

# 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, 2022 and 2021 and its activities for the two fiscal years ended June 30, 2022. 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 65,000 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 ("UMH"), 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 UMH-West). 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 \$32.4 billion and total liabilities and deferred inflows of \$13.1 billion at June 30, 2022, compared to total assets and deferred outflows of \$30.4 billion and total liabilities and deferred inflows of \$10.9 billion at June 30, 2021. 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 \$19.3 billion and \$19.5 billion at June 30, 2022 and 2021, 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)	2022	2021	2020
Operating revenues and educational appropriations	\$ 9,505	\$ 8,831	\$ 8,340
Federal economic relief funds	152	256	144
Private gifts for operating activities	219	184	179
Operating and net interest expenses	(10,668)	(9,612)	(9,445)
	(792)	(341)	(782)
Net investment income	336	5,141	323
Endowment, capital gifts and grants, and other	251	176	182
(Decrease) increase in net position	\$ (205)	\$ 4,976	\$ (277)

During 2022, the University adopted Governmental Accounting Standards Board ("GASB") Statement No. 87, *Leases* ("GASB 87"), which establishes a single model for lease accounting based on the principle that leases serve to finance the right to use an underlying asset. The statement requires lessees to recognize right-to-use assets and related liabilities, and lessors to recognize receivables and corresponding deferred inflows of resources, for leases that were previously classified as operating and recognized as inflows or outflows of resources. The adoption of GASB 87 has been reflected at the beginning of the earliest period presented in the financial statements, or July 1, 2020, resulting in an increase to the following line items within the University's consolidated statement of net position as of this date (in millions):

Current portion of notes and pledges receivable, net	\$ 0.1
Notes and pledges receivable, net	\$ 0.3
Capital assets, net	\$ 263.3
Accounts payable	\$ 50.3
Other noncurrent liabilities	\$ 213.0
Deferred inflows	\$ 0.4

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 87 at June 30, 2020. The consolidated statement of revenues, expenses and changes in net position and the consolidated statement of cash flows presented for the year ended June 30, 2020 do not reflect the adoption of GASB 87.

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, staff and health care professionals; and a period of constrained base 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 benefits 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 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.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

## 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)	2022	2021	2020
Current assets	\$ 6,578	\$ 4,898	\$ 4,010
Noncurrent assets:			
Endowment, life income and other investments	17,838	17,533	12,704
Capital assets, net	6,266	6,432	6,536
Other	705	446	518
Total assets	31,387	29,309	23,768
Deferred outflows	1,045	1,124	514
Current liabilities	2,827	2,578	2,424
Noncurrent liabilities	9,514	7,877	6,860
Total liabilities	12,341	10,455	9,284
Deferred inflows	793	475	471
Net position	\$ 19,298	\$ 19,503	\$ 14,527

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 \$1.7 billion to \$6.6 billion at June 30, 2022, as compared to \$4.9 billion at June 30, 2021, primarily as a result of the University's continued focus on liquidity. Cash, cash equivalents and investments for operating activities totaled \$4.6 billion at June 30, 2022, which represents approximately six 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 UMH-West. Deferred outflows totaled \$1.0 billion and \$1.1 billion at June 30, 2022 and 2021, 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 \$2.8 billion and \$2.6 billion at June 30, 2022 and 2021, respectively.

Deferred inflows represent the acquisition of net assets attributable to a future period and are primarily associated with the University's obligations for postemployment benefits, the defined benefit pension plan for UMH-West and irrevocable split-interest agreements. Deferred inflows totaled \$793 million and \$475 million at June 30, 2022 and 2021, 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)	2022	2021	2020
Endowment investments	\$ 17,347	\$ 17,023	\$ 12,313
Life income investments	178	191	145
Noncurrent portion of insurance and benefits obligations investments	291	293	225
Other	22	26	21
	\$ 17,838	\$ 17,533	\$ 12,704

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 ("UEF"), a unitized pool which represents a collection of over 12,400 separate funds, the majority of which are restricted for specific purposes. The UEF is invested in the University's Long Term Portfolio, a single diversified investment pool.

The endowment spending rule provides for distributions from the UEF to the participants 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 UEF 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, participants may also use withdrawals from funds functioning as endowment to support capital expenditures and operations.

Endowment spending rate distributions totaled \$434 million and \$404 million and withdrawals from funds functioning as endowment totaled \$15 million and \$4 million in 2022 and 2021, respectively. Total spending rate distributions combined with withdrawals from funds functioning as endowment averaged 3.4 percent and 3.8 percent of the current year average fair value of the UEF for 2022 and 2021, respectively. Over the past ten years, total spending rate distributions combined with withdrawals from funds functioning as endowment averaged 4.4 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.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

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## 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 \$454 million in 2022 as compared to \$523 million in 2021. 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 \$125 million, as well as debt proceeds of \$299 million and state capital appropriations of \$30 million.

Projects completed in 2022 include significant new construction and renovation of academic, research and patient care facilities, as well as central campus utilities.

The new Central Campus Classroom Building replaces the 1964 addition to the Ruthven Building and includes 100,000 square feet of active learning classrooms, including an auditorium that seats approximately 550 students, with total building classroom capacity in excess of 1,400 students. The renovation of the original 1928 Ruthven Building transformed the former museum space into a flexible and modern workplace to accommodate the relocation of the University's central administrative offices that were previously located in the Fleming Administration Building. The 138,000 square foot building also includes a 200-person capacity multipurpose room and research space.

The W.K. Kellogg Institute and Dental Building, originally constructed in 1940 and 1969, respectively, has undergone an extensive renovation and expansion to create a more welcoming accessible facility to support the latest developments in patient care, dental education and research. New modern teaching clinics include a special care clinic to treat patients with complex medical conditions and disabilities. Open, flexible research space and additional common areas will foster collaboration among faculty, researchers and students. This project also addressed deferred maintenance including exterior envelope repairs and life safety, electrical, mechanical and plumbing system improvements.

Expansion of the University's Central Power Plant enhances power reliability and reduces 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.

Construction in progress, which totaled \$279 million and \$482 million at June 30, 2022 and 2021, respectively, includes construction of a new hospital building.

The Pavilion at UMH is a new 690,000 square foot clinical inpatient tower under construction. The 12-story hospital will house 264 private rooms capable of converting to intensive care, a state-of-the-art neurosciences center, and high-level, specialty care services for cardiovascular and thoracic patients, along with advanced imaging. Locating these services together will enable healthcare providers to quickly respond to complex cases and deliver state-of-the-art treatments. The design will also allow for relocation of 110 beds currently in semi-private rooms at University Hospital to the Pavilion, which will improve patient safety, quality and experience, while creating space for family members to participate in their loved one's care, healing and recovery. This project is scheduled to be completed in spring 2025.

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 2022, 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:

(in millions)	2022			
	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	\$ 154		\$ 13	\$ 141
Bonds	3,160	\$ 2,483	578	5,065
	\$ 3,314	\$ 2,483	\$ 591	\$ 5,206

(in millions)	2021			
	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	\$ 135	\$ 165	\$ 146	\$ 154
Bonds	3,241		81	3,160
	\$ 3,376	\$ 165	\$ 227	\$ 3,314

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 2022, the University issued \$2,469 million of general revenue bonds with a net original issue premium of \$14 million, which included \$2,413 million of fixed rate, taxable bonds, and \$56 million of fixed rate, tax-exempt bonds. Total bond proceeds of \$2,483 million were utilized to refund \$69 million of existing bonds, establish an escrow of \$412 million to advance refund existing bonds, as well as provide \$299 million for capital projects designed to advance the University's commitment to decarbonization, \$1,686 million for capital projects and general purposes, and \$17 million for debt issuance costs.

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

(in millions)	2022	2021	2020
Variable rate:			
Commercial paper	\$ 141	\$ 154	\$ 135
Bonds	426	523	551
Fixed rate bonds	4,639	2,637	2,690
	\$ 5,206	\$ 3,314	\$ 3,376

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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 2.9 percent and 2.5 percent in 2022 and 2021, respectively, including the federal subsidies for interest on taxable Build America Bonds. Interest expense on long-term debt net of federal subsidies received for interest on taxable Build America Bonds totaled \$111 million and \$85 million in 2022 and 2021, 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 \$4.3 billion at June 30, 2022, as compared to \$4.4 billion and \$3.5 billion at June 30, 2021 and 2020, respectively. The decrease in the reported liability at June 30, 2022 was driven primarily by favorable health care claims cost experience and mortality and longevity improvement. 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. 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 \$784 million, \$795 million and \$629 million at June 30, 2022, 2021 and 2020, 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 \$2.1 billion at June 30, 2022. 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)	2022	2021	2020
Net investment in capital assets	\$ 3,522	\$ 3,670	\$ 3,767
Restricted:			
Nonexpendable:			
Permanent endowment corpus	2,822	2,625	2,483
Expendable:			
Net appreciation of permanent endowments	3,589	3,684	2,055
Funds functioning as endowment	3,218	2,974	2,260
Restricted for operations and other	807	924	852
Unrestricted	5,340	5,626	3,110
	\$ 19,298	\$ 19,503	\$ 14,527

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

Restricted nonexpendable net position represents the corpus portion (historical value) 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 remained stable with an increase of \$32 million, to \$7.6 billion at June 30, 2022, as compared to an increase of 47 percent, or \$2.4 billion, to \$7.6 billion at June 30, 2021.

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, 2022 totaled \$5.3 billion and included funds functioning as endowment of \$7.7 billion offset by unfunded obligations for postemployment benefits of \$3.9 billion. 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 also includes other net resources which totaled \$1.5 billion at both June 30, 2022 and 2021, respectively.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

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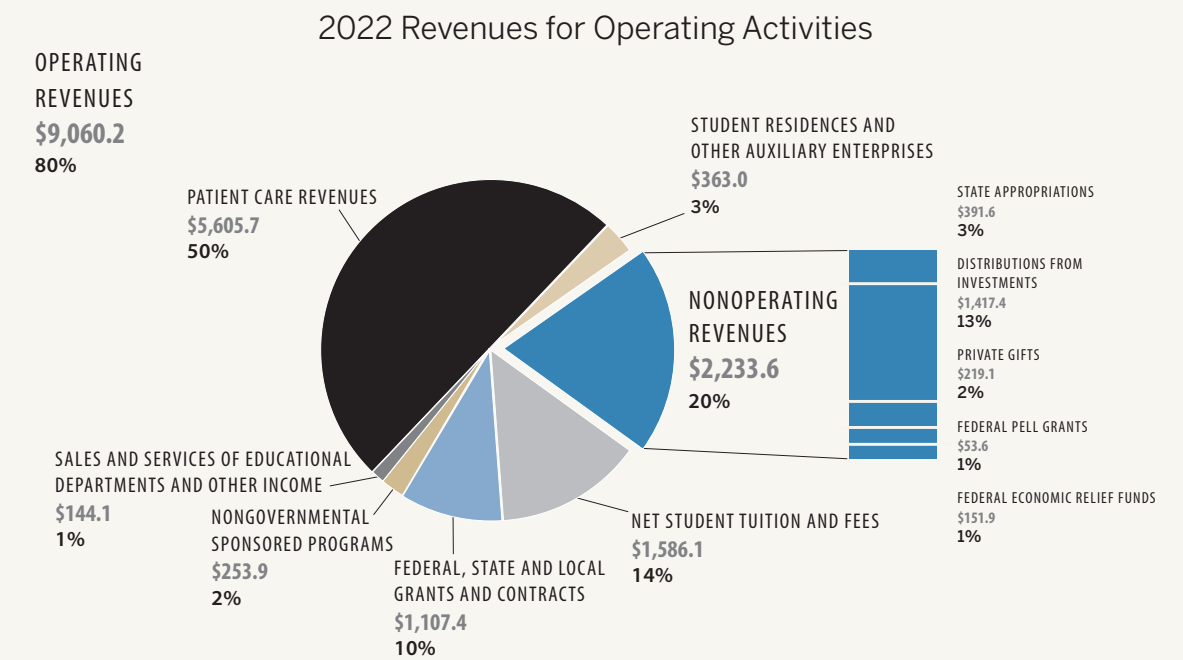
## CONSOLIDATED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

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)	2022	2021	2020
<b>Operating revenues:</b>			
Net student tuition and fees	\$ 1,586.1	\$ 1,480.8	\$ 1,455.6
Sponsored programs	1,361.3	1,264.4	1,259.9
Patient care revenues, net	5,605.7	5,351.1	4,767.9
Other	507.1	308.0	472.2
	9,060.2	8,404.3	7,955.6
<b>Operating expenses</b>			
Operating loss	(1,488.2)	(1,115.7)	(1,408.7)
<b>Nonoperating and other revenues (expenses):</b>			
State educational appropriations	391.6	373.2	331.3
Federal Pell grants	53.6	53.4	53.5
Federal economic relief funds	151.9	255.7	143.8
Private gifts for operating activities	219.1	184.1	178.8
Net investment income	336.3	5,141.3	322.6
Interest expense	(125.2)	(97.9)	(86.0)
Federal subsidies for interest on Build America Bonds	5.5	5.5	5.6
State capital appropriations	29.8	32.1	13.9
Endowment and capital gifts and grants	235.0	151.0	167.6
Other	(14.0)	(6.6)	0.7
Nonoperating and other revenues, net	1,283.6	6,091.8	1,131.8
	(204.6)	4,976.1	(276.9)
Net position, beginning of year	19,503.1	14,527.0	14,803.9
Net position, end of year	\$ 19,298.5	\$ 19,503.1	\$ 14,527.0

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.

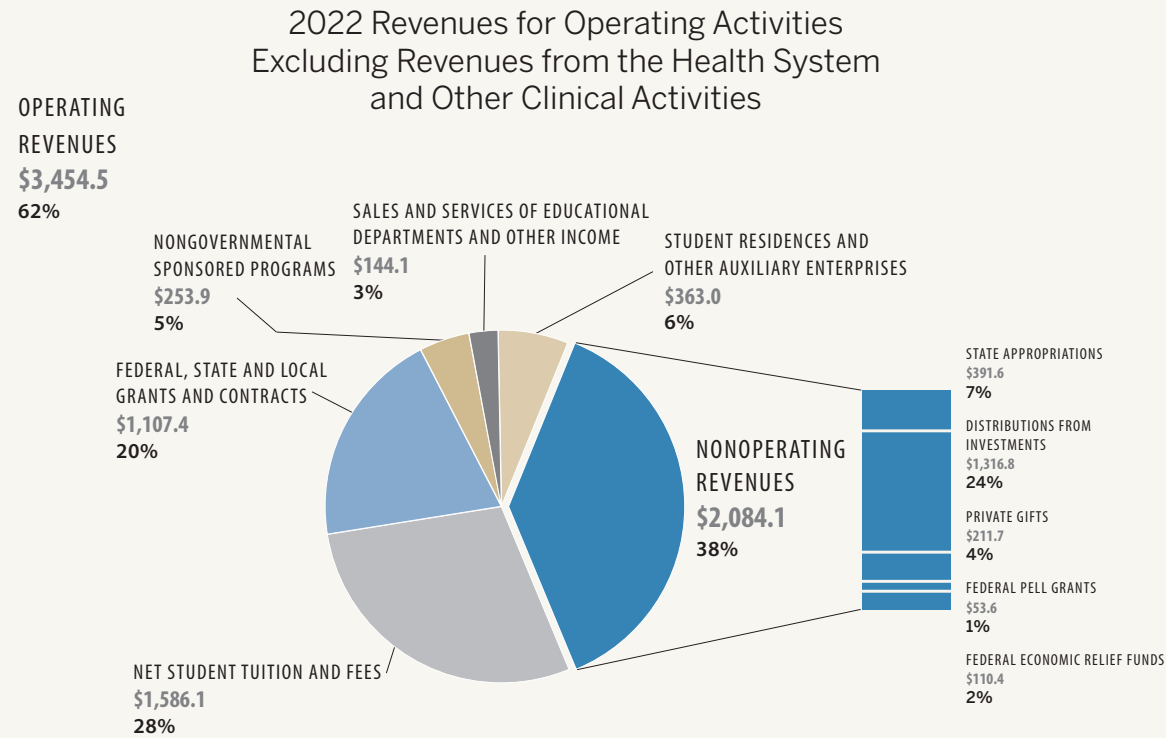
The following is a graphic illustration of revenues by source, both operating and nonoperating, which are used to fund the University's operating activities for the year ended June 30, 2022 (amounts are presented in millions of dollars). Certain recurring sources of the University's revenues are considered nonoperating, as defined by GASB, such as state appropriations, distributions from investments, private gifts and federal Pell grants.



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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, 2022 (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 7 percent, or \$124 million, to \$2.0 billion in 2022.

In 2022, the University's state educational appropriations increased 5 percent, or \$18 million, to \$392 million primarily due to a one-time supplemental appropriation of \$15 million.

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

(in millions)	2022	2021	2020
Student tuition and fees	\$ 2,085.0	\$ 1,978.0	\$ 1,944.2
Less scholarship allowances	498.9	497.2	488.6
	\$ 1,586.1	\$ 1,480.8	\$ 1,455.6

In 2022, net student tuition and fees revenue increased 7 percent, or \$105 million, to \$1.6 billion, which reflects an increase of 5 percent, or \$107 million, in gross student tuition and fees revenue offset by an increase of less than 1 percent, or \$2 million, in scholarship allowances. Tuition rate increases in 2022 were 1.4 percent for resident undergraduate students and 1.8 percent for both nonresident undergraduate students and most graduate students on the Ann Arbor campus, with a 1.9 percent tuition rate increase for most resident undergraduate students on the Dearborn campus and no increase in the resident undergraduate rates on the Flint campus. During 2022, the University experienced moderate growth in the number of students, as well as a shift in mix from resident to nonresident students.

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.

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 \$219 million in 2022, as compared to \$184 million in 2021.

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 increased 8 percent, or \$97 million, to \$1.4 billion in 2022 driven primarily by increases in federally sponsored activity during this period.

Patient care revenues are principally generated within the University's hospitals and ambulatory care facilities. Patient care revenues increased 5 percent, or \$255 million, to \$5.6 billion in 2022, due primarily to growth in patient volume as well as an increase in revenue per patient case.

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

(in millions)	2022	2021	2020
University of Michigan Health	\$ 4,926.4	\$ 4,682.6	\$ 4,152.6
UM Health	522.4	507.0	464.3
Michigan Health Corporation	22.6	30.9	36.4
Other	134.3	130.6	114.6
	<u>\$ 5,605.7</u>	<u>\$ 5,351.1</u>	<u>\$ 4,767.9</u>

The largest component of patient care revenues is generated by UMH, a national leader in advanced patient care and comprehensive education of physicians and medical scientists. UMH 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 and various other health care programs across the state. Substantially all physician services to UMH patients are provided by the University's Medical School faculty. UMH 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 UMH-West, a community health care provider in west Michigan, which operates a hospital with 208 licensed beds for acute care, as well as outpatient clinics and a growing network of specialty services. The University's affiliation with UMH-West 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 follows:

	2022	2021	2020
Medicare	27%	27%	27%
Medicaid	13%	12%	11%
Blue Cross	38%	38%	39%
Other	22%	23%	23%

Federal economic relief funds represent amounts received from various government agencies to provide economic assistance to entities that have been negatively impacted by the COVID-19 pandemic. For the years ended June 30, federal economic relief funds are summarized as follows:

(in millions)	2022	2021	2020
Provider Relief Fund	\$ 18.7	\$ 135.3	\$ 134.7
Higher Education Emergency Relief Fund	110.3	77.1	9.1
Coronavirus State and Local Fiscal Recovery Fund	16.7		
Coronavirus Relief Fund		42.4	
Other	6.2	0.9	
	<u>\$ 151.9</u>	<u>\$ 255.7</u>	<u>\$ 143.8</u>

Net investment income totaled \$336 million in 2022 as compared to \$5.1 billion in 2021. In 2022, the rising interest rate environment introduced increased volatility into the markets which had an effect on returns in the current fiscal year as compared to the prior year. Net investment income was attributable primarily to the alternative assets class which returned 12 percent overall, with natural resources and real estate assets leading with returns of 40 and 16 percent, respectively. The positive returns for the alternative assets class were offset by the performance of marketable assets, which were down 11 percent for the year.

During 2021, the financial markets experienced strong growth following the impact of the COVID-19 pandemic induced slowdown from the prior year. 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.

State capital appropriations help the University improve its academic buildings. Recent capital outlays have supported renovations of the W.K. Kellogg Institute and Dental Building on the Ann Arbor campus, 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 \$189 million in 2022, as compared to \$136 million in 2021. Capital gifts and grants totaled \$46 million in 2022 as compared to \$15 million in 2021. 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 62 percent of total expenses, as well as in the areas of energy, technology and ongoing maintenance of facilities and infrastructure.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

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

	2022		2021		2020	
Operating:						
Compensation and benefits	\$ 6,573.9	62%	\$ 6,137.5	64%	\$ 6,049.9	64%
Supplies and services	3,137.1	29	2,562.1	27	2,574.6	27
Depreciation	606.5	6	620.0	6	566.7	6
Scholarships and fellowships	230.9	2	200.4	2	173.1	2
	10,548.4	99	9,520.0	99	9,364.3	99
Nonoperating:						
Interest, net	119.7	1	92.4	1	80.4	1
	\$ 10,668.1	100%	\$ 9,612.4	100%	\$ 9,444.7	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 7 percent, or \$436 million, to \$6.6 billion in 2022. Of the 2022 increase, compensation increased 6 percent, or \$278 million, to \$4.9 billion, driven primarily by increases in staffing levels resulting from patient activity volumes within the University's health system, and employee benefits increased 10 percent, or \$158 million, to \$1.7 billion, resulting from an increase in health care and prescription drug costs.

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 22 percent, or \$575 million, to \$3.1 billion in 2022. This increase reflects the growth in patient care related expenses as well as an increase in insurance and benefits reserves.

In addition to their natural 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):

	2022		2021		2020	
Operating:						
Instruction	\$ 1,243.3	12%	\$ 1,174.1	12%	\$ 1,204.8	13%
Research	919.2	9	853.1	9	862.8	9
Public service	271.1	2	287.5	3	206.4	2
Institutional and academic support	1,084.5	10	846.6	9	779.9	8
Operations and maintenance of plant	330.4	3	266.6	3	324.1	3
Auxiliary enterprises:						
Patient care	5,459.0	51	5,072.7	53	4,975.4	53
Other	403.5	4	199.0	2	271.1	3
Depreciation	606.5	6	620.0	6	566.7	6
Scholarships and fellowships	230.9	2	200.4	2	173.1	2
	10,548.4	99	9,520.0	99	9,364.3	99
Nonoperating:						
Interest, net	119.7	1	92.4	1	80.4	1
	\$ 10,668.1	100%	\$ 9,612.4	100%	\$ 9,444.7	100%

Instruction expenses increased 6 percent, or \$69 million, in 2022 and reflect the growth in the related revenue sources offset by cost containment efforts.

Research expenses increased 8 percent, or \$66 million, in 2022. The increase in 2022, reflects the strength of the University's overall research enterprise and a return to pre-COVID-19 levels of research activity. 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 \$1.7 billion and \$1.6 billion in 2022 and 2021, respectively.

Patient care expenses increased 8 percent, or \$386 million, in 2022 and reflect the impact of additional patient volume during the period. Increased medical supplies expense resulted from higher patient activity levels, the rising cost of pharmaceuticals and the additional cost of personal protective equipment associated with the COVID-19 pandemic.



# MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

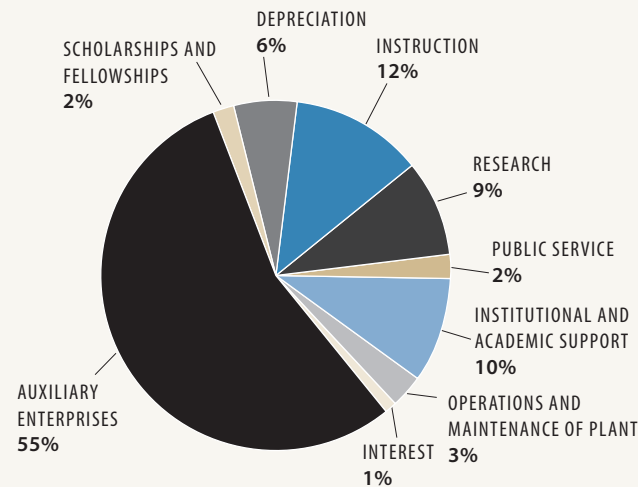
Scholarships and fellowships provided to students totaled \$755 million in 2022 as compared to \$708 million in 2021, an increase of 7 percent. Tuition, housing and fees revenues are reported net of aid applied to students' accounts, while amounts paid directly to students are reported as scholarships and fellowships expense. Scholarships and fellowships for the years ended June 30 are summarized as follows:

(in millions)	2022	2021	2020
Paid directly to students	\$ 230.9	\$ 200.4	\$ 173.1
Applied to tuition and fees	498.9	497.2	488.6
Applied to University Housing	24.8	10.3	23.1
	<u>\$ 754.6</u>	<u>\$ 707.9</u>	<u>\$ 684.8</u>

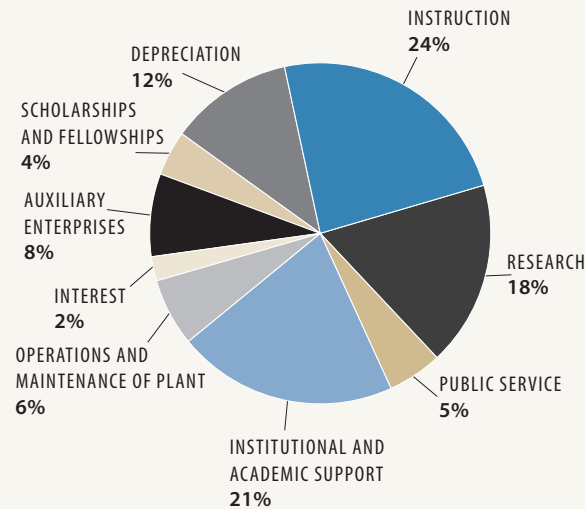
During 2022, 2021 and 2020, scholarships and fellowships expense included emergency financial aid grants distributed directly to students in accordance with the terms of the Higher Education Emergency Relief Fund of \$53 million, \$26 million and \$8 million respectively.

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

2022 Expenses by Function



2022 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)	2022	2021	2020
Cash received from operations	\$ 8,866.2	\$ 8,081.4	\$ 8,345.6
Cash expended for operations	(9,336.1)	(8,360.3)	(8,440.6)
Net cash used in operating activities	(469.9)	(278.9)	(95.0)
Net cash provided by noncapital financing activities	2,626.5	900.9	1,705.4
Net cash used in capital and related financing activities	(281.0)	(622.3)	(602.3)
Net cash provided by (used in) investing activities	72.5	(271.3)	(130.0)
Net increase (decrease) in cash and cash equivalents	1,948.1	(271.6)	878.1
Cash and cash equivalents, beginning of year	1,003.8	1,275.4	397.3
Cash and cash equivalents, end of year	<u>\$ 2,951.9</u>	<u>\$ 1,003.8</u>	<u>\$ 1,275.4</u>

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 University's budget for 2023 anticipates a 3.0 percent increase in state educational appropriations, a 3.4 percent tuition rate increase for Ann Arbor campus resident undergraduates and a 4.8 percent increase in centrally awarded financial aid. Nonresident undergraduate tuition rates as well as most graduate and professional rates will increase 3.9 percent. Resident undergraduate tuition rates for the Dearborn and Flint campuses will increase 3.6 percent and 4.9 percent, respectively.

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 \$1,394 million at June 30, 2022. Funding for these projects is anticipated to include \$1,046 million from internal sources, gifts, grants and proceeds from borrowings; \$43 million from the State Building Authority and \$305 million from the utilization of unexpended bond proceeds.

# MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

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.