MANAGEMENT'S DISCUSSION AND ANALYSIS
(UNAUDITED)

INTRODUCTION

The following discussion and analysis provides an overview of the financial position of the University of Michigan (the "University") at June 30, 2021 and 2020 and its activities for the three fiscal years ended June 30, 2021. This discussion has been prepared by management and should be read in conjunction with the financial statements and the notes thereto, which follow this section.

The University is a comprehensive public institution of higher learning with over 63,500 students and approximately 8,500 faculty members on three campuses in southeast Michigan. The University offers a diverse range of degree programs from baccalaureate to post-doctoral levels through 19 schools and colleges, and contributes to the state and nation through related research and public service programs. The University also has a nationally renowned health system which includes the University of Michigan Health System ("UMHS"), the University's Medical School, Michigan Health Corporation (a wholly-owned corporation created for joint venture and managed care initiatives) and UM Health (a wholly-owned corporation created to hold and develop the University's statewide network of hospitals, hospital joint ventures and other hospital affiliations, primarily consisting of Metropolitan Hospital). The University's health system currently includes four hospitals as well as numerous health centers and outpatient clinics.

The University consistently ranks among the nation's top universities by various measures of quality, both in general academic terms and in terms of strength of offerings, in specific academic disciplines and professional subjects. Research is central to the University's mission and a key aspect of its strong reputation among educational institutions. The University is widely recognized for the breadth and excellence of its research enterprise as well as for the exceptional level of cooperation across disciplines, which allows faculty and students to address the full complexity of real-world challenges. The University's health system also has a tradition of excellence in teaching, advancement of medical science and patient care, consistently ranking among the best health care systems in the nation.

The global outbreak of COVID-19, a respiratory disease caused by a new strain of coronavirus, was declared a pandemic by the World Health Organization on March 11, 2020 and a national emergency by the President of the United States on March 13, 2020. The outbreak and related actions taken by federal and state governments in response have impacted several aspects of the University's mission, including those related to instruction, research, patient care and other auxiliary activities.

FINANCIAL HIGHLIGHTS

The University's financial position remains strong, with total assets and deferred outflows of $30.2 billion and total liabilities and deferred inflows of $10.7 billion at June 30, 2021, compared to total assets and deferred outflows of $24.0 billion and total liabilities and deferred inflows of $9.5 billion at June 30, 2020. Net position, which represents the residual interest in the University's total assets and deferred outflows after total liabilities and deferred inflows are deducted, totaled $19.5 billion and $14.5 billion at June 30, 2021 and 2020, respectively. Changes in net position represent the University's results of operations and are summarized for the years ended June 30 as follows:

(in millions)	2021	2020	2019
Operating revenues and educational appropriations	$ 8,831	$ 8,340	$ 8,411
Federal economic relief funds	256	144	
Private gifts for operating activities	184	179	178
Operating and net interest expenses	(9,608)	(9,445)	(9,099)
	(337)	(782)	(510)
Net investment income	5,141	323	810
Endowment, capital gifts and grants, and other	176	182	223
Increase (decrease) in net position	$ 4,980	$ (277)	$ 523

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(UNAUDITED)

The results of operations reflect the University's emphasis on maintaining its national standards in academics, research and health care, within a competitive recruitment environment for faculty and health care professionals and a period of constrained state appropriations and rising health care, regulatory and facility costs. During 2021 and 2020, the University also faced significant challenges associated with the COVID-19 pandemic, which impacted a broad range of its activities. The University is addressing these risks through aggressive cost cutting and productivity gains designed to help preserve access to affordable higher education and healthcare for Michigan families. To achieve sustainable long-term goals for cost cutting and productivity gains, the University is also strategically utilizing resources to support enterprise-wide information technology projects and other initiatives.

The University's long-term investment strategy combined with its endowment spending policy serves to insulate operations from expected volatility in the capital markets and provides for a stable and predictable level of spending distributions from the endowment. The success of the University's long-term investment strategy is evidenced by strong returns over sustained periods of time and the ability to limit losses in the face of challenging markets.

The University invests its financial assets in pools with distinct risk and liquidity characteristics based on its needs, with a majority of its financial assets invested in two such pools. The University's working capital is primarily invested in relatively short duration, liquid assets, through its Daily and Monthly Portfolios, while the endowment is primarily invested, along with the noncurrent portion of insurance and benefit reserves, in an equity oriented long-term strategy through its Long Term Portfolio.

USING THE BASIC FINANCIAL STATEMENTS

The University's financial report includes: the Consolidated Statement of Net Position; the Consolidated Statement of Revenues, Expenses and Changes in Net Position; the Consolidated Statement of Cash Flows; the Statement of Fiduciary Net Position; and the Statement of Changes in Fiduciary Net Position. These basic financial statements are prepared in accordance with Governmental Accounting Standards Board ("GASB") principles, which establish standards for external financial reporting for public colleges and universities. The University's business-type activities are reported in the consolidated financial statements, while its fiduciary activities are reported in the fiduciary financial statements.

CONSOLIDATED STATEMENT OF NET POSITION

The consolidated statement of net position presents the financial position of the University at the end of the fiscal year and includes all assets, deferred outflows, liabilities and deferred inflows of the University. The difference between total assets and deferred outflows as compared to total liabilities and deferred inflows – net position – is one indicator of the current financial condition of the University, while the change in net position is an indication of whether the overall financial condition has improved or worsened during the year. The University's assets, deferred outflows, liabilities, deferred inflows and net position at June 30 are summarized as follows:

(in millions)	2021	2020	2019
Current assets	$ 4,898	$ 4,010	$ 2,885
Noncurrent assets:			
Endowment, life income and other investments	17,533	12,704	12,660
Capital assets, net	6,187	6,273	6,227
Other	445	518	500
Total assets	29,063	23,505	22,272
Deferred outflows	1,124	514	371
Current liabilities	2,538	2,374	1,708
Noncurrent liabilities	7,688	6,647	5,611
Total liabilities	10,226	9,021	7,319
Deferred inflows	454	471	520
Net position	$ 19,507	$ 14,527	$ 14,804

During 2021, the University adopted GASB Statement No. 84, *Fiduciary Activities* ("GASB 84"), which required the removal of fiduciary activities from the University's consolidated financial statements at July 1, 2019, resulting in a decrease in current assets and current liabilities of $46 million, and a decrease in endowment, life income and other investments and noncurrent liabilities of $174 million as compared to amounts previously reported. As a result of the adoption of this statement, the University's fiduciary activities are now presented within the statement of fiduciary net position and the statement of changes in fiduciary net position.

For purposes of management's discussion and analysis, comparative data for the consolidated statement of net position has been provided by reflecting the adoption of GASB 84 at June 30, 2019.

The University continues to maintain and protect its strong financial foundation. This financial health, as reflected in the University's net position, results from the prudent utilization of financial resources including careful cost controls, preservation of endowment funds, conservative utilization of debt and adherence to a long-range capital plan for the maintenance and replacement of the physical plant.

Current assets consist primarily of cash and cash equivalents, operating and capital investments and accounts receivable and increased $888 million to $4.9 billion at June 30, 2021, as compared to $4.0 billion at June 30, 2020, primarily as a result of the University's continued focus on liquidity in response to uncertainties surrounding the COVID-19 pandemic, as well as increased patient care receivables. Cash, cash equivalents and investments for operating activities totaled $2.9 billion at June 30, 2021, which represents approximately four months of total expenses excluding depreciation.

Deferred outflows represent the consumption of net assets attributable to a future period and are primarily associated with the University's obligations for postemployment benefits, debt and derivative activity, and the defined benefit pension plan for Metropolitan Hospital. Deferred outflows totaled $1.1 billion and $514 million at June 30, 2021 and 2020, respectively.

Current liabilities consist primarily of accounts payable, accrued compensation, unearned revenue, commercial paper, the current portion of bonds payable and net long-term bonds payable subject to remarketing. Current liabilities totaled $2.5 billion and $2.4 billion at June 30, 2021 and 2020, respectively.

Deferred inflows represent the acquisition of net assets attributable to a future period and are associated with the University's obligations for post-employment benefits, Metropolitan Hospital's defined benefit pension plan and irrevocable split-interest agreements. Deferred inflows totaled $454 million and $471 million at June 30, 2021 and 2020, respectively.

ENDOWMENT, LIFE INCOME AND OTHER INVESTMENTS

The composition of the University's endowment, life income and other investments at June 30 is summarized as follows:

(in millions)	2021	2020	2019
Endowment investments	$ 17,023	$ 12,313	$ 12,275
Life income investments	191	145	147
Noncurrent portion of insurance and benefits obligations investments	293	225	216
Other	26	21	22
	$ 17,533	$ 12,704	$ 12,660

The University's endowment funds consist of both permanent endowments and funds functioning as endowment. Permanent endowments are those funds received from donors with the stipulation that the principal remain intact and be invested in perpetuity to produce income that is to be expended for the purposes specified by the donors. Funds functioning as endowment consist of restricted gifts or unrestricted funds that have been allocated by the University for long-term investment purposes, but are not limited by donor stipulations requiring the University to preserve principal in perpetuity. Programs supported by endowment funds include scholarships, fellowships, professorships, research efforts and other important programs and activities.

The University uses its endowment funds to support operations in a way that strikes a balance between generating a predictable stream of annual support for current needs and preserving the purchasing power of the endowment funds for future periods. A majority of the endowment is maintained in the University Endowment Fund, a unitized pool which represents a collection of over 12,000 separate (individual) funds, the majority of which are restricted for specific purposes. The University Endowment Fund is invested in the University's Long Term Portfolio, a single diversified investment pool.

The endowment spending rule provides for distributions from the University Endowment Fund to the entities that benefit from the endowment fund. The annual distribution rate is 4.5 percent of the one-quarter lagged seven year moving average fair value of University Endowment Fund shares. This spending rule is one element of an ongoing financial management strategy that has allowed the University to effectively weather the uncertainties of challenging economic environments.

To protect endowment principal in the event of a prolonged market downturn, distributions are limited to 5.3 percent of the current fair value of fund shares. Capital gains or income generated above the endowment spending rate are reinvested so that in lean times funds will be available for distribution. In addition, departments may also use withdrawals from funds functioning as endowment to support capital expenditures and operations.

Endowment spending rate distributions totaled $404 million, $384 million and $361 million and withdrawals from funds functioning as endowment totaled $4 million, $7 million and $38 million in 2021, 2020 and 2019, respectively. Total spending rate distributions combined with withdrawals from funds functioning as endowment averaged 3.8 percent, 4.3 percent and 4.5 percent of the current year average fair value of the University Endowment Fund for 2021, 2020 and 2019, respectively. Over the past ten years, total spending rate distributions combined with withdrawals from funds functioning as endowment averaged 4.6 percent.

The University participates in certain split-interest agreements and currently holds life income funds for beneficiaries of the pooled income fund, charitable remainder trusts and the gift annuity program. These funds generally pay lifetime income to beneficiaries, after which the principal is made available to the University in accordance with donor intentions.

CAPITAL AND DEBT ACTIVITIES

One of the critical factors in continuing the quality of the University's academic, research and clinical programs is the development and renewal of capital assets. The University continues to implement its long-range plan to maintain and modernize its existing infrastructure and strategically invest in new construction.

Capital asset additions totaled $488 million in 2021 as compared to $618 million in 2020. Capital asset additions primarily represent renovation and new construction of academic, research and clinical facilities, as well as significant investments in equipment, including information technology. Current year capital asset additions were primarily funded with net position and gifts designated for capital purposes of $427 million, as well as debt proceeds of $29 million and state capital appropriations of $32 million.

Projects completed in 2021 include significant new construction and renovation of academic and research facilities.

The new Ford Motor Company Robotics Building brings all parts of the Michigan Robotics enterprise together in one complex. This 134,000 square foot state-of-the-art facility houses classrooms, makerspaces, research and testing laboratories, associated support functions and offices. The building also provides space for its corporate partner, Ford Motor Company, to perform robotics research and engineering activities in collaboration with the University and other industry leaders, and has specialized labs for robot walking, flight testing, rehabilitation robotics, and electronics and software development.

The Edward Henry Kraus Building, which was originally completed in 1915, underwent an extensive renovation of 183,000 square feet as well as construction of an infill addition of 62,000 square feet within the exterior courtyard. This renovation and addition enables the School of Kinesiology to consolidate its programs and operations into one location and allows for future growth.

Laboratory renovations at two of the North Campus Research Complex buildings, which cover 158,000 square feet, will accommodate growth of the Medical School's wet laboratory research over the next decade. A 6,900 square foot infill addition improves connectivity between the buildings and throughout the complex. The project also addressed deferred maintenance including heating, ventilation, air conditioning, electrical and life safety system upgrades, and provided accessibility improvements and new finishes in public spaces.

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Renovation and expansion of the Engineering Lab Building on the University's Dearborn campus, which was originally constructed in 1959, facilitates entrepreneurial problem solving, encourages multidisciplinary cooperation in the context of 21st-century engineering instruction, and provides students with new collaboration and project spaces. It also allows for research partnerships with industry, as well as expanded K-12 and community outreach efforts, with a focus on women and minorities. The 123,000 square feet facility includes classrooms, research and teaching laboratories, faculty offices and student support spaces. Replacement of regional boilers and electrical distribution equipment were also part of this project.

Expansion of the William R. Murchie Science Building on the University's Flint campus addresses immediate space limitations, and supports growing demand for instructional, research, and collaborative spaces for the science, technology, engineering and math disciplines, and create engineering-specific instructional and research laboratories. The project added 61,000 square feet and a third wing to the current Murchie building structure.

Construction in progress, which totaled $482 million and $636 million at June 30, 2021 and 2020, respectively, includes important projects for academic instruction, research and patient care, as well as central campus utilities.

The new Central Campus Classroom Building is being constructed to replace the 1964 addition to the Ruthven building. When complete, this new facility will include 100,000 square feet of active learning classrooms, including an auditorium that will seat approximately 550 students, with total building classroom capacity in excess of 1,400 students. The project also includes the 1928 Ruthven building which will be renovated to include a 200 person multipurpose room as well as space to accommodate the University's central administration staff that is currently located in the Fleming Administration Building. This project is scheduled to be completed in fall 2021.

Renovation and expansion of the W.K. Kellogg Institute and Dental Building will create a more welcoming, accessible facility with an improved patient entrance as well as new modern teaching clinics including a special care clinic to treat patients with complex medical conditions and disabilities. An open, flexible research space will be created along with space designed to foster collaboration among faculty and students. This project will also address deferred maintenance including exterior envelope repairs and life safety, electrical, mechanical and plumbing system improvements. This project is scheduled to be completed in summer 2022.

Expansion of the University's Central Power Plant will enhance power reliability and reduce greenhouse gas emissions, in accordance with a recommendation by the 2015 President's Committee on Greenhouse Gas Reduction. The Central Power Plant is a highly efficient, reliable on-campus source of heat and electricity that supports mission-critical functions across the University, including research and the demands of a major regional medical center. The expansion includes a 15 megawatt combustion turbine to increase the amount of energy that can be generated on campus, as well as reduce the amount of coal-based electricity purchased by the University. A cumulative reduction of more than 400,000 metric tons of carbon is expected within the first ten years of operation. This project is scheduled to be completed in fall 2021.

The University is aware of its financial stewardship responsibility and works diligently to manage its financial resources effectively, including the prudent use of debt to finance capital projects. A strong debt rating is an important indicator of the University's success in this area. In 2020, S&P Global affirmed its highest credit rating (AAA) for bonds backed by a broad revenue pledge based on the University's robust enrollment and demand, exceptional student quality, retention and graduation rates, strong reputation of the University's health system, excellent balance sheet, exceptional research presence and manageable debt burden. Moody's also affirmed its highest credit rating (Aaa) based on the University's diversified student demand, sustained philanthropic support, expansive research enterprise, high brand value and reputation of the University's health system, and well-established strategic and budgetary framework.

Long-term debt activity for the years ended June 30 is summarized as follows:

2021

(in millions)	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	$ 135	$ 165	$ 146	$ 154
Bonds	3,241		81	3,160
	$ 3,376	$ 165	$ 227	$ 3,314

2020

(in millions)	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	$ 145		$ 10	$ 135
Bonds	2,330	$ 1,026	115	3,241
	$ 2,475	$ 1,026	$ 125	$ 3,376

The University utilizes commercial paper, backed by a general revenue pledge, to provide interim financing for its capital improvement program. Outstanding commercial paper is converted to long-term debt financing as appropriate, within the normal course of business. Outstanding bonds are also supported by the University's general revenue pledge.

During 2020, the University issued $988 million of general revenue bonds with a net original issue premium of $38 million, which included $138 million of fixed rate, tax-exempt bonds, and $850 million of fixed rate, taxable bonds. Total bond proceeds of $1,026 million were utilized to refund existing bonds of $26 million and provide $150 million for capital projects, $848 million for capital projects, refunding of debt and general purposes, and $2 million for debt issuance costs.

The composition of the University's debt at June 30 is summarized as follows:

(in millions)	2021	2020	2019
Variable rate:			
Commercial paper	$ 154	$ 135	$ 145
Bonds	523	551	566
Fixed rate bonds	2,637	2,690	1,764
	$ 3,314	$ 3,376	$ 2,475

A significant portion of the University's variable rate bonds are subject to remarketing and, in accordance with GASB requirements, such debt is classified as current unless supported by liquidity arrangements such as lines of credit or standby bond purchase agreements which could refinance the debt on a long-term basis. In the event that variable rate bonds are put back to the University by the debt holder, management believes that the use of remarketing agents as well as the University's strong credit rating will ensure that the bonds will be remarketed within a reasonable period of time.

While fixed rate bonds typically have a higher effective rate of interest at the date of issuance as compared to variable rate bonds, they reduce the volatility of required debt service payments and do not require liquidity support such as lines of credit, standby bond purchase agreements or internal liquidity.

Effective interest rates averaged 2.5 percent and 2.9 percent in 2021 and 2020, respectively, including the federal subsidies for interest on taxable Build America Bonds. Interest expense net of federal subsidies received for interest on taxable Build America Bonds totaled $89 million and $80 million in 2021 and 2020, respectively.

OBLIGATIONS FOR POSTEMPLOYMENT BENEFITS

Using current actuarial assumptions, and presuming a continuation of the current level of benefits, the University's obligations for postemployment benefits totaled $4.4 billion at June 30, 2021, as compared to $3.5 billion and $3.1 billion at June 30, 2020 and 2019, respectively. The increase in the reported liability at June 30, 2021 was driven primarily by a decrease in the discount rate offset by a reduction in expected health care claims cost due to favorable experience and changes in health care claims trend assumption rates. The increase in the reported liability at June 30, 2020 was driven primarily by a decrease in the discount rate and mortality and longevity improvements, offset by a reduction in expected health care claims cost due to favorable experience. Since a portion of retiree medical services will be provided by the University's health system, this liability is net of the related margin and fixed costs associated with providing those services which totaled $795 million, $629 million and $580 million at June 30, 2021, 2020 and 2019, respectively.

By implementing a series of health benefit initiatives over the past several years, the University has favorably impacted its total liability for postemployment benefits by $2.0 billion at June 30, 2021. These initiatives have included cost sharing changes, elimination of Medicare Part B reimbursements for certain retirees and the adjustment of retirement eligibility criteria.

NET POSITION

Net position represents the residual interest in the University's assets and deferred outflows after liabilities and deferred inflows are deducted. The composition of the University's net position at June 30 is summarized as follows:

(in millions)	2021	2020	2019
Net investment in capital assets	$ 3,677	$ 3,767	$ 3,743
Restricted:			
Nonexpendable:			
Permanent endowment corpus	2,625	2,483	2,329
Expendable:			
Net appreciation of permanent endowments	3,684	2,055	2,144
Funds functioning as endowment	2,974	2,260	2,382
Restricted for operations and other	925	852	686
Unrestricted	5,622	3,110	3,520
	$ 19,507	$ 14,527	$ 14,804

Net investment in capital assets represents the University's capital assets net of accumulated depreciation, outstanding principal balances of debt and capital lease liabilities, unexpended bond proceeds and deferred outflows associated with the acquisition, construction or improvement of those assets.

Restricted nonexpendable net position represents the historical value (corpus) of gifts to the University's permanent endowment funds. Restricted expendable net position is subject to externally imposed stipulations governing their use and includes net appreciation of permanent endowments, funds functioning as endowment and net position restricted for operations, facilities and student loan programs. Restricted expendable net position increased 47 percent, or $2.4 billion, to $7.6 billion at June 30, 2021, as compared to a decrease of 1 percent, or $45 million, to $5.2 billion at June 30, 2020. The increase experienced during 2021 was driven primarily by strong investment returns within the University's Long Term Portfolio.

Although unrestricted net position is not subject to externally imposed stipulations, substantially all of the University's unrestricted net position has been designated for various academic programs, research initiatives and capital projects. Unrestricted net position at June 30, 2021 totaled $5.6 billion and included funds functioning as endowment of $7.7 billion offset by unfunded obligations for postemployment benefits of $3.6 billion. Unrestricted net position at June 30, 2020 totaled $3.1 billion and included funds functioning as endowment of $5.5 billion offset by unfunded obligations for postemployment benefits of $3.4 billion. Unrestricted net position also includes other net resources which totaled $1.5 billion and $1.0 billion at June 30, 2021 and 2020, respectively.

MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

CONSOLIDATED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

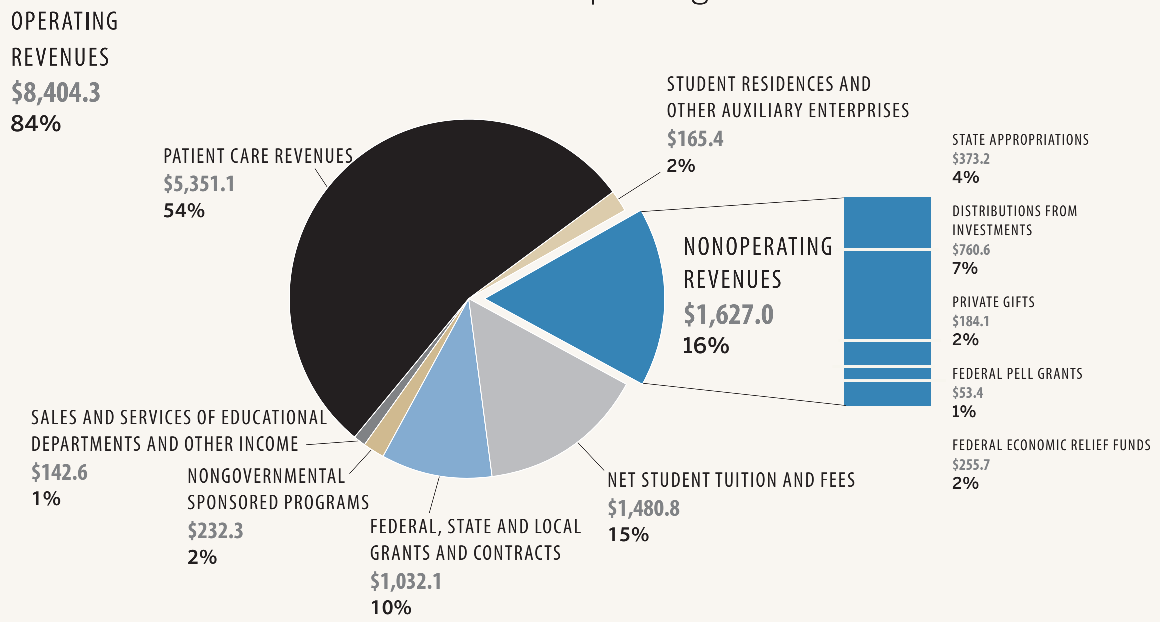
The consolidated statement of revenues, expenses and changes in net position presents the University's results of operations. In accordance with GASB reporting principles, revenues and expenses are classified as either operating or nonoperating. The University's revenues, expenses and changes in net position for the years ended June 30 are summarized as follows:

(in millions)	2021	2020	2019
Operating revenues:			
Net student tuition and fees	$ 1,480.8	$ 1,455.6	$ 1,366.5
Sponsored programs	1,264.4	1,259.9	1,266.4
Patient care revenues, net	5,351.1	4,767.9	4,845.1
Other	308.0	472.2	511.9
	8,404.3	7,955.6	7,989.9
Operating expenses	9,519.1	9,364.3	9,025.0
Operating loss	(1,114.8)	(1,408.7)	(1,035.1)
Nonoperating and other revenues (expenses):			
State educational appropriations	373.2	331.3	370.4
Federal Pell grants	53.4	53.5	51.2
Federal economic relief funds	255.7	143.8	
Private gifts for operating activities	184.1	178.8	177.8
Net investment income	5,141.3	322.6	810.0
Interest expense	(94.7)	(86.0)	(81.4)
Federal subsidies for interest on Build America Bonds	5.5	5.6	7.0
State capital appropriations	32.1	13.9	
Endowment and capital gifts and grants	151.0	167.6	206.1
Other	(6.6)	0.7	16.9
Nonoperating and other revenues, net	6,095.0	1,131.8	1,558.0
Increase (decrease) in net position	4,980.2	(276.9)	522.9
Net position, beginning of year	14,527.0	14,803.9	14,281.0
Net position, end of year	$ 19,507.2	$ 14,527.0	$ 14,803.9

One of the University's greatest strengths is the diverse streams of revenue that supplement its student tuition and fees, including private support from individuals, foundations and corporations, along with government and other sponsored programs, state appropriations and investment income. The University continues to aggressively seek funding from all possible sources consistent with its mission in order to supplement student tuition and prudently manage the financial resources realized from these efforts to fund its operating activities, which include instruction, patient care and research.

The following is a graphic illustration of revenues by source, both operating and nonoperating, which are used to fund the University's operating activities for the year ended June 30, 2021 (amounts are presented in millions of dollars). Certain recurring sources of the University's revenues are considered nonoperating, as defined by GASB, such as state appropriations, distributions from investments, private gifts and federal Pell grants.

2021 Revenues for Operating Activities



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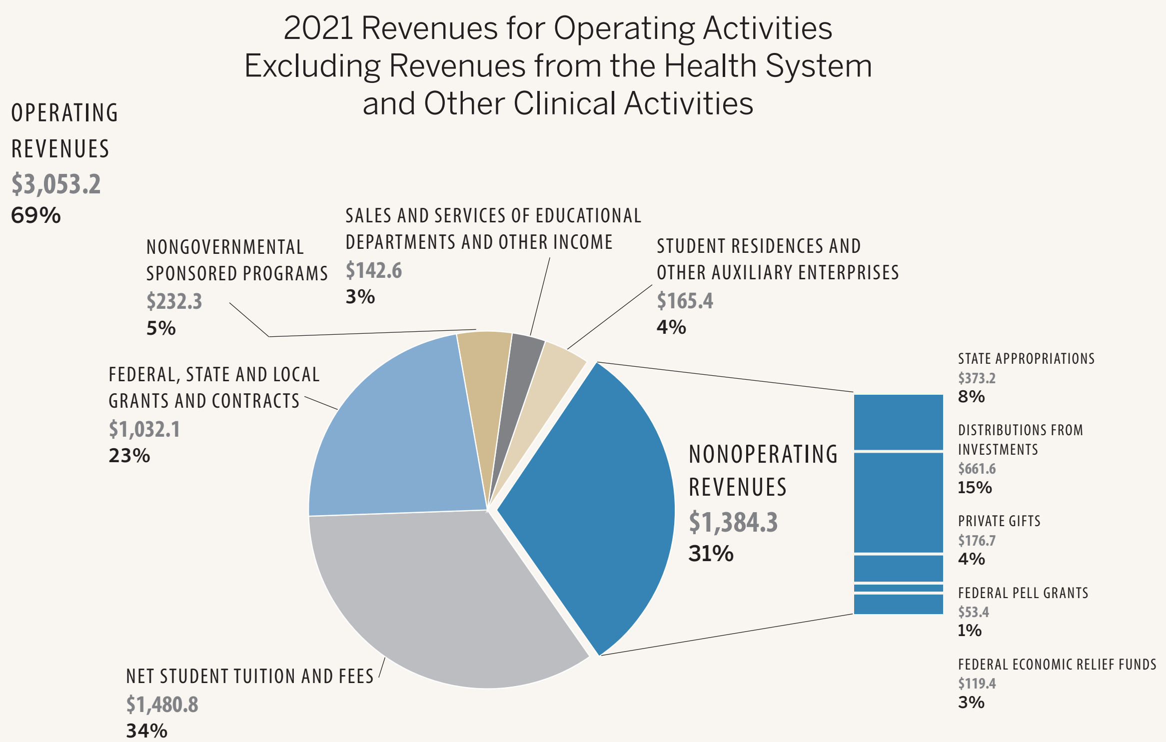
The University measures its performance both for the University as a whole and for the University without its health system and other clinical activities. The exclusion of these activities allows a clearer view of the operations of the schools and colleges, as well as central administration. The following is a graphic illustration of University revenues by source, both operating and nonoperating, which are used to fund operating activities other than the health system and other clinical activities, for the year ended June 30, 2021 (amounts are presented in millions of dollars).



Tuition and state appropriations are the primary sources of funding for the University's academic programs. There is a relationship between the growth or reduction in state support and the University's ability to restrain tuition fee increases. Together, net student tuition and fees and state educational appropriations increased 4 percent, or $67 million, to $1.9 billion in 2021, as compared to 3 percent, or $50 million, to $1.8 billion in 2020.

In 2021, the University's state educational appropriations increased 13 percent, or $42 million, to $373 million reflecting a return to pre-COVID-19 pandemic funding levels. In 2020, the University's state educational appropriations decreased 11 percent, or $39 million, to $331 million primarily as a result of the establishment of an allowance against the University's outstanding state educational appropriations receivable due to uncertainties associated with the COVID-19 pandemic.

For the years ended June 30, net student tuition and fees revenue consisted of the following components:

(in millions)	2021	2020	2019
Student tuition and fees	$ 1,978.0	$ 1,944.2	$ 1,812.5
Less scholarship allowances	497.2	488.6	446.0
	$ 1,480.8	$ 1,455.6	$ 1,366.5

In 2021, net student tuition and fees revenue increased 2 percent, or $25 million, to $1.5 billion, which reflects an increase of 2 percent, or $34 million, in gross student tuition and fees revenue offset by an increase of 2 percent, or $9 million, in scholarship allowances. Tuition rate increases in 2021 were 1.9 percent for both resident and nonresident undergraduate students and most graduate students on the Ann Arbor campus, with a 1.9 and 3.9 percent tuition rate increase for most resident undergraduate students on the Dearborn and Flint campuses, respectively. During 2021, the University experienced moderate growth in the number of students, as well as a shift in mix from resident to nonresident students.

In 2020, net student tuition and fees revenue increased 7 percent, or $89 million, to $1.5 billion, which reflects an increase of 7 percent, or $132 million, in gross student tuition and fees revenue offset by an increase of 10 percent, or $43 million, in scholarship allowances. Tuition rate increases in 2020 were 1.9 percent for resident undergraduate students, 3.7 percent for nonresident undergraduate students and 3.2 percent for most graduate students on the Ann Arbor campus, with a 3.2 and 5.0 percent tuition rate increase for most resident undergraduate students on the Dearborn and Flint campuses, respectively. During 2020, the University experienced moderate growth in the number of students, as well as a shift in mix from resident to nonresident students.

The University's tuition rate increases have consistently been among the lowest in the state, even in years of significant reductions in state appropriations, which reflects a commitment to affordable higher education for Michigan families. In addition, the University has increased scholarship and fellowship expenses and related allowances to benefit students in financial need. The University's long-term plan includes an ongoing commitment to cost containment and reallocating resources to the highest priorities to provide support for innovative new initiatives to maintain academic excellence and help students keep pace with the evolving needs of society.

While tuition and state appropriations fund a large percentage of University costs, private support is also essential to the University's academic distinction. Private gifts for other than capital and endowment purposes totaled $184 million in 2021, as compared to $179 million in 2020 and $178 million in 2019.

The University receives revenues for sponsored programs from various government agencies and private sources, which normally provide for both direct and indirect costs to perform these sponsored activities, with a significant portion related to federal research. Revenues for sponsored programs remained stable at $1.3 billion in both 2021 and 2020 as the rate of increase during these periods was limited by capacity constraints within the University's research labs which were initiated in response to the COVID-19 pandemic.

Patient care revenues are principally generated within the University's hospitals and ambulatory care facilities. Patient care revenues increased 12 percent, or $583 million, to $5.4 billion in 2021, due primarily to growth in patient volume as well as an increase in revenue per patient case. Patient care revenues decreased 2 percent, or $77 million, to $4.8 billion in 2020, due primarily to a decrease in patient volume resulting from a temporary reduction in operations in response to the COVID-19 pandemic.

For the years ended June 30, patient care revenues by source are summarized as follows:

(in millions)	2021	2020	2019
University of Michigan Health System	$ 4,682.6	$ 4,152.6	$ 4,212.4
UM Health	507.0	464.3	472.5
Michigan Health Corporation	30.9	36.4	39.1
Other	130.6	114.6	121.1
	$ 5,351.1	$ 4,767.9	$ 4,845.1

The largest component of patient care revenues is generated by UMHS, a national leader in advanced patient care and comprehensive education of physicians and medical scientists. UMHS serves as the principal teaching facility for the University's Medical School and operates three hospitals with 1,043 licensed beds for acute care and psychiatric needs, as well as numerous ambulatory care centers, outpatient clinics and various other health care programs across the state. Substantially all physician services to UMHS patients are provided by the University's Medical School faculty. UMHS also provides educational and clinical opportunities to students of the University's Schools of Nursing, Dentistry, Social Work and Public Health, as well as the College of Pharmacy.

UM Health patient care revenues primarily represent Metropolitan Hospital, a community health care provider in west Michigan, which operates a hospital with 208 licensed beds for acute care, as well as neighborhood outpatient clinics and a growing network of specialty services. The University's affiliation with Metropolitan Hospital positions UM Health to expand research capabilities, primary care, specialty services and the use of complex medical technologies.

Michigan Health Corporation generates revenue through its various joint venture and managed care initiatives, which provide services to patients including dialysis and other health services.

Other patient care revenues include amounts received from governmental and commercial payers associated with initiatives designed to improve accessibility and quality of care for patients, services provided by physicians working at facilities outside of the University and ambulatory care services provided by University Health Service, the School of Dentistry and the School of Nursing.

Contractual arrangements with governmental payers (Medicare and Medicaid) and private insurers impact patient care revenues. The distribution of net patient care service revenue by primary payer source for the years ended June 30 is summarized as follow:

	2021	2020	2019
Medicare	27%	27%	26%
Medicaid	12%	11%	12%
Blue Cross	38%	39%	38%
Other	23%	23%	24%

Federal economic relief funds represent amounts received from the federal government to provide economic assistance to entities that have been negatively impacted by the COVID-19 pandemic. The University recognized revenue of $135 million in both 2021 and 2020 associated with the Provider Relief Fund distributed by the U.S. Department of Health and Human Services. Revenue associated with the Higher Education Emergency Relief Fund distributed by the U.S. Department of Education totaled $77 million in 2021 as compared to $9 million in 2020. Revenue of $42 million associated with the Coronavirus Relief Fund distributed by the U.S. Department of the Treasury was recognized during 2021.

Net investment income totaled $5.1 billion in 2021 as compared to $323 million in 2020 and $810 million in 2019. During 2021 the financial markets experienced strong growth following the impact of the COVID-19 pandemic induced slowdown from the prior year. In 2021, the alternative assets returned 51 percent with venture capital and private equity assets leading the alternative asset class with returns of 78 and 51 percent, respectively. Within the marketable assets class, equities led with a return of 51 percent.

The investment environment in 2020 experienced a significant amount of volatility during the third and fourth quarters due to the impact of the COVID-19 pandemic. During 2020, the alternative asset class had the strongest performance and returned 6 percent for the year. The venture capital and private equity assets led the alternative asset class with returns of 19 percent and 11 percent, respectively.

State capital appropriations help the University improve its academic buildings. Recent capital outlays have supported renovations of the Engineering Lab Building on the Dearborn campus and the William R. Murchie Science Building on the Flint campus.

Gifts and grants for endowment and capital purposes continue to be a significant part of sustaining the University's excellence. Private gifts for permanent endowment purposes totaled $136 million in 2021, as compared to $149 million and $176 million in 2020 and 2019, respectively. Capital gifts and grants totaled $15 million in 2021, as compared to $19 million and $30 million in 2020 and 2019, respectively. In recent years, major gifts have been received in support of the University's wide-ranging capital initiatives which include the health system, Ross School of Business, College of Engineering and Intercollegiate Athletics.

In addition to revenue diversification, the University continues to make cost containment an ongoing priority. This is necessary as the University faces significant financial pressures, particularly in the areas of compensation and benefits, which represent 64 percent of total expenses, as well as in the areas of energy, technology and ongoing maintenance of facilities and infrastructure.

The University's expenses for the years ended June 30 are summarized as follows (amounts in millions):

	2021		2020		2019	
Operating:						
Compensation and benefits	$ 6,137.5	64%	$ 6,049.9	64%	$ 5,769.0	63%
Supplies and services	2,614.4	27	2,574.6	27	2,523.8	28
Depreciation	566.8	6	566.7	6	567.8	6
Scholarships and fellowships	200.4	2	173.1	2	164.4	2
	9,519.1	99	9,364.3	99	9,025.0	99
Nonoperating:						
Interest, net	89.2	1	80.4	1	74.4	1
	$ 9,608.3	100%	$ 9,444.7	100%	$ 9,099.4	100%

The University is committed to recruiting and retaining outstanding faculty and staff and the compensation package is one way to successfully compete with peer institutions and nonacademic employers. Compensation and benefits increased 1 percent, or $88 million, to $6.1 billion in 2021 as compared to 5 percent, or $281 million, to $6.0 billion in 2020. Of the 2021 increase, compensation increased less than 1 percent, or $11 million, to $4.6 billion, due primarily to temporary cost saving measures taken in response to the COVID-19 pandemic, and employee benefits increased 5 percent, or $77 million, to $1.5 billion, resulting from an increase in prescription drug costs as well as activity associated with the University's postemployment benefits obligations. For 2020, compensation increased 5 percent, to $4.6 billion, and benefits increased 5 percent, to $1.4 billion.

The University faces external and industry realities that put significant pressure on its ability to reduce compensation costs while remaining competitive. To help address this risk, the University continues to review components of its existing benefits program to find opportunities for potential savings without compromising the ability to offer competitive benefits to all faculty and staff.

Health care benefits are one of the most significant employee benefits. Compared to most employers, the University is in a unique position to utilize internal experts to advise and guide its health care and drug plans. Over the past several years, the University has implemented initiatives to better control its rate of cost increase, encourage employees to choose the lowest cost health care plan that meets their needs and share a larger portion of health care cost increases with employees. These initiatives reflect the reality of the national landscape while remaining true to the commitment we make to our employees for a robust benefits package. Careful stewardship of our health benefit plans, including the use of wellness initiatives, helps maintain our competitive position while preserving funding for the University's core mission.

Supplies and services expenses increased 2 percent, or $40 million, to $2.6 billion in 2021 as compared to an increase of 2 percent, or $51 million, to $2.6 billion in 2020. These increases reflect the growth in patient care related expenses, offset partially by cost containment measures taken in response to the COVID-19 pandemic.

MANAGEMENT'S DISCUSSION AND ANALYSIS
(UNAUDITED)

In addition to their natural (object) classification, it is also informative to review operating expenses by function. The University's expenses by functional classification for the years ended June 30 are summarized as follows (amounts in millions):

	2021		2020		2019	
Operating:						
Instruction	$ 1,175.4	12%	$ 1,204.8	13%	$ 1,195.2	13%
Research	853.2	9	862.8	9	857.6	10
Public service	287.9	3	206.4	2	208.7	2
Institutional and academic support	849.5	9	779.9	8	767.0	8
Operations and maintenance of plant	271.9	3	324.1	3	351.6	4
Auxiliary enterprises:						
Patient care	5,114.3	53	4,975.4	53	4,661.5	51
Other	199.7	2	271.1	3	251.2	3
Depreciation	566.8	6	566.7	6	567.8	6
Scholarships and fellowships	200.4	2	173.1	2	164.4	2
	9,519.1	99	9,364.3	99	9,025.0	99
Nonoperating:						
Interest, net	89.2	1	80.4	1	74.4	1
	$ 9,608.3	100%	$ 9,444.7	100%	$ 9,099.4	100%

Instruction expenses decreased 2 percent, or $29 million, in 2021, and increased less than 1 percent, or $10 million, in 2020. This activity reflects the growth in the related revenue sources offset by cost containment efforts.

Research expenses decreased 1 percent, or $10 million, in 2021, as compared to an increase of less than 1 percent, or $5 million, in 2020. The relative stability in both 2021 and 2020, despite the on-going challenges associated with the COVID-19 pandemic, reflects the strength of the University's overall research enterprise. To measure its total volume of research expenditures, the University considers research expenses included in the above table, as well as research related facilities and administrative expenses, research initiative and start-up expenses and research equipment purchases. These amounts totaled $1.58 billion in 2021, and $1.62 billion in both 2020 and 2019.

Patient care expenses increased 3 percent, or $139 million, in 2021, and 7 percent, or $314 million, in 2020, and reflect the impact of additional patient activity and capacity expansion. Increased medical supplies expense resulted from higher patient activity levels, the rising cost of pharmaceuticals and the additional cost of personal protective equipment acquired in response to the COVID-19 pandemic.

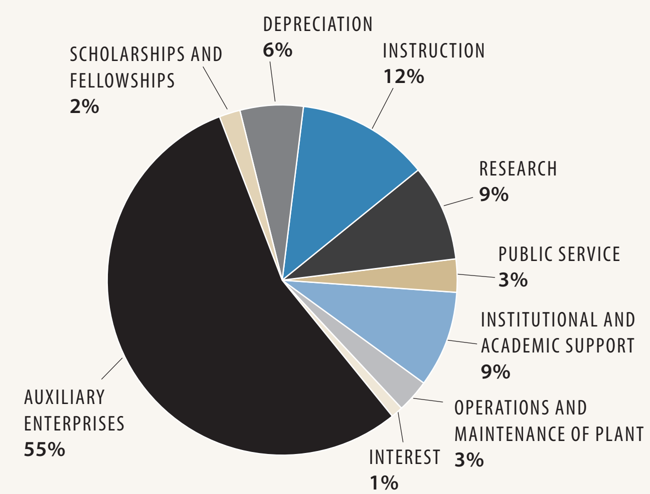
Scholarships and fellowships provided to students totaled $708 million in 2021, as compared to $685 million in 2020 and $635 million in 2019, an increase of 12 percent over the past two years. Tuition, housing and fees revenues are reported net of aid applied to students' accounts, while amounts paid directly to students are reported as scholarships and fellowships expense. Scholarships and fellowships for the years ended June 30 are summarized as follows:

(in millions)	2021	2020	2019
Paid directly to students	$ 200.4	$ 173.1	$ 164.4
Applied to tuition and fees	497.2	488.6	446.0
Applied to University Housing	10.3	23.1	24.2
	$ 707.9	$ 684.8	$ 634.6

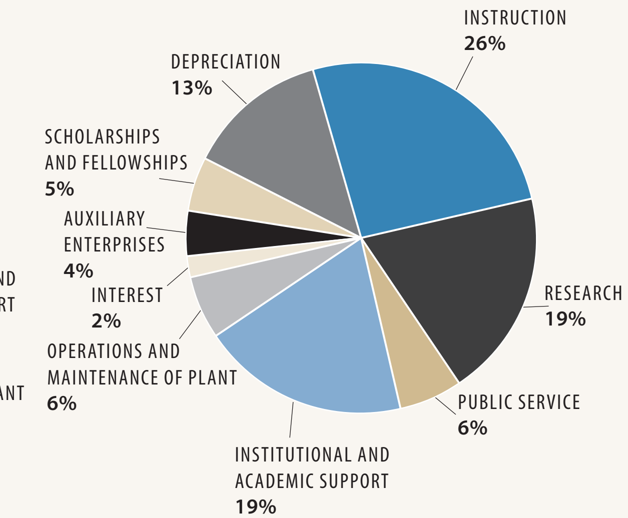
During 2021 and 2020, scholarships and fellowships expense included emergency financial aid grants distributed directly to students in accordance with the terms of the Higher Education Emergency Relief Fund of $26 million and $8 million, respectively.

The following graphic illustrations present total expenses by function, with and without the University's health system and other patient care activities:

2021 Expenses by Function



2021 Expenses by Function Excluding Expenses from the University's Patient Care Activities



CONSOLIDATED STATEMENT OF CASH FLOWS

The consolidated statement of cash flows provides additional information about the University's financial results by reporting the major sources and uses of cash. The University's cash flows for the years ended June 30 are summarized as follows:

(in millions)	2021	2020	2019
Cash received from operations	$ 8,081.4	$ 8,345.6	$ 7,965.9
Cash expended for operations	(8,412.8)	(8,440.6)	(8,283.8)
Net cash used in operating activities	(331.4)	(95.0)	(317.9)
Net cash provided by noncapital financing activities	900.9	1,705.4	767.7
Net cash used in capital and related financing activities	(569.8)	(602.3)	(597.2)
Net cash (used in) provided by investing activities	(271.3)	(130.0)	411.3
Net (decrease) increase in cash and cash equivalents	(271.6)	878.1	263.9
Cash and cash equivalents, beginning of year	1,275.4	397.3	133.4
Cash and cash equivalents, end of year	$ 1,003.8	$ 1,275.4	$ 397.3

Cash received from operations primarily consists of student tuition, sponsored program grants and contracts, and patient care revenues. Significant sources of cash provided by noncapital financing activities, as defined by GASB, include state appropriations, federal Pell grants and private gifts used to fund operating activities.

ECONOMIC FACTORS THAT MAY AFFECT THE FUTURE

The University maintains the highest credit ratings of S&P Global (AAA) and Moody's (Aaa). Achieving and maintaining the highest credit ratings provides the University with significant flexibility in securing capital funds on the most competitive terms. This flexibility, along with ongoing efforts toward revenue diversification and cost containment, will enable the University to provide the necessary resources to support a consistent level of excellence in service to students, patients, the research community, the state and the nation.

A crucial element to the University's future continues to be a strong relationship with the state of Michigan. Historically, there has been a connection between the growth or reduction of state support and the University's ability to control tuition increases. Over the past several years, the University has successfully addressed the realities of the state's challenging economy and, pursuant to a long-range plan, continues to work relentlessly to cut and mitigate operational costs in order to remain affordable and preserve access, while protecting the academic enterprise.

The on-going COVID-19 pandemic is expected to continue to impact the state's revenues, which provide the foundation for the University's annual appropriations. Although the State has worked to identify and initiate various cost saving measures in response to the pandemic, the University's budget for 2022 reflects the impact of these economic challenges at the state and local level, and therefore anticipates no change in the level of base state educational appropriations as compared to the prior year. The 2022 budget also anticipates a 1.4 percent tuition rate increase for Ann Arbor campus resident undergraduates and a 6.4 percent increase in centrally awarded financial aid. Nonresident undergraduate tuition rates as well as most graduate and professional rates will increase 1.8 percent. Resident undergraduate tuition rates for the Dearborn campus will increase 1.9 percent, while the Flint campus will see no increase in their resident undergraduate rates.

The University continues to execute its long-range plan to maintain, modernize and expand its complement of older facilities while adding key new facilities for instruction, research, patient care, athletics and residential life. This strategy addresses the University's growth and the continuing effects of technology on teaching, research and clinical activities. Authorized costs to complete construction and other projects totaled $1,130 million at June 30, 2021. Funding for these projects is anticipated to include $1,034 million from internal sources, gifts, grants and proceeds from borrowings, $44 million from the State Building Authority and $52 million from the utilization of unexpended bond proceeds.

The University's health system continues its strategy to expand access to patients, locally and on a statewide basis. In addition to strategic capital and technological investments, the University's health system is also focusing on clinical affiliation arrangements and population management programs designed to expand community access and improve patient, family and provider experiences across the continuum of care. The affiliation arrangements are also expected to enhance clinical research, physician recruitment and support services.

While the University's health system is well positioned to maintain its strong financial condition in the near term, ongoing constraints on revenue are expected due to fiscal pressures from employers and federal and state governments. Lawmakers continue to discuss Medicare and Medicaid changes which may target graduate medical education-related payments and could result in a significant impact on teaching hospitals. In addition, private insurance and managed care contracts historically provide for annual increases in reimbursement rates that met or exceeded the rate of inflation; however, there can be no assurance that such trends will continue. Management believes that much of the payment pressure can be offset by growth in patient volume and continued efforts to contain certain costs.

The University will continue to employ its long-term investment strategy to maximize total returns, at an appropriate level of risk, while utilizing a spending rate policy to preserve endowment capital and insulate the University's operations from temporary market volatility.

As a labor-intensive organization, the University faces competitive pressures related to attracting and retaining faculty and staff. Moreover, consistent with the national landscape, the University also faces rising costs of health benefits for its employees and retirees. The University has successfully taken and will continue to take proactive steps to respond to these challenges while protecting the quality of the overall benefits package.

A portion of the University's labor force is unionized, with negotiated labor agreements defining terms and conditions of employment. Changes in relations with unions and represented employees, including the negotiation of new agreements, could have a material effect on the University.

The COVID-19 pandemic and related actions taken by federal and state governments in response may materially impact the University's financial position and its results of operations, including those related to instruction, research, patient care and other auxiliary activities. While the University continues to design and execute plans to mitigate these risks, the extent of the impact to the University will depend on future developments beyond its control, including the overall duration and spread of the outbreak, and cannot be fully determined at this time.

While it is not possible to predict the ultimate results, management believes that the University's financial position will remain strong.