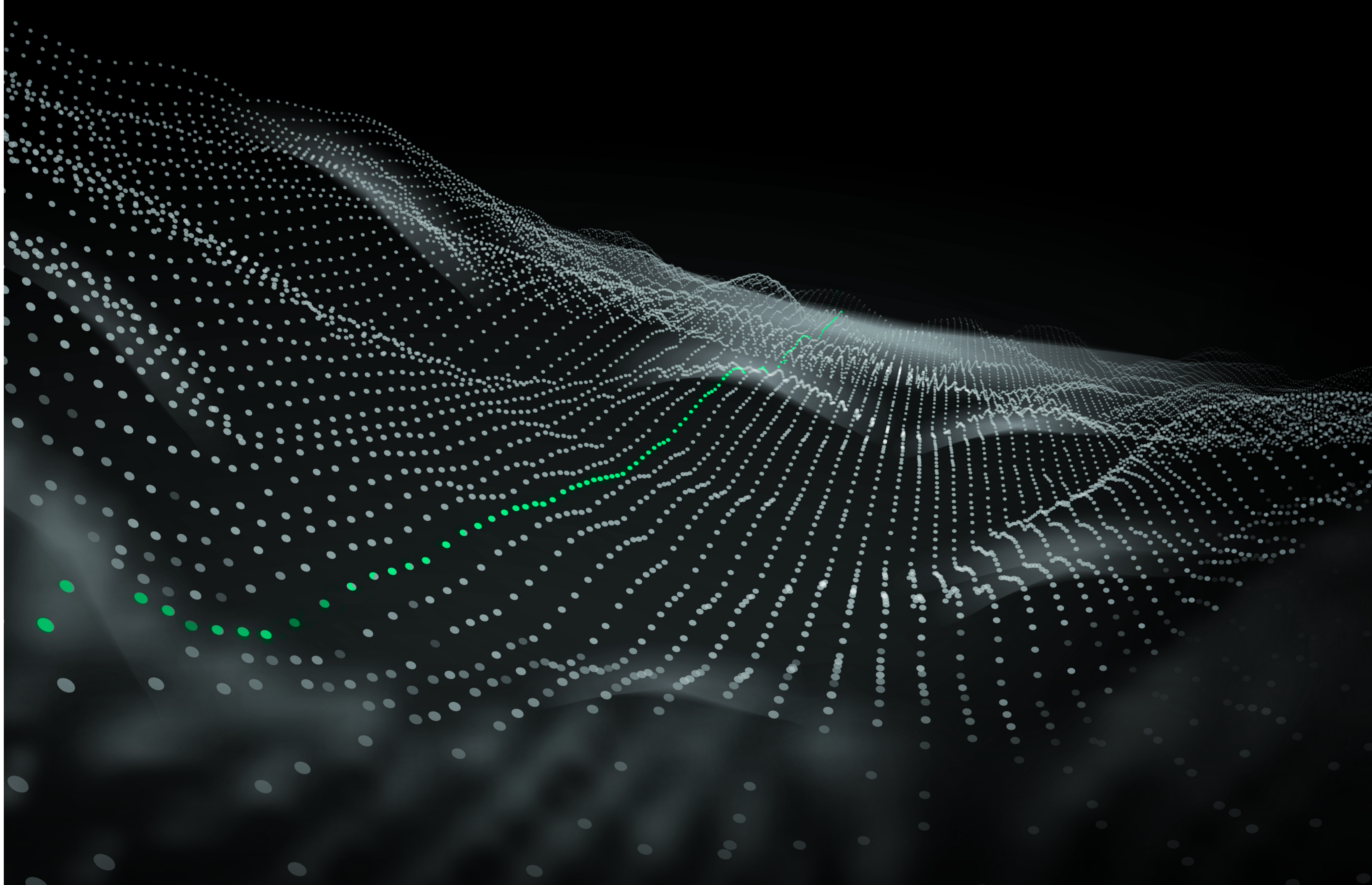
Annual Financial Report

2019-2020



MICHIGAN STATE
UNIVERSITY

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TRUSTEES, EXECUTIVE TEAM, AND FINANCE MANAGEMENT

BOARD OF TRUSTEES

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OFFICE OF THE VICE PRESIDENT FOR FINANCE

OFFICE OF THE CONTROLLER

MICHIGAN STATE UNIVERSITY

October 30, 2020

We are pleased to present Michigan State University's financial report for the fiscal years ending June 30, 2019, and June 30, 2020. 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.

The 2019 novel Coronavirus (COVID-19) has had a significant impact on the University, the state, the nation, and the world. By adhering to its basic financial principles, including funding recurring operations with recurring revenues, the University has made and will continue to make necessary fiscal adjustments with the objective of maintaining quality. The University continues to focus on cost controls, pursue a long-term investment strategy to maximize risk-adjusted total returns, and appropriately utilize debt and other resources to meet programmatic needs, including the maintenance and replacement of the University's infrastructure.

Financial Report Highlights:

- Revenues and expenses totaled $2.8 billion.
- The University's financial assets totaled nearly $7.0 billion.
- Total net position was $2.5 billion.
- Grant and contract revenue contributed $554 million, including $16 million in Federal Coronavirus Aid, Relief, and Economic Security Act revenue.

MSU has been working to advance knowledge and transform lives for more than 165 years by making its exceptional programs accessible to students from Michigan and around the globe. MSU's strength and stature as one of the top 125 research universities in the world results from its outstanding faculty, staff and students who, amidst the challenges of the pandemic, continue to find new and innovative ways to excel.

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 creativity, determination and hard work of its faculty, staff, students, alumni, and worldwide supporters, MSU continues to make a significant impact. Go Green!

Mark P. Haas

Mark P. Haas
Vice President for Finance and Treasurer

OFFICE OF THE
VICE PRESIDENT FOR
FINANCE

Mark P. Haas
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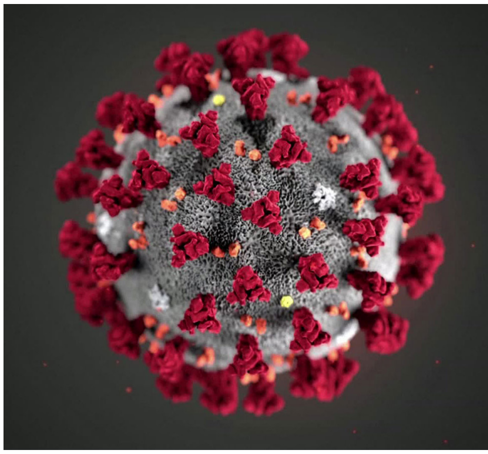
Michigan State University (the University, or MSU) is recognized around the world as a leading academic institution with world-class faculty, top graduate education programs, a powerful research portfolio and an engaged, entrepreneurial spirit. MSU is ranked among the top 125 global universities in the world by *Times Higher Education* and the *U.S. News and World Report*, and features 34 programs in the top 25 nationally, including ten rated number one. The University's excellence, cultivated over its 165-year history, is rooted in the core values of its land-grant heritage in providing quality, inclusiveness and connectivity in all it does.

Novel Coronavirus Pandemic



The global Novel Coronavirus (COVID-19) pandemic has had a profound impact on our daily lives. As a central hub of academic training, research, and public outreach, MSU has had to rethink the way it delivers its services to the public. The University has responded to these challenges by transitioning instruction to remote learning to the fullest extent possible, limiting on-campus residence, cancelling most public functions, and transitioning other services to digital platforms. These changes naturally led to financial consequences to which the University has responded and will continue to do so with aggressive cost cutting and a focus on efficient use of existing resources.

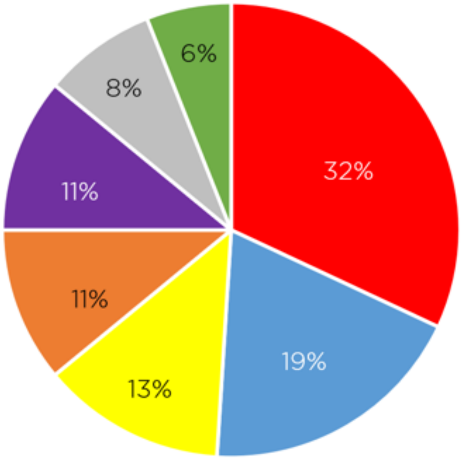
Managing Finances through Adversity

MSU has exercised prudent financial stewardship over the years and never more so than during this past year. Managing finances through the COVID-19 pandemic required diligent actions. From cutting costs to managing cash flows, the University has maintained a strong financial foundation. With assets and deferred outflows of $7.5 billion and liabilities and deferred inflows of $5.0 billion, the University's net position is $2.5 billion as of June 30, 2020.

Revenue diversification and active cash and debt management by MSU'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 remain financially stable through different economic cycles, adverse expenses, and the COVID-19 pandemic as well as reduce dependence on student tuition and fee increases. MSU maintained solid AA credit ratings from both Moody's and Standard & Poor's.

Sources of Net Revenue (millions):

$ 895	Tuition, net of discounts
535	Grants and contracts
358	Auxiliary activities
322	State appropriations
306	Other departmental activities
215	Private gifts, capital grants, and other
166	Net investment income (endowments and operating cash)
$ 2,797	Total net revenues



Students and Academics

During fiscal year 2020, MSU welcomed its largest and most diverse entering class in history, with a total 8,570 undergraduate students made up of 4,428 women and 4,142 men, of whom 2,067 are students of color and 656 international students. MSU enrolls approximately 75% in-state resident undergraduate students, more than any Michigan higher education institution, and exceeds the Big Ten average by 10%, 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 130 countries.

MSU is modeled to provide diverse learning experiences that blend the theoretical with the practical, combine curricular and cocurricular experiences, and instill an entrepreneurial mindset in its students. Student learning experiences typically include education abroad, hands-on research engagement, service learning, internships, co-ops, field placement, student teaching clinical placement, and online learning during their degree program. All complement a variety of classroom experiences to provide rich learning opportunities. Curricular and cocurricular 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. Although COVID-19 has required the University to offer these experiences in an alternative form, through the innovation, determination, and hard work of its faculty, staff, and students, MSU is adapting to new processes and techniques that aim to provide the highest level of safety while supporting an engaged and connected experience for all.

The 100,000-square-foot Edward J. Minskoff Pavilion at the Eli Broad College of Business operates to foster learning, collaboration, and engagement with alumni and the business community, in addition to weaving the existing spaces to create a more cohesive "campus within a campus." This state-of-the-art facility will cement MSU's position as a top-of-mind business school and will position the Broad College ahead of the curve with flexible classrooms, energy-efficient spaces, and cutting-edge technology.

Our collective efforts aimed at enhancing the student experience have resulted in MSU's graduation rate exceeding *U.S. News & World Report's* predicted graduation rate by 10 percentage points. Additionally, more than 90% of MSU graduates are employed or continuing their education within nine months of graduation, approximately 6% above the national average.

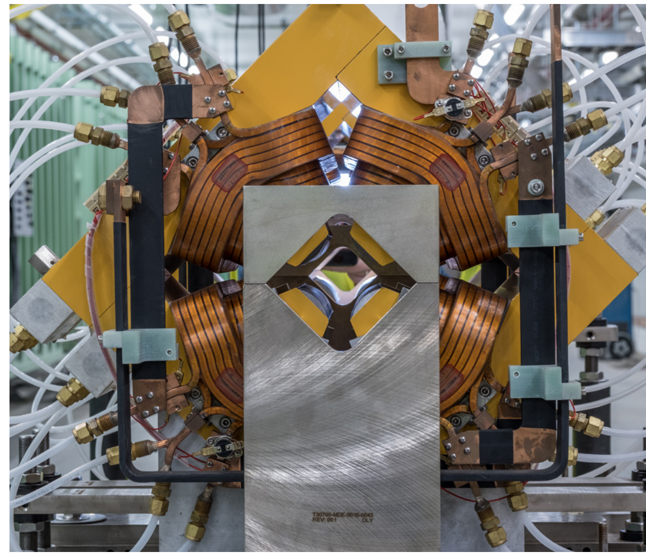
Research

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 that opened in 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 composed of wet bench laboratories, computational research space, offices, and core and collaborative space that include areas for shared equipment.

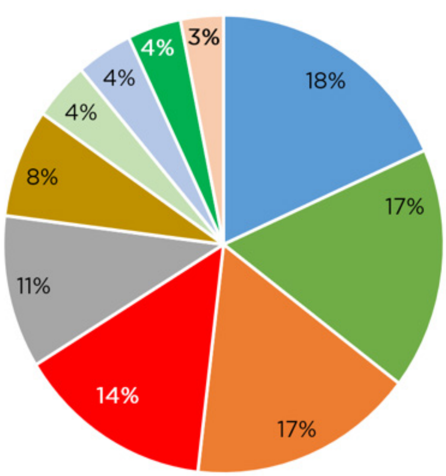
- In August of 2018, MSU broke ground on a new STEM Teaching and Learning Facility. The building will include modern teaching laboratories that incorporate active-learning principles and foster cross-disciplinary teaching and learning as well as support developing and evolving changes in related curriculum and their 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. In fiscal year 2020, the scope of the project was expanded to include the addition of two large classrooms of approximately 15,000 square feet.

- 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, 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 grow its research programs, 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 period between 2015-20, with more than 85 hired to date.

Sources of Net Sponsored Program Revenue (millions):



$ 93	Federal US Dept. of Health and Human Services
87	Federal US Dept. of Energy
84	Federal National Science Foundation
73	Local/Private Revenue
55	Federal US Dept. of Education
39	Federal US Dept. of Agriculture
21	Federal USAID
21	Federal Other
20	State Revenues
16	Federal US Dept. of Defense
$ 509	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 multispecialty group practice of the University. This new organization has 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 include 260 providers from 14 clinical departments at MSU.

In fiscal year 2020, the MSU College of Medicine announced the formation of two new clinical divisions — the Division of Neurosurgery and the Division of Otolaryngology — in partnership with two Southeast Michigan medical practices, a move that expands its statewide presence and opportunities for its students. The University also signed a nonbinding letter of intent with Detroit-based Henry Ford Health System to partner with the $6.5 billion health system that includes six hospitals and more than 250 care sites across Southeast Michigan. The letter of intent calls for the creation of a joint operating company to oversee a new health sciences center that would undertake research, education, and clinical activities.

Further, MSU will broaden its community health care footprint through a partnership with McLaren Health Care, as the medical provider builds a new hospital near the University's campus. McLaren 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 broke ground in December 2018 and 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.

In the face of the COVID-19 global pandemic, MSU has remained firm in its stance to provide quality health care to our community, the country, and the world. Some of MSU's undertakings to combat the virus locally include offering drive-through testing for the virus, producing personal protective equipment using 3D printers, and decontaminating reusable PPE to redistribute to local hospitals and frontline workers. MSU also is helping to combat the virus outside of our community by developing more accurate tests for the virus that return faster results, researching the practical application of existing drugs to combat the virus, developing an FDA-approved method of decontaminating reusable PPE, and developing a new ventilator design that is low-cost and can be constructed with items hospitals already have on hand.

Together We Will

Michigan State'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 among various student groups, and foster a healthier campus. Despite the obstacles COVID-19 has presented, MSU is devoted to fulfilling its mission in new and innovative ways.

MSU is recognized around the world as a leading academic institution with world-class faculty, top graduate education programs, a powerful research portfolio, and an engaged, entrepreneurial spirit. Together, the collective will of our students, faculty and staff, 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 MSU'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, 2020 and 2019 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 audits 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 audits 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, 2020 and 2019 and the respective changes in their 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.

Emphasis of Matter

As described in Note 1 to the financial statements, the COVID-19 pandemic has impacted the operations of the University. Our opinion is not modified with respect to this matter.

To the Board of Trustees
Michigan State University

Other Matters

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 audits 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 29, 2020 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 29, 2020

Introduction

The following discussion provides an overview of the financial position of Michigan State University (the "University") for the fiscal years ended June 30, 2020 and 2019.

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, testing, and 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.

Novel Coronavirus (COVID-19) Pandemic

In December 2019, the Novel Coronavirus (COVID-19) was first reported and has since emerged as a global pandemic. The world-wide response to manage the COVID-19 pandemic has included many extraordinary measures designed to reduce physical human interactions, including the temporary suspension of community events and other activities, broad travel restrictions, and the temporary closing of many businesses. Likewise, the pandemic has had a significant effect on the University for the year ended June 30, 2020, including transitioning instruction to remote learning to the fullest extent possible, limiting on-campus residence, eliminating all non-essential travel, and cancelling or postponing athletic and performing arts events. The following sections will discuss further the specific impacts reflected in the financial statements for the year ending June 30, 2020.

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, 2020 and 2019 adjusted to illustrate the impact of postemployment benefit obligations. The 2018 fiscal year is shown as originally reported:

(in millions)	2020	OPEB Adjustment	2020 Net of OPEB	2019	OPEB Adjustment	2019 Net of OPEB	2018	OPEB Adjustment	2018 Net of OPEB
Current assets	$ 824	-	$ 824	$ 739	-	$ 739	$ 636	-	$ 636
Noncurrent assets:									
Restricted cash and cash equivalents and restricted investments	14	-	14	145	-	145	-	-	-
Endowment and other investments	3,080	-	3,080	3,151	-	3,151	2,954	-	2,954
Capital assets, net	2,938	-	2,938	2,862	-	2,862	2,743	-	2,743
Other	106	-	106	125	-	125	112	-	112
Total assets	6,962	-	6,962	7,022	-	7,022	6,445	-	6,445
Deferred outflows of resources	548	(490)	58	163	(115)	48	166	(125)	41
Current liabilities	745	(51)	694	759	(44)	715	1,177	(42)	1,135
Noncurrent liabilities	3,913	(2,090)	1,823	3,521	(1,603)	1,918	3,082	(1,974)	1,108
Total liabilities	4,658	(2,141)	2,517	4,280	(1,647)	2,633	4,259	(2,016)	2,243
Deferred inflows of resources	388	(362)	26	423	(405)	18	17	-	17
Net Investment in Capital Assets	1,485	-	1,485	1,511	-	1,511	1,527	-	1,527
Restricted:									
Nonexpendable	817	-	817	763	-	763	709	-	709
Expendable	852	-	852	894	-	894	826	-	826
Unrestricted	(690)	2,013	1,323	(686)	1,937	1,251	(727)	1,891	1,164
Net position	$ 2,464	$ 2,013	$ 4,477	$ 2,482	$ 1,937	$ 4,419	$ 2,335	$ 1,891	$ 4,226

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

<u>Current assets:</u>

Current assets consist of cash and cash equivalents, investments, net accounts and interest receivable, and other assets. During 2020, cash and cash equivalents increased $64 million. The increase is a function of the University's operating, financing, and investing activities as reported in the statement of cash flows. Investments decreased $25 million, primarily due to decreases in short-term investment reserves. Net receivables increased $54 million due to a $90 million increase in insurance recoveries receivable (see note 10) offset by a $32 million decrease in state appropriations receivable due to the State of Michigan Public Act 146 of 2020 signed in July 2020 that replaced appropriation payments originally allocated for 2020 with federal Coronavirus Relief Funds.

Due to the timing of the bill and eligibility requirements of the funding these amounts will be recognized as revenue during 2021.

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.

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.

Endowment and other investments

At June 30, 2020 and 2019, the University's endowment investments totaled $2,800 million (a decrease of $78 million) and $2,878 million (an increase of $178 million), respectively. Endowment gifts and University-designated additions to endowment investments totaled $50 million in 2020 and $55 million in 2019. In addition, $15 million in 2020 and $18 million in 2019, 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 $29 million in 2020 and $1 million in 2019, respectively, for programmatic and capital initiatives. Realized and unrealized net investment gains and losses within the investment portfolio net of transfers to cash and short-term investments accounted for a $87 million decrease in 2020 and a $104 million increase in 2019. Further, $85 million of designated endowment investments were reallocated to operating funds in 2020, consistent with the University's Board approved cash management and investment plan. No reallocations were made in 2019.

Other investments consist primarily of retirement and postemployment benefit reserves, which totaled $96 million and $101 million at June 30, 2020 and 2019, respectively. Also included in other investments was the Liquidity Reserve Pool component of the University's Operating Cash Pool ($106 million in 2020 and $108 million in 2019).

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, 2020, 2019, and 2018, the University's investments in capital assets were as follows:

	2020	2019 (in millions)	2018
Land	$ 49	$ 48	$ 48
Buildings and site improvements	3,969	3,709	3,655
Construction in progress	440	491	324
Software and other intangibles	120	119	119
Equipment and other	993	957	911
Museum collections	24	22	15
Less: accumulated depreciation	(2,657)	(2,484)	(2,329)
	$ 2,938	$ 2,862	$ 2,743

Major additions to buildings and site improvements during 2020 included $97 million for the Interdisciplinary Science and Technology Building, $61 million for the Edward J. Minskoff Pavilion, $39 million for Music Building Addition, and $18 million for Campus Water System Improvements. 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.

Construction in progress reflects multi-year projects which, once completed and placed into service, are generally categorized as buildings and site improvements. The 2020 balance included $70 million for STEM Teaching and Learning Facilities, $33 million for TB Simon Power Plant upgrades, $23 million for the Facility for Rare Isotope Beams Harvest Vault, and $218 million for the Facility for Rare Isotope Beams specialized equipment fabrication. The 2019 balance included $98 million for Interdisciplinary Science and Technology Building, $59 million for the Edward J. Minskoff Pavilion, $22 million for the STEM Teaching and Learning Facilities, and $196 million for the Facility for Rare Isotope Beams specialized equipment fabrication.

As of June 30, 2020, the University had initiated plans and incurred certain contractual commitments related to the construction and renovation of various facilities. Many of the projects have been deferred due to the financial impacts of COVID-19; however, the costs to complete the projects are estimated to be $191 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, 2020 and 2019, deferred outflows of resources totaled $548 million (an increase of $385 million) and $163 million (a decrease of $3 million), respectively. In 2020, 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 GASB No. 75, *Accounting and Financial Reporting for Postemployment Benefits Other Than Pensions* ("GASB 75")) increased by $375 million. In addition, accumulated changes in the fair value of hedging derivative instruments increased $11 million. Offsetting these increases is a $1 million decrease in deferred losses on refunding debt in 2010.

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 2020 was due primarily to decreases in accounts payable of $29 million and deposits held for others of $48 million. Accounts payable decreased primarily due to changes in certain medical service plan and Medicaid Enhanced Reimbursement program costs and the related timing of payments to service providers. Deposits held for others decreased due to the reduction in the Litigation Reserve fund (see note 10). These decreases were offset by an increase in the current portion of long-term debt and other obligations as insurance recovery proceeds accrued in 2020 are committed to refunding existing Series 2018A debt in 2021 (see note 10).

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).

Noncurrent liabilities, primarily debt and net postemployment benefit obligations:

At June 30, 2020, the University had noncurrent debt and other obligations outstanding of $1,673 million compared with $1,806 million at June 30, 2019. During the year ended June 30, 2020, the University issued series 2019C ($148 million) bonds which were used to refund the Series 2010C bonds. During the year ended June 30, 2019, the University issued Series 2018A ($492 million), Series 2019A ($323 million), and Series 2019B ($292 million) bonds. 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 $1,762 million and $1,816 million in 2020 and 2019, respectively (including $92 million and $81 million in 2020 and 2019, 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, 2020, 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, 2020 and 2019, the noncurrent portion of the University's net postemployment benefit obligations (OPEB) totaled $2,090 million (an increase of $487 million) and $1,603 million (a decrease of $334 million). Provisions of GASB 75 require revaluing the unfunded liability using a 20 year tax-exempt municipal rate on an annual basis. As a result, the liability estimate for financial reporting is susceptible to dramatic variation from year to year. Although the financial reporting liability will be changing, the University's approach to 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.

Effective January 2021, the University will transition to a Medicare Advantage Program to deliver medical benefits to eligible retired employees and qualified spouses/beneficiaries. This change is estimated to reduce the University's OPEB liability by approximately $1.5 billion which will be recognized as a reduction in benefit expense during the year ended June 30, 2021 (see note 12). While the change in the plan will result in monetary savings to the University, the majority of the reduction in the liability will be due to the accounting provisions of GASB 75 where benefits provided as a conduit for the federal government are not part of the substantive OPEB plan offered by the employer because the federal government is primarily responsible for and has assumed the risks associated with providing the benefits. The University's approach on funding the retirement benefits on a pay-as-you-go-basis will remain.

Deferred inflows of resources:

At June 30, 2020 and 2019, deferred inflows of resources totaled $388 million and $423 million respectively (a decrease of $35 million). In 2020, deferred inflows of resources representing deferred amounts due to changes in assumptions used to calculate the valuation of other postemployment benefits decreased by $42 million. Deferred inflows of resources attributable to the University's investment value resulting from irrevocable split-interest agreements (primarily Charitable Remainder Trusts) at June 30, 2020 remained consistent with 2019 and totaled $19 million. In accordance with GASB 81 amounts are deferred until all provisions of the agreements are satisfied. Deferred inflows of resources of $7 million were recognized in 2020 due to gains on bond refunding related to the refunding of the 2010C bonds. In 2019, 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.

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, 2020, 2019, and 2018 was as follows:

	2020	2019 *(in millions)*	2018
Net investment in capital assets	$ 1,485	$ 1,511	$ 1,527
Restricted:			
Nonexpendable	817	763	709
Expendable	852	894	826
Total restricted	1,669	1,657	1,535
Unrestricted - before OPEB	1,323	1,251	1,164
Total net position - before OPEB	4,477	4,419	4,226
OPEB (Unrestricted)	(2,013)	(1,937)	(1,891)
Total net position	$ 2,464	$ 2,482	$ 2,335

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 2020 summer semester and the first quarter of fiscal year 2021, maintaining reserves for capital projects, sustaining working capital balances for self-supporting departmental activities, and preserving unrestricted quasi and term endowments. At June 30, 2020 and 2019, the unrestricted balances related to these specific commitments totaled $1,323 million (an increase of $72 million) and $1,251 million (an increase of $87 million), respectively. Offsetting these balances is a draw on unrestricted net position for commitments related to postemployment benefits. At June 30, 2020 and 2019, these commitments reduced unrestricted net position by $2,013 million and $1,937 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.

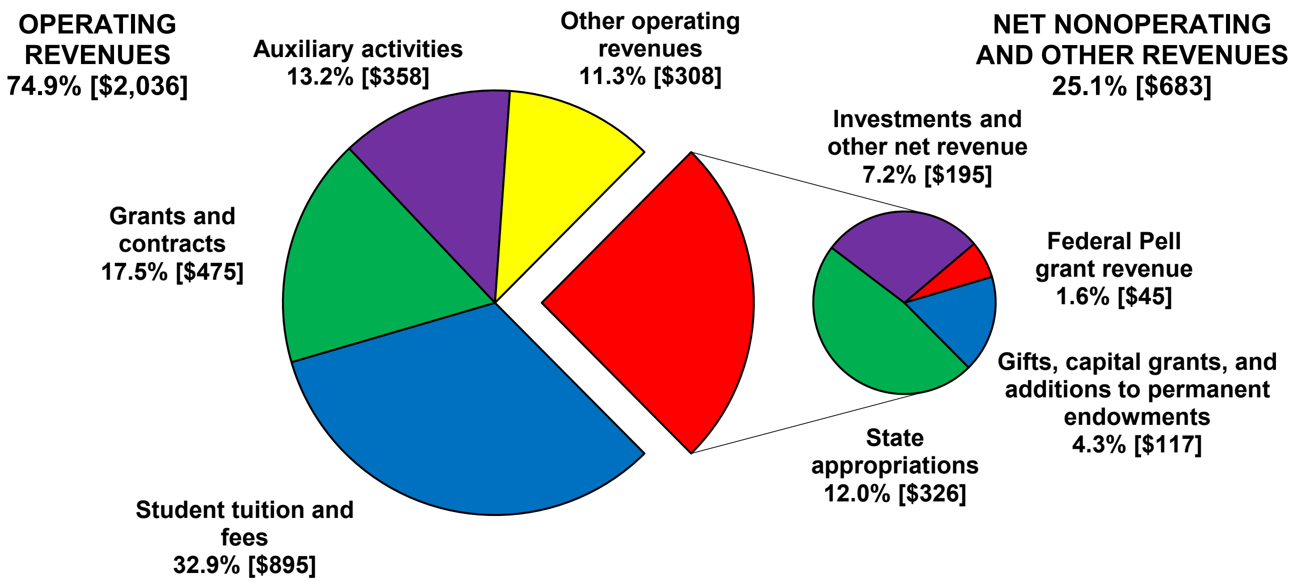
A summarized comparison of the University's revenues, expenses, and changes in net position for the years ended June 30, 2020, 2019, and 2018 follows:

	2020	2019	2018
		(in millions)	
Operating revenues:			
Student tuition and fees, net of allowances	$ 895	$ 868	$ 868
Grants and contracts	475	483	463
Auxiliary activities	358	412	374
Other operating revenues	308	284	282
Total operating revenues	2,036	2,047	1,987
Operating expenses:			
Instruction and departmental research	776	784	799
Research	400	411	400
Public service	380	344	327
Academic support	137	133	136
Student services	59	58	55
Scholarships and fellowships	99	73	72
Institutional support*	194	179	666
Operation and maintenance of plant	136	136	129
Auxiliary enterprises	366	362	336
Depreciation	186	179	177
Other operating expenses, net	4	3	3
Total operating expenses	2,737	2,662	3,100
Operating loss	(701)	(615)	(1,113)
Nonoperating revenues (expenses):			
State operating appropriation	256	286	281
State AgBioResearch appropriation	35	35	34
State Extension appropriation	30	30	29
Federal Pell grant revenue	45	45	44
Federal Coronavirus Aid, Relief, and Economic Security Act	16	-	-
Gifts	40	61	64
Net investment income	166	247	320
Interest expense on indebtedness	(77)	(63)	(45)
Other nonoperating revenues, net	90	2	7
Net nonoperating revenues	601	643	734
(Loss) income before other	(100)	28	(379)
State capital appropriations	5	-	-
Capital grants and gifts	30	75	70
Additions to permanent endowments	47	44	63
(Decrease) increase in net position	(18)	147	(246)
Net position, beginning of year	2,482	2,335	3,932
Cumulative effect of change in accounting principles	-	-	(1,351)
Net position, beginning of year, restated	2,482	2,335	2,581
Net position, end of year	$ 2,464	$ 2,482	$ 2,335

* 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, 2020 are presented in millions of dollars:



TOTAL NET REVENUES $2.7 BILLION

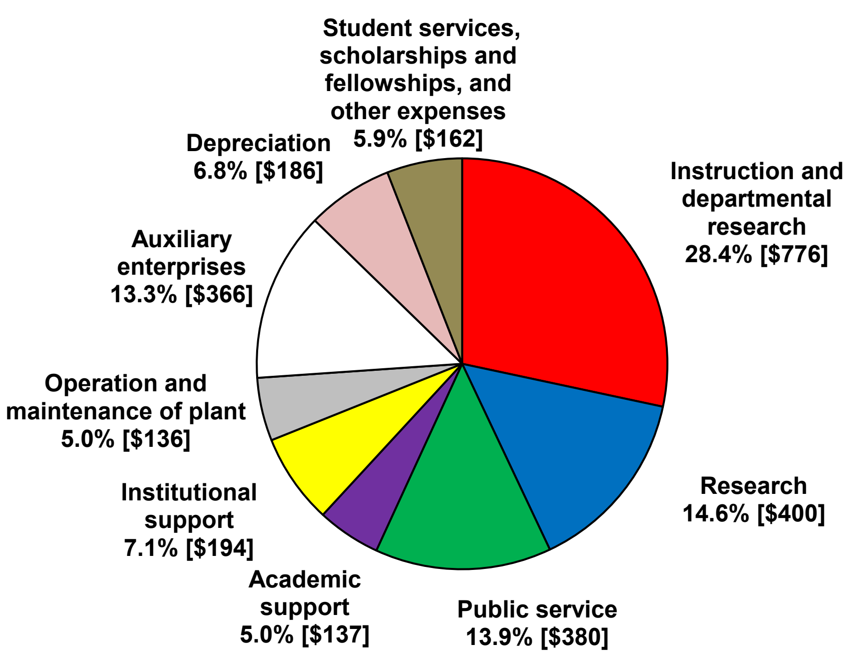
Operating revenues: The primary source of operating revenue for the University was student tuition and fees (net of scholarship allowances), totaling $895 million and $868 million in 2020 and 2019, respectively. Gross tuition and fees revenue increased $42 million due in part to changes in student blend and impacts of transitioning to a flat rate tuition model. Other major revenue sources in 2020 included federal grants and contracts of $374 million (a decrease of $7 million), including $355 million in sponsored programs, and auxiliary activities (activities that provide services to students, faculty, staff, and the public) totaled $358 million (a decrease of $54 million). The decrease in auxiliary activities was driven by the impacts of the COVID-19 pandemic on athletics, residential housing services, and other auxiliary activities. In 2019, net tuition and fees were consistent with the prior year primarily due to a freeze on freshman in-state tuition and changes in student blend, federal grants and contracts increased by $24 million, and auxiliary activities increased $38 million.

Net nonoperating and other revenues: The primary source of this net revenue was State appropriations, which totaled $321 million in 2020, a decrease of $30 million. In 2020, the University received $256 million in funding for general operations, compared to $286 million in 2019. Michigan State University Extension and MSU AgBioResearch appropriations totaled $65 million, consistent with 2019 levels. As noted in the current assets section above, the State of Michigan revised funding for state appropriation allocations, resulting in $32 million of funds originally appropriated for 2020 being recognized as revenue in 2021. In addition, the University was awarded $30 million in federal funding through the Coronavirus Aid, Relief, and Economic Security (CARES) Act: Higher Education Emergency Relief Fund during 2020. In accordance with the Act, the University must meet certain eligibility requirements before recognizing the funding. For 2020, the University provided $15 million to students as emergency financial aid grants and this amount has been recognized as revenue. The remaining $15 million is expected to be recognized in 2021 once all eligibility requirements have been met. In addition, $1 million of federal CARES Act: Provider Relief Funding has been recognized as an eligible health care provider.

Other significant components of net nonoperating revenues in 2020 included net investment income, which decreased $81 million due to market conditions. In addition, the University settled claims with certain insurance carriers for $113 million, with $28 million of contingent fees being paid to third parties who aided in the recovery, resulting in net revenues of $85 million. In 2019, net investment income decreased $73 million due to market conditions.

During 2020, $1,556 million was expended for the core missions of the University: instruction and departmental research, research, and public service, an increase of $17 million (1.1%) from 2019. Instruction and departmental research and research expenses decreased $19 million (1.2%). Public service expenses increased $36 million (2.3%), 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 ($30 million). Institutional support totaled $194 million, an increase of $15 million, primarily due to an increase in claims and legal expenses (see note 10). Auxiliary enterprises totaled $366 million, an increase of $4 million, and scholarships and fellowships totaled $99 million, an increase of $26 million due in part to the student emergency grants paid from the CARES Act funding. In 2019, expenses for the core mission of the University increased $13 million and auxiliary enterprises increased $26 million.

Operating expenses by source for the year ended June 30, 2020 are presented in millions of dollars:



TOTAL OPERATING EXPENSES $2.7 BILLION

The University's Economic Outlook

As a top global university, MSU is committed to fulfilling its land-grant mission; to advance knowledge and transform lives by providing outstanding education to all that 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.

COVID-19 continues to have a significant impact on the University, the state, the nation, and the world. While environmental and public health conditions continue to change, University leadership remains focused on assuring the safety and well-being of students, faculty, and staff while providing high quality academic programs in a variety of formats.

Initial projections for fiscal year 2021 anticipate $300 million in lost revenues campus wide. Forecasted revenue disruptions include the modification of the fall football season, diminished occupancy for the fall semester in residence halls, and enrollment disruption for international and domestic non-resident students. Mitigation efforts focus on cost-savings efforts, temporary adjustments to salary and benefits programs, and prudent use of institutional reserves.

Below outlines some of the major impacts and initiatives:

- Tuition and fees revenue – In May 2020, the Board of Trustees voted to hold tuition rates flat for the 2021 academic year. For the fall 2020 semester, MSU has pivoted to a remote learning format for all undergraduates and some graduate classes. As of the first day of classes, fall enrollment totals approximate 50,000 students, consistent with estimates included in the fiscal year 2021 budget.

- Federal and state funding – Subsequent to June 30, 2020, the State of Michigan passed Public Act 146 of 2020 which substituted certain State funding originally allocated for fiscal year 2020 for Federal CARES Act funding that will be recognized in fiscal year 2021. In addition, MSU has been awarded and will utilize certain CARES Act – Higher Education Emergency Relief Funding during fiscal year 2021. In September 2020, state appropriations were finalized that will keep higher education at the same level of state funding as the previous fiscal year.

- Auxiliary activities – With the postponement and modification of fall sports across the Big Ten conference and the pivot to remote learning format for most students for the fall 2020 semester, the University's major auxiliary units will continue to face economic pressures. Staff reductions and other cost containment initiatives have been implemented to align with disrupted operations.

- Operating cost reductions – Included in the fiscal year 2021 operating budget, MSU implemented a three percent budget reduction for all academic and administrative units. In addition, MSU has implemented various personnel cost reductions including a University-wide hiring chill; salary and retirement contribution reductions for non-union faculty, academic staff, and executive managers; employee furloughs across multiple units; deferred capital project initiatives; elimination of external consultants where possible; and reductions of discretionary spending, including travel, to the fullest extent possible.

While greatly impacted by COVID-19, the University continues to adapt and make the necessary fiscal adjustments with the objective of maintaining quality.

STATEMENTS OF NET POSITION

	June 30, 2020	June 30, 2019
ASSETS	(in thousands)	
Current assets:		
Cash and cash equivalents	$ 201,143	$ 91,787
Restricted cash and cash equivalents	-	45,773
Investments	307,425	332,287
Accounts and interest receivable, net	260,897	206,644
Student loans and pledges receivable, net	32,292	38,348
Inventories and other assets	22,141	24,252
Total current assets	823,898	739,091
Noncurrent assets:		
Restricted cash and cash equivalents	4,669	46,079
Restricted investments	9,220	98,536
Endowment investments	2,799,889	2,877,833
Other investments	280,293	273,057
Student loans and pledges receivable, net	76,389	95,585
Investments in joint ventures and other assets	29,258	29,615
Derivative instruments - swap asset	372	460
Capital assets, net	2,937,901	2,862,005
Total noncurrent assets	6,137,991	6,283,170
Total assets	**6,961,889**	**7,022,261**
DEFERRED OUTFLOWS OF RESOURCES	**547,578**	**163,228**
LIABILITIES		
Current liabilities:		
Accounts and interest payable	165,062	193,981
Accrued personnel costs	64,435	62,745
Accrued self-insurance liabilities	22,907	19,890
Payroll taxes and other payroll deductions	22,573	23,509
Deposits held for others	22,123	70,261
Unearned revenues	102,640	117,598
Current portion of net other postemployment benefit obligations	51,326	44,083
Current portion of long-term debt and other obligations	293,435	227,403
Total current liabilities	744,501	759,470
Noncurrent liabilities:		
Accrued personnel costs	36,894	36,911
Accrued self-insurance liabilities	10,260	7,186
Payroll taxes and other payroll deductions	15,485	-
Unearned revenues	8,667	9,533
Derivative instruments - swap liability	78,763	57,781
Net other postemployment benefit obligations	2,090,014	1,603,252
Long-term debt and other obligations	1,672,946	1,806,109
Total noncurrent liabilities	3,913,029	3,520,772
Total liabilities	**4,657,530**	**4,280,242**
DEFERRED INFLOWS OF RESOURCES	**387,548**	**423,685**
NET POSITION		
Net investment in capital assets	1,484,778	1,511,083
Restricted:		
Nonexpendable	817,110	762,991
Expendable:		
Research and gifts	523,154	531,187
Quasi and term endowments	229,858	247,356
Debt service and capital projects	87,661	102,460
Student loans	11,234	12,573
Unrestricted	(689,406)	(686,088)
TOTAL NET POSITION	**$ 2,464,389**	**$ 2,481,562**

See accompanying notes

STATEMENTS OF FINANCIAL POSITION

	June 30, 2020	June 30, 2019
	(in thousands)	
ASSETS		
Cash equivalents	$ 16,880	$ 12,443
Interest and dividends receivable, net	121	202
Other receivables, net	3,372	4,646
Investments	365,972	388,859
Land held for investment, net	1,605	3,347
Investment in Research Park, net	2,885	2,897
Equity in start-up organizations, net	3,077	1,585
Notes receivable, net	1,033	776
Prepaid expenses	55	55
Property and equipment, net	7,190	5,768
Intangible assets, net	791	857
TOTAL ASSETS	**$ 402,981**	**$ 421,435**
LIABILITIES AND NET ASSETS		
Liabilities:		
Accrued expenses and other payables	$ 2,647	$ 3,083
Deferred revenue	13	129
Trusts and annuities payable	6,743	7,246
Deposit held for Michigan State University	17,856	18,677
Obligations under life estate agreements	456	661
Total liabilities	**27,715**	**29,796**
Net assets:		
Without donor restrictions	338,933	351,994
With donor restrictions:		
Time or purpose restrictions	36,333	38,886
Perpetual restrictions	-	759
Total net assets with donor restrictions	36,333	39,645
Total net assets	**375,266**	**391,639**
TOTAL LIABILITIES AND NET ASSETS	**$ 402,981**	**$ 421,435**

See accompanying notes

STATEMENTS OF REVENUES, EXPENSES, AND CHANGES IN NET POSITION

	Year ended June 30, 2020	Year ended June 30, 2019
	(in thousands)	
OPERATING REVENUES		
Student tuition and fees	$ 1,050,466	$ 1,008,609
Less: scholarship allowances	155,214	140,704
Net student tuition and fees	895,252	867,905
State of Michigan grants and contracts	18,159	16,936
Federal grants and contracts	373,846	380,966
Local and private sponsored programs	82,643	85,318
Interest and fees on student loans	1,272	1,022
Departmental activities (net of scholarship allowances of $8,160 in 2020 and $7,738 in 2019)	306,473	282,912
Auxiliary activities (net of room and board allowances of $27,442 in 2020 and $26,302 in 2019)	358,354	411,632
TOTAL OPERATING REVENUES	**2,035,999**	**2,046,691**
OPERATING EXPENSES		
Instruction and departmental research	775,782	783,859
Research	399,507	410,887
Public service	380,269	344,030
Academic support	136,793	133,419
Student services	58,866	57,635
Scholarships and fellowships	98,604	73,431
Institutional support	194,441	178,709
Operation and maintenance of plant	135,909	135,552
Auxiliary enterprises	365,935	362,462
Depreciation	186,306	178,729
Other operating expenses, net	4,442	3,117
TOTAL OPERATING EXPENSES	**2,736,854**	**2,661,830**
Operating loss	(700,855)	(615,139)
NONOPERATING REVENUES (EXPENSES)		
State operating appropriation	256,597	286,274
State AgBioResearch appropriation	34,937	34,591
State Extension appropriation	30,136	29,838
Federal Pell grant revenue	44,596	44,996
Federal Coronavirus Aid, Relief, and Economic Security Act revenue	16,135	-
Gifts	39,779	60,746
Net investment income	165,837	246,962
Interest expense on indebtedness	(77,432)	(62,788)
Other nonoperating revenues, net	90,401	1,850
Net nonoperating revenues	600,986	642,469
(LOSS) INCOME BEFORE OTHER	**(99,869)**	**27,330**
State capital appropriations	5,111	-
Capital grants and gifts	30,306	75,216
Additions to permanent endowments	47,279	43,927
(Decrease) increase in net position	(17,173)	146,473
Net position, beginning of year	2,481,562	2,335,089
NET POSITION, END OF YEAR	**$ 2,464,389**	**$ 2,481,562**

See accompanying notes

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

	Year ended June 30, 2020		
	Without Donor Restrictions	With Donor Restrictions	Total
		(in thousands)	
REVENUE, GAINS AND OTHER SUPPORT:			
Contributions	$ 48	$ 1,486	$ 1,534
Income from investments - net of investment fees	1,338	174	1,512
Royalty income	674		674
Rental income	1,803		1,803
Grants and contracts	347		347
Adjustment to value of annuities payable		173	173
Other income	215		215
Net assets released from restrictions	5,145	(5,145)	-
TOTAL REVENUE, GAINS AND OTHER SUPPORT	9,570	(3,312)	6,258
EXPENSES:			
Contributions to Michigan State University	14,257		14,257
Salaries, fringe benefits, and payroll taxes	3,608		3,608
Net periodic postretirement benefit cost	160		160
Consultants and interns	1,072		1,072
Office expense	275		275
Professional fees	245		245
Operating expense	250		250
Rent and utilities	1,032		1,032
Insurance	108		108
Depreciation and amortization	885		885
Provision for uncollectible receivables	392		392
Other expense	347		347
TOTAL EXPENSES	22,631	- -	22,631
Other postretirement adjustments	-		-
Change in net assets	(13,061)	(3,312)	(16,373)
Net assets, beginning of year	351,994	39,645	391,639
NET ASSETS, END OF YEAR	$ 338,933	$ 36,333	$ 375,266

	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
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	394		394
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

See accompanying notes

	Year ended June 30, 2020	Year ended June 30, 2019
	(in thousands)	
Cash flows from operating activities		
Tuition and fees	$ 898,814	$ 865,847
Research grants and contracts	460,848	479,230
Auxiliary activities	350,043	398,599
Departmental activities	289,084	327,955
Interest and fees on student loans	1,272	1,022
Loans issued to students	(4,583)	(3,601)
Collection of loans from students	7,689	7,936
Scholarships and fellowships	(105,367)	(114,625)
Payments to suppliers	(661,566)	(698,269)
Payments to employees	(1,653,069)	(1,582,107)
Other payments	(78,276)	(492,860)
Net cash used by operating activities	(495,111)	(810,873)
Cash flows from noncapital financing activities		
State appropriations	353,297	349,558
Federal Pell grant revenue	44,596	44,996
Federal Coronavirus Aid, Relief, and Economic Security Act receipts	16,135	-
Gifts	48,543	58,323
Endowment gifts	47,386	43,835
Proceeds from issuance of noncapital debt	-	792,795
Principal paid on noncapital debt	(23,055)	(300,000)
Interest paid on noncapital debt	(16,124)	(3,519)
William D. Ford Direct Lending receipts	334,070	348,088
William D. Ford Direct Lending disbursements	(334,070)	(347,578)
Other receipts	17,762	-
Net cash provided by noncapital financing activities	488,540	986,498
Cash flows from capital and related financing activities		
Capital gifts and grants	43,579	57,219
Proceeds from issuance of capital debt and other long-term obligations	177,392	385,313
Purchase of capital assets	(284,808)	(290,568)
Proceeds from sale of capital assets	1,534	1,320
Principal paid on capital debt	(211,829)	(103,713)
Interest paid on capital debt	(66,195)	(49,666)
Other receipts	4,142	888
Net cash (used) provided by capital and related financing activities	(336,185)	793
Cash flows from investing activities		
Investment income, net	168,713	200,039
Proceeds from sales and maturities of investments	7,355,784	4,832,846
Purchase of investments	(7,159,568)	(5,089,996)
Net cash provided (used) by investing activities	364,929	(57,111)
Net increase in cash	22,173	119,307
Cash and cash equivalents, beginning of year	183,639	64,332
Cash and cash equivalents, end of year	**$ 205,812**	**$ 183,639**

See accompanying notes

	Year ended June 30, 2020	Year ended June 30, 2019
Reconciliation of net operating loss to cash flows from operating activities:	(in thousands)	
Operating loss	$ (700,855)	$ (615,139)
Adjustments to reconcile net loss to net cash used by operating activities:		
Depreciation expense	186,306	178,729
Change in assets and liabilities:		
Accounts receivable	6,855	(13,185)
Student loans receivable	3,106	4,335
Inventories and other assets	2,111	1,137
Investments in joint ventures and other assets	357	(792)
Accounts payable	(27,769)	48,643
Accrued personnel costs	1,673	2,231
Payroll taxes and other payroll deductions	14,549	1,038
Deposits held for others	(48,138)	46,306
Unearned revenues	(15,824)	(11,570)
Accrued self-insurance liabilities	6,091	(498,501)
Net other postemployment benefit obligation	494,005	(368,713)
Change in deferred outflows	(374,978)	9,913
Change in deferred inflows	(42,600)	404,695
Net cash used by operating activities	**$ (495,111)**	**$ (810,873)**

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 Statement 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.

MSU Health Care, Inc. is a legally separate, tax-exempt entity 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, testing, and other services. Under the requirements of GASB Statement 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, 2020, MSU Health Care, Inc. had total assets of $5,086, total liabilities of $9, and total net position of $5,077. For the year ended June 30, 2020, MSU Health Care, Inc. had net revenues of ($190) and total expenses of $1,027. 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.

Subsequent to June 30, 2020, the University transferred the operations of primary care, sports medicine, diagnostics, testing, and other services to MSU Health Care, Inc. The University transferred total assets of $31,921 and total liabilities of $4,442 at carrying value to MSU Health Care, Inc. The assets, liabilities, and activity reported by MSU Health Care, Inc. will continue to be reported as a blended component unit in the University financial statements going forward.

Lysander Series of Aesir Series, LLC ("Lysander") was formed as a legally separate entity that meets the criteria set forth for component units under GASB Statement 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, 2020, Lysander had total assets of $1,983, total liabilities of $975, and total net position of $1,008. For the year ended June 30, 2020, Lysander received a $545 contribution from the University, had total income of $8, and had total expenses of $49. 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.

In December 2019, the University entered into an asset purchase agreement with an affiliated nonprofit institution and foundation, the Michigan State University College of Law and the Michigan State University College of Law Foundation ("Law College"). The University agreed to acquire all of the assets and ongoing operations of the Law College in exchange for assuming the Law College's outstanding liabilities. The operations of the Law College will continue as a department of the University and the Law College's separate legal entity will be dissolved. The purchase was completed in August 2020. The asset purchase agreement is accounted for as a merger and the University will recognize the Law College's assets, liabilities, and net position at carrying value as of July 1, 2020. The Law College reported under FASB accounting standards, so the Law College's financial statements will be recalculated under GASB accounting standards, before being recognized by the University in the financial statements for the year ended June 30, 2021. As of June 30, 2020, the Law College had total assets of $44,114, total liabilities of $20,609, and net assets of $23,505 under FASB accounting standards.

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 previously held in the Litigation Reserve as discussed in note 10. At June 30, 2020, all funds had been spent from the Litigation Reserve in accordance with restricted purposes.

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, changes in assumptions related to the valuation of other postemployment benefits, and deferred gains on refunding of debt.

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.

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. For the year ended June 30, 2020, insurance proceeds were accrued and reported as other nonoperating revenues net of contingent legal fees related to the recoveries (see note 10). Restricted and unrestricted resources are spent and tracked at the discretion of the recipient University department within the guidelines of donor restrictions, if any.

Federal Coronavirus Aid, Relief, and Economic Security Act revenue - In December 2019, the Novel Coronavirus (COVID-19) was first reported and has since emerged as a global pandemic. The world-wide response to manage the COVID-19 pandemic has included many extraordinary measures designed to reduce physical human interactions, including the temporary suspension of community events and other activities, broad travel restrictions, and the temporary closing of many businesses. Likewise, the University's operations and financial results for the year ended June 30, 2020 were also impacted, including transitioning instruction to remote learning to the fullest extent possible, limiting on-campus residence, eliminating all non-essential travel, and cancelling or postponing athletic and performing arts events. To partially offset the financial impact to students and the losses incurred by the University due to the disruption caused by COVID-19, the University received grants as outlined below.

The University has been awarded $29,837 in funding through the Coronavirus Aid, Relief, and Economic Security ("CARES") Act: Higher Education Emergency Relief Fund during the year ended June 30, 2020. In accordance with the Act, the University must meet certain eligibility requirements before utilizing the funding. For the fiscal year ending June 30, 2020, the University provided $14,919 to students as emergency financial aid grants. This amount is recognized as nonoperating revenue and scholarships and fellowships expense in the Statement of Revenues, Expenses, and Changes in Net Position. The remaining $14,918 is expected to be used in 2021 once all eligibility requirements have been met.

In addition, the University recognized $1,216 in revenue from the CARES Act: Provider Relief Fund as an eligible healthcare provider.

Subsequent to June 30, 2020, the University was awarded $32,203 of CARES Act Relief Funding through the State of Michigan as a substitute for a portion of the originally awarded state appropriation (see note 5). Due to certain eligibility requirements, the relief funding is also expected to be recognized in 2021.

The severity of the continued impact due to COVID-19 on the University's financial condition, results of operations or cash flows will depend on a number of factors, including, but not limited to, the duration and severity of the pandemic and the extent and severity of the impact on the University's community, all of which are uncertain and cannot be predicted.

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 2020. For fiscal year 2021, 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.

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.

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

2. Cash and cash equivalents

The University's cash and cash equivalents as of June 30, 2020 and 2019 were as follows:

	2020	2019
Cash and cash equivalents, current	$ 201,143	$ 91,787
Restricted cash and cash equivalents, current	-	45,773
Restricted cash and cash equivalents, noncurrent	4,669	46,079
Total cash and cash equivalents	$ 205,812	$ 183,639

Of the bank balances for cash, $1,001 of the total $246,510 in 2020 and $846 of the total $151,296 in 2019 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.

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). Certain prior year amounts in the footnote have been reclassified for consistency with the current year presentation.

As of June 30, 2020 and 2019, the University had the following investments:

	June 30, 2020				
Investment type	LP	LRP	CIF	Other	Total
Investment pools	$ 13,704	$ 106,246	$ 2,600,080	$ 69,418	$ 2,789,448
U.S. Treasury bonds	193,721	-	-	-	193,721
U.S. Government agencies	14,341	-	-	2,788	17,129
Municipal bonds	1,280	-	-	-	1,280
Corporate bonds	31,594	-	-	4,506	36,100
Asset-backed securities	49,111	-	-	112	49,223
U.S. equities	-	-	239,960	8,058	248,018
International equities	-	-	42,269	2,168	44,437
International bonds	12,894	-	213	86	13,193
Life insurance policies	-	-	-	4,278	4,278
Total	$ 316,645	$ 106,246	$ 2,882,522	$ 91,414	$ 3,396,827

	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

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

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, 2020 and 2019, respectively, are as follows:

Investment type	2020	2019
Investment pools	$ 15,616	$ 44,360
U.S. Treasury bonds	193,721	266,050
U.S. Government agencies	14,341	47,841
Municipal bonds	1,280	2,748
Corporate bonds	33,905	127,799
Asset-backed securities	49,223	77,168
U.S. equities	242,276	250,832
International equities	42,841	40,807
International bonds	13,107	30,632
Total	$ 606,310	$ 888,237

The maturities of fixed income investments as of June 30, 2020 and 2019 were as follows:

	June 30, 2020 Fixed Income Investment Maturities				
Investment type	Less than 1 year	1-5 years	6-10 years	More than 10 years	Total
U.S. Treasury bonds	5,027	188,694	-	-	193,721
U.S. Government agencies	2,398	11,284	-	3,447	17,129
Municipal bonds	916	-	-	364	1,280
Corporate bonds	5,866	25,617	2,306	2,311	36,100
Asset-backed securities	1,978	14,809	5,440	26,996	49,223
International bonds	2,991	10,202	-	-	13,193
Total	$ 19,176	$ 250,606	$ 7,746	$ 33,118	$ 310,646

	June 30, 2019 Fixed Income Investment Maturities				
Investment type	Less than 1 year	1-5 years	6-10 years	More than 10 years	Total
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
Asset-backed securities	10,292	29,238	9,546	28,092	77,168
International bonds	9,605	16,296	3,741	990	30,632
Total	$ 96,566	$ 327,079	$ 52,631	$ 75,962	$ 552,238

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, 2020 and 2019, 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, 2020 and 2019 were as follows:

	June 30, 2020							
	Rating							
Investment type	AAA	AA	A	BBB	BB	Below BB	Not rated	Total
U.S. Treasury bonds	-	193,721	-	-	-	-	-	193,721
U.S. Government agencies	-	17,129	-	-	-	-	-	17,129
Municipal bonds	-	364	916	-	-	-	-	1,280
Corporate bonds	-	3,052	11,639	14,986	352	373	5,698	36,100
Asset-backed securities	12,738	2,596	2,084	3,082	-	-	28,723	49,223
International bonds	-	2,062	6,485	3,938	-	-	708	13,193
Total	$ 12,738	$ 218,924	$ 21,124	$ 22,006	$ 352	$ 373	$ 35,129	$ 310,646

	June 30, 2019							
	Rating							
Investment type	AAA	AA	A	BBB	BB	Below BB	Not rated	Total
U.S. Treasury bonds	-	266,050	-	-	-	-	-	266,050
U.S. Government agencies	-	45,117	1,486	1,238	-	-	-	47,841
Municipal bonds	-	1,240	1,104	404	-	-	-	2,748
Corporate bonds	236	9,079	42,330	58,984	1,181	-	15,989	127,799
Asset-backed securities	28,599	3,865	943	2,449	-	646	40,666	77,168
International bonds	-	5,555	13,777	8,774	181	-	2,345	30,632
Total	$ 28,835	$ 330,906	$ 59,640	$ 71,849	$ 1,362	$ 646	$ 59,000	$ 552,238

Credit Risk: While not individually rated, U.S. Treasury bonds and U.S. Government agencies securities are backed by the full faith and credit of the U.S. government, which has an AA+ rating by Standard & Poor's. University policy does not address credit risk by investment type. 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

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, 2020 and 2019, 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 $12,302 in investments denominated in British pounds sterling and $2,845 in investments denominated in euros at June 30, 2020. 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.

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.

Certain prior year amounts in the footnote have been reclassified for consistency with the current year presentation. The Foundation's estimated fair values of investments measured on a recurring basis as of June 30, 2020 and 2019 were as follows:

	Fair value measurement at June 30, 2020 using:			
	Balance at June 30, 2020	Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Marketable securities:				
Short-term investments	$ 647	$ 647	$ -	$ -
Domestic equities	45,496	45,496	-	-
Foreign equities	4,079	4,079	-	-
Fixed income	-	-	-	-
Mutual funds - equities	51,384	51,384	-	-
Mutual funds - fixed income	31,723	31,723	-	-
Total investments by fair value level	133,329	133,329	-	-

At June 30, 2020, $4 of investments in short-term investments, $42,664 of investments in foreign equities, $82,983 of investments in hedge funds, and $106,992 of investments in private equity and venture capital were valued at net asset value and not included above.

	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	42,754	42,754	-	-
Foreign equities	3,493	3,493	-	-
Fixed income	24,249	24,249	-	-
Mutual funds - equities	13,546	13,546	-	-
Mutual funds - fixed income	8,007	8,007	-	-
Total investments by fair value level	92,975	92,975	-	-

At June 30, 2019, $8 of investments in short-term investments, $16,323 of investments in domestic equities, $85,357 of investments in foreign equities, $90,840 of investments in hedge funds, and $103,356 of investments in private equity and venture capital were 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.

In accordance with applicable accounting standards, certain investments that are measured at fair value using the NAV per share (or its equivalent) practical expedient have not been classified in the fair value hierarchy.

Private equity and venture capital investments are illiquid based upon partnership dissolution. Management, external consultants, and the Board of Directors evaluate these investments for impairment on a quarterly basis. As of June 30, 2020, the Foundation has outstanding commitments to fund limited partnerships and venture capital investments in the amount of $57,724.

5. Accounts and interest receivable

The composition of accounts and interest receivable at June 30, 2020 and 2019 is summarized as follows:

	2020	2019
State appropriations	$ 32,138	$ 63,764
Research and sponsored programs	60,500	54,193
Departmental activities	63,261	73,473
Insurance recoveries receivable (see note 10)	90,000	-
Interest receivable	544	2,923
Other	25,221	24,699
	271,664	219,052
Less: allowance for doubtful accounts	10,767	12,408
Total accounts and interest receivable, net	$ 260,897	$ 206,644

In July 2020, the State of Michigan passed Public Act 146 of 2020 that replaced the August 2020 and part of the July 2020 appropriation payments with CARES Act Relief Funds that the State had received from the federal government. Due to the timing of the Act and eligibility requirements of the funding, $32,203 in appropriations originally appropriated for fiscal year 2020 will be recorded within the financial statements for the fiscal year ending June 30, 2021.

6. Student loans and pledges receivable

The composition of student loans and pledges receivable at June 30, 2020 and 2019 is summarized as follows:

	2020	2019
Student loans receivable:		
Perkins Federal Loan Program	$ 16,804	$ 24,492
Health Professions Student Loan Programs	12,301	10,488
Other	2,254	2,549
	31,359	37,529
Less: allowance for doubtful accounts	3,832	6,896
Total student loans receivable, net	27,527	30,633
Pledges receivable:		
Capital	66,195	80,955
Operations	24,479	33,397
	90,674	114,352
Less: allowance for doubtful accounts	9,520	11,052
Total pledges receivable, net	81,154	103,300
Total student loans and pledges receivable, net	108,681	133,933
Less: current portion - student loans	7,882	8,299
Less: current portion - pledges	24,410	30,049
Noncurrent portion	$ 76,389	$ 95,585

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, 2020 and 2019, the University distributed $334,070 and $347,578, 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 $35,858 and $39,582 at June 30, 2020 and 2019, 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, 2020, 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 3.5%.

2021	$ 27,293
2022	19,671
2023	12,303
2024	7,433
2025	3,141
2026 and beyond	20,833
Total discounted pledges receivable	90,674
Less: allowance for uncollectible pledges	9,520
Total pledges receivable, net	$ 81,154

7. Investments in joint ventures and other assets

The composition of investment in joint ventures and other assets at June 30, 2020 and 2019 is summarized as follows:

	2020	2019
Investment in joint ventures	$ 5,638	$ 5,495
Other assets	23,620	24,120
Total investment in joint ventures and other assets	$ 29,258	$ 29,615

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, 2020. As of June 30, 2020, no amounts had been drawn on this line of credit. At June 30, 2020 and 2019, the University had a note receivable balance of $1,826 and $1,896, 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.

MSU Health Care, Inc., a blended component unit, is a member of an incorporated nonprofit joint venture which is accounted for under the equity method. Spartan Radiology, LLC, whose members are MSU Health Care, Inc. and Advanced Radiology Services, PC, is an enterprise to providing professional medical diagnostic imaging, therapeutic and radiology services, and related professional services. MSU Health Care, Inc., and thus 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.

MSU Health Care, Inc. has provided two promissory notes to Spartan Radiology, LLC in the amount of $375 and $350, respectively, each at a rate of 6%, which are secured by all tangible and intangible property of Spartan Radiology, LLC. Principal and accrued interest payments are due quarterly at a rate of 50% of the entity's cash balance to the extent it exceeds $250, with any remaining outstanding amounts due in April 2022. No payments have been received as of June 30, 2020.

Other assets is comprised of a $22,561 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, 2020 and 2019 follows:

	2019	Additions	Disposals	Transfers	2020
Non-depreciated capital assets:					
Land	$ 48,110	$ 465	$ -	$ -	$ 48,575
Construction in progress	490,804	209,467	-	(260,474)	439,797
Museum collections	22,420	1,627	(5)	-	24,042
Total non-depreciated capital assets	561,334	211,559	(5)	(260,474)	512,414
Depreciated capital assets:					
Buildings and site improvements	3,708,751	1,195	-	259,344	3,969,290
Software and other intangibles	119,008	9	-	1,130	120,147
Equipment and other	956,828	49,979	(13,415)	-	993,392
Less: accumulated depreciation					
Buildings and site improvements	(1,627,582)	(122,189)	61	-	(1,749,710)
Software and other intangibles	(109,260)	(4,907)	-	-	(114,167)
Equipment and other	(747,074)	(59,210)	12,819	-	(793,465)
Total depreciated capital assets	2,300,671	(135,123)	(535)	260,474	2,425,487
Total capital assets	$ 2,862,005	$ 76,436	$ (540)	$ -	$ 2,937,901

	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

9. Deferred outflows and inflows of resources

The composition of deferred outflows of resources at June 30, 2020 and 2019 is summarized as follows:

	2020	2019
Accumulated changes in fair value of hedging derivative instruments	$ 49,995	$ 39,490
Other postemployment benefits (see note 12)	489,892	114,914
Loss on refunding of debt at June 30, 2010	7,691	8,824
Total deferred outflows of resources	$ 547,578	$ 163,228

The composition of deferred inflows of resources at June 30, 2020 and 2019 is summarized as follows:

	2020	2019
Irrevocable split-interest agreements (net of related liabilities)	$ 18,827	$ 18,990
Other postemployment benefits (see note 12)	362,095	404,695
Gain on refunding of debt at June 30, 2020	6,626	-
Total deferred inflows of resources	$ 387,548	$ 423,685

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 $7,893 and $5,009 as of June 30, 2020 and 2019, 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 $3,767 and $3,759 as of June 30, 2020 and 2019, respectively. The discount rate used was 3.5% and 4% as of June 30, 2020 and 2019, respectively, 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 2020, 2019, and 2018 were as follows:

	2020	2019	2018
Balance, beginning of year	$ 27,076	$ 525,577	$ 22,943
Claims incurred and changes in estimates	231,804	210,216	704,204
Claim payments	(225,713)	(708,717)	(201,570)
Balance, end of year	33,167	27,076	525,577
Less: current portion	22,907	19,890	517,786
Noncurrent portion	$ 10,260	$ 7,186	$ 7,791

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 August 28, 2018, a settlement agreement became effective with the 332 individuals for $500,000 and 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. Both amounts were primarily funded by private placement bonds, Series 2018A (see note 13). The Litigation Reserve was used to litigate or settle any related claims not released by the settlement agreement and the University could 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 were funded by the Litigation Reserve.

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

Changes in the Litigation Reserve during 2020 and 2019 were as follows:

	2020	2019
Balance, beginning of year	$ 45,773	$ -
Reserve funding	-	75,000
Interest income	190	576
Settlement claims	(43,981)	(25,725)
Other costs and expenses	(1,982)	(4,078)
Balance, end of year	$ -	$ 45,773

The Litigation Reserve was used to settle 96 and 54 claims in 2020 and 2019, respectively, totaling $69,706. In addition, $6,060 was used to fund costs and expenses. There is no balance remaining at June 30, 2020. At June 30, 2019, the remaining balance was reported in the Statement of Net Position as restricted cash (asset) and deposits held for others (liability).

In addition to the settlements funded by the Qualified Settlement Fund and Litigation Reserve, the University has settled and paid 39 claims for $17,003 during the year ended June 30, 2020. Additional claims could be paid in the future, but absent knowledge of the number and nature of such claims, the University is unable to predict the ultimate legal and financial liability and at this time cannot reasonably estimate the possible loss or range of loss. Accordingly, no amounts have been accrued in the financial statements for these claims.

For the years ended June 30, 2020 and 2019, the University incurred costs totaling $7,674 and $7,200, 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. Insurance reimbursements for settlements and/or legal fees totaling $113,350 were agreed to during the year ended June 30, 2020 and reported as other non-operating revenues net of amounts owed to third parties. The University received $23,350 of the recoveries during the year with $90,000 receivable at June 30, 2020. Per an agreement contingent on the recoveries, the University paid $5,588 to third parties that aided in the recoveries, with an additional $22,500 payable at June 30, 2020. The University has committed to using the net insurance recoveries to pay down the Series 2018A bonds (see note 13). The amounts of any future insurance reimbursements are unknown as of June 30, 2020, and as a result no insurance recovery accruals have been recorded in the 2020 financial statements.

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 was recorded as an accrued liability at June 30, 2019 and paid for during fiscal year 2020. 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.

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

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. Effective July 1, 2020, the University reduced the matching contribution to 5% for executive management and non-unionized faculty and academic staff for at least one year as a cost cutting measure related to the COVID-19 pandemic. Contributions under the base program, excluding the participants' supplemental contributions, for the years ended June 30, 2020 and 2019 were as follows:

	2020	2019
University contributions	$ 94,194	$ 91,318
Employee contributions	46,528	45,142

In addition, the University has a single-employer, defined benefit plan covering 233 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 $2,946 and $3,246 representing the total remaining pension obligation based on an actuarial valuation as of January 1, 2020 and 2019, respectively. The benefits are based on the employee's compensation during the last three years of employment and/or years of service.

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 21,000 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 Statement No. 75 ("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.

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

For the year ended June 30, 2020, the University's reported liability for providing retiree health and dental care benefits is estimated based on an actuarial valuation date of January 1, 2020 and measurement date of December 31, 2019 in accordance with GASB 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	2.73%, based on the Bond Buyer 20-year General Obligation Municipal Bond Index
Salary increases	5.0%
Healthcare cost trend rates	6.88% for 2020, 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.

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 was estimated based on an actuarial valuation date of January 1, 2018 and measurement date of December 31, 2018 in accordance with GASB 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	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 December 31, 2019 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-2019 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-2019. For the December 31, 2018 measurement date, the University utilized separate mortality assumptions for faculty and non-faculty staff. Faculty mortality was based on the Pub T.H-2010.H (A) Public Retirement Plans Mortality Tables with MP-2018 improvement scale. Non-faculty staff mortality was 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. Additional assumptions updated as a result of the 2019 experience study included 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, 2020 and 2019, are summarized as follows:

	2020	2019
Balance, beginning of year	$ 1,647,335	$ 2,016,048
Service cost	41,383	48,202
Interest cost	66,476	70,323
Changes in assumptions	402,866	(447,295)
Difference between expected and actual plan experience	27,297	-
Benefits payments	(44,017)	(39,943)
Balance, end of year	2,141,340	1,647,335
Less: current portion	51,326	44,083
Noncurrent portion	$ 2,090,014	$ 1,603,252

Changes in assumptions reflect a change in the discount rate at both the measurement dates of December 31, 2019 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.

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

In accordance with GASB 75, the University's liability for postemployment benefits obligations at June 30, 2020 and 2019 is not reduced by the anticipated Medicare Retiree Drug Subsidy for future periods. This subsidy would reduce the total postemployment benefits liability by approximately $2,750 and $2,522, respectively.

The December 31, 2019 measurement date amounts are based on the valuation date of January 1, 2020. The December 31, 2018 measurement date amounts were based on the valuation date of January 1, 2018. Therefore, census data, including the number of plan participants, consisted of the following:

	2020	2019
Active employees - Hired before July 1, 2010	5,682	6,791
Active employees - Hired after July 1, 2010	7,333	6,027
Retirees receiving benefits	5,385	4,401
Dependents	3,088	2,879
Total plan participants	21,488	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, 2020:

	1% Decrease	Current Rates	1% Increase
Discount rate:			
Net OPEB obligations	$ 2,516,151	$ 2,141,340	$ 1,837,541
Increase (decrease)	374,811	-	(303,799)
Health care trend rate:			
Net OPEB obligations	$ 1,985,678	$ 2,141,340	$ 2,204,945
Increase (decrease)	(155,662)	-	63,605

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

The components of postemployment benefits expense for the year ended June 30, 2020 and 2019 are summarized as follows:

	2020	2019
Service cost	$ 41,383	$ 48,202
Interest cost	66,476	70,323
Amortization of differences between expected and actual experience	2,730	-
Amortization of changes in assumptions	9,351	(30,936)
Total expense	$ 119,940	$ 87,589

(dollars in thousands)

Deferred outflows and inflows of resources related to postemployment benefits obligations at June 30, 2020 are summarized as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net deferred impact to OPEB
Changes in assumptions	$ 443,057	$ 362,095	$ 80,962
Differences between expected and actual experience	24,567	-	24,567
Benefit payments made after measurement date	22,268	-	22,268
Total	$ 489,892	$ 362,095	$ 127,797

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)

Of the total amount reported as deferred outflows of resources related to OPEB at June 30, 2020, $22,268 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, 2021. 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.

2021	$ 12,081
2022	12,081
2023	12,081
2024	12,081
2025	12,081
2026 and beyond	45,124
Total	$ 105,529

Effective January 2021, the University will transition to a Medicare Advantage with Prescription Drug Program to deliver medical benefits to eligible retired employees and qualified spouses/beneficiaries. The Medicare Advantage with Prescription Drug Program will shift the retiree population to a premium-based plan from a self-insured plan and allow the plan administrator to leverage significant federal subsidies to control costs. In accordance with GASB 75, Medicare benefits that an employer provides as a conduit for the federal government are not part of the substantive OPEB plan offered by the employer because the federal government is primarily responsible for and has assumed the risks associated with providing the benefits. This change is estimated to reduce the University's OPEB liability by approximately $1,500,000. The Medicare Advantage with Prescription Drug Program became part of the substantive plan subsequent to the December 31, 2019 measurement date so the reduction in the University's liability will not be recognized until the year ended June 30, 2021. The change will be recognized as a change in OPEB plan and thus a reduction in benefit expense during the year ended June 30, 2021.

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, 2020 and 2019 are summarized as follows:

	2019	Borrowed	Retired	2020	Current Portion
General Revenue Bonds:					
Series 2019C	$ -	$ 147,755	$ -	$ 147,755	$ 10,840
Series 2019A	323,070	-	-	323,070	675
Series 2019B	292,105	-	-	292,105	5,200
Series 2018A - Direct placement	191,800	-	23,055	168,745	77,870
Series 2015A	184,410	-	4,000	180,410	4,015
Series 2013A	153,850	-	3,900	149,950	4,080
Series 2010A	205,000	-	-	205,000	-
Series 2010C	179,990	-	179,990	-	-
Series 2007B	25,000	-	1,990	23,010	2,065
Series 2005	54,140	-	-	54,140	3,050
Series 2003A	48,205	-	-	48,205	2,865
Series 2000A	77,125	-	-	77,125	-
	1,734,695	147,755	212,935	1,669,515	110,660
General Revenue Commercial Paper:					
Series B taxable	127,715	7,910	5,010	130,615	130,615
Series F tax-exempt	52,485	-	8,745	43,740	43,740
	180,200	7,910	13,755	174,355	174,355
Unamortized bond premiums	81,031	21,102	9,638	92,495	3,370
Student loan deposits	36,355	-	7,791	28,564	4,653
Lease obligations and other	1,231	625	404	1,452	397
Total long-term debt and other obligations	$ 2,033,512	$ 177,392	$ 244,523	$ 1,966,381	$ 293,435

	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

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

- Series 2018A: through 2034
- Series 2007B: 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.

During the year ended June 30, 2020, the University issued Series 2019C general revenue bonds in the amount of $147,755 with a net original issue premium of $21,102. Bond proceeds were used to refund $164,600 Series 2010C bonds and pay issuance costs. The undiscounted cash flow to service the new debt decreased by $53,548. The economic gain resulting from this transaction amounted to $39,608. The Series 2019C bonds bear interest at fixed rates from 4% to 5% and mature either serially through 2039 or are subject to mandatory redemption from 2040 through 2044.

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 5.9% from October 1, 2019 to September 30, 2020. The sequestration reduction rate was 6.2% from October 1, 2018 to September 30, 2019. 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 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 .23% to .24% and taxable balances bear interest at rates from .22% to .24%, 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, 2020, 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 Ending June 30,	Direct Placement Fixed-Rate Bonds Principal	Interest	Direct Placement Variable-Rate Bonds Principal	Interest	Hedging Derivatives, Net	Total
2021	-	-	77,870	544	-	78,414
2022	-	-	6,175	462	-	6,637
2023	-	-	6,405	427	-	6,832
2024	-	-	6,650	391	-	7,041
2025	-	-	6,905	354	-	7,259
2026-2030	-	-	38,645	1,164	-	39,809
2031-2035	-	-	26,095	158	-	26,253
2036-2040	-	-	-	-	-	-
2041-2045	-	-	-	-	-	-
2046-2050	-	-	-	-	-	-
2051-2055	-	-	-	-	-	-
Total	$ -	$ -	$ 168,745	$ 3,500	$ -	$ 172,245

Fiscal Year Ending June 30,	Other Fixed-Rate Bonds Principal	Interest	Other Variable-Rate Bonds Principal	Interest	Hedging Derivatives, Net	Total
2021	24,810	61,322	7,980	442	7,410	101,964
2022	23,125	60,251	10,880	414	6,985	101,655
2023	24,140	67,350	11,360	383	6,529	109,762
2024	19,665	58,149	16,375	346	5,904	100,439
2025	20,475	57,190	17,120	307	5,246	100,338
2026-2030	102,405	272,603	91,850	921	15,495	483,274
2031-2035	146,275	247,162	44,955	256	2,617	441,265
2036-2040	266,115	198,667	1,960	19	-	466,761
2041-2045	342,690	130,403	-	-	-	473,093
2046-2050	328,590	39,522	-	-	-	368,112
2051-2055	-	-	-	-	-	-
Total	$ 1,298,290	$ 1,192,619	$ 202,480	$ 3,088	$ 50,186	$ 2,746,663

Interest expense was $77,432 and $62,788 for 2020 and 2019, respectively.

Unamortized bond premiums totaled $92,495 ($3,370 current) and $81,031 ($3,012 current) at June 30, 2020 and 2019, 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.

As of June 30, 2020, the University held $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, 2020 and 2019, no amounts were drawn on these lines of credit. In October 2020, $37,500 of the revolving lines of credit expired and were not replaced by the University.

Lease obligations and other is comprised of lease obligations of $552 ($177 current) and obligations for installment purchases of $900 ($220 current).

On October 5, 2020, the University issued Series 2020A general revenue bonds in the amount of $91,360 with a net original issue premium of $20,027. Bond proceeds were used to refund $80,875 of Series 2018A bonds and $30,000 of Series 2015A bonds and related issuance costs. The 2018A bonds were variable rate, so a change in undiscounted cash flow to service the new debt and economic gain was not determined. For the portion that refunded part of Series 2015A, the undiscounted cash flow to service the new debt decreased by $13,450, and the economic gain was $10,947. The Series 2020A bonds bear interest at fixed rates from 3% to 5% and mature either serially through 2031 or are subject to mandatory redemption from 2041 through 2045.

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

Additionally, the University issued $10,000 of taxable Series B Commercial Paper on October 2, 2020, and used the proceeds to refund the remaining $10,000 of Series 2018A bonds on October 5, 2020.

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 2020 and 2019 were as follows:

	2020	2019
Balance, beginning of year	$ 99,656	$ 97,424
Additions	9,435	6,246
Reductions	(7,762)	(4,014)
Balance, end of year	101,329	99,656
Less: current portion	64,435	62,745
Noncurrent portion	$ 36,894	$ 36,911

14. Derivative instruments

At June 30, 2020 and 2019, the University was party to seven separate pay-fixed, receive-variable interest rate swaps 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, 2020 and 2019 were as follows:

	June 30, 2020		June 30, 2019	
	Notional Amount	Fair Value	Notional Amount	Fair Value
Derivative instruments - swap asset:				
Investment derivatives:				
Pay-variable interest rate swaps	$ 22,360	$ 372	$ 29,000	$ 460
Derivative instruments - swap liability:				
Cash flow hedging derivatives				
Pay-fixed interest rate swaps	$ 202,150	$ (49,995)	$ 205,190	$ (39,490)
Investment derivatives:				
Pay-variable interest rate swaps	316,465	2,400	333,645	3,346
Pay-fixed interest rate swaps	71,685	(31,168)	71,685	(21,637)
Total Derivative instruments - swap liability	$ 590,300	$ (78,763)	$ 610,520	$ (57,781)

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, 2020 and 2019, the fair value of hedging derivative instruments decreased $10,505 and $8,003, respectively, while the fair value of investment derivative instruments decreased $10,565 and $1,558, 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 seven 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, 2020 and 2019, along with the notional amounts and credit rating of the associated counterparty as of June 30, 2020.

Type	Cash Flow Hedge for Debt Series	2020 Notional Amount	Effective Date	Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating	2020 Fair Value	2019 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 / Baa3/BBB+	$ (17,270)	$ (14,388)
Pay-fixed interest rate swap	Taxable CP	1,555	10/17/2002	8/15/2022	5.280%	USD-LIBOR-BBA one month	Deutsche Bank AG / Baa3/BBB+	(122)	(156)
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 / A1/A	(12,612)	(9,515)
Pay-fixed interest rate swap	Taxable CP	6,905	11/3/2008	2/15/2033	5.330%	USD-LIBOR-BBA one month	Barclays Bank PLC / A1/A	(2,567)	(1,955)
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 / A1/A	(14,355)	(10,847)
Pay-fixed interest rate swap	2007B & Tax-exempt CP	19,810	5/17/2007	2/15/2028	4.139%	67% USD-LIBOR-BBA three month plus .58%	JP Morgan Chase Bank / Aa2/A+	(3,069)	(2,629)
		$ 202,150						$ (49,995)	$ (39,490)

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, 2020 and 2019, along with the notional amounts and credit rating of the associated counterparty as of June 30, 2020:

Type	Associated Debt Series	2020 Notional Amount	Effective Date	Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating	2020 Fair Value	2019 Fair Value
Pay-variable interest rate swap	2000A, 2003A, 2005, 2019C	$ 201,600	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 / Baa3/BBB+	$ (179)	$ 234
Pay-variable interest rate swap	Taxable CP	8,460	5/26/2006	2/15/2033	USD-LIBOR-BBA one month	USD-LIBOR-BBA ten year less 0.575%	Deutsche Bank AG / Baa3/BBB+	5	39
Pay-variable interest rate swap	2019C	14,910	5/17/2010	8/15/2032	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 0.44%	Deutsche Bank AG / Baa3/BBB+	248	307
Pay-variable interest rate swap	2019C	22,360	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-	372	460
Pay-variable interest rate swap	2007A, 2007B, 2019C	91,495	5/17/2007	2/15/2037	SIFMA Municipal Swap Index	67% USD-ISDA Swap Rate ten year plus 0.0063%	JP Morgan Chase Bank / Aa2/A+	2,326	2,766
Pay-fixed interest rate swap	2007B, Taxable and Tax-exempt CP	71,685	5/17/2007	2/15/2037	4.226%	67% USD-LIBOR-BBA three month plus 0.63%	JP Morgan Chase Bank / Aa2/A+	(31,168)	(21,637)
		$ 410,510						$ (28,396)	$ (17,831)

Subsequent to the original effective dates, the University amended the following pay-variable, receive-variable interest rate swap per the terms listed in the table below. After the amendment periods, the interest rate swap reverts back to the original terms as outlined in the table above.

2020 Notional Amount	Amendment Effective Date	Amendment Termination Date	Rate Paid	Rate Received	Counterparty/ Counterparty Credit Rating
$ 91,495	8/1/2011	7/31/2014	SIFMA Municipal Swap Index	67% USD-LIBOR-BBA one month plus 1.8653%	JP Morgan Chase Bank / Aa2/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, 2020 and 2019 was $2,951 and $3,806, 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 $372 and $460 at June 30, 2020 and 2019, respectively.

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

	Deutsche Bank AG		JP Morgan Chase Bank N.A.		Bank of New York Mellon		Barclays Bank PLC	
Credit Rating	Threshold	Minimum Transfer	Threshold	Minimum Transfer	Threshold	Minimum Transfer	Threshold	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, 2020, 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, 2020 was ($78,391). The related collateral postings totaled $35,460 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, 2020, 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 $191,175 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, 2020, the University has entered into various limited partnerships with investment managers of hedge, real assets, real estate, venture capital, private equity, and restructuring funds. As of June 30, 2020, $527,107 of the initial $1,832,183 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. Certain prior year amounts in the footnote have been reclassified for consistency with the current year presentation.

The University's recurring estimated fair value of investments at June 30, 2020 and 2019, grouped by the valuation hierarchy outlined above were as follows:

	Fair value measurement at June 30, 2020 using:			
	Balance at June 30, 2020	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	$ 480,492	$ 480,492	$ -	$ -
International equities	44,436	44,436	-	-
Debt securities:		-	-	-
U.S Treasury bonds	193,721	-	193,721	-
U.S Government agencies	14,341	-	14,341	-
Corporate bonds	33,905	-	31,594	2,311
International bonds	13,107	-	13,107	-
Municipal bonds	1,280	-	1,280	-
Asset-backed securities	49,223	-	49,111	112
Other fixed income	5,303	5,303	-	-
Real assets/Real estate	20,725	-	-	20,725
Money market and mutual funds	184,018	184,018	-	-
Funds held at MSU Foundation	17,641	-	-	17,641
Other investments	19,708	-	-	19,708
Total investments by fair value level	$ 1,077,900	$ 714,249	$ 303,154	$ 60,497
Investments measured at the net asset value (NAV):				
Hedge funds	616,475			
International equities	298,296			
Private investments	1,010,242			
Real assets/Real estate	134,505			
U.S. equities	223,949			
Total investments measured at NAV	2,283,467			
Total investments measured at fair value	$ 3,361,367			

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

	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/Real estate	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	$ 557,249	$ 561,099	$ 69,213
Investments measured at the net asset value (NAV):				
Hedge funds	590,493			
International equities	471,073			
Private investments	865,164			
Real assets/Real estate	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			

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, 2020, the University did not hold any U.S. Treasury bond investments with original maturities of less than one year. 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. In addition, certain funds held by interest rate swap counterparties totaling $35,460 and $17,060 at June 30, 2020 and 2019, respectively, reflect cash balances on deposit in accordance with counterparty collateral posting provisions.

Investments classified in Level 1 at June 30, 2020 and 2019 are valued using prices quoted in active markets for those securities.

The fair value of various equity and debt securities held at June 30, 2020 and 2019 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, 2020 and 2019 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, 2020 and 2019 were as follows:

	Fair value measurement at June 30, 2020 using:			
	Balance at June 30, 2020	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	$ 372	$ -	$ 372	$ -
Cash flow hedging derivatives - swap liability	(49,995)	-	(49,995)	-
Investment derivatives - swap liability	(28,768)	-	(28,768)	-
Total derivative instruments by fair value	$ (78,391)	$ -	$ (78,391)	$ -

	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)	$ -

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, 2020 and 2019, the fair value, unfunded commitments, and redemption rules of those investments were as follows:

			As of June 30, 2020		
	June 30, 2020	June 30, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Hedge funds	616,475	$ 590,493	$ 8,232	Various	31-180 days
International equities	298,296	471,073	-	Various	5-90 days
Private investments	1,010,242	865,164	449,106	Not applicable	Not applicable
Real assets/Real estate	134,505	159,827	69,769	Not applicable	Not applicable
Other fixed income	-	79,988	-	Daily	10 days
U.S. equities	223,949	183,902	-	Daily	1 day
Total	$ 2,283,467	$ 2,350,447	$ 527,107		

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, $155,230 and $191,763 of the real asset/real estate class at June 30, 2020 and 2019, respectively, and $8,434 and $5,056 of the hedge fund class at June 30, 2020 and 2019, 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, 10.2% and 3.3% of the value of the investments in the hedge funds and international equities classes, respectively, 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 6 to 34 months at June 30, 2020. 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, 2021. 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, 2021. 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. 93, *Replacement of Interbank Offered Rates,* effective with the fiscal year ending June 30, 2021. This GASB Statement amends accounting guidance that will be impacted by global reference rate reform and the related end of the London Interbank Offered Rate (LIBOR). 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, 2022. 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.

The University will be required to implement the provisions of GASB Statement No. 94, *Public-Private and Public-Public Partnerships and Availability Payment Arrangements,* effective for the fiscal year ending June 30, 2023. This GASB Statement intends to improve financial reporting by addressing issues related to public-private and public-public partnership arrangements. 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. 96, *Subscription-Based Information Technology Arrangements,* effective for the fiscal year ending June 30, 2023. This GASB Statement provides guidance on accounting and financial reporting for subscription-based information technology arrangements. The University is in the process of determining the full impact of this standard on its financial statements.

REQUIRED SUPPLEMENTARY INFORMATION (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, 2020, 2019, and 2018 is summarized as follows:

	2020	2019	2018
Service cost	$ 41,383	$ 48,202	$ 41,211
Interest cost	66,476	70,323	69,928
Changes in assumptions	402,866	(447,295)	115,470
Differences between expected and actual plan experience	27,297	-	-
Benefit payments	(44,017)	(39,943)	(38,599)
Net changes	$ 494,005	$ (368,713)	$ 188,010
Total liability, beginning of year	$ 1,647,335	$ 2,016,048	$ 1,828,038
Total liability, ending of year	$ 2,141,340	$ 1,647,335	$ 2,016,048
Covered payroll	$ 1,006,188	$ 993,122	$ 959,538
Total liability as a percentage of covered payroll	212.8%	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 2.73%, 4.09%, 3.44%, and 3.78% at the measurement dates of December 31, 2019, 2018, 2017, and 2016, respectively.

In 2020, changes in assumption include the repeal of the Affordable Care Act high cost plan excise tax and a reduction in the current health care cost trend rate from 7.50% to 6.88%.

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") as of and for the year ended June 30, 2020 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 29, 2020. 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. The financial statements of the Foundation were not audited in accordance with *Government Auditing Standards,* and, accordingly, this report does not include reporting on internal control over financial reporting or compliance and other matters associated with the Foundation or that are reported on separately by those auditors who audited the financial statements of the Foundation.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered the University's internal control over financial reporting (internal control) as a basis for designing 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 financial statements. 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 29, 2020