UNIVERSITY OF MICHIGAN

2022 ANNUAL REPORT

| Comeback Commencement |
A 2020 Comeback Commencement Ceremony took place on May 7, 2022, at Michigan Stadium to honor all Class of 2020 graduates who missed out on their in-person ceremony because of the coronavirus pandemic.

One of the
TOP-RANKED
U.S. Public Universities for Research Volume
National Science Foundation

110
Grad Programs in the Top 10
U.S. News & World Report

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FRONT COVER
| A fresh start |
The Alexander G. Ruthven Building, originally constructed in 1928, reopened after a three-year renovation that transformed a former museum space into research areas and central administrative offices.

PRESIDENT'S MESSAGE

| SANTA J. ONO |

It's such an honor to be president of the University of Michigan.

We're one of the leading public research universities in the country, with $1.7 billion in research expenditures last year. We have more than 100 top-10 graduate programs. Our students come to learn and grow as leaders from nearly every county in Michigan, all 50 states and more than 130 countries around the world. University of Michigan Health's adult hospitals and the C.S. Mott Children's Hospital have been ranked the best in Michigan. Even our beloved fight song, "The Victors," is regularly found at the top of lists ranking the best college fight songs — and rightly so!

What I've learned in my time since starting as president this fall is that behind these remarkable numbers and countless accolades are thousands of people — faculty, students, staff, alumni and so many others — who embody the commitment to excellence that keeps this institution performing at such a high level. They conduct the research that helps address some of our society's most urgent challenges. They create the art that connects us, inspires us and helps us to think more deeply about our world. They enrich our campus community with diverse viewpoints and experiences. And they support and amplify the university's innovative work through entrepreneurship, mentoring, selflessness and generosity.

One of those people is former U-M President Emerita Mary Sue Coleman, who returned to serve the university for 10 months on an interim basis before I stepped into the role in October. Her commitment to this institution and its students is something we should all admire. I will be eternally grateful for the guidance and wisdom she shared with me as I made my transition to this office.

Across our three campuses, more than 65,000 students are pursuing their academic goals and earning their degrees in a wide breadth of disciplines. At Michigan Medicine, our health care professionals handled more than 2.6 million patient clinic visits in the last year. The university's research activity during FY 2022 generated 433 new inventions and 16 startup companies and ranged in scope from genetic data accessibility to internet interfaces for the visually impaired.

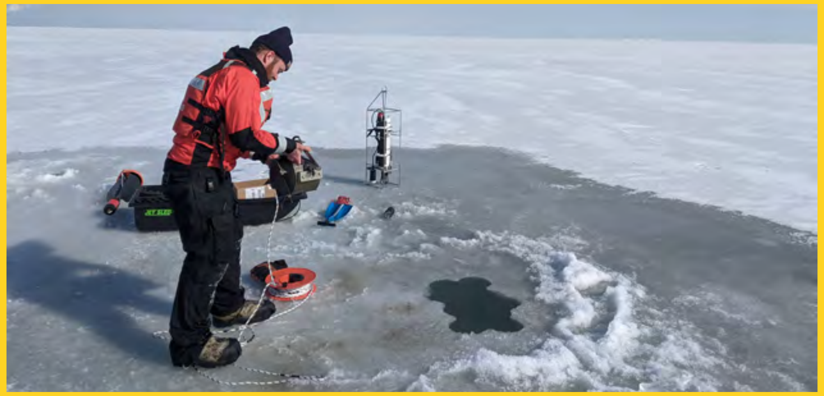
In short, the University of Michigan is thriving.

> "What I've learned in my time since starting as president this fall is that behind these remarkable numbers and countless accolades are thousands of people — faculty, students, staff, alumni and so many others — who embody the commitment to excellence that keeps this institution performing at such a high level."

AMPLIFYING OUR RESEARCH ENTERPRISE

For more than a decade, the University of Michigan has been top-ranked in research volume among U.S. public universities. This vast, broad enterprise powers medical breakthroughs, solutions to environmental challenges, advancements in technology and engineering, a better understanding of human behavior and so much more. The research enterprise also plays a key role in driving economic growth, with U-M research contributing $97 million to Michigan's economy over the past fiscal year.

Earlier this year, U-M was awarded a five-year, $53 million renewal agreement from the federal government to continue and expand the Cooperative Institute for Great Lakes Research (CIGLR), with the goal of helping to conserve and manage the region's natural resources. CIGLR is hosted by U-M's School for Environment and Sustainability and its scientists and their students work alongside National Oceanic and Atmospheric Administration researchers to seek solutions for some of the most pressing Great Lakes issues, including a changing regional climate and invasive species. The $53 million renewal was the largest sponsored award in the School for Environment and Sustainability's history.



| Collecting samples on Lake Erie to study wintertime physical, chemical, and biological conditions in the lake. This research was conducted as part of the 2022 Great Lakes Winter Grab. (Photo by Paul Glyshaw, NOAA GLERL) |

In another area of vital research, U-M received a $5.5 million federal grant in September to launch a National Institutes of Health (NIH) firearm research coordinating center that will oversee community-based research projects designed to reduce firearm-related injuries. In collaboration with the NIH, the U-M Institute for Firearm Injury Prevention will provide cross-network coordination, communication, analytics, engagement and dissemination efforts to help advance three new research projects.

These are just two examples of how the university's vast and vibrant research ecosystem is well positioned to take on many of our society's biggest problems. As president, I am committed to making us even more essential as a leading research university that serves our state, our nation and our world.

The university will soon launch a phased strategy to amplify research and scholarship activity across disciplines so teams are positioned to rapidly address and solve critical challenges affecting communities worldwide.

WORKING TOWARD A SUSTAINABLE FUTURE

Perhaps the most critical challenge we're actively involved in addressing is the global climate crisis. And while we have incredible scholars and leaders in this space, this problem isn't merely for climate scientists to solve. Universities are societies within themselves, with massive operational footprints, and U-M has made considerable strides toward university-wide carbon neutrality in recent years.

Earlier this year, the Ann Arbor campus achieved its goal — set in 2011— of reducing greenhouse gas emissions by 25 percent, three years ahead of a 2025 target. The university also is on pace to reduce Scope 1 emissions (those from direct sources) and Scope 2 emissions (those from purchased energy) by 50 percent by 2025, exceeding Intergovernmental Panel on Climate Change guidance to reduce emissions by 45 percent by 2030.

The important work can't be done in a vacuum, which is why I'm proud that U-M will now serve as the lead institution for the University Climate Change Coalition. The UC3 convenes 23 leading North American universities toward climate action on campus, in communities, and at a global scale.

We can, and will, extend our impact through our bold and strategic leadership on this issue.

THE MICHIGAN DIFFERENCE

I've had the opportunity to meet with and listen to hundreds of people in the University of Michigan community over the past few months. I've heard where you think we're succeeding and where you think we need to improve. I take these messages to heart, and I assure you they will help to guide my priorities in the months and years ahead.

A key factor in the university's ability to deliver on its mission has been its continued financial strength, and the Chief Financial Officer's Report outlines U-M's healthy finances in greater detail.

Additionally, the Report of the Vice President for Development highlights a record year for generosity, with donors offering $515 million in total cash gifts. That includes $233 million in student support alone.

The University of Michigan is growing and thriving, and its people are the reason. What an incredible privilege it is to be a part of this vibrant community dedicated to excellence.

Despite challenging moments, the university has had an incredible year of achievement. I look forward to the future, and all that we will accomplish together.

Sincerely,

Santa J. Ono
President

REPORT FROM THE CHIEF FINANCIAL OFFICER

The University of Michigan has been regarded as a global leader in higher education for generations. While there are many reasons for this well-deserved reputation, two notable factors stand out — U-M's exceptionally strong and longstanding financial strength as well as the continued focus of our 50,000+ employees on the institution's missions of education, research and patient care.

| GEOFFREY S. CHATAS |

FY 2022 presented a number of challenges, including continuation of the COVID-19 pandemic, supply chain disruptions and the onset of inflation. Despite these challenges, U-M continued to provide an outstanding education to students from around the world, perform important research that benefits society and provide exceptional health care services. The university also continued its proactive focus on building a strong foundation — financial and otherwise — to ensure it can best serve its students, patients and society in the years ahead.

MAINTAINING A STRONG FINANCIAL POSITION

The university's financial position remains very strong with a net position of $19.3 billion at June 30, 2022. U-M's FY 2022 net investment income of $336 million was among the highest for universities with large endowments, with most reporting losses after extraordinary gains the prior year. In addition, the increase in year-over-year operating expenses reflects costs associated with finalization of a settlement agreement between the university and claimants who alleged abuse by the late physician Robert Anderson. Operating expenses in FY 2022 also reflect the lifting of most pandemic-related spending restrictions, a rebound in campus activities and inflation.

To take advantage of historically low interest rates and lock in a semi-permanent source of capital, the university issued $2.5 billion of general revenue bonds during FY 2022. This included $1.7 billion of century bonds — the largest ever issued in higher education — and $300 million of green bonds, both firsts for the university. Total bond proceeds were utilized to refund $69 million of existing bonds, establish an escrow of $412 million to advance refund existing bonds as well as provide $1.7 billion for capital projects and general purposes along with $299 million for capital projects designed to advance the university's commitment to decarbonization.

"The university also continued its proactive focus on building a strong foundation — financial and otherwise — to ensure it can best serve its students, patients and society in the years ahead."

INVESTMENT PERFORMANCE	RETURN FOR THE 12-MONTH PERIOD ENDED JUNE 30, 2022	ANNUALIZED 5-YEAR RETURN	ANNUALIZED 10-YEAR RETURN
LONG TERM PORTFOLIO	2.1%	11.6%	10.2%
U-M'S BENCHMARK	-3.6%	8.4%	8.4%
BLENDED PASSIVE INDEX	-11.8%	5.8%	7.0%

Our endowment distribution policy and long-term investment strategy combine to insulate U-M from volatility and provide dependable annual support for operations. The endowment distribution policy smooths the impact of capital market volatility by providing for annual distributions of 4.5 percent of the seven-year moving average fair value of the University Endowment Fund. This policy, along with the endowment's growth, allowed for distributions of $434 million to support university operations in FY 2022, for a total of $1.9 billion over the past five years. Distributions from more than 12,400 individual endowments provide ongoing and dependable support for a variety of academic, health-related and other needs across the university such as student scholarships, professorships, clinical operations and research.

Endowment funds, which are invested principally in the university's Long Term Portfolio, totaled $17.3 billion at June 30, 2022. The table above summarizes the investment performance of U-M's Long Term Portfolio in relation to comparative benchmark portfolio returns.

The Long Term Portfolio's 10-year, 5-year and 12-month annualized returns exceeded those of its custom U-M Benchmark and Blended Passive Index. The 12-month return of 2.1 percent reflects a volatile year in the financial markets, which were reacting to rising interest rates, high levels of inflation and increased geopolitical risks. With a 10-year annualized return of 10.2 percent, U-M's Long Term Portfolio is in the top quartile of performance relative to other college and university endowment investment portfolios.

DIVERSIFICATION IN REVENUE STREAMS

U-M has a diversified revenue base, which has enabled the university to remain financially stable through various economic cycles and challenges as well as avoid unnecessary dependence on student tuition and fee increases. The components of the university's sources of revenue are depicted at the top of the next page.

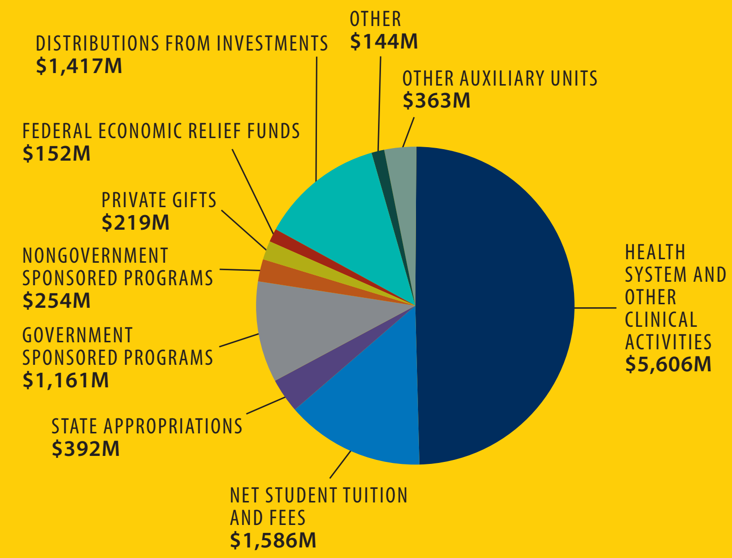
Funding from the state of Michigan continues to be an essential source of financial support for U-M. In FY 2022, state educational appropriations totaled $392 million. We are very appreciative of the ongoing support of higher education and U-M by residents of the state, particularly in a year that saw inflation and ongoing economic issues due to the COVID-19 pandemic.

U-M's operating budget continues to balance academic excellence and investment in the future with student affordability and access. For the Ann Arbor campus, tuition rate increases for FY 2022 were 1.4 percent for in-state undergraduate students and 1.8 percent for nonresident undergraduate students and most graduate students. For the Dearborn campus, tuition rate increases for undergraduate and graduate students were 1.9 percent and for the Flint campus, there was no increase in undergraduate rates and a 3 percent increase for graduate students.

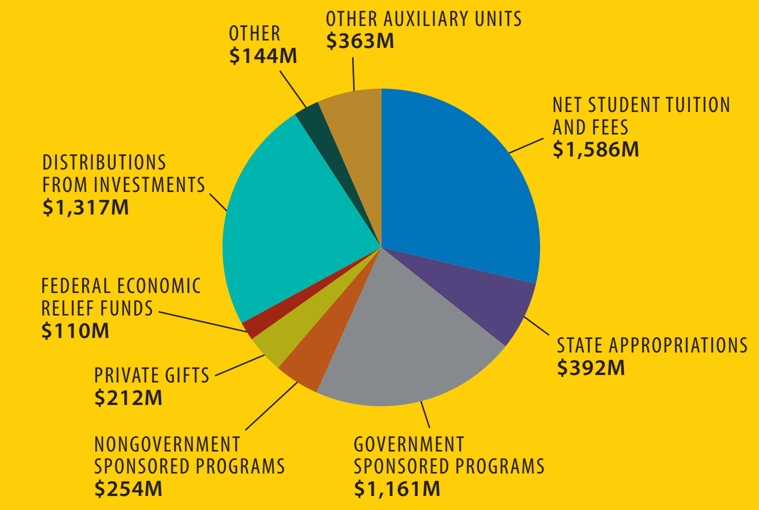
The FY 2022 budget also included a 6.4 percent increase in financial aid for undergraduates on the Ann Arbor campus as well as an extension of the Go Blue Guarantee to the Dearborn and Flint campuses. This landmark program provides four years of free tuition for high-achieving in-state undergraduate students with a family income of $65,000 or less and assets less than $50,000. U-M has been able to limit tuition increases and provide generous financial aid because of continued growth in non-tuition revenues and a longstanding commitment to controlling costs and improving efficiencies across its operations.

Demand for a U-M education continues to grow. More than 90,000 prospective first-year-student applications — a record number — were submitted from around the world for the university's three campuses. This is the 15th consecutive year that applications have increased. U-M's impressive global reputation and incredible value make it a top destination for outstanding students from Michigan, the United States and countries around the world.

OPERATING ACTIVITIES
Total revenue $11,294 million



OPERATING ACTIVITIES EXCLUDING HEALTH SYSTEM AND OTHER CLINICAL ACTIVITIES
Total revenue $5,539 million



U-M RESEARCH ADDRESSES SOCIETAL CHALLENGES AND DRIVES ECONOMIC GROWTH

Researchers throughout the university secured nearly 3,000 new awards from external sponsors during FY 2022 and the total value of those research awards increased 14.7 percent when compared to FY 2021. This type of support has allowed U-M teams to utilize their knowledge and experience to address key societal challenges that impact communities across Michigan and beyond — from Great Lakes water quality and substance abuse to youth violence and global health disparities.

With a record $1.7 billion volume of research expenditures in FY 2022, U-M made key advances in many important and wide-ranging areas, from driverless vehicle technologies to treatments for serious medical conditions. U-M's research efforts continue to have a significant and positive impact on a global level.

The federal government continues to be a leading sponsor of U-M research and scholarship activity. More than half of the university's total research expenditures were supported by federal agencies, totaling $973 million in FY 2022, an 8.9 percent increase when compared to FY 2021.

As a public research university, U-M remains committed to ensuring that research discoveries are translated from its laboratories to the marketplace in ways that benefit society and drive economic growth. During FY 2022, U-M research led to 16 startups and 433 new inventions.

MICHIGAN MEDICINE CONTINUES TO BE A LEADER IN HEALTH CARE

Michigan Medicine — which includes University of Michigan Health (UMH), University of Michigan Medical School, Michigan Health Corporation and UM-Health — is acknowledged across the country as a leader in advanced patient care, innovative research to improve human health and comprehensive education of physicians and medical scientists.

Despite challenges from the COVID-19 omicron surge, supply chain issues and workforce shortages, UMH realized positive financial results in FY 2022, with a 1.9 percent — or $94 million — operating margin on operating revenues of $5.0 billion. UMH also recognized federal pandemic relief funding of $30 million.

Dedication, talent and commitment to the highest standards of patient care along with a focus on inclusion and teamwork enabled Michigan Medicine to successfully manage ongoing COVID-19 issues and introduce new initiatives to improve access. These initiatives include the Care at Home program, which offers patients hospital-level care combined with the opportunity to recover at home. This program provides eligible patients with the option to receive nurse and physician visits — plus a wide array of tests, treatments and monitoring — in their homes. That allows some hospitalized patients to return home sooner to receive care in familiar surroundings, closer to loved ones.

In addition, construction of The Pavilion at University of Michigan Health continues. When completed, this new 12-story adult inpatient hospital will house 264 private rooms capable of converting to intensive care, a state-of-the-art neurological and neurosurgical center, high-level specialty care services for cardiovascular and thoracic patients and advanced imaging services. The 690,000-gross-square-foot building is expected to open in fall 2025.

Planning is also underway for a major expansion into specialty and mail pharmacy services from a new facility near Ann Arbor. The expansion will allow Michigan Medicine to more than double the number of prescriptions it fills each year through its existing in-house pharmacy.

"The University of Michigan continues to be financially strong and is well positioned for the future. We are one of only seven public universities in the country to earn the highest possible credit ratings from S&P Global (AAA) and Moody's (Aaa)."

LOOKING AHEAD

The University of Michigan continues to be financially strong and is well positioned for the future. We are one of only seven public universities in the country to earn the highest possible credit ratings from S&P Global (AAA) and Moody's (Aaa). The university has maintained these outstanding ratings for years, and they're a clear indication of our long-term financial strength and stability.

As part of its ongoing effort to maintain excellence in education, research and patient care as well as offer collaboration opportunities for multiple disciplines, the university continues to make important capital investments in a wide array of its facilities.

An overview of the capital projects completed, in progress and in planning during FY 2022 appears in the Major Projects section. Our long-time approach of balancing investments in new facilities against the renewal of existing facilities enables us to avoid an excessive accumulation of deferred facility maintenance.

Please take some time to review Management's Discussion and Analysis in conjunction with the audited financial statements. In this section of the annual report, you'll find more details about the university's financial strength, prudent financial policies and commitment to excellence. These factors — in conjunction with the ongoing efforts of our outstanding employees — enable U-M to continue its longstanding commitment to improving society through world-class education, research and patient care.

Sincerely,

Geoffrey S. Chatas
Executive Vice President and Chief Financial Officer

REPORT FROM THE VICE PRESIDENT FOR DEVELOPMENT

The generosity and support of our wonderful donor community continuously energizes and inspires me, but this past year has been especially gratifying.

I'm delighted to report that donors gave to the University of Michigan in record fashion during FY 2022, with the university receiving $515 million in total cash gifts, the highest in U-M history and the first time that cash gifts topped $500 million.

The giving was widespread across the university, with generous gifts from donors at every level. Almost 100,000 donors gave gifts of $25,000 or less, and 125 donors gave $1 million or more. We are especially pleased that 29 of U-M's schools, colleges and units received gifts at or above FY 2021 totals. Gifts to support students, such as scholarships, fellowships and student success programs, totaled a record-setting $233 million.

Among those gifts was a $40 million endowment from the **Fred and Judy Wilpon Family Foundation** for the Kessler Family Scholars program for first-generation college students in the College of Literature, Science, and the Arts. Founded 13 years ago, Kessler Scholars supports 157 students across all four years of their undergraduate academic career and uses research-based support to raise graduation rates of first-generation students. Announced last October, the new endowment funds the program in perpetuity.

| **THOMAS A. BAIRD** |

| Judy and Fred Wilpon |

"I'm delighted to report that donors gave to the University of Michigan in record fashion during FY 2022, with the university receiving $515 million in total cash gifts, the highest in U-M history and the first time that cash gifts topped $500 million."

| Edward Ginsberg Center for Community Service and Learning |

| Leinweber Computer Science and Information Building |

In the spring, an $11.5 million gift was made to Michigan Medicine's Kellogg Eye Center by **James Grosfeld**, an investor, philanthropist and former chairman and CEO of PulteGroup Inc. Grosfeld's gift will establish two endowed professorships focused on researching dry age-related macular degeneration — or AMD — as well as a new facility for working with pluripotent stem cells for use in AMD-related research across disciplines. AMD is the leading cause of irreversible blindness in people older than 50.

Other gifts included support for:

- The Tishman Center for Social Justice and the Environment within the School for Environment and Sustainability.
- Construction of a new home for the Edward Ginsberg Center for Community Service and Learning.
- Building the Leinweber Computer Science and Information building to house Michigan Engineering's Computer Science and Engineering Division and the School of Information.

These are just a few of the many gifts to support a wide variety of passions from our community of donors. We are grateful for their confidence in the university's mission and purpose. That steady support carries us through challenging times and helps uphold U-M's position among the top universities in the world.

Thank you for your commitment to U-M and for giving me the opportunity to help advance our mission.

Go Blue!

Thomas A. Baird
Vice President for Development

HIGHLIGHTS

More at: 2022.annualreport.umich.edu/highlights

Eleven U-M teams Big 10 conference champions in 2021–22

During 2021–2022, 11 U-M teams earned the title of conference champions, showcasing their talents as leaders and best in their sport. The teams included baseball, football, women's golf, men's and women's gymnastics, ice hockey, women's soccer, men's and women's tennis, women's water polo and wrestling.

$42.65M awarded to concussion study

The largest concussion and repetitive head impact study in history, co-led by the University of Michigan, has received a $42.65 million award to launch the next phase of the landmark research project. The NCAA-U.S. Department of Defense Concussion Assessment, Research and Education Consortium was awarded $25 million by the U.S. Army Medical Research and Development Command, with an additional $10 million coming from the NCAA and $7.65 million from the Defense Health Agency, to investigate the long-term effects of head impact exposure and concussion/mild traumatic brain injury in NCAA student-athletes and military service members

Road Scholars Tour resumes with faculty visiting communities

The annual Michigan Road Scholars Tour resumed this year after a two-year pause during the COVID-19 pandemic. From May 2–6, 2022, 16 faculty members from the Ann Arbor, Dearborn and Flint campuses visited stops in Lansing, Grand Rapids, Muskegon, Traverse City, Pellston, Sault Ste. Marie, Brimley, Midland, Warren and Detroit. They heard directly from community members and discussed a wide range of topics, including equitable development, educational needs on tribal lands, the problem of homelessness and more.

Progress report highlights ongoing DEI commitment

Despite the challenges of a global pandemic and nationwide racial unrest, U-M's Year Five Diversity, Equity and Inclusion Progress Report charted milestones of institutional success in DEI skill building, new policies and processes, new and expanded DEI community support, accessibility and affordability. FY 2022 marked the conclusion of the university's initial DEI Five-Year Strategic Plan, known as DEI 1.0, and the beginning of a yearlong evaluation process in which central and unit-level content and actions from DEI 1.0 will serve as a base of planning for DEI 2.0, which will launch in fall 2023.

Federal grant aids new UM-Flint Innovation and Technology Center

A building designed for teaching, collaborating and inspiring innovators is being built on the UM-Flint campus near the William S. White Building. The U.S. Economic Development Administration awarded a $3.8 million CARES Act Recovery Assistance grant to build the Innovation and Technology Center. The grant will be matched with $4.9 million in additional funds from university donors. This new center will provide a base for the Flint campus's College of Innovation and Technology, which launched in fall 2021, welcoming students who are pursuing degrees in digital manufacturing technology, information technology and informatics, and cybersecurity.

Study abroad, global opportunities come back strong

About 1,500 U-M students applied to travel to 33 countries during winter 2022, a number that is fast approaching pre-pandemic levels. U-M was the No. 2 Big Ten university and No. 5 in the nation overall for students studying abroad during the 2019–20 academic year, according to an annual report by the Institute of International Education. U-M also topped public universities for students and faculty scholars who were offered Fulbright grants to fund overseas work for the 2021–22 academic year.

UM-Dearborn program targets underserved STEM students

A $1.44 million National Science Foundation award will help UM-Dearborn create a STEM Scholars program to bridge a gap in science fields among low-income, high-talent students. The program began its first cohort in fall 2022. Scholars must be Pell-eligible and have a minimum 3.0 high school GPA, placement into campus' Calculus I or higher, and a major in a STEM-focused program. Students who are accepted into the STEM Scholars program will be awarded grants and scholarships toward tuition and fees for four academic years as long as they remain in one of the selected STEM majors and maintain a 2.5 GPA. This means that, through a combination of the NSF-funded grant and other federal and institutional grant funding, they can essentially earn a STEM undergraduate degree for free.

Major initiatives address infectious disease threats

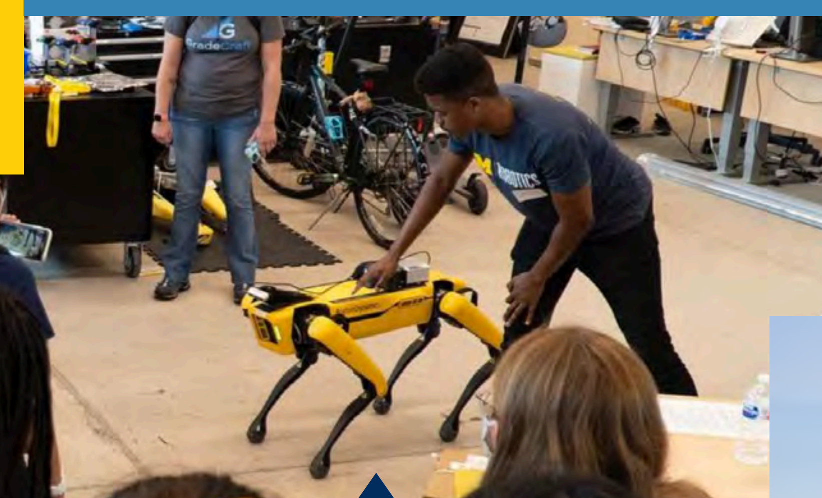
The University of Michigan is one of four Michigan universities receiving $18.5 million in federal funds to collect and analyze genomic data to address emerging infectious disease threats and the state's ability to respond to those threats. U-M will use the funding to increase sequencing capacity in the state starting with SARS-CoV-2 and then other diseases with the potential for broad community spread. In addition to these efforts, U-M's Biosciences Initiative is awarding $13.8 million over five years to the new Michigan Center for Infectious Disease Threats, to allow researchers to work across disciplines on infectious disease preparedness and response.

U-M recruiting students across campus to fill arts internships

The University of Michigan's Arts Initiative continued to explore new models for students, faculty and staff to work across disciplines. Demonstration projects like Michigan Culture Corps encourage students across campus — from engineering to political science — to apply their unique talents to cultural organizations. The outreach program recruited first-generation students, community college transfers and Bachelor of Arts or Bachelor of Science candidates who are not arts majors to pursue paid arts internships as part of their academic experience.

Ross School launches health care accelerator for student entrepreneurs

The new Pinkert Healthcare Accelerator at the Stephen M. Ross School of Business aims to help students develop and launch their creative ideas for addressing major challenges in health care. Managed by Ross' Zell Lurie Institute, the Pinkert Healthcare Accelerator adds to the extensive world-class health care and entrepreneurial offerings available to Ross and U-M students. The accelerator provides student teams with grant seed funding; expert mentorship from U-M faculty, staff and alumni; and advice from a board of leaders in health care entrepreneurship and investing.



Undergraduate robotics program starts enrollment

Michigan Engineering's new undergraduate program in robotics began enrolling students in fall 2022 to practice the full spectrum of robotics — including underwater, wheeled, legged, flying and medical robots — at the 134,000-square-foot Ford Motor Company Robotics Building. The U-M Department of Robotics is a first among top 10 engineering schools. According to the U.S. Bureau of Labor Statistics, the demand for qualified robotics professionals grew by more than 13 percent in 2018 alone, and up to 80 percent of U.S. industrial employers are facing difficulties filling vacancies for highly skilled technical professionals, including robotics, computer vision, artificial intelligence and motion control.

Federal funding expands Great Lakes research

U-M was awarded a five-year, $53 million renewal from the federal government to continue and expand the Cooperative Institute for Great Lakes Research (CIGLR) to help conserve and manage the region's natural resources. In addition to this funding, researchers at U-M and Michigan State University have also been awarded $5.4 million from the National Oceanic and Atmospheric Administration to continue their study of climate change and variability risks in the larger Great Lakes region for the next five years. Funding for the Great Lakes Integrated Sciences and Assessments, known as GLISA, will be granted through the federal agency's Climate Program Office.

MAJOR PROJECTS

More at: **2022.annualreport.umich.edu/major-projects**

| U-M's new Central Campus Classroom Building opened in January 2022. The 100,000 gross square foot state-of-the-art building is the first facility on campus designed entirely to support active learning in large courses. |

PROJECTS IN PLANNING

Central Power Plant Steam Pressure Regulator Valve System

Edward and Rosalie Ginsberg Building

Hayward Street Geothermal Facility

Michigan Stadium Scoreboard Replacement

New North Campus Undergraduate Housing

New Building for College of Pharmacy

New Central Campus Recreation Building Replacement

Horace H. Rackham Educational Memorial 100 Farnsworth Street, Detroit Michigan

University of Michigan Health

- Brighton Center for Specialty Care Linear Accelerator Expansion
- Brighton Center for Specialty Care Shell Space Utilization for New Operating Rooms
- University Hospital Electrical Substation Replacement

PROJECTS IN PROGRESS

Chemistry Building and Willard H. Dow Laboratory East Campus Switching Station Upgrade | Work started November 2021 with an estimated completion date of September 2023. Financing is from utilities reserves.

Dean Road Transportation Facility | Work started January 2021 with an estimated completion date of September 2022. Financing is from Logistics, Transportation, and Parking.

East University Chiller Plant Chiller Replacement | Work started December 2021 with an estimated completion date of September 2023. Financing is from utilities reserves.

Robben W. and Aldyth Fleming Administration Building Demolition | Work started May 2022 with an estimated completion date of September 2022. Financing is from reserves.

William W. Cook Legal Research Library and Hutchins Hall Exterior Repairs | Work started July 2021 with an estimated completion date of December 2022. Financing is from the general fund.

Leinweber Computer Science and Information Building | Work started May 2022 with an estimated completion date of September 2025. Financing is from state capital appropriation, the Office of the Provost, the College of Engineering and the School of Information.

Medical Science Research Buildings I, II and III Installation of Back Up Generators | Work started July 2021 with an estimated completion date of December 2022. Financing is from the Medical School.

Palmer Field Temporary Recreation Facility | Work started June 2022 with an estimated completion date of December 2022. Financing is from reserves.

President's Residence Infrastructure Renovation | Work started May 2022 with an estimated completion date of September 2023. Financing is from reserves.

Harold T. and Vivian B. Shapiro Library Third Floor Renovation | Work started March 2022 with an estimated completion date of March 2023. Financing is from gifts and the Office of the Provost.

A. Alfred Taubman Biomedical Science Research Building Vivarium Expansion | Work started February 2021 with an estimated completion date of January 2023. Financing is from the Medical School.

University of Michigan Health | Financing is from University of Michigan Health.

- **The D. Dan and Betty Kahn Healthcare Pavilion at University of Michigan Health |** Work restarted May 2021 with an estimated completion date of June 2025.

PROJECTS IN PROGRESS, continued

- **Samuel and Jean Frankel Cardiovascular Center Positron Emission Tomography/Computed Tomography Scanner Project |** Work started February 2022 with an estimated completion date of December 2022.
- **C.S Mott Children's and Von Voigtlander Women's Hospitals Emergency and Psychiatric Services Renovation |** Work started March 2022 with an estimated completion date of March 2023.
- **University Hospital and University Hospital South Clinical Pathology Laboratories |** Work started January 2020 with an estimated completion date of December 2023.
- **7300 West Joy Road, Dexter, Michigan Specialty Pharmacy Expansion |** Work started June 2022 with an estimated completion date of June 2023.
- **Rogel Cancer Center Exterior Improvements |** Work started July 2021 with an estimated completion date of July 2022. Financing is from University of Michigan Health and the general fund.
- **University Hospital Air Handling Unit Replacement |** Work started December 2021 with an estimated completion date of September 2022. Financing is from insurance reserves.

PROJECTS COMPLETED

Catherine Street Area Utility Infrastructure Upgrades | Completed November 2021. Financed by utilities reserves.

Central Power Plant 13,200 Volt Switchgear Upgrade | Completed October 2021. Financed by utilities reserves.

Central Power Plant Expansion | Completed January 2022. Financed by utilities reserves.

W.K. Kellogg Institute and Dental Building Expansion and Renovation | Completed June 2022. Financed by state capital appropriation, the Office of the Provost, the School of Dentistry and investment proceeds.

Detroit Observatory Classroom and Accessibility Addition | Completed July 2021. Financed by the Bentley Historical Library, gifts and investment proceeds.

Carl A. Gerstacker Building Herbert H. Dow Building Center for Ultrafast Optical Science Expansion | Completed November 2021. Financed by the College of Engineering.

Medical Campus Utility Infrastructure Upgrades | Completed November 2021. Financed by utilities reserves.

New Dance Building | Completed July 2021. Financed by investment proceeds, the School of Music, Theatre & Dance gifts and resources.

Central Campus Classroom Building and the Alexander G. Ruthven Building Renovation and Addition | Completed December 2021. Financed by investment proceeds.

University of Michigan Health | Financed by University of Michigan Health.

- **Brighton Center for Specialty Care Central System Replacement |** Completed February 2022.

| In June 2022, the U-M School of Dentistry completed its first major renovation and expansion in 50 years. The project added new innovative research labs, student meeting spaces, conference rooms, offices and clinic spaces to the school. |

MANAGEMENT'S RESPONSIBILITY FOR THE FINANCIAL STATEMENTS

OFFICE OF BUSINESS & FINANCE
UNIVERSITY OF MICHIGAN

October 20, 2022

The management of the University of Michigan (the "University") is responsible for the preparation, integrity and fair presentation of the basic financial statements. The basic financial statements, presented on pages 46 to 89, have been prepared in conformity with accounting principles generally accepted in the United States of America and, as such, include amounts based on judgments and estimates made by management.

The basic financial statements have been audited by the independent accounting firm PricewaterhouseCoopers LLP, which was given unrestricted access to all financial records and related data, including minutes of all meetings of the Board of Regents. The University believes that all representations made to the independent auditors during their audit were valid and appropriate. PricewaterhouseCoopers' audit opinion is presented on pages 25-27.

The University maintains a system of internal controls over financial reporting designed to provide reasonable assurance to the University's management and Board of Regents regarding the preparation of reliable financial statements. These controls are maintained by the establishment and communication of accounting and financial policies and procedures, by the selection and training of qualified personnel and by an internal audit program designed to identify internal control weaknesses, in order to permit management to take appropriate corrective action on a timely basis. There are, however, inherent limitations in the effectiveness of any system of internal controls, including the possibility of human error and the circumvention of controls.

The Board of Regents, through its Finance, Audit and Investment Committee, is responsible for engaging the independent auditors and meeting regularly with management, internal auditors and the independent auditors to ensure that each is carrying out their responsibilities, and to discuss auditing, internal control and financial reporting matters. Both the internal auditors and independent auditors have full and free access to the Finance, Audit and Investment Committee.

Based on the above, the information contained in the accompanying basic financial statements fairly presents, in all material respects, the financial position, changes in financial position and cash flows of the University.

Geoffrey S. Chatas
Executive Vice President and Chief Financial Officer

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REPORT OF INDEPENDENT AUDITORS

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To the Regents of the University of Michigan

OPINIONS

We have audited the accompanying financial statements of the business-type activities and the aggregate remaining fund information of the University of Michigan (the "University"), which comprise the statements of net position and of fiduciary net position as of June 30, 2022 and 2021, and the related statements of revenues, expenses and changes in net position, of cash flows, and of changes in fiduciary net position for the years then ended, including the related notes to the financial statements (collectively referred to as the "financial statements").

In our opinion, the accompanying financial statements present fairly, in all material respects, the respective financial position of the business-type activities and the aggregate remaining fund information of the University as of June 30, 2022 and 2021, and the respective changes in financial position and, where applicable, cash flows thereof for the years then ended in accordance with accounting principles generally accepted in the United States of America.

BASIS FOR OPINIONS

We conducted our audit in accordance with auditing standards generally accepted in the United States of America ("US GAAS"). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are required to be independent of the University and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

EMPHASIS OF MATTER

As discussed in Note 1 to the financial statements, the University changed the manner in which it accounts for leases in 2022. Our opinions are not modified with respect to this matter.

RESPONSIBILITIES OF MANAGEMENT FOR THE FINANCIAL STATEMENTS

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

In preparing the financial statements, management is required to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for twelve months beyond the financial statement date, including any currently known information that may raise substantial doubt shortly thereafter.

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REPORT OF INDEPENDENT AUDITORS

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AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinions. Reasonable assurance is a high level of assurance but is not absolute assurance and therefore is not a guarantee that an audit conducted in accordance with US GAAS will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the financial statements.

In performing an audit in accordance with US GAAS, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the University's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the financial statements.
- Conclude whether, in our judgment, there are conditions or events, considered in the aggregate, that raise substantial doubt about the University's ability to continue as a going concern for a reasonable period of time.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

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REQUIRED SUPPLEMENTAL INFORMATION

Accounting principles generally accepted in the United States of America require that the accompanying management's discussion and analysis on pages 28 through 46 and required supplementary information for the pension plan and postemployment benefits on pages 87 through 89 be presented to supplement the basic financial statements. Such information is the responsibility of management and, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplemental information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

PricewaterhouseCoopers L.L.P.

October 20, 2022

PricewaterhouseCoopers LLP, 500 Woodward Avenue, Detroit, Michigan 48226
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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.

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.

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:

2022

(in millions)	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

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

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

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.

CONSOLIDATED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

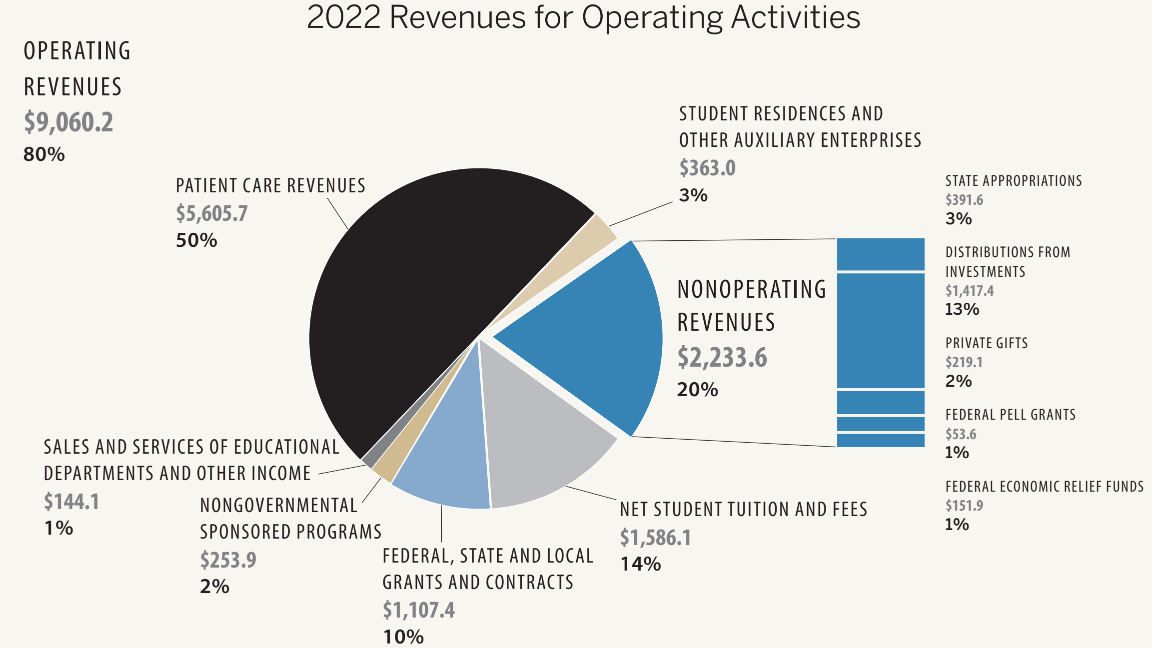
The consolidated statement of revenues, expenses and changes in net position presents the University's results of operations. In accordance with GASB reporting principles, revenues and expenses are classified as either operating or nonoperating. The University's revenues, expenses and changes in net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

(in millions)	2022	2021	2020
Operating revenues:			
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
Operating expenses	10,548.4	9,520.0	9,364.3
Operating loss	(1,488.2)	(1,115.7)	(1,408.7)
Nonoperating and other revenues (expenses):			
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
(Decrease) increase in net position	(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.

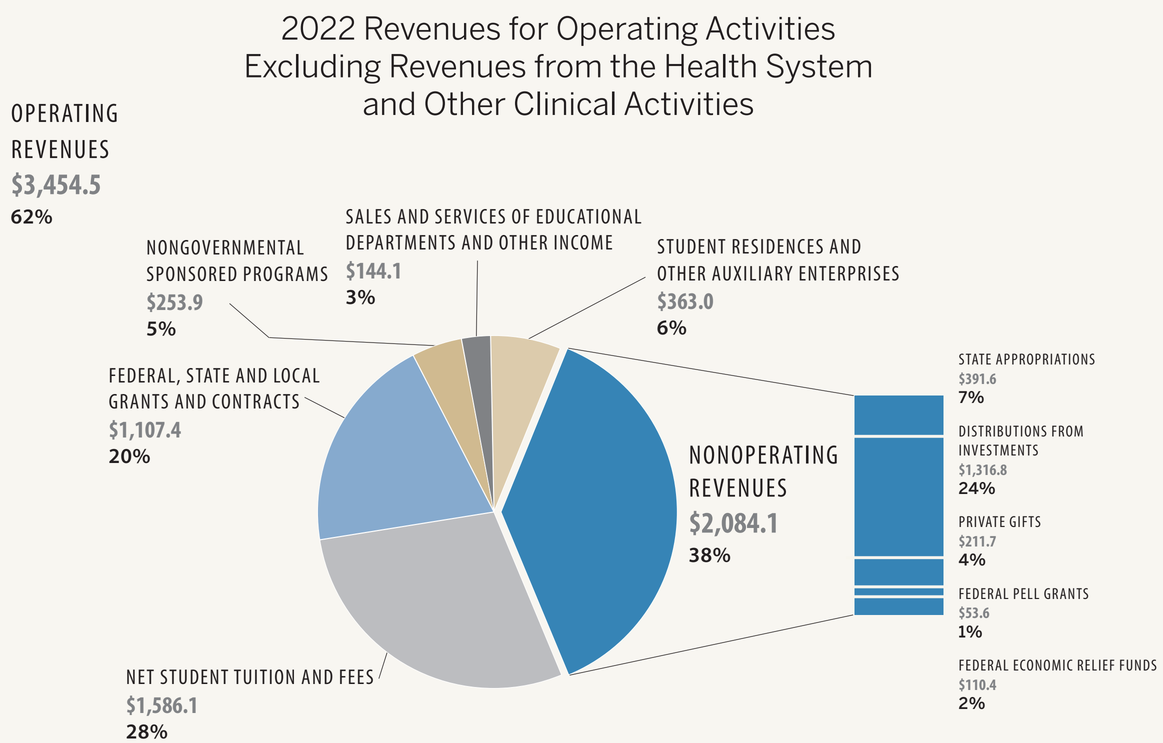
The following is a graphic illustration of revenues by source, both operating and nonoperating, which are used to fund the University's operating activities for the year ended June 30, 2022 (amounts are presented in millions of dollars). Certain recurring sources of the University's revenues are considered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

2022 Revenues for Operating Activities



MANAGEMENT'S DISCUSSION AND ANALYSIS
(UNAUDITED)

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.

MANAGEMENT'S DISCUSSION AND ANALYSIS

(UNAUDITED)

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
	$ 5,605.7	$ 5,351.1	$ 4,767.9

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	
	$ 151.9	$ 255.7	$ 143.8

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.

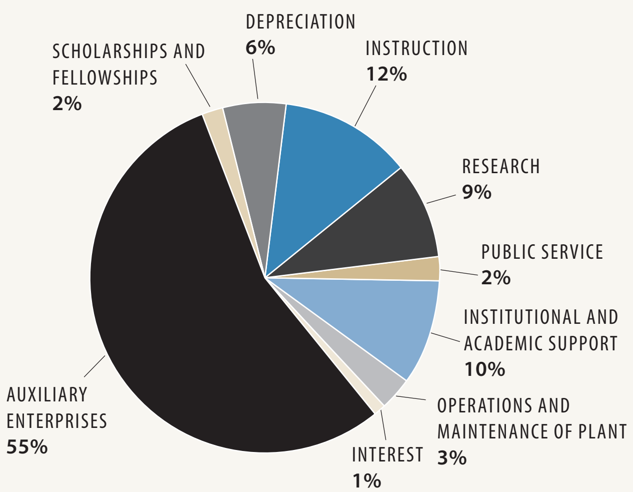
Scholarships and fellowships provided to students totaled $755 million in 2022 as compared to $708 million in 2021, an increase of 7 percent. Tuition, housing and fees revenues are reported net of aid applied to students' accounts, while amounts paid directly to students are reported as scholarships 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
	$ 754.6	$ 707.9	$ 684.8

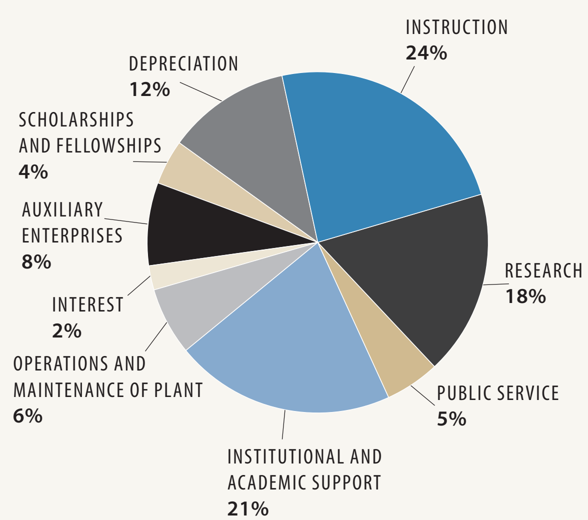
During 2022, 2021 and 2020, scholarships and fellowships expense included emergency financial aid grants distributed directly to students in accordance with the terms of the Higher Education Emergency Relief Fund of $53 million, $26 million and $8 million respectively.

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	$ 2,951.9	$ 1,003.8	$ 1,275.4

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.

FINANCIAL STATEMENTS
CONSOLIDATED STATEMENT OF NET POSITION

	June 30,	
(in thousands)	**2022**	**2021**
Assets		
Current Assets:		
Cash and cash equivalents	$ 2,951,905	$ 1,003,846
Investments for operating activities	1,691,019	1,912,859
Investments for capital activities	559,411	627,926
Investments for student loan activities	68,387	70,481
Accounts receivable, net	996,475	970,600
Current portion of notes and pledges receivable, net	108,164	108,789
Current portion of other assets	179,403	183,656
Cash collateral held by agent	23,037	20,040
Total Current Assets	6,577,801	4,898,197
Noncurrent Assets:		
Unexpended bond proceeds	305,452	52,451
Endowment, life income and other investments	17,837,664	17,532,653
Notes and pledges receivable, net	273,986	260,756
Other assets	126,435	131,951
Capital assets, net	6,265,812	6,432,423
Total Noncurrent Assets	24,809,349	24,410,234
Total Assets	**31,387,150**	**29,308,431**
Deferred Outflows	**1,045,098**	**1,124,313**

FINANCIAL STATEMENTS
CONSOLIDATED STATEMENT OF NET POSITION, CONTINUED

(in thousands)	June 30, 2022	2021
Liabilities		
Current Liabilities:		
Accounts payable	408,727	356,020
Accrued compensation and other	754,888	746,422
Unearned revenue	412,866	553,784
Current portion of insurance and benefits reserves	646,591	269,789
Current portion of obligations for postemployment benefits	97,354	95,581
Commercial paper and current portion of bonds payable	209,311	235,875
Long-term bonds payable subject to remarketing, net	274,392	300,542
Collateral held for securities lending	23,037	20,040
Total Current Liabilities	2,827,166	2,578,053
Noncurrent Liabilities:		
Accrued compensation	23,496	103,563
Insurance and benefits reserves	177,023	170,059
Obligations for defined benefit pension plan, net	(22,675)	(6,322)
Obligations for postemployment benefits	4,200,305	4,316,565
Obligations under life income agreements	73,554	76,995
Government loan advances	43,580	55,585
Bonds payable	4,722,319	2,777,621
Other liabilities	296,462	382,819
Total Noncurrent Liabilities	9,514,064	7,876,885
Total Liabilities	**12,341,230**	**10,454,938**
Deferred Inflows	**792,557**	**474,742**
Net Position		
Net investment in capital assets	3,522,018	3,669,608
Restricted:		
Nonexpendable	2,821,876	2,625,459
Expendable	7,615,023	7,582,296
Unrestricted	5,339,544	5,625,701
Total Net Position	**$ 19,298,461**	**$ 19,503,064**

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENT OF REVENUES, EXPENSES AND CHANGES IN NET POSITION

(in thousands)	Year Ended June 30, 2022	2021
Operating Revenues		
Student tuition and fees	$ 2,085,014	$ 1,977,983
Less scholarship allowances	498,938	497,162
Net student tuition and fees	1,586,076	1,480,821
Federal grants and contracts	1,095,005	1,019,559
State and local grants and contracts	12,372	12,577
Nongovernmental sponsored programs	253,876	232,286
Sales and services of educational departments	141,498	140,594
Auxiliary enterprises:		
Patient care revenues (net of provision for bad debts of $146,099 in 2022 and $140,672 in 2021)	5,605,741	5,351,066
Student residence fees (net of scholarship allowances of $24,767 in 2022 and $10,260 in 2021)	121,919	50,334
Other revenues	241,115	115,029
Student loan interest income and fees	2,622	2,057
Total Operating Revenues	**9,060,224**	**8,404,323**
Operating Expenses		
Compensation and benefits	6,573,834	6,137,455
Supplies and services	3,137,104	2,562,079
Depreciation	606,523	620,037
Scholarships and fellowships	230,946	200,431
Total Operating Expenses	**10,548,407**	**9,520,002**
Operating Loss	(1,488,183)	(1,115,679)
Nonoperating Revenues (Expenses)		
State educational appropriations	391,639	373,230
Federal Pell grants	53,552	53,396
Federal economic relief funds	151,926	255,673
Private gifts for other than capital and endowment purposes	219,068	184,108
Net investment income	336,345	5,141,252
Interest expense	(125,248)	(97,924)
Federal subsidies for interest on Build America Bonds	5,519	5,529
Total Nonoperating Revenues, Net	**1,032,801**	**5,915,264**
(Loss) Income Before Other Revenues (Expenses)	(455,382)	4,799,585
Other Revenues (Expenses)		
State capital appropriations	29,760	32,062
Capital gifts and grants	46,222	14,639
Private gifts for permanent endowment purposes	188,803	136,402
Other	(14,006)	(6,624)
Total Other Revenues, Net	**250,779**	**176,479**
(Decrease) Increase in Net Position	(204,603)	4,976,064
Net Position, Beginning of Year	19,503,064	14,527,000
Net Position, End of Year	**$ 19,298,461**	**$ 19,503,064**

The accompanying notes are an integral part of the consolidated financial statements.

FINANCIAL STATEMENTS
CONSOLIDATED STATEMENT OF CASH FLOWS

(in thousands)	Year Ended June 30, 2022	2021
Cash Flows from Operating Activities		
Student tuition and fees	$ 1,590,126	$ 1,487,613
Federal, state and local grants and contracts	1,110,673	1,016,803
Nongovernmental sponsored programs	266,398	238,827
Sales and services of educational departments and other	391,838	274,661
Patient care revenues	5,367,111	4,994,855
Student residence fees	122,470	50,936
Payments to employees	(4,884,734)	(4,543,478)
Payments for benefits	(1,524,661)	(1,142,841)
Payments to suppliers	(2,688,744)	(2,467,119)
Payments for scholarships and fellowships	(230,946)	(200,431)
Student loans issued	(7,014)	(6,430)
Student loans collected	14,985	15,662
Student loan interest and fees collected	2,622	2,057
Net Cash Used in Operating Activities	**(469,876)**	**(278,885)**
Cash Flows from Noncapital Financing Activities		
State educational appropriations	390,943	331,523
Federal Pell grants	53,552	53,396
Federal economic relief funds	149,484	249,737
Private gifts and other receipts	378,153	285,710
Proceeds from issuance of debt	1,700,000	
Interest payments on debt	(18,787)	(16,830)
Payments for bond refunding and related costs	(13,651)	
Student direct lending receipts	312,072	312,147
Student direct lending disbursements	(315,257)	(311,608)
Amounts received for annuity and life income funds	1,223	5,979
Amounts paid to annuitants and life beneficiaries and related expenses	(11,194)	(9,118)
Net Cash Provided by Noncapital Financing Activities	**2,626,538**	**900,936**
Cash Flows from Capital and Related Financing Activities		
State capital appropriations	29,491	31,033
Private gifts and other receipts	38,750	37,792
Principal and interest payments on lease liabilities	(67,299)	(66,409)
Proceeds from issuance of capital debt	782,838	164,875
Principal payments on capital debt	(527,900)	(211,690)
Interest payments on capital debt	(119,730)	(86,834)
Federal subsidies for Build America Bonds interest	5,524	5,531
Payments for bond refunding and related costs	(3,104)	
Purchases of capital assets	(428,852)	(498,316)
Proceeds from sales of capital assets	9,214	1,739
Net Cash Used in Capital and Related Financing Activities	**(281,068)**	**(622,279)**

(in thousands)	Year Ended June 30, 2022	2021
Cash Flows from Investing Activities		
Interest and dividends on investments, net	44,637	24,323
Proceeds from sales and maturities of investments	9,795,835	8,341,799
Purchases of investments	(9,405,226)	(8,710,091)
Net (increase) decrease in unexpended capital debt proceeds	(253,001)	73,454
Net (increase) decrease in cash equivalents from noncurrent investments	(95,546)	8,232
Net increase in fiduciary custodial funds and other	(14,234)	(9,044)
Net Cash Provided by (Used in) Investing Activities	**72,465**	**(271,327)**
Net Increase (Decrease) in Cash and Cash Equivalents	1,948,059	(271,555)
Cash and Cash Equivalents, Beginning of Year	1,003,846	1,275,401
Cash and Cash Equivalents, End of Year	**$ 2,951,905**	**$ 1,003,846**
Reconciliation of Operating Loss to Net Cash Used in Operating Activities:		
Operating loss	$ (1,488,183)	$ (1,115,679)
Adjustments to reconcile operating loss to net cash used in operating activities:		
Depreciation expense	606,523	620,037
Changes in assets and liabilities:		
Accounts receivable, net	(10,502)	(331,111)
Notes and pledges receivable, net	(416)	(283)
Other assets	9,280	(46,807)
Accounts payable	60,333	(11,484)
Accrued compensation and other	(145,861)	209,818
Unearned revenue	(141,472)	(27,287)
Insurance and benefits reserves	383,766	136,417
Obligations for defined benefit pension plan, net	(16,353)	(5,075)
Obligations for postemployment benefits	(114,487)	934,658
Changes in deferred outflows	105,899	(615,072)
Changes in deferred inflows	281,597	(27,017)
Net Cash Used in Operating Activities	**$ (469,876)**	**$ (278,885)**

The accompanying notes are an integral part of the consolidated financial statements.

FINANCIAL STATEMENTS
STATEMENT OF FIDUCIARY NET POSITION

	June 30, 2022	June 30, 2021	September 30, 2021	September 30, 2020
(in thousands)	Custodial Funds		Pension Trust Funds	
Assets				
Receivables			$ 1,109	$ 220
Investments	$ 293,682	$ 274,374	89,697	77,486
Total Assets	**293,682**	**274,374**	**90,806**	**77,706**
Liabilities				
Due to individuals and organizations	50,590	50,578	318	142
Total Liabilities	**50,590**	**50,578**	**318**	**142**
Fiduciary Net Position				
Restricted for:				
Pension			90,488	77,564
Organizations	243,092	223,796		
Total Fiduciary Net Position	**$ 243,092**	**$ 223,796**	**$ 90,488**	**$ 77,564**

The accompanying notes are an integral part of the consolidated financial statements.

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	Year Ended June 30, 2022	Year Ended June 30, 2021	Year Ended September 30, 2021	Year Ended September 30, 2020
(in thousands)	Custodial Funds		Pension Trust Funds	
Additions				
Contributions:				
Organizations	$ 2,162	$ 6,327		
Employer			$ 2,227	$ 60
Total contributions	2,162	6,327	2,227	60
Net investment income	18,832	54,582	16,966	7,079
Total Additions	**20,994**	**60,909**	**19,193**	**7,139**
Deductions				
Benefits paid to participants			5,846	5,565
Administrative expenses			423	375
Withdrawals	1,698	872		
Total Deductions	**1,698**	**872**	**6,269**	**5,940**
Increase in Fiduciary Net Position	19,296	60,037	12,924	1,199
Fiduciary Net Position, Beginning of Year	223,796	163,759	77,564	76,365
Fiduciary Net Position, End of Year	**$ 243,092**	**$ 223,796**	**$ 90,488**	**$ 77,564**

The accompanying notes are an integral part of the consolidated financial statements.

NOTE 1—ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization and Basis of Presentation: The University of Michigan (the "University") is a state-supported institution with an enrollment of over 65,000 students on its three campuses. The financial statements include the individual schools, colleges and departments, the University of Michigan Health ("UMH"), Michigan Health Corporation (a wholly-owned corporation created for joint venture and managed care initiatives), 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) and Veritas Insurance Corporation (a wholly-owned captive insurance company). While the University is a political subdivision of the state of Michigan, it is not a component unit of the State in accordance with Governmental Accounting Standards Board ("GASB") Statement No. 14, *The Financial Reporting Entity*. The University is classified as a state instrumentality under Internal Revenue Code Section 115 and a charitable organization under Internal Revenue Code Section 501(c)(3), and is therefore exempt from federal income taxes. Certain activities of the University may be subject to taxation as unrelated business income under Internal Revenue Code Sections 511 to 514.

Within its consolidated financial statements, the University reports as a special purpose government entity engaged primarily in business type activities, as defined by GASB, on the accrual basis. Business type activities are those that are financed in whole or in part by fees charged to external parties for goods or services. The University's fiduciary activities represent those resources for which the University acts as a trustee or custodian, including the UMH-West pension plan trust which is considered a fiduciary component unit.

During 2022, the University adopted 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 thousands):

Current portion of notes and pledges receivable, net	$ 129
Notes and pledges receivable, net	$ 282
Capital assets, net	$ 263,291
Accounts payable	$ 50,254
Other noncurrent liabilities	$ 213,037
Deferred inflows	$ 411

Net position is categorized as:

- Net investment in capital assets: 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 subject to externally imposed stipulations that it be maintained permanently. Such net position includes the corpus portion (historical value) of gifts to the University's permanent endowment funds and certain investment earnings stipulated by the donor to be reinvested permanently.

  Expendable – Net position subject to externally imposed stipulations that can be fulfilled by actions of the University pursuant to those stipulations or that expire by the passage of time. Such net position includes net appreciation of the University's permanent endowment funds that have not been stipulated by the donor to be reinvested permanently.
- Unrestricted: Net position not subject to externally imposed stipulations. Unrestricted net position may be designated for specific purposes by action of management or the Board of Regents. Substantially all unrestricted net position is designated for various academic programs, research initiatives and capital projects.

Summary of Significant Accounting Policies: The University considers all highly liquid investments purchased with a maturity of three months or less to be cash equivalents. Cash equivalents representing assets of the University's endowment, life income and other investments are included in noncurrent investments as these funds are not used for operating purposes.

Investments are reported in four categories in the statement of net position. Investments reported as endowment, life income and other investments are those funds invested in portfolios that are considered by management to be of a long duration. Investments for student loan and capital activities are those funds that are intended to be used for these specific activities. All other investments are reported as investments for operating activities.

GASB defines fair value and establishes a framework for measuring fair value that includes a three tiered hierarchy of valuation inputs, placing a priority on those which are observable in the market. Observable inputs reflect market data obtained from sources independent of the reporting entity and unobservable inputs reflect the University's own assumptions about how market participants would value an asset or liability based on the best information available. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. The three levels of inputs, of which the first two are considered observable and the last unobservable, are as follows:

- Level 1 – Quoted prices for identical assets or liabilities in active markets that can be accessed at the measurement date
- Level 2 – Other significant observable inputs, either direct or indirect, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable; or market corroborated inputs
- Level 3 – Unobservable inputs

GASB allows for the use of net asset value ("NAV") as a practical expedient to determine the fair value of nonmarketable investments if the NAV is calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies. Investments that use NAV in determining fair value are disclosed separately from the valuation hierarchy as presented in Note 2.

Investments in marketable securities are carried at fair value, as established by the major securities markets. Purchases and sales of investments are accounted for on the trade date basis. Investment income is recorded on the accrual basis. Realized and unrealized gains and losses are reported in investment income.

Investments in nonmarketable limited partnerships are carried at fair value, which is generally established using the NAV provided by the management of the investment partnerships at June 30, 2022 and 2021. The University may also adjust the fair value of these investments based on market conditions, specific redemption terms and restrictions, risk considerations and other factors. As these investments are not readily marketable, the estimated value is subject to uncertainty, and therefore, may differ from the value that would have been used had a ready market for the investments existed.

Investments denominated in foreign currencies are translated into U.S. dollar equivalents using year end spot foreign currency exchange rates. Purchases and sales of investments denominated in foreign currencies and related income are translated at spot exchange rates on the transaction dates.

Derivative instruments such as financial futures, forward foreign exchange contracts and interest rate swaps held in investment portfolios, are recorded on the contract date and are carried at fair value using listed price quotations or amounts that approximate fair value. To facilitate trading in financial futures, the University is required to post cash or securities to satisfy margin requirements of the exchange where such futures contracts are listed. The University monitors the required amount of cash and securities on deposit for financial futures transactions and withdraws or deposits cash or securities as necessary.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1—ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

Accounts receivable are recorded net of an allowance for uncollectible accounts receivable. The allowance is based on management's judgment of potential uncollectible amounts, which includes such factors as historical experience and type of receivable.

The University receives pledges and bequests of financial support from corporations, foundations and individuals. Revenue is recognized when a pledge representing an unconditional promise to give is received and all eligibility requirements, including time requirements, have been met. In the absence of such a promise, revenue is recognized when the gift is received. Permanent endowment pledges do not meet eligibility requirements, as defined by GASB, and are not recorded as assets until the related gift is received.

Unconditional promises to give that are expected to be collected in future years are recorded at the present value of the estimated future cash flows. The discounts on these amounts are computed using risk-free interest rates applicable to the years in which the promises are made, commensurate with expected future payments. An allowance for uncollectible pledges receivable is provided based on management's judgment of potential uncollectible amounts and includes such factors as prior collection history, type of gift and nature of fundraising.

Capital assets are recorded at cost or, if donated, at acquisition value at the date of donation. Depreciation of capital assets is provided on a straight-line method over the estimated useful lives of the respective assets, which generally range from three to fifty years. Right-to-use assets are recorded at the present value of payments expected to be made during the related term using discount rates which are based upon the University's incremental borrowing rates, and are depreciated over the shorter of the related term or the expected useful life of the underlying asset. The University does not capitalize works of art or historical treasures that are held for exhibition, education, research or public service, as these collections are neither disposed of for financial gain nor encumbered in any way.

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.

Unearned revenue consists primarily of cash received from grant and contract sponsors which has not yet been earned under the terms of the agreement. Unearned revenue also includes amounts received in advance of an event, such as student tuition and advance ticket sales related to future fiscal years. In 2020, the University received amounts from the Centers for Medicare and Medicaid Services under the terms of their Accelerated and Advance Payment Program, which was expanded in response to the COVID-19 pandemic. The unearned portion of these additional advanced payments totaled $41,240,000 and $261,396,000 at June 30, 2022 and 2021, respectively, and will be reported as patient care revenues as the qualifying patient care services are performed.

The University 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. All life income fund assets, including those held in trust, are recorded at fair value. The present value of estimated future payments due to life income beneficiaries is recorded as a liability.

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.

For donor restricted endowments, the Uniform Prudent Management of Institutional Funds Act, as adopted in Michigan, permits the Board of Regents to appropriate amounts for endowment spending rule distributions as is considered prudent. The University's policy is to retain net realized and unrealized appreciation with the endowment after spending rule distributions. Net appreciation of permanent endowment funds, which totaled $3,589,441,000 and $3,684,197,000 at June 30, 2022 and 2021, respectively, is recorded in restricted expendable net position. The University's endowment spending rule is further discussed in Note 2.

The University's policy for defining operating activities as reported on the statement of revenues, expenses and changes in net position are those that generally result from exchange transactions such as payments received for providing services and payments made for services or goods received. Nearly all of the University's expenses result from exchange transactions.

Student tuition and residence fees are presented net of scholarships and fellowships applied to student accounts, while stipends and other payments made directly to students are presented as scholarship and fellowship expenses.

Patient care revenues are reported net of contractual allowances and bad debt expenses. Contractual allowances are estimated based on agreements with third-party payers that provide payments for patient care services at amounts different from established rates. These allowances are subject to the laws and regulations governing the federal and state programs and post-payment audits, and adjusted in future periods as final settlements are determined. Patient care services are primarily provided through the University's health system, which includes University Health Service, which offers health care services to students, faculty and staff, and Dental Faculty Associates, which offers dental care services performed by faculty dentists.

Patient care services are provided to patients who meet certain criteria under the University's charity care policies without charge or at amounts less than its established rates. Accordingly, charity care is not reported as revenue in the accompanying statement of revenues, expenses and changes in net position. Charges forgone for charity care services totaled $60,229,000 and $62,596,000 in 2022 and 2021, respectively.

Other auxiliary enterprise revenues primarily represent revenues generated by intercollegiate athletics, parking, student unions and student publications.

Certain significant revenue streams relied upon for operations result from nonexchange transactions and are recorded as nonoperating revenues including state appropriations, federal Pell grants, gifts and investment income.

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. During 2022 and 2021, the University received payments primarily from four programs, the Provider Relief Fund, the Higher Education Emergency Relief Fund, the Coronavirus State and Local Fiscal Recovery Fund and the Coronavirus Relief Fund.

The Provider Relief Fund is administered through the U.S. Department of Health and Human Services and offers funding to hospitals and health care providers to support expenses incurred or revenues lost associated with the COVID-19 pandemic. Funds received are recognized into revenue as the University identifies eligible expenditures or lost revenues which qualify for reimbursement. Revenue recognized under the terms of this program totaled $18,666,000 and $135,325,000 in 2022 and 2021, respectively.

The Higher Education Emergency Relief Fund is administered through the U.S. Department of Education and was designed to facilitate the distribution of emergency financial aid grants directly to students, as well as to provide funding for institutions negatively impacted by the COVID-19 pandemic. Under the terms of the student portion of this program, revenue is recognized once eligible expenditures associated with the distribution of aid to students have been incurred. For the institutional portions of this program, revenue is recognized as the University identifies eligible expenditures or lost revenues which qualify for reimbursement. Revenue recognized under the terms of this program totaled $110,324,000 and $77,055,000 in 2022 and 2021, respectively.

The Coronavirus State and Local Fiscal Recovery Fund is administered through the U.S. Department of the Treasury and delivers aid to state, local and tribal governments to support their response to and recovery from the COVID-19 pandemic. Funds received are recognized into revenue as the University identifies eligible expenditures or lost revenues which qualify for reimbursement. Revenue recognized under the terms of this program totaled $16,695,000 in 2022.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1—ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES, CONTINUED

The Coronavirus Relief Fund is administered through the U.S. Department of the Treasury and provides assistance to state, local and tribal governments to support expenses incurred due to the public health emergency associated with the COVID-19 pandemic. Funds received from the state of Michigan are recognized into revenue as the University identifies eligible expenditures which qualify for reimbursement. Revenue recognized under the terms of this program totaled $42,380,000 in 2021.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates. The most significant areas that require management estimates relate to self-insurance and benefits obligations.

NOTE 2—CASH AND INVESTMENTS

Summary: The University maintains centralized management for substantially all of its cash and investments.

Working capital of individual University units is primarily invested in the University Investment Pool ("UIP"). Together with the University's short-term insurance and other benefits reserves, the UIP is invested in the Daily and Monthly Portfolios, which are principally invested in investment-grade money market securities, U.S. government and other fixed income securities, and absolute return strategies.

The University collectively invests substantially all of the assets of its endowment funds along with a portion of its insurance and benefits reserves, charitable remainder trusts and gift annuity program in the Long Term Portfolio. The longer investment horizon of the Long Term Portfolio allows for an equity-oriented strategy to achieve higher expected returns over time, and permits the use of less liquid alternative investments, providing for equity diversification beyond the stock markets. The Long Term Portfolio includes investments in domestic and non-U.S. stocks and bonds, commingled funds and limited partnerships consisting of venture capital, absolute return strategies, private equity, real estate and natural resources.

The University also separately invests certain endowments and charitable remainder trusts, unexpended bond proceeds and other funds with investment restrictions outside of the Daily, Monthly and Long Term Portfolios.

The University holds invested funds as a result of agency relationships with various groups that are considered fiduciary in nature. Funds received are invested in either the UIP, or the University Endowment Fund ("UEF"), a commingled pool invested entirely in the Long Term Portfolio. The University establishes the fair value of the UIP at $1.00 per share and any participant in the pool may purchase or redeem shares at that price. The University determines the fair value of UEF shares at the end of each calendar quarter based on the fair value of the pool. Participants may purchase or redeem UEF shares at fair value at each valuation date, subject to minimum holding and notice requirements.

Given the commingled nature of the underlying pools in which the UIP and UEF invest, unitized shares are not specifically associated with individual investments. Therefore, the University's investment activities as presented within the consolidated statement of cash flows as well as this note are presented gross, with a corresponding adjustment to remove the fiduciary custodial activities that are presented within the statement of fiduciary net position and statement of changes in fiduciary net position.

Authorizations: The University's investment policies are governed and authorized by University Bylaws and the Board of Regents. The approved asset allocation policy for the Long Term Portfolio sets general targets for both equities and fixed income securities. Since diversification is a fundamental risk management strategy, the Long Term Portfolio is broadly diversified within these general categories.

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 fund shares. 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. Distributions are also made from the UIP based on the 90-day U.S. Treasury Bill rate. The University's costs to administer and grow the UEF and UIP are funded by investment returns.

Cash and Cash Equivalents and Unexpended Bond Proceeds: Cash and cash equivalents, which totaled $2,951,905,000 and $1,003,846,000 at June 30, 2022 and 2021, respectively, represent cash and short-term money market investments in mutual funds, overnight collective funds managed by the University's custodian or short-term highly liquid investments registered as securities and held by the University or its agents in the University's name. Of its cash and cash equivalents, the University had actual cash balances in its bank accounts in excess of Federal Deposit Insurance Corporation limits in the amount of $36,227,000 and $72,126,000 at June 30, 2022 and 2021, respectively. The University does not require its deposits to be collateralized or insured.

Unexpended bond proceeds, which totaled $305,452,000 and $52,451,000 at June 30, 2022 and 2021, respectively, represent short-term money market investments in mutual funds. These amounts are used solely for the reimbursement of qualifying expenditures for construction projects associated with certain outstanding general revenue bonds issued by the University.

Cash and cash equivalents and unexpended bond proceeds include certain securities that are subject to the leveling requirements defined by GASB. Level 1 securities, which primarily consist of money market funds and U.S. government securities, totaled $2,998,384,000 and $926,114,000 at June 30, 2022 and 2021, respectively. Level 2 securities, which primarily consist of commercial paper and repurchase agreements, totaled $150,811,000 and $5,500,000 at June 30, 2022 and 2021, respectively.

Investments: At June 30, 2022 and 2021, the University's investments, which are held by the University or its agents in the University's name, are summarized as follows:

(in thousands)	2022	2021
Cash equivalents, noncurrent	$ 371,602	$ 276,168
Equity securities	624,928	752,048
Fixed income securities	3,010,240	3,010,819
Commingled funds	2,657,802	3,190,302
Nonmarketable alternative investments	13,778,984	13,183,395
Other investments	6,607	5,561
	20,450,163	20,418,293
Less fiduciary custodial funds	293,682	274,374
	$ 20,156,481	$ 20,143,919

NOTE 2—CASH AND INVESTMENTS, CONTINUED

At June 30, 2022 and 2021, the fair value of the University's investments based on the inputs used to value them is summarized as follows:

2022

(in thousands)	Level 1	Level 2	Level 3	NAV	Total Fair Value
Cash equivalents, noncurrent	$ 371,602	-	-	-	$ 371,602
Equity securities:					
Domestic	149,188		$ 68,219		217,407
Foreign	405,453		2,068		407,521
	554,641	-	70,287	-	624,928
Fixed income securities:					
U.S. Treasury	1,877,265				1,877,265
U.S. government agency		$ 55,483			55,483
Corporate and other		1,069,366	8,126		1,077,492
	1,877,265	1,124,849	8,126	-	3,010,240
Commingled funds:					
Absolute return				$ 1,985,526	1,985,526
Domestic equities	4,067			347,147	351,214
Global equities	7,497			296,002	303,499
U.S. fixed income	2,430				2,430
Other	15,133				15,133
	29,127	-	-	2,628,675	2,657,802
Nonmarketable alternative investments:					
Venture capital				4,881,566	4,881,566
Absolute return				2,336,711	2,336,711
Private equity			448,100	2,129,959	2,578,059
Real estate			20,289	1,726,906	1,747,195
Natural resources			266,079	1,969,374	2,235,453
	-	-	734,468	13,044,516	13,778,984
Other investments	(2,005)	(169)	8,781	-	6,607
	$ 2,830,630	$ 1,124,680	$ 821,662	$ 15,673,191	20,450,163
					293,682
Less fiduciary custodial funds					$ 20,156,481

2021

(in thousands)	Level 1	Level 2	Level 3	NAV	Total Fair Value
Cash equivalents, noncurrent	$ 276,168	-	-	-	$ 276,168
Equity securities:					
Domestic	155,737		$ 52,154		207,891
Foreign	542,969		1,188		544,157
	698,706	-	53,342	-	752,048
Fixed income securities:					
U.S. Treasury	1,887,542				1,887,542
U.S. government agency		$ 49,513			49,513
Corporate and other		1,068,479	5,285		1,073,764
	1,887,542	1,117,992	5,285	-	3,010,819
Commingled funds:					
Absolute return				$ 2,524,614	2,524,614
Domestic equities	14,060			268,714	282,774
Global equities	49			359,321	359,370
U.S. fixed income	3,092				3,092
Other	20,452				20,452
	37,653	-	-	3,152,649	3,190,302
Nonmarketable alternative investments:					
Venture capital				4,592,803	4,592,803
Absolute return				2,556,764	2,556,764
Private equity			449,800	2,460,896	2,910,696
Real estate			8,658	1,590,549	1,599,207
Natural resources			203,886	1,320,039	1,523,925
	-	-	662,344	12,521,051	13,183,395
Other investments	(2,665)	(1,235)	9,461	-	5,561
	$ 2,897,404	$ 1,116,757	$ 730,432	$ 15,673,700	20,418,293
					274,374
Less fiduciary custodial funds					$ 20,143,919

Investments categorized as Level 1 are valued using prices quoted in active markets for those securities. Equity securities categorized as Level 3 represent investments in start-up or venture companies. Fixed income securities categorized as Level 2 represent investments valued using a matrix pricing technique, which values debt securities based on their relationship to a benchmark and the relative spread to that benchmark. Fixed income securities categorized as Level 3 represent debt investments with select venture funded University faculty start-ups. Nonmarketable alternative investments categorized as Level 3 primarily represent direct investments which are valued using models that rely on inputs which are unobservable in the market.

NOTE 2—CASH AND INVESTMENTS, CONTINUED

The University's investment strategy incorporates certain financial instruments that involve, to varying degrees, elements of market risk and credit risk in excess of amounts recorded in the financial statements. Market risk is the potential for changes in the value of financial instruments due to market changes, including interest and foreign exchange rate movements and fluctuations embodied in forwards, futures and commodity or security prices. Market risk is directly impacted by the volatility and liquidity of the markets in which the underlying assets are traded. Credit risk is the possibility that a loss may occur due to the failure of a counterparty to perform according to the terms of the contract. The University's risk of loss in the event of a counterparty default is typically limited to the amounts recognized in the statement of net position and is not represented by the contract or notional amounts of the instruments.

Fixed income securities have inherent financial risks, including credit risk and interest rate risk. Credit risk for fixed income securities is the risk that the issuer will not fulfill its obligations. Nationally recognized statistical rating organizations ("NSROs"), such as S&P Global and Moody's, assign credit ratings to security issues and issuers that indicate a measure of potential credit risk to investors. Fixed income securities considered investment grade are those rated at least BBB by S&P Global and Baa by Moody's. To manage credit risk, the University specifies minimum average and minimum absolute quality NSRO ratings for securities held pursuant to its management agreements.

The University minimizes concentration of credit risk, the risk of a large loss attributed to the magnitude of the investment in a single issuer of fixed income securities, by diversifying its fixed income issues and issuers and holding U.S. Treasury securities which are considered to have minimal credit risk. The University also manages this risk at the account level by limiting each fixed income manager's holding of any non-U.S. government issuer to 5 percent of the value of the investment account.

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of fixed income securities. Effective duration, a commonly used measure of interest rate risk, incorporates a security's yield, coupon, final maturity, call features and other embedded options into one number expressed in years that indicates how price-sensitive a security or portfolio of securities is to changes in interest rates. The effective duration of a security or portfolio indicates the approximate percentage change in fair value expected for a one percent change in interest rates. The longer the duration, the more sensitive the security or portfolio is to changes in interest rates. The weighted average effective duration of the University's fixed income securities was 2.6 years at June 30, 2022 compared to 3.2 years at June 30, 2021. The University manages the effective duration of its fixed income securities at the account level, where fixed income managers generally may not deviate from the duration of their respective benchmarks by more than 25 percent. The Monthly Portfolio held positions in bond futures at June 30, 2022 and 2021, which are used to adjust the duration of cash equivalents and the fixed income portion of the portfolios.

The composition of fixed income securities at June 30, 2022 and 2021, along with credit quality and effective duration measures, is summarized as follows:

2022

(in thousands)	U.S. Government	Investment Grade	Non-Investment Grade	Not Rated	Total	Duration (in years)
U.S. Treasury	$ 1,874,199				$ 1,874,199	2.3
U.S. Treasury inflation protected	3,066				3,066	14.6
U.S. government agency	55,483				55,483	4.7
Mortgage backed		$ 28,735	$ 977	$ 3,816	33,528	1.8
Asset backed		113,288	684		113,972	0.6
Corporate and other		863,373	21,025	45,594	929,992	3.5
	$ 1,932,748	$ 1,005,396	$ 22,686	$ 49,410	$ 3,010,240	2.6

2021

(in thousands)	U.S. Government	Investment Grade	Non-Investment Grade	Not Rated	Total	Duration (in years)
U.S. Treasury	$ 1,884,675				$ 1,884,675	2.7
U.S. Treasury inflation protected	2,867				2,867	17.1
U.S. government agency	49,513				49,513	5.2
Mortgage backed		$ 40,465	$ 66	$ 10,047	50,578	1.6
Asset backed		111,033		400	111,433	0.8
Corporate and other		845,052	19,927	46,774	911,753	4.5
	$ 1,937,055	$ 996,550	$ 19,993	$ 57,221	$ 3,010,819	3.2

Of the University's fixed income securities, 98 percent and 97 percent were rated investment grade or better at June 30, 2022 and 2021, respectively, and 73 percent of these securities consisted of either U.S. treasury and government agencies or non-U.S. government securities rated AAA/Aaa at both June 30, 2022 and 2021.

Commingled (pooled) funds include Securities and Exchange Commission regulated mutual funds and externally managed funds, limited partnerships and corporate structures which are generally unrated and unregulated. Certain commingled funds may use derivatives, short positions and leverage as part of their investment strategy. These investments are structured to limit the University's risk exposure to the amount of invested capital.

Nonmarketable alternative investments consist of limited partnerships and similar vehicles involving an advance commitment of capital called by the general partner as needed and distributions of capital and return on invested capital as underlying strategies are concluded during the life of the partnership. There is not an active secondary market for these alternative investments, which are generally unrated and unregulated, and the liquidity of these investments is dependent on actions taken by the general partner. The University's limited partnerships are diversified in terms of manager selection, industry and geographic focus. At June 30, 2022 and 2021, no individual partnership investment represented 5 percent or more of total investments.

Absolute return strategies in the commingled funds and nonmarketable alternative investments classifications include long/short stock programs, merger arbitrage, intra-capital structure arbitrage and distressed debt investments. The goal of absolute return strategies is to provide, in aggregate, a return that is consistently positive and uncorrelated with the overall market.

NOTE 2—CASH AND INVESTMENTS, CONTINUED

The University's investments in commingled funds and nonmarketable alternative investments are contractual agreements that may limit the ability to initiate redemptions due to notice periods, lock-ups and gates. Additional information about current redemption terms and outstanding commitments at June 30, 2022 is summarized as follows (amounts in thousands):

	Fair Value	Remaining Life	Outstanding Commitments	Redemption Terms	Redemption Notice
Commingled funds	$ 2,657,802	N/A	$ -	Daily, monthly, quarterly and annually, with varying notice periods	Lock-up provisions range from none to five years
Nonmarketable alternative investments	$ 13,778,984	1-12 years	$ 5,179,752	Ineligible for redemption	N/A

Commingled funds have liquidity (redemption) provisions, which enable the University to make full or partial withdrawals with notice, subject to restrictions on the timing and amount. Of the University's commingled funds at June 30, 2022 and 2021, 71 percent and 79 percent, respectively, are redeemable within one year, with 46 percent and 65 percent, respectively, redeemable within 90 days under normal market conditions. The remaining amounts are redeemable beyond one year, with redemption of certain funds dependent on disposition of the underlying assets. The University's committed but unpaid obligation to nonmarketable alternative investments is further discussed in Note 14.

The University participates in non-U.S. developed and emerging markets through commingled funds invested in non-U.S./global equities and absolute return strategies. Although all of these funds are reported in U.S. dollars, price changes of the underlying securities in local markets as well as changes to the value of local currencies relative to the U.S. dollar are embedded in investment returns. In addition, a portion of the University's equity securities and nonmarketable alternative investments are denominated in foreign currencies, which must be settled in local (non-U.S.) currencies.

Foreign exchange risk is the risk that investments denominated in foreign currencies may lose value due to adverse fluctuations in the value of the U.S. dollar relative to foreign currencies. Forward foreign currency contracts are typically used to manage the risks related to fluctuations in currency exchange rates between the time of purchase or sale and the actual settlement of foreign securities. Various investment managers acting for the University use forward foreign exchange contracts in risk-based transactions to carry out their portfolio strategies and are subject to agreements that provide minimum diversification and maximum exposure limits by country and currency.

The value of the University's non-U.S. dollar holdings, net of the value of the outstanding forward foreign exchange contracts, totaled $1,564,351,000 or 8 percent of total investments at June 30, 2022, and $1,777,448,000 or 9 percent of total investments at June 30, 2021, and are summarized as follows:

(in thousands)	2022	2021
Euro	$ 876,311	$ 885,763
British pound sterling	234,271	279,092
Swedish krona	195,165	236,595
Canadian dollar	106,781	143,015
Japanese yen	106,570	135,042
Danish krone	23,433	29,657
Other	21,820	68,284
	$ 1,564,351	$ 1,777,448

The Long Term Portfolio and the Monthly Portfolio participate in a short-term, fully collateralized, securities lending program administered by the University's master custodian. Together, the Portfolios had $42,466,000 and $21,472,000 in securities loans outstanding at June 30, 2022 and 2021, respectively. At loan inception, an approved borrower must deliver collateral of cash, securities or letters of credit to the University's lending agent equal to 102 percent of fair value for domestic securities and 105 percent for foreign securities. Collateral positions are monitored daily to ensure that borrowed securities are never less than 100 percent collateralized. At June 30, 2022, collateral of $52,693,000 (124 percent of securities on loan) includes invested cash of $23,037,000 and U.S. government securities of $29,656,000, while at June 30, 2021, collateral of $22,227,000 (104 percent of securities on loan) includes invested cash of $20,040,000 and U.S. government securities of $2,187,000.

Cash collateral held by the University's lending agent, along with the offsetting liability to return the collateral at loan termination, are recorded in the statement of net position. Neither the University nor its securities lending agent has the ability to pledge or sell securities received as collateral unless a borrower defaults. Securities loans may be terminated upon notice by either the University or the borrower.

NOTE 3—ACCOUNTS RECEIVABLE

The composition of accounts receivable at June 30, 2022 and 2021 is summarized as follows:

(in thousands)	2022	2021
Patient care	$ 797,306	$ 778,548
Sponsored programs	187,237	177,384
State appropriations, educational and capital	72,768	71,804
Student accounts	37,612	38,445
Other	52,979	45,947
	1,147,902	1,112,128
Less allowance for uncollectible accounts receivable:		
Patient care	140,314	131,628
All other	11,113	9,900
	$ 996,475	$ 970,600

NOTE 4—NOTES AND PLEDGES RECEIVABLE

The composition of notes and pledges receivable at June 30, 2022 and 2021 is summarized as follows:

(in thousands)	2022	2021
Notes:		
Federal student loan programs	$ 46,227	$ 54,341
University student loan funds	14,363	14,233
Other	2,277	8,192
	62,867	76,766
Less allowance for uncollectible notes	3,100	3,100
Total notes receivable, net	59,767	73,666
Gift pledges:		
Capital	100,495	94,264
Operations	232,882	212,471
	333,377	306,735
Less:		
Allowance for uncollectible pledges	7,827	7,407
Unamortized discount to present value	3,167	3,449
Total pledges receivable, net	322,383	295,879
Total notes and pledges receivable, net	382,150	369,545
Less current portion	108,164	108,789
	$ 273,986	$ 260,756

The principal repayment and interest rate terms of federal and University loans vary considerably. The allowance for uncollectible notes only applies to University funded loans and the University portion of federal student loans, as the University is not obligated to fund the federal portion of uncollected student loans. Federal loan programs are funded principally with federal advances to the University under the Perkins and various health professions loan programs.

Payments on pledges receivable at June 30, 2022 are expected to be received in the following years ended June 30 (in thousands):

2023	$ 94,692
2024	71,686
2025	49,704
2026	46,335
2027	20,856
2028 and after	50,104
	$ 333,377

Permanent endowment pledges do not meet eligibility requirements, as defined by GASB, until the related gift is received. Accordingly, permanent endowment pledges totaling $137,460,000 and $129,158,000 at June 30, 2022 and 2021, respectively, are not recognized as assets in the accompanying financial statements. In addition, bequest intentions and other conditional promises are not recognized as assets until the specified conditions are met due to uncertainties with regard to their realizability and valuation.

NOTE 5—CAPITAL ASSETS

Capital assets activity for the years ended June 30, 2022 and 2021 is summarized as follows:

2022				
(in thousands)	Beginning Balance	Additions	Retirements	Ending Balance
Land	$ 155,111	$ 1,722	$ 950	$ 155,883
Land improvements	168,121	2,710	216	170,615
Infrastructure	264,874			264,874
Buildings	9,986,838	463,350	51,977	10,398,211
Construction in progress	481,905	(203,002)		278,903
Equipment	2,231,283	126,709	188,897	2,169,095
Library materials	724,672	30,215	5	754,882
Right-to-use assets	382,614	32,433	6,555	408,492
	14,395,418	454,137	248,600	14,600,955
Less accumulated depreciation	7,962,995	606,523	234,375	8,335,143
	$ 6,432,423	$ (152,386)	$ 14,225	$ 6,265,812

2021				
(in thousands)	Beginning Balance	Additions	Retirements	Ending Balance
Land	$ 153,218	$ 1,897	$ 4	$ 155,111
Land improvements	163,626	5,671	1,176	168,121
Infrastructure	264,778	96		264,874
Buildings	9,507,952	516,904	38,018	9,986,838
Construction in progress	635,515	(153,610)		481,905
Equipment	2,239,751	91,249	99,717	2,231,283
Library materials	699,201	25,471		724,672
Right-to-use assets	365,057	35,496	17,939	382,614
	14,029,098	523,174	156,854	14,395,418
Less accumulated depreciation	7,492,799	620,037	149,841	7,962,995
	$ 6,536,299	$ (96,863)	$ 7,013	$ 6,432,423

The decrease in construction in progress of $203,002,000 in 2022 represents the amount of capital expenditures for new projects of $287,679,000 net of assets placed in service of $490,681,000. The decrease in construction in progress of $153,610,000 in 2021 represents the amount of capital expenditures for new projects of $359,238,000 net of assets placed in service of $512,848,000.

NOTE 6—LONG-TERM DEBT

Long-term debt at June 30, 2022 and 2021 is summarized as follows:

(in thousands)	2022	2021
Commercial paper:		
Tax-exempt, variable rate (0.96%)*	$ 140,505	$ 149,305
Taxable, variable rate (1.09%)*	630	4,220
General revenue bonds:		
Series 2022A, taxable, 3.504% to 4.454% through 2122	1,700,000	
Series 2022B, taxable, 3.504% through 2052	300,000	
Series 2022C, taxable, 2.734% to 3.599% through 2047	413,205	
Series 2022D, 5.00% through 2033	55,775	
unamortized premium	13,858	
Series 2020A, 4.00% to 5.00% through 2050	138,430	138,430
unamortized premium	33,091	35,589
Series 2020B, taxable, 1.004% to 2.562% through 2050	850,025	850,025
Series 2019A, 5.00% through 2036	123,335	132,140
unamortized premium	17,809	20,674
Series 2019B, taxable, 2.714% to 3.416% through 2029	12,210	13,765
Series 2019C, 4.00% through 2049	61,725	61,725
unamortized premium	5,189	5,443
Series 2018A, 4.00% to 5.00% through 2048	127,280	130,025
unamortized premium	14,911	15,915
Series 2017A, 4.86% to 5.00% through 2035	239,970	420,990
unamortized premium	32,720	60,910
Series 2015, 4.00% to 5.00% through 2035	112,690	280,950
unamortized premium	14,715	38,791
Series 2014A, 4.25% to 5.00% through 2030	18,925	70,425
unamortized premium	1,327	5,201
Series 2014B, taxable, 3.216% to 3.516% through 2024	1,980	2,945
Series 2013A, 2.50% to 5.00% through 2029	39,370	40,780
unamortized premium	812	1,005
Series 2012A, variable rate (0.83%)* through 2036	50,000	50,000
Series 2012B, variable rate (0.56%)* through 2042	65,000	65,000
Series 2012D-1, variable rate (0.58%)* through 2025 with partial swap to fixed through 2025	44,760	48,915
Series 2012D-2, variable rate (0.83%)* through 2030 with partial swap to fixed through 2026	44,135	49,025
Series 2012E**, variable rate through 2033		82,020
Series 2010A, taxable Build America Bonds, 4.926% to 5.593% through 2040	163,110	163,110
Series 2010D, taxable Build America Bonds, 3.756% to 5.333% through 2041	146,620	148,205
Series 2009B, variable rate (1.20%)* through 2039	118,710	118,710
Series 2008A, variable rate (0.60%)* through 2038	57,085	57,085
Series 2008B, variable rate (0.86%)* through 2028 with partial swap to fixed through 2026	46,115	52,715
	5,206,022	3,314,038
Less:		
Commercial paper and current portion of bonds payable	209,311	235,875
Long-term bonds payable subject to remarketing, net	274,392	300,542
	$ 4,722,319	$ 2,777,621

* Denotes variable rate at June 30, 2022
** Denotes variable rate bonds not subject to remarketing

Certain variable rate bonds have remarketing features which allow bondholders to put debt back to the University. Accordingly, these variable rate bonds are classified as current unless supported by liquidity agreements, such as lines of credit or standby bond purchase agreements, which can refinance the debt on a long-term basis. The classification of the University's variable rate bonds payable subject to remarketing at June 30, 2022 and 2021 is summarized as follows:

(in thousands)	2022	2021
Variable rate bonds payable subject to remarketing	$ 425,805	$ 441,450
Less:		
Current principal maturities	26,150	15,645
Long-term liquidity agreements:		
Unsecured lines of credit	125,263	125,263
Long-term bonds payable subject to remarketing, net	$ 274,392	$ 300,542

The University's available lines of credit totaled $1,190,000,000 and were entirely unused at both June 30, 2022 and 2021.

In connection with certain issues of variable rate debt, the University has entered into floating-to-fixed interest rate swaps to convert all or a portion of the associated variable rate debt to synthetic fixed rates to protect against the potential of rising interest rates. Information about the University's interest rate swaps is discussed in Note 7.

Long-term debt activity for the years ended June 30, 2022 and 2021 is summarized as follows:

2022				
(in thousands)	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	$ 153,525		$ 12,390	$ 141,135
Bonds	3,160,513	$ 2,482,838	578,464	5,064,887
	$ 3,314,038	$ 2,482,838	$ 590,854	$ 5,206,022

2021				
(in thousands)	Beginning Balance	Additions	Reductions	Ending Balance
Commercial paper	$ 135,305	$ 164,875	$ 146,655	$ 153,525
Bonds	3,240,866		80,353	3,160,513
	$ 3,376,171	$ 164,875	$ 227,008	$ 3,314,038

The University maintains a combination of variable and fixed rate debt supported by general revenues, with effective interest rates that averaged 2.9 percent and 2.5 percent in 2022 and 2021, respectively, including federal subsidies for interest on taxable Build America Bonds.

The University utilizes commercial paper to provide interim financing for its capital improvement program. The Board of Regents has authorized the issuance of up to $300,000,000 in commercial paper backed by a general revenue pledge. Outstanding commercial paper debt is converted to long-term debt financing, as appropriate, within the normal course of business.

NOTE 6—LONG-TERM DEBT, CONTINUED

During 2022, the University issued $2,468,980,000 of General Revenue Bonds with a net original issue premium of $13,858,000 which included $1,700,000,000 of fixed rate, taxable bonds Series 2022A, $300,000,000 of fixed rate, taxable green bonds Series 2022B, $413,205,000 of fixed rate, taxable bonds Series 2022C and $55,775,000 of fixed rate, tax-exempt bonds Series 2022D. Total bond proceeds of $2,482,838,000 were utilized to refund $69,410,000 of existing bonds, establish an escrow of $411,701,000 to advance refund existing bonds, as well as provide $298,618,000 for capital projects designed to advance the University's commitment to decarbonization, $1,686,312,000 for capital projects and other general purposes, and $16,797,000 for debt issuance costs.

Bond proceeds of $69,410,000 were used to refund a portion of the General Revenue Bonds Series 2012E, which had an interest rate of 0.78 percent at March 31, 2022 and a final maturity date of April 1, 2033. As a result of the refunding, the University's aggregate debt service payments increased over the next 11 years by $6,811,000, resulting in a present value economic loss of $7,161,000.

The University also established three escrow funds with bond proceeds of $411,701,000 to advance refund $49,470,000 of General Revenue Bonds Series 2014A, $162,885,000 of General Revenue Bonds Series 2015 and $166,840,000 of General Revenue Bonds Series 2017A which had average interest rates of 4.9 percent, 5.0 percent and 5.0 percent, respectively. These bonds are considered legally defeased as amounts were deposited in irrevocable escrow funds with an escrow trustee to provide for all future debt service payments on the refunded bonds to the dates of redemption. As a result of these advance refundings, the University reduced its aggregate debt service payments over the next 25 years by $30,853,000, resulting in a present value economic gain of $29,851,000.

Deferred outflows associated with the University's refunding activity totaled $34,397,000 and $4,064,000 at June 30, 2022 and 2021, respectively; and deferred inflows associated with the University's refunding activity totaled $47,486,000 at June 30, 2022. The outstanding balance of these deferred outflows and deferred inflows will be amortized into interest expense over the remaining life of the refunded bonds.

Debt obligations are generally callable by the University and mature at various dates through fiscal 2122. Principal maturities, including interest on debt obligations, based on scheduled bond maturities for the next five years and in subsequent five-year periods are as follows:

(in thousands)	Principal	Interest*	Total
2023	$ 196,860	$ 184,422	$ 381,282
2024	97,925	179,897	277,822
2025	201,540	176,333	377,873
2026	102,155	171,799	273,954
2027	145,010	167,520	312,530
2028-2032	557,410	763,760	1,321,170
2033-2037	533,435	659,930	1,193,365
2038-2042	742,085	553,573	1,295,658
2043-2047	165,125	471,971	637,096
2048-2052	1,130,045	432,746	1,562,791
2053-2117		3,474,120	3,474,120
2118-2122	1,200,000	267,240	1,467,240
Total payments	5,071,590	$ 7,503,311	$ 12,574,901
Plus unamortized premiums	134,432		
	$ 5,206,022		

* Interest on variable rate debt is estimated based on rates in effect at June 30, 2022; amounts do not reflect federal subsidies to be received for Build America Bonds interest

The University maintains certain unsecured lines of credit and standby bond purchase agreements that, in accordance with GASB requirements, do not qualify to support the noncurrent classification of variable rate bonds payable subject to remarketing. If all of the variable rate bonds subject to remarketing were put back to the University and these existing unsecured lines of credit and standby bond purchase agreements were not extended upon their current expiration dates, the total principal payments due in 2023 would decrease to $170,710,000, total principal payments due in 2024 would increase to $115,365,000, total principal payments due in 2025 would increase to $363,497,000, total principal payments due in 2026 would increase to $280,633,000 and total principal payments due in 2027 would decrease to $131,040,000. Accordingly, principal payments due in subsequent years would be reduced to $482,675,000 in 2028 through 2032, $379,950,000 in 2033 through 2037 and $652,550,000 in 2038 through 2042. Principal payments due in 2043 through 2122 would not change. There would not be a material impact on annual interest payments due to the low variable rate of interest on these bonds.

NOTE 7—DERIVATIVE INSTRUMENTS

Derivatives held by the University are recorded at fair value in the statement of net position. For hedging derivative instruments that are effective in significantly reducing an identified financial risk, the corresponding change in fair value is deferred and included in the statement of net position. For all other derivative instruments, changes in fair value are reported as investment income or loss.

Derivative instruments held by the University at June 30, 2022 and 2021 are summarized as follows:

2022		
(in thousands)	Notional Amount	Fair Value
Investment derivative instruments:		
Investment portfolios:		
Futures	$ 82,255	$ 55
Foreign currency forwards:		
Australian dollar	80,923	(4,742)
Thailand baht	57,203	4,667
New Zealand dollar	71,097	3,501
Japanese yen	73,249	3,165
Colombian peso	47,389	(3,102)
Israeli shekel	36,851	2,843
All other currencies	601,769	(10,256)
	968,481	(3,924)
Other	38,220	(184)
	$ 1,088,956	$ (4,053)
Floating-to-fixed interest rate swaps on debt	$ 44,670	$ (1,690)
Effective cash flow hedges:		
Floating-to-fixed interest rate swaps on debt	$ 49,280	$ (1,343)

NOTE 7—DERIVATIVE INSTRUMENTS, CONTINUED

2021

(in thousands)	Notional Amount	Fair Value
Investment derivative instruments:		
Investment portfolios:		
Futures	$ 97,399	$ (432)
Foreign currency forwards:		
Euro	193,416	(8,305)
New Zealand dollar	144,792	4,769
Swedish krona	165,644	(4,624)
Canadian dollar	83,602	(4,456)
Japanese yen	240,261	3,250
Australian dollar	140,630	3,241
All other currencies	889,389	10,842
	1,857,734	4,717
Other	25,134	248
	$ 1,980,267	$ 4,533
Floating-to-fixed interest rate swaps on debt	$ 48,815	$ (4,982)
Effective cash flow hedges:		
Floating-to-fixed interest rate swaps on debt	$ 60,760	$ (4,739)

The University utilizes bond futures in its investment portfolios to adjust the duration of cash equivalents and fixed income securities, while foreign currency forward contracts are utilized to settle securities and transactions denominated in foreign currencies and manage foreign exchange risk. Other derivative instruments in the University's investment portfolios consist primarily of interest rate swaps, credit default swaps and total return swaps used to carry out investment and portfolio strategies.

In connection with certain issues of variable rate debt, the University has entered into floating-to-fixed interest rate swaps to convert all or a portion of the associated variable rate debt to synthetic fixed rates to protect against the potential of rising interest rates. The fair value of these swaps generally represent the estimated amount that the University would pay to terminate the swap agreements at the statement of net position date, taking into account current interest rates and creditworthiness of the underlying counterparty. The valuation inputs used to determine the fair value of these instruments are considered Level 2, as they rely on observable inputs other than quoted market prices. The notional amount represents the underlying reference of the instrument and does not represent the amount of the University's settlement obligations.

At June 30, 2022 and 2021, the fair value of floating-to-fixed interest rate swaps associated with the University's variable rate debt is ($3,033,000) and ($9,721,000), respectively, and is included in the statement of net position as a component of other liabilities. The deferred outflows associated with the fair value of swaps deemed effective cash flow hedges totaled $587,000 and $3,550,000 at June 30, 2022 and 2021, respectively.

The change in fair value of derivative instruments, which includes realized gains and losses on positions closed, for the years ended June 30, 2022 and 2021 is summarized as follows:

(in thousands)	**2022**	**2021**
Investment derivative instruments:		
Investment portfolios:		
Futures	$ (15,763)	$ 25,502
Foreign currency forwards	(51,023)	13,688
Other	374	731
	$ (66,412)	$ 39,921
Floating-to-fixed interest rate swaps on debt	$ 3,292	$ 2,219
Effective cash flow hedges:		
Floating-to-fixed interest rate swaps on debt	$ 3,396	$ 2,448

Using rates in effect at June 30, 2022, the projected cash flows for the floating-to-fixed interest rate swaps deemed effective cash flow hedges, along with the debt service requirements of the associated variable rate debt, are summarized as follows:

	Variable Rate Bonds		Swap	Total
(in thousands)	Principal	Interest	Payments, Net	Payments
2023	$ 11,925	$ 724	$ 876	$ 13,525
2024	12,410	622	625	13,657
2025	12,940	514	359	13,813
2026	12,045	410	101	12,556
2027	13,970	300		14,270
2028-2030	26,960	224		27,184
	$ 90,250	$ 2,794	$ 1,961	$ 95,005

By using derivative financial instruments to hedge exposures to changes in interest rates, the University is exposed to termination risk and basis risk. There is termination risk with floating-to-fixed interest rate swaps as the University or swap counterparty may terminate a swap if the other party fails to perform under the terms of the contract or its credit rating falls below investment grade. Termination risk is the risk that the associated variable rate debt no longer carries a synthetic fixed rate and if at the time of termination a swap has a negative fair value, the University is liable to the counterparty for payment equal to the swap's fair value. The University is also exposed to basis risk as a portion of the variable payments paid to the University by the counterparties are based on a percentage of LIBOR. Basis risk is the risk that changes in the relationship between the floating Securities Industry and Financial Markets Association Municipal Index and LIBOR may impact the synthetic fixed rate of the variable rate debt. At June 30, 2022 and 2021, the University is not exposed to credit risk as the swaps have negative fair values.

The University is subject to collateral requirements with its counterparties on certain derivative instrument positions. To meet trading margin requirements for bond futures, the University had cash and U.S. government securities with a fair value of $5,940,000 and $7,477,000 at June 30, 2022 and 2021, respectively, on deposit with its futures broker as collateral.

NOTE 8—SELF-INSURANCE

The University is self-insured for medical malpractice, workers' compensation, directors' and officers' liability, property damage, auto liability and general liability through Veritas Insurance Corporation. The University is also self-insured for various employee benefits through internally maintained funds.

Claims and expenses are reported when it is probable that a loss has occurred and the amount of the loss can be reasonably estimated. Those losses include an estimate of claims that have been incurred but not reported and the future costs of handling claims. These liabilities are generally based on actuarial valuations and are reported at present value, discounted at a rate of 5 percent.

Changes in the total reported liability for insurance and benefits reserves for the years ended June 30, 2022 and 2021 are summarized as follows:

(in thousands)	2022	2021
Balance, beginning of year	$ 439,848	$ 303,431
Claims incurred and changes in estimates	1,267,941	948,519
Claim payments	(884,175)	(812,102)
Balance, end of year	823,614	439,848
Less current portion	646,591	269,789
	$ 177,023	$ 170,059

During 2022, the University and attorneys for claimants who alleged abuse by the late University physician Robert Anderson reached a settlement agreement that would resolve those survivors' claims against the University pending documentation and approval by the claimants, as recommended by their attorneys, and the federal court overseeing the process. The total amount for the settlement is $490,750,000.

Event Subsequent to June 30, 2022: On September 16, 2022, a settlement agreement between the University and claimants who alleged abuse by the late University physician Robert Anderson was approved by all parties and finalized. On October 12, 2022, the University transferred $490,750,000 into accounts designated per the terms of the agreement to facilitate settlement with the claimants.

NOTE 9—PENSION PLAN

UMH-West has a noncontributory, single-employer defined benefit pension plan, which covered substantially all employees prior to being frozen at December 31, 2007. The plan generally provides benefits based on each employee's years of service and final average earnings, as defined, and does not provide any automatic or ad-hoc cost of living adjustments. The UMH-West Board of Directors has the authority to establish and amend benefit provisions of the plan.

The annual pension expense and net pension liability is actuarially calculated using the entry age normal level percent of pay method. UMH-West has elected to measure the net pension liability one year prior to the fiscal year end reporting date and amounts measured at June 30, 2021 and 2020 were determined based on an actuarial valuation at October 1, 2020 and 2019, respectively. There are no significant changes known which would impact the net pension liability between the measurement date and the reporting date, other than typical plan experience.

For purposes of the June 30, 2021 and 2020 measurement dates, the number of plan participants consisted of the following:

	2021	2020
Active participants	429	493
Vested terminated participants	784	810
Retirees, beneficiaries and disabled participants	516	465
	1,729	1,768

Changes in the reported net pension liability for the years ended June 30, 2022 and 2021 are summarized as follows:

2022 (in thousands)	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance, beginning of year	$ 67,735	$ 74,057	$ (6,322)
Interest cost	4,543		4,543
Changes in assumptions	89		89
Differences between expected and actual plan experience	989		989
Benefit payments	(5,598)	(5,598)	-
Contributions from the employer		891	(891)
Administrative expenses		(76)	76
Net investment income:			
Expected investment earnings		4,997	(4,997)
Differences between expected and actual investment earnings		16,162	(16,162)
Balance, end of year	$ 67,758	$ 90,433	$ (22,675)

2021 (in thousands)	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
Balance, beginning of year	$ 75,964	$ 77,211	$ (1,247)
Interest cost	4,687		4,687
Changes in assumptions	(3,540)		(3,540)
Differences between expected and actual plan experience	(1,662)		(1,662)
Benefit payments	(7,714)	(7,714)	-
Contributions from the employer		900	(900)
Net investment income:			
Expected investment earnings		4,797	(4,797)
Differences between expected and actual investment earnings		(1,137)	1,137
Balance, end of year	$ 67,735	$ 74,057	$ (6,322)

The plan fiduciary net position as a percentage of the total pension liability was 133 percent and 109 percent at June 30, 2022 and 2021, respectively.

NOTE 9—PENSION PLAN, CONTINUED

Significant actuarial assumptions used at the June 30, 2021 and 2020 measurement dates are as follows:

	2021	2020
Discount rate	7.0%	7.0%
Inflation	2.0%	2.0%
Investment rate of return	7.0%	7.0%
Mortality table	Pri-2012, Scale MP-2020	Pri-2012, Scale MP-2019

Discount rates are based on the expected rate of return on pension plan investments. The projection of cash flows used to determine the single discount rate for each fiscal year end assumed that employer contributions will be made based on the minimum contribution projection under provisions of ERISA and the Pension Protection Act of 2006, including MAP-21, for future years. Based on the stated assumptions, the pension plan's fiduciary net position and future contributions were sufficient to finance the future benefit payments of the current plan members for all projection years. As a result, the long-term expected rate of return on pension plan investments was applied to all periods of the projected benefit payments to determine the total pension liability.

The long-term expected rate of return on pension plan investments of 7.0 percent at both June 30, 2021 and 2020, respectively, was determined using the expected future rates of return for the target asset allocation of the portfolio. The target allocation and best estimate geometric rates of return by asset class are summarized as follows:

	2021		2020	
	Portfolio Allocation	Long-Term Expected Return	Portfolio Allocation	Long-Term Expected Return
U.S. large cap	25.0%	7.8%	25.0%	7.9%
U.S. mid cap	10.5%	8.6%	10.5%	8.6%
U.S. small cap	6.5%	9.0%	6.5%	9.1%
International developed	14.0%	5.9%	14.0%	6.2%
Emerging market	9.0%	5.5%	9.0%	5.7%
STRIPs	7.0%	3.7%	7.0%	4.6%
Corporate 10+ year	28.0%	4.4%	28.0%	4.6%

A one-percentage point change in the discount rate would impact the reported net pension liability at June 30, 2022 and 2021 as follows:

	2022		2021	
(in thousands)	1% Decrease	1% Increase	1% Decrease	1% Increase
Net pension liability	$ 6,934	$ (5,912)	$ 7,463	$ (6,250)

The components of pension income for the years ended June 30, 2022 and 2021 are summarized as follows:

(in thousands)	2022	2021
Interest cost	$ 4,543	$ 4,687
Expected investment earnings	(4,997)	(4,797)
Administrative expenses	76	
Amortization of deferred outflows and deferred inflows	(4,755)	(1,139)
	$ (5,133)	$ (1,249)

Deferred outflows and deferred inflows related to the reported net pension liability at June 30, 2022 and 2021 are summarized as follows:

	2022		2021	
(in thousands)	Deferred Outflows	Deferred Inflows	Deferred Outflows	Deferred Inflows
Changes in assumptions	$ 43	$ 501	$ 526	$ 2,021
Differences between expected and actual plan experience	477	235		966
Differences between expected and actual investment earnings	916	13,101	1,377	988
	1,436	13,837	1,903	3,975
Contributions made after measurement date	1,781		891	
	$ 3,217	$ 13,837	$ 2,794	$ 3,975

Deferred outflows and deferred inflows related to changes in assumptions and differences between expected and actual experience will be recognized into expense in the following years ended June 30 (in thousands):

2023	$ 3,074
2024	3,090
2025	3,005
2026	3,232
	$ 12,401

NOTE 9—PENSION PLAN, CONTINUED

The inputs used to determine the fair value of the plan's investments reported at June 30, 2022 and 2021 are summarized as follows:

2022

(in thousands)	Level 1	Level 2	NAV	Total Fair Value
Equity securities	$ 67,034			$ 67,034
Fixed income securities		$ 22,738		22,738
Nonmarketable alternative investments			$ 661	661
	$ 67,034	$ 22,738	$ 661	$ 90,433

2021

(in thousands)	Level 1	Level 2	NAV	Total Fair Value
Equity securities	$ 49,482			$ 49,482
Fixed income securities		$ 24,326		24,326
Nonmarketable alternative investments			$ 249	249
	$ 49,482	$ 24,326	$ 249	$ 74,057

NOTE 10—POSTEMPLOYMENT BENEFITS

The University provides retiree health and welfare benefits, primarily medical, prescription drug, dental and life insurance coverage, to eligible retirees and their eligible dependents. Substantially all full-time regular University employees may become eligible for these benefits if they reach retirement age while working for the University. For employees retiring on or after January 1, 1987, contributions toward health and welfare benefits are shared between the University and the retiree and can vary based on date of hire, date of retirement, age and coverage elections.

The University also provides income replacement benefits, retirement savings contributions, and health and life insurance benefits to substantially all regular University employees that are enrolled in a University sponsored long-term disability plan and qualify, based on disability status while working for the University, to receive basic or expanded long-term disability benefits. Contributions toward the expanded long-term disability plan are shared between the University and employees and vary based on years of service, annual base salary and coverage elections. Contributions toward the basic long-term disability plan are paid entirely by the University.

These postemployment benefits are provided through single-employer plans administered by the University. The Executive Vice Presidents of the University have the authority to establish and amend benefit provisions of the plans.

Actuarial projections of postemployment benefits are based on the substantive plan (the plan as understood by the employer and the plan members) and include the types of benefits provided and announced future changes at the time of each valuation and the historical pattern of sharing benefit costs between the employer and plan members to that point.

The University's reported liability for postemployment benefits obligations is calculated using the entry age normal level percent of pay method. The University has elected to measure the total postemployment liability one year prior to the fiscal year end reporting date and amounts measured at June 30, 2021 and 2020 were determined based on an actuarial valuation at January 1, 2021 and 2020, respectively. There are no significant changes known which would impact the total postemployment liability between the measurement date and the reporting date, other than typical plan experience.

For purposes of the June 30, 2021 and 2020 measurement dates, the number of plan participants consisted of the following:

2021

	Retiree Health and Welfare	Long-term Disability
Active employees	43,880	38,402
Retirees receiving benefits	11,835	
Surviving spouses	892	
Participants receiving disability benefits		555
	56,607	38,957

2020

	Retiree Health and Welfare	Long-term Disability
Active employees	44,746	38,181
Retirees receiving benefits	11,125	
Surviving spouses	883	
Participants receiving disability benefits		555
	56,754	38,736

NOTE 10—POSTEMPLOYMENT BENEFITS, CONTINUED

Changes in the reported total liability for postemployment benefits obligations for the years ended June 30, 2022 and 2021 are summarized as follows:

2022

(in thousands)	Retiree Health and Welfare	Long-term Disability	Total
Balance, beginning of year	$ 4,083,296	$ 328,850	$ 4,412,146
Service cost	174,102	38,927	213,029
Interest cost	93,398	7,768	101,166
Changes in assumptions	(344,206)	(24,010)	(368,216)
Differences between expected and actual plan experience	38,479	(3,364)	35,115
Benefit payments	(62,869)	(32,712)	(95,581)
Balance, end of year	3,982,200	315,459	4,297,659
Less current portion	63,891	33,463	97,354
	$ 3,918,309	$ 281,996	$ 4,200,305

2021

(in thousands)	Retiree Health and Welfare	Long-term Disability	Total
Balance, beginning of year	$ 3,172,947	$ 304,541	$ 3,477,488
Service cost	118,293	33,632	151,925
Interest cost	114,122	11,299	125,421
Changes in assumptions	713,614	17,606	731,220
Differences between expected and actual plan experience	26,070	(7,294)	18,776
Benefit payments	(61,750)	(30,934)	(92,684)
Balance, end of year	4,083,296	328,850	4,412,146
Less current portion	62,869	32,712	95,581
	$ 4,020,427	$ 296,138	$ 4,316,565

Since a portion of retiree medical services will be provided by the University's health system, the reported liability for postemployment benefits obligations is net of the related margin and fixed costs associated with providing those services which totaled $783,862,000 and $794,964,000 at June 30, 2022 and 2021, respectively.

The University's liability for postemployment benefits obligations is not reduced by the anticipated Medicare Retiree Drug Subsidy for future periods. This subsidy would reduce the reported total postemployment benefits liability by approximately $437,000,000 and $443,000,000 at June 30, 2022 and 2021, respectively.

Assets used to fund postemployment benefits are not maintained in a separate legal trust. The University has no obligation to make contributions in advance of when insurance premiums or claims are due for payment and currently pays for postemployment benefits on a pay-as-you-go basis. The University's reported postemployment benefits obligations at June 30, 2022 and 2021 as a percentage of covered payroll of $4,502,421,000 and $4,255,709,000 were 95 percent and 104 percent, respectively.

Significant actuarial assumptions used at the June 30, 2021 and 2020 measurement dates are as follows:

	2021	2020
Discount rate*	2.16%	2.21%
Inflation rate	2.00%	2.00%
Immediate/ultimate administrative trend rate	0.0%/3.0%	0.0%/3.0%
Immediate/ultimate medical trend rate	6.0%/4.5%	6.0%/4.5%
Immediate/ultimate Rx trend rate	7.0%/4.5%	7.25%/4.5%
Increase in compensation rate faculty/staff/union	4.5%/4.75%/3.75%	0.0%/0.0%/3.75%
Mortality table**	PUB-2010 Teachers Head Count Table, Scale MP-2020	PUB-2010 Teachers Head Count Table, Scale MP-2019
Average future work life expectancy (years):		
Retiree health and welfare	8.81	9.04
Long-term disability	11.16	11.46

* Bond Buyer 20-year General Obligation Municipal Bond Index as of the last publication of the measurement period
** Based on the University's study of mortality experience from 2015-2019

A one-percentage point change in the discount rate and assumed health care cost trend rates would impact the reported total liability for postemployment benefits obligations at June 30, 2022 and 2021 as follows:

2022

(in thousands)	1% Decrease	1% Increase
Discount rate:		
Retiree health and welfare	$ 896,861	$ (695,000)
Long-term disability	$ 14,038	$ (12,815)
Health care cost trend rates:		
Retiree health and welfare	$ (780,982)	$ 1,065,747
Long-term disability	$ (12,428)	$ 12,831

2021

(in thousands)	1% Decrease	1% Increase
Discount rate:		
Retiree health and welfare	$ 948,617	$ (726,846)
Long-term disability	$ 12,530	$ (10,140)
Health care cost trend rates:		
Retiree health and welfare	$ (807,936)	$ 1,102,842
Long-term disability	$ (17,191)	$ 17,486

NOTE 10—POSTEMPLOYMENT BENEFITS, CONTINUED

The components of postemployment benefits expense for the years ended June 30, 2022 and 2021 are summarized as follows:

2022 (in thousands)	Retiree Health and Welfare	Long-term Disability	Total
Service cost	$ 174,102	$ 38,927	$ 213,029
Interest cost	93,398	7,768	101,166
Amortization of deferred outflows and deferred inflows	47,630	894	48,524
	$ 315,130	$ 47,589	$ 362,719

2021 (in thousands)	Retiree Health and Welfare	Long-term Disability	Total
Service cost	$ 118,293	$ 33,632	$ 151,925
Interest cost	114,122	11,299	125,421
Amortization of deferred outflows and deferred inflows	82,332	3,346	85,678
	$ 314,747	$ 48,277	$ 363,024

Deferred outflows and deferred inflows related to the reported total liability for postemployment benefits obligations at June 30, 2022 and 2021 are summarized as follows:

	2022		2021	
(in thousands)	Deferred Outflows	Deferred Inflows	Deferred Outflows	Deferred Inflows
Changes in assumptions	$ 779,951	$ 600,527	$ 905,690	$ 329,105
Differences between expected and actual plan experience	128,647	17,606	111,758	16,253
	908,598	618,133	1,017,448	345,358
Benefit payments made after measurement date	97,354		95,581	
	$ 1,005,952	$ 618,133	$ 1,113,029	$ 345,358

Deferred outflows and deferred inflows related to changes in assumptions and the differences between expected and actual plan experience will be recognized into expense in the following years ended June 30 based upon the average future work life expectancy of plan participants (in thousands):

2023	$ 48,524
2024	48,524
2025	48,524
2026	36,502
2027	29,738
2028 and beyond	78,653
	$ 290,465

NOTE 11—RETIREMENT PLAN

The University has a defined contribution retirement plan for all qualified employees through TIAA and Fidelity Management Trust Company ("FMTC") mutual funds. All regular and supplemental instructional and primary staff are eligible to participate in the plan based upon age and service requirements. Participants maintain individual contracts with TIAA, or accounts with FMTC, and are fully vested.

For payroll covered under the plan, eligible employees generally contribute 5 percent of their pay and the University generally contributes 10 percent of employees' pay to the plan. The University contribution commences after an employee has completed one year of employment. Participants may elect to contribute additional amounts to the plan within specified limits that are not matched by University contributions. Contributions and covered payroll under the plan (excluding participants' additional contributions) for the years ended June 30, 2022 and 2021 are summarized as follows:

(in thousands)	2022	2021
University contributions	$ 347,465	$ 264,244
Employee contributions	$ 180,423	$ 170,622
Payroll covered under plan	$ 4,502,421	$ 4,255,709
Total payroll	$ 4,646,695	$ 4,400,615

NOTE 12—NET POSITION

The composition of net position at June 30, 2022 and 2021 is summarized as follows:

(in thousands)	2022	2021
Net investment in capital assets	$ 3,522,018	$ 3,669,608
Restricted:		
Nonexpendable:		
Permanent endowment corpus	2,821,876	2,625,459
Expendable:		
Net appreciation of permanent endowments	3,589,441	3,684,197
Funds functioning as endowment	3,218,330	2,973,422
Restricted for operations and other	807,252	924,677
Unrestricted	5,339,544	5,625,701
	$ 19,298,461	$ 19,503,064

Unrestricted net position is not subject to externally imposed stipulations; however, it is subject to internal restrictions. For example, unrestricted net position may be designated for specific purposes by action of management or the Board of Regents. At June 30, 2022 and 2021, substantially all of the unrestricted net position has been designated for various academic programs, research initiatives and capital projects.

NOTE 13—FEDERAL DIRECT LENDING PROGRAM

The University distributed $315,257,000 and $311,608,000 during the years ended June 30, 2022 and 2021, respectively, for student loans through the U.S. Department of Education ("DoED") Federal Direct Lending Program. These distributions and related funding sources are not included as expenses and revenues in the accompanying financial statements. The statement of net position includes a receivable of $4,250,000 and $1,065,000 at June 30, 2022 and 2021, respectively, for DoED funding received subsequent to distribution.

NOTE 14—COMMITMENTS AND CONTINGENCIES

Authorized expenditures for construction and other projects unexpended at June 30, 2022 were $1,394,163,000. Of these expenditures, the University expects that $1,045,800,000 will be funded by internal sources, gifts, grants and proceeds from borrowings; $42,911,000 by the State Building Authority and the remaining $305,452,000 will be funded using unexpended bond proceeds.

Under the terms of various limited partnership agreements approved by the Board of Regents or University officers, the University is obligated to make periodic payments for advance commitments to venture capital, private equity, real estate, natural resources and absolute return strategies. At June 30, 2022, the University had committed, but not paid, a total of $5,179,752,000 in funding for these alternative investments. Based on historical capital calls and discussions with those managing the limited partnerships, outstanding commitments for such investments are anticipated to be paid in the following years ended June 30 (in thousands):

2023	$ 1,859,543
2024	1,011,915
2025	888,538
2026	578,673
2027	329,054
2028 and beyond	512,029
	$ 5,179,752

These commitments are generally able to be called prior to an agreed commitment expiration date and therefore may occur earlier or later than estimated.

The University has entered into leases for certain space and equipment, which expire at various dates through 2042. Future lease payments, including both principal and interest on these commitments for the next five years and in subsequent five-year periods are as follows:

(in thousands)	Principal	Interest	Total
2023	$ 47,679	$ 7,835	$ 55,514
2024	42,335	7,947	50,282
2025	39,040	7,283	46,323
2026	27,948	6,632	34,580
2027	24,075	6,023	30,098
2028-2032	71,668	21,441	93,109
2033-2037	43,373	6,551	49,924
2038-2042	6,134	490	6,624
	$ 302,252	$ 64,202	$ 366,454

Substantial amounts are received and expended by the University under federal and state programs and are subject to audit by cognizant governmental agencies. This funding relates to research, student aid, patient care and other programs. The University believes that any liabilities arising from such audits will not have a material effect on its financial position.

The University is a party to various pending legal actions and other claims in the normal course of business, and is of the opinion that the outcome of these proceedings will not have a material adverse effect on its financial position.

NOTE 15—OPERATING EXPENSES BY FUNCTION

Operating expenses by functional classification for the years ended June 30, 2022 and 2021 are summarized as follows:

2022

(in thousands)	Compensation and Benefits	Supplies and Services	Depreciation	Scholarships and Fellowships	Total
Instruction	$ 1,125,341	$ 117,962			$ 1,243,303
Research	646,105	273,108			919,213
Public service	164,759	106,328			271,087
Academic support	325,726	67,659			393,385
Student services	115,220	33,183			148,403
Institutional support	209,526	333,070			542,596
Operations and maintenance of plant	101,012	229,393			330,405
Auxiliary enterprises	3,886,145	1,976,401			5,862,546
Depreciation			$ 606,523		606,523
Scholarships and fellowships				$ 230,946	230,946
	$ 6,573,834	$ 3,137,104	$ 606,523	$ 230,946	$ 10,548,407

2021

(in thousands)	Compensation and Benefits	Supplies and Services	Depreciation	Scholarships and Fellowships	Total
Instruction	$ 1,092,866	$ 81,251			$ 1,174,117
Research	616,727	236,395			853,122
Public service	191,972	95,496			287,468
Academic support	310,667	49,039			359,706
Student services	107,156	24,950			132,106
Institutional support	191,449	163,357			354,806
Operations and maintenance of plant	93,937	172,678			266,615
Auxiliary enterprises	3,532,681	1,738,913			5,271,594
Depreciation			$ 620,037		620,037
Scholarships and fellowships				$ 200,431	200,431
	$ 6,137,455	$ 2,562,079	$ 620,037	$ 200,431	$ 9,520,002

NOTE 16—UM HEALTH

Condensed financial information for UM Health, a blended component unit, before the elimination of certain intra-University transactions, at and for the years ended June 30, 2022 and 2021 is as follows:

(in thousands)	2022	2021
Condensed Statement of Net Position		
Assets:		
Current assets	$ 108,089	$ 126,853
Noncurrent assets	356,607	361,731
Total assets	464,696	488,584
Deferred outflows	3,217	2,589
Liabilities:		
Current liabilities	84,599	91,677
Noncurrent liabilities	245,347	272,826
Total liabilities	329,946	364,503
Deferred inflows	15,984	6,288
Net position:		
Net investment in capital assets	61,967	56,529
Restricted:		
Nonexpendable	682	682
Expendable	19,525	14,853
Unrestricted	39,809	48,318
Total net position	$ 121,983	$ 120,382
Condensed Statement of Revenues, Expenses and Changes in Net Position		
Operating revenues	$ 529,560	$ 508,348
Operating expenses other than depreciation expense	482,303	447,786
Depreciation expense	33,897	34,539
Operating income	13,360	26,023
Nonoperating expenses, net	(11,667)	(3,734)
Other expenses, net	(92)	(2,379)
Net revenues before transfers	1,601	19,910
Transfers from other University units		13,000
Increase in net position	1,601	32,910
Net position, beginning of year	120,382	87,472
Net position, end of year	$ 121,983	$ 120,382
Condensed Statement of Cash Flows		
Net cash provided by operating activities	$ 14,740	$ 49,662
Net cash provided by noncapital financing activities	7,286	2,463
Net cash used in capital and related financing activities	(70,753)	(68,345)
Net cash provided by investing activities	13,295	4,939
Net decrease in cash and cash equivalents	(35,432)	(11,281)
Cash and cash equivalents, beginning of year	57,379	68,660
Cash and cash equivalents, end of year	$ 21,947	$ 57,379

PENSION PLAN

Changes in the reported net pension liability for the years ended June 30 are summarized as follows (amounts in thousands):

	2022	2021	2020	2019	2018	2017
Total Pension Liability						
Interest Cost	$ 4,543	$ 4,687	$ 4,957	$ 4,930	$ 5,103	$ 4,482
Changes in assumptions	89	(3,540)	3,713	(273)	(822)	(24,906)
Differences between expected and actual plan experience	989	(1,662)	(124)	1,361	(767)	2,067
Benefit payments	(5,598)	(7,714)	(6,791)	(4,489)	(4,712)	(4,089)
Net change in total pension liability	23	(8,229)	1,755	1,529	(1,288)	(22,446)
Total pension liability, beginning of year	67,735	75,964	74,209	72,680	73,968	96,414
Total pension liability, end of year	$ 67,758	$ 67,735	$ 75,964	$ 74,209	$ 72,680	$ 73,968
Plan Fiduciary Net Position						
Benefit payments	$ (5,598)	$ (7,714)	$ (6,791)	$ (4,489)	$ (4,712)	$ (4,089)
Contributions from the employer	891	900	1,244	1,047	2,171	2,903
Administrative expenses	(76)					
Net investment income:						
Expected investment earnings	4,997	4,797	5,205	5,234	4,848	3,166
Differences between expected and actual investment earnings	16,162	(1,137)	426	(1,168)	3,664	1,316
Net change in plan fiduciary net position	16,376	(3,154)	84	624	5,971	3,296
Plan fiduciary net position, beginning of year	74,057	77,211	77,127	76,503	70,532	67,236
Plan fiduciary net position, end of year	$ 90,433	$ 74,057	$ 77,211	$ 77,127	$ 76,503	$ 70,532
Net pension liability, end of year	$ (22,675)	$ (6,322)	$ (1,247)	$ (2,918)	$ (3,823)	$ 3,436
Plan fiduciary net position as a percentage of the total pension liability	133%	109%	102%	104%	105%	95%

PENSION PLAN, CONTINUED

Employer contributions in relation to actuarially determined contributions for the years ended June 30 are as follows:

(in thousands)	Employer Contributions*	Actuarially Determined Contributions	Excess (Deficient) Contributions
2022	$ 1,781	$ -	$ 1,781
2021	$ 891	$ 2,133	$ (1,242)
2020	$ 900	$ 1,336	$ (436)
2019	$ 1,244	$ 393	$ 851
2018	$ 1,047	$ 1,622	$ (575)
2017	$ 2,171	$ 1,754	$ 417

* Reflects no employer contributions after April 30 of the respective fiscal year

Significant methods and assumptions used to calculate the actuarially determined contributions for the years ended June 30 are as follows:

Actuarially determined contributions	The plan is subject to funding requirements under the provisions of ERISA and the Pension Protection Act of 2006 (including MAP-21, HATFA, BBA and ARP). The actuarially determined contributions represent the IRC Section 430 minimum required contributions.
Contributions in relation to actuarially determined contributions	Under IRC Section 430, the due date to pay minimum required contributions for the plan year is generally 8 ½ months after the end of the plan year. For the plan years ended September 30, contributions are due by June 15 of the following year.
Actuarial cost method	Unit Credit method
Asset valuation method	24-month smoothed value of assets

Interest rate

	First Segment Rate	Second Segment Rate	Third Segment Rate	Effective Rate
2022	4.75%	5.50%	6.27%	5.76%
2021	3.74%	5.35%	6.11%	5.57%
2020	3.92%	5.52%	6.29%	5.73%
2019	4.16%	5.72%	6.48%	5.94%
2018	4.16%	5.72%	6.48%	5.93%
2017	4.43%	5.91%	6.65%	6.13%

Mortality	Tables prescribed by the Secretary of Treasury.

POSTEMPLOYMENT BENEFITS

The historical reconciliation of the reported total liability for postemployment benefits obligations for the years ended June 30 is summarized as follows (amounts in thousands):

	2022	2021	2020	2019	2018	2017
Service cost	$ 213,029	$ 151,925	$ 134,115	$ 141,933	$ 143,787	$ 122,073
Interest cost	101,166	125,421	124,023	121,800	94,153	108,561
Changes in assumptions	(368,216)	731,220	154,777	(383,315)	(107,874)	255,041
Differences between expected and actual plan experience	35,115	18,776	38,230	17,535	52,721	14,028
Benefit payments	(95,581)	(92,684)	(87,712)	(87,638)	(77,374)	(72,302)
Net change	$ (114,487)	$ 934,658	$ 363,433	$ (189,685)	$ 105,413	$ 427,401
Total liability, end of year	$ 4,297,659	$ 4,412,146	$ 3,477,488	$ 3,114,055	$ 3,303,740	$ 3,198,327
Covered employee payroll	$ 4,502,421	$ 4,255,709	$ 4,214,627	$ 4,013,983	$ 3,792,553	$ 3,568,918
Total liability as a percentage of covered employee payroll	95%	104%	83%	78%	87%	90%

Discount rates used in determining the reported total liability for postemployment benefits obligations at June 30 are as follows:

2022	2.16%
2021	2.21%
2020	3.50%
2019	3.87%
2018	3.58%
2017	2.85%

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