Series 2010C	209,040	-	14,230	194,810	14,820
Series 2007A	4,095	-	2,005	2,090	2,090
Series 2007B	25,000	-	-	25,000	-
Series 2005	54,140	-	-	54,140	-
Series 2003A	48,205	-	-	48,205	-
Series 2000A	77,125	-	-	77,125	-
	975,635	-	23,455	952,180	24,460
General Revenue Commercial Paper:					
Series B taxable	94,195	44,090	-	138,285	138,285
Series F tax-exempt	85,595	41,275	39,655	87,215	87,215
	179,790	85,365	39,655	225,500	225,500
Unamortized bond premiums	49,858	-	2,881	46,977	3,195
Student loan deposits	40,148	-	4,303	35,846	4,308
Lease obligations and other	1,043	-	158	885	163
Total long term debt and other obligations	$ 1,246,474	$ 85,365	$ 70,452	$ 1,261,388	$ 257,626

All General Revenue bonds are secured by General Revenues and certain variable rate issues bear interest based on weekly or quarterly rates determined by the indexing agent or remarketing agent and are amortized through mandatory redemptions as follows:

- Series 2018A: from fiscal 2020 through 2034
- Series 2007B: from fiscal 2020 through 2037
- Series 2005: from 2021 through 2034
- Series 2003A: from 2021 through 2033
- Series 2000A: from 2022 through 2031

With the exception of the Series 2007B bonds and 2018A bonds, the foregoing bonds may be converted to a permanent fixed rate provided certain conditions are met.

The Series 2019B bonds bear interest at fixed rates from 3% to 5% and mature either serially from fiscal 2021 through 2039 or are subject to mandatory redemption from fiscal 2040 through 2048.

The Series 2019A bonds bear interest at fixed rates from 3.066% to 4.496% and subject to mandatory redemption from fiscal 2021 through 2049.

The Series 2015A bonds bear interest at fixed rates from 2% to 5% and mature either serially through fiscal 2036 or are subject to mandatory redemption from fiscal 2037 through 2046.

The Series 2013A bonds bear interest at fixed rates from 3% to 5% and mature either serially through fiscal 2034 or are subject to mandatory redemption from fiscal 2035 through 2042.

The Series 2010A bonds bear interest at 6.173% and are subject to mandatory redemption from fiscal 2044 through 2050. Prior to March 1, 2013, in accordance with the Build America Bonds program, the University received semi-annual federal credit payments equal to 35% of actual interest expense incurred on the outstanding principal balance of the bonds. Pursuant to the requirements of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended, certain automatic reductions took place on March 1, 2013. These required reductions included a reduction to refundable credits applicable to certain qualified bonds, including Series 2010A. The sequestration reduction rate was 6.2% from October 1, 2018 to September 30, 2019. The sequestration reduction rate is 6.6% for payments processed on or after October 1, 2017 and on or before September 30, 2018. The sequestration reduction rate will be applied unless and until a law is enacted that cancels or otherwise impacts the sequester, at which time the sequestration rate is subject to change.

The Series 2010C bonds bear interest at fixed rates from 3% to 5.125% and mature either serially through fiscal 2029 or are subject to mandatory redemption from 2030 through 2044.

The Series 2018A bonds were purchased by a commercial bank in a direct placement transaction and significant events of default under the related bondholder's agreement include: (1) the failure to pay when due the principal, premium, or interest on the Series 2018A bonds, or on certain other debt of the University secured by General Revenues in an outstanding principal amount in excess of $10,000 (or in excess of $50,000 in the case of certain lease obligations); (2) the failure to pay regularly scheduled payments on interest rate swaps related to debt of the University secured by General Revenues; (3) the entry of a final and non-appealable judgment against the University for the payment of money in excess of $15,000 that remains unsatisfied for a period of sixty days; (4) the occurrence of certain bankruptcy or insolvency events; (5) the long-term unenhanced ratings assigned to the University's General Revenue Bonds are reduced below "A3" by Moody's or below "A-" by S&P, or either of such ratings is withdrawn or suspended for credit-related reasons; (6) any representation or warranty made by the University in the bondholder's agreement or in any related agreement proves to have been incorrect in any material respect and is not corrected within the applicable cure period; (7) the failure of the University to perform or observe any of the affirmative or negative covenants specified in the bondholder's agreement (certain of which contain limited or no notice or cure rights, and others of which constitute events of default only after the passage of thirty days during which the default is not remedied); (8) the occurrence of an event of default under the trust agreement pursuant to which the Series 2018A bonds were issued, which includes the failure in any fiscal year to generate General Revenues in an amount equal to at least 200% of annual debt service requirements in such fiscal year on debt of the University secured by General Revenues; or (9) other debt of the University secured by General Revenues and outstanding in a principal amount in excess of $10,000 is declared to be due and payable or is required to be prepaid prior to the stated maturity thereof due to the occurrence of a default under the agreement or instrument pursuant to which such debt was issued or incurred. Upon the occurrence of an event of default under the bondholder's agreement, the bondholder may exercise certain rights and remedies, including the right to require the University to repurchase the Series 2018A bonds, on the fifteenth day following receipt of written notice of the event of default, at a purchase price equal to 100% of the outstanding principal amount of the Series 2018A bonds.

The University utilizes variable-rate commercial paper to provide interim financing. The Board has authorized the issuance of up to $250,000 in commercial paper secured by General Revenues and allows for tax-exempt and taxable issuances. Outstanding commercial paper debt is converted to long-term financing, as appropriate, within the normal course of business. Outstanding tax-exempt balances bear interest at rates from 1.44% to 1.46% and taxable balances bear interest at rates from 2.40% to 2.55%, with principal and accrued interest payments due within a maximum of 270 days from the date of issuance.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Hedging derivative instrument payments and hedged debt: Using rates as of June 30, 2019, scheduled fiscal year maturities of bonds payable and related interest expense are as follows. These amounts assume that current interest rates on variable-rate bonds and the current reference rates of hedging derivative instruments will remain the same for their term. As these rates vary, interest payments on variable-rate bonds and net receipts/payments on the hedging derivative instruments will vary. See note 14 for information on derivative instruments.

Fiscal Year	Direct Placement Fixed-Rate Bonds		Direct Placement Variable-Rate Bonds		Hedging	
Ending June 30,	Principal	Interest	Principal	Interest	Derivatives, Net	Total
2020	-	-	9,720	4,234	-	13,954
2021	-	-	10,095	4,002	-	14,097
2022	-	-	10,480	3,761	-	14,241
2023	-	-	10,870	3,511	-	14,381
2024	-	-	11,290	3,252	-	14,542
2025-2029	-	-	63,210	12,007	-	75,217
2030-2034	-	-	76,135	3,870	-	80,005
2035-2039	-	-	-	-	-	-
2040-2044	-	-	-	-	-	-
2045-2049	-	-	-	-	-	-
2050-2054	-	-	-	-	-	-
Total	$ -	$ -	$ 191,800	$ 34,637	$ -	$ 226,437

Fiscal Year	Other Fixed-Rate Bonds		Other Variable-Rate Bonds		Hedging	
Ending June 30,	Principal	Interest	Principal	Interest	Derivatives, Net	Total
2020	23,290	63,776	1,990	3,984	4,520	97,560
2021	24,080	62,813	7,980	3,899	4,405	103,177
2022	22,405	61,759	10,880	3,695	4,156	102,895
2023	23,400	60,625	11,360	3,476	3,887	102,748
2024	18,905	59,711	16,375	3,163	3,512	101,666
2025-2029	101,235	285,425	90,415	10,609	11,291	498,975
2030-2034	126,100	261,406	62,590	2,729	2,447	455,272
2035-2039	259,120	217,765	2,880	104	-	479,869
2040-2044	333,085	148,880	-	-	-	481,965
2045-2049	371,135	57,751	-	-	-	428,886
2050-2054	35,670	1,388	-	-	-	37,058
Total	$ 1,338,425	$ 1,281,299	$ 204,470	$ 31,659	$ 34,218	$ 2,890,071

Interest expense was $62,788 for 2019 with no interest capitalized after the adoption of GASB 89. Interest expense was $45,246 (net of $3,808 capitalized interest) for 2018.

Unamortized bond premiums totaled $81,031 ($3,012 current) and $46,977 ($3,195 current) at June 30, 2019 and 2018, respectively. Bond premium amounts are amortized over the applicable bond issue life.

Student loan deposits represent funds from the federal government and other private entities related to various student loan programs.

The University holds $75,000 in revolving lines of credit that are available for maintaining the required operating cash reserves of the University and providing necessary funds to meet extraordinary cash flow needs, if necessary. For the years ending June 30, 2019 and 2018, no amounts were drawn on these lines of credit.

Lease obligations and other is comprised of lease obligations of $722 ($170 current) and obligations for installment purchases of $509 ($85 current).

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Accrued personnel costs include vacation and sick leave days earned but unused, including the University's share of payroll taxes, valued at the current rate of pay. Changes in the balances of accrued personnel costs during 2019 and 2018 were as follows:

	2019	2018
Balance, beginning of year	$ 97,424	$ 95,288
Additions	6,246	5,616
Reductions	(4,014)	(3,480)
Balance, end of year	99,656	97,424
Less: current portion	62,745	60,543
Noncurrent portion	$ 36,911	$ 36,881

14. Derivative instruments

At June 30, 2019 and 2018, the University was party to seven and eight separate pay-fixed, receive-variable interest rate swaps, respectively, and five separate pay-variable, receive-variable interest rate swaps. After considering any netting arrangements or other rights of offsets that may exist with each counterparty, interest rate swaps are reported at the net fair value as of the balance sheet date as either a noncurrent asset or noncurrent liability in the Statement of Net Position.

The fair value and notional amounts of derivative instruments outstanding at June 30, 2019 and 2018 were as follows:

	June 30, 2019		June 30, 2018	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Derivative instruments - swap asset:				
Investment derivatives:				
Pay variable interest rate swaps	$ 29,000	$ 460	$ 35,400	$ 321
Derivative instruments - swap liability:				
Cash flow hedging derivatives				
Pay-fixed interest rate swaps	$ 205,190	$ (39,490)	$ 206,005	$ (31,487)
Investment derivatives:				
Pay-variable interest rate swaps	333,645	3,346	350,170	(366)
Pay-fixed interest rate swaps	71,685	(21,637)	71,685	(16,228)
Total Derivative instruments - swap liability	$ 610,520	$ (57,781)	$ 627,860	$ (48,081)

In accordance with GASB Statement No. 53, *Accounting and Financial Reporting for Derivative Instruments,* an interest rate swap is considered an effective cash flow hedge if the swap payment received substantially offsets the payment made on the associated debt and changes in fair value are deferred as either a deferred outflow or a deferred inflow of resources. An interest rate swap that is not considered an effective cash flow hedge, in accordance with the provisions of the Statement, is deemed to be an investment derivative instrument and changes in fair value are recorded as net investment income (loss). For the fiscal year ending June 30, 2019 and 2018, the fair value of hedging derivative instruments decreased $8,003 and increased $12,169, respectively, while the fair value of investment derivative instruments decreased $1,558 and $3,096, respectively.

Fair Value: The fair values of the interest rate swaps were estimated using the zero-coupon method. This method calculates the future net settlement payments required by the swaps, assuming that the current forward rates implied by the yield curve correctly anticipate future spot interest rates. The payments are then discounted using the spot rates implied by the current yield curve for hypothetical zero-coupon bonds due on the dates of each future net settlement on the swaps.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Objective: The University is party to eight separate derivative instruments which are pay-fixed, receive-variable interest rate swaps that hedge the changes in cash flows on various variable-rate debt series. In order to protect against the potential of rising interest rates, the University entered into these derivative instruments at a cost less than what the University would have paid to issue fixed-rate debt. In order to benefit from both expected changes in the relationship of short and long-term interest rates and the relationships between the SIFMA Municipal Swap Index and both the ten-year USD-ISDA Index and the one-month USD-LIBOR-BBA Index and the relationship between the one-month USD-LIBOR-BBA Index and the ten-year USD-ISDA Index, the University also entered into five separate investment derivative instruments which are pay-variable, receive-variable interest rate swaps which relate to various debt series.

Terms, Fair Values, and Credit Risk: The following table displays the terms and fair values of the University's hedging derivative instruments outstanding at June 30, 2019 and 2018, along with the notional amounts and credit rating of the associated counterparty as of June 30, 2019.

Type	Cash Flow Hedge for Debt Series	2019 Notional Amount	Effective Date	Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating	2019 Fair Value	2018 Fair Value
Pay-fixed interest rate swap	2000A	$ 71,535	11/3/2008	8/15/2029	4.074%	67% USD-LIBOR-BBA one month	Deutsche Bank AG / Baa2/BBB+	$ (14,388)	$ (11,917)
Pay-fixed interest rate swap	CP Series B	-	10/17/2002	8/15/2018	4.330%	USD-LIBOR-BBA one month	Deutsche Bank AG / Baa2/BBB+	-	(8)
Pay-fixed interest rate swap	CP Series B	2,040	10/17/2002	8/15/2022	5.280%	USD-LIBOR-BBA one month	Deutsche Bank AG / Baa2/BBB+	(156)	(169)
Pay-fixed interest rate swap	2003A	48,205	11/3/2008	2/15/2033	3.618%	67% USD-LIBOR-BBA one month	Barclays Bank PLC / A2/A-	(9,515)	(7,312)
Pay-fixed interest rate swap	CP Series B	7,270	11/3/2008	2/15/2033	5.330%	USD-LIBOR-BBA one month	Barclays Bank PLC / A2/A-	(1,955)	(1,521)
Pay-fixed interest rate swap	2005	54,140	11/3/2008	2/15/2034	3.647%	67% USD-LIBOR-BBA one month	Barclays Bank PLC / A2/A-	(10,847)	(8,367)
Pay-fixed interest rate swap	2007B & CP Series E	22,000	5/17/2007	2/15/2028	4.139%	67% USD-LIBOR-BBA three month plus .58%	JP Morgan Chase Bank / Aa3/A+	(2,629)	(2,193)
		$ 205,190						$ (39,490)	$ (31,487)

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

The following table displays the terms and fair values of the University's investment derivative instruments outstanding at June 30, 2019 and 2018, along with the notional amounts and credit rating of the associated counterparty as of June 30, 2019:

Type	Associated Debt Series	2019 Notional Amount	Effective Date	Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating	2019 Fair Value	2018 Fair Value
Pay-variable interest rate swap	2000A, 2003A, 2005, 2010C	$ 211,315	8/15/2009	2/15/2034	67% USD-LIBOR-BBA one month	67% USD-ISDA Swap Rate ten year less 0.407%	Deutsche Bank AG / Baa2/BBB+	$ 234	$ (279)
Pay-variable interest rate swap	CP Series B	9,310	5/26/2006	2/15/2033	USD-LIBOR-BBA one month	USD-LIBOR-BBA ten year less 0.575%	Deutsche Bank AG / Baa2/BBB+	39	38
Pay-variable interest rate swap	2010C	19,335	5/17/2010	8/15/2032	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 0.44%	Deutsche Bank AG / Baa2/BBB+	307	214
Pay-variable interest rate swap	2010C	29,000	5/17/2010	8/15/2032	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 0.44%	Bank of New York Mellon / Aa2/AA-	460	321
Pay-variable interest rate swap	2007A, 2007B, 2010C	93,685	5/17/2007	2/15/2037	SIFMA Municipal Swap Index	67% USD-ISDA Swap Rate ten year plus 0.0063%	JP Morgan Chase Bank / Aa3/A+	2,766	(339)
Pay-fixed interest rate swap	2007B, CP Series B & E	71,685	5/17/2010	2/15/2037	4.226%	67% USD-LIBOR-BBA three month plus 0.63%	JP Morgan Chase Bank / Aa3/A+	(21,637)	(16,228)
		$ 434,330						$ (17,831)	$ (16,273)

Subsequent to the original effective dates, the University amended three of its pay-variable, receive-variable interest rate swaps per the terms listed in the table below. After the amendment periods, these interest rate swaps revert back to the original terms as outlined in the table above.

2019 Notional Amount	Amendment Effective Date	Amendment Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating
$ 211,315	8/15/2011	8/14/2014	0%	1.407%	Deutsche Bank AG / Baa2/BBB+
	8/15/2014	8/14/2019	0%	0.857%	
$ 9,310	8/15/2011	8/14/2014	0%	2.1725%	Deutsche Bank AG / Baa2/BBB+
	8/15/2014	8/14/2019	0%	1.3530%	
$ 93,685	8/1/2011	7/31/2014	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 1.8653%	JP Morgan Chase Bank / Aa3/A+
	8/1/2014	2/14/2021	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 1.1245%	

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Credit Risk: The University is exposed to credit risk on derivative instruments that are in asset positions. To minimize its exposure to loss related to credit risk, it is the University's policy to require counterparty collateral posting provisions. The University has never failed to access collateral when required. The aggregate fair value of derivative instruments in asset positions at June 30, 2019 and 2018 was $3,806 and $573, respectively. This represents the maximum loss that would be recognized at the reporting date if the counterparties to those derivatives failed to perform as contracted. This maximum exposure is offset by negative hedging and investment derivative fair values included in netting arrangements with the same counterparties as the derivative instruments in asset positions. The net exposure to credit risk with any individual counterparty is $460 and $321 at June 30, 2019 and 2018,

The following table demonstrates the thresholds and minimum transfers for collateralization:

Credit Rating	Deutsche Bank AG Threshold	Deutsche Bank AG Minimum Transfer	JP Morgan Chase Bank N.A. Threshold	JP Morgan Chase Bank N.A. Minimum Transfer	Bank of New York Mellon Threshold	Bank of New York Mellon Minimum Transfer	Barclays Bank PLC Threshold	Barclays Bank PLC Minimum Transfer
Aaa/AAA	$ 40,000	$ 1,000	$ 40,000	$ 1,000	$ 40,000	$ 1,000	$ 40,000	$ 1,000
Aa3/AA- to Aa1/AA+	6,000*	1,000	20,000	1,000	6,000*	1,000	6,000	1,000
A3/A- to A1/A+	1,500	500	5,000	500	1,500	500	1,500	500
Baa1/BBB+	500	250	500	250	500	250	500	250
Below Baa1/BBB+	-	250	-	250	-	250	-	-

* Threshold for the University is $20,000

Interest Rate Risk: The University is not exposed to interest rate risk on its derivative instruments.

Basis Risk: The University is exposed to basis risk on its pay-fixed, receive-variable interest rate swaps because the variable-rate payments received by the University on these hedging derivative instruments are based on a rate or index other than interest rates the University pays on its variable-rate debt, which bear interest based on periodic rates determined by the indexing agent or remarketing agent. These pay-fixed, receive-variable swaps expose the University to basis risk should the rates resulting from the 67% of USD-LIBOR-BBA swaps not equal the rate the University pays on the 2000A, 2003A, 2005, 2007B, and tax-exempt Commercial Paper Series debt, and should the rates resulting from the USD-LIBOR-BBA swaps not equal the rate the University pays on the taxable Commercial Paper Series debt.

Termination Risk: The University or any of the involved counterparties may terminate a derivative instrument if the other party fails to perform under the terms of the contract. If at the time of termination, a hedging derivative instrument is in a liability position, the University would be liable to the appropriate counterparty for a payment equal to the liability, subject to any netting arrangement.

Rollover Risk: The University is not exposed to rollover risk on its derivative instruments.

Contingencies: All of the University's derivative instruments include provisions that require the University to post collateral at certain thresholds depending on the University's credit rating. See the table under "Credit Risk" for thresholds and minimum transfers for collateralization. As of June 30, 2019, the University's credit ratings were Aa2 as assigned by Moody's and AA as assigned by Standard & Poor's. The aggregate fair value of all derivative instruments with these collateral posting provisions as of June 30, 2019 was ($57,321). The related collateral postings totaled $17,060 posted by the University to its counterparties and $0 held by the University posted by its counterparties.

15. Grants and contracts

The University receives grants and contracts from certain federal, state, and local agencies to fund research and other activities. Revenues from grants and contracts are recognized when all eligibility requirements have been met. The University records indirect costs related to such grants and contracts at predetermined rates that are negotiated with the University's federal cognizant agency. Both direct and indirect costs charged to the grants or contracts are subject to audit and approval by the granting agencies. University management believes adjustments of costs, if any, resulting from such examination by the granting agency would not be material.

16. Commitments

At June 30, 2019, the University has initiated plans and incurred certain contractual commitments related to the construction or capital improvement of various facilities. The costs to complete the projects are estimated to be $267,906 and are to be funded from debt proceeds, capital grants, private gifts, and other University funds. Certain University facilities have been, or are scheduled to be, financed in whole or in part by SBA bond issues secured by a pledge of rentals to be received from the State of Michigan pursuant to lease agreements among the SBA, the State of Michigan, and the University. During the lease terms, the SBA will hold title to the respective buildings, the State of Michigan will make all lease payments to the SBA, and the University will pay certain operating and maintenance costs. The SBA will be obligated to sell each building to the University for one dollar, after full payment of all rentals due under the related lease.

At June 30, 2019, the University has entered into various limited partnerships with investment managers of hedge, oil and gas, real estate, venture capital, private equity, and restructuring funds. As of June 30, 2019, $622,636 of the initial $1,782,037 investment commitment remains outstanding.

The University is party to an electric power purchase and site access agreement for renewable solar energy. Under the terms of the contract, the University has granted a third party access to construct, operate, and maintain solar arrays on the University's property. The University is committed to purchase, at a fixed rate, all of the electric power generated from the solar arrays. The University has the option to purchase the solar array infrastructure at specific dates throughout the term of the contract.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

17. Fair value measurements

The University categorizes its fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The following describes this hierarchy and the primary valuation methodologies used by the University for financial instruments measured at fair value on a recurring basis:

Level 1: Quoted prices in active markets for identical assets or liabilities. Market-price data are generally obtained from relevant exchanges or dealer markets.

Level 2: Inputs other than Level 1 that are observable either directly or indirectly, such as quoted prices in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for similar assets or liabilities. Inputs are obtained from various sources, including market participants, dealers, and brokers.

Level 3: Unobservable inputs that are supported by little or no market activity and are significant to the fair value of the assets or liabilities.

In instances where inputs used to measure fair value fall into different levels in the above fair value hierarchy, fair value measurements in their entirety are categorized based on the lowest level input that is significant to the valuation. The University's assessment of the significance of particular inputs to these fair value measurements requires judgment and considers factors specific to each asset or liability.

The University's recurring estimated fair value of investments at June 30, 2019 and 2018, grouped by the valuation hierarchy outlined above were as follows:

	Fair value measurement at June 30, 2019 using:			
	Balance at June 30, 2019	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity securities:				
U.S. equities	$ 473,601	$ 473,601	$ -	$ -
International equities	72,486	36,980	35,506	-
Debt securities:		-	-	-
U.S Treasury bonds	239,405	239,405	-	-
U.S Government agencies	47,841	-	47,841	-
Corporate bonds	127,799	-	127,799	-
International bonds	30,632	-	30,632	-
Municipal bonds	2,748	-	2,748	-
Asset-backed securities	77,168	-	77,168	-
Other fixed income	5,887	5,887	-	-
Real assets	31,936	-	-	31,936
Money market and mutual funds	40,781	40,781	-	-
Funds held at MSU Foundation	18,143	-	-	18,143
Other investments	19,134	-	-	19,134
Total investments by fair value level	$ 1,187,561	$ 796,654	$ 321,694	$ 69,213
Investments measured at the net asset value (NAV):				
Hedge funds - event driven	248,943			
Hedge funds - long/short	341,550			
International equities	471,073			
Private investments - opportunistic	60,101			
Private investments - private equity	419,989			
Private investments - secondaries	82,522			
Private investments - venture capital	302,552			
Real assets	159,827			
Fixed income	79,988			
U.S. equities	183,902			
Total investments measured at NAV	2,350,447			
Total investments measured at fair value	$ 3,538,008			

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

	Fair value measurement at June 30, 2018 using:			
	Balance at June 30, 2018	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Investments by fair value level:				
Equity securities:				
U.S. equities	$ 422,345	$ 421,950	$ -	$ 395
International equities	80,979	34,104	45,828	1,047
Debt securities:		-	-	-
U.S Treasury bonds	155,389	155,389	-	-
U.S Government agencies	61,422	-	61,422	-
Corporate bonds	119,396	-	119,396	-
International bonds	39,878	-	39,878	-
Municipal bonds	1,336	-	1,336	-
Asset-backed securities	58,522	-	58,522	-
Other fixed income	6,376	5,843	-	533
Real assets	39,176	-	-	39,176
Money market and mutual funds	31,244	31,244	-	-
Funds held at MSU Foundation	19,215	-	-	19,215
Other investments	27,873	10,062	-	17,811
Total investments by fair value level	$ 1,063,151	$ 658,592	$ 326,382	$ 78,177

Investments measured at the net asset value (NAV):	
Hedge funds - event driven	307,619
Hedge funds - long/short	345,190
International equities	564,984
Private investments - opportunistic	45,665
Private investments - private equity	348,549
Private investments - secondaries	72,499
Private investments - venture capital	213,038
Real assets	158,616
Fixed income	78,817
U.S. equities	73,566
Total investments measured at NAV	2,208,543
Total investments measured at fair value	$ 3,271,694

As prescribed by GASB Statement No. 72, *Fair Value Measurement and Application*, certain investments held by the University are to be valued using methods other than fair value. For the fiscal year ending June 30, 2019, the University valued U.S. Treasury bond investments with original maturities of less than one year at amortized cost that totaled $26,645. No such U.S. Treasury bond investments were held as of June 30, 2018. In addition, certain funds held by interest rate swap counterparties totaling $17,060 and $2,000 at June 30, 2019 and 2018, respectively, reflect cash balances on deposit in accordance with counterparty collateral posting provisions.

Investments classified in Level 1 at June 30, 2019 and 2018 are valued using prices quoted in active markets for those securities.

The fair value of various equity and debt securities held at June 30, 2019 and 2018 was determined primarily on Level 2 inputs. The University estimates the fair value of these investments using other inputs such as interest rates and yield curves that are observable at commonly quoted intervals.

Investments classified in Level 3 at June 30, 2019 and 2018 are valued using the University's own estimates using pricing models, discounted cash flow methodologies, or similar techniques taking into account the characteristics of the asset. Life insurance policies are valued at their cash surrender value.

NOTES TO THE FINANCIAL STATEMENTS (continued) (dollars in thousands)

Derivative instruments classified in Level 2 of the fair value hierarchy are valued using a market approach that considers benchmark interest rates. The University's estimated fair value of derivatives at June 30, 2019 and 2018 were as follows:

	Fair value measurement at June 30, 2019 using:			
	Balance at June 30, 2019	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Derivative instruments by fair value:				
Investment derivatives - swap assets	$ 460	$ -	$ 460	
Cash flow hedging derivatives - swap liability	(39,490)	-	(39,490)	
Investment derivatives - swap liability	(18,291)	-	(18,291)	
Total derivative instruments by fair value	$ (57,321)	$ -	$ (57,321)	$ -

	Fair value measurement at June 30, 2018 using:			
	Balance at June 30, 2018	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Derivative instruments by fair value:				
Investment derivatives - swap assets	$ 321	$ -	$ 321	$ -
Cash flow hedging derivatives - swap liability	(31,487)	-	(31,487)	-
Investment derivatives - swap liability	(16,594)	-	(16,594)	-
Total derivative instruments by fair value	$ (47,760)	$ -	$ (47,760)	$ -

The University holds shares or interests in investment companies where the fair value of the investments are measured on a recurring basis using net asset value (or its equivalent) of the investment companies as a practical expedient. For the year ended June 30, 2019 and 2018, the fair value, unfunded commitments, and redemption rules of those investments were as follows:

			As of June 30, 2019		
	June 30, 2019	June 30, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Hedge funds	$ 590,493	$ 652,809	$ 1,650	Various	4-180 days
International equities	471,073	564,984	-	Various	1-90 days
Private investments	865,164	679,751	464,513	Not applicable	Not applicable
Real assets	159,827	158,616	61,768	Not applicable	Not applicable
Other fixed income	79,988	78,817	-	Daily	10 days
U.S. equities	183,902	73,566	-	Annually	1-90 days
Total	$ 2,350,447	$ 2,208,543	$ 527,931		

The University invests in hedge funds seeking equity-like returns while reducing volatility . The University will consider funds with a diversifier mandate (lower expected volatility and lower correlation to broad market trends), as well as funds with a growth-oriented mandate (higher expected volatility and higher correlation to broad market trends). Managers with either type of mandate will employ risk management techniques intended to reduce downside potential to a degree considered appropriate for their respective strategy. Managers employing “long/short” strategies invest primarily in equities and mitigate market risk by purchasing equity shares that are expected to appreciate in value and selling short equity shares that are expected to decline in value. Managers employing event-driven and arbitrage strategies seek to maximize returns by investing in publicly announced corporate transactions, such as mergers, tender offers, liquidations, bankruptcies and reorganizations or in arbitraging temporary discrepancies in securities pricing in the equity and fixed income markets. Distressed security managers invest primarily in bonds and bank loans trading at a significant discount to par value as a result of the debtor’s troubled financial condition.

The University invests in international equities that are marketable equity securities in developed and emerging countries outside the U.S. The investment is intended to provide long-term performance similar to or in excess of U.S. equities and provide diversification.

The University seeks to enhance the total return of the CIF by investing a portion of its funds in private investments, which include distressed, private equity, and venture capital investments. These investments are illiquid and higher risk/return assets than marketable securities. Risk will be controlled by diversifying across a number of fund managers and by geographic focus, industry emphasis, financing stage, and vintage year. This core private investments portfolio may be supplemented with less diversified specialty funds or direct investments.

The University seeks to reduce volatility and provide a hedge against sudden, unanticipated inflation by investing in both public and private real assets. Risks related to the investments will be minimized by diversifying through use of investment pools or partnerships that are varied as to property type, location, investment life cycle, and investment manager. This core real asset portfolio may be supplemented with less diversified specialty funds or direct investments.

The University invests in other fixed income assets that are intended to reduce exposure to market risk and provide a hedge against sudden, unanticipated deflation.

The University invests in U.S. equities that are marketable equity securities of primarily U.S.-based companies. Several sub-categories of this asset class include: large capitalization companies, small capitalization companies, value-style investing, and growth-style investing.

The investments in the private investments class (limited partnerships) are committed to funds for extended periods of time, often multiple years. The pacing of investment returns is determined by market activity and the discretion of the general partner. Secondary markets exist into which limited partners can sell their interest in funds, but often at a steep discount to the fair value of the investment. In addition, $191,763 and $198,892 of the real asset class at June 30, 2019 and 2018, respectively, and $5,056 and $3,600 of the hedge fund class at June 30, 2019 and 2018, respectively, can never be redeemed. Distributions from each fund will be received only as the underlying investments of the funds are liquidated. It is estimated that the underlying assets of the fund will be liquidated over the next 1 to 10 years.

Approximately, 8% of the value of the investments in the hedge funds class cannot be redeemed because the investments include restrictions that do not allow for redemption in the first 12 to 60 months after acquisition. The remaining restriction period for these investments ranged from 4 to 30 months at June 30, 2019. Generally, longer redemption restrictions are offered with a lower fee structure.

18. New accounting pronouncements

The University will be required to implement the provisions of GASB Statement No. 84, *Fiduciary Activities,* effective for the fiscal year ending June 30, 2020. This GASB Statement intends to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The University is in the process of determining the full impact of this standard on its financial statements.

The University will be required to implement the provisions of GASB Statement No. 90, *Majority Equity Interests - an amendment of GASB Statements No. 14 and No. 61,* effective with the fiscal year ending June 30, 2020. This GASB Statement intends to improve the consistency and comparability of reporting the University's major equity interest in legally separate organizations. The University is in the process of determining the full impact of this standard on its financial statements.

The University will be required to implement the provisions of GASB Statement No. 87, *Leases,* effective for the fiscal year ending June 30, 2021. This GASB Statement intends to improve accounting and financial reporting for leases by establishing a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. The University is in the process of determining the full impact of this standard on its financial statements.

Financial report prepared under the direction of Mark P. Haas, Vice President for Finance and Treasurer;
Gregory J. Deppong, Controller; John L. Thelen, Assistant Controller; and Shea M. Bryant, Manager of
Financial Analysis and Reporting

(dollars in thousands)

Schedule of changes in the University's total OPEB liability and related ratios

The historical reconciliation of the total reported liability for postemployment benefits obligations for the year ended June 30, 2019 and 2018 is summarized as follows:

	2019	2018
Service cost	$ 48,202	$ 41,211
Interest cost	70,323	69,928
Changes in assumptions	(447,295)	115,470
Differences between expected and actual plan experience	-	-
Benefit payments	(39,943)	(38,599)
Net changes	$ (368,713)	$ 188,010
Total liability, beginning of year	$ 2,016,048	$ 1,828,038
Total liability, ending of year	$ 1,647,335	$ 2,016,048
Covered payroll	$ 993,122	$ 959,538
Total liability as a percentage of covered payroll	165.9%	210.1%

Notes to Schedule:

No assets are accumulated in a trust to pay related other postemployment benefits.

Discount rates used in determining the total reported liability for postemployment benefits obligations were 4.09%, 3.44%, and 3.78% at the measurement dates of December 31, 2018, 2017, and 2016, respectively.

In 2019, as a result of an experience study, assumptions related to mortality, employee withdrawal rates, retirement age, salary increases, marital status, and retiree opt-out rates were adjusted to more closely reflect actual experience. The changes were as follows:

- Mortality – The University changed from using the RP-2014 Generational Healthy Mortality Tables, with white collar adjustments for all employees to Pub T.H-2010.H (A) Public Retirement Plans Mortality Tables for faculty and MP-2014 Generational Healthy Mortality Tables, with mixed collar adjustments for non-faculty.

- Employee withdrawal rate – The University changed from 0% at age 55 to up to 1.5% at age 65 for certain employee groups.

- Retirement age – The University increased the retirement age from 62.4 for all employees to up to 69.0 for certain employee groups.

- Salary increase – The University increased the salary increase level from 4% to 5%.

- Marital status – The University increased the number of covered spouses from 80% for males and 50% for females to 90% for males and 60% for females.

- Retiree opt-out rate – The University increased the retiree opt-out rate from 0% to 8%

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Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards*

Independent Auditor's Report

To Management and the Board of Trustees
Michigan State University

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 Michigan State University (the "University") and its discretely presented component unit as of and for the year ended June 30, 2019 and the related notes to the financial statements, which collectively comprise the University's basic financial statements, and have issued our report thereon dated October 24, 2019. Our report includes a reference to other auditors who audited the financial statements of Michigan State University Foundation (the "Foundation"), as described in our report on Michigan State University's financial statements. This report does not include the results of the other auditors' testing of internal control over financial reporting or compliance and other matters that are reported on separately by those auditors. The financial statements of the Foundation were not audited in accordance with *Government Auditing Standards.*

Internal Control Over Financial Reporting

In planning and performing our audits of the financial statements, we considered the University's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, we do not express an opinion on the effectiveness of the University's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the University's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether the University's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards.*

To Management and the Board of Trustees
Michigan State University

Purpose of This Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Plante & Moran, PLLC

October 24, 2019