Miami University

Financial Report
June 30, 2019

OHIO AUDITOR OF STATE
KEITH FABER

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Board of Trustees
Miami University
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We have reviewed the *Independent Auditor's Report* of Miami University, Butler County, prepared by RSM US LLP, for the audit period July 1, 2018 through June 30, 2019. Based upon this review, we have accepted these reports in lieu of the audit required by Section 117.11, Revised Code. The Auditor of State did not audit the accompanying financial statements and, accordingly, we are unable to express, and do not express an opinion on them.

Our review was made in reference to the applicable sections of legislative criteria, as reflected by the Ohio Constitution, and the Revised Code, policies, procedures and guidelines of the Auditor of State, regulations and grant requirements. Miami University is responsible for compliance with these laws and regulations.

Keith Faber
Auditor of State
Columbus, Ohio

December 6, 2019

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Independent Auditor's Report

President and Board of Trustees of Miami University

Report on the Financial Statements
We have audited the accompanying financial statements of the business-type activities and the discretely presented component unit of Miami University (the University), a component unit of the State of Ohio, as of and for the years ended June 30, 2019 and 2018, and the related notes to the financial statements, which collectively comprise the University's basic financial statements as listed in the table of contents.

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

Auditor's Responsibility
Our responsibility is to express opinions on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards,* issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the 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.

Opinion
In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the business-type activities and the discretely presented component unit of Miami University, as of June 30, 2019 and 2018, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that management's discussion and analysis on pages 3-10 as well as required supplementary data for certain retirement plan data and other postemployment benefits (OPEB) data on pages 56-59 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the University's basic financial statements. The accompanying Schedule of Expenditures of Federal Awards, as required by Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards is* presented for purposes of additional analysis and is not a required part of the basic financial statements.

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

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated October 15, 2019, on our consideration of the University's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the University's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the University's internal control over financial reporting and compliance.

RSM US LLP

Cleveland, Ohio
October 15, 2019

Introduction

The following discussion and analysis provides an overview of the financial position and activities of Miami University for the year ended June 30, 2019 and 2018. This discussion should be read in conjunction with the accompanying financial statements and footnotes.

The University's annual report consists of this Management's Discussion and Analysis, the Statements of Net Position, the Statements of Revenues, Expenses, and Changes in Net Position, the Statements of Cash Flows, and the Notes to the Financial Statements. The financial statements of the University have been prepared on the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recorded when the related liability has been incurred. The financial activity of the Miami University Foundation, a component unit of the University, is included through a discrete presentation as part of the University's financial statements.

The financial statements, footnotes, and this discussion have been prepared by and are the responsibility of University management.

Financial Highlights

The University reported favorable year-end results for the tenth consecutive year. Enrollment gains, a modest tuition increase and a continued focus on controlling operating costs have been important contributing factors to these successful results.

Overall the University's financial position improved at June 30, 2019. Total assets rose 3 percent from $2.32 to $2.39 billion. Liabilities were flat and totaled $1.19 billion. Significant financial events during fiscal year 2019 were:

- The University's fall 2018 cohort, at a confirmed size of 3,937 first-year resident undergraduate students, was the third enrolled cohort under the Miami Tuition Promise program. Each year of their enrollment, the incoming cohort of first-year first-time undergraduate resident students at the Oxford campus will have a guaranteed tuition amount due each year of their full-time enrollment for the four years of the guarantee. Total undergraduate enrollment declined 0.8 percent to 21,594 students for fall 2018 compared to 21,763 total undergraduate students in the fall 2017 class. Graduate enrollment for fall 2018 increased by 1.9 percent to a total of 2,568 compared to 2,519 graduate students in the fall 2017 class.

- The University's commitment to increase selectivity, diversity, and maintain quality with strong academic credentials in enrollment goals was evidenced by a confirmed ACT average in excess of 28.0 and a confirmed GPA average in excess of 3.76 for the fall 2018 class. The profile of the incoming class for fall 2018 consisted of 39.3 percent non-resident, and 17.4 percent students of color. The fall 2018 categories of transfer students and relocation students increased by 2 students. The Hamilton campus incoming class size decreased from 582 students from fall 2017 to 491 for fall 2018, and the Middletown campus decreased from 334 students to 296 first time incoming students for the fall 2018 class.

Financial Highlights (Continued)

- The investment portfolios produced positive but modest results during the fiscal year. Operational investments, which underwent a significant transition to its allocation and exposures during the year, earned 3.4 percent, a slight improvement from the previous year's gain of 3.0 percent. The pooled investment fund, which includes the University and Foundation endowments, posted an estimated gain of 3.4 percent, down from the 6.4% realized in the previous year. Global capital markets experienced dramatic swings in volatility during the fiscal year. Much of the swings in market activity focused on the direction of interest rate policy by the U.S. Federal Reserve. After nine rate increases since 2015, policy makers communicated an intention to pause, while bond markets subsequently priced in expected rate cuts. The current economic cycle in the United States is in its tenth year of expansion, and has set a new record for duration. Plenty of threats persist, including softening corporate earnings, an inverted yield curve, and continued uncertainty over tariffs and trade wars.

- For fiscal year 2019, the University increased salaries by 3.0 percent. Salary and benefit expense on all three campuses increased by $6.4 million to $272.5 million, which was $14.3 million below the adopted budget. Although a hiring freeze is not in affect, requests to add new positions or fill previously vacant positions are carefully scrutinized.

Statements of Net Position

The Statements of Net Position presents the assets, liabilities, deferred outflows/inflows of resources, and net position of the University as of the end of the fiscal year. The difference between total assets and total liabilities, or net position, is one indicator of the overall strength of the institution. Also, the increase or decrease in total net position indicates whether the financial position of the institution is improving or declining. Except for capital assets, all other assets and liabilities are measured at a point in time using current values. Capital assets are recorded at historical cost less an allowance for depreciation.

The net position is classified into three major categories. The first category, net investment in capital assets, reports the institution's net equity in property, plant, and equipment. The second major category, restricted net position, reports assets that are owned by the institution, but the use or purpose of the funds is restricted by an external source or entity. This category is subdivided into two types: nonexpendable and expendable. Nonexpendable restricted assets are primarily endowment funds that may be invested for income and capital gains, but the endowed principal may not be spent. Expendable restricted assets may be spent by the institution, but only for the purpose specified by the donor, grantor, or other external entity. The third category, unrestricted net position, is separated into two types: allocated and unallocated. Allocated unrestricted assets are available to the institution, but are set aside for a specific purpose by University policy, management, or the governing board. Unallocated unrestricted assets are available to be used for any lawful purpose of the institution.

(Dollars in Thousands)

Statements of Net Position (Continued)

	2019	2018	2017
Assets:			
Current assets	$ 742,064	$ 742,497	$ 756,058
Capital assets, net	1,406,278	1,355,726	1,266,306
Long-term investments	227,443	214,570	211,096
Other assets	16,064	5,409	6,877
Total assets	2,391,849	2,318,202	2,240,337
Deferred outflows of resources	104,215	92,676	102,572
Total assets and deferred outflows of resources	$ 2,496,064	$ 2,410,878	$ 2,342,909
Liabilities:			
Current liabilities	$ 121,668	$ 118,973	$ 116,596
Noncurrent liabilities	1,066,770	1,072,362	1,122,705
Total liabilities	1,188,438	1,191,335	1,239,301
Deferred inflows of resources	49,326	43,215	3,414
Net Position:			
Net investment in capital assets	748,383	710,249	682,581
Restricted – nonexpendable	98,579	95,227	91,156
Restricted – expendable	62,283	60,503	41,966
Unrestricted – allocated	338,042	295,022	264,322
Unrestricted – unallocated	11,013	15,327	20,169
Total net position	1,258,300	1,176,328	1,100,194
Total liabilities, deferred inflows of resources and net position	$ 2,496,064	$ 2,410,878	$ 2,342,909

Total assets of the institution increased 3.2 percent or $73.6 million in fiscal year 2019. This increase was the primary result of an increase in capital assets of $50.6 million. Details of the increase in capital assets are provided in the Capital Assets and Debt Administration section of this report.

Total liabilities decreased $2.9 million in fiscal year 2019. This decrease was due to Debt principal payments of $31.7 million, nearly offset by increases in Net Pension and OPEB liabilities and several others totaling $28.8 million.

Statements of Revenues, Expenses and Changes in Net Position

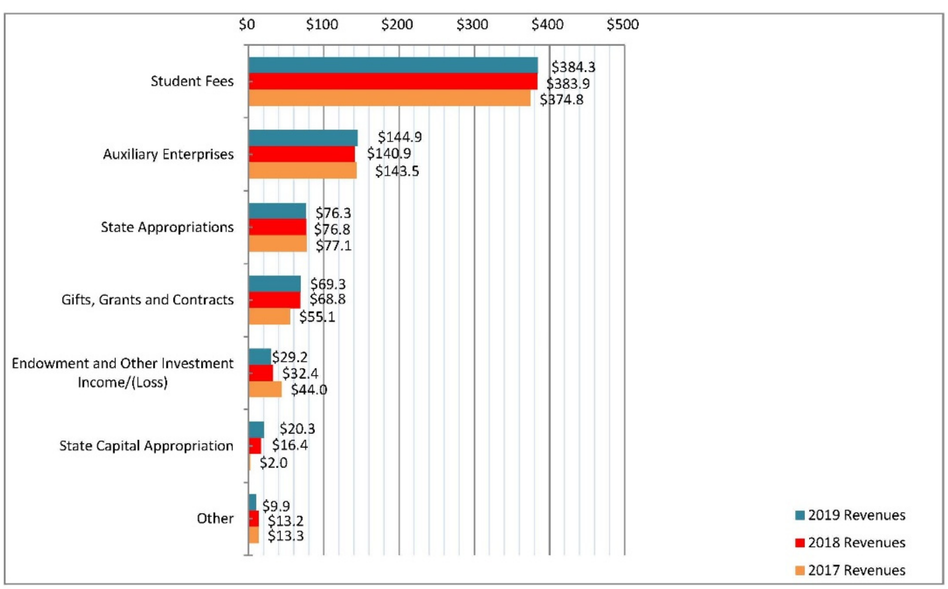
The Statements of Revenues, Expenses, and Changes in Net Position presents the University's results of operations for the fiscal year. The revenues and expenses are generally reported as either operating or non-operating. Operating revenues are generated by providing goods and services to customers and constituencies of the institution. Operating expenses are incurred when goods and services are provided by vendors and employees for the overall operations of the University. Non-operating revenues include the student instructional subsidy from the State of Ohio, while other revenues include the State's capital appropriation. Investment losses and returns are also included in non-operating revenue. Interest on debt is the primary component of non-operating expense.

In fiscal year 2019, total revenues of the institution from all sources were approximately $734.2 million, which represents a $1.8 million or 0.3 percent increase from the prior year. Approximately 75.9 percent of revenues were classified as operating, and 24.1 percent were classified as non-operating or other revenues.

	2019	2018	2017
Operating revenues	$ 557,561	$ 551,696	$ 544,553
Non-operating revenues	146,784	156,723	158,059
Other revenues	29,893	23,972	7,087
Total revenues	734,238	732,391	709,699
Operating expenses	(626,094)	(521,118)	(599,516)
Non-operating expenses	(26,172)	(26,725)	(26,455)
Total expenses	(652,266)	(547,843)	(625,971)
Change in net position	$ 81,972	$ 184,548	$ 83,728

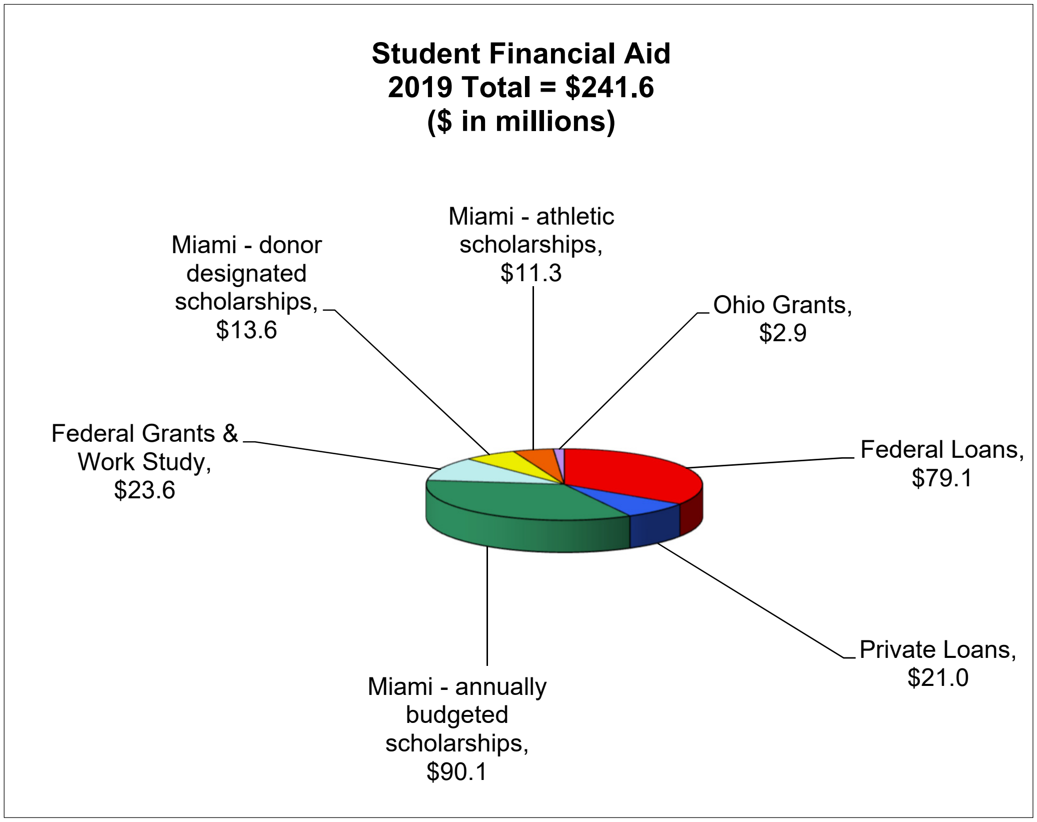
The University revenue base is shown in the accompanying chart. Student tuition and fees make up the largest percentage of revenues at slightly more than 52.3 percent, while auxiliary enterprises such as residence and dining halls, several student recreational facilities, and the bookstore account for the second highest amount at 19.7 percent. State appropriations are 10.4 percent of the total. Gifts, grants, and contracts represent 9.4 percent, and net endowment and investment income contributed 4.0 percent to the total. State capital appropriations are 2.8 percent.

Total Revenues ($ in Millions)



Statements of Revenues, Expenses and Changes in Net Position (Continued)

The University continues to expand the merit scholarship packages for in-state and out-of-state students in order to recognize student achievement and to continue making a high-quality education more affordable for parents and students. In fiscal year 2019, Miami-funded financial aid increased by $9.8 million or 4.2 percent. In total, financial aid awards were $241.6 million.



Capital Assets and Debt Administration

During fiscal year 2019, the University completed and capitalized several projects. These projects were funded by a combination of bond proceeds, state capital appropriations, gifts, and local funding. The bond proceeds were generated from the 2014 and 2017 Series General Receipts Revenue Bonds totaling $54.7 million combined. Major projects completed in 2019 include renovation projects to Art Education, Campus Avenue, Ecology Research Barn, Glos Center, Harrison Hall, Hoyt Hall, Upham Hall, Harris Hall, Shriver Center and Mosler Hall, located on the Hamilton Campus. The addition of two new resident halls included Withrow Hall and Presidents Hall. Other infrastructure improvements included US 27 South Corridor Enhancements. See Note 4 for additional information concerning capital assets and accumulated depreciation.

The University's bond rating remained the same with a rating of Aa3 from Moody's Investors Services and a rating of AA from Fitch Ratings. For more detailed information on current outstanding debt, see Note 5 and 6.

No new debt was issued in fiscal year 2019.

Economic Factors That Will Affect the Future

The higher education landscape continues to be influenced by disruptive forces resulting from technological change, the national conversation regarding affordability and efficiency, and economic and demographic issues. In Ohio, the issues mirror those of much of the nation.

The focus of the Ohio General Assembly continues to be on improving affordability, graduation rates, and job placement and starting salaries of graduates at Ohio's public colleges and universities. Ohio's demographic trends are a barrier to both Miami's goal of growing its enrollment and Ohio's desire to increase the number of Ohio residents with a college degree. The number of high school graduates in Ohio continues to decline and will continue to decline in the next decade. Similar declines in high school graduation numbers in the surrounding states and the northeastern United States will also negatively impact Miami's Oxford Campus as these regions have historically contributed students to Miami's incoming freshmen classes.

Ohio's demographic trends are also expected to negatively affect future state support for higher education as the proportion of the state's population in the workforce declines and the aged population increases the financial burden on state programs like Medicaid. Miami's state funding for 2020 in nominal dollars is about 8 percent below what the University received in 2001.

Economic Factors That Will Affect the Future (Continued)

The Oxford Campus' fall 2019 class continued the recent pattern of larger classes and more academically prepared students. As of the first day of classes, there were 4,358 new freshmen with an average ACT score of 28.0 which is 10 percent larger than the fall 2018 class on the first day. The nonresident composition of the new class rose from 39 percent to 41 percent largely as a result of a 27 percent (343 students) increase in Domestic Non-residents, offset by 40 percent decline in international enrollment. Overall the enrollment on the Oxford Campus declined slightly, from 18,364 to 18,251 students. The decline in international enrollments generally occurred across all institutions of higher education as a result of policy changes in Washington and increased global competition for students. Future international enrollment trends, especially from China are difficult to predict given the current national conversation but are unlikely to return to recent levels anytime soon.

Enrollment at Miami's regional campuses for fall 2019 increased slightly by 1.2 percent to 4,342 as enrollment on these campuses is stabilized after declining during this decade. Lackluster enrollment results over the last five years for these campuses reflects the national enrollment trend for open enrollment campuses as employment in the region and the nation has improved. New academic program offerings, a tuition guarantee program, and new enrollment strategies are continuing to be implemented for these campuses in response to the downward enrollment trend.

Strategic Plan

On June 28, 2019, Miami's Board of Trustees received the Strategic Plan from Miami's Strategic Planning Steering Committee. The plan is designed to provide a bold blueprint to move Miami forward and sustain the University's long history of excellence. The plan includes 30 strategic recommendations in four categories: innovate, invest, invigorate, and implement. The executive summary of the plan is shown below.

Honoring Miami's Past and Present

The world for an entering Miami University first-year student is different from any previous generation. Today's first-year student walks onto campus with the same hopes and dreams as students have done throughout our history. Excitement about learning, career expectations, contributions to community and the possibilities of tomorrow abound. Miami University's challenge is to support the aspirations of students and to prepare them for lifelong learning, even as the world around them continues to change. This strategic plan will position Miami to ensure that our students of today and tomorrow will continue to have the chance to pursue their dreams, opportunities Miami has helped students fulfill for more than two centuries.

Planning Miami's Future

In October 2018, President Greg Crawford appointed a 14-person steering committee to lead Miami's strategic planning efforts. The president identified six areas of focus: academic excellence; research and scholarly success; transformative student experience; diversity, equity and inclusion; financial sustainability; and Miami as a national university. The committee's work was based on the principle that success will depend on broad input from the entire Miami community.

The committee's charge from President Crawford: “We are asking the committee to develop a five-year strategic plan that builds on the many strengths of Miami University, but recognizes the need for change and innovation. Our charge to the committee is to take a hard look at our current approaches and to recommend transformational change. We believe that incremental changes to our current strategy and tactics—as valuable as they have been—will not prepare Miami for the new world of higher education.... ”

Strategic Recommendations

As we present our recommendations, it is important to recognize the context of our work. Higher education is changing so quickly that Miami already has launched several strategic initiatives to address some of the issues raised in this strategic plan. A new development campaign, a feasibility assessment for new buildings, regional campus reform including a major shift to offering both two-year and four-year degrees in the traditional classroom setting and online and even changes to our budget model all are in process. The world is moving too fast to explore one strategy at a time, so coordination and communication have never been more important across the Miami community.

We know that Miami University is living in a new era of financial accountability. As you will read throughout this report, Miami cannot afford every program or service we might wish to provide. Every decision we make must be fully informed by the financial implications. It is imperative that we manage our resources wisely, develop diversified revenue streams to reduce dependence on tuition and align every resource with the University’s broader strategic initiatives. In today’s world of higher education, this is the job of every Miami division, department and administrative unit.

We observe a common theme across the various recommendations in this report. Our current decision-making processes are too often decentralized and disconnected, and it will be important moving forward to rethink our strategic planning as a process that can make these connections in real time. As we seek to create a transformational experience for students, we must strengthen the connections between academic and co-curricular decision-making. A standing Strategic Planning Committee can help to make these connections while also providing strategic direction for the University.

In this context, we offer the following recommendations categorized into four groups that include cross-cutting strategies. We will innovate to position Miami to thrive in a rapidly changing environment. We will invest in proactive solutions. We will invigorate our process and culture to clear pathways for creative solutions. And we will act decisively to implement the reforms envisioned in this plan. We recognize that Miami cannot act upon all of the recommendations at once, so this plan is a living document that will require constant adaptation as higher education continues to evolve.

Miami University

Statements of Net Position
June 30, 2019 and 2018
(Dollars in Thousands)

	Miami University		University Foundation	
Assets	2019	2018	2019	2018
Current assets:				
Cash and cash equivalents	$ 120,763	$ 85,064	$ 19,663	$ 25,392
Investments	565,197	609,414	-	-
Accounts, pledges and notes receivable, net	46,184	39,963	7,464	10,099
Inventories	2,871	2,104	-	-
Prepaid expenses	7,049	5,952	-	-
Total current assets	742,064	742,497	27,127	35,491
Noncurrent assets:				
Restricted cash and cash equivalents	-	-	28,606	38,891
Investments	227,443	214,570	510,217	479,129
Pledges and notes receivable, net	2,830	4,477	37,991	33,598
Net pension asset	755	932	-	-
Net OPEB asset	12,479	-	-	-
Nondepreciable capital assets	190,063	212,691	-	-
Depreciable capital assets, net	1,216,215	1,143,035	-	-
Total noncurrent assets	1,649,785	1,575,705	576,814	551,618
Total assets	2,391,849	2,318,202	603,941	587,109
Deferred outflows of resources:				
Pensions	95,698	85,137	-	-
OPEB	8,517	7,539	-	-
Total deferred outflows of resources	104,215	92,676	-	-
Total assets and deferred outflows of resources	$ 2,496,064	$ 2,410,878	$ 603,941	$ 587,109
Liabilities				
Current liabilities:				
Accounts payable	$ 45,588	$ 43,134	$ 16,360	$ 14,825
Accrued salaries and wages	17,458	16,834	-	-
Accrued compensated absences	1,148	1,379	-	-
Unearned revenue	12,186	12,719	-	-
Deposits	12,567	12,529	-	-
Current portion of long-term debt	31,965	31,577	-	-
Other current liabilities	756	801	559	575
Total current liabilities	121,668	118,973	16,919	15,400
Noncurrent liabilities:				
Accrued compensated absences	16,550	16,844	-	-
Bonds payable, net	625,403	659,572	-	-
Capital leases payable	1,760	2,030	-	-
Federal Perkins loan program	3,541	3,287	-	-
Net pension liability	338,370	287,503	-	-
Net OPEB liability	81,146	103,126	-	-
Other noncurrent liabilities	-	-	232,040	219,539
Total noncurrent liabilities	1,066,770	1,072,362	232,040	219,539
Total liabilities	1,188,438	1,191,335	248,959	234,939
Deferred inflows of resources:				
Deferred gains on refunding	973	1,129	-	-
Beneficial interest in perpetual trust	1,946	-	-	-
Pensions	20,229	32,777	-	-
OPEB	26,178	9,309	-	-
Total deferred inflows of resources	49,326	43,215	-	-
Net position:				
Net investment in capital assets	748,383	710,249	-	-
Restricted:				
Nonexpendable - permanent endowments	98,579	95,227	232,186	222,824
Expendable - gift and grant programs	62,283	60,503	119,806	128,722
Unrestricted	349,055	310,349	2,990	624
Total net position	1,258,300	1,176,328	354,982	352,170
Total liabilities, deferred inflows and net position	$ 2,496,064	$ 2,410,878	$ 603,941	$ 587,109

See notes to financial statements.

Miami University

Statements of Revenues, Expenses, and Changes in Net Position
Years Ended June 30, 2019 and 2018
(Dollars in Thousands)

	Miami University		University Foundation	
	2019	2018	2019	2018
Operating revenues:				
Tuition, fees, and other student charges	$ 488,244	$ 481,191	$ -	$ -
Less allowance for student scholarships	(103,955)	(97,323)	-	-
Net tuition, fees, and other student charges	384,289	383,868	-	-
Sales and services of auxiliary enterprises	150,927	147,079	-	-
Less allowance for student scholarships	(6,004)	(6,158)	-	-
Net sales and services of auxiliary enterprises	144,923	140,921	-	-
Federal grants	10,600	12,321	-	-
Gifts	-	-	5,932	2,531
Sales and services of educational activities	2,117	2,801	-	-
Private grants	3,211	2,912	-	-
State grants	1,560	1,314	-	-
Local grants	116	100	-	-
Other	10,745	7,459	-	-
Total operating revenues	557,561	551,696	5,932	2,531
Operating expenses:				
Education and general:				
Instruction and departmental research	198,420	193,026	-	-
Separately budgeted research	13,391	13,038	-	-
Public service	2,758	2,721	-	-
Academic support	63,369	61,220	-	-
Student services	29,328	28,603	-	-
Institutional support	64,670	60,056	-	-
Operation and maintenance of plant	31,264	32,666	-	-
Scholarships and fellowships	28,734	20,394	-	-
Auxiliary enterprises	107,147	113,971	-	-
Depreciation	63,613	59,810	-	-
Pension and other postemployment benefit expense (revenue)	9,368	(74,847)	-	-
Other	14,032	10,460	-	-
Total operating expenses	626,094	521,118	-	-
Net operating (loss) income	(68,533)	30,578	5,932	2,531
Non-operating revenues (expenses):				
State appropriations	76,277	76,832	-	-
Gifts, including those from the University Foundation	26,035	27,266	-	-
Federal grants	18,192	18,276	-	-
Net investment income, net of investment expense of				
$2,342,028 for the University and $3,125,104 for the Foundation in FY 19	27,604	29,764	8,392	16,171
$2,602,537 for the University and $3,293,612 for the Foundation in FY 18				
State grants	1,607	1,671	-	-
Interest on debt	(26,172)	(26,725)	-	-
Payments to Miami University	-	-	(23,093)	(18,181)
Other non-operating (expenses) revenues	(2,931)	2,914	(102)	(80)
Net non-operating revenues (expenses)	120,612	129,998	(14,803)	(2,090)
Income (loss) before other revenues, expenses, gains or losses	52,079	160,576	(8,871)	441
Other revenues, expenses, gains or losses:				
State capital appropriation	20,308	16,433	-	-
Capital grants and gifts	7,958	4,895	-	-
Additions to permanent endowments	1,627	2,644	11,683	12,346
Total other revenues, expenses, gains or losses	29,893	23,972	11,683	12,346
Change in net position	81,972	184,548	2,812	12,787
Total net position at beginning of year	1,176,328	991,780	352,170	339,383
Total net position at end of year	$ 1,258,300	$ 1,176,328	$ 354,982	$ 352,170

See notes to financial statements.

Miami University

Statements of Cash Flows
Years Ended June 30, 2019 and 2018
(Dollars in Thousands)

	2019	2018
Cash flows from operating activities:		
Tuition, fees, and other student charges	$ 487,961	$ 482,450
Sales and services of auxiliary enterprises	150,504	145,750
Contracts	16,417	18,232
Other operating receipts	13,039	10,343
Payments for employee compensation and benefits	(376,913)	(365,631)
Payments to vendors for services and materials	(139,462)	(145,734)
Student scholarships	(138,693)	(123,882)
Loans issued to students and employees	(176)	(3,951)
Collection of loans from students and employees	1,377	1,683
Net cash flows provided by operating activities	14,054	19,260
Cash flows from noncapital financing activities:		
State share of instruction funds	78,746	78,995
Grants for noncapital purposes	19,799	19,947
Gifts	27,975	26,657
Net cash flows provided by noncapital financing activities	126,520	125,599
Cash flows from capital and related financing activities:		
State capital appropriation	20,308	16,433
Grants for capital purposes	7,899	4,662
Other capital and related (expenditures) receipts	(5,550)	617
Payments to construct, renovate, or purchase capital assets	(118,823)	(147,632)
Principal paid on outstanding debt	(31,727)	(29,964)
Interest paid on outstanding debt	(30,576)	(31,958)
Net cash flows used in capital and related financing activities	(158,469)	(187,842)
Cash flows from investing activities:		
Proceeds from sale of investments	823,285	259,774
Purchases of investments	(773,756)	(221,161)
Endowment (fees) income	(219)	1,095
Other investment income	4,284	11,016
Net cash flows provided by investing activities	53,594	50,724
Net increase in cash and cash equivalents	35,699	7,741
Cash and cash equivalents:		
Beginning	85,064	77,323
Ending	$ 120,763	$ 85,064

(Continued)

Miami University

Statements of Cash Flows (Continued)
Years Ended June 30, 2019 and 2018
(Dollars in Thousands)

	2019	2018
Reconciliation of operating (loss) income to net cash flows provided by operating activities:		
Operating (loss) income	$ (68,533)	$ 30,578
Adjustments to reconcile net operating (loss) income to net cash flows provided by operating activities:		
Depreciation expense	63,613	59,810
Net gain on retirements of capital assets	6,909	-
Accounts receivable bad debt adjustments	98	87
Adjustments to reconcile change in net position to net cash provided by operating activities:		
Accounts receivable	1,757	2,060
Inventories	(767)	(232)
Prepaid expenses	(945)	(90)
Notes receivable	1,023	744
Net pension asset	177	(562)
Net OPEB asset	(12,479)	-
Deferred outflows of pension resources	(10,560)	17,435
Deferred outflows of OPEB resources	(978)	(7,539)
Accounts payable	1,719	2,990
Accrued salaries and wages	624	482
Accrued compensated absences	(525)	(650)
Unearned revenue and deposits	(495)	(203)
Federal Perkins loans	209	(1,469)
Net pension liability	50,867	(118,841)
Net OPEB liability	(21,980)	(5,287)
Deferred inflows of pension resources	(12,548)	30,638
Deferred inflows of OPEB resources	16,868	9,309
Net cash flows provided by operating activities	$ 14,054	$ 19,260
Supplemental disclosures of noncash information:		
Capital assets included in accounts payable	$ 24,437	$ 23,296
Capital assets acquired by gifts in kind	$ 59	$ 233

See notes to financial statements.

Note 1. Summary of Significant Accounting Policies

Miami University (the University) is a land grant institution chartered by the State of Ohio in 1809 and governed by a Board of Trustees (the board). The board consists of up to 17 members, including two student members and up to six non-voting national trustees. Voting members are appointed one each year for nine-year terms by the governor with the advice and consent of the state senate. The two student non-voting members are appointed for two-year staggered terms by the governor with the advice and consent of the senate, and the national trustees are appointed by the voting members and can serve for no more than two consecutive three-year terms.

In accordance with Governmental Accounting Standards Board (GASB) Codification Section 2100: *Defining the Financial Reporting Entity*, the University's financial statements are included as a discretely presented component unit in the State of Ohio's Comprehensive Annual Financial Report.

Furthermore, in accordance with GASB Codification Section 2600: *Reporting Entity and Component Unit Presentation and Disclosure*, the Miami University Foundation (the Foundation) is included as a discretely presented component unit in a separate column in the University's financial statements to emphasize that it is legally separate from the University. The Foundation, which is a separate not-for-profit foundation, meets this criteria set forth in the Codification Section 2600 due to the significance of its operational and financial relationship with the University. Note 10 provides additional information on the Foundation. Certain disclosures concerning the Foundation are not included because it has been audited separately and reports have been issued under separate cover. Copies of these reports may be obtained from Treasury Services, 107 Roudebush Hall, Miami University, Oxford, Ohio, 45056.

Basis for presentation: The financial statements of the University have been prepared on the accrual basis of accounting, whereby revenues are recognized when earned and expenses are recorded when the related liability has been incurred. For financial reporting purposes, the University is considered a special-purpose government engaged only in business-type activities as defined by GASB Statement Nos. 34 and 35.

Recent and pending accounting pronouncements: Effective July 1, 2018, the University adopted GASB Statement No. 83, *Certain Asset Retirement Obligations*. The objective of this Statement is to address accounting and financial reporting for certain asset retirement obligations. An asset retirement obligation is defined as a legally enforceable liability associated with the retirement of a tangible capital asset. A government that has legal obligations to perform future asset retirement activities related to tangible capital assets should recognize a liability based on the guidance in this Statement. There was no material impact on the University's financial statements due to the adoption of Statement No. 83.

Effective July 1, 2018, the University adopted, GASB Statement No. 88, *Certain Disclosures Related to Debt, including Direct Borrowings and Direct Placements*. The primary objective of this Statement is to improve the information that is disclosed in notes to government financial statements related to debt, including direct borrowings and direct placements. It also clarifies which liabilities governments should include when disclosing information related to debt. This Statement defines debt for purposes of disclosure in notes to financial statements as a liability that arises from a contractual obligation to pay cash (or other assets that may be used in lieu of cash) in one or more payments to settle an amount that is fixed at the date the contractual obligation is established. This Statement requires that additional essential information related to debt be disclosed in notes to financial statements, including unused lines of credit; assets pledged as collateral for the debt; and terms specified in debt agreements related to significant events of default with finance-related consequences, significant termination events with finance-related consequences, and significant subjective acceleration clauses. For notes to financial statements related to debt, this Statement also requires that existing and additional information be provided for direct borrowings and direct placements of debt separately from other debt. The required disclosure was included in Note 5.

Note 1. Summary of Significant Accounting Policies (Continued)

In January 2017, GASB issued Statement No. 84, *Fiduciary Activities*. The objective of this Statement is to improve guidance regarding the identification of fiduciary activities for accounting and financial reporting purposes and how those activities should be reported. The Statement establishes criteria for identifying fiduciary activities and the focus of the criteria generally is on (1) whether the government is controlling the assets of the fiduciary activity and (2) the beneficiaries with whom a fiduciary relationship exists. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. The University has not yet determined the impact this statement will have on the financial statements.

In June 2017, GASB issued Statement No. 87, *Leases*. The objective of this Statement is to better meet the information needs of financial statement users by improving accounting and financial reporting for leases by governments. This Statement increases the usefulness of governments' financial statements by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset, and a lessor is required to recognize a lease receivable and a deferred inflow of resources, thereby enhancing the relevance and consistency of information about governments' leasing activities. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The University has not yet determined the impact this statement will have on the financial statements.

In June 2018, GASB issued Statement No. 89, *Accounting for Interest Cost Incurred Before the End of a Construction Period*. The objectives of this Statement are (1) to enhance the relevance and comparability of information about capital assets and the cost of borrowing for a reporting period and (2) to simplify accounting for interest cost incurred before the end of a construction period. This Statement requires that interest cost incurred before the end of a construction period be recognized as an expense in the period in which the cost is incurred for financial statements prepared using the economic resources measurement focus. As a result, interest cost incurred before the end of a construction period will not be included in the historical cost of a capital asset reported in a business-type activity or enterprise fund. This Statement also reiterates that in financial statements prepared using the current financial resources measurement focus, interest cost incurred before the end of a construction period should be recognized as an expenditure on a basis consistent with governmental fund accounting principles. The requirements of this Statement are effective for reporting periods beginning after December 15, 2019. The University has not yet determined the impact this statement will have on the financial statements.

Note 1. Summary of Significant Accounting Policies (Continued)

In August 2018, GASB issued Statement No. 90, *Majority Equity Interests – An Amendment of GASB Statements No. 14 and No. 61*. The primary objectives of this Statement are to improve the consistency and comparability of reporting a government's majority equity interest in a legally separate organization and to improve the relevance of financial statement information for certain component units. It defines a majority equity interest and specifies that a majority equity interest in a legally separate organization should be reported as an investment if a government's holding of the equity interest meets the definition of an investment. A majority equity interest that meets the definition of an investment should be measured using the equity method, unless it is held by a special-purpose government engaged only in fiduciary activities, a fiduciary fund, or an endowment (including permanent and term endowments) or permanent fund. Those governments and funds should measure the majority equity interest at fair value. For all other holdings of a majority equity interest in a legally separate organization, a government should report the legally separate organization as a component unit, and the government or fund that holds the equity interest should report an asset related to the majority equity interest using the equity method. This Statement establishes that ownership of a majority equity interest in a legally separate organization results in the government being financially accountable for the legally separate organization and, therefore, the government should report that organization as a component unit. This Statement also requires that a component unit in which a government has a 100 percent equity interest account for its assets, deferred outflows of resources, liabilities, and deferred inflows of resources at acquisition value at the date the government acquired a 100 percent equity interest in the component unit. Transactions presented in flows statements of the component unit in that circumstance should include only transactions that occurred subsequent to the acquisition. The requirements of this Statement are effective for reporting periods beginning after December 15, 2018. The University has not yet determined the impact this statement will have on the financial statements.

In May 2019, GASB issued Statement No. 91, Conduit Debt Obligations. The primary objectives of this Statement are to provide a single method of reporting conduit debt obligations by issuers and eliminate diversity in practice associated with (1) commitments extended by issuers, (2) arrangements associated with conduit debt obligations, and (3) related note disclosures. This Statement achieves those objectives by clarifying the existing definition of a conduit debt obligation; establishing that a conduit debt obligation is not a liability of the issuer; establishing standards for accounting and financial reporting of additional commitments and voluntary commitments extended by issuers and arrangements associated with conduit debt obligations; and improving required note disclosures.

This Statement also addresses arrangements—often characterized as leases—that are associated with conduit debt obligations. In those arrangements, capital assets are constructed or acquired with the proceeds of a conduit debt obligation and used by third-party obligors in the course of their activities. Payments from third-party obligors are intended to cover and coincide with debt service payments. During those arrangements, issuers retain the titles to the capital assets. Those titles may or may not pass to the obligors at the end of the arrangements.

This Statement requires issuers to disclose general information about their conduit debt obligations, organized by type of commitment, including the aggregate outstanding principal amount of the issuers' conduit debt obligations and a description of each type of commitment. Issuers that recognize liabilities related to supporting the debt service of conduit debt obligations also should disclose information about the amount recognized and how the liabilities changed during the reporting period. The requirements of this Statement are effective for reporting periods beginning after December 15, 2020. The University has not yet determined the impact this statement will have on the financial statements.

Cash and cash equivalents: Cash consists primarily of cash in banks and money market accounts. Cash equivalents are short-term, highly liquid investments readily convertible to cash, with an original maturity of three months or less at the time of purchase.

Note 1. Summary of Significant Accounting Policies (Continued)

Investments: Investments that are market traded are recorded at fair value. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The value of holdings of commingled or non-publicly traded funds is based on the funds' net asset value as supplied by the investment manager. Investments in real estate are recorded at estimated fair value.

Investment income is recorded on the accrual basis and purchases and sales of investments are recorded on a trade-date basis. Investment transactions occurring on or before June 30 that settle after such date are recorded as receivables or payables.

Accounts, pledges and notes receivable allowance: The allowance for doubtful accounts is determined based on management's judgment of potential uncollectible amounts, based on historical experience, analysis of the aging of payment schedules and type of receivable.

Inventories: The University reports inventories at the lower of first-in, first out cost or market.

Capital assets: Land, buildings, and equipment are recorded at cost at the date of acquisition. In the case of gifts or other donated capital assets, they are recorded at acquisition value. Acquisition value is the price that would be paid to acquire an asset in an orderly market transaction at the acquisition date. Acquisition value is a market-based entry price. Intangible assets include patents, trademarks, land rights and computer software. Land, collections of works of art and historical treasures are capitalized but not depreciated. Any collection that is not capitalized is charged to operations at the time of purchase. Depreciation is computed using the straight-line method over the estimated useful lives of the respective assets. Estimated useful lives are 50 years for buildings; 25 years for infrastructure, library books and publications; and land improvements; 20 years for improvements to buildings; and 5 to 7 years for equipment, vehicles, and furniture. Intangible assets are depreciated based on the estimated life of each asset. The University's capitalization threshold is the lower of 5 percent of the original building cost or $100 for building renovations and $5 for other capitalized items. The capitalization threshold for intangible assets is $100 except for internally generated computer software which has a threshold of $500. Interest on construction projects is capitalized until substantial completion of the project.

Unearned revenue: Tuition and fees relating to summer sessions that are conducted in July and August are recorded in the accompanying Statements of Net Position as unearned revenue. Unearned revenue also includes the amounts received from grant and contract sponsors that have not yet been earned and amounts received from a tuition payment service for payments received for the next fiscal year. These will be recorded as revenue in the following fiscal year.

Pensions: For purposes of measuring the net pension liability or asset, deferred outflows of resources and deferred inflows of resources related to pensions, pension expense, and information about the fiduciary net position of the Ohio Public Employees Retirement System (OPERS) Traditional and Combined Plans as well as the State Teachers Retirement System of Ohio Retirement Plan (STRS Ohio) (collectively referred to as, the Pension Plans) any additions to/deductions from the Pension Plan's fiduciary net position have been determined on the same basis as they are reported by the Pension Plans. For this purpose, benefit payments (including refunds of employee contributions) are recognized when due and payable in accordance with the benefit terms. Investments are reported at fair value.

Note 1. Summary of Significant Accounting Policies (Continued)

Postemployment benefits other than pensions (OPEB): For purposes of measuring the OPEB liability or asset, deferred outflows of resources and deferred inflows of resources related to healthcare costs, and employer OPEB expense, information about the fiduciary net position of the OPERS OPEB Plan as well as the STRS Ohio OPEB Plan (collectively referred to as, the OPEB Plans) and additions to/deductions from the Plan's fiduciary net position have been determined on the same basis as they are reported by the OPEB Plans. For this purpose, deductions are recorded when the liability is incurred and revenues are recognized when earned. OPEB plan liabilities are recognized when due and payable in accordance with the health care terms. Investments are reported at fair value.

Operating and non-operating revenue: The University defines operating activities, for purposes of reporting on the Statements of Revenues, Expenses, and Changes in Net Position, as those activities that generally result from exchange transactions such as payments received for providing services and payments made for services or goods received. Substantially all of the University's expenses are from exchange transactions. Certain significant revenue streams relied upon for operations are recorded as non-operating revenues, as defined by GASB Codification 2200: *Comprehensive Annual Financial Report*, including state appropriations, gifts, and investment income.

Revenue recognition: The University recognizes tuition, fees and other student charges as goods and services are provided to customers and constituencies of the institution. State appropriations are recognized when received or made available. Restricted funds are recognized as revenue as expenditures are incurred for cost reimbursement grants and contracts when earned. Gifts are recognized when received.

Allowance for student scholarships: Allowances for student tuition and fee revenues, and certain other revenues from students, are reported in the Statements of Revenues, Expenses, and Changes in Net Position. Scholarship allowances are the difference between the stated charge for goods and services provided by the University, and the amount that is paid by students and/or third parties making payments on the students' behalf. Certain governmental grants, such as Pell grants, and other Federal, state or nongovernmental programs, are recorded as either operating or non-operating revenues in the University's financial statements. To the extent that revenues from such programs are used to satisfy tuition and fees and other student charges, the University has recorded a scholarship allowance.

Bond premiums, discounts and issuance costs: Bond premiums and discounts costs are deferred and amortized over the life of the bonds using the effective interest method. Bond issuance costs are recognized as an expense in the period incurred.

Deferred outflows/inflows of resources: Deferred outflows of resources are a consumption of net position by the University that is applicable to a future reporting period. Deferred outflows of resources of the University consist of certain changes in the net pension liability and net OPEB liability not included in pension expense and OPEB expense, respectively. Employer contributions to the pension plan and OPEB plan subsequent to the measurement date of the net pension liability and OPEB liability, respectively, are also required to be reported as a deferred outflow of resources of the University. Deferred inflows of resources are an acquisition of net positions by the University that is applicable to a future reporting period. Deferred inflows of resources consist of deferred gains on debt refundings, the University's share of interests in perpetual trusts, and certain changes in net pension liability not included in pension expense and net OPEB liability not included in OPEB expense.

Note 1. Summary of Significant Accounting Policies (Continued)

Compensated absences: Full-time unclassified staff earn vacation at rates of 18 to 22 days per year, based on the term of their employment contract, with a maximum accrual of 52 days. Classified employees earn vacation at rates up to 25 days per year, based on years of service and hours reported, with a maximum accrual equivalent to the amount earned in three years. Upon retirement, termination, or death, the employee is compensated at the final rate of pay for unused vacation up to a maximum of 40 days. Faculty accrue no vacation benefits.

Full-time faculty, unclassified staff, and classified staff earn 15 days of sick leave per year and individuals who work less than full-time earn sick leave on a pro-rata basis. There is no limit on the number of sick leave hours that can be accumulated. Upon retirement a staff member with 10 or more years of Ohio public service is paid for one-fourth the value of earned but unused sick leave not to exceed 30 days, based on the employee's rate of pay at the time of retirement. The termination payment method is used to compute the liability for sick leave. Employees transferring to or from another State of Ohio agency may transfer any unused accumulated sick leave entitlement to/from the new agency. Persons leaving employment for reasons other than retirement are not compensated for unused sick leave.

Net positions: Net positions are divided into three major categories. The first category, net investment in capital assets included property, plant and equipment, net of accumulated depreciation and net of capital related debt and capital related deferred inflows of resources. Capital related debt is offset by unspent bond proceeds, if any. The second major category is restricted net position. This category contains assets that are owned by the institution (offset by liabilities payable from those assets, if any), but the use or purpose of the funds is restricted by an external source or entity. The corpus of the nonexpendable restricted assets is available for investment purposes only. The expendable restricted assets may be expended by the institution, but must be spent only for the purpose as determined by a donor or external entity. The income generated from the nonexpendable restricted investments and the expendable restricted funds may be used for student loans, scholarships and fellowships, instruction, research, and other needs to support the operation of the University. The third category is unrestricted net position and is separated into two types: allocated and unallocated. Allocated unrestricted assets are available to the institution, but are allocated for a specific purpose within the institution by University policy, management, or the governing board. The allocated unrestricted net position was $338,042 and $295,022 as of June 30, 2019 and 2018, respectively, and is to be used for loans, scholarships, investments and capital projects. Unallocated unrestricted net positions are available to be used for any lawful purpose of the institution. Generally, it is the University’s policy to consider restricted resources to have been spent first when an expenditure is incurred for which both restricted and unrestricted resources are available.

Tax status: The University is exempt from federal income taxes under Section 115 of the Internal Revenue Code. As such, the University is subject to federal income taxes only on unrelated business income, if any, under the provisions of Section 511 in the Internal Revenue Code.

Estimates: Management has made, where necessary, estimates and judgments that affect certain amounts reported in the financial statements. The estimates and judgments are based on current available information, and actual results could differ from those estimates.

Reclassifications: Certain items in the 2018 financial statements have been reclassified to conform to the 2019 presentation. These reclassifications had no impact on total assets, liabilities, net position, or change in net position.

Subsequent events: The University has evaluated subsequent events occurring between the end of our most recent fiscal year and October 15, 2019, the date the financial statements were available to be issued.

Note 2. Cash and Investments

The University's cash and investment activities are governed by policies adopted by the Board in accordance with authority granted by the Ohio Revised Code. Such policies are implemented by the treasurer and overseen by the Board's finance and audit committee.

The University's investment strategy incorporates financial instruments that involve varying elements of risk including market risk, credit risk, interest rate risk, and custodial credit risk. The University's investment policies and procedures establish risk guidelines for each of the two primary investment pools, the non-endowment pool and endowment pool. Diversification is a fundamental risk management strategy for both pools.

Cash and cash equivalents: At year-end, the carrying amount of the University's cash and cash equivalents was approximately $120,800 and $85,100 in 2019 and 2018, respectively. Cash and cash equivalents consists primarily of cash in banks, money market accounts and the State Treasury Asset Reserve of Ohio (STAR Ohio) that include short-term, highly liquid investments readily convertible to cash, with an original maturity of three months or less. STAR Ohio is a statewide fund managed by the State Treasurer of Ohio with the carrying amount of the assets reported at amortized cost.

Approximately $22,449 and $22,000 in 2019 and 2018, respectively, of cash and cash equivalents was covered by federal depository insurance; $49,843 and $53,600 in 2019 and 2018, respectively, was covered by collateral held by third-party trustees pursuant to paragraph 135.181 of the Ohio Revised Code in collateral pools securing all public funds on deposit with specific depository institutions; and the remaining $48,508 and $9,500 was not collateralized or insured for the years ending June 30, 2019 and 2018, respectively, leaving it exposed to credit risk. Credit risk is the risk that, in the event of the failure of a depository financial institution, the University may not be able to recover its deposits or collateral securities. The University maintains active relationships with multiple cash equivalent accounts to reduce its exposure to custodial credit risk at any single institution.

Investments: Investments held by the University at June 30, 2019 and 2018 are presented below, categorized by investment type and credit quality rating. Credit quality ratings provide information about the investments' credit risk, which is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. During fiscal year 2019, management of the University's investments has been delegated by the Board to an external investment firm. The external investment firm has discretion to manage the University's investments within the framework of the investment policy statement. The University's formal investment policy does not specifically address interest rate risk, credit risk, custodial credit risk, or concentration risk, though these risks are monitored and managed by the external investment firm as part of their management and due diligence process. The external investment firm has implemented a combination of internally and externally managed investment vehicles, including separate accounts, limited partnerships, and commingled funds. The University's investment management policy establishes guidelines for average credit quality ratings in the portfolios. Investments in Tier II of the policy include U.S. Treasury and government agency securities generally with an average weighted maturity of between zero and two years for the baseline allocation. Investments in Tier III of the policy include diversified global equity and fixed income securities, along with absolute return strategies. Moody's Investors Services and Fitch Ratings have assigned AAA credit ratings to U.S. Treasury obligations. On August 6, 2011, Standard & Poor's lowered its credit rating on long-term U.S. Treasury related debt obligations from AAA to AA+. 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 investment or collateral securities that are in the possession of an outside party. The University has credit risk associated with counterparty nonperformance. However, credit risk associated with exchange-traded contracts are typically perceived to be less because exchanges typically provide clearing house arrangements in which the collective credit of the managers of the exchange is pledged to support the financial integrity of the exchange. Margins, which may be subject to loss in the event of a default, are generally required in exchange trading and further mitigate credit risk. All of the future contracts held by the University at June 30, 2019 were exchange traded contracts.

(Dollars in Thousands)

Note 2. Cash and Investments (Continued)

The credit ratings are based on Moody's investor services and are summarized as follow as of June 30:

	2019				
Investment Type	Fair Value	Not Rated	AAA	AA, A, and BBB	Below BBB
U.S. Treasury bonds	$ 171,564	$ -	$ 171,564	$ -	$ -
U.S. Agency bonds	1,152	-	1,152	-	-
U.S. Treasury strips	1,571	-	1,571	-	-
U.S. Treasury inflation protection securities	20,949	-	20,949	-	-
Government-backed bonds	1,010	-	1,010	-	-
Common and preferred stocks	752	752	-	-	-
Exchanged traded funds	15,808	15,808	-	-	-
Commingled funds	579,497	579,497	-	-	-
Real estate and other	337	337	-	-	-
Total investments	$ 792,640	$ 596,394	$ 196,246	$ -	$ -

	2018				
Investment Type	Fair Value	Not Rated	AAA	AA, A, and BBB	Below BBB
U.S. Treasury bonds	$ 77,024	$ -	$ 77,024	$ -	$ -
U.S. Agency bonds	44,362	-	44,362	-	-
U.S. Treasury strips	2,341	-	2,341	-	-
Government-backed bonds	77,783	-	77,783	-	-
Corporate bonds	24,372	-	1,450	22,922	-
Municipal bonds	1,876	-	-	1,876	-
Common and preferred stocks	575	575	-	-	-
Commingled funds	595,310	525,914	2,879	55,296	11,221
Real estate and other	341	341	-	-	-
Total investments	$ 823,984	$ 526,830	$ 205,839	$ 80,094	$ 11,221

The University's bond investments are exposed to interest rate risk, which is the risk that changes in interest rates will adversely affect the fair value of an investment. Interest rate risk is managed primarily by adjusting portfolio duration.

Bond investments by length of maturity as of June 30 are summarized as follows:

	2019				
Investment Type	Fair Value	Less than 1 Year	1 to 5 Years	6 to 10 Years	More than 10 Years
U.S. Treasury bonds	$ 171,564	$ 65,728	$ 85,380	$ 20,456	$ -
U.S. Agency bonds	1,152	901	251	-	-
U.S. Treasury strips	1,571	-	1,571	-	-
U.S. Treasury inflation protection securities	20,949	-	14,231	6,718	-
Government-backed bonds	1,010	304	337	-	369
Total bonds	$ 196,246	$ 66,933	$ 101,770	$ 27,174	$ 369

	2018				
Investment Type	Fair Value	Less than 1 Year	1 to 5 Years	6 to 10 Years	More than 10 Years
U.S. Treasury bonds	$ 77,024	$ 39,196	$ 25,164	$ 11,748	$ 916
U.S. Agency bonds	44,362	21,308	19,273	3,164	618
U.S. Treasury strips	2,341	-	1,463	-	879
Government-backed bonds	77,783	6,245	20,072	22,139	29,326
Corporate bonds	24,372	2,017	17,204	3,848	1,303
Municipal bonds	1,876	-	1,144	324	407
Commingled bond funds	69,396	7,654	21,216	38,558	1,968
Total bonds	$ 297,154	$ 76,420	$ 105,536	$ 79,781	$ 35,417

(Dollars in Thousands)

Note 2. Cash and Investments (Continued)

Fair value of financial instruments: Fair value is defined in the accounting standards as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Management utilizes valuation techniques that maximize the use of observable inputs (Levels 1 and 2) and minimize the use of unobservable inputs (Level 3) within the fair value hierarchy established by GASB. Assets and liabilities carried at fair value are required to be classified and disclosed in one of the following three categories:

Level 1: Quoted prices in active markets for identical assets as of the report date. The quoted market prices are from those securities traded on an active exchange such as the New York Stock Exchange, NASDAQ or an active over-the-counter market.

Level 2: Significant other observable inputs including prices quoted in active markets for similar assets.

Level 3: Inputs that are unobservable including the University's own assumptions in determining the fair value of investments or liabilities. If the inputs used to measure the financial instruments fall within different levels of the hierarchy, the categorization is based on the lowest level input that is significant to the fair value measurement of the instrument.

The following table presents the investments by fair value hierarchy as of June 30:

	2019			
	Level 1	Level 2	Level 3	Total
Investment assets:				
U.S. Treasury bonds	$ -	$ 171,564	$ -	$ 171,564
U.S. Agency bonds	-	1,152	-	1,152
U.S. Treasury strips	-	1,571	-	1,571
U.S. Treasury inflation protection securities	-	20,949	-	20,949
Government-back bonds	-	1,010	-	1,010
Common and preferred stocks	702	-	50	752
Exchanged traded funds	15,808	-	-	15,808
Real estate and other	-	-	337	337
Miami University Foundation investment pool	-	-	226,404	226,404
	$ 16,510	$ 196,246	$ 226,791	$ 439,547
Funds reported at fair value based on net asset value per share:				
Non-publicly traded funds [(a)]				
Cintrifuse Syndicate Fund II, LLC				$ 114
Strategic SPC Alpha Segregated Portfolio				81,735
Strategic U.S. Equity Trust				61,205
Strategic Global Equity Trust				22,489
Strategic Developed Markets ex-U.S. Equity Trust				74,015
Strategic Emerging Markets Equity Trust				42,433
Strategic Active Credit Trust				36,648
PRISA LP				2,000
Hedge funds [(b)]				32,454
Total investment assets				$ 792,640

(Dollars in Thousands)

Note 2. Cash and Investments (Continued)

	2018			
	Level 1	Level 2	Level 3	Total
Investment assets:				
U.S. Treasury bonds	$ -	$ 77,024	$ -	$ 77,024
U.S. Agency bonds	-	44,362	-	44,362
U.S. Treasury strips	-	2,341	-	2,341
Government-back bonds	-	77,783	-	77,783
Corporate bonds	-	24,372	-	24,372
Municipal bonds	-	1,876	-	1,876
Global public debt	34,230	-	-	34,230
Common and preferred stocks	500	-	75	575
Non-public equity	-	26,164	-	26,164
Real estate and other	-	-	341	341
Miami University Foundation investment pool	-	-	213,730	213,730
	$ 34,730	$ 253,922	$ 214,146	$ 502,798
Funds reported at fair value based on net asset value per share:				
Non-publicly traded funds [(a)]				$ 65,539
Hedged funds [(b)]				255,647
Total investment assets				$ 823,984

The redemption frequency, if eligible, ranged from monthly to quarterly for the various funds reported at fair value based on net asset value per share at June 30, 2019, with a redemption notice period, if applicable, ranging from 30 day to 90 days. As of June 30, 2019, the University has made commitments to limited partnerships of approximately $883 that have not yet been funded.

Certain investments that are measured at net asset value per share (or its equivalent) have not been classified in the fair value hierarchy. The fair value amounts presented in these tables are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the Statements of Net Position.

(a) This class includes investments in non-publically traded funds where the underlying holdings are primarily long-only investments in publicly traded equity and bonds on a global basis.

(b) This class includes primarily investments in hedge funds that invest in both long and short positions in publicly traded equity and debt securities on a global basis.

All of the University's investments in publicly traded securities are subject to market risk. As a result, a significant downturn in the securities markets could adversely affect the market value of University assets. Investments include globally oriented strategies that include exposure to non-U.S. equity and debt securities. While providing a potential diversification benefit, such international investments are exposed to foreign currency risk. All direct investments and investment vehicles in the portfolios are denominated in U.S. dollars. The University's investments that are exposed to concentration risk consist of securities issued by the U.S. agencies or instrumentalities of the U.S. government which represent 24.8 percent and 24.5 percent of investments at June 30, 2019 and 2018, respectively. No other single issuer represents more than 5 percent of investments. Commingled funds held by the University include a wide range of investments, including hedge funds. The University's objective for investing in these hedge funds is to provide stable, absolute returns that are uncorrelated to fluctuations in the stock and bond markets. Specific investments will also be reviewed and aggregated, as available from each Manager, on a regular basis to ensure that the portfolio does not maintain unwarranted concentration risks with respect to any single factor or security at the Manager's level, asset class level and portfolio level.

Note 2. Cash and Investments (Continued)

Endowment funds: The Miami University Foundation (Foundation) manages the Foundation and University endowment and quasi-endowment funds in a single investment pool (Pooled Fund). The University investment is maintained as a separate fund in the financial system of the Foundation and receives a proportionate share of the Pooled Fund's activity. The Foundation owns the assets of the Pooled Fund; the University has an interest in the Pooled Fund. The Foundation's Pooled Fund is not registered with the Securities and Exchange Commission as an investment company. The Foundation's Board of Directors appoints an Investment Committee, which is responsible for oversight of the Pooled Fund in accordance with Foundation policies. University investments include $226,404 and $213,730 managed by the Foundation as of June 30, 2019 and 2018, respectively. The assets held on behalf of the University are included in other noncurrent liabilities on the Statements of Net Position of the Foundation. The fair value of the University's position in the Pooled Fund is based on the University's proportional share of the Pooled Fund, which is marked-to-market annually. Note 10 provides additional information on the Foundation and the Pooled Fund.

The Uniform Prudent Management of Institutional Funds Act (UPMIFA) as adopted by the State of Ohio provides statutory guidelines for prudent management, investment, and expenditure of donor-restricted endowment funds held by charitable organizations. The University's interpretation of its fiduciary responsibilities for donor-restricted endowments under UPMIFA requirements, barring the existence of any donor-specific provisions, is to preserve intergenerational equity to the extent possible and to produce maximum total return without assuming inappropriate risks. The investment policies governing these funds look beyond short-term fluctuations in economic cycles toward an investment philosophy that provides the best total return over very long time periods.

The University employs a total return policy which defines the total amount of dividends, interest and realized gains to be distributed from the endowment assets. The policy distributes four percent of the average of the previous twelve quarterly market values as of March 31st of each fiscal year. The authorized spending amount was $8,288 and $7,546 in 2019 and 2018, respectively. In accordance with donors' stipulations, a portion of the earnings was returned to endowment principal and the balance of $6,900 and $6,726 was distributed for expenditure for 2019 and 2018, respectively. Donor restricted endowments with insufficient accumulated earnings made a partial distribution.

(Dollars in Thousands)

Note 3. Accounts, Pledges and Notes Receivable, Net

The accounts, pledges and notes receivable as of June 30 are summarized as follows:

	2019	2018
Accounts receivable:		
Student receivables	$ 10,326	$ 10,670
University Foundation	16,348	14,719
Grants and contracts	3,788	3,869
Investment trade receivables	5,588	-
Other receivables	5,180	5,300
Total accounts receivable	41,230	34,558
Less allowances for doubtful accounts	(1,285)	(1,285)
Net accounts receivable	$ 39,945	$ 33,273
Pledges receivable:		
Pledges receivable	$ 2,572	$ 3,562
Less allowance for doubtful pledges	(576)	(489)
Net pledges receivable	$ 1,996	$ 3,073
Notes receivable:		
Federal loan programs	$ 4,965	$ 5,810
University loan programs	4,082	4,258
Total notes receivable	9,047	10,068
Less allowance for doubtful notes	(1,974)	(1,974)
Net notes receivable	7,073	8,094
Total	$ 49,014	$ 44,440

(Dollars in Thousands)

Note 4. Capital Assets

The capital assets and accumulated depreciation as of June 30 are summarized as follows:

	2019				
	Beginning Balance	Additions	Retirements	Transfers	Ending Balance
Capital assets:					
Land	$ 6,025	$ -	$ -	$ -	$ 6,025
Collections of works of art and historical treasures	9,888	272	-	-	10,160
Construction in progress	196,778	107,614	-	(130,514)	173,878
Total nondepreciable capital assets	212,691	107,886	-	(130,514)	190,063
Land improvements	60,942	2,156	-	-	63,098
Buildings	1,461,965	37	(3,011)	125,256	1,584,247
Infrastructure	170,047	3,827	-	5,258	179,132
Machinery and equipment	88,147	5,929	(8,864)	-	85,212
Library books and publications	71,995	887	-	-	72,882
Vehicles	6,863	197	(325)	-	6,735
Intangible assets	12,871	155	(366)	-	12,660
Total depreciable capital assets	1,872,830	13,188	(12,566)	130,514	2,003,966
Total capital assets	2,085,521	121,074	(12,566)	-	2,194,029
Less accumulated depreciation:					
Buildings	527,115	48,026	(3,011)	-	572,130
Infrastructure	80,514	6,369	-	-	86,883
Land improvements	21,926	2,229	-	-	24,155
Machinery and equipment	28,431	4,803	(1,955)	-	31,279
Library books and publications	52,710	1,926	-	-	54,636
Vehicles	6,228	245	(325)	-	6,148
Intangible assets	12,871	15	(366)	-	12,520
Total accumulated depreciation	729,795	63,613	(5,657)	-	787,751
Total capital assets, net	$ 1,355,726	$ 57,461	$ (6,909)	$ -	$ 1,406,278

(Dollars in Thousands)

Note 4. Capital Assets (Continued)

	2018				
	Beginning Balance	Additions	Retirements	Transfers	Ending Balance
Capital assets:					
Land	$ 5,792	$ 233	$ -	$ -	$ 6,025
Collections of works of art and historical treasures	9,338	550	-	-	9,888
Construction in progress	131,692	132,923	-	(67,837)	196,778
Total nondepreciable capital assets	146,822	133,706		(67,837)	212,691
Land improvements	54,194	6,748	-	-	60,942
Buildings	1,406,093	966	-	54,906	1,461,965
Infrastructure	155,878	1,238	-	12,931	170,047
Machinery and equipment	86,923	5,419	(4,195)	-	88,147
Library books and publications	71,050	945	-	-	71,995
Vehicles	7,048	208	(393)	-	6,863
Intangible assets	17,069	-	(4,198)	-	12,871
Total depreciable capital assets	1,798,255	15,524	(8,786)	67,837	1,872,830
Total capital assets	1,945,077	149,230	(8,786)	-	2,085,521
Less accumulated depreciation:					
Buildings	482,142	44,973	-	-	527,115
Infrastructure	74,580	5,934	-	-	80,514
Land improvements	19,869	2,057	-	-	21,926
Machinery and equipment	28,805	3,821	(4,195)	-	28,431
Library books and publications	50,709	2,001	-	-	52,710
Vehicles	5,597	1,024	(393)	-	6,228
Intangible assets	17,069	-	(4,198)	-	12,871
Total accumulated depreciation	678,771	59,810	(8,786)	-	729,795
Total capital assets, net	$ 1,266,306	$ 89,420	$ -	$ -	$ 1,355,726

Note 5. Long-Term Liabilities

The long-term liabilities as of June 30 are summarized as follows:

	2019				
	Beginning Balance	Additions	Reductions	Ending Balance	Current Portion
Bonds and leases payable:					
Bonds payable	$ 641,815	$ -	$ (31,450)	$ 610,365	$ 31,845
Capital leases payable	2,157	-	(277)	1,880	120
Premiums	49,207	-	(2,324)	46,883	-
Total bonds and leases payable	693,179	-	(34,051)	659,128	31,965
Other liabilities:					
Compensated absences	18,223	7,779	(8,304)	17,698	1,148
Federal Perkins loans	4,088	283	(74)	4,297	756
Total other liabilities	22,311	8,062	(8,378)	21,995	1,904
Total	$ 715,490	$ 8,062	$ (42,429)	$ 681,123	$ 33,869

(Dollars in Thousands)

Note 5. Long-Term Liabilities (Continued)

	2018				
	Beginning Balance	Additions	Reductions	Ending Balance	Current Portion
Bonds and leases payable:					
Bonds payable	$ 671,655	$ -	$ (29,840)	$ 641,815	$ 31,450
Capital leases payable	2,281	-	(124)	2,157	127
Premiums	51,561	-	(2,354)	49,207	-
Total bonds and leases payable	725,497	-	(32,318)	693,179	31,577
Other liabilities:					
Compensated absences	18,873	7,951	(8,601)	18,223	1,379
Federal Perkins loans	5,558	287	(1,757)	4,088	801
Total other liabilities	24,431	8,238	(10,358)	22,311	2,180
Total	$ 749,928	$ 8,238	$ (42,676)	$ 715,490	$ 33,757

Miami University's General Receipts Revenue Bonds (Series 2010A, 2011, 2012, 2014, and 2017) related to the multi-phase effort to renovate all campus student housing and dining facilities contain subjective acceleration clauses. In the event of default, the Trustee may, upon the written request of the bond holders of not less than 25 percent (in aggregate) principal amount of the obligations outstanding shall, declare the principal of all obligation with accrued interest thereon, to be immediately due and payable on the announced accelerated maturity date.

Additional information regarding the bonds and capital leases is included in Note 6.

Note 6. Indebtedness

During the year ended June 30, 2017, the University issued $154,635 in General Receipts Revenue Bonds with interest rates ranging from 2.00 percent to 5.00 percent and maturities from 2017 to 2042. A part of the proceeds were used to refund a portion of the remaining Miami University General Receipts Bonds, Series 2007. The net change in cash flows related to the refunding was approximately $5,800 and the net present value savings was approximately $5,000. In 2017, the University defeased a portion of the Series 2007 bonds by placing some of the proceeds from the Series 2017 bonds into an escrow account to provide for future debt service. The outstanding balance of defeased bonds were $41,065 and $45,165 as of June 30, 2019 and 2018, respectively.

The February 14, 2017 bond refunding resulted in a difference between the net carrying amount of the old debt and the reacquisition price of $599. The unamortized difference of $489 and $549 at June 30, 2019 and 2018 is reported in the accompanying financial statements as a deferred inflow of resources and is being amortized through the year 2028.

During the year ended June 30, 2015, the University issued $52,335 in General Receipts Revenue Bonds with a 1.88 percent coupon and maturities from 2016 to 2025. The proceeds were used to retire existing debt obligations.

During the year ended June 30, 2014, the University issued $135,035 in General Receipts Revenue Bonds with interest rates ranging from 3.00 percent to 5.00 percent and maturities from 2015 to 2040.

During the year ended June 30, 2013, the University issued $116,065 in General Receipts Revenue Bonds with interest rates ranging from 3.00 percent to 5.00 percent and maturities from 2014 to 2038.

Note 6. Indebtedness (Continued)

During the year ended June 30, 2012, the University issued $148,775 in General Receipts Revenue Bonds with interest rates ranging from 2.00 percent to 5.00 percent and maturities from 2012 to 2037. A part of the proceeds were used to refund a portion of the remaining Miami University General Receipts Bonds, Series 2003. The net change in cash flows related to the refunding was approximately $2,100 and the net present value savings was approximately $1,600. In fiscal year 2012, the University defeased a portion of the Series 2003 bonds by placing some of the proceeds from the Series 2011 bonds into an escrow account to provide for all future debt service. The outstanding balance of defeased bonds were $17,575 and $20,590 as of June 30, 2019 and 2018, respectively.

The December 21, 2011 bond refunding resulted in a difference between the net carrying amount of the old debt and the reacquisition price of $1,209. The unamortized difference of $484 and $580 at June 30, 2019 and 2018 is reported in the accompanying financial statements as a deferred inflow of resources and is being amortized through the year 2024.

During the year ended June 30, 2011, the University issued $125,000 in General Receipts Revenue Bonds consisting of $105,445 Series 2010A (Federally Taxable Build America Bonds – Direct Payment) and $19,555 Series 2010B (Tax-Exempt Bonds). Interest rates range from 4.81 percent to 6.77 percent for the Series 2010A bonds and 5.00 percent for the Series 2010B bonds. Maturities range from 2017 to 2036 for the Series 2010A bonds with a final payment in 2017 for the Series 2010B bonds. The Series 2010 bond proceeds were used to provide funding for the first phase of planned improvements to student housing and dining facilities and the first phase of construction of the Armstrong Student Center.

During the year ended June 30, 2007, the University issued $83,210 in General Receipts Revenue Bonds with interest rates ranging from 3.25 percent to 5.25 percent and maturities from 2009 to 2027. The proceeds were used to fund capital asset additions. As noted previously, a significant portion of these bonds were refunded during 2017 with the issue of the Series 2017 General Receipt Revenue Bonds and these bonds were paid in full during 2018.

The proceeds from the 2017, 2014, 2013, and 2012 issuances have been and will continue to be used to fund the multi-phase effort to renovate all campus student housing and dining facilities as well as to retire outstanding indebtedness of the University for more favorable borrowing terms as described in the proceeding paragraphs. The 2015 issuance was to refinance the 2005 issuance that was used to fund the campus student housing and dining facilities as well as the Farmer School of Business and infrastructure projects. The 2011 issuance refunded the 2003 issuance as well as fund campus student housing and dining facilities. The 2010A issuance was used to fund the Armstrong Student Center as well as campus student housing and dining facilities.

The University incurred total interest costs of $26,172 and $26,725 as of June 30, 2019 and 2018, respectively. The interest costs that were capitalized were $1,051 and $1,811 as of June 30, 2019 and 2018, respectively.

(Dollars in Thousands)

Note 6. Indebtedness (Continued)

The maturity dates, interest rates, and outstanding principal balances as of June 30, 2019 are as follows:

	Maturity Dates	Interest Rates	Outstanding Debt
Bonds payable:			
Series 2017 general receipts	2020 - 2042	4.00% - 5.00%	$ 146,065
Series 2015 general receipts	2020 - 2025	1.88% - 1.88%	32,130
Series 2014 general receipts	2020 - 2040	3.50% - 5.00%	121,300
Series 2012 general receipts	2020 - 2038	3.00% - 5.00%	98,735
Series 2011 general receipts	2020 - 2037	4.00% - 5.00%	114,400
Series 2010A general receipts	2020 - 2036	5.56% - 6.77%	97,735
Total bonds payable			610,365
Bond premiums			46,883
Total bonds payable, net			$ 657,248

The principal and interest payments for the bonds in future years are as follows:

	Principal	Interest	Total
2020	$ 31,845	$ 28,233	$ 60,078
2021	33,205	26,732	59,937
2022	34,690	25,143	59,833
2023	36,190	23,499	59,689
2024	37,755	21,826	59,581
2025 - 2029	141,355	86,983	228,338
2030 - 2034	138,650	61,723	200,373
2035 - 2039	127,830	16,776	144,606
2040 - 2042	28,845	1,326	30,171
Total	$ 610,365	$ 292,241	$ 902,606

The University has $1,880 in capitalized lease obligations that have varying maturity dates through 2032 and carry implicit interest rates ranging from 2.65 percent to 6.38 percent. The scheduled maturities of these leases as of June 30, 2019 are:

2020	$ 179
2021	179
2022	180
2023	178
2024	179
2025 - 2029	892
2030 - 2032	532
Total minimum lease payments	2,319
Less amount representing interest	(439)
Net minimum lease payments	$ 1,880

Note 6. Indebtedness (Continued)

Certain buildings are financed with capital leases. The carrying amount of the buildings related to these capital leases as of June 30, 2019 and 2018 is $2,191 and $2,442, respectively.

Note 7. Net Pension Liability / Asset

Substantially all non-student employees are covered by one of three retirement plans. The University faculty is covered by the State Teachers Retirement System of Ohio (STRS Ohio). Non-faculty employees are covered by the Ohio Public Employees Retirement System of Ohio (OPERS). Employees may opt out of STRS Ohio and OPERS and participate in the Alternative Retirement Plan (ARP).

OPERS offers three separate retirement plans: the defined benefit plan (traditional plan), the defined contribution plan, and a combined plan. The defined contribution plan is excluded as it is not material to the financial statements for reporting purposes.

Defined benefit plans: Both STRS Ohio and OPERS (traditional and combined plans) are cost-sharing multiple-employer statewide retirement systems. Both plans provide retirement, disability, postretirement health care coverage, and death benefits to plan members and beneficiaries. Authority to establish and amend benefits is provided by state statute.

STRS Ohio and OPERS issue stand-alone financial reports. Copies of these reports may be obtained by visiting the STRS website at www.strsoh.org, or visiting the OPERS website at www.opers.org.

Benefits provided: STRS Ohio plan benefits are established under Chapter 3307 of the Ohio Revised Code (ORC), as amended by Substitute Senate Bill 342 in 2012, which gives the Retirement Board the authority to make future adjustments to the member contribution rate, retirement age and service requirements, and the cost-of-living adjustment as the need or opportunity arises, depending on the retirement system’s funding progress.

Any member in the STRS Ohio plan may retire who has (1) five years of service credit and attained age 60; (2) 26 years of service credit and attained age 55; or (3) 31 years of service credit regardless of age. Beginning August 1, 2015, eligibility requirements for an unreduced benefit changed. The maximum annual retirement allowance, payable for life, considers years of credited service, final average salary (3-5 years) and multiplying by a factor ranging from 2.2 percent to 2.6 percent with 0.1 percent incremental increases for years greater than 30-31, depending on retirement age. Additionally, there are no cost-of-living adjustments.

A plan member with five or more years of credited service who is determined to be disabled (illness or injury preventing individual’s ability to perform regular job duties for at least 12 months) may receive a disability benefit. Additionally, eligible survivors of members who die before service retirement may qualify for monthly benefits. New members on or after July 1, 2013, must have at least 10 years of qualifying service credit to apply for disability benefits.

A death benefit of $1,000 is payable to the beneficiary of each deceased retired member who participated in the plan. Death benefit coverage up to $2,000 can be purchased by participants in all three of the plans. Various other benefits are available to members’ beneficiaries.

OPERS plan benefits are established under Chapter 145 of the Ohio Revised Code, as amended by Substitute Senate Bill 343 in 2012. The requirements to retire depend on years of service (15 to 30 years) and from attaining the age of 48 to 62, depending on when the employee became a member. Members retiring before age 65 with less than 30 years of service credit receive a percentage reduction in benefit. Member retirement benefits are calculated on a formula that considers years of service (15-30 years), age (48-62 years) and final average salary, using a factor ranging from 1.0 percent to 2.5 percent.

Note 7. Net Pension Liability / Asset (Continued)

A plan member who becomes disabled before age 60 or at any age, depending on when the member entered the plan, and has completed 60 contributing months is eligible for a disability benefit.

A death benefit of $500 - $2,500 is determined by the number of years of service credit of the retiree. Benefits may transfer to a beneficiary upon death with 1.5 years of service credits with the plan obtained within the last 2.5 years, except for law enforcement and public safety personnel, who are eligible immediately upon employment.

Benefit terms provide for annual cost-of-living adjustments to each employee's retirement allowance subsequent to the employee's retirement date. The annual adjustment, if applicable, is 3 percent.

Contribution requirements: Employer and member contribution rates are established by the State Teachers Retirement Board and limited by Chapter 3307 of the Ohio Revised Code. The statutory employer rate and member contribution rate for fiscal year 2019 and subsequent years is 14 percent of covered payroll (for both pension and OPEB). For STRS Ohio the University contributed $10,654 and $10,397 for the years ended June 30, 2019 and 2018, respectively.

OPERS plan contributions are established under Chapter 145 of the Ohio Revised Code, as amended by Substitute Senate Bill 343 in 2012. During calendar years 2018 and 2017, employees covered by the OPERS system were required by state statute to contribute 10.0 percent of their salary to the plan. The University was required to contribute 14.0 percent of covered payroll, total pension and OPEB and the Plans determine how much to allocated to OPEB each year. Law enforcement employees who are a part of the OPERS law enforcement division contribute 13.0 percent of their salary to the plan for the calendar year 2018. For these employees, the University was required to contribute 18.1 percent of covered payroll for this same year. The member contribution rate for all other employees and the University's contribution rate remained unchanged. The University contributed $14,046 and $13,180 for the years ended June 30, 2019 and 2018, respectively. Effective January 1, 2018 the portion of employer contributions to OPERS allocated to health care (OPEB) for members in the Traditional Plan was decreased to 0.0 percent.

The payroll for employees covered by STRS Ohio for the years ended June 30, 2019 and 2018 was approximately $76,102 and $74,262, respectively. The payroll for employees covered by OPERS for the years ended June 30, 2019 and 2018 was approximately $99,651 and $96,874, respectively.

Pension liabilities and assets, pension expense, and deferred outflows of resources and deferred inflows of resources related to pensions: At June 30, 2019, the University reported a liability of $338,370 for its proportionate share of the net pension liability for the OPERS Traditional plan and the STRS Ohio plan, in the amounts of $167,611 and $170,759, respectively. The net pension liability was measured as of December 31, 2018 for the OPERS traditional plan and June 30, 2018 for the STRS Ohio plan. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of the same date for each plan. The amount used to allocate the net pension liability, deferred inflows/outflows and pension expense was based on the contributions during the measurement period which was determined by the OPERS Traditional plan and STRS Ohio plan to be a reliable approximation of long term contribution effort to the two plans. At the measurement date, the University's proportion was .6111989 percent for OPERS Traditional, which was a decrease of .052 from its proportion measured as of December 31, 2017 and .776608 percent for STRS Ohio, which was an increase of .004 from its proportion measured as of June 30, 2017.

Note 7. Net Pension Liability / Asset (Continued)

At June 30, 2018, the University reported a liability of $287,503 for its proportionate share of the net pension liability for the OPERS Traditional plan and the STRS Ohio plan, in the amounts of $104,072 and $183,431, respectively. The net pension liability was measured as of December 31, 2017 for the OPERS traditional plan and June 30, 2017 for the STRS Ohio plan. The total pension liability used to calculate the net pension liability was determined by an actuarial valuation as of same date for each plan. The amount used to allocate the net pension liability, deferred inflows/outflows and pension expense was based on the contributions during the measurement period which was determined by the OPERS Traditional plan and STRS Ohio plan to be a reliable approximation of long term contribution effort to the two plans. At the measurement date, the University's proportion was .663383 percent for OPERS Traditional, which was a decrease of .001 from its proportion measured as of December 31, 2016 and .772173 percent for STRS Ohio, which was an increase of .009 from its proportion measured as of June 30, 2016.

At June 30, 2019, the University reported an asset of $755 for its proportionate share of the net pension asset for the OPERS Combined plan. The net pension asset was measured as of December 31, 2018. The method used to calculate the net pension asset was determined by an actuarial valuation as of that date. The amount used to allocate the net pension asset, deferred inflows/outflows and pension expense was based on the contributions during the measurement period which was determined by the OPERS Combined plan and to be a reliable approximation of long term contribution effort to the plan. At the measurement date, the University's proportion was .674437 percent for OPERS Combined plan, which was a decrease of .010 from its proportion measured as of December 31, 2017.

At June 30, 2018, the University reported an asset of $932 for its proportionate share of the net pension asset for the OPERS Combined plan. The net pension asset was measured as of December 31, 2017. The method used to calculate the net pension asset was determined by an actuarial valuation as of that date. The amount used to allocate the net pension asset, deferred inflows/outflows and pension expense was based on the contributions during the measurement period which was determined by the OPERS Combined plan and to be a reliable approximation of long term contribution effort to the plan. At the measurement date, the University's proportion was .684872 percent for OPERS Combined plan, which was an increase of .019 from its proportion measured as of December 31, 2016.

For the year ended June 30, 2019, the University recognized pension expense of approximately $51,933 consisting of pension expense of approximately $35,259 for the OPERS Traditional plan, approximately $16,454 for the STRS Ohio plan and an expense of $220 for the OPERS Combined plan.

For the year ended June 30, 2018, the University recognized pension (income) of approximately $(48,438) consisting of pension expense (income) of approximately $21,915 for the OPERS Traditional plan, approximately $(70,492) for the STRS Ohio plan and of $139 for the OPERS Combined plan.

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

At June 30, the University reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	2019		
	STRS Ohio	OPERS	Total
Deferred outflows of resources:			
Differences between expected and actual actuarial experience	$ 3,843	$ 8	$ 3,851
Net difference between projected and actual earnings on pension plan investments		21,122	21,122
Changes in assumptions	30,088	14,837	44,925
Changes in proportion and differences between University contributions and proportionate share of contributions	5,969	2,548	8,517
University contributions subsequent to the measurement date	10,655	6,628	17,283
Total	$ 50,555	$ 45,143	$ 95,698
Deferred inflows of resources:			
Differences between expected and actual actuarial experience	$ 1,109	$ 2,580	$ 3,689
Net difference between projected and actual earnings on pension plan investments	10,607	-	10,607
Changes in proportion and differences between University contributions and proportionate share of contributions	-	5,933	5,933
Total	$ 11,716	$ 8,513	$ 20,229

	2018		
	STRS Ohio	OPERS	Total
Deferred outflows of resources:			
Differences between expected and actual actuarial experience	$ 6,907	$ 106	$ 7,013
Changes in assumptions	40,118	12,546	52,664
Changes in proportion and differences between University contributions and proportionate share of contributions	7,249	1,366	8,615
University contributions subsequent to the measurement date	10,397	6,448	16,845
Total	$ 64,671	$ 20,466	$ 85,137
Deferred inflows of resources:			
Differences between expected and actual actuarial experience	$ 1,478	$ 2,321	$ 3,799
Net difference between projected and actual earnings on pension plan investments	5,881	22,779	28,660
Changes in proportion and differences between University contributions and proportionate share of contributions	-	318	318
Total	$ 7,359	$ 25,418	$ 32,777

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

Deferred inflows and outflows of resources related to the net difference between projected and actual earnings on pension plan investments are amortized over five years. The remaining deferred inflows and outflows of resources are amortized over the average remaining service lives of the active and inactive participants in the plan. Deferred outflows of resources includes $17,283 and $16,845, for the years ended June 30, 2019 and 2018, respectively, for University contributions subsequent to the measurement dates of the Plans and will be recognized as a reduction of the net pension liability in the subsequent fiscal year. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense (benefit) as follows:

	STRS Ohio	OPERS	Total
Year ended June 30:			
2020	$ 17,022	$ 13,100	$ 30,122
2021	11,084	4,916	16,000
2022	1,955	1,395	3,350
2023	(1,877)	10,627	8,750
2024	-	(20)	(20)
Thereafter	-	(16)	(16)
	$ 28,184	$ 30,002	$ 58,186

Actuarial assumptions used for the year-ended June 30, 2019

For STRS Ohio, the total pension liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

STRS Ohio	
Inflation	2.50 percent
Projected salary increases	12.50 percent at age 20 to 2.50 percent at age 65
Investment rate of return	7.45 percent, net of investment expenses, including inflation
Discount rate of return	7.45 percent
Cost-of-living adjustments (COLA)	0.00 percent

For OPERS, the total pension liability/asset in the December 31, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

OPERS	Traditional Pension Plan	Combined Plan
Wage Inflation	3.25 percent	3.25 percent
Projected salary increases	3.25 percent to 10.75 percent (includes wage inflation at 3.25 percent)	3.25 percent to 8.25 percent (includes wage inflation at 3.25 percent)
Investment rate of return and discount rate	7.20 percent	7.20 percent
Cost-of-living adjustments (COLA)	Pre January 1, 2013 retirees: 3.00 percent simple Post January 1, 2013 retirees: 3.00 percent simple through 2018, then 2.15 percent simple	Pre January 1, 2013 retirees: 3.00 percent simple Post January 1, 2013 retirees: 3.00 percent simple through 2018, then 2.15 percent simple

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

Mortality rates: STRS Ohio post-retirement mortality rates for healthy retirees are based on the RP-2014 Annuitant Mortality Table with 50% of rates through age 69, 70% of rates between ages 70 and 79, 90% of rates between ages 80 and 84, and 100% of rates thereafter, projected forward generationally using mortality improvement scale MP-2016. Pre-retirement mortality rates are based on RP-2014 Employee Mortality Table, projected forward generationally using mortality improvement scale MP-2016. Post-retirement disabled mortality rates are based on the RP-2014 Disabled Mortality Table with 90% of rates for males and 100% of rates for females, projected forward generationally using mortality improvement scale MP-2016.

OPERS pre-retirement mortality rates are based on RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality tables for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

Experience studies: STRS actuarial assumption used in the July 1, 2018 valuation are based on the results of an actuarial experience study for the period July 1, 2011 through June 30, 2016. OPERS actuarial assumptions used in the December 31, 2018 valuation are based on the results of an actual experience study for the period January 1, 2011 through December 31, 2015.

Investment return assumptions: STRS Ohio utilizes investment consultants to develop an estimated range for the investment return assumption based on the target allocation adopted by the respective Retirement Board of STRS Ohio.

The long-term expected rate of return on OPERS defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target allocation percentage, adjusted for inflation.

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	STRS Ohio		OPERS	
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equities	28.00 %	7.35 %	19.00 %	6.21 %
International equity	23.00	7.55	20.00	7.83
Alternative investments	17.00	7.09	10.00	10.81
Fixed income	21.00	3.00	23.00	2.79
Real estate	10.00	6.00	10.00	4.90
Other	1.00	2.25	18.00	5.50
Total	100.00 %		100.00 %	

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

Discount rate: The discount rate used to measure the total pension liability was 7.45 percent for STRS Ohio as of the measurement date (June 30, 2018). The projection of cash flows used to determine the discount rate assumes that member and employer contributions will be made at the statutorily required rates. Based on those assumptions, the STRS Ohio's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on pension plan investments of 7.45% was applied to all periods of projected benefit payments to determine the total pension liability.

The discount rate used to measure the total pension liability (asset) was 7.20 percent for OPERS as of the measurement date (December 31, 2018). This is a decrease of .30 percent from the discount rate used in the December 31, 2017 actuarial valuation. The projection of cash flows used to determine the discount rate assumed that contributions from plan members and employer contributions will be made at the contractually required rates, as actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability (asset).

Sensitivity of net pension liability (asset) to changes in discount rate: The following presents the University's proportionate share of the STRS Ohio and OPERS net pension liability (asset) calculated using a discount rate 1 percent higher and 1 percent lower than the plans' current rate.

	2019		
	1% Decrease (6.45%)	Current Discount Rate (7.45%)	1% Increase (8.45%)
STRS Ohio	$ 249,370	$ 170,759	$ 104,224
	1% Decrease (6.20%)	Current Discount Rate (7.20%)	1% Increase (8.20%)
OPERS - Traditional Plan	$ 247,611	$ 167,611	$ 101,131
OPERS - Combined Plan	(250)	(755)	(1,120)

<u>Actuarial assumptions used for the year-ended June 30, 2018</u>

For STRS Ohio, the total pension liability in the June 30, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

STRS Ohio	
Inflation	2.50 percent
Projected salary increases	12.50 percent at age 20 to 2.50 percent at age 65
Investment rate of return	7.45 percent, net of investment expenses, including inflation
Discount rate of return	7.45 percent
Cost-of-living adjustments (COLA)	0.00 percent effective July 1, 2017

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

For OPERS, the total pension liability/asset in the December 31, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

OPERS	Traditional Pension Plan	Combined Plan
Wage Inflation	3.25 percent	3.25 percent
Projected salary increases	3.25 percent to 10.75 percent (includes wage inflation at 3.25 percent)	3.25 percent to 8.25 percent (includes wage inflation at 3.25 percent)
Investment rate of return and discount rate	7.50 percent	7.50 percent
Cost-of-living adjustments (COLA)	Pre January 1, 2013 retirees: 3.00 percent	Pre January 1, 2013 retirees: 3.00 percent

Mortality rates: STRS Ohio post-retirement mortality rates for healthy retires are based on the RP-2014 Annuitant Mortality Table with 50% of rates through age 69, 70% of rates between ages 70 and 79, 90% of rates between ages 80 and 84, and 100% of rates thereafter, projected forward generationally using mortality improvement scale MP-2016. Pre-retirement mortality rates are based on RP-2014 Employee Mortality Table, projected forward generationally using mortality improvement scale MP-2016. Post-retirement disabled mortality rates are based on the RP-2014 Disabled Mortality Table with 90% of rates for males and 100% of rates for females, projected forward generationally using mortality improvement scale MP-2016.

OPERS pre-retirement mortality rates are based on RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality tables for males and females, adjusted for mortality improvement back to the observation period base year of 2006.The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

Experience studies: STRS actuarial assumption used in the July 1, 2017 valuation are based on the results of an actuarial experience study for the period July 1, 2011 through June 30, 2016. OPERS actuarial assumptions used in the December 31, 2017 valuation are based on the results of an actual experience study for the period January 1, 2011 through December 31, 2015.

Investment return assumptions: STRS Ohio utilizes investment consultants to develop an estimated range for the investment return assumption based on the target allocation adopted by the respective Retirement Board of STRS Ohio.

The long-term expected rate of return on OPERS defined benefit investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target allocation percentage, adjusted for inflation.

(Dollars in Thousands)

Note 7. Net Pension Liability / Asset (Continued)

The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	STRS Ohio		OPERS	
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equities	28.00 %	7.35 %	19.00 %	6.37 %
International equity	23.00	7.55	20.00	7.88
Alternative investments	17.00	7.09	10.00	8.97
Fixed income	21.00	3.00	23.00	2.20
Real estate	10.00	6.00	10.00	5.26
Other	1.00	2.25	18.00	5.26
Total	100.00 %		100.00 %	

Discount rate: The discount rate used to measure the total pension liability (asset) was 7.45 percent for STRS Ohio as of the measurement date, June 30, 2017 and 7.50 percent for OPERS as of the measurement date, December 31, 2017. The projection of cash flows used to determine the discount rate assumes that employee contributions will be made at the current contribution rate and that participating employer contributions will be made at statutorily required rates. Based on those assumptions, the pension plans' fiduciary net position was projected to be available to make all projected future benefit payments of current active and inactive employees. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability as of June 30, 2018.

Sensitivity of net pension liability (asset) to changes in discount rate: The following presents the University's proportionate share of the STRS Ohio and OPERS net pension liability (asset) calculated using a discount rate 1 percent higher and 1 percent lower than the plans' current rate.

	2018		
	1% Decrease (6.45%)	Current Discount Rate (7.45%)	1% Increase (8.45%)
STRS Ohio	$ 262,943	$ 183,431	$ 116,455

	1% Decrease (6.50%)	Current Discount Rate (7.50%)	1% Increase (8.50%)
OPERS - Traditional Plan	$ 184,805	$ 104,072	$ 36,765
OPERS - Combined Plan	(507)	(932)	(1,226)

Note 8. Defined Contribution Retirement Plans

Full-time faculty and unclassified employees are eligible to participate in the Alternative Retirement Plan (ARP) offered by STRS Ohio and OPERS. Full-time faculty and unclassified employees are eligible to choose a provider, in lieu of STRS Ohio or OPERS, from the list of six providers currently approved by the Ohio Department of Insurance and who hold agreements with the University. The University's Board of Trustees has established the employer and employee contributions requirements, which are noted below.

Eligible employees have 120 days from their date of hire to make an irrevocable election to participate in the ARP. Under this plan, employees who would have otherwise been required to be in STRS Ohio or OPERS, and who elect to participate in the ARP, must contribute the employee's share of retirement contributions to one of seven private providers approved by the Ohio Department of Insurance. The legislation mandates that the employer must contribute an amount to the state retirement system to which the employee would have otherwise belonged, based on an independent actuarial study commissioned by the Ohio Retirement Study Council and submitted to the Ohio Board of Regents. The required contribution was 4.47 percent for STRS Ohio and 2.44 percent for OPERS of covered payroll for the years ended June 30, 2019 and 2018. The employer also contributes what would have been the employer's contribution under STRS Ohio or OPERS, less the aforementioned percentages, to the private provider selected by the employee. The University plan provides these employees with vesting after one year. The pension expense for the ARP was $7,763 and $7,417 for the years ended June 30, 2019 and 2018, respectively.

ARP does not provide disability benefits, annual cost-of-living adjustments, postretirement health care benefits, or death benefits to plan members and beneficiaries. Benefits consist of the sum of contributions and investment returns earned by each participant's choice of investment options.

The payroll for employees electing the alternative retirement program for the years ended June 30, 2019 and 2018 was approximately $77,049 and $73,665, respectively.

Note 9. Postemployment Benefits Other Than Pensions (OPEB)

OPEB plans: STRS Ohio is a cost-sharing multiple employer statewide retirement plan. STRS Ohio provides access to health care coverage for eligible retirees who participated in the Defined Benefit or Combined Plans and their eligible dependents. Coverage under the current program includes hospitalization, physicians' fees and prescription drugs and reimbursement of a portion of the monthly Medicare Part B premiums. Medicare Part B premium reimbursements will be discontinued effective January 1, 2020. Pursuant to the ORC, the State Teachers Retirement Board has discretionary authority over how much, if any, of the associated health care costs will be absorbed by the plan. All benefit recipients pay a portion of the health care costs in the form of a monthly premium. Benefit recipients contributed $329.3 million or 64% and $339.1 million or 60% of the total health care costs in fiscal 2018 and 2017, respectively (excluding deductibles, coinsurance and copayments).

Medicare Part D is a federal program to help cover the costs of prescription drugs for Medicare beneficiaries. This program allows STRS Ohio to recover part of the cost for providing prescription coverage since all eligible STRS Ohio health care plans include creditable prescription drug coverage. For the year ended June 30, 2018, STRS Ohio received $107.2 million in Medicare Part D reimbursements.

The ORC permits, but does not require, OPERS to offer post-employment health care coverage. Authority to establish and amend health care coverage is provided in Chapter 145 of the ORC. The ORC allows a portion of the employers' contributions to be used to fund health care coverage. The health care portion of the employer contribution rate for the Traditional Pension Plan and Combined Plan is comparable, as the same coverage options are provided to participants in both plants. Beginning January 1, 2015, the service eligibility criteria for health care coverage increased from 10 years to 20 years with a minimum age of 60, or 30 years of qualifying service at any age. Beginning with January 2016 premiums, Medicare-eligible retirees could select supplemental coverage, and may be eligible for monthly allowances deposited to an HRA to be used for reimbursement of eligible health care expenses. Coverage for non-Medicare retirees includes hospitalization, medical expenses and prescription drugs. The System determines the amount, if any, of the associated health care costs that will be absorbed by the System and attempts to control costs by using managed care, case management, and other programs. Additional details on health care coverage can be found in the Plan Statement in the OPERS 2018 CAFR.

The OPERS funding policy provides for periodic member and employer contributions at rates established by the Board, subject to limits set in statute. With assistance of the System's actuary and Board approval, a portion of each employer contribution to OPERS may be set aside for the funding of post-employment hath care coverage. All contribution rates were within the limits authorized by the ORC. The portion of Traditional Pension Plan and Combined Plan employer contributions allocated to health care was zero for 2018.

STRS Ohio and OPERS issue stand-alone financial reports. Copies of these reports may be obtained by visiting the STRS website at www.strsoh.org, or visiting the OPERS website at www.opers.org.

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

The payroll for employees covered by STRS Ohio for the years ended June 30, 2019 and 2018 was approximately $76,102 and $74,262, respectively. The payroll for employees covered by OPERS for the years ended June 30, 2019 and 2018 was approximately $99,651 and $96,874, respectively. There were no employer contributions made to fund post-employment benefits for the year ended June 30, 2019. The employer contribution rated decreased to 0 percent effective January 1, 2018 for the Traditional and Combined Plans. For the year ended June 30, 2018, no employer allocation was made to the health care fund for STRS Ohio.

OPEB asset, OPEB liabilities, OPEB expense, and deferred outflows of resources and deferred inflows of resources related to OPEB: At June 30, 2019, the University reported a liability of $81,146 for its proportionate share of the net OPEB liability for the OPERS plan. The net OPEB liability was measured as of December 31, 2017, rolled forward to the measurement date. The amount used to allocate the net OPEB liability, deferred inflows/outflows and OPEB expense was based on the total employer (pension and OPEB) contributions during the measurement period which was determined by the OPERS plan to be a reliable approximation of long term contribution effort to the plan. At the measurement date, the University's proportion was .622401 percent for OPERS, which was a decrease of .049 from its proportion measured as of December 31, 2017.

At June 30, 2019, the University reported an asset of $12,479 for its proportionate share of the net OPEB asset for the STRS Ohio plan. The net OPEB asset was measured as of June 30, 2018 for the STRS Ohio plan. The total OPEB asset used to calculate the net OPEB asset was determined by an actuarial valuation as of that date for the plan. The amount used to allocate the net OPEB asset, deferred inflows/outflows and OPEB expense was based on the total employer (pension and OPEB) contributions during the measurement period which was determined by the STRS Ohio plan to be a reliable approximation of long term contribution effort to the plan. At the measurement date, the University's proportion was .776608 percent for STRS Ohio, which was an increase of .004 from its proportion measured as of June 30, 2017.

At June 30, 2018, the University reported a liability of $103,126 for its proportionate share of the net OPEB liability for the OPERS and STRS Ohio plan, in the amounts of $72,999 and $30,127, respectively. The net OPEB liability was measured as of December 31, 2017 for the OPERS plan and June 30, 2017 for the STRS Ohio plan. The total OPEB liability used to calculate the net OPEB liability was determined by an actuarial valuation as of that date for each plan. The amount used to allocate the net OPEB liability, deferred inflows/outflows and OPEB expense was based on the employer contributions (pension and OPEB) during the measurement period which was determined by the OPERS plan and STRS Ohio plan to be a reliable approximation of long term contribution effort to the two plans. At the measurement date, the University's proportion was .67222 percent for OPERS and .772173 percent for STRS Ohio.

For the year ended June 30, 2019, the University recognized OPEB (income) of approximately $(18,569) consisting of OPEB expenses (income) of approximately $8,391 for the OPERS plan and $(26,960) for the STRS Ohio plan.

For the year ended June 30, 2018, the University recognized OPEB (income) of approximately $(3,043) consisting of OPEB expenses (income) of approximately $6,079 for the OPERS plan and $(9,122) for the STRS Ohio plan.

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

At June 30, the University reported deferred outflows of resources and deferred inflows of resources related to OPEB from the following sources:

	2019		
	STRS Ohio	OPERS	Total
Deferred outflows of resources:			
Differences between expected and actual actuarial experience	$ 1,449	$ 30	$ 1,479
Net difference between projected and actual earnings on OPEB plan investments	-	3,418	3,418
Changes in assumptions	-	2,822	2,822
Changes in proportion and differences between University contributions and proportionate share of contributions	496	302	798
Total	$ 1,945	$ 6,572	$ 8,517
Deferred inflows of resources:			
Differences between expected and actual actuarial experience	$ 727	$ 220	$ 947
Net difference between projected and actual earnings on OPEB plan investments	1,420	-	1,420
Changes in assumptions	16,993	-	16,993
Changes in proportion and differences between University contributions and proportionate share of contributions	-	6,818	6,818
Total	$ 19,140	$ 7,038	$ 26,178

	2018		
	STRS Ohio	OPERS	Total
Deferred outflows of resources:			
Differences between expected and actual actuarial experience	$ 1,739	$ 57	$ 1,796
Changes in assumptions	-	5,315	5,315
Changes in proportion and differences between University contributions and proportionate share of contributions	428	-	428
Total	$ 2,167	$ 5,372	$ 7,539
Deferred inflows of resources:			
Net difference between projected and actual earnings on OPEB plan investments	$ 1,287	$ 5,438	$ 6,725
Changes in assumptions	2,427	-	2,427
Changes in proportion and differences between University contributions and proportionate share of contributions	-	157	157
Total	$ 3,714	$ 5,595	$ 9,309

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

Deferred inflows and outflows of resources related to the net difference between projected and actual earnings on OPEB plan investments is amortized over five years. The remaining deferred inflows and outflows of resources are amortized over the average remaining service lives of the active and inactive participants in the plan. Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEB will be recognized in OPEB expense (benefit) as follows:

	STRS Ohio	OPERS	Total
Year ended June 30:			
2020	$ (3,072)	$ 1,312	$ (1,760)
2021	(3,072)	(1,021)	(4,093)
2022	(3,072)	(1,083)	(4,155)
2023	(2,752)	326	(2,426)
2024	(2,635)	-	(2,635)
Thereafter	(2,592)	-	(2,592)
	$ (17,195)	$ (466)	$ (17,661)

Actuarial assumptions used for the year-ended June 30, 2019

For STRS Ohio, the total OPEB liability in the June 30, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

STRS Ohio	
Projected salary increases	12.50 percent at age 20 to 2.50 percent at age 65
Projected payroll increases	3.00 percent
Investment rate of return	7.45 percent, net of investment expenses, including inflation
Discount rate	7.45 percent
Health care cost trends	
Medical	
Pre-Medicare	6.00 percent initial, 4.00 percent ultimate
Medicare	5.00 percent initial, 4.00 percent ultimate
Prescription Drug	
Pre-Medicare	8.00 percent initial, 4.00 percent ultimate
Medicare	(5.23) percent initial, 4.00 percent ultimate

For OPERS, the total OPEB liability in the December 31, 2018 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

OPERS	
Single discount rate	3.96 percent
Investment rate of return	6.00 percent
Municipal bond rate	3.71 percent
Inflation	3.25 percent
Projected salary increases	3.25 percent to 10.75 percent (includes wage inflation)
Health care cost trends	10.0 percent initial, 3.25 percent ultimate in 2029

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

Mortality rates: For STRS Ohio healthy retirees, the mortality rates are based on the RP-2014 Annuitant Mortality Table with 50 percent of rates through age 69, 70 percent of rates between ages 70 and 79, 90 percent of rates between ages 80 and 84, and 100 percent of rates, thereafter, projected forward generationally using mortality improvement scale MP-2016. For disabled retirees, mortality rates are based on the RP-2014 Disabled Mortality Table with 90 percent of rates for males and 100 percent of rates for females, projected forward generationally using mortality improvement scale MP-2016.

OPERS pre-retirement mortality rates are based on RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality tables for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

Experience Studies: STRS actuarial assumption used in the July 1, 2018 valuation are based on the results of an actuarial experience study for the period July 1, 2011 through June 30, 2016. OPERS actuarial assumption used in the December 31, 2018 valuation are based on the results of an actuarial experience study for the period January 1, 2011 through December 31, 2015.

Investment return assumptions: STRS Ohio utilizes investment consultants to develop an estimated range for the investment return assumption based on the target allocation determined by the respective Retirement Board of STRS Ohio.

The long-term expected rate of return on OPERS health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target allocation percentage, adjusted for inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	STRS Ohio		OPERS	
Asset Class	Target Allocation	Long-Term Expected Real Rate of Return	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equities	28.00 %	7.35 %	21.00 %	6.21 %
International equity	23.00	7.55	22.00	7.83
Alternative investments	17.00	7.09	-	-
Fixed income	21.00	3.00	34.00	2.42
Real estate	10.00	6.00	-	-
REITs	-	-	6.00	5.98
Other	1.00	2.25	17.00	5.57
Total	100.00 %		100.00 %	

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

Discount rate: For STRS Ohio, the discount rate used to measure the total OPEB liability was 7.45 percent as of the measurement date, June 30, 2018. The projection of cash flows used to determine the discount rate assumes STRS Ohio continues to allocate no employer contributions to the health care fund. Based on those assumptions, the STRS Ohio's fiduciary net position was projected to be available to make all projected future benefit payments to current plan members. Therefore, the long-term expected rate of return on health care plan investments of 7.45 percent was used to measure the total OPEB liability as of June 30, 2019.

For OPERS, a single discount rate of 3.96 percent was used to measure the OPEB liability on the measurement date of December 31, 2018, which is an increase of .11 percent since the prior measurement date. This single discount rate was based on an expected rate of return of the health care investment portfolio of 6.00 percent and a municipal bond rate of 3.71 percent based on an index of 20-year general obligation bonds with an average AA credit rating. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on those assumptions, the OPERS health care fiduciary net position and future contributions were sufficient to finance health care costs through 2031. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2031, and the municipal bond rate was applied to all health care costs after that date.

The following presents the University's proportionate share of the STRS Ohio and OPERS net OPEB (asset) liability calculated using a discount rate 1 percent higher and 1 percent lower than the plans' current rate:

	2019		
	1% Decrease (6.45%)	Current Discount Rate (7.45%)	1% Increase (8.45%)
STRS Ohio	$ (10,966)	$ (12,479)	$ (13,978)
	1% Decrease (2.96%)	Current Discount Rate (3.96%)	1% Increase (4.96%)
OPERS	$ 103,816	$ 81,146	$ 63,118

Sensitivity of net OPEB (asset) liability to changes in healthcare cost trend rates: The following presents the University's proportionate share of the STRS Ohio and OPERS net OPEB (asset) liability calculated using healthcare cost trend rates 1 percent higher and 1 percent lower than the plans' current rate:

	2019		
	1% Decrease	Current Health Care Cost Trend Rate	1% Increase
STRS Ohio	$ (13,894)	$ (12,479)	$ (11,043)
OPERS	$ 77,999	$ 81,146	$ 84,771

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

OPEB plan fiduciary net position: Detailed information about the OPEB plans' fiduciary net position is available in the separately issued STRS Ohio and OPERS financial report.

Actuarial assumptions used for the year-ended June 30, 2018

For STRS Ohio the total OPEB liability in the June 30, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

STRS Ohio	
Projected salary increases	12.50 percent at age 20 to 2.50 percent at age 65
Discount rate	4.13 percent
Investment rate of return	7.45 percent, net of investment expenses, including inflation
Health care cost trends	6.00 percent to (11.00) percent initial, 4.50 percent ultimate
Cost-of-living adjustments (COLA)	0 percent effective July 1, 2017

For OPERS the total OPEB liability in the December 31, 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

OPERS	
Single discount rate	3.85 percent
Investment rate of return	6.50 percent
Municipal bond rate	3.31 percent
Inflation	3.25 percent
Projected salary increases	3.25 percent to 10.75 percent (includes wage inflation)
Health care cost trends	7.50 percent initial, 3.25 percent ultimate in 2028

Mortality rates: For STRS Ohio healthy retirees, the mortality rates are based on the RP-2014 Annuitant Mortality Table with 50 percent of rates through age 69, 70 percent of rates between ages 70 and 79, 90 percent of rates between ages 80 and 84, and 100 percent of rates, thereafter, projected forward generationally using mortality improvement scale MP-2016. For disabled retirees, mortality rates are based on the RP-2014 Disabled Mortality Table with 90 percent of rates for males and 100 percent of rates for females, projected forward generationally using mortality improvement scale MP-2016.

OPERS pre-retirement mortality rates are based on RP-2014 Employees mortality table for males and females, adjusted for mortality improvement back to the observation period base of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates are based on the RP-2014 Healthy Annuitant mortality tables for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Post-retirement mortality rates for disabled retirees are based on the RP-2014 Disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The base year for males and females was then established to be 2015 and 2010, respectively. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to all of the above described tables.

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

Experience studies: STRS actuarial assumption used in the July 1, 2017 valuation are based on the results of an actuarial experience study for the period July 1, 2011 through June 30, 2016. OPERS actuarial assumption used in the December 31, 2017 valuation are based on the results of an actuarial experience study for the period January 1, 2011 through December 31, 2015.

Investment return assumptions: STRS Ohio utilizes investment consultants to develop an estimated range for the investment return assumption based on the target allocation determined by the respective Retirement Board of STRS Ohio. The long-term expected rate of return on OPERS health care investment assets was determined using a building-block method in which best-estimate ranges of expected future real rates of return were developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target allocation percentage, adjusted for inflation. The target allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:

	STRS Ohio		OPERS	
Asset Class	Target Allocation	Long-Term	Target	Long-Term Expected
Domestic equities	28.00 %	7.35 %	21.00 %	6.37 %
International equity	23.00	7.55	22.00	7.88
Alternative investments	17.00	7.09	-	-
Fixed income	21.00	3.00	34.00	1.88
Real estate	10.00	6.00	-	-
REITs	-	-	6.00	5.91
Other	1.00	2.25	17.00	5.39
Total	100.00 %		100.00 %	

Discount rate: For STRS Ohio, the discount rate used to measure the total OPEB liability was 4.13 percent as of the measurement date June 30, 2017. The projection of cash flows used to determine the discount rate assumes STRS Ohio continues to allocate no employer contributions to the health care fund. Based on those assumptions, the STRS Ohio OPEB plan's fiduciary net position was not projected to be sufficient to make all projected future benefit payments of current plan members. Therefore, a blended discount rate of 4.13 percent, which represents the long-term expected rate of return of 7.45 percent for the funded benefit payments and the Bond Buyer 20-year municipal bond rate of 3.58 percent for the unfunded benefit payments, was used to measure the total OPEB liability as of June 30, 2018.

For OPERS, a single discount rate of 3.85 percent was used to measure the OPEB liability on the measurement date of December 31, 2018, which was a decrease of .38 percent from the previous fiscal year. This single discount rate was based on an expected rate of return of the health care investment portfolio of 6.50 percent and a municipal bond rate of 3.31percent, based on Fidelity Index's 20 year Municipal GO AA Index as of December 29, 2017. The projection of cash flows used to determine this single discount rate assumed that employer contributions will be made at rates equal to the actuarially determined contribution rate. Based on those assumptions, the OPERS health care fiduciary net position and future contributions were sufficient to finance health care costs through 2034. As a result, the long-term expected rate of return on health care investments was applied to projected costs through the year 2034, and the municipal bond rate was applied to all health care costs after that date.

(Dollars in Thousands)

Note 9. Postemployment Benefits Other Than Pensions (OPEB) (Continued)

The following presents the University's proportionate share of the STRS Ohio and OPERS net OPEB liability calculated using a discount rate 1 percent higher and 1 percent lower than the plans' current rate:

	2018		
	1% Decrease (3.13%)	Current Discount Rate (4.13%)	1% Increase (5.13%)
STRS Ohio	$ 40,445	$ 30,127	$ 21,972
	1% Decrease (2.85%)	Current Discount Rate (3.85%)	1% Increase (4.85%)
OPERS	$ 96,982	$ 72,999	$ 53,596

Sensitivity of net OPEB liability to changes in healthcare cost trend rates: The following presents the University's proportionate share of the STRS Ohio and OPERS net OPEB liability calculated using healthcare cost trend rates 1 percent higher and 1 percent lower than the plans' current rate:

	2018		
	1% Decrease	Current Health Care Cost Trend Rate	1% Increase
STRS Ohio	$ 20,931	$ 30,127	$ 42,231
OPERS	$ 69,844	$ 72,999	$ 76,257

OPEB plan fiduciary net position: Detailed information about the OPEB plans' fiduciary net position is available in the separately issued STRS Ohio and OPERS financial report.

Note 10. Discretely Presented Component Unit

The Miami University Foundation (the Foundation) is a separate not-for-profit entity organized for the purpose of promoting educational and research activities of the University. Since the resources held by the Foundation can be used only by and 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 board (Board) is comprised of at least fifteen directors that are elected by the Board and eight directors that are appointed by Miami University. At least two-thirds of the elected directors are required to be alumni or former students of Miami University. The Foundation issues reports using standards issued by the Financial Accounting Standards Board.

Amounts received by the University from the Foundation are restricted and are included in gifts in the accompanying financial statements. The Foundation values its investments at fair value.

(Dollars in Thousands)

Note 10. Discretely Presented Component Unit (Continued)

Summary financial information for the Foundation as of June 30, the date of its most recent audited financial report, is as follows:

	2019		
	Without Donor Restrictions	With Donor Restrictions	Total
Net assets at end of year	$ 2,990	$ 351,992	$ 354,982
Change in net assets for the year	2,366	446	2,812
Distributions to Miami University	23,093	-	23,093

	2018		
	Without Donor Restrictions	With Donor Restrictions	Total
Net assets at end of year	$ 624	$ 351,546	$ 352,170
Change in net assets for the year	(333)	13,120	12,787
Distributions to Miami University	18,181	-	18,181

Cash and cash equivalents: Cash and cash equivalents consists primarily of cash in banks, money market accounts, and the State Treasury Asset Reserve of Ohio (STAR Ohio and STAR Plus) that include short-term, highly liquid investments readily convertible to cash, with an original maturity of three months or less. The Foundation maintains active relationships with multiple cash equivalent accounts to reduce its exposure to custodial credit risk at any single institution. The carrying amounts of these items are a reasonable estimate of their fair value.

Investments: Investments that are market traded are recorded at fair value based primarily on quoted market prices, as established by the major securities markets.

The value of holdings of non-publicly traded funds that do not have a readily determined market value is based on the funds' estimated net asset value as supplied by the investment manager. The values are reviewed and evaluated by Foundation management. Market prices are not available for certain investments. These investments are carried at estimated fair value provided by the funds' management. Some valuations are determined as of June 30, while the remaining valuations are determined based on March 31 information when June 30 information is not yet available and adjusted by cash receipts, cash disbursements, and securities distributions through June 30. The Foundation believes that the carrying amounts are reasonable estimates of fair value as of year-end. Because these investments are not readily marketable, the estimated value is subject to uncertainty and, therefore, may differ from the value that would have been used had a ready market for the investments existed. Such differences could be material. The amount of gain or loss associated with these investments is reflected in the accompanying financial statements using the equity method of accounting.

The issuing insurance companies determine the cash surrender value of the life insurance policies annually. Investments in real estate are recorded at appraised value at the date of donation.

All donor-restricted endowment investments and board-designated endowments are managed in a unitized investment pool (Pooled Funds), unless donor-restricted endowment gift agreements require that they be held separately. For the Pooled Funds, the fair value of the investments is determined at the end of each month and the incremental fair value increase or decrease is allocated to the individual fund accounts based on the number of shares the fund owns at the beginning of the month.

(Dollars in Thousands)

Note 10. Discretely Presented Component Unit (Continued)

Investment income is recorded on the accrual basis and purchases and sales of investments are recorded on a trade-date basis. Investment transactions occurring on or before June 30, which settle after such date, are recorded as receivables or payables. Net dividend and interest income as well as gains/losses are allocated based on the number of shares owned.

Long-term investments: Investments held by the Foundation as of June 30, 2019 were:

	Fair Value	
	2019	2018
Investment description:		
Pooled Investment Fund (PIF):		
Strategic Investment Management, LLC funds	$ 319,519	$ -
Domestic public equities	-	19,604
Global and international public equities	-	227,436
Government bonds	41,920	55,113
Global debt	-	11,949
Hedge funds	27,939	58,961
Various private capital investments	101,681	91,053
Exchange traded funds	3,486	-
Other	2,592	2,093
Split-interest funds:		
Charitable remainder trusts	10,215	10,049
Charitable gift annuities	2,281	2,297
Pooled income funds	584	574
Total	$ 510,217	$ 479,129

The Foundation maintains a diversified investment portfolio for the PIF intended to reduce market risk, credit risk, and interest rate risk with a strategy designed to take advantage of market inefficiencies. During 2019, management of the PIF (Pooled Investment Fund) has been delegated by the Board to an external investment firm, Strategic Investment Management, LLC. The external investment firm has discretion to manage the PIF within the framework of the investment policy statement. Additionally, the external investment firm has implemented a combination of internally and externally managed investment vehicles, including separate accounts, limited partnerships, and commingled funds. The Foundation's investment portfolio also includes publicly traded securities. The underlying holdings for certain non-publicly traded funds includes publicly traded securities. As a result, a significant downturn in the securities markets could adversely affect the market value of Foundation assets. As of June 30, 2019, the Foundation has made commitments to limited partnerships of approximately $125 million that have not yet been funded, some of which management expects may not be called by the partnerships due to the life-cycle of the respective partnerships.

For the years ending June 30, 2019 and 2018 dividend and interest income of $2,838 and $4,445, respectively, is net of fees from external investment managers totaling $197 and $284 for June 30, 2019 and 2018, respectively.

Fair value measurements: The Foundation uses fair value measurements to record fair value adjustments to certain assets and liabilities and to determine fair value disclosures. Subsequent changes in fair value are recorded as an adjustment to earnings.

Note 10. Discretely Presented Component Unit (Continued)

Pledges receivable: As of June 30, 2019 and 2018, contributors to the Foundation have made unconditional pledges totaling $32,199 and $34,372, respectively, with one pledge accounting for over 43 percent of that total. Net pledges receivable have been discounted using rates commensurate with the risks involved to a net present value of $30,113 and $32,984 at June 30, 2019 and 2018, respectively. Discount rates ranged from 1.20 percent to 3.40 percent. Management has set up an allowance for uncollectible pledges of $1,295 and $1,725 at June 30, 2019 and 2018, respectively. All pledges have been classified as restricted expendable net positions since they will either expire or be fulfilled within a specified time or donor imposed stipulations.

The Foundation had also been notified of revocable pledges, bequests, and other indications of intentions to give. These potential contributions are not permitted to be recorded as they are deemed intentions to give and not promises to give.

Split-interest agreements: The Foundation’s split-interest agreements with donors consist primarily of charitable gift annuities, pooled income funds and irrevocable charitable remainder trusts for which the Foundation serves as trustee. Assets are invested and payments are made to donors and/or other beneficiaries in accordance with the respective agreements. Assets held for these agreements are included in investments.

Endowment: UPMIFA provides statutory guidelines for prudent management, investment, and expenditure of donor-restricted endowment funds held by charitable organizations.

The Foundation’s interpretation of its fiduciary responsibilities for donor-restricted endowments under UPMIFA requirements, barring the existence of any donor-specific provisions, is to preserve intergenerational equity to the extent possible and to produce maximum total return without assuming inappropriate risks. The investment policies governing these funds look beyond short-term fluctuations in economic cycles toward an investment philosophy that provides the best total return over very long time periods.

UPMIFA specifies that unless stated otherwise in the gift agreement, donor-restricted assets in an endowment fund are restricted assets until appropriated for expenditure by the institution. Barring the existence of specific donor instruction, the Foundation’s policy is to classify as net assets with donor restrictions the historical value of donor-restricted endowment funds, which includes (a) the original value of gifts donated to the endowment, (b) the original value of subsequent gifts to the endowment, and (c) changes to the endowment made in accordance with the direction of the applicable donor gift instrument. Also included in net assets with donor restrictions is accumulated appreciation on donor restricted endowment funds which are available for expenditure in a manner consistent with the standard of prudence prescribed by UPMIFA, and deficiencies associated with funds where the value of the fund has fallen below the original value of the gift.

From time to time, the fair value of assets associated with donor-restricted endowment funds may fall below the level that the donor or UPMIFA requires the Foundation to retain as a fund of perpetual duration. In accordance with GAAP, deficiencies of this nature are reported in expendable net positions. As of June 30, 2019, funds with original gift values of $1,207, fair values of $1,187, and deficiencies of $20 were reported in expendable net positions. There were no such deficiencies of this nature as of June 30, 2018.

(Dollars in Thousands)

Note 10. Discretely Presented Component Unit (Continued)

Net position classification: Resources of the Foundation are classified for reporting purposes into net positions based on the existence or absence of donor-imposed restrictions and state law. Net positions unrestricted represent the portion of funds over which the Foundation has discretionary control as there are no donor-imposed purposes or time restrictions on how the funds may be spent. Restricted expendable net positions include gifts and grants for which donor imposed restrictions have not been met (primarily future capital projects or gifts for educational purposes), earnings from long term investments which are donor restricted, and time restricted trust activity. Restricted nonexpendable net positions include gifts which generally require, by donor restriction, that the corpus be invested in perpetuity. The donors generally permit the use of a portion of the income earned to be utilized for specific purposes based on their restrictions.

Note 11. Commitments

At June 30, the University is committed to future contractual obligations for capital expenditures of approximately $67,200 and $114,700, respectively. These commitments are being funded from the following sources:

	2019	2018
Contractual obligations:		
Approved state appropriations not expended	$ 7,480	$ 6,804
University funds and bond proceeds	59,725	107,852
Total	$ 67,205	$ 114,656

Note 12. Risk Management

The University's employee health insurance program is a self-insured plan. Administration of the plan is provided by United Medical Resources, a United Healthcare company. Employees are offered two plan options, a Traditional PPO Plan or a High Deductible Health Plan with a Health Savings Account.

Health insurance claims are accrued based upon estimates of the claims liabilities. These estimates are based on past experience, current claims outstanding, and medical inflation trends. As a result, the actual claims experience may differ from the estimate. An estimate of claims incurred but not reported in the amount of $2,908 and $2,970 is included in the accrued salaries and wages as of June 30, 2019 and 2018, respectively. The change in the total liability for actual and estimated claims is summarized below at June 30:

	2019	2018	2017
Liability at beginning of year	$ 2,970	$ 2,369	$ 2,888
Claims incurred	42,197	38,441	33,175
Claims paid	(42,316)	(38,352)	(33,186)
Change in estimated claims incurred but not reported	57	512	(508)
Liability at end of year	$ 2,908	$ 2,970	$ 2,369

Note 12. Risk Management (Continued)

To reduce potential loss exposure, the University has established a reserve for health insurance stabilization of $15,000.

The University participates in a consortium with all other Ohio state-assisted universities (excluding The Ohio State University) for the acquisition of commercial property and liability insurance. The name of the consortium is the IUC-Risk Management & Insurance Consortium. The commercial property program's loss limit is $1,750,000 and the general/auto liability loss limit is $50,000. The property insurance program has been in place for 24 years during which time Miami University has had two material losses above the insurance policy deductible of $350. The property pool deductible for individual universities is $100. The liability program has been in place for 19 years during which time Miami University has had three losses above the pool deductible. The current self-insured retention for the liability program is $1,000. The educator's legal liability loss limit is $50,000. The University also participates with the other consortium universities for the purchase of commercial insurance for other risks.

The State of Ohio self-insures worker's compensation benefits for all state employees, including University employees. Under the direction of the Ohio Bureau of Worker's Compensation and the University, Careworks and Sheakley UniComp, Inc. assist in the administration and disposition of worker's compensation claims.

Note 13. Contingencies

The University receives grants and contracts from certain federal, state, and local agencies to fund research and other activities. The costs, both direct and indirect, that have been charged to the grants or contracts are subject to examination and approval by the granting agency. It is the opinion of the University's administration that any disallowance or adjustment of such costs would not have a material effect on the financial statements.

The University is presently involved as a defendant or codefendant in various matters of litigation. The University's administration believes that the ultimate disposition of any of these matters would not have a material adverse effect upon the financial condition of the University.

Required Supplementary Information

Miami University

Retirement Plan Data
Years Ended June 30, 2019, 2018, 2017, 2016 and 2015
(In Thousands)

For the Year Ended June 30, 2019	STRS Ohio	OPERS Traditional	OPERS Combined
University's proportion of the net pension liability (asset)	0.776608%	0.661199%	0.674437%
University's proportionate share of the net pension liability (asset)	$ 170,759	$ 167,611	$ (755)
University's covered payroll	76,102	91,506	3,155
University's proportionate share of the net pension liability (asset) as a percentage of its covered payroll	224.38%	183.17%	-23.93%
Plan fiduciary net position as a percentage of the total pension liability	77.30%	74.70%	126.64%

For the Year Ended June 30, 2018			
University's proportion of the net pension liability (asset)	0.772173%	0.663383%	0.684872%
University's proportionate share of the net pension liability (asset)	$ 183,431	$ 104,072	$ (932)
University's covered payroll	74,262	89,066	2,774
University's proportionate share of the net pension liability (asset) as a percentage of its covered payroll	247.01%	116.85%	-33.60%
Plan fiduciary net position as a percentage of the total pension liability	75.30%	84.66%	137.28%

For the Year Ended June 30, 2017			
University's proportion of the net pension liability (asset)	0.762848%	0.664940%	0.665441%
University's proportionate share of the net pension liability (asset)	$ 255,348	$ 150,997	$ (370)
University's covered payroll	71,889	86,004	2,679
University's proportionate share of the net pension liability (asset) as a percentage of its covered payroll	355.20%	175.57%	-13.81%
Plan fiduciary net position as a percentage of the total pension liability	66.80%	77.25%	116.55%

For the Year Ended June 30, 2016			
University's proportion of the net pension liability (asset)	0.750872%	0.651198%	0.664254%
University's proportionate share of the net pension liability (asset)	$ 207,519	$ 112,796	$ (323)
University's covered payroll	67,969	83,037	2,475
University's proportionate share of the net pension liability (asset) as a percentage of its covered payroll	305.31%	135.84%	-13.05%
Plan fiduciary net position as a percentage of the total pension liability	72.10%	81.08%	116.90%

For the Year Ended June 30, 2015			
University's proportion of the net pension liability (asset)	0.718940%	0.662272%	0.650661%
University's proportionate share of the net pension liability (asset)	$ 174,871	$ 79,877	$ (251)
University's covered payroll	67,064	80,131	2,327
University's proportionate share of the net pension liability (asset) as a percentage of its covered payroll	260.75%	99.68%	-10.79%
Plan fiduciary net position as a percentage of the total pension liability	74.70%	86.45%	114.83%

Note: The University has presented as many years as information is available.

(Continued)

Miami University

Retirement Plan Data (Continued)
Year Ended June 30, 2019
(In Thousands)

	STRS Ohio				
	Contractually Required Contribution	Contributions in Relation to the Contractually Required Contribution	Contribution Deficiency (Excess)	University's Covered Payroll	Contributions as a Percentage of Covered Payroll
2010	$ 8,609	$ 8,609	$ -	$ 66,222	13.0%
2011	8,415	8,415	-	64,727	13.0%
2012	8,195	8,195	-	63,038	13.0%
2013	8,095	8,095	-	62,272	13.0%
2014	8,218	8,218	-	63,215	13.0%
2015	8,718	8,718	-	67,064	13.0%
2016	9,516	9,516	-	67,969	14.0%
2017	10,064	10,064	-	71,889	14.0%
2018	10,397	10,397	-	74,262	14.0%
2019	10,654	10,654	-	76,102	14.0%

	OPERS Traditional, Combined and Member-Directed				
	Contractually Required Contribution	Contributions in Relation to the Contractually Required Contribution	Contribution Deficiency (Excess)	University's Covered Payroll	Contributions as a Percentage of Covered Payroll
2010	$ 7,641	$ 7,641	$ -	$ 87,443	8.7%
2011	8,035	8,035	-	84,585	9.5%
2012	8,492	8,492	-	84,266	10.1%
2013	9,853	9,853	-	85,101	11.6%
2014	11,458	11,458	-	87,598	13.1%
2015	10,925	10,925	-	86,845	12.6%
2016	10,877	10,877	-	90,034	12.1%
2017	11,778	11,778	-	93,543	12.6%
2018	13,180	13,180	-	96,874	13.6%
2019	14,046	14,046	-	99,651	14.1%

Miami University

OPEB Plan Data
Years Ended June 30, 2019
(In Thousands)

For the year ended June 30, 2019	STRS Ohio	OPERS
University's proportion of the net OPEB (asset) liability	0.776608%	0.622400%
University's proportionate share of the net OPEB (asset) liability	$ (12,479)	$ 81,146
University's covered payroll	76,102	99,651
University's proportionate share of the net OPEB (asset) liability as a percentage of its covered payroll	-16.40%	81.43%
Plan fiduciary net position as a percentage of the total OPEB (assets) liability	176.00%	46.33%
For the year ended June 30, 2018		
University's proportion of the net OPEB liability	0.772173%	0.672220%
University's proportionate share of the net OPEB liability	$ 30,127	$ 72,999
University's covered payroll	74,262	96,874
University's proportionate share of the net OPEB liability as a percentage of its covered payroll	40.57%	75.35%
Plan fiduciary net position as a percentage of the total OPEB liability	47.10%	54.14%

	STRS Ohio				
	Contractually Required Contribution	Contributions in Relation to the Contractually Required Contribution	Contribution Deficiency (Excess)	University's Covered Payroll	Contributions as a Percentage of Covered Payroll
2010	$ 662	$ 662	$ -	$ 66,222	1.0%
2011	647	647	-	64,727	1.0%
2012	630	630	-	63,038	1.0%
2013	623	623	-	62,272	1.0%
2014	632	632	-	63,215	1.0%
2015	671	671	-	67,064	1.0%
2016	-	-	-	67,969	0.0%
2017	-	-	-	71,889	0.0%
2018	-	-	-	74,262	0.0%
2019	-	-	-	76,102	0.0%

	OPERS Traditional, Combined and Member-Directed				
	Contractually Required Contribution	Contributions in Relation to the Contractually Required Contribution	Contribution Deficiency (Excess)	University's Covered Payroll	Contributions as a Percentage of Covered Payroll
2010	$ 4,663	$ 4,663	$ -	$ 87,443	5.3%
2011	3,807	3,807	-	84,585	4.5%
2012	3,371	3,371	-	84,266	4.0%
2013	2,129	2,129	-	85,101	2.5%
2014	876	876	-	87,598	1.0%
2015	1,302	1,302	-	86,845	1.5%
2016	1,801	1,801	-	90,034	2.0%
2017	1,403	1,403	-	93,543	1.5%
2018	474	474	-	96,874	0.5%
2019	-	-	-	99,651	0.0%

Note: The University has presented as many years as information is available.

Changes in assumptions (Pension): The Retirement Board of OPERS approved one change to the actuarial assumptions in 2018. The long term expected rate of return was reduced from 7.50 percent to 7.20 percent. There were no other changes in assumptions compared to the prior year. The Retirement Board of STRS Ohio made no changes in assumptions in 2018 compared to the prior year.

Changes in assumptions (OPEB): The Retirement Board of OPERS approved one change to the actuarial assumptions in 2018. The long term expected rate of return was reduced from 6.50 percent to 6.00 percent. There were no other changes in assumptions compared to the prior year for OPERS. The Retirement Board of STRS increased the discount rate from the blended rate of 4.13 percent to the long-term expected rate of return of 7.45 percent.

Changes to benefit terms: Effective July 1, 2017, the Cost of Living Adjustment (COLA) was reduced to zero for STRS Ohio.

Changes of assumptions: The Retirement Board of STRS Ohio approved several changes to the actuarial assumptions in 2017. The long term expected rate of return was reduced from 7.75 percent to 7.45 percent, the inflation assumption was lowered from 2.75 percent to 2.50 percent, the payroll growth assumption was lowered to 3.00 percent, and total salary increases rate was lowered by decreasing the merit component of the individual salary increases, in addition to a decrease of 0.25 percent due to lower inflation. The healthy and disabled mortality assumptions were updated to the RP-2014 mortality tables with generational improvement scale MP-2016. Rates of retirement, termination and disability were modified to better reflect anticipated future experience.

Miami University

Uniform Guidance Requirements

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Miami University

Schedule of Expenditures of Federal Awards
For the Year Ended June 30, 2019

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Provided to Subrecipients	Total Federal Expenditures
STUDENT FINANCIAL ASSISTANCE CLUSTER				
U.S. Department of Education:				
Supplemental Educational Opportunities Grant Program	84.007	N/A	$ -	$ 823,106
College Work Study Program Federal Funds 18/19	84.033	N/A	-	535,505
Federal Perkins Loan Program:				
Loans Outstanding at the beginning of the year			-	5,809,107
Loans made during the year			-	-
Total Federal Perkins Loan Program			-	5,809,107
Federal PELL Grant Program	84.063	N/A	-	15,297,094
Federal Direct Student Loan Program	84.268	N/A	-	79,111,810
TEACH Grant Program	84.379	N/A	-	1,116,872
Total U.S. Department of Education			-	102,693,494
Total Student Financial Assistance Cluster			-	102,693,494
RESEARCH AND DEVELOPMENT CLUSTER				
U.S. Department of Agriculture:				
Using NMR Metabolomics to Examine the Role of Anaerobic Soil Disingection in Promoting Disease Resistance in Vegetable Crops	10.001	N/A	-	13,267
Educating from the Ground Up: Promoting Integrated and Experiential Learning for Resilient Food Systems at Miami University	10.326	N/A	-	25,771
Evaluation of Educating from the Ground Up: Promoting Integrated and Experiential Learning for Resilient Food Systems at Miami University	10.326	N/A	-	6,364
Total U.S. Department of Agriculture Direct Programs			-	45,402
Pass-Through Programs From:				
University of Buffalo: Regulatory Element Discovery in Sequenced Insect Species	10.31	R1177604	-	169
Total U.S. Department of Agriculture			-	45,571
U.S. Department of Commerce:				
George Washington University: Coverage, Capacity, and Resilience Enhancement in Limited Public Safety Networks	11.609	17-S17	-	43,545
U.S. Department of Defense:				
Imaging Urothelial Integrity with Contrast-Sensitive Optical Coherence Tomography for Diagnosis of Interstitial Cystitis	12.42	N/A	-	78,002
Summer Undergraduate Mathematical Sciences Research Institute (SUMSRI) 2018 and 2019	12.901	N/A	-	92,872
Complete Reductive Defluorination of Poly- and Perfluoroalkyl Substances (PFASs) by Hydrated Electrons Generated From 3-Indole-Acetic-Acid in Chitosan-Modified Montmorillonite	12.XXX	N/A	8,828	61,140
Software-Defined Multi-Functional LPI/LPD Adaptive Radar for Network-Centric Applications	12.XXX	N/A	-	74,796
Noise-Enabled High-Efficiency Cold Atom Nano-Ratchets	12.XXX	N/A	-	59,989
Total U.S. Department of Defense Direct Programs			8,828	366,799
Pass-Through Programs From:				
Florida State University: Reconnecting: Improving Interoception To Reduce Suicidal Ideation And Behavior	12.420	R02106	10,431	76,478
Wright Brothers Institute Inc: Miami-AFRL Technology Commercialization Accelerator	12.800	WBSC 7255 - MIAMI U	-	100,000
Florida State University: Characterizing The Dynamics Of Acute Suicidal Affective Distrubance: A BetweenSubjects ANd Intra-Individual Network Approach	12.42	R02111	-	23,117
Denver Research Institute: Interoceptive Deficits and Suicidality	12.42	MSRC-FY17-02	-	109,804
Performance Analysis of a Dual-Use Secure RadarComm System in NLOS Environments	12.63	RY-MU-18-10-AFRL	-	23,068
Universal Technology Corporation: Research and Development of Advanced-Propulsion-Driven Technologies: Increase Thrust-to-Weight Ratio	12.8	18-7900-0008-38-C2	-	12,471
JRM: Development of Lightmap Rendering Technology to Advance Infrared Simulation Capabilities for Training Applications	12.8	MUFA865017P6858	-	18,322
MacAulay-Brown: Behavioral Modeling for Ambiguous and Unknown Radar Emitter Identification Using Stochastic Grammars	12.XXX	DSC3174-01	-	35,000
Utility Functions for Uncovering Unknown Unknowns	12.XXX	ICA2018-EXT-001	-	9,797
Sonalysts: A Software Toolkit For Predicting The Neural Signatures Of Cognitive States(Phase I)	12.XXX	201900014-S	-	1,841
Total U.S. Department of Defense Pass-Through Programs			10,431	409,898
Total U.S. Department of Defense			19,259	776,697
U.S. Department of the Interior:				
Investigating Induced Seismicity Associated with Hydraulic Fracture Stimulations in Oklahoma	15.807	N/A	-	15,141
Investigating Relationships Between Hydraulic Fracture Injection Parameters and Induced Seisimicity	15.807	N/A	-	75,178
Acid Precipitation Monitoring Site OH 99	15.808	N/A	-	648
Total U.S. Department of the Interior Direct Programs			-	90,967
Pass-Through Programs From:				
ASGFC: Conservation Genomics of Lampsilis Rafinesqueana (Fresh Water Mussel) (Arkansas)	15.615	G60404	-	9,858
KDWPT: Conservation Genomics of Lampsilis Rafinesqueana (Fresh Water Mussel) (KANSAS)	15.615	E-32-R-1	-	18,488

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Miami University

Schedule of Expenditures of Federal Awards (Continued)
For the Year Ended June 30, 2019

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Provided to Subrecipients	Total Federal Expenditures
Conservation Genomics of Lampsilis Rafinesqueana (Fresh Water Mussel) (Missouri)	15.615	NO. 419	$ -	$ 5,699
NMDGF: Conservation Biology of New Mexico Aquatic Invertebrates	15.615	G60392	-	41,229
ODWC: Conservation Genomics of Lampsilis Rafinesqueana (Fresh Water Mussel) (OKLAHOMA)	15.615	F18AP00228	-	743
Texas A & M:Thermal Tolerance of Popenaias Popeii (Texas Hornshell) From the Rio Grande, Texas	15.615	M1803673	-	7,142
KWA: Conservation Genetics of the Orange-Foot Pimpleback (Plethobasus Cooperianus)	15.657	G60388	-	18,552
Total U.S. Department of Interior Pass-Through Programs			-	101,711
Total U.S. Department of Interior			-	192,678
U.S. Department of Justice:				
Pass-Through Programs From:				
NIJ: Development of a Novel Human Materials Hyperspectral Remote Sensing Tool for Forensic Investigations and Operations for US Law Enforcement	16.56	2015-DN-BX-K011	-	125,676
BCMHARS: Research Partner for Comprehensive Opioid Abuse Site-Based Program (COAP)	16.754	G03135	-	11,995
Total U.S. Department of Justice			-	137,671
National Aeronautics Space Administration:				
Land-cover/Land-use Change in Southern Vietnam Through the Lenses of Conflict, Religion, and Politics, 1980s to Present	43.001	N/A	62,018	114,165
Pass-Through Programs From:				
National Institute of Aerospace: FIRE Chem: Fueled from Below: Linking Fire, Fuels and Weather of the Atmosphere	43.001	X18-7205-MU	-	32,289
University of Houston: The Search for Nebular Heterogeneity and the Compositions of Terrestrial Planetary Materials Usign Nd, Sm and Os Isotopes	43.001	R-17-0000	-	5,129
Electrical Discharge Machining Induced Microstructural Changes and its Effect on Fracture and Fatigue Properties if Ti-6AI-4V for Space Shuttle Applications	43.008	G03046	-	1,164
Total National Aeronautics Space Administration Pass-Through Programs			-	38,582
Total National Aeronautics Space Administration			62,018	152,747
National Endowment for Humanities:				
Breath of Life 2.0: Creating a "Second Breath" for Indigenous Language Revitalization	45.169	N/A	2,606	63,568
Evaluation of Breath of Life 2.0: Creating a 'Second Breath' for Indigenous Language Revitalization	45.169	N/A	-	2,973
Total National Endowment for Humanities Direct Programs			2,606	66,541
Pass-Through Programs From:				
OHC: Austin-Magie Farm and Mill District Oxford, Ohio: Digital Humanities Map & Learning Resources	45.129	MA17-012	-	10,950
Total National Endowment for Humanities			2,606	77,491
Institute of Museum and Library Services:				
State Library of Ohio: High School to Workforce: Statewide Diversity Pathway for Library and Data Related Professions	45.31	N/A		20,000
National Science Foundation:				
A Preliminary Investigation of a Social Cognitive Intervention in Early Courses	47.041	N/A	-	83,699
Time-Resolved Spectroscopic Study of Diatomic Molecular Sodium	47.049	N/A		58,311
Probing Substrate/Inhibitor to Metalloenzymes Using EPR	47.049	N/A	-	215,754
REU Site: Reserch Experience for Undergraduates in Chemistry and Biochemistry at Miami University	47.049	N/A	-	48,444
REU Site: Summer Undergraduate Research in Chemistry and Biochemistry at Miami University	47.049	N/A	-	21,019
Ortho-Phenylenes in Complex Foldamer Architectures	47.049	N/A	-	121,237
REU Site: Physics at Miami University	47.049	N/A	-	34,729
CAREER: Dynamic Polymer Materials with Advanced Polymer Architecture and Carbon Nanotube Reinforcements	47.049	N/A	-	68,436
Chemistry Early Career Investigator Workshop	47.049	N/A	-	67,581
Large Cardinals and Small Sets	47.049	N/A	-	890
Large Cardinals and Absoluteness	47.049	N/A	-	40,013
MRI: Acquisition of a Pulsed EPR Spectrometer	47.049	N/A	-	242,433
Investigating Membranw Proteins With Magnetic Resonance Spectroscopy	47.049	N/A	-	172,242
Great Plains Operator Theory Symposium 2018	47.049	N/A	-	36,809
Does Proximity of Hydraulic Fracturing and Wastewater Disposal to Basement Increase the Likelihood of Induced Seismicity in the Central and Eastern US?	47.05	N/A	-	53,157
Collaborative Research: The Role of Phyllosilicate Minerals in mediating the Temperature Sensitivity of Soil Organic Matter Decomposition	47.05	N/A	-	96,249
Collaborative Research: Winter Survival Mechanisms and Adaptive Genetic Variation in an Antarctic Insect	47.05	N/A	-	24,448
GP-EXTRA: Advancing Undergraduate Geosciences Through Integrated Training Experiences (AUGITE)	47.05	N/A	-	44,673
Collaborative Research: Development and Calibration of the Oxygen Isotope Systematics of Small Terrestrial Gastropods	47.05	N/A	-	7,143
Collaborative Research: The Evolutionary Significance of Biotic Interactions: A Comparative Study Utilizing Echinoid Associated Traces	47.05	N/A	-	14,124
Collaborative Research: Mesozoic Tethyan Paleocommunity Dynamics: Modeling Complexity and Stability During Times of Biotic Escalation and Community Restructuring	47.05	N/A	-	3,486
Origin & Eruptive History of Quaternary Volcanism in Nosy Be and Itasy-Askaratra, Madagascar	47.05	N/A	-	17,179

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Schedule of Expenditures of Federal Awards (Continued)
For the Year Ended June 30, 2019

Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Provided to Subrecipients	Total Federal Expenditures
Incoherent Scatter Radar Study of the F1 Region Composition, Coupling, Dynamics and Energetics	47.05	N/A	$ -	$ 28,560
Realistic Navigation in the Third Dimension Using Low Cost, Portable, Wearable Immersive Virtual Environment Systems	47.07	N/A	-	4,951
REU Site: Ecology in Human-Dominated Landscapes	47.074	N/A	-	88,948
Neuromodulatory Control of switching between SIngle and Dual Oscillatory Network States	47.074	N/A	-	69,439
Ammonia Oxidizers and Their Heterotrophic Friends	47.074	N/A	-	94,687
RUI: Methanogenesis from Quaternary Amines	47.074	N/A	-	81,269
CAREER: Protein Quality Control at the Membrane	47.074	N/A	-	34,036
MRI: Acquisition of a Fluorescence Activated Cell Sorting System to Expand Synergistic Research and educational Opportunities	47.074	N/A	-	421
Lobes or Gills, Exploring the Origin of Insect Wings	47.074	N/A	-	121,988
LTREB Renewal: Response of a Reservoir Ecosystem to Declining Subsides of Nutrients and Detritus	47.074	N/A	-	14,550
Collaborative Research: LTREB: Will Increases in Dissolved Organic Matter Accelerate a Shift in Trophic Status Through Anoxia-Driven Positive Feedbacks in an Oligotrophic Lake?	47.074	N/A	-	27,494
Breath of Life Archival Institute for Indigenous Languages	47.075	N/A	10	10
National Science Foundation: The Face of Humanity: Configural Face Processing and Dehumanization	47.075	N/A	1,743	26,693
Evaluation of Breath of Life Archival Institute for Indigenous Languages	47.075	N/A	-	21,532
Miami University Robert Noyce Scholars Program	47.076	N/A	-	65,996
Developing Assessments for Core Chemistry Concepts: Measuring Student Understanding of Multiple External Representations through Cluster Analysis	47.076	N/A	-	196,265
Staying in STEM: Examining Communal Goal Congruity Processes in the Retention of Women	47.076	N/A	-	18,576
Collaborative Research: Engaged Student Learning - Design and Development Level II: Using a Cyberlegarning Environment to Improve Student Learning and Engagement in Software Courses	47.076	N/A	-	58,602
Electronics and Computing Service Scholars	47.076	N/A	-	146,799
Graduate Research Fellowship Program (GRFP)	47.076	N/A	-	169,551
IGE: Professional and Identity Development in Graduate School: Bringing Transformative Practices in PD to Doctoral Students in Chemistry & Psychology	47.076	N/A	-	70,212
Evaluation of Further Development and Testing of the Target Inquiry Model for Middle and High School Science Teacher Professional Development	47.076	N/A	-	6,895
Evaluation of Electronics and Computing Service Scholars	47.076	N/A	-	2,533
Evaluation of Miami University Robert Noyce Scholars Program	47.076	N/A	-	13,055
Collaborative Research: Further Development and Testing of the Target Inquiry Model for Middle and High School Science Teacher Professional Development	47.076	N/A	-	39,489
Total National Science Foundation Direct Programs			1,753	2,874,607
Pass-Through Programs From:				
Cornell University: Evaluation of the Center for Bright Beams	47.049	75548-10842	-	29,667
Univ of Georgia: Collaborative Research: Probing the Metabolic and Electrical Interactions of Cable Bacteria in Anoxic Sediments	47.05	SUB00001748	-	33,469
Michigan State University: Evaluation of CS10K- Leading the Way to CS10K: Assessing a Just-in-Time Professional Development Approach for Teacher Knowledge Growth in Computer Science	47.07	RC104385MU	-	569
Cary Institute of Ecosystems Studies: LTER: Long-Term Ecological Research at the Hubbard Brook Experimental Forest	47.074	3298-200201815	-	1,246
Cary Institute of Ecosystem Studies:LTER: Long-Term Ecological Research at the Hubbard Brook Experimental Forest	47.074	3340/200201865	-	26,304
Colorado State University: Unlocking Microbial Condensed Tannin Resistance Mechanisms: Scaling from Enzymes to Biomes	47.074	G-92775-02	-	33,037
Cornell University: Digitization TCN: Collaborative: The Microfungi Collections Consortium: A Networked Approach to Digitizing Small Fungi with Large Impacts on the Function and Health of Ecosystems	47.074	74983-10505	-	6,217
OSU: Unlocking Microbial Condensed Tannin Resistance Mechanisms: Scaling From Enzymes to Biomes (NSF-OSU Hagerman)	47.074	60064757	-	5,255
University at Buffalo: Evaluation of Biology with X-Ray Lasers	47.074	R01092122	-	107,794
University of Colorado Boulder: LTER: Ecosystem Response to Amplified Lnadscape Connectivity in the McMurdo Dry Valleys, Antarctica	47.074	1000861768	-	76,463
University of Illinois: Genomic Mechanisms of Domesticating a Y Chromosome in Papaya	47.074	15997	-	27,826
University of Michigan: Using Natural History Museum Collections to Document the Occurrence Through Space and Time of Aquatic Non-Indigenous Fish, Mollusks, Algae, and Plants Threatening North America's Great Lakes	47.074	3003198912	-	3,756
Univ of MI: Digitization TCN: Collaborative Research: The Pteridological Collections Consortium: An Integrative Approach to Pteridophyte Diversity Over the Last 420 Million Years	47.074	SUBK00008286	-	2,572
Ashland University: Evaluation of Science Scholars Program: Opening the Science Career Pipeline Through Enhanced Engagement and Support	47.076	1643489	-	2,735
ONU: Ohio Northern University NOYCE Scholars Program	47.076	2GF038	-	10,292
Ohio State University: Ohio LSAMP Consortium	47.076	60057047-MU	-	90,658
Purdue University: Building and Broadening Understanding of Engineering Practices Among Elementary Presevice Teachers	47.076	4101-77096	-	34,439
University of Cincinnati: Evaluation of University of Cincinnati MSP (CEEMS)	47.076	L16-4500088964	-	4,484
University of Cincinnati: NSF ITEST Strategies: Trans-disciplinary Education in Biology and Engineering Technology	47.076	ITEST	-	3,101
UC: Evaluation of STEM in the Playscape: Building Knowledge for Educational Practice	47.076	010137-003	-	10,670
University at Buffalo: Evaluation of Geotechnology Experiences for Students and Teachers (GTEST)	47.076	1614976	-	25,375
University of Georgia: Collective Argumentation Learning and Coding (CALC)	47.076	1741910	-	22,242
OSU: NSF-LSAMP Ohio Alliance - 2018-23-Kiper	47.076	N/A	-	8,664
University of Nevada Las Vegas: PIRE: Toward a Holistic and Global Understanding of Hot Springs Ecosystems: A US-China based International Collaboration	47.079	11-707D-E	-	3,221
Total National Science Foundation Pass-Through Programs			-	570,056
Total National Science Foundation			1,753	3,444,663
Environmental Protection Agency:				
UV-LED Photocatalytic Process for Fuel Vapor Emissions Control	66.516	83946401	-	6,383
Synthesis and Characterization of Fluorinated Hydrocarbon Anion Exchange Resins for the Extraction of Perfluorinated Chemicals	66.516	83945401	-	3,165
Total Environmental Protection Agency			-	9,548

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Provided to Subrecipients	Total Federal Expenditures
U.S. Department of Energy:				
Thylakoid Assembly and Folded Protein Transport by the Chloroplast Twin Arginine Translocation (cpTat)Pathway	81.049	N/A	$ -	$ 63,484
Dissipative Assembly of Carboxylic Acid Anhydrides for Nonequilibrium Systems Chemistry	81.049	N/A	-	306,101
Regulation of Sustained Cyclic Electron Flow (CEF) in the Photopsychrophile Chlamydomonas sp. UW0241	81.049	N/A	-	18,007
Total U.S. Department of Energy			-	387,592
U.S. Department of Education:				
Miami University Regional Campuses Student Support Services Program	84.042	N/A	-	235,980
A Mixed-Methods Study of Middle-Aged and Older Adults: Lifelong Learning, Skill Proficiencies, and Employment in the U.S. and Selected OECD Countries	84.305	N/A	160,336	371,555
Mapping Barriers to Community College Completion Among Older Learners: Identifying Malleable Factors to Improve Student Outcomes	84.305	N/A	241,860	440,400
Total U.S. Department of Education Direct Programs			402,196	1,047,935
Pass-Through Programs From:				
Ohio Department of Education: Positive Transformations for Ohio Schools: Building Statewide Positive Supports	84.184	G02503	-	118,351
Total U.S. Department of Education			402,196	1,166,286
U.S. Department of Health & Human Services:				
Strategies to Accommodate Reading in Aphasia: Using Assistive Technology to Support Reading by eople with Aphasia	93.173	N/A	86,833	171,802
Parenting, Physiological Reactivity, and Neural Markers of Anxiety in Kindergarteners	93.242	N/A	-	36,426
Text Message Support to Prevent Smoking Relapse in Community Treatment Settings	93.279	N/A	14,731	171,615
Fighting with Food: Battling Chemical Toxicity with Good Nutrition	93.389	N/A	-	13,936
Nuclear Organization During Adenovirus Infection	93.393	N/A	-	114,661
Biological/Synthetic Scaffolds for Bone Tissue Engineering	93.846	N/A	-	57,979
Central Action of Brain-Derived Neurotrophic Factor in Male and Female Rats	93.847	N/A	-	166,907
Oligodendrocyte Lineage Cell Plasticity in the Spinal Cord Following Peripheral Injury	93.853	N/A	-	95,712
Regulation of Type-I Interferon by SLAMF9	93.855	N/A	-	39,297
Acinetobacter Baumannii Gene Regulation in Respojnse to Illumination	93.859	N/A	-	26,960
EPR Structural Studies of KCNE1/KCNQ1	93.859	N/A	-	(545)
EPR Spectroscopic Studies of Membrane Proteins	93.859	N/A	-	342,842
EPR Structural Studies of KCNE1/KCNQ1	93.859	N/A	-	(188)
Triage Mechanisms for Directing Protein Refolding and Degradation	93.859	N/A	-	235,064
Transactional Neurobiological Influences on Parent-Child Kindergarten Adjustment	93.865	N/A	-	54,216
Influence of Aerobic Training and Weight Loss on Skeletal Muscle Inflammatory Markers and Muscle Protein Balance in Older Adults	93.866	N/A	-	110,505
On Determinants of Lens Regeneration	93.867	N/A	-	328,371
Exploiting Animal Models of RPE Plasticity to Unlock Human Retina Regeneration from RPE	93.867	N/A	-	262,497
The Role of FGF Receptors in Lens Development	93.867	N/A	-	284,297
NIOSH Risk Assessment Research and Reivew	93.XXX	N/A	-	30,432
Occupational Risk Assessment Research, Analysis and Review	93.XXX	N/A	-	14,699
NIOSH Data Analyses Conducted by STA 660 Class	93.XXX	N/A	-	2,800
Total U.S. Department of Health & Human Services Direct Programs			101,564	2,560,285
Pass-Through Programs From:				
National Association of Area Agencies on Aging: Information and Planning: Understanding the Capacity of the Aging Network	93.048	HHS-2015-ACL-AOA-UC-0109	-	2,275
n4a: Information and Planning: Understanding the Capacity of the Aging Network	93.048	G03136	-	45,003
Georgetown University: Quality, Private-Pay Price, and Consumer's Demand for Nursing Home Care	93.226	413466_GR413082-MU	-	24,306
University of Cincinnati: UC Psychiatry Pediatric Bipolar Research Traineeship (Green, 2018-19)	93.242	G03049	-	16,108
University of Cincinnati: UC Psychiatry Pediatric Bipolar Research Clinical Traineeship 2017-18	93.242	G02890	-	41
Butler County: SAMHSA-Butler County Commissioners Meehan/Robinson	93.243	G03143	-	34,354
ODE: Evaluation of Making Ohio AWARE: Building Statewide Mental Health First Aid Capacity	93.243	062984	-	127,052
UC: Predicting Changes in Driving Safety Performance on an Individualized Level Under Naturalistic Driving Conditions	93.262	010412-055	-	776
University of Minnesota: Multi-Level Approach to Improve Quality of Life for Minority Nursing Home Residents	93.307	POO5333353	-	23,334
MemoryLane: Creating a Dementia-Capable Community in Northwest Ohio through the Expansion of Supports and Services	93.47	G03213	-	2,349
ODM-ODA: Person-Centered Staff Engagement Project	93.636	AGE01-0000003250	-	16,443
ODM: Evaluating Long-Term Services and Supports in Ohio	93.791	G-1819-02-0071	-	(792)
The Ohio State University: Alternative Routes of Gut Microbial Methylamine Metabolism That May Limit Trimethylamine N=Oxide, A Trigger for Atherosclerosis	93.847	R01KD109345	-	71,396
UTHSCH: Telomere Length Dynamics in Relation to Changes in Adiposity and Metabolic Risk	93.847	0012700D	-	17,773
Cincinnati Childrens Hosp Medical Center: WE ENGAGE	93.859	304842	-	21,539
Developing Metallo-Beta-Lactamase Inhibitors	93.859	UTA15-000329	-	47,400
Cincinnati Children's Hospital Medical Center: Human Animal Interaction To Promote Recovery Following Pediatric Brain Injury	93.865	306521	-	7,001
Ohio State University: Structure and Genesis of Tau Aggregates	93.866	60060509	-	43,688
University of Texas Rio Grande: Genetic Epidemiology of Ocular Health aand Disease	93.867	R01EY024384	-	123,399
Greene County Educational Service Center: Safe Schools/Healthy Students Local Evaluation Plan for Greene County Educational Service Center	93.XXX	G02920	-	16,968
Total U.S. Department of Health & Human Services Pass-Through Programs			-	640,413
Total U.S. Department of Health & Human Services			101,564	3,200,698

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Federal Grantor/Pass-Through Grantor/Program or Cluster Title	Federal CFDA Number	Pass-Through Entity Identifying Number	Provided to Subrecipients	Total Federal Expenditures
U.S. Department of Homeland Security:				
Foresight- Predicting & Preventing Emergent Epidemics in Humans & Livestock	97.108	N/A	$ -	$ 91,571
Total Research and Development Cluster			589,396	9,746,758
INSTRUCTIONAL				
U.S. Department of Defense:				
Manufacturing Workshop for AFRL/Man Tech at WPAFB	12.XXX	N/A	-	23,400
U.S. Department of State:				
Miami University - Sanya University American Cultural Center	19.04	N/A	-	6,651
National Endowment for Humanities:				
Woman Citizen: Helen Hamilton Gardener and Women's Suffrage in America	45.16	N/A	-	50,400
From Warzone to Home: A Humanities Dialogue	45.162	N/A	-	70,755
Total National Endowment for Humanities			-	121,155
U.S. Department of Education:				
Miami University Regionals - Upward Bound Program	84.047	N/A	-	266,861
Miami University: CCAMPIS Scholarships for Low Income Undergraduate Students on Three Campuses	84.335	N/A	-	45,336
Miami University: CCAMPIS Subsidies for Low-Income Student-Parents on Three Campuses	84.335	N/A	-	51,088
Total U.S. Department of Education Direct Programs			-	363,285
Pass-Through Programs From:				
National Writing Project: 2016-2017 NWP SEED Professional Development in a High-Need School	84.367	92-OH01-SEED2016-HNEVAL	-	5,055
NWP Salary Support for Beth Rimer 2018-2019	84.367	BRIMER-2018	-	20,084
ODHE: Writing and Inquiry Stories to Explore Science II (WISE Science II)	84.367	16-18	-	2,349
2018-2019 Year 2 i3 Scale-Up C3WP Advanced Institute for Upper Elementary	84.411	92-OH-01-2018I3C3WP	-	10,176
2018-19 i3 C3WP High-Need School PD	84.411	92-OH01-2018I3C3WP	-	45,104
NWP:2019-20 Year 3 i3 Scale-up C3WP Grant	84.411	92-OH01-2019I3C3WP	-	1,019
Total U.S. Department of Education Pass-Through Programs			-	83,787
Total U.S. Department of Education			-	447,072
Total Instructional			-	598,278
PUBLIC SERVICE				
U.S. Department of Justice:				
OVW Reducing Campus SIV	16.525	N/A	-	20,204
U.S. Department of State:				
Institute for Training and Development: USDOS-ITD Albarran	19.009	N/A	-	10,994
USDOS-ITD Albarran	19.009	N/A	-	174,385
Total U.S. Department of State			-	185,379
National Highway Traffic Safety:				
OVI Countywide Task Force	20.XXX	N/A	-	5,946
National Endowment for the Arts:				
Arts Midwest: 2018-19 Arts Midwest Touring Fund	45.025	N/A	-	2,700
U.S. Department of Health & Human Services:				
Pass-Through Programs From:				
ODMHAS: Systems of Care Summit: Ohio, The Heart of it All	93.104	1900498	-	42,000
Cincinnati Children's Hospital Medical Center: Children's Hospital (DHHS) LEND Traineeship 2018-19	93.11	G03054	-	16,108
ODMHAS: Systems of Care Summit: Ohio, The Heart of It All	93.243	1900499	-	29,917
Ohio Department of Education:Making Ohio AWARE: Building Statewide Mental Health First Aid Capacity	93.243	G02502	-	412,991
Ohio Department of Mental Health and Addiction Services: Hosting 2018 OPEC Conference	93.959	1800365	-	6,261
Total U.S. Department of Health & Human Services			-	507,277
Office of Public Affairs:				
Pass-Through Programs From:				
Equitable Sharing	97.XXX	N/A	-	13,432
ICE-HSI: Reimbursement of Joint Operations Expenses from the Treasury Forfeiture Fund	97.XXX	N/A	-	(436)
Total Office of Public Affairs			-	12,996
Total Public Service			-	734,502
Total Expenditures of Federal Awards			$ 589,396	$ 113,773,032

See notes to the schedule of expenditures of federal awards

Note 1. Basis of Presentation

The accompanying schedule of expenditures of federal awards (the Schedule) includes the federal award activity of Miami University (the University) under programs of the federal government for the year ended June 30, 2019. The information in this Schedule is presented in accordance with the requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Because the Schedule presents only a selected portion of the operations of the University, it is not intended to and does not present the financial position, changes in net position, or cash flows of the University.

Note 2. Summary of Significant Accounting Policies

Expenditures reported on the Schedule are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance, wherein certain types of expenditures are not allowable or are limited as to reimbursement. Negative amounts shown on the Schedule represent adjustments or credits made in the normal course of business to amounts reported as expenditures in prior years.

Note 3. Indirect Cost Rate

The University has elected not to exercise its option to use the 10-percent de minimis indirect cost rate due to the fact that the University has an existing approved indirect cost rate.

Note 4. Federal Perkins Loan Program

The Federal Perkins Loan Program listed subsequently is administered directly by the University and balances and transaction relating to this program are included in the University's financial statements. There were no loans made during the current year. The balances of loans outstanding at June 30, 2019 consist of:

Program Name	Outstanding Balance at July 1, 2018	New Loans Issued	Repayments of Student Loans	Outstanding Balance at June 30, 2019
Federal Perkins Loan Program	$ 5,809,107	$ -	$ (849,740)	$ 4,959,367

Note 5. Federal Direct Student Loans

The University also participates in the Federal Direct Student Loan Program, which includes subsidized and unsubsidized Federal Stafford Loans "Stafford" and Federal PLUS Loans "PLUS". New loans processed for students during the year ended June 30, 2019, were as follows:

Federal Direct Student Loan Program	
Stafford:	
Subsidized	$ 20,731,534
Unsubsidized	33,653,192
GLPS	286,262
PLUS	24,440,822

The value of the loans issued for the Federal Direct Student Loan Program is based on disbursed amounts. The University is responsible only for the performance of certain administrative duties with respect to the Federally Guaranteed Student Loan Programs and, accordingly, balances and transactions relating to the loan programs are not included in the University's basic financial statements. Therefore, it is not practical to determine the balance of loans outstanding to students and former students of Miami University at June 30, 2019.

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

President and Board of Trustees of Miami University

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities and the discretely presented component unit of Miami University (the University), as of and for the year ended June 30, 2019, and the related notes to the financial statements, which collectively comprise the University's basic financial statements and the related notes to the financial statements, and have issued our report thereon dated October 15, 2019.

This report does not extend to the Miami University Foundation due to the Foundation issuing a separate report on Internal Control over Financial Reporting and on Compliance and Others Matters Based on an Audit of Financial Statements Performed in Accordance with *Government Auditing Standards* dated October 15, 2019.

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) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinion 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 entity's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

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

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

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.

RSM US LLP

Cleveland, Ohio
October 15, 2019

Report On Compliance For Each Major Federal Program; And Report On Internal Control Over Compliance Required By The Uniform Guidance

Independent Auditor's Report

President and Board of Trustees of Miami University

Report on Compliance for Each Major Federal Program
We have audited Miami University's (the University) compliance with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the University's major federal programs for the year ended June 30, 2019. The University's major federal programs are identified in the summary of auditor's results section of the accompanying Schedule of Findings and Questioned Costs.

Management's Responsibility
Management is responsible for compliance with federal statutes, regulations, and the terms and conditions of its federal awards applicable to its federal programs.

Auditor's Responsibility
Our responsibility is to express an opinion on compliance for each of the University's major federal programs based on our audit of the types of compliance requirements referred to above. We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* (Uniform Guidance). Those standards and the Uniform Guidance require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about the University's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances.

We believe that our audit provides a reasonable basis for our opinion on compliance for each major federal program. However, our audit does not provide a legal determination of the University's compliance.

Opinion on Each Major Federal Program
In our opinion, the University complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2019.

Report on Internal Control over Compliance

Management of the University is responsible for establishing and maintaining effective internal control over compliance with the types of compliance requirements referred to above. In planning and performing our audit of compliance, we considered the University's internal control over compliance with the types of requirements that could have a direct and material effect on each major federal program to determine the auditing procedures that are appropriate in the circumstances for the purpose of expressing an opinion on compliance for each major federal program and to test and report on internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of the University's internal control over compliance.

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

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

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

RSM US LLP

Cleveland, Ohio
October 15, 2019

Miami University

Schedule of Findings and Questioned Costs
For the Year Ended June 30, 2019

Section I - Summary of Auditor's Results

Financial Statements

Type of report the auditor issued on whether the financial statements audited were prepared in accordance with GAAP:	Unmodified			
Internal control over financial reporting:				
• Material weakness(es) identified?		Yes	X	No
• Significant deficiency(ies) identified?		Yes	X	None reported
Noncompliance material to financial statements noted?		Yes	X	No

Federal Awards

Internal control over major programs:				
• Material weakness(es) identified?		Yes	X	No
• Significant deficiency(ies) identified?		Yes	X	None reported
Type of auditor's report issued on compliance for major federal programs:	Unmodified			
Any audit findings disclosed that are required to be reported in accordance with 2 CFR 200.516(a)?		Yes	X	No

Identification of major programs:

CFDA Number(s)	Name of Federal Program or Cluster
84.007, 84.033, 84.038, 84.063, 84.268 and 84.379	Student Financial Aid Cluster
84.047	Upward Bound

Dollar threshold used to distinguish between Type A and Type B programs:	$ 750,000			
Auditee qualified as a low risk auditee?	X	Yes		No

II. Findings Relating to the Financial Statement Audit as Required to be Reported in Accordance with Generally Accepted *Government Auditing Standards*

(A) Internal Control

None reported.

(B) Compliance Findings

None reported.

III. Findings and Questioned Costs for Federal Awards

(A) Internal Control

None reported.

(B) Compliance Findings

None reported.

Miami University

Schedule of Prior Year Findings and Questioned Costs
Year Ended June 30, 2019

No matters were reported.

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OHIO AUDITOR OF STATE
KEITH FABER

MIAMI UNIVERSITY

BUTLER COUNTY

CLERK'S CERTIFICATION
This is a true and correct copy of the report which is required to be filed in the Office of the Auditor of State pursuant to Section 117.26, Revised Code, and which is filed in Columbus, Ohio.

Susan Babbitt

CLERK OF THE BUREAU

CERTIFIED
DECEMBER 19, 2019

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